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Volume II included Framework and Process, Public Involvement, Inventory Summary, Needs Assessment, Master Street Plans, Area Studies, Transportation and Land Use Alternatives, Financial Plan, System Performance, and Findings

### **Chapter 7-Framework and Process** (PDF Document, 304kb)

Included Phases of the Transportation System plan, and Policy Regulatory Framework

### **Chapter 8-Public Involvement** (PDF Document, 997kb)

Included TSP Public Involvement Program and Policy Requirements

### **Chapter 9-Inventory Summary** (PDF Document, 231kb)

Included Requirements and Inventory

### **Chapter 10-Linking State, Regional and Local Needs** (PDF Document, 268kb)

Included Linking State, Regional and Local Needs, State and Regional Transportation Needs, and Citywide Needs

### **Chapter 10-Central City District** (PDF Document, 229kb)

Included Land uses, Transportation, District Performance Measures, and Central City Plan and Studies

### **Chapter 10-North District** (PDF Document, 145kb)

Included Land uses and North District Plan and Studies

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Included Land uses, Transportation, and Northeast District Plan and Studies

### **Chapter 10-Far Northeast District** (PDF Document, 166kb)

Included Land uses, Transportation, and Far Northeast District Plan and Studies

### **Chapter 10-Southeast District** (PDF Document, 192kb)

Included Land uses, Transportation, and Southeast District Plan and Studies

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Included Land uses, Transportation, and Far Southeast District Plan and Studies

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**Chapter 10-Northwest District** (PDF Document, 164kb)

Included Land uses, Transportation, and Northwest District Plan and Studies

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**Chapter 10-Southwest District** (PDF Document, 159kb)

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**Chapter 11-Master Street Plans** (PDF Document, 2,965kb)

Included the Street Plans of South Waterfront District, Bridgeton Neighborhood, Gateway, Airport Way, River District, N. Macadam District, SW and Far SE Portland Master Street Plan. Also the Requirements of State, Metro, and Areas Meeting Connectivity.

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# FRAMEWORK and PROCESS

# 7

## INTRODUCTION

This chapter provides background information about the requirements and process for the Transportation System Plan (TSP). It summarizes the two phases of the TSP, provides the policy and regulatory framework, and discusses the review process.

## PHASES OF THE TRANSPORTATION SYSTEM PLAN

The TSP was developed in two phases.

### Phase I

Phase I began in January 1995. Its purpose was to update the transportation policies and street classifications contained in the Transportation Element (TE) of the Comprehensive Plan and to incorporate the newly adopted Pedestrian and Bicycle Master Plans. City Council adopted Phase I on May 22, 1996 (ordinance No. 170136), with an effective date of June 21, 1996.

The policies of the TE were extensively amended to be consistent with the state Transportation Planning Rule (TPR) and to incorporate new policies developed as part of the Pedestrian and Bicycle Master Plans. These changes include:

- Policy 6.6, Urban Form, was strengthened and clarified to address connectivity.
- Policy 6.29, Freight Intermodal Facilities and Freight Activity Areas, was strengthened to reflect the importance of freight movement to the local economy.
- New policies included Policy 6.18, Adequacy of Transportation Facilities; Policy 6.2, Public Involvement; Policy 6.3, Transportation Education; and Policy 6.29, Street Vacations.
- The new pedestrian and bicycle policies reflect the City's commitment to improve the physical environment for pedestrians and bicyclists and encourage walking and biking as alternatives to the automobile.
- Changes to street classifications and classification descriptions were made to reflect new pedestrian and bicycle networks, including the addition of several pedestrian districts that reflect action items in the Outer Southeast Community Plan.
- Other street classification changes were made to correct errors or make minor adjustments to the traffic, transit, and truck networks.

Phase 1 also updated other goals of the Comprehensive Plan, in addition to the TE policies and street classifications:

- Several policies under Goal 2, Urban Development, were amended to better address minimum density requirements near transit corridors and light rail stations and to support infill and redevelopment throughout the City.
- Goal 11, Public Facilities, was amended to better reflect how improvements are made to the right-of-way.

## **Phase II**

Phase II began immediately after Phase I was adopted, and focused on completing the remaining elements of the TSP. Although Phase I added and amended many TE policies, some policy issues were unresolved and were addressed in Phase II. These included addressing the impact of traffic calming on emergency response; parking; access management; and consistency with the Regional Transportation Plan (RTP). Street classifications were revised, and many changes to achieve consistency with the RTP modal maps were necessary during this phase. These changes include:

- Reorganization of transportation policies into topic areas.
- Addition of street design classifications and descriptions consistent with the RTP.
- Incorporation of emergency response policies and classifications developed through the Emergency Response Classification Study.
- Street connectivity policies, standards and maps consistent with RTP requirements.
- Incorporation of the RTP level-of-service standards.
- Development of a transportation system improvement list consistent with the TPR and RTP.
- Development of a transportation finance plan consistent with the TPR.
- Development of system performance measures and benchmarks consistent with the TPR.

## **POLICY AND REGULATORY FRAMEWORK**

### **State of Oregon**

The Oregon State Legislature mandated comprehensive planning in Oregon with the adoption of Senate Bill 100 (ORS Chapter 197) in 1973. This legislation created the state Land Conservation and Development Commission (LCDC), which adopted 19 statewide planning goals and associated guidelines in 1974 (effective January 1, 1975).

Under state law, comprehensive plans and any ordinances or regulations that implement the plans must comply with applicable statewide planning goals. Fourteen of the 19 statewide goals apply to Portland.

Because the TSP is part of the City’s Comprehensive Plan, it must comply with all applicable state goals, with findings to that effect included in the adopting ordinance. Two statewide goals are directly applicable to the TSP: Goal 11, Public Facilities and Services, and Goal 12, Transportation.

***Goal 11, Public Facilities and Services***

State Goal 11, Public Facilities and Services, is “[t]o plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”

The goal’s intent is to ensure that urban and rural development is guided and supported by the appropriate public facilities and services. Goal 11 requires jurisdictions to provide for key facilities in their comprehensive plans. The goal contains a set of planning guidelines for coordinated public facilities planning that will be a major determinant of the carrying capacity of the air, land, and water resources in an area. Implementation guidelines are also included for capital improvement programming that will achieve the desired types and levels of public facilities and services in urban, urbanizable, and rural areas. The guidelines also recommend that the level of key facilities that can be provided should be a principal factor in planning for various densities and types of urban and rural land uses.

***State Requirements of OAR 660-11***

The state requirements for public facilities planning became much more specific in 1983 when the Legislature adopted HB 2295, which amended ORS 197 to add a new section (Economic Development) that includes the following directive:

197.712(2) By the adoption of new goals or rules, or the application, interpretation or amendment of existing goals or rules, the commission shall implement all of the following:

- (e) A city or county shall develop and adopt a public facility plan for areas within an urban growth boundary containing a population greater than 25,000 persons. The public facility plan shall include rough cost estimates for public projects needed to provide sewer, water and transportation for the land uses contemplated in the comprehensive plan and land use regulations. Project timing and financing provisions of public facility plans shall not be considered land use decisions.

Based on this directive, LCDC adopted a new administrative rule on public facilities planning: OAR 660 Division 11. This administrative rule includes definitions, procedures, and standards for developing, adopting, and amending a public facilities plan. Section 660-11-005(7)(d) outlines specific transportation elements to be included in the public facilities plan (PFP), as follows:

- (a) Transportation
  - (A) Freeway system, if planned for in the acknowledged comprehensive plan
  - (B) Arterial system

- (C) Significant collector system
- (D) Bridge system (those on the Federal Bridge inventory)
- (E) Mass transit facilities if planned for in the acknowledged comprehensive plan, including purchase of new buses if total fleet is less than 200 buses, rail lines or transit service to major transportation corridors and park-and-ride stations
- (F) Airport facilities as identified in current airport master plans
- (G) Bicycle paths if planned for in the acknowledged comprehensive plan.

Section 660-11-010(1) requires the PFP to contain:

- (a) An inventory and general assessment of the condition of all the significant public facility systems which support the land uses designated in the acknowledged comprehensive plan;
- (b) A list of the significant public facility projects, which are to support the land uses designated in the acknowledged comprehensive plan. Public facility project descriptions or specifications of these projects as necessary;
- (c) Rough cost estimates of each public facility project;
- (d) A map or written description of each public facility project's general location or service area;
- (e) Policy statement(s) or urban growth management agreement identifying the provider of each public facility system. If there is more than one provider with the authority to provide the system within the area covered by the public facility plan, then the provider of each project shall be designated;
- (f) An estimate of when each facility project will be needed; and
- (g) A discussion of the provider's existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each public facility project or system.

### *Status of the Public Facilities Plan*

The City adopted a public facilities plan for transportation on April 5, 1989 (ordinance 161770). Since adoption, the PFP has been used to develop the capital improvement program (CIP), which identifies two years of capital projects. The PFP has not been updated or amended since its initial adoption in 1989.

### *Relationship of the PFP to the TPR and TSP*

Section 660-1200 of the TPR states that "[t]ransportation system plans adopted pursuant to this Division fulfill the requirements for public facilities planning required under ORS 197.712(2)(e), Goal 11 and OAR Chapter 660, Division 11, as they relate to transportation facilities." The TSP will, therefore, update and replace the City's public facilities plan for transportation.

### *Goal 12, Transportation*

State Goal 12, Transportation, is "[t]o provide and encourage a safe, convenient and economic transportation system." The goal and its accompanying text (below) has the force of law and is mandatory.

A transportation plan shall:

- (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian;
- (2) be based upon an inventory of local, regional and state transportation needs;
- (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes;
- (4) avoid principal reliance upon any one mode of transportation;
- (5) minimize adverse social, economic and environmental impacts and costs;
- (6) conserve energy;
- (7) meet the needs of the transportation disadvantaged by improving transportation services;
- (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and
- (9) conform with local and regional comprehensive land use plans.

Each plan shall include a provision for transportation as a key facility.

The planning guidelines for Goal 12 emphasize the use of existing facilities and rights-of-way, and support high-density developments with mass transit rather than auto facilities. The implementation guidelines recommend that transportation facilities direct urban expansion into suitable areas, and that transportation decisions should identify and take into account the positive and negative impacts on local land use patterns, environmental quality, energy use and resources, existing transportation system, and fiscal resources.

*State Requirements of OAR 660-12 (Transportation Planning Rule)*

LCDC adopted the Transportation Planning Rule (TPR) in 1991 to carry out state Goal 12, Transportation. The TPR is spelled out in OAR 660, Division 12, Transportation Planning. The TPR requires the Oregon Department of Transportation (ODOT), metropolitan planning organizations, and local governments to provide a system of transportation facilities and improvements sufficient to meet identified state, regional, and local transportation needs and to

assure that the planned transportation system supports a pattern of travel and land use in urban areas which will avoid the air pollution, traffic and livability problems faced by other areas of the country.

**GENERAL TPR REQUIREMENTS**

The TPR has general requirements for the development of a Transportation System Plan (TSP). When completed, the TSP will take the place of the public facilities plan for transportation required by Goal 11 and state statutes [ORS 197.712 (2)(e)]. A local TSP “shall establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with regional TSPs and adopted elements of the state TSP.” The TSP must be coordinated with affected state and federal agencies, local governments, special districts, and private providers of transportation services. The TSP must be adopted as part of the City’s comprehensive plan, except that transportation financing programs may be adopted as a supporting document.

A TSP must be designed to achieve the following objectives for reducing automobile vehicle miles traveled (VMT) per capita (regionwide):

- (a) no increase within 10 years of adoption
- (b) a 10-percent reduction within 20 years of adoption
- (c) an additional 5-percent reduction within 30 years

#### **SPECIFIC TPR REQUIREMENTS**

A TSP must include a determination of transportation needs, including the needs of the transportation disadvantaged and the needs for movement of goods and services to support industrial and commercial development. The determination of needs is based on population and employment forecasts for a 20-year period and on the assumption that there will be reduced reliance on the automobile. A TSP must also evaluate transportation alternatives, addressing improvements to existing facilities or services, new facilities and services, transportation system management measures, demand management measures, and the implications of a 'no-build' alternative.

Section 660-12-020(2) requires modal plans for streets; public transit; bicycles and pedestrians; air, rail, water, and pipelines; transportation system management and transportation demand management; and parking.

The street, transit, bicycle, and pedestrian modal plans must include:

- An inventory and general assessment of existing and committed transportation facilities and services by function, type, capacity, and condition.

The modal plan for streets must describe a system of arterials and collectors and other important local street connections that shows:

- Extensions of existing streets
- Connections to existing or planned streets
- Connections to neighborhood destinations

The public transit plan must:

- Describe public transportation services for the transportation disadvantaged and identify service inadequacies
- Describe intercity bus and passenger rail services and identify the location of terminals
- Identify existing and planned transit truck routes, exclusive transit ways, terminals and major transfer stations, and park-and-ride stations

The bike and pedestrian plans must show:

- A network of bicycle and pedestrian routes
- A list of facility improvements

The air, rail, water, and pipeline transportation plan must identify where public use airports, mainline and branchline railroads and railroad facilities, port facilities, and major regional pipelines and terminals are located or planned.



Modal plans must be developed for transportation system management and demand management and for parking, including minimum and maximum parking requirements and measures to reduce parking spaces per capita by 10 percent over the 20-year plan timeframe.

Sections 660-12-020(2)(I) and 660-12-040 require the TSP to include a transportation financing program, which must contain:

- (a) A list of planned transportation facilities and major improvements
- (b) A general estimate of the timing for planned transportation facilities and major improvements
- (c) Determination of rough cost estimates for the transportation facilities and major improvements identified in the TSP

The financing program must also discuss the facility provider's existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each transportation facility and major improvement. The financing program is intended to encourage infill and redevelopment of urban lands before supporting facilities that would cause premature development of urbanizable areas.

Section 660-12-045 of the TPR specifies that the TSP process must include the adoption of policies and land use regulations to implement the TSP. Phase I of the TSP fulfills elements of this requirement. Some of the TPR requirements were already part of City ordinances-- for example, protecting airports with height and noise regulations. Further amendments were partially completed in November 6, 1996, when City Council adopted "Interim Implementation of the Transportation Planning Rule." These regulations address requirements for notification, orientation of buildings and parking to transit lines, and bicycle parking. Additional land use regulation amendments to address street connectivity were adopted as part of the revision of Title 34: Land Divisions of the Municipal Code. The TSP includes additional implementation measures to address access as required by 660-12-045 (3)(b) and (c).

Jurisdictions must establish interim benchmarks for five-year intervals over the planning period to measure how effectively the TSP is reducing VMT and increasing the use of alternative modes of transportation. If the interim benchmarks are not met, the TSP must be amended to include new or additional efforts to meet the TPR requirements.

#### TPR TIMELINES

Following completion of the regional TSP, local jurisdictions have one year to complete their TSPs. Metro's original deadline for completing the Regional Transportation Plan (RTP) was May 1995, and the City of Portland's TSP was due in May 1996. The RTP was completed August 2000. Completion of the TSP is now scheduled for September 2002.

### ***Oregon Transportation Plan***

The Oregon Transportation Committee adopted the Oregon Transportation Plan (OTP) on September 15, 1992. The OTP is intended to meet ORS 184.618(1), which requires the Oregon Transportation Commission (OTC) to "develop and maintain a state transportation policy and a comprehensive, long-range plan for a multimodal transportation system for the state which encompasses economic efficiency, orderly economic development, safety and

environmental quality.” The OTP must also be consistent with the TPR regarding development of a state transportation system plan.

The OTP contains a vision, goals, policies and actions, a preferred transportation network and services, and an implementation section. Since adoption of the OTP, modal or topic plans have also been adopted. These include the Bicycle and Pedestrian Plan, the Highway Plan, and various corridor plans, including a plan for Highway 30 – St. Helens Road. Each modal plan also contains a set of goals and policies.

### *OTP Requirements*

Policy 4K, Local Government Responsibilities, of the OTP states that “[i]t is the policy of the State of Oregon that:

- Local governments shall define a transportation system of local significance adequate to meet identified needs for the movement of people and goods to local destinations within their jurisdictions; and
- Local government transportation plans shall be consistent with regional transportation plans and adopted elements of the state transportation system plan.

The OTP establishes performance standards or minimum levels of service for motor vehicles on state-controlled facilities. These standards are found in Policy 1F: Highway Mobility Standards, of the Oregon Highway Plan (OHP). Tables in Policy 1F establish maximum volume-to-capacity ratios for state facilities. The ratios “must be used for deficiency analyses of state highways.” In December 2000, however, Metro requested that the OTC substitute the level-of-service measures from the 2000 Regional Transportation Plan for the state standards. The OTC approved the request as an amendment to the OHP.

### *Relationship of the OTP to the TSP*

The OTP states that local TSPs must be consistent with adopted portions of the state transportation system plan. Oregon statutes do not give the OTC authority to impose OTP goals, policies, and performance guidelines on other than state agencies. The TPR does require local TSPs to be consistent with adopted portions of the state transportation system plan (i.e., the OTP and its modal/topic plans). The OTP is generally implemented through the coordination of local and regional jurisdictions with ODOT.

## **Regional (Metro)**

This section gives an overview of the regional transportation policies and requirements that address regional transportation issues.

### ***Regional Urban Growth Goals and Objectives***

The Metro Council adopted Regional Urban Growth Goals and Objectives (RUGGOs) in 1991 and amended them in 1995. The RUGGOs provide land use goals and objectives for the region, replacing those previously adopted by the Columbia Region Association of Governments.

The RUGGOs include two principal goals:

- Goal I addresses the planning process Metro uses to coordinate regional growth management issues, including the role of functional plans.
- Goal II addresses urban form :
  - Goal II.1 addresses the natural environment
  - Goal II.2 addresses the built environment, including transportation facilities
  - Goal II.3 addresses growth management
  - Goal II.4 describes the Region 2040 Growth Concept and concept map

The RUGGOs are not directly applicable to local plans and local land use decisions. However, they are the building blocks that shape the Regional Framework Plan and its implementing functional plans.

### *Goal II.2: Built Environment/Transportation*

Policy II.2: Built Environment, addresses how development in the region should occur, including “the provision of infrastructure and critical public services concurrent with the pace of urban growth” and “the creation of a balanced transportation system, less dependent on the private automobile, supported by both the use of emerging technology and the location of jobs, housing, commercial activity, parks and open space.”

Objective 18 states that public services and facilities, including transportation, should be planned and developed to minimize costs, maximize service efficiencies, maintain or enhance environmental quality, keep pace with growth and achieve planned service levels, and shape and direct growth to meet local and regional objectives.

Objective 19, Transportation, addresses how the regional system should be developed. The system will: i) reduce reliance on a single mode of transportation, ii) recognize and protect freight movement, iii) provide adequate levels of mobility, iv) encourage energy efficiency, v) support a balance of jobs and housing, vi) recognize financial constraints, vii) minimize environmental impacts, viii) reward and reinforce pedestrian activity, and ix) identify and protect intermodal transfer points.

System priorities are to meet the mobility needs of mixed-use urban centers through a combination of intensifying land uses and increasing transportation system capacity, while minimizing negative impacts on environmental quality and on “where and how people live, work and plan.” Environmental considerations should include reducing energy consumption and air pollution through increased use of transit, telecommuting, zero-emission vehicles, carpools, vanpools, bicycles and walking; maintaining the region’s air quality; and reducing negative impacts on parks, public open space, wetlands, and neighborhood livability. Objective 19.3 seeks a transportation balance that reduces automobile dependency, increases the use of transit, and encourages bicycle and pedestrian movement through the location and design of land uses.

### *Region 2040 Growth Concept*

LCDC adopted the 2040 Growth Concept in December 1995 as part of the RUGGOs (Goal II.4). In December 1996, LCDC acknowledged amended RUGGOs, including the 2040 Growth Concept text and map.

The 2040 Growth Concept states the preferred form of long-term regional growth and development. It includes a general approach to approximately where and how much the Urban Growth Boundary (UGB) should be expanded, what ranges of density are estimated to accommodate projected growth, and which areas should be protected as open space. It also designates design types, such as central city, regional center, town center, and main street.

The 2040 Growth Concept responds to the future vision required by the Metro Charter and described in Objective 9 of the RUGGOs. Implementation of the 2040 Growth Concept is also part of the region's efforts to comply with federal clean air requirements by producing more transportation-efficient land use patterns.

### ***Regional Framework Plan***

The Metro Charter, approved in 1992, identifies specific requirements for Metro's planning programs, including adoption of the Regional Framework Plan. The Metro Charter requires the Regional Framework Plan to be developed with the consultation and advice of the Metro Policy Advisory Committee (MPAC).

The Regional Framework Plan was adopted in 1997 and contains policies that implement the Region 2040 Growth Concept. These policies are based on federal, state, and regional mandates as well as on the RUGGOs. Similar to Portland's Comprehensive Plan, the Regional Framework Plan lays out broad guidance in a variety of areas for which it has jurisdiction.

The Regional Framework Plan's policies are binding on Metro, but are not binding on local jurisdictions and do not directly regulate local plans. The plan has no direct relationship to the City's TSP and does not impose any requirements. It is, however, the basis for the development of functional plans, which do impose requirements on local jurisdictions, and is therefore important for understanding functional plan requirements and guidelines.

Metro can regulate local plans only through specific implementing ordinances. Elements of the Framework Plan that are intended to change local plans are included in functional plans that define exact standards and procedures for specific jurisdictions. State legislation (ORS 268) establishes functional plans as Metro's legal mechanism to require changes in comprehensive plans. It is through adopted functional plans that regional policies directly affect Portland's Comprehensive Plan and implementing ordinances.

The Framework Plan consists of several elements, including a description of the Region 2040 Growth Concept design types, and policies relating to land use; transportation; parks, open spaces and recreational facilities; water supply and management; regional natural hazards; Clark County; management; and implementation.

### ***2040 Design Types***

The 2040 Growth Concept is designed to accommodate approximately 720,000 additional residents and 350,000 additional jobs over the life of the plan. Fundamental to the Growth Concept is a multimodal transportation system that assures mobility of people and goods throughout the region. Mixed-use centers inside the UGB are also a key component of the Growth Concept. The 2040 design types and associated transportation elements are described below.

Portland's **Central City** is the region's largest market area, employment center and cultural hub. Under the Growth Concept, downtown Portland will continue to contain approximately 20 percent of regional employment. Densities will increase from today's 150 people per acre to about 250 people per acre. Improvements to the transit system network, development of a multimodal street system, and maintenance of regional through-routes will provide mobility to and from the City center.

**Regional centers**, such as Gateway, serve large market areas outside the Central City and are connected to it by light rail transit and highways. These regional centers will become the focus of compact development, redevelopment, and high-quality transit service; contain multimodal street networks; and act as major nodes along regional through-routes. From the current 24 people per acre, the centers will grow to about 60 people per acre. In addition to light rail connecting to the Central City, a dense network of multimodal arterial and collector streets will tie regional centers to surrounding neighborhoods and other centers. The street design within regional centers is planned to encourage public transportation, bicycle, and pedestrian travel, while also accommodating auto and freight movement.

Smaller **town centers** are connected to each regional center by roadways and transit lines. Town centers such as St. Johns, Hollywood, Lents, and Hillside will provide local shopping, employment, recreational and cultural opportunities within a local market area. The 1990 density of an average town center will nearly double, from 23 to about 40 persons per acre.

**Station communities** are nodes of development centered around a light-rail or high-capacity transit station that features a high-quality pedestrian and bicycle environment. They provide for the highest densities outside centers, averaging around 45 persons per acre within approximately one-half mile from the station stop.

**Main streets**, linear in nature, and neighborhood centers, nodal in character, are typical of how the City has grown in the past. They are expected to grow from 1990 levels of about 36 people per acre to about 39 people per acre. Main streets and neighborhood centers are served by high-quality transit and are characterized by neighborhood and special shopping areas. When several main streets occur within a few blocks of one another, they may serve as a dispersed town center, such as the main street areas of Belmont, Hawthorne, and Division. Main streets feature street designs that emphasize pedestrian activity, public transit, and bicycle travel.

**Corridors** are located along good-quality transit lines and have average densities of about 25 people per acre. They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Densities will average about 25 persons per acre. Some corridors will be continuous, narrow bands of higher-intensity development along arterial roads; others will be more nodal, with small centers at major intersections. The corridors will also emphasize a high-quality bicycle and pedestrian environment, especially at nodes.

**Neighborhoods** are a key component of the Growth Concept and fall into two categories. Inner neighborhoods include areas such as Portland where access to employment is good. Average lot sizes will be slightly smaller than today to accommodate approximately 14 persons per acre. Outer neighborhoods are farther from large employment centers and will be characterized by larger lot sizes and lower densities than inner neighborhoods. Some existing neighborhoods are characterized by a lack of street connections, which discourages

walking and bicycling. The Growth Concept envisions neighborhoods with good internal connectivity, as well as connectivity to other neighborhoods and to the arterial system.

**Industrial areas** are locations set aside primarily for industrial activities. Other supporting uses, including some retail uses, are allowed if limited to sizes and locations intended to serve the industrial uses. Access to the industrial areas and intermodal facilities are centered on rail, the regional freeway system, public transportation, bikeways, and a network of arterials.

**Employment areas** mix various types of employment and include some residential development. Overall densities are envisioned to be about 20 people per acre. Employment areas are expected to include some limited retail uses to serve the needs of people working or living in, or in close proximity to, the employment area.

### *Transportation Policies*

Chapter 2 of the Regional Framework Plan addresses transportation. The transportation policies in the Regional Framework Plan comply with and replace the air quality and transportation objectives in the RUGGOs. Implementation of the policies is through the Urban Growth Management Functional Plan and the RTP, which have requirements for local jurisdictions. Chapter 1 of the RTP also contains the transportation policies of the Regional Framework Plan, along with objectives, performance measures, project identification and funding criteria. Transportation policies in Chapter 2 of the RTP address a large variety of issues, including intergovernmental coordination, consistency between land use and transportation planning, public involvement, street design, water and air quality, public transportation, demand management, and funding.

### *Other Framework Policies*

Other chapters of the Regional Framework Plan include policies that address land use; parks, open spaces and recreational facilities; water; regional natural hazards; and management. The parks, open spaces and recreational facilities policies include a policy that addresses the desire to identify a regional trails system to be included in the RTP.

### ***Urban Growth Management Functional Plan***

The Metro Council adopted the Urban Growth Management Functional Plan (UGMFP) on November 21, 1996. The purpose of the UGMFP is to require early implementation of the 2040 Growth Concept prior to adoption of the Framework Plan. The UGMFP states:

Early implementation of the 2040 Growth Concept is intended to take advantage of opportunities now and avoid use of land inconsistent with the long-term growth policy. The MPAC, as well as the Joint Policy Advisory Committee on Transportation (JPACT) and the Water Resource Policy Advisory Committee (WRPAC), have made recommendations that are the basis for this functional plan. All of the elements considered by MPAC, JPACT and WRPAC were deemed by the Metro Council to be matters of metropolitan concern that have significant impact upon the orderly and responsible development of the metropolitan area.

The regional policies contained in the UGMFP recommend (in some cases) and require (in other cases) changes to city and county comprehensive plans and implementing ordinances.

'Shall' or other directive words are used with requirements. The local comprehensive plan changes and related actions, including implementing regulations, must be adopted within 24 months of the effective date of the UGMFP (February 21, 1999). The UGMFP is structured so that, in some instances, jurisdictions can choose to meet either a performance standard or a prescriptive standard. The intent is to allow local flexibility, although there are some mandatory requirements that apply to all cities and counties.

### *Title 2: Regional Parking Policy*

The TPR calls for reducing parking spaces per capita by restricting construction of new parking spaces and redeveloping existing parking to other uses. Excessive parking can result in less efficient land usage and lower floor-area ratios. Where transit is provided or other non-auto modes are convenient, less parking can be provided and still allow accessibility and mobility. Fewer auto trips can reduce congestion and increase air quality. The federally mandated air quality plan adopted by the State relies on the 2040 Growth Concept fully achieving its transportation objectives, including reducing vehicle trips and parking spaces per capita through the establishment of minimum and maximum parking ratios.

Cities and counties are required to amend their comprehensive plans and implementing regulations to meet or exceed standards established in the UGMFP Plan for minimum and maximum parking ratios. The regional parking ratios table included in the UGMFP establishes parking ratios based on the availability of good transit service by dividing the region in two zones. Some parking may be exempted from the ratios, such as paid parking (at market rate), carpool parking, and parking in structures. The maximum parking ratios apply to most uses, but residential uses, including hotels and motels, are exempt. Cities and counties must also monitor the number and location of newly developed parking spaces and show compliance with the minimum and maximum parking standards.

Portland City Council adopted new minimum and maximum parking ratios to comply with Title 2 requirements on October 11, 2000 (ordinance no. 174980). Chapter 6: Implementation Strategies and Regulations provides additional discussion of this action.

Title 2 was amended as part of the adoption of the RTP in 2000. Two new requirements were added for local jurisdictions. Cities and counties must allow the designation of residential parking districts in their comprehensive plans or codes. Portland already does this. A requirement was added, consistent with language in the TPR, to ensure that large parking lots (greater than three acres in area) include 'street-like features' along major driveways, including curbs, sidewalks, and street trees or plant strips. Chapter 6 of the TSP presents Portland's approach to fulfilling this requirement.

### *Title 6: Regional Accessibility*

Title 6 was superseded by the RTP when it was adopted in 2000. All of the requirements of Title 6 have been incorporated into Chapter 6 of the RTP.

## Regional Transportation Plan (Transportation Functional Plan)

The RTP is intended to implement the 2040 Growth Concept and is Metro's functional plan for transportation. It is a 20-year blueprint for making decisions about transportation in the region. The Metro Council adopted the RTP on August 10, 2000, following extensive public input and the advice of JPACT and MPAC.

As a condition for receiving federal funding for transportation projects, federal regulations require each urbanized area to have a transportation plan consistent with the planned development of the area. Metro, along with ODOT and Tri-Met, are the agencies designated to carry out the federal transportation and related air quality planning requirements. Metro must adopt a transportation plan at least every three years, and a Metropolitan Transportation Improvement Program (MTIP) at least every other year to identify the federally funded transportation projects to be implemented.

The RTP, like the City's TSP, must also be consistent with the State transportation plan and the requirements of the TPR. Some parts of the RTP, such as its policies and street classifications, are included in the Regional Framework Plan.

### Regional Transportation Vision

The regional transportation vision seeks to protect the region's livability by defining a transportation system that:

- Anticipates the region's current and future travel needs
- Accommodates an appropriate mix of all forms of travel
- Supports key elements of the 2040 Growth Concept through strategic investments in the region's transportation system

The RTP includes the following table, which establishes funding priorities based on 2040 design types.

**Table 7.1**  
**Hierarchy of 2040 Design Types**

<i>Primary Land Use Components</i>	<i>Secondary Land Use Components</i>
Central City	Station communities
Regional centers	Town centers
Industrial areas	Main streets
Intermodal facilities	Corridors
<i>Other Urban Land Use Components</i>	<i>Land Use Components outside the Urban Area</i>
Employment areas	Urban reserves
Inner neighborhoods	Rural reserves
Outer neighborhoods	Neighboring cities
	Green corridors



## ***Regional Transportation Policies***

The RTP policies and objectives address public process, connecting land use and transportation, equal access and safety, protecting the environment, designing the transportation system, managing the transportation system, and implementing the transportation system. The policies are summarized in the relevant modal and management plans in Chapter 5 of the TSP.

## ***Transportation System Design***

Similar to Portland's TE and TSP, the RTP is based on a multimodal system of regional streets. It is different from the TSP because it focuses only on streets of regional significance. The regional motor vehicle system provides access to the Central City, regional centers, industrial areas, and intermodal facilities, with an emphasis on mobility between these destinations. The hierarchy of motor vehicle classifications is from principal arterials, which include freeways and highways, to major arterials, minor arterials, and collectors of regional significance. This last category was added with the update of the RTP to include collectors that carry significant amounts of regional traffic and that need to be part of the regional system. Collectors of regional significance can be a single street or a collection of streets that carry some amount of regional traffic, while also functioning as neighborhood collectors. The design of the streets may be the same as other neighborhood collectors, including having traffic calming design features if needed.

The public transportation classifications have also been changed to reflect the increased importance of high-speed transit in accommodating growth. The regional public transportation system consists of light rail and streetcar, rapid bus, frequent bus, and regional bus. All of the primary transit network service is intended to have high frequencies throughout the day, varying in the length of trip served and the level of passenger amenities provided. The network also includes commuter rail, intercity high speed rail, intercity air passenger terminals, intercity rail passenger terminals, intercity bus passenger terminals, transit centers, LRT stations, and major bus stops.

The regional freight system includes main roadway routes, road connectors, main railroad lines, and branch railroad lines and spur tracks. A number of freight facilities are also mapped: marine, railroad, air cargo, distribution facilities, truck terminals, and intermodal rail yards.

The regional bicycle system has four categories of bike facilities: regional access bikeways, regional corridor on-street bikeways, regional corridor off-street bikeways, and community connectors.

The regional pedestrian system identifies pedestrian districts (mixed-use centers), which include the Central City, regional and town centers, and light rail stations; transit/mixed-use corridors; and multi-use facilities with pedestrian transportation functions.

In addition to these modal elements of the regional transportation system, Metro has added street design classifications, which recognize the link between transportation and land use in implementing the 2040 Growth Concept. Street design classifications are differentiated as throughways, which include freeways and highways; boulevards, which are differentiated as either regional or community and have high levels of facilities for pedestrian, bicycle, and

transit travel; Streets, which are also either regional or community level; and roads, which may be either urban or rural in character. The street design classifications also define potential boulevard intersections where special attention should be given to pedestrian movement.

### ***Recommended Transportation Improvements***

The RTP includes a project matrix showing transportation investments that are the most efficient way to use public funds to solve the region's transportation problems and implement the 2040 Growth Concept. (Chapter 13: Transportation and Land Use Alternatives provides more detail about RTP alternatives and the priority system. Chapter 14: Financial Plan has more detail about the financial aspects of the RTP.)

### ***Implementation***

Metro uses the RTP's list of projects to develop the MTIP. Chapter 14 provides additional information about the connection between regional and local financing of transportation projects.

Local jurisdictions have one year after adoption of the RTP to implement its requirements, which are summarized below.

#### ***Chapter 1: Regional Transportation Policy***

Local jurisdictions must be consistent with the policies, objectives, motor vehicle level-of-service measure and modal targets, system maps, and functional classifications. The TSP policies and objectives and the level-of service matrix are included in Chapter 2: Transportation Element of the Comprehensive Plan. Some policies addressed by the RTP are in other policies of the Comprehensive Plan under Goal 7, Energy, and Goal 8, Environment. These policies are summarized on pages 17 through 19 of this chapter. Modal targets are included in Chapter 15: System Performance.

#### ***Chapter 6: Implementation***

Sections of Chapter 6 of the RTP establish new and restate existing TPR requirements for local jurisdictions. In some cases, the RTP is more specific than the TPR requirements. Local TSPs must be in compliance with the following:

- Local jurisdictions must be consistent with the 2020 population and employment forecasts for the purpose of TSP development and analysis. These forecasts are based on the 2040 Growth Concept. Portland meets this requirement.
- Development of a conceptual new streets plan for vacant and redevelopable parcels of five acres or more and adoption into the comprehensive plan. (See Chapters 2 and 11 of the TSP.)
- Requirement for developers to provide a specific street plan map as a part of residential or mixed-use development. (See Chapter 6 of the TSP.)
- Consideration of narrow street designs and other local approaches to provide connectivity and support neighborhood livability. (See Chapters 2 and 6 of the TSP.)

- Development of alternative mode share targets for all 2040 Growth Concept land use design types, and strategies to achieve the targets. (See Chapters 2 and 15 of the TSP.)
- Incorporation into comprehensive plans and implementing ordinances of the motor vehicle level-of-service policy for regional facilities contained in the RTP. (See Chapter 2 of the TSP.)
- Consideration of transportation system management, alternative modes, comprehensive plan map amendments, connectivity, and traffic calming prior to capacity improvements (other than those in the RTP) during system planning, corridor or area studies, and land use reviews. (See Chapters 2, 5 and 6 of the TSP.)
- Adoption of an approach for areas of special concern (as identified in the RTP) that either 1) adopts a set of performance measures, or 2) establishes an action plan. (See Chapters 5 and 10 of the TSP.)
- Adoption of a transit system map consistent with the transit functional classifications in the RTP. (See Chapter 2 of the TSP.)
- Adoption of development code regulations to require orientation of retail, office, and institutional buildings at major transit stops. (See Chapter 6 of the TSP.)
- Provision for pedestrian crossings and street designs that respond to transit service. (See Chapters 2 and 6 of the TSP.)
- Consideration of operational and design considerations during transportation project analysis, including transportation system management to address or preserve existing street capacity and street design policies, classifications, and design principles contained in the RTP. (See Chapter 2 of the TSP.)
- Consideration of system management and regional street design policies and guidelines during transportation project analysis. (See Chapters 2 and 6 of the TSP.)

## **Portland Comprehensive Plan**

The Portland City Council adopted a Comprehensive Plan in 1980 that included goals, policies, objectives, and a plan map to guide the future development and redevelopment of the City. The plan was intended to be dynamic. Since its adoption, the goals, policies, and objectives have been amended to respond to new circumstances, special studies, new technology, and changes in state land use and transportation regulations.

The goals and policies of the Comprehensive Plan provide the context and guidance for future City programs, major capital projects, and other funding decisions. They respond to existing needs and conditions and provide initial guidance for decision making over the next 20 years. State law requires major development decisions to be consistent with the Comprehensive Plan. For this reason, the goals and policies must be reviewed periodically and modified as necessary to respond to changing conditions.

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## ***Transportation Element of the Comprehensive Plan***

The Transportation Element of the City of Portland's Comprehensive Plan includes transportation policies, street classification descriptions and maps, and district policies that are adopted as part of the Comprehensive Plan, as well as other sections of the TE that are not adopted in the Comprehensive Plan. The purpose of the TE is to establish a framework within which transportation projects and plans are developed and implemented within Portland.

The TE is the policy portion of the TSP. The street classifications dictate what types of automobile, transit, bicycle, pedestrian, truck, and emergency response use should be emphasized on each street. The current use of the street may not match these functional classifications, but land use changes and transportation projects should not be approved unless they are consistent with the classifications of the affected streets.

The TE also addresses issues such as neighborhood livability, land use/transportation relationships, public transit and transit-oriented development, and increased opportunities for walking and bicycling.

The TE indicates what types of improvements are appropriate on various kinds of streets and in different areas of the City. Citizens, City staff, and other agencies use the TE to identify transportation problems, develop and evaluate projects, and review private development proposals that will affect the street system.

The TE is updated every five years as part of the update of the TSP.

The TE includes three goals and their associated policies and objectives:

- Goal 6, Transportation
- Goal 11B: Public Rights-of-Way
- Central City Transportation Management Plan Goal

Chapter 2 of the TSP contains the complete TE, along with explanatory text.

### ***Transportation-Related Policies***

While Goal 6 of the Comprehensive Plan contains most of the Comprehensive Plan's transportation policies, some transportation-related policies are also found in other chapters. These policies address the interaction between transportation and urban development, economic development, energy conservation, and public infrastructure, as summarized below.

#### ***Comprehensive Plan Goal 2: Urban Development***

Goal 2 policies relevant to transportation are 2.12, Transit Corridors; 2.13, Auto-Oriented Commercial Development; 2.15, Living Closer to Work; 2.17, Transit Stations and Transit Centers; 2.18, Transit-Supportive Density; 2.19, Infill and Redevelopment; 2.24, Terwilliger Parkway Corridor Plan; and 2.25, Northwest Triangle District. The listed policies between 2.12 and 2.19 describe the ways in which land use can support transit use. Specifically, they call for minimum residential densities and a mixture of land uses along transit corridors and

at transit stations and centers. They also encourage transit-oriented development patterns along transit streets and at transit centers to enhance accessibility to transit. Policies 2.24 and 2.25 address specific areas of the City. Policy 2.24 calls for the preservation and enhancement of the scenic character of the Terwilliger Corridor. Policy 2.25 calls for efficient access and circulation in the Northwest Triangle District.

### *Comprehensive Plan Goal 3: Neighborhoods*

Goal 3 policies relevant to transportation are 3.6, Neighborhood Plan; 3.8, Albina Community Plan Neighborhoods; and 3.9, Outer Southeast Community Plan Neighborhoods and Business Plan. Policy 3.6 calls for maintaining and enforcing neighborhood plans that are consistent with the Comprehensive Plan and adopted by City Council. Policies 3.8 and 3.9 call for including neighborhood plans developed as part of community plans in the Comprehensive Plan.

Community and neighborhood plans are the primary vehicles for updating the City's Comprehensive Plan and Comprehensive Plan Map. These planning efforts develop policies and objectives relating to a number of topics, including transportation, land use, and urban design, which are adopted into the Comprehensive Plan. They also involve a rezoning effort that updates the Comprehensive Plan Map. The transportation policies in these plans are supportive and consistent with the TE and, once adopted, become part of Portland's transportation policy. The plans also suggest possible changes in street classifications, which are considered in the development of the City's TSP.

For community planning purposes, the City is divided into eight districts to examine transportation and other broad issue areas. Neighborhood plans provide the focus to address specific problems or needs and guide neighborhoods as they change over time.

Three community plans have been completed to date, two with concurrent neighborhood and business plans:

- Central City Plan
- Albina Community Plan (concurrent neighborhood plans: Arbor Lodge, Boise, Concordia, Eliot, Humboldt, Irvington, Kenton, King, Piedmont, Sabin, and Woodlawn)
- Outer Southeast Community Plan (concurrent neighborhood and business plans: Centennial, Foster-Powell, Hazelwood, Lents, Mill Park, Montavilla, Mt. Scott-Arleta, Outer Southeast Business Coalition, Pleasant Valley, Powellhurst-Gilbert, and South Tabor).

Individual neighborhood plans have also been developed over the years, a number of which address transportation and land use issues.

The Southwest Community Plan is the most recent community planning effort. Its policies, including transportation policies, were adopted in 2000. Its zoning map was adopted November 21, 2001 (ordinance No. 176090). Separate neighborhood plans were not adopted as part of the Southwest Community Plan.

The City's planning focus has recently changed from district-wide planning to updating the Comprehensive Plan in Region 2040 land use type area studies. Recently completed area

studies cover the Gateway regional center, Hollywood town center and Sandy main street, and Lents town center. The St. Johns town center and Lombard main street planning are currently underway.

### *Comprehensive Plan Goal 5: Economic Development*

Goal 5 policies relevant to transportation are 5.4, Transportation System; 5.5, Infrastructure Development; and 5.10, Columbia South Shore. Policy 5.4 recognizes the transportation system's role in economic development. It encourages a transportation system that efficiently moves people, goods, and services. Policy 5.5 calls for promoting public and private investments in public infrastructure to foster economic development in Council-designated target areas. Policy 5.10 addresses the specific needs of the Columbia South Shore – the building of recreational facilities in the area, the protection of the transportation capacity of the area's highways and roads, and the importance of the airport and other regional transportation facilities to the district.

### *Comprehensive Plan Goal 7: Energy*

Goal 7 policies relevant to transportation are 7.4, Energy Efficiency through Land Use Regulations; 7.6, Energy Efficient Transportation; and 7.7, Telecommunications as an Energy Efficient Strategy. Policies 7.4 and 7.6 promote efforts to increase the energy efficiency of the transportation system, including encouraging transit-supportive densities and a mixture of land uses, and using alternative modes and cleaner burning fuels. Policy 7.7 supports telecommunication as a means of reducing the need for travel.

### *Comprehensive Plan Goal 8: Environment*

Goal 8 policies relevant to transportation are 8.1, Interagency Cooperation - Air Quality; 8.2, Central City Transportation Management Plan; 8.3, Air Quality Maintenance Strategies; 8.4, Ride Sharing, Bicycling, Walking, and Transit; and 8.14, Natural Resources. These policies relate to the improvement of air quality, promotion of alternative modes of transportation, and preservation of viewpoints and corridors.

### *Comprehensive Plan Goal 11: Public Facilities*

Goal 11 policies relevant to transportation are 11.6, Public Facilities System Plan; 11.7, Capital Improvement Program; and Goal 11B: Public Rights-of-Way. Chapter 2 of the TSP contains the complete text of policies 11.8 through 11.12 for Goal 11B, which are considered part of the TE.

### *Comprehensive Plan Goal 12: Urban Design*

The Goal 12 policy relevant to transportation is 12.4, Provide for Pedestrians. This policy discusses the importance of a pedestrian environment that is attractive, comfortable, and safe. This is an environment that is not compromised by transportation improvements aimed at motor vehicle traffic and that improves pedestrian accessibility to parks, developments, and attractions.

## **Central City**

The Downtown and, later, the Central City have been the subject of numerous plans, policies and regulations intended to preserve and enhance them as the region's employment and cultural center.

### *Downtown Plan and Downtown Parking and Circulation Policy*

The Downtown Plan was adopted in 1972 to revitalize the central business district. The Downtown Plan transportation goal was to “design a balanced transportation system which is supportive of the other Downtown goals and which recognizes that the transportation system should provide more efficient use of both right-of-way and vehicles. This means reducing reliance on the automobile, increasing the number of persons per car and increasing the number of persons moving through concentrated areas on transit facilities.” More specific goals addressed the desired mode share for transit (75 percent of all trips), walking, bicycling, and public parking.

The Downtown Parking and Circulation Policy, adopted in 1975, implemented the Downtown Plan’s transportation goals and guidelines. Major updates occurred in 1980 and 1986, and amendments were made in 1988, 1991, and 1992. Major components of DPCP included a lid on the number of parking spaces, maximum parking ratios for new development, and restrictions on surface parking lots. This policy was the City’s plan for ensuring compliance with the carbon monoxide standards of the federal Clean Air Act. The Downtown Parking and Circulation Policy was superseded by the Central City Transportation Management Plan (CCTMP).

### *Central City Plan*

In the mid-1980s, the City of Portland recognized that there was more to downtown than the downtown core – that surrounding neighborhoods had equal potential for high-density commercial, retail, and residential development. The Central City Plan was a broad planning approach to achieve this potential in the eight districts of the Central City. City Council adopted the Central City Plan as part of the Comprehensive Plan in 1988. A key assumption was that transportation had and would continue to play a major role in shaping the Central City and implementing the Central City Plan. The transportation policy states:

Improve the Central City’s accessibility to the rest of the region and its ability to accommodate growth, by extending the light rail system and by maintaining and improving other forms of transit and the street and highway system and while preserving and enhancing the City’s livability.

Subpolicies address supporting light rail and other transportation facility improvements, providing adequate parking within each district, encouraging walking and the use of bicycles, improving goods movement, and protecting adjacent neighborhood livability. A specific recommended action in the plan directed PDOT to “[d]evelop a parking strategy for each Central City district, and for specific sectors within the Downtown. . . .”

### *Central City Transportation Management Plan*

City Council authorized development of the Central City Transportation Management Plan (CCTMP) in 1990 to carry out the Central City Plan’s transportation policy and to replace the Downtown Parking and Circulation Policy (DPCP). The CCTMP is intended to serve as the transportation system plan for the Central City, with modifications to be made only as necessary to ensure consistency with the City’s and Metro’s TSPs.

City Council adopted the CCTMP in December 1995 as part of the Comprehensive Plan. The CCTMP was the result of a five-year process to carry out the Central City Plan’s transportation policy and to replace the DPCP. The CCTMP includes transportation policies and potential actions for implementation. Regulations to implement the CCTMP were

adopted by ordinance and incorporated into Title 33, Planning and Zoning. The CCTMP is incorporated into the City's Comprehensive Plan TE.

### *Central City Transportation Management Plan Policies*

Much like the TE, the CCTMP is divided into several sections. It contains a transportation goal, a number of policies and objectives, district strategies, descriptions of street classifications, and street classification maps. Most of the policies and objectives apply throughout the Central City, but some are specific to certain districts or sectors. The policies are used to guide future improvements to the transportation system, while the strategies are potential implementation measures.

The CCTMP uses a concentrated growth scenario that predicts only a four percent increase in peak-hour auto use over historical patterns. One of the main reasons for this small increase is the amount of housing assumed to develop under this scenario. An increase in housing development will reduce the need to drive to jobs, and the implementation of parking management strategies will control the amount and use of parking.

Chapter 2 of the TSP contains the full text of the CCTMP goal, policies, and objectives. The CCTMP maps have been updated as a part of the TSP process and are in Chapter 2.

## **REVIEW PROCESSES**

### **State Requirements**

#### *Transportation Planning Rule*

The TPR [OAR 660-12-015 (5)] requires the development of TSPs to be coordinated with “affected state and federal agencies, local governments, special districts, and private providers of transportation services.” Where conflicts are identified between proposed regional TSPs and acknowledged comprehensive plans, representatives of affected local governments must meet to discuss ways to resolve the conflicts. These measures may include: a) changing the draft TSP to eliminate the conflicts, or b) amending the comprehensive plan provision to eliminate the conflict.

#### *Oregon Department of Transportation Review*

ODOT staff from the Region 1 office have actively participated in developing both the region's and the City's TSPs. ODOT must prepare and adopt a state TSP, which it has done (the Oregon Transportation Plan).

ODOT does not have a formal review process for local TSPs. It relies on Metro and the DLC D to review local TSPs for compliance with ODOT plans and policies. Metro ensures compliance with the RTP, and DLC D ensures compliance with the TPR. ODOT reviews local TSPs during their development and submits comments on issues affecting state highways and compliance with the Oregon Highway Plan (OHP), including access management requirements.



### ***Land Conservation and Development Commission Review***

The TSP is submitted to the LCDC for formal review and adoption. The LCDC must be notified, and copies of the TSP must be sent to Salem at least 45 days before the first evidentiary hearing (typically the first Planning Commission hearing). The LCDC review is governed by ORS 197.610, OAR Chapter 660 – Division 18 and Senate Bill 543 (effective June 30, 1999). Within five days of adoption of the TSP by City Council, notice must be sent to the Department of Land Conservation and Development (DLCDC).

### **Regional Requirements**

#### ***Role of Cities in Carrying Out RUGGOs***

Objective 8 of the RUGGOs lays out the roles of Metro, cities, counties, the state, and other special districts in carrying out the RUGGOs. Objective 8.2 defines the role of cities to:

- 8.2.1 Adopt and amend comprehensive plans to conform to functional plans adopted by Metro;
- 8.2.2 Identify potential areas and activities of metropolitan concern through a broad-based local discussion;
- 8.2.3 Cooperatively develop strategies for responding to designated areas and activities of metropolitan concern;
- 8.2.4 Participate in the review and refinement of these goals and objectives.

#### ***Development and Review of the RTP***

Metro had extensive involvement with local jurisdictions as it developed the RTP. Metro convened work teams and made up of representatives from affected jurisdictions to develop RTP policies and maps between 1995 and 1997. A coordination work team oversaw the work of the teams. The 17-member JPACT provides a forum for elected officials and representatives of agencies involved in regional transportation needs to evaluate the update of the RTP and make recommendations to the Metro Council. JPACT's discussions are based on the technical assessments of the TPAC, which includes technical staff from the same agencies as JPACT, as well as six citizens appointed at large by the Metro Council. This involvement of local jurisdictions is crucial because of the RTP's role as the framework for local TSPs.

#### ***Metro Review***

The Urban Growth Management Functional Plan (UGMFP) and Regional Transportation Plan (RTP) establish compliance review requirements.

#### ***Urban Growth Management Functional Plan***

Section 1 and Section 5 of Title 8 of the UGMFP govern review of Title 2 requirements that were amended with adoption of the RTP. These requirements are: 1) provide for residential parking districts and 2) street-like features along major driveways in parking lots of more than three acres in size. Cities and counties must amend their comprehensive plans and

implementing ordinances to comply with these new UGMFP provisions within one year of the adoption of the RTP.

Any amendments to a comprehensive plan or implementing ordinance, including the City's TSP, must be consistent with the requirements of the UGMFP. Notice must be given to Metro at the same time it is given to the Department of Land Conservation and Development (DLCD). The notice to Metro should include an analysis demonstrating that the proposed amendments are consistent with the UGMFP. If this analysis is not included in the initial notice, a report containing the analysis must be sent to Metro no later than 14 days before the City conducts a final hearing on the proposed amendment.

The Metro Council may grant exceptions to any of the requirements, after MPAC review. Exceptions to Title 6, Regional Accessibility, may be granted if a city or county can show that a street system or connection is not feasible for reasons of topographic constraints or natural or built environmental considerations.

Metro may grant an extension to timelines in the functional plan if the city or county has demonstrated substantial progress or proof of good cause for failing to complete the requirements on time.

City or county requests or determinations that functional plan requirements should not or cannot be incorporated into their comprehensive plan are subject to the conflict resolution and mediation processes of RUGGO (Goal 1) provisions. Final city or county land use decisions that are inconsistent with functional plan requirements, or failure to amend comprehensive plans and implementing ordinances, are subject to immediate appeal for violation of the functional plan and may result in a reduction of regional transportation funding.

### *Regional Transportation Plan*

Section 6.4.3, Process for Metro review of Local Plan Amendments, Facility and Service Plans, of the RTP describes how Metro will review the TSP. The TSP is submitted to Metro prior to public hearings. Metro will:

- Review the TSP for consistency with the elements of the RTP listed in Section 6.4.1
- Within four weeks of submission, send written comments identifying whether the TSP is consistent with RTP requirements and what, if any, modifications would be required to achieve consistency

The city or county must notify Metro of its final action on the TSP. Following adoption of the TSP, Metro will complete a 'final consistency review' and forward a finding of consistency to DLCD, or identify inconsistencies that were not remedied as part of the local adoption process. Metro's written finding of consistency or finding of non-compliance (if conflicting elements cannot be resolved between Metro and the local jurisdiction) for consideration as part of state review of the TSP.

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## **Portland Comprehensive Plan Requirements**

### ***Policy Requirements***

Goal 1: Metropolitan Coordination, of Portland's Comprehensive Plan directs changes to the plan to be coordinated with federal and state law and to support regional goals, objectives, and plans adopted by Metro to promote a regional planning framework. Policy 1.5, Compliance with Future Metro Planning Efforts, requires updates of Portland's Comprehensive Plan to comply with the Regional Framework Plan adopted by Metro. Policy 6.1, Intergovernmental Coordination, states:

Coordinate long range transportation planning activities by participating in Metro's management of funds and resources. Coordinate transportation facilities and improvements with development activities, both public and private, and with regional transportation and land use plans in order to achieve maximum benefit with the limited funds. Coordinate with affected state and federal agencies, local governments, special districts, and providers of transportation services in the development of the Transportation System Plan. Update the Transportation Element of the Comprehensive Plan to be consistent with the City and Regional Transportation System Plans and the Transportation Planning Rule.

### ***Technical Advisory Committee***

To develop the TSP, Portland convened a Technical Advisory Committee (TAC) made up of agency representatives inside and outside the City structure. The TAC includes representatives from Metro, the Port of Portland, Tri-Met, ODOT, and Multnomah, Clackamas, and Washington Counties. The TAC has met monthly during development of the TSP. It meets the requirements for coordination with affected state agencies, local governments, and special districts. Members of the TAC are listed in Volume I of the TSP.

### ***Public Review***

Chapter 8 of the TSP details the extensive TSP public review process. Public review is prescribed by the City's Comprehensive Plan, Metro's public involvement process, and Statewide Planning Goal 1. In addition to specific requirements, the City has established a citizen advisory committee, held numerous public workshops and briefings for citizens and neighborhood and business groups, and mailed newsletters to a large list of interested persons.

### ***Planning Commission Review***

The Portland Planning Commission received numerous briefings on the TSP in 2001. Formal hearings began on June 11, 2002. Public notice was mailed 30 days before the first public hearing, and the TSP documents (Volumes I, II, and III and the TSP inventory) were available a minimum of 10 days before the first hearing.

***City Council Review***

Portland City Council held a public hearing on September 25, 2002. A second hearing was held on October 17, 2002 to take testimony on amendments and regulations. City Council adopted the TSP on October 30, 2002 with an effective date of December 14, 2002.

# PUBLIC INVOLVEMENT

# 8

## INTRODUCTION

Public involvement is key to the quality and success of the Transportation System Plan (TSP). The citizen involvement component of the TSP has provided opportunities for a broad range of citizens, including those typically underserved by the transportation system, to be involved in the development of the plan. A variety of involvement activities have been instrumental to the planning process. Portland's citizens have provided input and review through workshops, focus groups, public hearings, staff presentations, and transportation conferences. The TSP also captures issues raised during development of the Regional Transportation Plan (RTP), community and neighborhood plans, and other City planning efforts.

## POLICY REQUIREMENTS

State, regional, and City policies mandate a citizen involvement component as an integral part of a planning effort. Oregon's Statewide Planning Goal 1: Citizen Involvement, aims to ensure that citizens have the opportunity to be involved in all phases of the planning process. The State mandates that elements of a public involvement program shall:

- Provide widespread citizen involvement, including the establishment of a citizen advisory committee (CAC) broadly representative of geographic areas and interests
- Assure effective two-way communication with citizens
- Assure technical information is available in an understandable form
- Assure that citizens receive a response from policymakers
- Insure adequate funding for citizen involvement in a planning budget

Metro's Local Public Involvement Policy for Transportation Planning (July 1995) includes a set of procedures for public involvement activities conducted at the local level. These procedures apply to locally adopted transportation plans and programs from which transportation projects are drawn and submitted to Metro. The local transportation plans and programs must meet minimum standards for public involvement before the Metro Council will take action on local transportation actions.

Portland's Comprehensive Plan, Goal 9: Citizen Involvement, calls for improving the method for citizen involvement in land use decision making and providing opportunities for citizen participation in the implementation, review, and amendment of the Comprehensive Plan. Goal 6 of the Comprehensive Plan, the Transportation Element, Policy 6.2: Public Involvement, specifies carrying out a public involvement process that is consistent with Metro guidelines and provides information about transportation issues and processes to citizens, especially those traditionally underserved by transportation services.

## TSP PUBLIC INVOLVEMENT PROGRAM

The public involvement program for the TSP occurred in distinct phases, corresponding to the developmental stages of the plan: introductory outreach, Phase I, and Phase II. Ongoing public outreach activities were also conducted to provide general information about the TSP and opportunities for interested citizens to get involved in the planning effort.

Before development of the TSP began, initial outreach activities introduced the plan concept to citizens and solicited interest in participating in a citizen advisory committee.

### Introductory Outreach

#### *Transportation System Plan (TSP) Forum*

In cooperation with Metro, the City held a Transportation System Plan Forum on October 19, 1994, to initiate public involvement in the planning process. The forum had two goals: 1) to provide information about the TSP process and its relationship to regional planning efforts and statewide goals, and 2) to solicit public participation in the plan, ranging from joining the TSP mailing list to applying to serve on a citizen advisory committee.

To draw a broad cross-section of Portland residents to this first public event, personalized invitations were sent to over 100 identified stakeholders, including representatives from various neighborhood, modal, business, and special interest groups. The forum was also advertised in *The Oregonian* and local newspapers.

The forum opened with a brief introduction to the plan's key elements, its relationship to regional planning, and potential approaches for addressing transportation trends in the region. It then featured a panel discussion of some of the key issues that would be discussed and debated during plan development. These issues included congestion pricing, freight movement, and least-cost planning, as well as the impact of the transportation system on development and environmental quality.

#### *Citizen Advisory Committee*

At the close of the forum, participants were encouraged to apply for the TSP Citizen Advisory Committee (TSP CAC). To supplement this pool of potential applicants, a recruitment notice was placed in various newspapers. To ensure broad geographic representation, each district coalition was invited to select a representative for the TSP CAC.

The CAC's 11 members were chosen to represent a cross-section of geographic areas and transportation advocacy and advisory groups. Their selection was based on:

- Interest group representation
- Geographic area representation
- Interest in transportation issues
- Familiarity with specific transportation mode(s)



The TSP CAC's role was to advise transportation staff in developing modal plans and recommending various transportation projects to implement the Transportation Element of the City's Comprehensive Plan. TSP CAC members were expected to represent the interests of their stakeholder group at committee meetings and to ensure two-way communication between the committee and their respective organizations.

Beginning in April 1995, the TSP CAC generally met once a month to review and comment on the development of the TSP. The committee members also participated in numerous public outreach events.

#### *TSP CAC Vision*

In 1998, the TSP CAC adopted a vision statement for the future of Portland to guide the committee's development of TSP concepts. The vision states:

Nature is an integral part of the personality of Portland. Nature has a vast array of interrelated systems, and transportation also has an array of interrelated systems. By developing a truly multimodal system, Portland offers many transportation options to its citizens. We have a vast network of parks, bikeways, and walkways.

Neighborhoods, schools, commercial and employment centers, entertainment and recreation areas are all well served by a highly developed, safe, and convenient transportation system.

City neighborhoods are easily walkable and, in addition, efficiently served by off-street and on-street bicycle and pedestrian systems, and a convenient transit system that includes buses, trolleys, streetcars, and light rail. The system is well balanced among all transportation modes and, for most trips, transportation choices exist. This integrated system allows for a very mobile populace that does not rely on single-occupant vehicles to get to, from, and within the metropolitan area.

The existence of multiple transportation options aids economic vitality as employers and employees have better access to one another. This increases economic efficiency and reduces employment barriers. In addition, the multiple transportation options reduce the need for expanded roadway capacity, and enhance the movement of freight and commercial traffic by preserving existing capacity for it. In building community, the citizens of Portland have developed a transportation system that is balanced, efficient, and convenient for its users. The natural environment that enhances the City's livability is restored to ecological balance, preserving water and air quality for future generations.

#### *TSP Concepts*

The CAC developed the following concepts to identify the guiding themes of the TSP (Chapter 1), create project evaluation criteria (Chapter 3), and devise performance measures (Chapter 15):

- **LAND USE:** The transportation system is integrated with land uses and serves compact mixed-use centers where walking is the easiest and most convenient mode.
- **LIVABILITY/ENVIRONMENT:** The transportation system is designed to minimize its impact on air and water quality by providing simple, direct, logical connections that keep through-traffic out of local neighborhoods.
- **ECONOMY:** The transportation system promotes economic vitality by accommodating the transportation needs of commerce and industry.
- **JOB ACCESS:** The transportation system provides for access to and within employment centers, major destinations, and neighborhoods.
- **CONVENIENCE:** The transit system provides a reasonable alternative to the automobile, offering convenient and timely service for travel within the City.
- **BALANCE/CHOICE:** A balanced transportation system reduces the emphasis on single-occupant vehicles and increases emphasis on other modes.
- **EFFICIENCY:** The transportation system is very efficient for all modes. It is planned, designed, and built with an orientation to everyday users and visitors. All modes are balanced and well connected, allowing a shift away from single-occupant vehicles.
- **DESIGN:** The transportation system is designed to support the land uses it serves, with emphasis given to the needs of pedestrians, bicyclists, and transit users.
- **EQUITY/ACCESS:** The transportation system offers equal opportunity for its users to choose a variety of modes by providing reasonable opportunities for access to transit, bicycle, and pedestrian systems.
- **FLEXIBILITY:** The transportation system is planned and designed to adapt and respond to foreseeable and unforeseeable market or technological changes that will enhance the mobility of its users while preserving the values of livability, safety, air and water quality.

### **Public Involvement in Phase I**

Phase I of the TSP development consisted of interim changes to Comprehensive Plan policies and objectives, Transportation Element classification descriptions and maps, and Comprehensive Plan definitions. These changes were needed to correct errors, update maps, and adopt the portions of the Bicycle and Pedestrian Master Plans that belong in the Comprehensive Plan.

Public involvement for Phase I involved briefing six district coalitions on the proposed changes relevant to each coalition's boundaries. It also included four citywide public workshops, a newsletter, two briefings to the Planning Commission, and hearings before the Planning Commission and City Council. Notice of the workshops and hearings was sent to the Regional Rail mailing list of over 8,000 households and organizations. Comments received from each level of public review led to revisions to the document that was adopted



by City Council on May 22, 1996. The Phase I revisions provided the policy framework for proceeding with Phase II of the TSP.

Table 8.1 summarizes the Phase I public involvement activities.

**Table 8.1**  
**Summary of TSP Public Involvement Activities – Phase I**

<i><b>Briefings on Policy Changes and Street Classifications</b></i>		
<b>Date</b>	<b>Audience</b>	
February 14, 1995	Planning Commission	
October 11, 1995	Neighbors West /Northwest Board	
October 11, 1995	East Portland District Coalition Transportation Committee	
October 16, 1995	Southeast Uplift Neighborhood Program Transportation Committee	
October 18, 1995	North Portland Neighborhood Office	
October 26, 1995	Northeast Coalition of Neighborhoods	
<i><b>Public Workshops on Policy Changes and Street Classifications</b></i>		
<b>Date</b>	<b>Area</b>	<b>Location</b>
October 19, 1994	TSP Forum	Portland Building
November 6, 1995	North/Northeast	Benson High School
November 13, 1995	Southwest	Gray Middle School
November 14, 1995	Southeast	Southeast Uplift Neighborhood Program
November 16, 1995	Northwest	Northwest District Association Service Center
<i><b>TSP Public Hearings on Policy Changes and Street Classifications</b></i>		
<b>Date</b>	<b>Subject</b>	<b>Hearing Body</b>
January 23, 1996	TSP Staff Recommendation	Planning Commission
March 12, 1996	TSP Staff Recommendation	Planning Commission
May 1, 1996	Bicycle Master Plan/TSP	City Council
May 8, 1996	Pedestrian Master Plan/TSP	City Council
May 15, 1996	TSP Planning Commission Recommendation	City Council
May 22, 1996	Ordinance 17 0136 amending Comprehensive Plan goals, policies, and objectives to implement Phase I of the TSP passed	City Council

## Public Involvement in Phase II

Phase II of the TSP began immediately after Phase I was adopted in May 1996. The second phase focused on completing the TSP in compliance with State and regional transportation requirements. Plan elements in this phase included:

- Updating citywide and district transportation policies and street classifications
- Defining transportation needs
- Preparing modal and management plans to address needs
- Identifying major capital improvements in response to needs
- Developing financial strategies to support projects list
- Crafting implementation strategies to achieve plan goals
- Creating performance measures to track success of the plan

At key points in the planning process, TSP public involvement activities helped inform the vision and policy direction, gather information, and provide feedback on the plan. These activities included distribution of brochures and newsletters, creation of a web site, eight district workshops, seven district coalition focus groups, nine district coalition briefings, and numerous other meetings with interest groups, neighborhoods, and district coalitions, as summarized below.

### *District Workshops*

TSP staff and CAC members held workshops in each of the eight Transportation Districts in fall 1998 to discuss transportation issues and community needs (Table 8.2). The series of workshops drew 183 participants, many representing neighborhoods or advocacy groups.



The workshop participants heard presentations on the TSP requirements and on financing transportation system improvements. Participants then split into smaller discussion groups facilitated by staff members. Each discussion group identified transportation needs in its district, reviewed the relevance of action items from previous planning efforts, and indicated its priority

issues (called 'transportation values') to guide transportation funding decisions. All ideas were recorded and later reviewed, sorted, and analyzed for compliance with regulatory and policy requirements. (Chapter 3 describes the review process.)

**Table 8.2**  
**TSP District Workshops Schedule**

<b>Date</b>	<b>Audience</b>
September 30, 1998	Southeast
October 1, 1998	North
October 3, 1998	Far Southeast
October 6, 1998	Northwest
October 7, 1998	Northeast
October 8, 1998	Far Northeast
October 13, 1998	Southwest
October 17, 1998	Central City /Citywide with Metro

### ***Focus Groups***

Six focus groups were held with Portland's district coalitions in summer 1999, and a seventh focus group was held with the Columbia Corridor Association in January 2000 (Table 8.3). The focus groups provided an interactive discussion on the preliminary recommendations for citywide and district transportation policies. Participants reviewed and provided feedback on new policies, amendments to existing policies, and policy deletions. The focus groups also provided an opportunity for participants to offer new policy ideas. The outcome of the focus group discussions informed the policies recommended by staff.

**Table 8.3**  
**District Coalition Focus Groups**

<b>Date</b>	<b>Audience</b>
June 21, 1999	Southwest Neighborhoods, Inc. (SWNI) Transportation
July 13, 1999	Southeast Uplift Neighborhood Program (SEUL)
July 15, 1999	Central Northeast Neighbors (CNN) and East Portland Neighborhood Office (EPNO)
July 21, 1999	Neighbors West/Northwest (W/NW) and Southwest Hills Residential League (SWHRL)
July 22, 1999	Columbia Corridor Association
July 26, 1999	North Portland Neighborhood Services (NPNS) and Northeast Coalition of Neighborhoods (NECN)
January 4, 2000	Columbia Corridor Association

### ***TSP Briefings***

Before releasing the recommended plan, TSP staff conducted two series of educational briefings to community leaders. The first series comprised seven briefings to Portland Planning Commission members in preparation for the plan's release in May 2002 (Table 8.4). The intent was to provide a framework for understanding the TSP's elements and their relationship to the Portland's Comprehensive Plan.

**Table 8.4**  
**Schedule of Portland Planning Commission Briefings**

<b>Date</b>	<b>Topic</b>
May 8, 2001	Overview of the TSP
May 23, 2001	General Briefing
June 12, 2001	City wide and District Transportation Policies
July 24, 2001	Street Classification Maps
August 28, 2001	Projects & Studies, Finances, and Performance Evaluation
September 25, 2001	TSP Primer and Implementation
February 12, 2002	Code Amendments

The second series of briefings was held for the transportation committees of each district coalition (Table 8.5). A district coalition staff training session served as the kick off for these briefings. The purpose of the briefings was to refresh committee members' knowledge of the TSP and prepare them for the public review and hearings on the plan. A briefing packet was distributed to explain the key elements of the TSP. Staff discussed these key elements and answered questions.

**Table 8.5**  
**Schedule of District Coalition Briefings**

<b>Date</b>	<b>Audience</b>
June 7, 2001	Neighborhood Coalition Staff
June 13, 2001	Central Northeast Neighbors (CNN)
June 18, 2001	Southwest Neighborhoods, Inc. (SWNI) and Southwest Hills Residential League (SWHRL)
June 19, 2001	Northeast Coalition of Neighborhoods (NECN)
June 26, 2001	North Portland Neighborhood Services (NPNS)
June 28, 2001	Neighbors West/Northwest (W/NW)
July 11, 2001	East Portland Neighborhood Office (EPNO)
July 16, 2001	Southeast Uplift Neighborhood Program (SEUL)
July 19, 2001	Columbia Corridor Transportation
September 18, 2001	Southwest Hills Residential League (SWHRL)

### ***Open Houses***

TSP staff and CAC members conducted three open houses in December 2001 to present key elements of the proposed plan to the public (Table 8.6). A postcard announcement was mailed to the TSP mailing list, and a press release was sent to the community newspapers.

Participants were guided through a series of stations that described the need for the plan and laid out the various elements. At each station, participants could comment on the materials and ask questions of staff. Key TSP chapters were available as handouts, including the transportation policies and street classifications, modal plans, and transportation system improvements. Citizens were encouraged to take materials home for more intensive review. Several options for returning comments were provided. The comments received from citizens were considered and incorporated as appropriate.



**Table 8.6**  
**TSP Preview Open Houses**

<b>Date</b>	<b>Location</b>
December 8, 2001	Portland Building
December 12, 2001	Portland Building
December 13, 2001	Southeast Community Center

### ***Brochures and Newsletters***

Two brochures were prepared during Phase II to provide updated information about the TSP. The first brochure was prepared in summer 1998 to introduce citizens to the idea of the plan, its goals, and how to get involved. It was sent to citizens on the TSP mailing list, distributed at public meetings, and mailed to interested citizens when requested. The second brochure was prepared in spring 2001, in preparation for the release of the proposed plan and corresponding public outreach activities. It described the plan's guiding principles, key elements, and upcoming public outreach events. This brochure was sent to citizens on the TSP mailing list, placed in district coalition offices, sent out in response to information requests, and distributed at various public outreach events, including the Portland Improvements Open Houses.

Two TSP newsletters provided citizens with more detailed information about the progress of the plan during Phase II. (Volume I was distributed during Phase I.) Volume II was published in August 1998 and announced the new phase of the TSP and the district workshop series, a pivotal component of the TSP public involvement effort. Volume III was published in winter 1999. It summarized the outcome of the district workshops held the previous autumn and described the next steps for the planning process.

### ***Planning Commission Hearings***

On June 11 and June 25, 2002, the Portland Planning Commission held hearings to receive public testimony on the staff recommended TSP. Prior to the first hearing, a notice for the June 11<sup>th</sup> Planning Commission hearing was mailed to the TSP mailing list and the Bureau of Planning's legislative mailing list. In addition, a press release was sent to neighborhood association newsletter chairs and local media advising them of the upcoming hearings.

Copies of the document were made available 30 days prior to the first hearing. Interested citizens could pick up copies from PDOT or review them at their district coalition office. A downloadable version was also made available on the TSP web site.

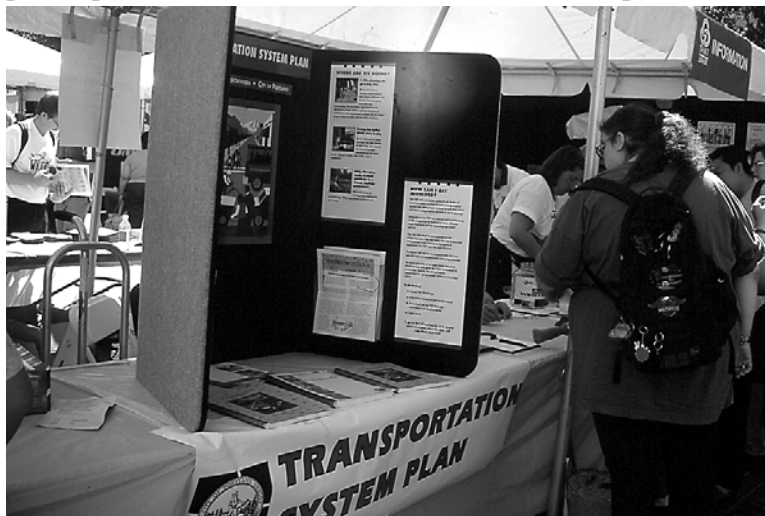
On July 9<sup>th</sup>, 2002, Planning Commission unanimously voted to forward the staff recommended TSP to City Council with minimal revisions.

### **Ongoing Public Involvement**

In addition to the Phase I and Phase II public involvement activities described above, staff used other public outreach methods throughout the process to provide education about the TSP and publicize upcoming TSP events, as described below and summarized in Table 8.7.

### ***Participation in City Outreach Events***

TSP staff participated in City outreach events, such as the 1994 Regional Rail Summit; the East Portland Traffic Forum; and Earth Day, safety, clean air, and energy fairs. Staff also participated in the 1997 and 1998 Annual Transportation Summits. A TSP information



booth at these events provided TSP brochures and/or newsletters and gave interested citizens the opportunity to sign up for the TSP mailing list. Staff members were also available to answer questions about the plan. In addition, staff members attended the Portland Office of Transportation's (PDOT) outreach events for its capital improvements plan (CIP) and participated in the city wide Portland Improvements Open House in fall 2001.

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### ***General Publicity***

Descriptions of the TSP appeared in the following publications:

- The Urban Puzzle: Piecing It Together, prepared for the Fourth Annual Regional Rail Summit
- Office of Neighborhood Associations (ONA) Handbook

### ***TSP Web Site***

The TSP web site provides general information about the TSP planning process and allows interested citizens to join the TSP mailing list to receive future updates and notices. The web site also provides a downloadable version of the current Transportation Element of the Comprehensive Plan. A downloadable version of the Staff Recommendation to Planning Commission TSP was added prior to the Planning Commission hearings in June/July 2002. The downloadable version of the adopted TSP will be available after the City Council adoption process is complete.

### ***Coordination with Land Use Planning***

TSP staff participated in public workshops for the Outer Southeast and Southwest Community Plans, as well as workshops for implementing 2040 town centers in Hollywood and St. Johns.

### ***Coordination with Regional Planning***

Public involvement for the TSP was closely coordinated with public involvement for the RTP in a number of ways. The City ensured that a representative from the TSP CAC was appointed to the RTP CAC. TSP and RTP staff members briefed each other's CAC. In addition, TSP staff and CAC members participated in regional transportation workshops, and RTP staff participated in citywide transportation workshops.

**Table 8.7**  
**Summary of TSP General Public Outreach Efforts**

<i>Events</i>		
<b>Date</b>	<b>Event</b>	<b>Participation</b>
February 26, 1994	Regional Rail Summit	Display ; brochures
April 9, 1994	East Portland Traffic Forum	Display ; brochures
April 22, 1994	Walk Your Talk, Earth Day	Display ; brochures
May 14, 1994	Grant Park Neighborhood Association Safety Fair	Br ochures
June 18, 1994	NW Solstice	Br ochures
June 24, 1994	Clean Air Fair	Br ochures
October 7, 1994	Energy Fair	Staff; brochures
January 21, 1995	Central City Transportation Management Plan (CCTMP) Fair	Br ochures
January 28, 1995	Metro Transportation Fair	Staff; displays ; br ochures
April 5, 1995	Bicycle and Pedestrian Master Plans Open House: Northwest	Br ochures; answer questions
May 17, 1995	Bicycle and Pedestrian Master Plans Open House: Downtown	Br ochures; answer questions
March 30, 1996	Metro Open House	Br ochures; answer questions
May 18, 1996	Regional Rail Summit	Br ochures; newsletters
April 26, 1997	Annual Transportation Summit	Facilitate group discu ssions; conduct survey
Nov ember 3, 1997	RTP Workshops	Facilitate group discu ssion s; br ochures
Nov ember 8, 1997	RTP Workshops	Facilitate group discu ssion s; br ochures
October 15, 2001	Portland Improv ements Open House - Southwest and Northwest	Hand out brochures; advertise TSP open houses; answer questions
October 22, 2001	Portland Improv ements Open House - Inner Southeast	Hand out brochures; advertise TSP open houses; answer questions
Nov ember 3, 2001	Portland Improv ements Open House - North and Inner Northeast	Hand out brochures; advertise TSP open houses; answer questions
Nov ember 8, 2001	Portland Improv ements Open House - Outer Northeast and Outer Southeast	Hand out brochures; advertise TSP open houses; answer questions
March 16, 2002	3 <sup>rd</sup> Annual Neighborhood A ssociation Summit	Hand out brochures and review drafts; advertise PCPC hearings



<b><i>General Publicity and Education Materials</i></b>		
<b>Date</b>	<b>Material</b>	<b>Content</b>
February 1994	Piecing It Together; Regional Rail Handbook	Description of TSP
Spring 1994	TSP Brochure	Introduction to TSP
June 1995	Office of Neighborhood Association Handbook	Description of TSP
Fall 1995	TSP Newsletter – Volume I	Introduction to TSP issues, public involvement opportunities
Summer 1998	TSP Newsletter – Volume II	TSP update
Winter 1999	TSP Newsletter – Volume III	Workshop Summary
June 2001	TSP Brochure	TSP elements and status
June 2001	TSP Handout	TSP overview
December 2001	Open House Handouts (19 documents)	TSP elements
<b><i>TSP Presentations</i></b>		
<b>Date</b>	<b>Audience</b>	<b>Purpose</b>
April 13, 1994	Steering Committee Meeting, Refugee Forum	Introduction to TSP
July 18, 1994	Southeast Uplift Neighborhood Program Land Use and Transportation Committee	Introduction to TSP
July 18, 1994	District Coalitions Meeting	Proposed public involvement process for the TSP
September 13, 1994	Reclaiming Our Streets Implementation Team	Introduction to TSP
October 31, 1994	Refugee Forum	Solicit CAC members
February 26, 2001	SWNI Transportation Committee	Update on status of TSP; answer questions
March 14, 2002	Oregon Trucking Association	Update on status of TSP; answer questions
March 25, 2002	City wide Land Use and Transportation Working Group	Update on status of TSP; answer questions



## INTRODUCTION

Portland's urban transportation system serves an area of approximately 147 square miles and a population of 530,000 people. To better manage a city's transportation infrastructure, the State Transportation Planning Rule (TPR) requires local and regional transportation system plans (TSP) to include an inventory and general assessment of existing transportation facilities and services by function, type, capacity, and condition. The Portland Office of Transportation (PDOT) completed an extensive Transportation System Plan Inventory in 1996. The scope of the inventory exceeds the TPR's baseline requirements; it also includes air, freight, mainline, and pipeline facilities and a description and maps of environmental constraints.

This chapter summarizes the TPR requirements and the 1996 Inventory. Unless otherwise indicated, the results cited below are taken from that inventory. Supporting information, maps, and figures are available in the 1996 Inventory, under separate cover.

## REQUIREMENTS

### Transportation Planning Rule

The TPR requires an inventory and general assessment of existing transportation facilities and services by function, type, capacity, and condition for:

1. Road system of arterials, collectors, local streets, and other important non-collector street connections
2. Public transportation services
3. Network of bicycle and pedestrian routes

The transportation capacity analysis for each element of the inventory must include:

- The capacities of existing and committed facilities.
- The degree to which those capacities have been reached or surpassed on existing facilities.
- The assumptions upon which these capacities are based.
- For State and regional facilities, the transportation capacity analysis shall be consistent with standards of facility performance considered acceptable by the affected State or regional transportation agency.
- The transportation facility condition analysis shall describe the general physical and operational condition of each transportation facility (for example: very good, good, fair, poor, very poor).

## INVENTORY

Table 9.1 shows the condition of each transportation facility. Based on 1995 ratings, most facilities are in good or very good condition; however, condition ratings have fallen in recent years. Two facilities (bridges and traffic signal hardware) are mostly in fair, poor, or very poor condition. Two additional facilities (pavement and traffic safety) are deteriorating as a result of inadequate funding. Even street lighting, the facility in the best condition, will be in poor condition within 15 years if capital replacement funding is not found.

### Street System

Portland's street system of arterials, collectors, local streets, and other important non-collector street connections is summarized below. In accordance with TPR requirements, streets are separated into arterial/collector and local streets for inventory reporting purposes. Chapter 2: Transportation Element of the Comprehensive Plan, of the TSP contains a detailed explanation of the functional classification of streets in Portland. The modal plans in Chapter 5: Modal Plans and Management Plans, contain equivalency tables that compare the street classification schemes used in Portland's TSP with those used in Metro's Regional Transportation Plan (RTP).

### Jurisdiction

The Oregon Department of Transportation (ODOT), Multnomah County, and the City of Portland are the primary jurisdictions within the City. The Port of Portland, railroads, and private owners are also involved in transportation infrastructure.

There are two primary considerations with respect to roadway jurisdiction: right-of-way (ROW) jurisdiction and route jurisdiction. In Portland, most roadways are either City streets on City ROW, ODOT routes on City ROW, or ODOT routes on ODOT ROW. (Figure 1 in the 1996 Inventory shows which government entity controlled the right-of-way and which controlled the route on all roadways in Portland in 1996.)

**Table 9.1**  
**Portland Transportation System:**  
**Status, Condition, and Value (July 1995)**

Facility	Status	Replacement Value	Condition (Percent)						Unmet Need
			VG	G	F	P	VP	TBD	
<b>Pavement</b>									
Improved Streets	3,805 Lane Miles	\$2,825,935,274	27	29	26	15	3		\$34,850,000
Unimproved (A)	160 Lane Miles	N/A					100		N/A
<i>Total Streets</i>	<i>3,965 Lane Miles</i>	<i>\$2,825,935,274</i>					<i>100</i>		<i>\$34,850,000</i>
<b>Pedestrian System</b>									
Sidewalks	1,900 Miles	\$406,296,000						X	N/A
Curbs	2,924 Miles	\$370,529,280						X	TBD
Corners	54,680	\$60,000,000		80	15	5			\$4,297,000
<i>Total</i>		<i>\$836,825,280</i>							<i>\$4,297,000</i>

Facility	Status	Replacement Value	Condition (Percent)						Unmet Need
			VG	G	F	P	VP	TBD	
<b>Bicycle Network</b>									
Bicycle Lanes (C)	64 Miles							X	TBD
<b>Structures</b>									
Bridges (D)	163	\$128,269,168	36	13	14	15	22		\$56,137,000
Retaining Walls	202	\$14,034,275	89	10	1	0	0		TBD
Stairways	169	\$2,633,700						X	TBD
Guardrails	15 Miles	\$4,275,637						X	TBD
Harbor Wall	5,400 Feet	\$55,211,750	100						0
<i>Total</i>		<i>\$204,424,530</i>							<i>\$56,137,000</i>
<b>Traffic Signals</b>									
Hardware	931	\$77,273,000		46	33	21			\$16,227,000
Controllers	931	\$6,517,000		77	15	8			\$521,000
Other Equipment	170	\$1,105,000							TBD
<i>Total</i>		<i>\$84,895,000</i>							<i>\$16,748,000</i>
<b>Traffic Safety</b>									
Maj. Intrsect. (E)	1,255			81	17	2			\$4,125,000
<b>Traffic Calming</b>									
Calming Devices	378	\$5,303,000						X	TBD
<b>Street Lights</b>									
Street Lights	49,000	\$33,000,000		94	4	2			\$1,865,000
<b>Street Signs</b>									
Street Name	68,750	\$2,320,175						X	TBD
Parking	43,368	\$1,677,474						X	TBD
Traffic Control	33,131	\$2,570,435						X	TBD
<i>Total</i>		<i>\$6,568,084</i>							
<b>Parking Meters</b>									
Meters	5,376	\$2,144,520	90	10					\$0
Facilities Subtotal		\$3,999,095,688							\$118,022,000
Right-Of-Way (G)	1,927 Miles	\$3,660,863,502							\$0
<i>TOTAL</i>		<i>\$7,659,959,190</i>							<i>\$118,022,000</i>

Source: Portland Transportation System: Status and Conditions Report, Executive Summary, July 1995.

## Notes:

- N/A Not applicable. This is not currently the City's financial responsibility.
- TBD To be determined as part of the Infrastructure Management Project or other programs.
- A City investment has not been made on unimproved streets. The cost to improve these streets in 1996, including drainage improvements, was \$110.8 million.
- B The unmet need for corners does not include the \$41.5 million cost estimated in 1996 for installing curb ramps to meet ADA standards.
- C The replacement value for bicycle lanes is included in pavement replacement value. In addition, at the time of the inventory, there were 11 miles of bicycle boulevards and 53 miles of off-street paths.
- D The unmet need for bridges includes \$38.9 million for seismic retrofitting.
- E The replacement value for major intersections is included in the figures for pavement, traffic signals, and street signs.
- F The unmet need for traffic calming has not been calculated. At inventory time, there were 1,059 unfunded projects requested that met the minimum program requirements.
- G The replacement value for right-of-way represents the value of the land in the right-of-way.

Maintenance jurisdiction is somewhat more complex than ROW or route jurisdiction, and depends on particular agreements between the City, ODOT, Multnomah County, and adjacent property owners. The City's Pavement Management System (PMS) maintains information about maintenance responsibility for City routes.

In 1984, the City of Portland and Multnomah County agreed to transfer all designated county roads within Portland to the City. As shown in Table 9.2, annexation of county roads has increased Portland's street inventory, and will continue to increase it as more roads within Portland's urban services boundary are annexed.

**Table 9.2**  
**Historical Comparison of Street Inventory (in Lane Miles)**

Type	April 1, 1984*		July 1, 1994		Difference	
	Number	Percent	Number	Percent	Number	Percent
Arterials/Collectors	676	26	1,179	32	503	45
Local Streets	1,890	74	2,499	68	609	55
<b>TOTAL</b>	<b>2,566</b>	<b>100</b>	<b>3,678</b>	<b>100</b>	<b>1,112</b>	<b>43</b>

Source: Portland Transportation System: Status and Condition Report, July 1994

\*Pre-City/County Agreement and Pre-Annexation

Between 1984 and 1994, the number of lane miles in Portland's street system increased by 43 percent to a total of 3,678, including 1,179 arterial and 2,499 local street lane miles. Of this total of improved streets for which PDOT is responsible, 93 percent are hard-surfaced asphalt or concrete and 7 percent are oil or gravel. In addition, ODOT maintains 12 state highways within the City boundaries.

### **Pavement Conditions**

PDOT put its PMS into full operation in 1983 to identify the current condition of all streets within the City. Based on field evaluations, street segments are assigned a coded rating for each of five distress characteristics. Scores are calculated, a maintenance strategy is selected, and work is performed. Street treatments include street resurfacing, overlay, sealing, patching, base repair, and reconstruction.

Five categories, ranging from very good to very poor, are used to represent the street condition, with lower scores representing a better condition. After the pavement is treated, the coded rating automatically reverts back to zero, or "very good." Table 9.3 shows the percentage of lane miles by condition for fiscal years 1988-89 to 1993-94.

**Table 9.3**  
**Pavement Condition (in Percent)**

	FY 88-89	FY 89-90	FY 90-91	FY 91-92	FY 92-93	FY 93-94
Total Lane Miles in City	3,426	3,453	3,508	3,540	3,576	3,678
Very Good	13%	16%	18%	21%	25%	27%
Good	48%	49%	44%	41%	38%	35%
Fair	24%	22%	24%	23%	23%	23%
<b>Fair or Better</b>	<b>85%</b>	<b>87%</b>	<b>86%</b>	<b>85%</b>	<b>86%</b>	<b>85%</b>
Poor	12%	10%	11%	12%	11%	12%
Very Poor	3%	3%	3%	3%	3%	3%
<b>Poor or Worse</b>	<b>15%</b>	<b>13%</b>	<b>14%</b>	<b>15%</b>	<b>14%</b>	<b>15%</b>

Source: Portland Transportation System: Status and Condition Report, July 1994

### ***Number of Lanes and Lane Widths***

The PMS inventory identifies the number of lanes on any given roadway segment and the curb-to-curb width. The PMS covers only roadways under City jurisdiction; it does not include other roadways that are within the City limits but maintained by other jurisdictions. (Figure 2 in the 1996 Inventory depicts the number of travel lanes on Portland's arterial streets.)

### **Traffic Signals**

The City maintains all signals within Portland, except for a few signals on State highways in recently annexed areas, which the State still maintains. For traffic signals at intersections or interchanges between State highways and City streets, the State reimburses the City 50 percent of maintenance and power costs for signals installed or remodeled after 1971.

As a result of annexation and new signal installations, Portland's signalized intersections have increased from 872 in 1986 to 923 in 1994. (Figure 3 in the 1996 Inventory shows the government entity responsible for maintenance at each traffic signal location. Figure 4 in the 1996 Inventory shows the signal type at each location.)

Each signal has two major components: intersection hardware and signal controller. The condition of the hardware has deteriorated since 1986; the percentage in good condition decreased from 69 to 48 percent between 1986 and 1994, while the percentage in poor condition increased from 11 to 20 percent. Because of decreased agency revenue, the level of expenditures for replacements has not kept up with the need.

The condition of intersection controllers has improved between 1986 and 1994; the percentage in good condition increased from 66 to 75 percent, while the percentage in poor condition dropped from 23 to 12 percent. The current level of investment has raised the condition of the controller inventory to an acceptable level.

Table 9.4 summarizes the condition of traffic signal hardware and signal controllers.

**Table 9.4**  
**Traffic Signal Condition**

<b>Hardware</b>	<b>1986</b>		<b>1994</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Good	602	69	443	48
Fair	174	20	295	32
Poor	96	11	185	20
<i>Total</i>	<i>872</i>	<i>100</i>	<i>923</i>	<i>100</i>
<b>Controllers</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Good	575	66	692	75
Fair	96	11	120	13
Poor	201	23	111	12
<i>Total</i>	<i>872</i>	<i>100</i>	<i>923</i>	<i>100</i>

*Source: Portland Transportation System: Status and Condition Report, July 1994*

## Traffic Signs

There were approximately 144,300 traffic signs within the City of Portland in 1996. Since that time, a complete inventory, including location, condition, and maintenance history, has been developed. The GIS-based sign inventory is part of the Infrastructure Management System (IMS) project and is maintained by the PDOT Bureau of Maintenance (BOM). (Figure 5 in the 1996 Inventory shows the 1991 arterial sign inventory by sign type.)

## Structures

The structures inventoried in 1996 comprise 158 bridges, 202 retaining walls, 15 miles of guardrails, 169 stairways, and the harbor wall along the Willamette River.

Between 1986 and 1996, Portland's bridge inventory grew from 109 to 158 as a result of annexation, ODOT construction projects, and new local construction. To analyze bridge condition, bridge components built at different times or of different materials are counted separately, bringing the total bridge inventory to 158.

Several jurisdictions maintain bridges within the City boundaries. At the time of the 1996 inventory, in addition to the City's 158 bridges, the State of Oregon was responsible for 250 bridges, Burlington Northern Railroad for 3 bridges, and Multnomah County for 5 of the Willamette River bridges. County bridges are composed of various structural approaches and spans, which constitute 21 separate bridges for inventory purposes.

In December 1986, PDOT completed a Structural Capital Evaluation Project that assessed the current condition and use of the City inventory of bridges and retaining walls. A 10-year structural capital improvement program was developed through that project.

Table 9.5 describes the condition categories for structures. Table 9.6 shows the condition of bridges based on that rating system. In 1994, 48 percent of the City's bridges were in very good or good condition, 29 percent were in fair or poor condition, and 23 percent were in very poor condition. The changes in bridge condition from 1986 to 1994 result from the increased number of bridges and the policy change that separates bridges at the same location if they were built at different times or of different materials. (Figure 6 in the 1996 Inventory maps bridge condition by location.)

**Table 9.5**  
**Structures Inventory Rating System (Overall)**

Condition	Description	Rating Number
Very Good	No defects; minimal maintenance required; normal traffic	Over 75
Good	Minor defects; potential for minor repairs; normal traffic	66-75
Fair	Moderate defects; satisfactory with normal maintenance; potential major repair required; minor effect on traffic	56-65
Poor	Major defects; major repairs required; reduced traffic	46-55
Very Poor	Major defects; major rehabilitation or replacement required; inadequate for traffic	Below 46

Source: Portland Transportation System: Status and Condition Report, July 1994



**Table 9.6  
Bridge Condition**

Condition	1986		1994	
	Number	Percent	Number	Percent
Very Good	44	40	54	34
Good	29	27	22	14
Fair	21	19	25	16
Poor	10	9	21	13
Very Poor	5	5	36	23
<b>Total</b>	<b>109</b>	<b>100</b>	<b>158</b>	<b>100</b>

*Source: Portland Transportation System: Status and Condition Report, July 1994*

Overall, the condition of the retaining walls in 1994 was good or very good, with only two percent in fair or worse condition. The increase from 167 to 202 retaining walls between 1986 and 1994 results from annexation and new construction. Table 9.7 summarizes the condition of retaining walls.

**Table 9.7  
Retaining Wall Condition**

Condition	1986		1994	
	Number	Percent	Number	Percent
Very Good	147	88	180	89
Good	16	10	20	10
Fair	4	2	2	2
Poor	0	0	0	0
Very Poor	0	0	0	0
<b>Total</b>	<b>167</b>	<b>100</b>	<b>202</b>	<b>101</b>

*Source: Portland Transportation System: Status and Condition Report, July 1994*

The harbor wall located on the west bank of the Willamette River in downtown Portland is not included in the analysis of structures. Built in 1929, the harbor wall is inspected every other year, and after the departure of the Rose Festival fleet if funds are available. Its condition is rated as very good, based on a minimal rate of settlement and movement since its construction.

## Traffic Volume and Level of Service

The City of Portland collects ongoing traffic data. The Bureau of Traffic Management combines this actual count data with the City's EMME2 model to produce an average daily traffic flow map that shows generalized traffic volumes for all of Portland's arterial streets. (See Figure 7 of the 1996 Inventory.)

Level of service (LOS), defined either as the ratio of volume to capacity or as average vehicle delay, has historically been used as the sole measure of a transportation system's performance. The City is broadening this traditional congestion-based measure to incorporate the following factors:

1. **District Accessibility:** Measures the ability of people in motorized vehicles to gain access to defined geographic areas called access districts. It provides a picture of the level of service for a district as a whole, rather than for specific intersections within it.

2. **Street Use Characteristics:** Looks at the origin and destination of trips using a specific facility and the consistency of those trip types with the street's classification as defined in the TE.
3. **Travel Time:** Measures the time it takes for a motor vehicle to go from point A to point B.
4. **Traffic Flow:** Defined as the movement of traffic along a street. Its performance is based on vehicle speed profiles and the number of stops made.
5. **Multimodal Service Level:** The above four measures apply only to motor vehicle traffic. This measure incorporates non-motorized modes (bicycling and walking). Its emphasis is on the person-carrying capacity of the corridor, rather than the vehicle-carrying capacity, to arrive at an averaged service level for all modes.

### **Right-of-Way Access**

ODOT recommends an inventory of the number and location of accesses. The City currently has no readily accessible data on curb cuts or other access management devices. However, PDOT's IMS mapping group is in the process of documenting the location of curb cuts, medians, etc.

### **High-Crash Locations**

PDOT instituted a system in 1985 to identify high-crash intersections within the City. PDOT annually updates State of Oregon crash information and analyzes the number of crashes per entering vehicle and the costs of crashes by arterial intersection. This system identifies the need for arterial intersection modifications to reduce crashes.

Intersections with more than six crashes over a four-year period are termed 'major intersections.' Major intersections typically carry through-moving traffic on non-local streets. At the time of the 1996 inventory, Portland had 1,327 major intersections.

The inventory of major intersections comprises three groups:

- **Level A:** Intersections with 20 or more crashes occurring within the four years preceding the inventory and a crash cost greater than or equal to \$48,000 per million vehicles entering, or a crash rate greater than or equal to 1.60 crashes per million entering vehicles.
- **Level B:** Intersections with 20 or more crashes within the last four years and a crash cost less than \$48,000 per million entering vehicles, or a crash rate less than 1.60 crashes per million entering vehicles.
- **Level C:** Intersections with between 6 and 19 crashes (inclusive) within the last four years.

Table 9.8 shows that 31 (2 percent) of the major intersections are rated in poor condition and require special attention. There are 230 major intersections (17 percent) in fair

condition. The remaining 81 percent of major intersections are in good condition, with a relatively low accident frequency. (Figure 8 in the 1996 inventory shows accident locations for 1991 through 1994.)

**Table 9.8**  
**Major Intersections\***

<b>Group</b>	<b>Condition</b>	<b>Number</b>	<b>Percent</b>
A	Poor	31	2
B	Fair	230	17
C	Good	1,066	81
<b>Total</b>		<b>1,327</b>	<b>100</b>

*Source: Portland Transportation System: Status and Condition Report, July 1994.*

\*Major intersections are based on the number and severity of accidents over a four-year period from 1989 to 1992.

## **Bicycle Network**

### ***Classification***

The three bikeway classifications in the 1996 Inventory are:

- Bicycle routes, which are designed to establish adequate and convenient routes for bicycling and to provide access to public transit
- Local service streets, which are intended to provide local circulation and access for bicycle and pedestrian movements
- Bicycle paths, which are off-street facilities designed to establish adequate and convenient routes for bicycling, and which may be shared with pedestrians

The 1996 inventory identifies 127.68 miles of bikeways and 24.68 miles of planned bikeways. (Figure 9 in the 1996 Inventory shows the existing and planned bicycle facilities.)

### ***Width***

The City standard for bikeways is five feet wide preferred, four feet wide at a minimum in some situations, and up to six feet wide in some situations. All bikeways within the City of Portland met this standard at the time of the 1996 inventory, except for SE 26<sup>th</sup> Street between Clinton and Gladstone. The sidewalks on the Hawthorne, Steel, Sellwood, St. Johns, and Ross Island bridges did not meet the preferred 10-foot standard for off-street paths.

### ***Jurisdiction***

All designated bikeways fall within the City of Portland's jurisdiction, except the Willamette River bridges and State-owned streets within City limits. Multnomah County owns the Hawthorne, Morrison, Burnside, Broadway, and Sellwood Bridges, and the State of Oregon owns the Ross Island and St. Johns Bridges. The Union Pacific Railroad owns the Steel Bridge. State-owned streets are St. Helens Road, SE McLoughlin

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Boulevard, Macadam, Martin Luther King Jr. Boulevard, Sandy Boulevard, 82<sup>nd</sup> Avenue, Lombard Street, SW Barbur Boulevard, SE Powell Boulevard, and Grand Avenue.

### ***Condition/Surface***

At the time of the 1996 inventory, all bikeways in the City of Portland had an asphalt surface, except for the Willamette River bridges and Waterfront Park, which have a concrete surface. Most are in fair to good condition.

## **Pedestrian Network**

### ***Jurisdiction***

The City of Portland has regulatory responsibility of all designated pedestrianways, except for State-owned streets within City limits and the Willamette River bridges. (See Figure 1 of the 1996 Inventory.) Adjacent property owners are responsible for maintaining sidewalks on pedestrianways, as well as sidewalks on other streets. The two exceptions are street corners and public stairways, which the City of Portland maintains.

### ***Sidewalk and Curb Inventory***

PDOT developed a complete inventory of sidewalks and curb ramps on all Portland streets in fall 1994. The inventory identifies a total of 31,027 street segments. (Appendix B of the 1996 Inventory describes the inventory methodology.)

### ***Sidewalk Inventory Results***

The 1996 Inventory analyzed sidewalk inventory data for arterial streets and local streets in each of the eight Transportation Districts defined in the Transportation Element of the Comprehensive Plan (Chapter 2 of the TSP). Sidewalk data were analyzed in three categories:

- Street segments with 100 percent sidewalk on both sides
- Street segments with 100 percent sidewalk on one side, but not the other
- Street segments with less than 100 percent sidewalk on both sides

This methodology does not take into account the discontinuity of the sidewalk between blocks. In the category of street segments with 100 percent sidewalk on one side, for example, a sidewalk that jumps from one side of the street to the other is counted no differently than a sidewalk that continues on the same side.

Tables 9.9 through 9.11 summarize the inventory results, organized by Transportation District. The data are grouped by total sidewalk miles, total miles on arterial streets, and total miles on local service streets. (Figure 10 in the 1996 Inventory depicts these results in bar chart form. Figure 11 in the 1996 Inventory shows the geographic distribution of the blocks with full sidewalks on at least one side.)

As might be expected, the inventory results show that older, inner neighborhoods (such as Southeast and Northeast) are much more likely to have completed sidewalk systems on at least one side of the street than their more recently annexed areas of the City (such as Southwest or outer east neighborhoods).

**Table 9.9**  
**Sidewalk Inventory by District for All Streets**

District	Total Miles	Total Miles w/ Sidewalk on Both Sides	% of Total Miles w/ Sidewalk on Both Sides	Total Miles w/ Sidewalk on at Least One Side	% of Total Miles w/ Sidewalk on One Side	Total Miles w/ Incomplete or No Sidewalks	% of Total Miles with Incomplete or No Sidewalk
North	255	134	53	28	11	93	36
Northeast	426	295	69	20	5	110	26
Far Northeast	153	46	30	15	10	92	60
Far Southeast	200	42	21	20	10	138	69
Southeast	524	385	74	35	7	104	20
Southwest	322	36	11	23	7	263	82
Northwest	116	39	34	15	13	62	54
Central City	107	76	71	11	10	21	20
<i>Whole City</i>	<i>2,102</i>	<i>1,054</i>	<i>50%</i>	<i>166</i>	<i>8%</i>	<i>883</i>	<i>42%</i>

*Source: Pedestrian Program Inventory, March 1996*

**Table 9.10**  
**Sidewalk Inventory by District for Arterial Streets**

District	Total Miles on Arterial Streets	Arterial Miles w/ Sidewalk on Both Sides	% of Arterial Miles w/ Sidewalk on Both Sides	Arterial Miles w/ Sidewalk on at Least One Side	% of Arterial Miles w/ Sidewalk on One Side	Arterial Miles w/ Incomplete or No Sidewalks	% of Arterial Miles w/ Incomplete or No Sidewalk
North	47	21	46	8	18	17	37
Northeast	87	50	57	6	6	32	37
Far Northeast	53	15	29	10	20	27	52
Far Southeast	46	12	26	6	14	28	61
Southeast	90	73	81	5	6	12	13
Southwest	78	8	11	9	12	60	78
Northwest	31	12	39	7	23	12	38
Central City	34	18	53	10	29	6	19
<i>Whole City</i>	<i>465</i>	<i>210</i>	<i>45%</i>	<i>62</i>	<i>13%</i>	<i>194</i>	<i>42%</i>

*Source: Pedestrian Program Inventory, March 1996*

**Table 9.11  
Sidewalk Inventory by District for Local Streets**

District	Total Miles on Local Service Streets	Local Miles w/ Sidewalk on Both Sides	% of Local Miles w/ Sidewalk on Both Sides	Local Miles w/ Sidewalk on at Least One Side	% of Local Miles w/ Sidewalk on One Side	Local Miles w/ Incomplete or No Sidewalks	% of Local Miles w/ Incomplete or No Sidewalk
North	208	113	54	19	9	76	36
Northeast	338	245	73	15	4	78	23
Far Northeast	101	31	31	5	5	65	64
Far Southeast	154	30	20	14	9	110	72
Southeast	434	312	72	29	7	92	21
Southwest	244	28	11	14	6	203	83
Northwest	85	27	32	8	9	50	59
Central City	73	58	79	1	1	15	20
<i>Citywide</i>	<i>1,637</i>	<i>844</i>	<i>52%</i>	<i>104</i>	<i>6%</i>	<i>689</i>	<i>42%</i>

*Source: Pedestrian Program Inventory, March 1996*

### ***Curb Ramp Inventory Results***

The 1996 Inventory analyzed curb ramp data for regular corners and for 'T' intersections. Corners were classified by the existence or lack of curb ramps. For corners with a single ramp, the data do not identify whether it is a diagonal ramp serving both travel paths or a straight ramp serving only one path. A T intersection generally has two legal crosswalks that extend between corners on one side of the intersection to a straight curb on the other side. Ramps on the straight curb were designated as a single entry.

Table 9.12 shows the 1996 Inventory distribution of corners and T intersections across the eight districts. The Portland BOM has an ongoing program to install curb ramps throughout the City, with priority given to business districts and transit streets. The number of curb ramps installed each year varies, and can be as many as 400 to 600. (Figure 12 in the 1996 Inventory illustrates the distribution of corners and T intersections across the City, and Figure 13 shows all the existing curb ramps in the City at the time of the inventory.)

**Table 9.12  
Curb Ramp Inventory by Transportation District**

<b>District</b>	<b>Total Corners</b>	<b>Corners with at Least One Ramp</b>	<b>% of Corners with at Least One Ramp</b>
North	5,812	1,900	33
Northeast	11,430	2,967	26
Far Northeast	3,324	569	17
Far Southeast	4,478	722	16
Southeast	16,186	5,010	31
Southwest	7,384	775	10
Northwest	2,248	920	41
Central City	3,712	2,086	56
<i>Citywide</i>	<i>54,574</i>	<i>14,949</i>	<i>27%</i>

*Source: Pedestrian Program Inventory, March 1996*

### ***Sidewalk Condition***

The 1996 Inventory did not collect sidewalk condition data. However, the general condition of Portland's existing sidewalk infrastructure is very good, owing to an excellent ongoing sidewalk inspection program. Inspectors regularly check the condition of sidewalks throughout Portland. In the Central Business District, sidewalks are inspected every two years. Neighborhood sidewalks are inspected at least every 10 years. Trips, gaps, breaks, and other possible hazards to pedestrians are noted, and the adjacent property owners are notified to repair the hazard. In addition to their regular inspection routine, sidewalk investigators also investigate citizen complaints.

### **Public Transportation Services**

#### ***Transit Network***

Tri-Met is the transit provider for Multnomah, Clackamas, and Washington Counties. As of the 1996 inventory, Tri-Met operated 90 bus routes (six of which provide crosstown service) and Eastside MAX, a light rail line extending from downtown Portland to downtown Gresham. Since the inventory, Westside MAX and Airport MAX have been built, and the Interstate MAX line is currently under construction.

#### ***Routes***

As of the 1996 Inventory, Tri-Met operated the following 90 bus routes and Eastside light rail: 5 trunk routes, including Eastside MAX; 22 city radial lines; 6 crosstown lines; 38 radial/feeder lines; and 20 peak radial/feeder lines. (This information is viewable on the Tri-Met route map.)

#### ***Transit Centers, Stops, and Park-and-Rides***

There were five transit centers within the City of Portland at the time of the 1996 Inventory.

In general, bus stops are located at two-block intervals along each route. (See Tri-Met's May 5, 1995, Master Stops List.)

At the time of the inventory, Tri-Met operated 58 park-and-ride lots in the tri-county region, 18 of which are located within Portland's City limits. These City lots provide approximately 2,380 parking spaces. (See Tri-Met Park and Ride map.) The Transportation Element of the Comprehensive Plan (Policy 6.9, Transit-Oriented Development, Objective D) states that regional transit access should be provided with the highest priority given to the development of effective feeder bus or van pool service, and the lowest priority to park-and-ride lots. Consistent with this policy, the City resists the development of additional park-and-ride lots within City limits.

### ***Fleet***

At the time of the 1996 Inventory, Tri-Met had a total fleet of 644 vehicles, including 25 mini-buses. (the 1996 Inventory, Appendix C: District's Fleet Status as dated September 3, 1995, provides additional information about the fleet vehicles.)

### ***Frequency, Ridership, and Loading***

Route frequency is based on the average load factor and time of day. Figure 14 in the 1996 Inventory shows inventory year Tri-Met routes with 20-minute or more frequent peak-hour service. These routes have an average load factor of 0.47. (The following appendices of the 1996 Inventory provide additional information: Appendix D: Transit Frequency Table; Appendix E: Average Weekday Boarding Rides [Fiscal Year 1987 to 1995] and Average Daily Boarding Rides; Appendix F: Average Load Factor for All Routes [Weekdays] and Average Load Factors – September 3 to December 2, 1995 [Weekdays].)

### ***Special Transit Services***

The LIFT Program provides service to registered customers certified as unable to use Tri-Met's regular service because of a physical or mental disability. In 1996, the program provided more than 1,800 door-to-door rides per day in the tri-county area. The LIFT service area is three-quarters of a mile from a regular Tri-Met route; both the origin and destination of a trip must be within this boundary. The service operates a fleet of over 100 small, lift-equipped buses from 4:30 a.m. to 2:30 a.m., seven days a week. (See Tri-Met's LIFT Rider's Guide, 1996 ADA Paratransit Plan Update.)

Tri-Met's Special Events Transit Service (SETS) augments regular Tri-Met service to accommodate special events. In most cases, the event sponsor requests the service. Examples of the special event destinations are Portland Meadows, the Coliseum and the Oregon Arena, and the Interstate Pavilion. (See Appendix G: Tri-Met Special Events Transit Service (SETS) '95, of the 1996 Inventory.)

### ***Transit Underserved Population***

The tables in Appendix H: Transit-Underserved Population, of the 1996 Inventory identify Tri-Met lines that do not operate at levels specified by Tri-Met's service standards. The tables are organized by route type, and policy headways are indicated.



Seventeen major locations are not being served. All would qualify for radial/feeder service. These areas include one or more of Metro's regional traffic zones in which less than 25 percent of the population is served by transit (i.e., is not within one-quarter mile of existing transit service).

## **Intercity Bus and Rail**

Policy 6.19 of the Transportation Element of the Comprehensive Plan states:

Union Station is the hub of the multimodal Transportation Center located in the North Downtown area and should serve as the primary passenger rail and intercity bus terminal in the Portland metropolitan area, providing direct connections between passenger rail, light rail, vintage trolleys, intracity buses, taxis and airport bus shuttles.

Portland's Greyhound terminal is located next to Union Station and provides bus service to cities and towns throughout the United States. (See Greyhound System Timetable [effective 1/10/96].)

Five Amtrak trains serve Portland along the Pacific Northwest Corridor: four provide daily service between Vancouver, British Columbia, and Eugene, Oregon, and one provides Sunday, Tuesday, and Thursday service between Seattle and Eugene. Two of those trains also provide service from Portland to Chicago.

## **Air**

Portland International Airport (PDX), owned and operated by the Port of Portland, is the primary commercial air transportation facility in the region. The airport is located on approximately 3,200 acres of land about 5 miles northeast of downtown Portland and primarily serves the surrounding Washington, Yamhill, Clackamas, Multnomah, and Clark Counties. PDX also serves the counties beyond this primary area, depending on the range and character of airline service provided in nearby cities such as Boise, Seattle, and Spokane.

The Federal Aviation Administration (FAA) classifies Portland as a medium air traffic hub. The FAA defines a medium hub as a metropolitan region enplaning 0.5 percent or more of the total passengers enplaned on certified route air carriers in scheduled service in the 50 states and the District of Columbia; Portland accounted for 0.74 percent in 1991.

As of August 1992, PDX was served by 10 scheduled passenger airlines, including 6 major airlines. As of that date, 5 charter airlines and 14 all-cargo airlines also provided service at the airport. Table 9.13 lists the airlines serving the airport. In addition, 66 general aviation aircraft are based at the airport.

**Table 9.13**  
**Airlines Serving Portland International Airport**

<b>Major Airlines</b>	<b>National Airlines</b>	<b>Regional &amp; Commuter Airlines</b>	<b>All-Cargo Airlines</b>	<b>Charter Airlines</b>
American Continental Delta * Northwest Trans World United	Alaska America West Southwest	Horizon United Express Reno Air Air BC	Air Pac Airborne Express Ameriflight Burlington Air Express DHL Emery Worldwide Empire Airways Federal Express Premier Jets Regional Express Salair Sports Air Travel United Parcel Service Viking	Morris Air Great America Fiesta West Casino Express Sun Country

*Source: Portland International Airport: Master Plan Update, Summary Report, April 1993*

\* Provides domestic and international airline service.

The PDX airfield consists of three active runways and supporting taxiways. A recent renovation and expansion of the passenger terminal complex has resulted in a terminal of approximately 940,000 square feet, with 37 air carrier aircraft gates and 6 commuter aircraft gates. This terminal complex has a capacity of more than 10 million passengers per year.

### Mainline Facilities

There are three chief categories of mainline facilities in the region: navigable waterways, railroad main lines, and main roadway routes. Table 9.14 describes these facilities. In addition, there are road connector and rail connector facilities (i.e., branch lines and industrial leads). (Figure 16 in the 1996 Inventory shows rail lines by company.)

**Table 9.14**  
**Mainline Facilities in the Region**

<b>Mainline Categories</b>	<b>Facilities</b>
Navigable Waterways	Willamette and Columbia Rivers
Railroad Main Lines	Union Pacific, Southern Pacific, and Burlington Northern Main Routes
Main Roadway Routes	I-84, I-5, I-205, I-405, US 26, US 30, Hwy 99E, Hwy 99W, Hwy 212/224

*Source: Port of Portland*

### Freight

As of the 1996 Inventory, there are 273 freight facilities within the City of Portland. Table 9.15 summarizes freight facilities in the Portland metropolitan region by freight type. (Appendix I of the 1996 Inventory has a complete list of freight facilities. Figure 15 in the 1996 Inventory shows the location of freight facilities by category.)

**Table 9.15  
Freight Facilities in the Region**

Facility	Number of Facilities
<b>Marine Facility</b>	
General Cargo Terminal	8
Bulk Terminal	22
Forest Products Terminal	2
Grain Elevator Terminal	9
Auto Terminal	3
Container Terminal	1
<b>Rail Facility</b>	
Rail Passenger Station	1
Intermodal Yard	5
Switching Yard	3
<b>Airport</b>	
Air Passenger Terminal	1
Air Cargo Facility	14
<b>Reload Facility</b>	
General Rail/Truck Reload	39
Petroleum Rail/Truck Reload	1
Truck/Truck Reload	102
Grain rail/Truck Reload	0
Truck Terminal	30
Distribution Facility	35
Carrier (no on site freight handling capabilities)	31
Freight Forwarder & Customs Broker (no on site freight handling capabilities)	7

*Source: RTP Freight Element: Freight Facilities, Port of Portland*

## Pipelines

Portland has 20 pipeline distribution centers located along the Willamette River: 17 in Northwest Portland and 3 in North Portland. (Figure 17 in the 1996 Inventory shows the locations of these centers.)

## Environmental Constraints

### *Natural*

The environmental zoning shown on the Portland Comprehensive Plan maps identifies many of the natural features to consider when making transportation planning decisions.

As defined in the Portland zoning code, environmental zones are intended to protect resources and functional values the City identifies as providing benefits to the public. The environmental protection zone provides the highest level of protection to the most important resources and functional values. The environmental conservation zone conserves important resources and functional values in areas that can withstand environmentally sensitive urban development. In addition to environmentally zoned land, parks, golf courses, and open spaces are also constrained by their zoning. (Figures 18 and 19 in the 1996 Inventory identify these features.)

***Cultural***

Transportation planning decisions need to consider cultural as well as natural features. The City's Historic Resource Inventory (1984) lists approximately 5,000 historic resources that are protected from demolition. This inventory includes districts, buildings, trees, and landmarks of historic value. These inventories are being updated as part of the community planning process.

## LINKING STATE, REGIONAL, AND LOCAL NEEDS

The State Transportation Planning Rule (TPR) provides the framework for preparing regional and local transportation system plans. The goal of the TPR is to ensure that Oregon's transportation system functions in a manner that is safe, convenient, economic, and balanced between modes to avoid livability issues such as congestion and poor air quality. To this end, the TPR requires that regional and local transportation system plans (TSPs) "establish a system of transportation facilities and services adequate to meet identified needs." The TPR defines 'transportation needs' as:

'Transportation Needs' means estimates of the movement of people and goods consistent with acknowledged comprehensive plans and the requirements of this rule. Needs are typically based on projections of future travel demand resulting from a continuation of current trends as modified by policy objectives, including those expressed in Goal 12 and this rule, especially those for avoiding principal reliance on any one mode of transportation.

The TPR requires TSPs to define and address transportation needs with solutions that support the goal of creating a balanced transportation system. The TPR defines transportation needs by level of government. Local TSPs are required to be consistent with the needs analysis and findings of both the regional and State transportation plans. According to the TPR, 'State transportation needs' means:

... needs for movement of people and goods between and through regions of the state and between the state and other states.

'Regional transportation needs' means:

... needs for movement of people and goods between and through communities and accessibility to regional destinations within a metropolitan area, county, or associated group of counties.

'Local transportation needs' means:

... needs for movement of people and goods within communities and portions of counties and the need to provide access to local destinations.

Section 660-012-0030 of the TPR identifies the specific requirements for a 'determination of transportation needs' as follows:

The TSP shall identify transportation needs relevant to the planning area and the scale of the transportation network being planned, including:

- State, regional, and local transportation needs

- Needs of the transportation disadvantaged
- Needs for the movement of goods and services to support industrial and commercial development planned, consistent with Statewide Planning Goal 9 (Economic Development)

Local jurisdictions must rely on the analysis of State transportation needs in adopted elements of the State TSP (which is the Oregon Transportation Plan) and regional transportation needs in adopted regional TSPs (which is the Regional Transportation Plan adopted by Metro).

Within an adopted urban growth boundary (UGB), the determination of local and regional transportation needs must be based on:

- Population and employment forecasts and distributions which are consistent with the acknowledged comprehensive plan, including the policies that implement Goal 14 (Urbanization), including Goal 14's requirement to encourage urban development on urban lands prior to conversion of urbanizable lands. Forecasts and distributions may be for 20 years or longer.
- Measures to reduce vehicle miles per capita by 10 percent in 20 years and 5 percent more over the next 10 years.
- Measures to reduce parking spaces per capita by 10 percent over the life of the TSP.

## STATE AND REGIONAL TRANSPORTATION NEEDS

The Regional Transportation Plan (RTP) provides regional population and employment forecasts that predict that by 2020, the Portland region (including Clark County) will have approximately 2.3 million people, an increase of 51 percent from 1994. Employment in the region is expected to grow by 70 percent, reaching 1.6 million jobs by 2020. The population and employment forecasts are based on the 2040 Growth Concept adopted by Metro in 1995. The 2040 Growth Concept reflects the following regional approach to urban form:

- A modest expansion of the urban growth boundary
- Using land more efficiently through infill and redevelopment, emphasizing higher densities and mixed-use development in key centers and corridors
- Focusing jobs and shopping closer to where people live
- Expanding transportation choices
- Protecting prime farm land, rural reserves, open spaces, and other environmentally sensitive lands

Metro, with the assistance of the state and local jurisdictions, has identified the following state and regional needs through the RTP development process:

- **I-5 North.** Reduce peak-hour congestion in the corridor between I-84 and the Columbia River.

- **Northeast Portland Highway.** Streamline the highway connection between the Rivergate industrial area and I-205 to improve freight and traffic movements.
- **I-205 North.** Maintain an acceptable level of access to the Portland International Airport and Gateway regional center, and preserve freight mobility emphasizing connections to I-84 east, Northeast Portland Highway, and Portland International Airport.
- **Marine Drive.** Reduce conflicts between rail and truck freight movements, and maintain accessibility between Rivergate/West Hayden Island intermodal facilities and I-5/Northeast Portland Highway.
- **St. Johns Town Center.** Provide bicycle and pedestrian connections to and within the center, expand transit service and traffic management strategies, improve pedestrian access to transit service, and reduce impacts of truck through-traffic.
- **Portland International Airport.** Maintain an acceptable level of access to the passenger and freight terminals, and improve traffic circulation in the airport vicinity to serve emerging industrial and office activities without impacting terminal access.
- **I-5 South.** Preserve access to and from Portland's Central City, maintain off-peak freight mobility, and improve connections to the Central Eastside Industrial District and Highway 99E/224.
- **I-405 Loop.** Maintain traffic and freight access and mobility between Portland's Central City, I-84, US 26, and I-5.
- **Banfield Freeway.** Mitigate for spillover I-84 traffic on adjacent arterial streets between I-5 and I-205, and expand traffic management and high-capacity transit strategies to better accommodate expected traffic growth in the corridor and maintain acceptable access to Portland's Central City.
- **Sunset Highway.** Maintain access between Portland's Central City, I-5, I-84, and the western suburbs, and preserve off-peak freight mobility on the Sunset Highway between I-405 and the Sylvan interchange.
- **Highway 99E.** Maintain access between Portland's Central City and Highway 224, and provide a transit alternative to Highway 99E.
- **Going Street/Greeley Avenue.** Reduce conflicts between rail and truck freight movement, maintain access to intermodal facilities on Swan Island, and improve access between industrial areas and regional facilities, including I-5, I-205, and Northeast Portland Highway.
- **Powell Boulevard/Foster Road.** Expand traffic management and high-capacity transit strategies to better accommodate expected traffic growth in the corridor west of the Lents town center and maintain acceptable access to Portland's Central City.
- **Macadam Avenue/Highway 43.** Expand traffic management and high-capacity transit strategies to better accommodate expected traffic growth in the corridor and maintain acceptable access to Portland's Central City.

- **Barbur Boulevard.** Improve the pedestrian and streetscape environment at selected locations, and expand traffic management and high-capacity transit strategies to better accommodate expected traffic growth in the corridor north of Highway 217 and maintain acceptable access to Portland's Central City.
- **West Burnside Street.** Enhance the pedestrian and transit environment between NW 23<sup>rd</sup> and Downtown, and expand traffic management and high-capacity transit strategies to better accommodate expected traffic growth in the corridor east of Barnes Road and maintain acceptable access to Portland's Central City.
- **Highway 30.** Maintain freight mobility between the northwest industrial area and the Rivergate terminals, and maintain access to Portland's Central City. A long-term strategy to serve freight movement should be developed as part of refinement planning for a North Willamette River crossing study.
- **East Burnside Street.** Expand traffic management and high-capacity transit strategies to better accommodate expected traffic growth on E Burnside west of the Gateway regional center and adjacent parallel streets, and maintain acceptable access to Portland's Central City.
- **Portland Central City.** The Portland Central City and its environs are designated as an Area of Special Concern in the RTP. Implement additional transit service, system management strategies, and pedestrian and bicycle improvements, and continue parking strategies to address congestion.
- **Union Station.** Continue developing Union Station as an intermodal passenger terminal, and preserve access to the site by all modes of transportation.
- **Hollywood Town Center.** Redesign diagonal street intersections along Sandy Boulevard to improve pedestrian and motor vehicle safety. Improve pedestrian and bicycle access to and within the center and to transit service. Expand transit service and traffic management strategies to better accommodate expected traffic growth in the town center consistent with the Hollywood town center plan.
- **Lents Town Center.** Reduce the impact of truck traffic from I-5 and high traffic volumes in the town center. Develop a strategy for providing and managing on-street parking to support redevelopment. Improve pedestrian and bicycle access to and within the center and to transit service. Expand transit service and traffic management strategies to better accommodate expected traffic growth in the town center.
- **West Portland Town Center.** Redesign the intersection of Barbur Blvd/Capitol Highway/Taylor's Ferry Road to improve safety and access to for all modes. Study the potential for new southbound freeway access between Portland's Central City and the town center to relieve traffic concentration at the Barbur Boulevard interchange. Improve pedestrian and bicycle access to and within the center and to transit service. Expand transit service and traffic management strategies to better accommodate expected traffic growth in the town center.
- **Hillsdale Town Center.** Redesign the Beaverton-Hillsdale Highway/Capitol Highway/Bertha Boulevard intersection to improve safety and town center access for all modes. Improve pedestrian and bicycle access to and within the center and to transit



service. Expand transit service and traffic management strategies to better accommodate expected traffic growth in the town center.

- **Southeast Portland Neighborhoods.** Improve pedestrian and bicycle access to Portland's Central City and transit service. Expand transit service and traffic management strategies to better accommodate expected traffic growth in the town center.
- **Gateway Regional Center.** Define new access routes to the regional center that move regional traffic from the heart of the center to the periphery. Examine the role of park-and-ride facilities in the center. Create a fine-grain network of local streets to meet regional connectivity standards. Optimize traffic flow in the center. Create a transit service plan that maximizes the use of transit to access the regional center. Provide pedestrian and bicycle facilities.
- **East Columbia Corridor Industrial Area.** Improve freight access to Portland International Airport and intermodal facilities in the west Columbia Corridor, and improve substandard rail crossings that limit freight mobility on the north/south arterial streets.
- **Division Street.** Improve pedestrian access to transit, and expand transit service and traffic management system strategies to better accommodate expected traffic growth in the corridor between I-205 and the Gresham regional center.
- **Powell Boulevard.** Expand transit service and traffic management strategies, new traffic capacity as needed. Between I-205 and the Gresham regional center, Powell Boulevard will experience significant congestion due to "planned growth in the Pleasant Valley and Damascus urban reserve areas. As capacity is added to this corridor, local access should be carefully managed to adequately serve the demand for this route to serve longer trips."
- **Foster Road.** Between the Lents town center and the future Damascus town center, Foster, (along with Powell,) "is expected to emerge as a major travel corridor due to expected growth in Clackamas County and the Pleasant Valley /Damascus urban reserves." Capacity improvements in conjunction with system management strategies should be examined while connectivity on local streets and potential parallel route improvements are needed in urban reserve areas near Foster.
- **I-205 Middle.** Include ramp, overcrossing, and parallel route improvements along with examination of capacity improvements to preserve freight movement in the corridor between Oregon City and I-84. A corridor study should evaluate the potential of express, peak-period pricing, or High Occupancy Vehicle (HOV) lanes as a strategy for expanding capacity.

The RTP addresses these state and regional needs through RTP projects, strategies, or other activities or through the refinement plan process. Refinement plans are intended to address a transportation need "for which decisions regarding function, general location, or mode are being deferred." Chapter 4: Refinement Plans and Studies, in Volume I of this document provides a thorough discussion of the refinement plan process.

## **CITYWIDE NEEDS**

### **Population and Employment Forecasts**

For purposes of analysis, the RTP breaks the region into subareas that do not conform to City boundaries. To better evaluate Portland's transportation needs, the TSP breaks the City down into districts that conform more closely to the TSP Transportation District boundaries.

In general, the City of Portland will have a lower rate of growth than the other jurisdictions in the region. Regional growth, however, will have a substantial impact on Portland. New residents in the region will use Portland streets to pursue employment, recreation, shopping, and cultural and social opportunities.

Over the next 25 years, population in the four-county area is estimated to increase by 766,600 persons (48 percent). Portland's population increased from 437,319 in 1990 to 529,121 in 2000 and is expected to grow to over 630,000 by 2020. Metro's employment forecasts indicate that, while employment growth will be substantially slower in Portland than in the rest of the region, it will still experience a 41 percent increase between 1994 and 2020, from 434,182 to approximately 612,000 jobs.

Table 10.1 shows the projected changes in population and employment for Portland and the remainder of the region between 1994 (which is the base year of the regional model) and 2020.

On a percentage basis, the largest increases in residents will be in the Central City and Far Southeast districts. All areas of the City will experience substantial increases in jobs, with the Far Southeast district experiencing the largest percentage gain.

**Table 10.1  
Changes in Population and Employment 1994 - 2020**

<b>District</b>	<b>1994 Population</b>	<b>2020 Population</b>	<b>Percent Change</b>	<b>1994 Employment</b>	<b>2020 Employment</b>	<b>Percent Change</b>
Central City	19,318	35,193	82	153,818	236,962	54
North	45,099	53,735	19	35,829	50,658	41
Northeast	106,548	121,572	14	60,051	90,394	51
Southeast	147,204	160,223	9	61,538	71,973	17
Far Northeast	44,531	55,811	25	24,280	34,101	40
Far Southeast	61,961	105,998	71	20,271	36,743	81
Northwest	18,782	26,522	41	39,061	46,543	19
Southwest	69,914	72,742	4	39,334	44,836	14
Total City	513,357	631,796	23	434,182	612,210	41
Rest of Region	1,039,307	1,712,829	65	513,465	998,746	95
<i>Total Region</i>	<i>1,552,664</i>	<i>2,344,625</i>	<i>51</i>	<i>947,647</i>	<i>1,610,956</i>	<i>70</i>

### **Growth in Traffic**

Motor vehicle volumes are expected to increase in the City, in part because of the growth in trips throughout the region. The motor vehicle modal plan in Chapter 5: Modal Plans details the growth along major regional corridors inside the City. In addition to traffic increases on these regional corridors, other Portland streets will experience traffic increases.

The City needs to address significant street segments on the RTP motor vehicle system that will exceed the acceptable level of service established by the region. Metro used a regional model to make these determinations; however, the model tends to underestimate capacity because it does not include all traffic modifications, such as free right turns. The commentary below indicates that Portland streets shown by Metro's regional model to experience unacceptable levels of congestion in the future will in fact operate adequately.

#### ***SW Campus Drive (Marquam Hill)***

The congestion shown on this street results from an oversimplification of the network model. Campus Drive is the only street shown in the network model between Marquam Hill and SW Terwilliger Drive. In reality, there are three other streets – SW Sam Jackson, SW Veterans Road, and SW 6<sup>th</sup> Avenue – that each have a capacity similar to SW Campus Drive.

***SW Taylors Ferry/SW Terwilliger***

The congestion shown on this street results from the network model's oversimplification of the southbound and westbound intersection approaches. Both approaches are actually two through-lanes and a protected left-turn lane. The model also shows that the intersection of Boones Ferry and Terwilliger allows all through and turn movements, while the existing condition allows only right turns into and out of Boones Ferry. The model is therefore overassigning trips to Boones Ferry and underassigning trips to Taylors Ferry west of Boones Ferry.

***SW Boones Ferry south of Terwilliger/SW Taylors Ferry west of Macadam***

The network model shows street segment capacities that reflect traffic signals and stop-controlled intersections, rather than the free-flow links that actually exist. As a result, the street segments show congestion along their lengths, when congestion is actually occurring only at signalized intersections. An operations level of analysis of these street segments could verify this.

***SW Garden Home/SW Oleson Road***

The network model does not include recent intersection improvements. The west, south, and east legs of the intersection all have free right turns and protected left turns. The model should show traffic capacities of 100 to 200 more vehicles per hour for these approaches.

***NW Cornell Road***

Northwest Cornell in the City is characterized by stretches of roadway without traffic signals. The network model shows capacities on this street that reflect traffic signals and stop-controlled intersections, rather than the free flow that actually exists. As a result, the street shows congestion along its length, when congestion is actually occurring only at signalized or stop-controlled intersections. The network model may also show additional trips loading onto Cornell that do not actually do so. An operations level of analysis of this street could verify this.

***SW Scholls Ferry Road north of Beaverton-Hillsdale Highway***

Similar to Boones Ferry and Cornell, SW Scholls Ferry is characterized by stretches of roadway without traffic signals. The network model shows capacities on this street that reflect traffic signals and stop-controlled intersections, rather than the free flow that actually exists. As a result, the street shows congestion along its length, when congestion is actually occurring only at signalized or stop-controlled intersections. An operations level of analysis of this street could verify this. There may also be improvements proposed for the Raleigh Hills town center that would address the level of service at the intersection of Scholls Ferry with Beaverton-Hillsdale Highway and Oleson Road.

### ***US Highway 30 and the St. Johns Bridge***

The network model does not reflect the free-flow segment of this intersection south of the St. Johns Bridge. The model also oversimplifies the operating characteristics of the north end of the intersection with the bridge.

### ***SE 39<sup>th</sup> Avenue***

The network model may be overassigning trips to SE 39<sup>th</sup> because it does not take the South Portland street grid (which relieves traffic on arterials such as SE 39<sup>th</sup>) into account.

### ***SE Johnson Creek Boulevard***

The network model shows the street system in the vicinity of SE Johnson Creek Boulevard incorrectly. Southeast Harney between SE 52<sup>nd</sup> and SE 62<sup>nd</sup> is not included. This missing link may result in overassigning trips onto Johnson Creek Boulevard. The model assumption of traffic loading onto Johnson Creek Boulevard may also be a contributing factor.

### ***NE Marine Drive***

Northeast Marine Drive is characterized by stretches of roadway without traffic signals. The network model shows capacities on this street that reflect traffic signals and stop-controlled intersections, rather than the free flow that actually exists. As a result, the street shows congestion along its length, when congestion is actually occurring only at signalized or stop-controlled intersections. The segments of Marine Drive shown as unacceptably congested are not intended to function as a through route for vehicles, particularly trucks. Resolving any localized congestion in this stretch of Marine Drive could make it more attractive for inappropriate truck trips.

### ***NE Columbia Boulevard/NE Lombard/NE Alderwood***

Northeast Columbia Boulevard is characterized by long stretches of roadway without traffic signals. The network model shows capacities on this street that reflect traffic signals and stop-controlled intersections, rather than the free flow that actually exists. As a result, the street shows congestion along its length, when congestion is actually occurring only at signalized or stop-controlled intersections. In addition, the network model does not include all the improvements to these street segments shown in the RTP, specifically RTP project numbers 3048 and 4041.

Vehicle miles traveled (VMT) is commonly used to describe automobile use on a daily or annual basis. This measure of travel incorporates both the number of vehicle trips and the length of those trips. For example, 10,000 vehicles each traveling an average of 15 miles per day would result in 150,000 VMT per day. The TPR calls for the Portland metropolitan region to reduce VMT per person by 10 percent over the next 20 years and an additional 5 percent in the following 10 years.

There is no easy way to measure VMT for all vehicles all days for a period of time. Planning models estimate travel within the region and can be used to derive VMT. Any measure of VMT is accurate within the constraints of the model. The Portland Office of Transportation (PDOT) developed a methodology for measuring VMT. (See Appendix A for more specifics

on VMT and calculations of VMT.) This methodology provides an estimate of VMT in the City and region that will allow changes in VMT per person to be measured over time. Table 10.2 compares VMT for Portland per person in 1994 (the base year for the model) and 2020.

**Table 10.2**  
**Change in Portland's VMT per Capita**

	Produced by the City		Attracted to the City
	Residential	Work	
Year	VMT/resident	VMT/employee	VMT/employee
1994	9.35	5.44	24.19
2020	8.53	5.49	22.24
<i>Change</i>	<i>-9%</i>	<i>+1%</i>	<i>-8%</i>

Given the assumptions in the regional model used to evaluate the RTP, Portland comes very close to meeting its share of the regional goal of reducing VMT per capita by 10 percent over 20 years. It is important to note that Portland used different geographic areas to calculate VMT per capita than the RTP, which excluded both Clark County and the area outside the UGB.

## Operational Performance

### *High-Accident Locations*

Each year, State high-accident data are analyzed for the number of injuries, fatalities, and property damage per entering vehicle and the cost of accidents per arterial intersection. Intersections with more than six crashes over a four-year period are termed major intersections. Currently, 1,204 of the City's 13,000 intersections are major intersections. Most of these carry through-traffic on arterials. Intersections are rated A, B, or C, depending on the number and cost of crashes.

Table 10.3 shows that 18 of the major intersections (two percent) are in critical condition and need immediate attention or study.

**Table 10.3**  
**Ranking of Major Intersections (High-Accident Locations)**

Condition	Number	Percent
Poor (Level A)	18	2
Fair (Level B)	232	19
Good (Level C)	954	79
<i>Total</i>	<i>1,204</i>	<i>100</i>

*Source: City of Portland, PDOT, July 1998*

The Level A critical intersections (1999 data) are listed below:

E Burnside at 80<sup>th</sup>  
N Cook at Williams  
N Broadway at Vancouver/I-5 southbound off-ramp  
N Alberta at Missouri  
NE Weidler at Grand  
NE Halsey at 47<sup>th</sup>/Euclid  
NW Bridge at NW Germantown  
NW Broadway at NW Davis  
NW Everett at 6<sup>th</sup>  
SE Ankeny at 6<sup>th</sup>  
SE Stark at 2<sup>nd</sup>  
SE Stark at 102<sup>nd</sup>  
SE Main at 162<sup>nd</sup>  
West end/Hawthorne Bridge (some modifications have since been made as part of the bridge rehabilitation project)  
SW Madison at SW 6<sup>th</sup>  
SW Market at SW 1<sup>st</sup>  
SW Naito/Ross Island Bridge  
SW Oak at 5<sup>th</sup>

It may be possible to modify critical intersections to improve their condition by signing, striping, signal phasing, or other minor changes that do not require capital solutions. Some locations require major reconstruction projects or new signals. The estimated unmet need for these intersections as of 1999 is \$8.9 million.

## District Highways

District highways within Portland are under the jurisdiction of the Oregon Department of Transportation (ODOT). They include Sandy Boulevard, 82<sup>nd</sup> Avenue, Lombard Street, Martin Luther King (MLK), Jr. Boulevard, and Grand Avenue. The function of these highways has changed over time as parallel State routes and limited access highways were constructed.

The City is interested in assuming jurisdiction for these district highways from the State to better implement land use goals, including 2040 main street development. Driveway location, street design, and street operations are currently under the State's authority. State regulations and standards are sometimes at odds with the City's land use and transportation goals.

Many of the district highways need reconstruction or are not built to the level of urban standards the City uses. While ODOT is interested in transferring these highways to the City, there are substantial cost implications for reconstruction, maintenance, and operations.

## Environmental Needs

Metro adopted the Stream and Floodplain Protection Plan in June 1998 as a functional plan to protect vegetated corridors along rivers, streams, and wetlands. The plan also addresses ways to control soil erosion and reduce flooding. The requirements are intended to enhance the region's water resources and manage land use in floodplains.

On March 16, 1999, the National Marine Fisheries Service (NMFS) listed eight species of salmon and steelhead in Washington and Oregon as threatened and one as endangered under the Endangered Species Act (ESA). Culverts and other instream structures may impede adult migration to spawning areas, smolt migration to the ocean, or juvenile movement within the watershed during rearing. Portland has identified and ranked 26 culverts for replacement. (Chapter 15: System Performance, provides more information.)

## Maintaining the Transportation System

The Portland transportation system is aging and needs increased maintenance and reconstruction. The backlog of pavement that needs treatment, but has no funds budgeted, has grown from 406 miles in 1993 to 497 miles in 1999. Arterial streets account for 22 percent of the value of the backlog. Arterials deteriorate more rapidly than local streets because of their high traffic volumes. Approximately 140 lane miles of streets used as travelways in the City are unimproved, with neither pavement nor drainage.

Eighty-eight of the 149 bridges under the City's control have structural details that do not meet current earthquake design standards. The unmet need for bridges is \$50 million.

Portland has 959 signalized intersections. The condition of the intersection hardware has deteriorated, from 89 percent in fair or better condition in 1986 to 73 percent in 1999. The 51,500 streetlights within the City are also aging. Streetlight condition will continue to decline to less than 20 percent in good condition by 2010 if no capital replacements are made.

The City expects to add very little mileage to the transportation system. ODOT, however, is interested in transferring 74 miles of State roads to the City. Many of these roads are in poor condition and require substantial work.

Portland's network of transportation facilities, including streets, sidewalks, bridges, signals, streetlights, and other facilities, has a value estimated at around \$2.6 billion. The identified unmet need to maintain and repair the system is \$141 million.

## Bicycle Needs

The Bicycle Modal Plan (see Chapter 5: Modal Plans and Management Plans) identifies existing conditions and deficiencies in the bicycle network and in end-of-trip facilities. The Bicycle Master Plan (1996) states that as of 1996, approximately 30 percent of the total 654 bikeway network miles were either complete or planned. At that time, approximately 69 percent of City-owned and State-owned streets in Portland had the appropriate bikeway facility. The unmet need for the bicycle network in 1996 was:

- |  |           |
|--|-----------|
| • Bicycle lanes, existing curbed streets | 238 miles |
| • Bicycle lanes, shoulder widening       | 80 miles  |
| • Bicycle boulevards                     | 66 miles  |
| • Off-street paths                       | 39 miles  |
| • Local street connections, signing only | 22 miles  |



Bicyclists also need end-of-trip facilities. The Bicycle Master Plan includes the results of a 1995 survey of bicycle parking outside the Central City, which found that:

- Bicycle parking amounted to only three percent of off-street automobile parking, compared to the five percent required by City Code.
- Two of every five bicycle racks were inadequate in some way.
- Over 88 percent of all surveyed locations provided no bicycle parking at all.
- Forty percent of the covered bicycle parking spaces still allowed bicycles to get wet.
- Less than two percent of bicycle parking is adequate for long-term parking.
- Thirteen percent of bicycle parking was so poorly placed as to invite the theft of any bicycle parked there.

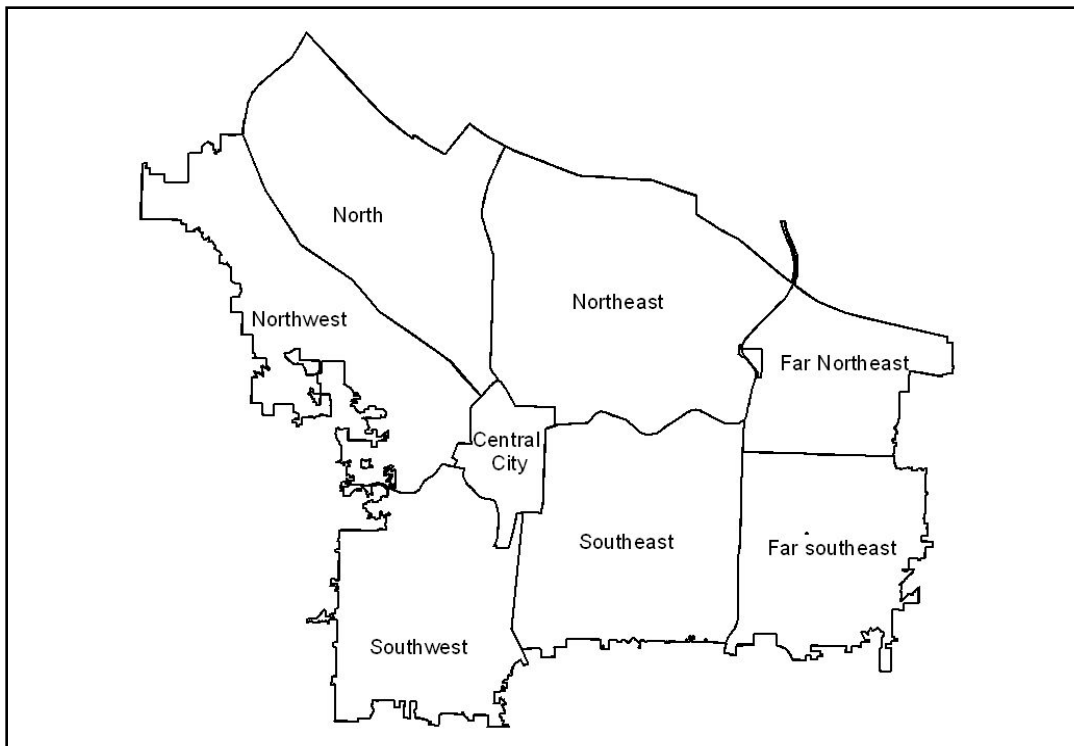
### **Pedestrian Master Plan**

A 1994 'snapshot' inventory of street segments within the City limits documented the presence or absence of sidewalks and curb ramps. No attempt was made to assess condition or compliance with the American with Disabilities Act (ADA). The inner, older neighborhoods found in the Southeast, Northwest, and North Transportation Districts are much more likely to have a completed sidewalk system than the more recently annexed areas of the City, such as neighborhoods in the Outer Southeast, Outer Northeast, and Southwest Transportation Districts. Citywide, a slightly greater percentage of local streets have sidewalks than do arterial streets.

## Transportation Needs by District

For transportation purposes, the City is divided into eight districts as shown on Map 10-1. The following sections describe the transportation needs for each district. The needs are derived from a variety of sources including recent transportation studies and plans, Tri-Met's Transit Choices for Livability process, neighborhood and community plans, and the Bicycle and Pedestrian Master Plans. Other needs were identified through the eight district workshops held in 1998 on the TSP.

**Map 10-1  
Transportation Districts**



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## CENTRAL CITY DISTRICT

### Introduction

When City Council adopted the Central City Plan in 1988 (Ordinance No. 160606), the plan area encompassed about 2,750 acres, or 4.3 square miles. Additional land north of Burnside and west of SW 18th was included as part of the Goose Hollow Station Area Plan. The Central City includes eight subdistricts (Downtown, University District, North Macadam, Central Eastside, Lloyd District, Lower Albina, Goose Hollow, and River District) and one subarea of the River District (Northwest Triangle). Portions of the Central City are claimed by the Eliot, Lloyd District, Kerns, Buckman, Hosford-Abernathy, Corbett-Terwilliger-Lair Hill, Downtown, Goose Hollow, Pearl, Old Town-Chinatown, and Northwest neighborhood associations. Business district associations with interests in the Central City include the Association for Portland Progress, Central Eastside Industrial Council, Downtown Retail Council, East Burnside Business Association, Goose Hollow Business Association, Historic Old Town, Lloyd District Community Association, Lower Albina Council, Northeast Broadway Business Association, Macadam Corridor Business Association, and Pearl District Business Association.

### Land Uses

Each Central City district has a distinct history and development pattern. The Lower Albina District is predominantly industrial, with approximately 49 percent of the area in that use and about 20 percent of the district made up of vacant land or buildings. The Russell Street Conservation District is located in Lower Albina to preserve a small area along Russell, with N Interstate on the west.

The Lloyd District is dominated by commercial uses, with 41 percent in general office, event and entertainment activities, and hotel/motel uses. Surface and structured parking occupy approximately 29 percent of the district. The Lloyd District is experiencing rapid development, with several office and residential buildings under construction.

The Central Eastside is still composed primarily of industrial uses, but is undergoing changes, especially in the southern portion. The East Portland/Grand Avenue Historic District is located between SE Ankeny on the north, SE Salmon on the south, SE 6<sup>th</sup> (approximately) on the east, and mid-block between Grand and MLK, Jr. Boulevard on the west.

Located on the west side of the river, the Downtown District continues to be the City's office and retail/commercial core. Downtown has seen significant change since adoption of the Central City Plan. Riverplace, Pioneer Place, and several new hotels and office towers have all been erected since that time. Downtown also includes the Yamhill Historic District on SW Yamhill east of the mid-block between 3<sup>rd</sup> and 2<sup>nd</sup>. The portion of the Skidmore Fountain/Old Town Historic District south of Burnside is also in Downtown.

The 52-block area between I-405, SW Market, and SW 4<sup>th</sup> is known as the University District. While this area was envisioned as a University District in the 1988 Central City Plan, it was not officially adopted until the Central City Plan was amended in 1995 to include it. Portland State University controls the vast majority of land within the district. The district

also includes part of the South Park Blocks, high-rise residential buildings, and commercial uses.

The Goose Hollow portion of the Central City originally extended only to SW 20<sup>th</sup> between Burnside and Jefferson, south of Burnside, and west and north of I-405 /US 26. Goose Hollow underwent a planning process after the Central City Plan was adopted. The Goose Hollow Station Community Plan was adopted in 1996 to respond to the changing needs of the district as light rail was extended to the west, with stations at SW 18<sup>th</sup> and Morrison and 18<sup>th</sup> and SW Jefferson. As a result, the Central City Plan district was expanded to include commercially zoned land north of Burnside up to 21<sup>st</sup>, most of the land between 20<sup>th</sup> and SW King, south of Burnside, and west and south from Jefferson between 18<sup>th</sup> and the Vista Tunnel. The area is characterized by large institutional and community facilities, including Lincoln High School, the Multnomah Athletic Club, and Civic Stadium (now PGE Park). The district also has a mix of older multifamily buildings and new multifamily development at the light rail stations, and commercial and office uses. The Goose Hollow District includes the eastern part of the King's Hill Historic District.

The Northwest Triangle and North of Burnside Districts were combined in 1995 to become the River District. The boundaries are W Burnside, I-405, and the Willamette River. The southern portion of Terminal 1 between the Fremont Bridge and the railroad tracks are also part of the River District. This rapidly changing district is envisioned as strongly residential, with office and commercial uses also represented. The district's housing target is 5,500 units. The district contains three historic districts: Thirteenth Avenue Historic District, roughly between NW Johnson and Davis, 14<sup>th</sup>, and mid-block between 13<sup>th</sup> and 14<sup>th</sup>; the north half of the Skidmore Fountain/Old Town Historic District between the river, Burnside, 4<sup>th</sup>, and Everett; and the New China/Japantown Historic District between Burnside, Glisan, 3<sup>rd</sup>, and 5<sup>th</sup>. New development includes the Chinese Garden, the Port of Portland Office, and a large number of new residential buildings and warehouse buildings converted into housing.

The North Macadam District is located south of the Marquam Bridge, between the river and SW Macadam, and north of SW Bancroft. While nearly all industrial in the past, the district is envisioned to transition to a mixed area of housing and office uses, with supportive commercial activities.

The 1988 Central City Plan had the objectives of 5,000 new housing units and 50,000 new jobs. These targets were increased to 15,000 housing units and 75,000 jobs with the adoption of the River District and University District Plans in 1995, which amended the Central City Plan.

Table 10.4 shows population and employment projections for the Central City districts. The Central Business District (CBD) includes River District, Downtown, and University District.

**Table 10.4  
Central City Population and Employment**

District	Population		Employment	
	1994	2020	1994	2020
CBD	8,726	18,775	102,833	153,139
Lower Albina	271	299	1,966	3,117
Lloyd District	231	1,935	17,142	29,896
Central East side	5,614	6,514	23,687	30,552
N Macadam	146	2,812	3,046	13,972
Goose Hollow	4,330	4,858	5,144	6,286
<i>Total Central City</i>	<i>19,318</i>	<i>35,193</i>	<i>153,818</i>	<i>236,962</i>

*Source: Metro*

Note: Metro analysis boundaries are not identical with district boundaries.

## Transportation

The Central City Plan envisioned the Central City Transportation Management Plan (CCTMP) as a tool to address parking and circulation comprehensively. Adopted in 1995, the CCTMP uses a 'high-growth scenario' (75,000 new jobs and 15,000 new housing units by 2010) to evaluate how concentrated growth in the Central City would affect the regional and local transportation system. The high-growth scenario projects a 26 percent increase in peak hour traffic during the 20-year planning period, but only a 4 percent increase over the traffic growth forecast by the RTP. The projected traffic increase is relatively small because of the expected benefits from more housing development, a wider area of parking management, and a substantial increase in transit service.

The RTP identifies the entire Central City as an 'area of special concern'. Metro defines an area of special concern as an area planned for mixed-use development, and "characterized by physical, environmental, or other constraints that limit the range of acceptable transportation solutions for addressing a level-of-service need, but where alternative routes for regional through-traffic are provided." The Central City continues to meet the alternative transportation performance standards for areas of special concerns. These standards are:

- *Non-SOV (single occupant vehicle) modal targets consistent with Table 1.3 in Chapter 1 of the RTP*

The non-SOV target is 60 to 70 percent for the Central City. According to the RTP, "the proportion of trips made to and from downtown Portland by walking, bicycling, shared ride, and transit represent 67 percent of all trips in this part of the region."

- *Parking ratios consistent with Title 2 of the Urban Growth Management Functional Plan*

The CCTMP includes several regulatory tools to manage parking in the Central City Plan district. Land use review requirements, parking lot size limitations, and parking maximums far exceed the Title 2 regional requirements in most cases. The Citywide

Parking Ratios Project adopted by City Council October 11, 2000 (Ordinance No. 174980) adjusted and added to these regulations to ensure the Central City parking ratios meet or exceed the regional requirements. Parking maximums were added for office uses in the River District sectors 1 and 2, as well as for Lower Albina and for Central Eastside sectors 1, 4, 5, and 6. The parking ratio for office uses in Lower Albina and Central Eastside sectors 1, 4, 5, and 6 is 2.5 spaces per 1,000 square feet of net building area (equivalent to the Title 2, Zone A ratio). The boundary between sectors RD1 and RD2 was moved north to the rail line, and a ratio of 2.5 spaces per 1,000 square feet of net building area was adopted for it. A ratio of 3.4 spaces per 1,000 square feet of net building area was adopted in RD1. The exception is a parking maximum of 4.1 spaces per 1,000 square feet of net building area for preservation parking in River District under certain circumstances. A separate planning process for North Macadam is proposing maximum parking ratios for office uses. (The Citywide Parking Ratios Project City Council Adopted Report, October 11, 2000, contains additional detail about compliance with Title 2.)

- *A street connectivity plan for the Area of Special Concern that meets the connectivity requirements set forth in Section 6.4.5 of the RTP*  
A 1998 analysis of the City's consistency with connectivity standards revealed that the vast majority of the Central City complies with or exceeds the 530-foot spacing for streets. This is because Portland's original street layout focused on 200-foot blocks. Most of the areas that does not meet the connectivity requirements are either subject to street plans (River District and North Macadam) or are in industrial zoning and are not subject to the requirements. The remaining parcels that do not meet the connectivity standard are already developed (Lloyd Center, Memorial Coliseum, South Auditorium). South Auditorium is interwoven with numerous public accessways and provides a fairly high level of connectivity for pedestrians and bicyclists. Large parcels in Lloyd District (superblocks) are frequently traversed by pedestrian/bicyclists, generally in the location of previously vacated streets.
- *A plan for mixed-use development*  
The 1988 Central City Plan establishes a 20-year plan and zoning pattern designed to create a dense core of residential, commercial, institutional, and office uses. Certain areas are targeted for residential development, and some areas have required residential components. The industrial zoning on the east side of the Willamette provides a broad range of employment opportunities, in addition to the office and retail jobs centered in the Downtown core and Lloyd District.

Housing and employment targets established for the Central City in 1988 were updated after the CCTMP was completed and the River District and University District components of the Central City Plan were adopted. The area of required residential development in the River District was expanded, and areas previously zoned industrial were designated as high-density residential (e.g., the south part of Terminal 1). The targets are now 75,000 new jobs and 15,000 new housing units by 2010. The 1996 Goose Hollow Station Community Plan further encourages a mix of residential and commercial development by requiring residential as a part of development in nearly all CX (Central Commercial) zoned areas.

The RTP identifies the I-405 loop between I-5 north and I-5 south as a segment that will experience unacceptable congestion. (Other identified segments are discussed above under

City wide Needs.) Segments of I-405 are congested during the two-hour evening peak period, particularly from the Burnside interchange at I-405 to I-5 north. The RTP notes that I-405 does not exceed the level-of-service performance measure for this corridor. The congestion is “localized in nature and does not significantly limit access to the Portland Central City during the evening two-hour peak period. Projects should focus on safety and key bottlenecks.”

Table 10.5 shows 1994 VMT and Table 10.6 shows projected 2020 VMT for the Central City. As noted earlier, the CBD includes River District, Downtown, and University District.

These two tables show there will be a 20 percent increase in VMT residential productions, a 44 percent increase in VMT work productions, and a 9 percent increase in VMT for all purposes of trip attractions between 1994 and 2020. While these are substantial increases, VMT per capita declines over the same period (by 34 percent, 21 percent, and 40 percent, respectively).

VMT and VMT per capita are useful tools to evaluate change over time. Where fundamental and large variations in jobs-to-housing ratios occur among subdistricts, however, comparing one subdistrict to another is somewhat misleading. VMT is still a useful tool in conjunction with other analysis techniques to describe transportation movement.

**Table 10.5**  
**Central City Vehicle Miles Traveled – 1994**

District	VMT (Productions) <sup>1</sup>		VMT (Attractions) <sup>2</sup>
	Residential <sup>3</sup>	Work <sup>4</sup>	All Purposes
CBD	30,242	323,734	1,412,277
Lower Albina	1,400	8,632	35,871
Lloyd District	1,816	109,014	432,942
Central Eastside	29,113	90,264	403,973
N Macadam	1,271	14,741	53,788
Goose Hollow	19,017	18,606	104,926
<i>Total Central City</i>	<i>82,800</i>	<i>564,990</i>	<i>2,443,777</i>

Source: Metro, 2000 RTP Round 3 Strategic Scenario

Note: Metro analysis boundaries are not identical to district boundaries.

<sup>1</sup> VMT (Productions) = AWD (average week day) vehicle miles traveled for trips produced in a district, regardless of destination.

<sup>2</sup> VMT (Attractions) = AWD vehicle miles traveled for trips attracted to a district, regardless of origin.

<sup>3</sup> Residential VMT includes all home-based trip purposes and the residential component of the non-home, non-work purpose.

<sup>4</sup> Work VMT includes all non-home based trip purposes except the residential component of the non-home, non-work purpose.

**Table 10.6  
Central City Vehicle Miles Traveled - 2020**

District	VMT (Productions) <sup>1</sup>		VMT (Attractions) <sup>2</sup>
	Residential <sup>3</sup>	Work <sup>4</sup>	All Purposes
CBD	40,927	451,379	1,377,915
Lower Albina	833	10,647	30,323
Lloyd District	5,434	145,048	466,324
Central Eastside	24,826	118,286	496,317
N Macadam	15,612	64,043	222,199
Goose Hollow	12,261	25,575	84,478
<i>Total Central City</i>	<i>99,893</i>	<i>814,979</i>	<i>2,677,556</i>

Source: Metro, 2000 RTP Round 3 Strategic Scenario

Note: Metro analysis boundaries are not identical to district boundaries.

<sup>1</sup> VMT (Productions) = AWD vehicle miles traveled for trips produced in a district, regardless of destination.

<sup>2</sup> VMT (Attractions) = AWD (average week day) vehicle miles traveled for trips attracted to a district, regardless of origin.

<sup>3</sup> Residential VMT includes all home-based trip purposes and the residential component of the non-home, non-work purpose.

<sup>4</sup> Work VMT includes all non-home based trip purposes except the residential component of the non-home, non-work purpose.

## Recent Studies and Plans

### *Central City Plan*

The 1988 Central City Plan (adopted by City Council Ordinance No. 160606) updates and expands on the following plans for areas partly or entirely within the Central City boundary:

- Downtown Plan (1972, 1980)
- North of Burnside Plan (1981)
- Transit Station Areas Planning Program (1984)
- Northwest Triangle Plan (1985)
- Northwest District Policy Plan (1977)
- Corbett-Terwilliger-Lair Hill Policy Plan (1977)
- Macadam Corridor Land Use and Urban Design Study (1985)
- Willamette River Greenway Plan (1979, 1987)

The Central City Plan identifies transit corridors as the spine for future growth, with the most intense development focused along them. Access to the transportation system is intended to move goods and people to and from manufacturing and distribution centers. The internal transit loop reinforces commercial, retail, and housing uses along the MLK, Jr. Boulevard/Grand Avenue corridor. The light rail system is intended to reinforce the Central City's role as the region's transportation hub. Bicycles and walking are envisioned as



important components of the transportation system. The bridges are seen as multimodal facilities that link the east and the west halves of the Central City.

The later planning efforts summarized below have amended the Central City Plan.

### *River District*

City Council's 1994 Resolution No. 35274 directed the Bureau of Planning to incorporate the River District vision (as proposed by the River District Steering Committee) into the Central City Plan. Central to the vision are a new community of residential neighborhoods and a reorientation of the district to the Willamette River. City Council adopted the River District Plan as part of the Central City Plan in July 1995 (Ordinance No. 168702). One transportation-related objective was added to the Central City Plan for the River District:

Incorporate strategic public investments in infrastructure that will stimulate private sector redevelopment. The River District needs increased transit services, improved streets, and open space.

### *University District*

The City of Portland, in partnership with Portland State University (PSU), proposed the creation of the University District, as called for in the Central City Plan. The University District Plan amended and updated parts of the 1988 Central City Plan, and was adopted by City Council in 1995 (Ordinance No. 168702). The policy envisions the University District to be a "vital, multicultural, and international crossroads with an environment which stimulates lifelong learning, collaboration between business and government and a rich cultural experience." Three transportation-related objectives were added to the Central City Plan for the University District.

Create light rail transit (LRT) access to the District from throughout the region and the Downtown, recognizing the District as one of the region's most significant destinations.

Improve pedestrian connections between the District and Goose Hollow and Lair Hill neighborhoods.

Reflect the establishment of the District by creating a University District Policy Element in the Central City Transportation Management Plan (CCTMP). Until the new element is created, recognize that the CCTMP Downtown Element is applicable to the University District.

### *Goose Hollow*

City Council adopted interim regulations for Goose Hollow in 1994 to ensure transit-oriented development. City Council adopted the Goose Hollow Station Community Plan on January 10, 1996 (Ordinance No. 169699) as an amendment to the Central City Plan. The plan was part of the planning for station communities within the westside light rail corridor. The plan's objectives include encouraging early development in the station area at appropriate densities, ensuring safe and pleasant bicycle and pedestrian environments, and increasing transit ridership. Transportation-related objectives added to the Central City Plan for Goose Hollow are:

Improve pedestrian and bicycle connections to light rail and throughout the neighborhood.

Emphasize linear corridor boulevards on SW 18<sup>th</sup> Avenue, Burnside, and Jefferson streets to provide active retail, plazas, and other urban amenities.

Create a local streetscape that places importance on the continuity of pedestrian pathways, building lines, street corners, and other important physical design qualities.

### *Downtown Community Association Residential Plan*

City Council adopted the Downtown Community Association's (DCA) Residential Plan in 1996 (Ordinance No. 170347). The plan area boundary is W Burnside, the I-405 freeway, and the Willamette River. The plan area comprises seven residential subdistricts: O'Bryant Square, Park Blocks, University District, South Auditorium, Riverplace, City Center, and Skidmore/Yamhill. The 1990 population of the DCA was 8,305, projected to be 9,138 by 2010. The plan builds from the policies of the Central City Plan and the CCTMP. The new objectives state:

- 9.1 Celebrate the nature of Downtown Portland as a pedestrian and bicycle-friendly city where walking and bicycling are a pleasure.
- 9.2 Promote the use of walking, bicycling, carpooling, and transit by Downtowners for home-based work trips, shopping, and other travel both within the Downtown and to other regional centers and destinations.
- 9.3 Improve and maintain full access on streets, transit, and in public buildings for individuals with special needs.
- 9.4 Ensure the passage and accessibility of emergency vehicles within the Downtown.
- 9.5 Design and use space within Downtown's transportation corridors to promote street level activity and enhance the quality of the residential environment.
- 9A.1 Improve Downtown transit access, frequency, speed, connectivity, ridership, and user-friendliness.
- 9A.2 Support the construction of additional transportation options in the Downtown which improve service, safety, reliability, and utility.

### *North Macadam*

City Council accepted the North Macadam Framework Plan August 11, 1999 (Resolution No. 35815) as guidance for developing the area as a "vibrant, mixed-use urban riverfront neighborhood." The Framework Plan describes an urban neighborhood designed to accommodate 8,500 to 10,000 jobs and 1,500 to 3,000 housing units during the next 20 years. These projections slightly exceed the CCTMP projections of 1,420 dwellings and 2 million square feet of commercial space. The transportation goals for North Macadam include:

Improve access and circulation options to, through, and within the district to accommodate projected development.

Promote a variety of transportation types such as streetcar, light rail, river taxi, and bus.

Develop a pedestrian and bicycle network of streets and accessways.

Create a parking strategy that considers timing, control of commuter trips, parking meters, and shared parking and that makes North Macadam competitive with comparable subdistricts.

Develop an efficient and convenient transit system.

Achieve at least a 30 percent mode split for non-SOV travel through transportation demand management (TDM), parking ratios, a transportation management association (TMA), and transit.

Develop east-west streets to connect the western edge to the river.

Develop a transportation system that reduces the traffic impacts on surrounding neighborhoods.

## 2040 Focus Areas

As identified in Metro's 2040 Growth Concept, the Central City is the major regional center, accessible to millions of people. The 1997 Regional Framework Plan notes:

Today, about 20 percent of all employment in the region is in downtown Portland. Under the Growth Concept, downtown Portland would grow at about the same rate as the rest of the region and would remain the location of about 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to about 250 people per acre.

According to the Framework Plan, the percentage of travel in the Central City by other than car is three times higher than in the next most successful area.

The 2040 Growth Concept also identifies several segments of main streets within the Central City, including W and E Burnside, SE Hawthorne, SE Belmont, a small section of NE MLK, Jr. Boulevard, and NE Broadway/Weidler. These designations are subsumed by the Central City designation, but are useful for street design.

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## Themes, Issues and Constraints

### *Central City Plan*

Since 1988, a number of projects have addressed many of the transportation themes and issues raised in the Central City Plan. Westside light rail has been built and is operational, with higher ridership than anticipated, particularly on weekends. Construction of the Greyhound Terminal has enhanced Union Station's role as a transportation hub. The transit mall has been extended north to Union Station. Several 'bike central' facilities have been established in conjunction with health club facilities. Parking strategies for each district (except North Macadam, which is underway) have been developed as part of the CCTMP. Parking permit programs have been established where on-street commuter parking has affected adjacent neighborhoods and Central City subdistricts.

Remaining issues identified in the Central City Plan include creating an inner-city transit loop (circulator) connecting the east and west sides, completing the light rail system, and improving access to bridges for all transportation modes. The Project Suggestions section, below, identifies additional actions from the Central City Transportation Management Plan.

The following themes guided development of the CCTMP:

- The vitality of the Central City depends on focusing a larger percentage of the region's growth in the Central City than would otherwise occur if existing trends continued.
- Transportation and parking management strategies need to be developed for each district of the Central City.
- Transit capacity and service need to be expanded, and the use of other alternative modes needs to increase to meet the needs of each district of the Central City.
- The aggressive development of housing in the Central City will contribute to an increase in pedestrian and other alternative modes.
- Regional air quality policies should be implemented to encourage trip reductions and a concentrated land use pattern served by transit, rather than focusing on restrictive air quality measures within the Central City districts.

The CCTMP Framework Policies summarize the specific policies and objectives of the CCTMP, as follows. (Chapter 2: Transportation Element of the Comprehensive Plan, of this document provides the complete text of the CCTMP goal, policies, and objectives.)

1. Minimize commuter travel by automobile in each of the Central City districts in order to ensure growth in employment.
2. Allocate sufficient parking to land uses that are economically essential to the Central City.
3. Manage the availability of parking in each Central City district, taking into consideration density, land use, congestion, and the level of transit service.

4. Establish mode split goals for transit and alternative modes by district, and develop strategies to achieve the goals.
5. Assure compliance with air quality standards by emphasizing regional solutions to air quality problems.
6. Support the development of regional strategies to implement trip reduction goals, and support adoption of a regional land use pattern that will support the expansion of the use of alternative modes.
7. Expand the use of transit in the Central City by supporting regional funding strategies needed for the expansion of transit service. These strategies should be adequate to meet the high-growth scenario and be consistent with the Tri-Met Strategic Plan.
8. Adopt policies for the Central City that will encourage transit-supportive development and bike and pedestrian mobility.

### ***PGE Park (Civic Stadium)***

A Comprehensive Transportation Management Plan (CTMP) was developed for PGE Park to guide the stadium operator and the City. The CTMP provides an overall transportation strategy to accommodate more and larger events at the renovated Civic Stadium, while minimizing impacts on the neighborhood. It was completed in May 2000 with the input of the affected neighborhoods. Existing parking opportunities are often exhausted in Goose Hollow and Northwest, even without events at PGE Park. Relatively small events at the stadium saturate parking in Goose Hollow, and larger events saturate parking north into the Northwest neighborhood.

The CTMP mitigation measures will shift event parking to Downtown, which will relieve parking pressures in the vicinity of the stadium and improve traffic and circulation during and after events. Strategies to reduce parking in the neighborhoods will include expanding the permit parking program and increasing enforcement, providing incentives to increase transit use, increasing the availability of MAX and shuttle buses, and directing educational efforts to patrons.

### ***North Macadam***

The primary development constraint in North Macadam is the lack of transportation access to the regional highway and transit systems. The area lacks a typical network of public rights-of-way and a grid of local streets. A street plan is needed to ensure that the desired urban form emerges: high-density development with access and mobility opportunities for pedestrians, transit patrons, and bicyclists. The North Macadam Framework Plan calls for frequent public connections to the river. The North Macadam District Street Plan, accepted by City Council in 1996, is currently being updated to reflect more recent planning efforts.

## Project Suggestions (Partial List)

### *District Workshop/Community and Neighborhood Plans*

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The final district workshop to solicit input on Central City transportation needs was held on October 17. The results are summarized below.

- **Transit.** Provide more frequent transit service; reinstate 'owl' service; expand weekend transit service.
- **Fareless Square.** Extend Fareless Square to the Lloyd District and other parts of the Central City.
- **Pedestrian.** Expand the pedestrian network to connect residents of the Central City to greenspaces and other neighborhoods and activity centers; install audible pedestrian signals at downtown intersections.
- **Bridges.** Improve bridgeheads and viaducts that provide pedestrian access, particularly the Morrison Bridge.
- **Bicycle.** Complete the bike network to and from the Central City for commuters; provide bike access to greenspaces and other recreational destinations.
- **Intersections.** Fix the intersection of SE 12th/Sandy/Burnside.

### *Central Eastside Transportation Study*

Although this study was completed in 1990, several major projects from it have not been completed, including changes to the Grand Avenue bridgeheads to make them more pedestrian-friendly and accessible to transit.

### *Central City Transportation Management Plan*

Some of the transportation-related projects identified in the action items section of each CCTMP policy are listed below. (The full text of action items is contained in the CCTMP document.)

- **Circulation and Access.** Support completion of I-5, Greeley to I-84.
- **Transit.** Increase transit hours span; consider bus 'circulator'; implement transit priority projects.
- **Pedestrian.** Complete Greenway Trail; improve access to and across bridges; improve access across I-5, I-84, and I-405.
- **Bicycle.** Implement the Bike Master Plan; provide bike priority at key intersections; add bike parking where needed.

The CCTMP identifies the following district strategies for the Central Eastside:

- **Pedestrian.** Connect the north side of the Ross Island Bridge to the west side of SE McLoughlin; improve crossings of Grand and MLK, Jr.; improve the 12th/Sandy/Burnside intersection.
- **Bicycle.** Connect SE Clinton to the district.
- **Circulation.** Evaluate modifying Sandy to eliminate excess pavement and improve circulation.

### ***Goose Hollow Station Community Plan***

The following transportation-related projects are included in the action charts of the Goose Hollow Station Community Plan:

- **Boulevard.** Jefferson street plan to reduce traffic speeds, provide parking, and widen sidewalks.
- **Parking.** Explore shared parking opportunities, more angled parking.
- **Pedestrian.** Improve connections (lighting, curb extensions, crossings, pavement materials) to light rail, PSU to student housing, across I-405.
- **Bicycle.** Improve connections between PSU and student housing; provide bike parking at Civic Stadium station.
- **Traffic and Circulation.** Calm traffic on local residential streets; conduct a corridor study for Burnside; improve right-of-way and traffic management between Civic Stadium station and the north side of Burnside.

### ***Downtown Community Association Residential Plan***

The action charts of the DCA Residential Plan include the following transportation-related projects:

- **Connections.** Provide additional transit to adjacent neighborhoods, employment centers, multimodal terminals, recreation.
- **Pedestrian.** Improve crossings and corners for the visually impaired; remove barriers.
- **Bicycle.** Provide bike lanes on designated streets.

### ***Report and Recommendations of the Goose Hollow/Civic Stadium Planning Committee***

The Goose Hollow/Civic Stadium report was prepared to identify issues relating to the redevelopment of Civic Stadium into PGE Park. The report was used in the development of the Comprehensive Transportation Management Plan (CTMP) for PGE Park. Some of the transportation-related issues are:

- **Transit.** Increase transit frequency and coverage; use shuttle buses.
- **Pedestrian.** Improve crossings of Burnside; widen sidewalks; remove obstructions; upgrade SW Taylor and Salmon between 18<sup>th</sup> and I-405; improve crossings of I-405.

- **Bicycle.** Provide bike lanes on designated streets; secure bicycle parking.
- **Traffic/Circulation.** Reconfigure streets surrounding Firemen's Memorial Park; evaluate street system changes as a part of redevelopment.

### ***Pedestrian Master Plan***

The 1998 Pedestrian Master Plan identifies a number of projects that are completed or partly completed within the Central City. (See the Pedestrian Master Plan for details of these projects.)

- **Crossings.** W Burnside from Park to 23<sup>rd</sup>; SE Powell at Milwaukie; E Burnside at 12<sup>th</sup> and Sandy
- **Bridges.** Broadway Bridge accessibility; Steel Bridge pedestrian access project (underway); Morrison Bridge accessibility project; Central City bridgeheads pedestrian access project; Ross Island bridge accessibility.
- **Greenstreets.** SW Park Blocks greenstreet
- **Connections.** NW I-405 bridges: Burnside, Couch, Everett, Glisan
- **Stairs.** SW Spiral Way right-of-way

### ***Bicycle Master Plan***

The 1996 Bicycle Master Plan identifies a number of bicycle improvements that are completely or partly within the Central City. (See the Bicycle Master Plan for a complete list of projects.)

- **Bike Lanes.** SW Main and Madison; SW Salmon and Taylor; SW 2<sup>nd</sup>; NW Everett and Glisan; NW 9<sup>th</sup>; MLK, Jr. Boulevard and Grand; NE 9<sup>th</sup>; SE Belmont
- **Bike Boulevards.** NE Couch, SW 1<sup>st</sup>
- **Multi-use Trail.** Willamette Greenway; I-84

### ***University District Plan***

The University District Plan includes projects and activities to enhance the transportation system. The transportation projects identified in the plan include:

- **Transit.** Extend the transit mall south through the district.
- **Connections.** Improve connection to Riverplace, the Willamette River Greenway Trail, and 40-Mile Loop via Montgomery Street.
- **Pedestrian.** Improve crossings on Broadway and 4<sup>th</sup>.

### ***River District Plan***

The River District Plan includes projects and activities to enhance the transportation system, including:



- **Pedestrian /Bicycle.** Complete the Willamette Greenway Trail.
- **Connections.** Improve crossings of the railroad.
- **Circulation.** Reconstruct the Lovejoy viaduct and 10<sup>th</sup> Avenue ramps.
- **Local Streets.** Construct 11<sup>th</sup> Avenue between Hoyt and Lovejoy and other streets.
- **Water Taxi.** Implement the river access transportation (RAT) project.

### ***North Macadam Framework Plan***

City Council accepted the North Macadam District Framework Plan in August 1999. The largely undeveloped area suffers from a number of problems, including poor transportation access and circulation, inadequate infrastructure, and soil contamination. The transportation improvements envisioned for the district include:

- **Pedestrian /Bicycle.** Make improvements on Sheridan and Corbett, overcrossings at I-5, and the Greenway Trail.
- **Circulation.** Reconfigure Bancroft/Hood/Macadam intersections; construct River Parkway; construct Moody/Bond; construct east-west streets (Arthur, Gibbs, Curry, Lowell).
- **Transit.** Continue streetcar through district; build transit hub.
- **River Taxi.** Investigate feasibility of river taxi system.

### **Non-TSP Project Issues**

Past studies and plans have recommended numerous activities, programs, and other actions. A sample is listed below.

#### ***Central City***

- Include traffic calming strategies in district transportation management programs.
- Use parking meters/parking control techniques to maintain livability of adjacent neighborhoods.
- Establish transportation management associations.
- Encourage incentives and discounts for employers to subsidize transit passes.
- Improve identification, signage, and lighting of the pedestrian network.
- Expand City program of installing bicycle racks.

#### ***Central City Subdistricts***

##### **DOWNTOWN**

- Explore residential parking permits; support electric vehicles in parking structures.
- Provide short-term and long-term parking.
- Modify street corners to assist the visually impaired.
- Improve transit signing, shelters, and kiosks.

- Remove barriers to the mobility impaired.
- Add ornamental lighting to SW Park and SW 9th between SW Morrison and W Burnside (partially completed).
- Explore potential for water taxis, mini-shuttles, bicycle carriages.

**UNIVERSITY DISTRICT**

- Implement a comprehensive transportation management program.
- Modify some local streets to create amenities to support housing.

**GOOSE HOLLOW**

- Expand area covered by permit parking; expand hours; raise permit fees
- Provide shared parking arrangements and parking garages.

**LLOYD DISTRICT**

- Provide plazas and public spaces through development on superblocks.
- Reinforce transit/pedestrian spine on NE Holladay.
- Develop transit center in the office core.

**CENTRAL EASTSIDE**

- Provide parking structure in the MLK, Jr./Grand corridor.
- Close unused curb cuts to increase on-street parking.
- Increase number of transit facilities: shelters, improved sidewalks, benches, lighting.
- Improve pedestrian access at “No Pedestrian Crossing” locations.
- Improve safety and convenience for bicyclists on SE Ankeny and SE Clay.
- Develop a truck access plan that improves connections to the regional system.

**LOWER ALBINA**

- Improve pedestrian access to Downtown impeded by freeway, ramps, and railroads.
- Monitor Rose Garden traffic and parking mitigation plan.

**NORTH MACADAM**

- Improve pedestrian access to Downtown.
- Preserve the Willamette Shoreline corridor for future light rail.
- Establish a transportation management association.
- Implement the transportation demand management plan.
- Implement a transit service strategy.
- Investigate river taxi.

**RIVER DISTRICT**

- Ensure safe pedestrian access to bus and train terminals.
- Develop a pedestrian plan for north of Lovejoy, with connections to the Greenway and park blocks.

## District Performance Measures

The CCTMP contains district-level transit share goals for commuter trips in 2010, as shown on Table 10.7.

**Table 10.7**  
**CCTMP Transit Mode Share Goals**

<b>District</b>	<b>Goal (%)</b>
Downtown	60
North of Burnside	40
Lloyd-Coliseum	40
Northwest Triangle	20
North Macadam <sup>1</sup>	20
Goose Hollow	20
Central Eastside	15
Lower Albina	10

<sup>1</sup> The North Macadam Framework Plan establishes a non-SOV mode share goal of 30 percent, but includes rideshare, walk, and bicycle trips as part of that percentage.

The CCTMP contains a combined walk/bike goal of 10 percent for home-based work trip attractions to each district by 2010. The CCTMP also has a rideshare goal for average auto occupancy of 1.3 person per vehicle for home-based work trip attractions to all Central City districts by 2010.

The upcoming review of the CCTMP will update mode split and other transportation performance measures in the Central City, including establishing new targets for districts that have combined or split since the CCTMP was adopted.

## NORTH DISTRICT

### Introduction

The North District, also known as the North Portland peninsula, is located at the confluence of the Columbia and Willamette Rivers, which also form the district's north and west boundaries. The I-5 (Banfield) Freeway defines the east boundary and the Fremont Bridge the south boundary of this district.

### Land Use

Land use within this area is primarily either single-family residential or industrial. The district also includes the St. Johnstown center and the Lombard main street. In addition, the area includes Smith and Bybee Lakes, remnants of the wetlands and marshes that used to border the Columbia River, and the second-largest natural area in the City. The Portland International Raceway (West Delta Park) and Portland Speedway, which provide for competitive automotive events, are within the district.

The North District includes four of the primary focus areas that the 2040 Growth Concept identifies within the City of Portland: two industrial districts (Rivergate and Swan Island) and two intermodal facilities (Terminal 6 and the Albina Rail Yard). The Rivergate and Swan Island Industrial Districts are primarily owned and developed by the Port of Portland. The Port also owns and operates the Terminal 6 intermodal facility on the Columbia River. The Burlington Northern and Santa Fe Railroad operates the Albina Rail Yard Intermodal Facility, adjacent to the south of Swan Island. While Swan Island is approaching full development, substantial development opportunity is left in the Rivergate Industrial District.

The proximity of rail, highway, air, and river access makes the North District uniquely important to the distribution aspect of the City's economy. The emphasis on the movement of goods and products also makes trucking a major part of the District's transportation concerns and needs.

Population and employment for the North District (as reflected in the regional transportation model) are:

Year	Population	Employment
1994	45,099	35,829
2020	53,735	50,658

### Transportation

The east-west street system in the North District comprises a number of major arterials, including Marine Drive, Columbia Boulevard, Lombard, and Going. The north-south street system comprises I-5, Interstate, Portland Road, and Greeley. The main access points into the district are I-5, Interstate, and the St. Johns Bridge. The St. Johns Bridge and Lombard are part of the federal highway system (US 30 Bypass).

Lombard (west of MLK, Jr. Boulevard) carries approximately 22,000 total vehicles per day, with a p.m. peak hour volume of approximately 1,500 vehicles. During the peak truck travel hour (1:30 p.m. to 2:30 p.m.), trucks constitute approximately 14 percent of the total vehicle volume. Columbia Boulevard carries approximately 28,000 vehicles per day through North Portland, with a p.m. peak hour volume of 1,700. The percentage of truck traffic on Columbia is between 14 and 22 percent, compared with City averages of 8 to 10 percent of total vehicles. Marine Drive carries approximately 10,000 vehicles per day, with a higher-than-average percentage of truck trips.

Residents have long had concerns about truck traffic in the North District, especially near major industrial areas such as Swan Island and the Rivergate Industrial District and near I-5. Many of the non-local trucks that travel between I-5 and US 30 (St. Helens Highway) now regularly use Fessenden Street and other residential and retail/commercial streets as truck routes. The 1992 Transportation Element identified the need for a study to evaluate North Portland truck routes and mitigation for truck traffic in St. Johns and other North Portland neighborhoods.

Light rail is under construction in the Interstate corridor between the Rose Quarter transit center and the Exposition Center near the Columbia River. Light rail will substantially improve access in the North District and change travel patterns. Residents are concerned about potential traffic infiltration once light rail opens in 2004.

North Portland is served by a number of bus lines, many of which use St. Johns as a hub. One bus line serves the Rivergate area, and one regular line and a shuttle service connect the Swan Island area via Going Street. The number 5 line is the primary north-south route, while Lines 72 and 75 provide cross-town service. Lines 16 and 17 connect the North District with northwest Portland.

Most streets in the North District are paved and have sidewalks. A new off-street path was recently opened along the railroad cut, and new trails have been constructed in the Bybee-Smith Lakes area.

## Recent Studies and Plans

Several studies have been completed or are underway to address the needs of truck movement and the needs of residents to have livable neighborhoods. The study results are summarized below and described in more detail in Chapter 12: Area Studies.

- I-5 Transportation and Trade Partnership (ODOT, PDOT, Metro, Portland Development Commission [PDC], Multnomah and Clark Counties, City of Portland, City of Vancouver, Port of Portland)
- Columbia Corridor Transportation Study (City of Portland)
- St. Johns Truck Strategy (City of Portland, Port of Portland)
- North-South Light Rail (Tri-Met, PDC, City of Portland)
- West Hayden Island Marine Terminal Development
- St. Johns/Lombard Plan

### ***I-5 Transportation and Trade Partnership***

The I-5 corridor provides access to many of the region's important industrial sites and port facilities and is a link to jobs throughout Portland and Vancouver. Because of the lack of multimodal options and increasing congestion, traffic delays are becoming more frequent and longer. Following public input and discussion, a task force is expected to adopt the Final Strategic Plan Recommendations for the I-5 Corridor in June 2002 and send it to the Oregon and Washington transportation commissions, Metro, and the southwest Washington metropolitan planning organizations for review. Strategies under discussion are increased I-5 capacity, potential high-occupancy vehicle (HOV) lanes, light rail, increased capacity over the Columbia River for all modes, and spot improvements at key interchanges.

### ***Columbia Corridor Transportation Study***

The area of this 1999 study extends between N Portland Road and NE 185<sup>th</sup>. The study's purpose was to address the concerns of residents living east of I-5 and of pedestrian and bicycle advocates. The identified problems were auto and truck speeding, volumes, vibration, cut-through traffic, and conflicts between modes. The study identifies a number of improvements, primarily between I-5 and 185<sup>th</sup>. The only recommendation that affects the North District is to consider a full interchange at I-5 and NE Columbia Boulevard (an addition of a northbound on-ramp) or improvement to the location of existing ramps.

### ***St. Johns Truck Strategy***

There had been no designated truck streets between Rivergate and Columbia Boulevard and the St. Johns Bridge since 1992, at the request of citizens who testified on the Transportation Element update. The purpose of the 2001 St. Johns Truck Strategy was to look at ways to reduce the amount of truck traffic travelling on neighborhood streets. The goal was to identify ways to eliminate or reduce conflicts between non-local truck movement and the residential and retail/commercial areas in St. Johns. The study also looked at transportation system improvements for truck travel to commercial or industrial sites, the freeway system, and the St. Johns Bridge.

Recommended transportation improvements include a number of traffic calming projects to enhance pedestrian and bicycle safety:

- Lombard from Pier Park to St. Louis
- Fessenden from Columbia Way to St. Louis
- St. Louis from Fessenden to Lombard
- Pedestrian and bicycle safety changes on Columbia Boulevard from Portland Road to Rivergate
- Other measures to create an environment that helps protect the neighborhood streets from incursion by non-local truck traffic

Intersection changes are recommended to improve truck movement and pedestrian and bicycle safety:

- Redesign and reconstruct the Lombard/St. Louis/Ivanhoe intersection.
- Redesign and reconstruct the Ivanhoe/Philadelphia intersection.
- Redesign and reconstruct the Columbia Boulevard/Portland/Columbia Way intersection.
- Redesign and reconstruct the street segment of Burgard and Lombard from Rivergate entrance to Terminal Road.

### ***South-North Light Rail***

Metro and Tri-Met began studies in 1984 to evaluate transportation alternatives that would address rapid population growth and travel demand in the region. The Washington and Portland metropolitan transportation committees adopted the south-north locally preferred strategy.

After a local funding ballot measure for south-north light rail was defeated in 1998, a group of local business and community leaders asked Tri-Met and Metro to investigate the development of a new north corridor light rail alignment. In 1999, Metro amended the preferred north alignment to an Interstate Avenue alignment.

The north corridor area is growing less rapidly than other areas of the region. Development of light rail in this corridor will increase developable land located within one-quarter mile of the new light rail stations by 127 acres and within one-half mile of the stations by 484.5 acres. Light rail will leverage job opportunities and new housing along the corridor.

Construction of the Interstate Avenue alignment is underway. Changes have been made in the Rose Quarter, and new tracks are being laid along N Interstate to the Expo Center near the Columbia River. Approximately 600 park-and-ride spaces will be provided at the two northernmost stations: Delta Park/Portland International Raceway and Expo Center.

### ***West Hayden Island Marine Terminal Development***

The West Hayden Island Development Plan calls for a transition of the West Hayden Island area to marine terminal facilities and an intermodal railyard. In accordance with the plan, a transportation analysis was completed in 1999 to identify specific traffic impacts associated with development of the bulk terminal and the container terminal/intermodal railyard. The analysis showed that the addition of bulk terminal traffic would have no adverse traffic impacts. The addition of a container terminal(s) and intermodal rail facilities would adversely affect traffic operation on Hayden Island and at the intersection of I-5 with Marine Drive. A bridge linking West Hayden Island to Marine Drive is proposed in conjunction with development of the marine terminal facilities and intermodal railyard. Development of West Hayden Island is not occurring immediately because of cost and other issues.

### ***St. Johns/Lombard Plan***

The St. Johns/Lombard Plan is now underway to implement the town center and main street designations of the 2040 Growth Concept. The plan will address Comprehensive Plan and zoning changes and other land use changes, along with transportation issues for bicyclists, pedestrians, transit users, and motorists. It will address the needs of alternative mode users through the design of street cross-sections and intersections and by identifying

locations for crossing opportunities. The plan will be coordinated with other City and regional planning efforts (recently completed or underway) that affect the study area, including the I-5 Trade and Partnership project, Willamette Greenway Plan update, Portsmouth Neighborhood Plan, North Interstate Urban Renewal Plan, and St. Johns Truck Strategy.

## **Themes, Issues, and Constraints**

### ***District Workshop Results***

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit input on North District transportation needs was held on October 1. The most frequently mentioned concerns were:

- **Speeding.** Many participants were concerned about finding solutions to speeding on local neighborhood streets.
- **Trucks.** Because of the proximity of industrial uses to residential areas, issues included trucks cutting through neighborhoods and the need for different truck routes.
- **Bicycle and Pedestrian Safety.** It is a challenge to get around the district by bicycle or walking. Other concerns for cyclists and pedestrians were safe access to recreational areas, greenspaces, and places of employment.
- **Transit Service.** Neighbors want increased frequency and additional transit routes to serve the district.
- **I-5 Connections.** The area needs improved connections to the freeway from Lombard, Columbia Boulevard, and Marine Drive/MLK, Jr. Boulevard.

### ***Transit Choices for Livability***

Tri-Met sponsored a series of workshops and charrettes in 1997 and 1998 to solicit public input on the City's transit needs. Suggested North Portland transit service improvements included:

- **Columbia Corridor.** New connections between North Portland and jobs in the corridor.
- **Swan Island.** Service to the high-density employment district, tailored to meet the needs of employees.
- **Northwest.** New connection between Westside MAX and the Northwest industrial area, with a link to North and Northeast Portland.

### ***Albina Community Plan***

The Albina Community Plan, adopted by City Council in October 1993, covers part of the North District: the Arbor Lodge, Kenton, and Overlook neighborhoods. Arbor Lodge and Kenton have neighborhood plans that were developed as part of the Albina Community Plan. The community plan emphasizes stabilizing and revitalizing residential neighborhoods;



reshaping existing commercial strips into nodes; improving the pedestrian environment, particularly along MLK, Jr. Boulevard; planning for light rail; and identifying family service, education, and employment needs.

Transportation-related policies identified the following issues for neighborhoods west of I-5:

- Emphasize light rail as the major transportation investment.
- Reduce the environmental impacts of I-5.
- Provide for higher-density housing opportunities adjacent to the light rail line.

The two neighborhood plans emphasize the following transportation policy issues:

**Arbor Lodge.** Reduce the use of the automobile and encourage the use of alternatives; pave unimproved streets and alleys and construct sidewalks where they are most needed; ensure that public transportation is accessible to neighborhood residents.

**Kenton.** Improve access to Kenton by providing transportation choices while reducing noise, pollution and safety hazards; protect neighborhood livability and safety by discouraging speeding; ensure that public transit is convenient, secure, and safe.

## Project Suggestions

### *District Workshops*

The attendees of the 1998 workshops submitted the following suggestions:

- **Connections.** Additional crossings of the railroad cut; additional access points to the Willamette River, N Kenton to PIR, Columbia Slough, Delta Park, and Columbia South Shore.
- **Crosswalks.** New locations in Kenton; N Columbia and path from N Peninsular and N Denver.
- **Bicycle/Pedestrian Improvements.** Portland Boulevard between N Willamette and Greeley; Killingsworth between Denver and Greeley; Knowles, Farragut, Omaha Buffalo; I-5 to Greenwich and Prescott to Columbia; Columbia.
- **Viaduct Improvements.** Denver viaduct.
- **Pedestrian District.** Improved pedestrian/bicycle connections between the town center and Pier Park, Columbia Slough, and Smith and Bybee Lakes.
- **Greenway Improvements.** Additional pedestrian and bicycle routes.
- **Signage.** Sign installation for bike routes, pedestrian routes, and the 40-Mile Loop.
- **Street Design.** N Denver.

### *Pedestrian Master Plan*

The Pedestrian Master Plan identifies the following projects for North Portland:

- **Walkways and Crossings.** N Columbia Boulevard walkway and crossings between Swift Court and Portland Road; N Columbia Boulevard walkway and crossings between Argyle Way and Albina.
- **Walkways and Transit Stop Improvements.** N Greeley between Going and Interstate.
- **Crossings.** N Lombard at Interstate.
- **Pedestrian Districts.** St. Johns; Kenton.
- **Pedestrian Plans.** Swan Island.
- **Bridge Access.** St. Johns Bridge accessibility improvements.

### ***Bicycle Master Plan***

The Bicycle Master Plan contains a number of projects in the North District that have been completed. Projects not yet completed include:

- **Bicycle Lanes.** N Lombard; N Columbia; N Lagoon/Channel.
- **Bicycle Boulevards.** N Woolsey; N Peninsular.
- **Multi-use Trails.** Columbia Slough trail.

### ***Albina Community Plan***

The Albina Community Plan and the individual neighborhood plans identify a large number of transportation improvements. Most of the Albina Community Plan's transportation action items are general, rather than specific. PDOT reviewed the suggestions and included them in the TSP as major transportation improvements if they met the criteria for 'significant' projects. Specific major transportation projects in the Albina Community Plan for the area west of I-5 include:

- Create noise buffers along I-5 to mitigate the impacts of freeway traffic noise (being installed).
- Synchronize traffic lights along major thoroughfares.
- Establish direct bus connections between Northwest and inner-North Portland. (Line No. 16 now in operation.)

The Arbor Lodge neighborhood plan contains the following project suggestions:

- Develop a traffic management plan for N Willamette Boulevard.
- Develop recreational and scenic routes, such as a hiking and bicycle trail system next to the Willamette River.
- Investigate alternative modes of travel, such as a monorail alignment connecting North Portland to Rivergate.

The Kenton neighborhood plan contains the following project suggestions:

- Consider traffic calming on N Denver.
- Provide bike lanes on Denver that connect to other bike facilities.
- Study how completing the traffic cloverleaf at I-5 and Columbia affects truck traffic.
- Provide additional pedestrian crosswalks.

Other workshops and neighborhood planning efforts in the North District have generated many ideas in addition to the suggested projects that are considered 'significant' for TSP purposes. Chapter 2: Transportation Element of the Comprehensive Plan, of the TSP includes ideas that are policy-level concerns under the North District objectives. More general ideas are referred to the appropriate PDOT staff for further review. Appendix E lists many of these smaller project ideas.

## NORTHEAST DISTRICT

### Introduction

The Northeast District is bounded by the Columbia River on the north, I-5 on the west, I-205 on the east, and I-84 on the south. The Lloyd Center area and Lower Albina in the southwest corner are part of the Central City rather than part of the Northeast District.

### Land Use

South of Columbia Boulevard, the neighborhoods in this district are primarily residential, with commercial areas located along arterials. North of Columbia Boulevard, the land use is industrial, except between NE 33<sup>rd</sup> Avenue and I-205, where Portland International Airport and airport-related activities are located.

East Delta Park, Portland Meadows, at least five golf courses, and a number of parks provide recreational opportunities. The east side MAX light rail line is located in the I-84 right-of-way at the south edge of the district. The airport light rail line extends northward from the Gateway station area, along I-205, then northwesterly into the Northeast District and on to the Cascade Station area and the airport.

This district includes a major portion of the Columbia South Shore Industrial District. Portland International Airport, owned and operated by the Port of Portland, is located in the Columbia South Shore Industrial District between NE 33<sup>rd</sup> and NE 82<sup>nd</sup>. The opportunity for new industrial, employment, commercial, and entertainment uses has been enhanced by the approval of the Portland International Center and a plan district for Cascade Station. The airport and surrounding industrial and employment uses are major attractors and generators of vehicle trips, with access largely dependent on the freeways.

The Hollywood town center and Sandy main street are in the southern part of the district. Other 2040 main streets are located on segments of MLK, Jr. Boulevard, N/NE Killingsworth, N/NE Lombard, NE Fremont, NE Broadway/Weidler, NE Cully Boulevard, and 82<sup>nd</sup> Avenue. Parts of the east side MAX 42<sup>nd</sup>, 60<sup>th</sup>, and 82<sup>nd</sup> transit centers are in the Northeast District, as are the Airport MAX stations in Parkrose, Cascade Station, and the airport.

Population and employment (as reflected in the regional transportation model) for the Northeast District are:

Year	Population	Employment
1994	106,548	60,051
2020	121,572	90,394

### Transportation

The Columbia Corridor Transportation Study (1999) provides a detailed picture of many of the major arterials in the north part of the district. These arterials are NE Columbia

Boulevard, NE Lombard, NE Marine Drive, NE MLK, Jr. Boulevard, NE 33<sup>rd</sup> Drive, and NE 82<sup>nd</sup> Avenue.

A large percentage of truck-oriented land uses are located directly adjacent to NE Columbia Boulevard. Depending on location, Columbia Boulevard carries between 28,000 vehicles per day (west end) to 20,000 vehicles per day (east end), with a p.m. peak hour of 1,700 and 1,250 vehicles, respectively. Truck volumes make up between 14 and 22 percent of the total motor vehicle traffic on the street during the truck peak hour (2:30 p.m. – 3:30 p.m.).

NE Lombard comprises segments with different street names. From I-5 to 60<sup>th</sup>, the street is N/NE Lombard; from 60<sup>th</sup> to Cully, it is N Portland Highway; and from Cully to I-205, it is N Killingsworth. ODOT owns and maintains the entire length, which serves as the US 30 Bypass. NE Lombard operates at good levels of service during peak periods with sufficient roadway capacity to handle the traffic volumes and local access. Volumes range from 22,000 vehicles per day (west end) to 24,500 vehicles per day (east end), with p.m. peak hour volumes of 1,500 and 2,500 vehicles, respectively. Truck volumes range from approximately 14 percent (west end) to 7 percent (east end) of total vehicle volumes.

NE Marine Drive traffic volumes are approximately 10,000 total vehicles per day over its entire length, with peak hour volumes varying between 700 and 1,200 vehicle (east end) and 2,500 vehicles (west end).

MLK, Jr. Boulevard and 82<sup>nd</sup> are state highways built before I-5 and I-205, respectively. The 2040 Growth Concept designates segments of both as main streets. A plan for MLK, Jr. Boulevard between NE Broadway and NE Columbia was adopted to transition the street from its highway function and design to a main street. Traffic volumes range from 40,600 vehicles per day (south end) to 19,000 vehicles (north end). Over 90 percent of the trips are local rather than through-trips.

Transit service crosses the district with a number of lines, although the Columbia Corridor is poorly served with east-west service. MAX light rail lines run along the southern and western edges of the district, with numerous transit stations served by feeder bus lines.

Most of the residential areas in the district have pedestrian facilities. The exception is the Cully neighborhood, which has many undeveloped streets. Bicycle facilities are present on several streets; many more are planned, but not yet developed.

## **Recent Studies and Plans**

Many plans have been completed or are underway for the Northeast District. Some of the plans are intended to address truck access to and within industrial areas; others are to improve access to the airport; and two are to implement the 2040 Growth Concept for town centers and main streets.

### ***Martin Luther King, Jr. Boulevard Transportation Project***

Martin Luther King, Jr. Boulevard is classified as a Major City Traffic Street and a state highway. It no longer functions as a state highway, however, and traffic is primarily local rather than regional. A study was initiated in 1997 to transition the street from its highway status to a main street. The study's goal was to transform the street to respond to the desired

land use characteristics. Four different cross-sections were developed to address safe pedestrian movement, on-street parking, traffic calming, and improved appearance.

### ***Hollywood and Sandy Plan***

City Council adopted the Hollywood and Sandy Plan in April 2000. The plan's intent was to transition Sandy Boulevard between NE 12<sup>th</sup> and NE 54<sup>th</sup> Avenues from a district highway to a main street and to reinforce and enhance the Hollywood town center and station area. The plan resulted in a number of Comprehensive Plan and zoning changes, along with other regulations to reinforce the land use concepts; a transportation concept for the Sandy main street; and a series of intersection designs intended to focus activity at key nodes along Sandy and the primary north-south and east-west pedestrian routes in Hollywood. An Oregon Transportation Investment Act project has recently been approved for Sandy Boulevard to implement the transportation concept between NE 13<sup>th</sup> and NE 47<sup>th</sup>.

### ***Columbia Corridor Transportation Study***

The area for this 1999 study extends between N Portland Road and NE 185<sup>th</sup>. The study's purpose was to address concerns of residents living east of I-5 and of pedestrian and bicycle advocates. The problems were identified as auto and truck speeding, volumes, vibration, cut-through traffic, and conflicts between modes. The study identifies a number of improvements, primarily between I-5 and 185<sup>th</sup>.

### ***Airport Light Rail and Portland International Center***

City Council adopted the Cascade Station /Portland International Center plan district in 1999 (Ordinance No. 173131) to support the light rail extension to Portland International Airport. The purpose of the plan district is to encourage the development of a commercially viable mix of transit-supportive and pedestrian-sensitive office, hotel, entertainment, retail, and industrial employment centers, while protecting the area's significant environmental and cultural features. The plan district is located between I-205 and NE 82<sup>nd</sup> Avenue and between NE Airport Way and the Columbia Slough.

The plan district contains two light rail stations and is intended to allow a mix of uses and activities that complement and serve ongoing airport operations and related airport service uses. Development guidelines and bicycle/pedestrian connections are included in recognition of the plan district's proximity to the Columbia Slough and Columbia Slough Trail.

### ***I-5 Transportation and Trade Partnership***

The I-5 corridor provides access to many of the region's important industrial sites and port facilities and is a link to jobs throughout Portland and Vancouver. Because of a lack of multimodal options and increasing congestion, traffic delays are becoming more frequent and longer. Following public input and discussion, a task force is expected to adopt the Final Strategic Plan Recommendations for the I-5 Corridor in June 2002 and send it to the Oregon and Washington transportation commissions, Metro, and the southwest Washington metropolitan planning organizations for review. Strategies under discussion are some increases in I-5 capacity, potential HOV lanes, light rail, increased capacity over the Columbia River for all modes, and spot improvements at key interchanges.

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## Themes, Issues, and Constraints

### *District Workshop Results*

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit input on Northeast District transportation needs was held on October 7. The most frequently mentioned concerns were:

- **Congestion.** There is a need to address traffic congestion, especially in the Hollywood area, where increased traffic causes access problems and safety concerns.
- **Transit Service.** Transit service needs include increased frequency of service, better coordination of transfers, and more east-west routes in the district. Some small groups mentioned unique ideas such as a streetcar line on MLK/Grand and free citywide transit.
- **Bicycle Routes.** More east-west bike routes are needed for the area, including bike commuter routes to Downtown. One suggestion was that bike-only routes (no autos) would create a safer commute.
- **Pedestrian Issues.** The pedestrian environment around commercial areas could benefit from amenities such as street trees and furniture. Completion of the district's sidewalk system, especially in residential areas, was frequently mentioned.
- **Speeding.** It is important to reduce speeding on local streets through enforcement and/or traffic calming measures.
- **Funding.** A new way to fund local improvements and creative financing were discussed as ways to address the shortfall in general transportation revenue.

### *Transit Choices for Livability*

Tri-Met sponsored a series of workshops and charrettes in 1997 and 1998 to solicit public input on City transit needs. Suggestions for Northeast District transit service improvements included:

- Commuter express transit service on I-84 between Troutdale and Portland
- New service from Gateway west along Columbia Boulevard
- New service along Airport Way between Gresham and the airport

### *Albina Community Plan*

The Albina Community Plan, adopted by City Council in October 1993, covers part of the Northeast District. The plan includes the Boise, Concordia, Eliot, Humboldt, Irvington, King, Piedmont, Sabin, and Woodlawn neighborhoods. It emphasizes stabilizing and revitalizing residential neighborhoods; reshaping existing commercial strips into nodes; improving the pedestrian environment, particularly along MLK, Jr. Boulevard; planning for light rail; and identifying family service, education, and employment needs.

The plan's transportation-related policies identify the following issues for neighborhoods east of I-5:

- Emphasize light rail as the major transportation investment. (The plan recommends an Interstate/I-5 corridor with alternative alignments, pending the outcome of the environmental impact statement for light rail.)
- Reinforce the role of MLK, Jr. Boulevard as a commercial and higher-density residential corridor.
- Reduce the environmental impacts of I-5.
- Support alternatives to the automobile.
- Create and develop new pedestrian districts.

The neighborhood plans included in the Albina Community Plan within the Northeast District emphasize the following transportation policy issues:

**Boise.** Ensure that the neighborhood is well served by public transportation and the streets are safe for pedestrians.

**Concordia.** Create a safe environment in which to walk, cycle, ride public transit, and drive.

**Eliot.** Create an increasingly convenient place drawing on many transportation modes, including, auto, truck, pedestrian, bicycle, light rail transit, bus, train, boat, and helicopter.

**Humboldt.** Promote the efficient use of the transportation system while reducing traffic and environmental impacts.

**Irvington.** Decrease traffic and traffic impacts on neighborhood streets; create a safe, pedestrian-friendly environment; encourage the use of bicycles and mass transit; and support light rail.

**King.** Create a local transportation system for tourists and shoppers that links the neighborhood with destinations in the Central City and the Columbia Corridor.

**Piedmont.** Create a safe and pleasant experience for pedestrians, cyclists, motorists, and transit riders by improving traffic safety and maintaining circulation patterns.

**Sabin.** Improve access to public transportation and make alternatives to the automobile safer and more pleasant.

**Woodlawn.** Enhance the livability of the neighborhood by improving its housing, commercial areas, streets, and park.



### ***Other Neighborhood Plans***

#### ***Cully Neighborhood Plan***

City Council adopted the Cully Neighborhood Plan in December 1991 (Ordinance No. 164922). The plan's transportation-related issues are:

- Encourage regional traffic to use major arterials, especially airport-related traffic.
- Improve unimproved streets, including sidewalks and bicycle lanes on arterials.
- Minimize the financial impact of street improvements on property owners.

#### ***Bridgeton Neighborhood Plan***

City Council adopted the Bridgeton Neighborhood Plan in November 1997 (Ordinance No. 171239 and Resolution No. 35619). The plan's transportation-related issues are:

- Changes to Bridgeton Road to add sidewalks and handle increased traffic are seen as desirable by some and not by others.
- Connections west from Bridgeton road to create a local street network could create additional traffic on Bridgeton.
- Marine Drive is used by many modes, but its function should primarily be as a scenic and recreational route and as a Neighborhood Collector.

#### ***Hollywood/Sandy Plan***

A number of transportation-related issues were identified during the development of the Hollywood and Sandy Plan. These include:

- Improve access and safety along and to the Sandy and Broadway main street, especially for pedestrians.
- Use transportation improvements as a catalyst to the area town center development.
- Increase the supply of on-street parking.
- Improve the transit center to make it more convenient, safe, and comfortable.
- Improve traffic circulation within the town center.
- Improve transit travel times.

### **Project Suggestions**

#### ***District Workshop***

Attendees of the 1998 Northeast District workshop made the following project suggestions:

- **Intersections.** Reduce accidents at NE 82<sup>nd</sup> and Halsey; improve the five-way intersection at NE Prescott and Cully.

- **Bridge.** Provide a bridge on or near NE 13<sup>th</sup> from Columbia Boulevard to the industrial sanctuary.
- **Street Improvements.** Fully improve all arterials; sidewalks in the Sabin and Cully neighborhoods; and sidewalks and bike lanes on NE 92<sup>nd</sup>.
- **Sidewalks.** Improve Killingsworth; make ADA improvements on Alberta and in Irvington and Sabin.
- **Pedestrian Safety at Intersections.** Increase pedestrian safety at Knott/MLK, Jr. Boulevard; NE 13<sup>th</sup>/Knott; NE 16<sup>th</sup>/Brazee; NE 21<sup>st</sup>/Tillamook.
- **Trails.** Improve access between the Piedmont neighborhood and the Columbia Slough Trail; access from the Sullivan's Gulch Trail at NE 33<sup>rd</sup> to the Columbia Slough Trail.
- **Street Design.** Improve the pedestrian environment on NE Broadway and MLK, Jr. Boulevard.

### ***Pedestrian Master Plan***

The Pedestrian Master Plan identifies the following projects for the Northeast District:

- **Walkways and Crossings.** Cully between Killingsworth and Prescott; 57<sup>th</sup> and Cully between Fremont and Prescott; Killingsworth between 42<sup>nd</sup> and Cully; Prescott between 47<sup>th</sup> and Cully; 92<sup>nd</sup> between Halsey and Fremont; 60<sup>th</sup> between Killingsworth and Going/Cully; 72<sup>nd</sup> between Prescott and Killingsworth
- **Pedestrian Districts.** Hollywood, Killingsworth, Eliot, Boise, Woodlawn
- **Pedestrian Safety.** Prescott and Cully intersection
- **Streetscape Improvements.** Alberta between MLK, Jr. Boulevard and 33<sup>rd</sup>; Fremont between 42<sup>nd</sup> and 52<sup>nd</sup>; Killingsworth between Williams and 33<sup>rd</sup>
- **Connections.** Between Bridgeton and Delta Park
- **Greenstreet.** Bridgeton, Ainsworth
- **Pedestrian Access to Transit.** NE Sandy between 47<sup>th</sup> and 67<sup>th</sup>

### ***Bicycle Master Plan***

The Bicycle Master Plan contains a number of projects in the Northeast District that have been completed. Projects not yet completed include:

- **Bicycle Boulevards.** NE 72<sup>nd</sup>; NE 82<sup>nd</sup> between Columbia and Airport Way; NE 28<sup>th</sup>; NE Alameda
- **Bicycle Lanes.** NE Cully between Prescott and Columbia; NE Ainsworth; NE Prescott
- **Multi-use Trails.** Columbia Slough Trail; Sullivan's Gulch Trail (I-84)

### ***Albina Community Plan***

The Albina Community Plan and individual neighborhood plans identify a large number of transportation improvements. Most of the Albina Community Plan's transportation action items are general, rather than specific. PDOT reviewed the suggestions and included them in the TSP as major transportation improvement if they met the criteria for 'significant' projects. Specific major transportation projects in the Albina Community Plan for the area east of I-5 include:

- Create noise buffers along I-5 to mitigate the impacts of freeway traffic noise (being installed).
- Construct a bridge and road connection, including pedestrian and bicycle facilities, from Columbia Boulevard across the slough to the industrial sanctuary, possibly on the NE 13<sup>th</sup> alignment.
- Improve east-west bus connections, including bus stop improvements.
- Install pedestrian signals on streets with high traffic volumes.

Not all Albina neighborhood plans suggested specific transportation projects. Those that did included the following projects:

#### ***Boise***

- Modify traffic calming to replace diverters with traffic circles and speed bumps.
- Provide light rail stops to serve the neighborhood.

#### ***Concordia***

- Upgrade unimproved streets: NE Wygant, NE Emerson, NE Jessup, NE Going, NE Roselawn, NE Sumner.
- Calm traffic on NE 27<sup>th</sup> and NE 30<sup>th</sup>.
- Improve traffic flow and circulation on NE Alberta.
- Improve bike routes.
- Provide intersection improvements and transit facilities at NE 33<sup>rd</sup> and Prescott.

#### ***Eliot***

- Establish a water taxi stop in lower Albina.
- Add bicycle lanes to designated routes.

#### ***Humboldt***

- Synchronize traffic signals along arterials.
- Add left-turn signals at MLK, Jr. Boulevard and Killingsworth.
- Realign the Albina/Skidmore intersection.

#### ***Irvington***

- Create a 'pass-through' lane at the traffic diverter at NE 16<sup>th</sup> and Tillamook.
- Sign bicycle routes.

#### ***King***

- Provide pedestrian-scale lighting along pedestrian corridors, especially along Alberta and MLK, Jr. Boulevard.

- Provide street trees along MLK, Jr. Boulevard.

### *Piedmont*

- Improve the intersection of Vancouver and Portland Boulevard to allow through-traffic to merge safely.
- Add pedestrian/bicycle paths along designated routes.
- Calm traffic on Ainsworth, Dekum, Portland Boulevard, and Vancouver.

### *Sabin*

- Improve school crossings at NE 18<sup>th</sup> and Fremont and at NE 18<sup>th</sup> and Prescott.
- Add ornamental/historical lighting standards at 15<sup>th</sup> and Fremont.

## ***Other Neighborhood Plans***

### *Cully Neighborhood Plan*

The Cully Neighborhood Plan contains numerous transportation projects. Significant projects include:

- Support light rail in the I-205 corridor.
- Bring arterials up to full City standards.
- Complete sidewalks on the following arterials: 72<sup>nd</sup>, Cully, Columbia, 42<sup>nd</sup>, 82<sup>nd</sup>, 60<sup>th</sup>, 47<sup>th</sup>, Prescott, Killingsworth.
- Add bike lanes to arterials.
- Improve Killingsworth/Columbia between the 82<sup>nd</sup> underpass and I-205 to increase capacity.
- Improve the Cully /60<sup>th</sup>/Prescott intersection to improve traffic flow, considering realignment, signalization, or other measures.
- Improve local streets through local improvement districts (LIDs) or other means.
- Modify the north end of the 42nd/Columbia overpass to allow safe bicycle passage.

### *Bridgeton Neighborhood Plan*

The Bridgeton Neighborhood Plan identifies many projects for the neighborhood and its vicinity. In addition, the plan identified the need for a transportation network concept that was subsequently developed and incorporated into the plan. (See Chapter 11, Master Street Plans, for more detail.) Some of the key improvements are:

#### MARINE DRIVE BETWEEN I-5 AND NE 13<sup>TH</sup>

- Widen Marine Drive between Gantenbein and Bridgeton to include left-turn lanes in the eastbound direction
- Construct wider pathways on both sides of Marine Drive
- Eliminate through truck traffic
- Improve pedestrian crossing opportunities

#### BRIDGETON ROAD AND MARINE DRIVE INTERSECTIONS

- Reconfigure the intersections to create a 'T' or other design

## BRIDGETON ROAD

- Construct sidewalks on the south side and elsewhere where needed for safety reasons

*Hollywood and Sandy Plan*

The Hollywood and Sandy Plan identified many projects that were developed through the transportation concept development for Sandy Boulevard and the Hollywood town center. (See Chapter 12: Area Studies, of the TSP Volume I document for more detail.) Some of the key improvements are:

- Implement intelligent transportation systems (ITS) along Sandy to improve traffic flow.
- Add turn movements at 33<sup>rd</sup> and Sandy.
- Improve intersections, including curb extensions, turn movements, or improved crossings at 18<sup>th</sup>/Sandy; 20<sup>th</sup>/Sandy; 22<sup>nd</sup>/Sandy/Glisan; and 28<sup>th</sup>/Sandy.
- Support NE 24<sup>th</sup> as a north-south bicycle connection between Ankeny and Glisan.
- Add signals to aid pedestrian crossing at 14<sup>th</sup>, 31<sup>st</sup>, and 35<sup>th</sup>.
- Eliminate the 'jug handle' intersection in Hollywood.
- Improve intersections at 37<sup>th</sup>/Sandy; 45<sup>th</sup>/Sandy; 47<sup>th</sup>/Sandy; 39<sup>th</sup>/Halsey; and 42<sup>st</sup>/Halsey.
- Add pedestrian improvements on 42<sup>nd</sup>.
- Implement the NE/SE 50s Bikeway Project.

## FAR NORTHEAST DISTRICT

### Introduction

The Far Northeast District is bounded on the west by I-205 and it stretches east to the City limits. The Columbia River is the northern boundary, and East Burnside Street and MAX form the southern boundary.

### Land Use

South of Sandy Boulevard, the district consists of residential neighborhoods, with commercial areas located along arterials. The commercial areas include the Gateway regional center. The Columbia South Shore industrial district, north of Sandy, has mostly industrial and some employment uses. Recent construction of and improvements to NE Airport Way have provided sites and infrastructure for new industrial and employment uses.

Sandy Boulevard divides the district into two distinct parts. The emphasis on the movement of goods and products in the northern half makes trucking a major part of the identified transportation concerns and needs. Commuter traffic has significant impacts on the southern half.

Region 2040 Growth Concept design types are represented by the NE Sandy main street between 102<sup>nd</sup> and 122<sup>nd</sup>, the 122<sup>nd</sup> main street between approximately Oregon and Morrison, and the NE Halsey/Weidler couplet. (Main street boundaries have not yet been adopted in most parts of the City; the boundaries given here are based on street design designations developed as part of the TSP.) The Columbia Corridor Industrial District is a 2040 industrial/employment area.

Projected population and employment growth between 1994 and 2020 (as reflected in the regional transportation model) for the Northeast District are:

Year	Population	Employment
1994	44,531	24,280
2020	55,811	34,101

### Transportation

The Far Northeast District is bounded by two major freeways: I-205 North and I-84. Interstate 205 will experience increasing congestion over the next 20 years. Planned ramp improvements will not completely eliminate congestion during the evening two-hour peak period. Other transportation improvement identified in the RTP, specifically the addition of auxiliary lanes on I-205 from I-84 to Airport Way, would reduce congestion to an acceptable level. Interstate 84 will also experience increasing congestion during the evening two-hour peak period west of the Gateway regional center, but not east of Gateway. Light rail ridership levels are expected to remain high, with more frequent service planned in the corridor.

The northern part of the Gateway regional center is in the Far Northeast District. Much of the existing and future congestion in the vicinity of the regional center results from regional

traffic passing through it to reach the freeway system. Most of the travel on NE102<sup>nd</sup> is local traffic, a result of an inadequate grid system. The RTP identifies the Gateway area as an 'area of special concern.' The TSP includes an action plan, based on the Opportunity Gateway plan, to address transportation issues over the next 20 years. (The motor vehicle modal plan in Chapter 5: Modal Plans and Management Plans, provides more detail.)

Employment will continue to increase over the next 20 years in the portion of the Columbia Corridor that lies within the Far Northeast District. This part of the district is focused on industrial, warehousing, and distribution businesses that are heavily dependent on truck traffic, either through shipping and receiving or by providing truck-oriented services. Truck traffic uses Airport Way and the freeway system to reach destinations in the Columbia Corridor, but some truck traffic uses Marine Drive as alternative access. Transit service is inadequate and difficult to provide because of dispersed uses on large sites.

Outside of the freeway system and the roads serving the Columbia Corridor, major arterials are NE Sandy, NE Halsey, NE 102<sup>nd</sup>, and 122<sup>nd</sup>. A transportation study approved by the City and ODOT in 1997 addressed the Sandy Boulevard main street between 102<sup>nd</sup> and 122<sup>nd</sup>. The study recommendations resulted in a recently completed project that supports the desired main street character through pedestrian, bicycle, transit, and parking improvements, while accommodating traffic demand.

Light rail serves the western and southern parts of the Far Northeast District. The eastside MAX line travels through the Gateway regional center, with stops at the Gateway transit center and 102<sup>nd</sup>, and at transit stations at 122<sup>nd</sup>, 148<sup>th</sup>, and 162<sup>nd</sup>. A light rail extension was recently extended to the airport from the Gateway transit center. The Parkrose park-and-ride was reconfigured, and a transit station was built between the park-and-ride lot and I-205. Ridership on Airport MAX is approximately 2,500 to 3,000 per day.

## **Recent Studies and Plans**

Several recent studies and plans encompass parts of the Far Northeast District. Some address truck access to and within industrial areas, while others address improved access to the airport or support the 2040 Growth Concept.

### ***Columbia Corridor Transportation Study***

The 1999 Columbia Corridor Transportation Study area extends between N Portland Road and NE 185<sup>th</sup>. The study's purpose was to address concerns of residents living east of I-5 and of pedestrian and bicycle advocates. The identified problems were auto and truck speeding, volumes, vibration, cut-through traffic, and conflicts between modes. The study identified a number of improvements, primarily between I-5 and 185<sup>th</sup>.

### ***Airport Light Rail and Portland International Center***

City Council adopted the Cascade Station /Portland International Center plan district in 1999 (Ordinance No. 173131) to support the light rail extension to Portland International Airport. The purpose of the plan district is to encourage the development of a commercially viable mix of transit-supportive and pedestrian-sensitive office, hotel, entertainment, retail and industrial employment centers, while protecting the area's significant environmental and

cultural features. The plan district is located between I-205 and NE 82<sup>nd</sup> Avenue and between NE Airport Way and the Columbia Slough.

The plan district contains two light rail stations and is intended to allow a mix of uses and activities that complement and serve ongoing airport operations and related airport service uses. Development guidelines and bicycle/pedestrian connections are included in recognition of the plan district's proximity to the Columbia Slough and Columbia Slough Trail.

### ***Sandy Boulevard-Parkrose Improvement Plan***

The Sandy Boulevard-Parkrose Improvement Plan started as a study of the potential impacts of removing on-street parking in the Parkrose business district section of Sandy Boulevard to accommodate a proposed center left-turn lane between NE 102<sup>nd</sup> and NE 112<sup>th</sup> Avenues. The study found that removal of on-street parking would adversely affect existing storefront businesses; replacement with off-street parking would adequately address the on-street parking loss; pedestrian and bicycle circulation and access are inconvenient and unsafe; and auto access and circulation adversely affect the area's economic vitality.

City Council and ODOT approved the improvement plan in 1997 and implemented it over the next several years. The recommended alternative preserves on-street parking in the core area of the business district; allows for a center turn lane to improve access, circulation, and safety; provides for bicycle lanes and improved pedestrian facilities; and creates a much-improved streetscape, including small medians with trees, street trees, and curb extensions. The resulting improvements greatly enhance the main street character of Sandy Boulevard through the Parkrose business district, while smoothing traffic flow.

The plan also identifies additional changes to support the business district and surrounding neighborhood, including access management along Sandy, local improvement districts to construct unimproved streets, underground utilities, additional parking opportunities, and transit improvements. Since the project was completed, the No. 12 bus has been rerouted to serve Sandy Boulevard through Parkrose.

### ***Opportunity Gateway Concept Plan and Redevelopment Strategy***

City Council adopted the Opportunity Gateway Concept Plan by resolution in February 2000. The purpose of the study, which covers the Gateway regional center, is to support the center's development over the next 20 years. Gateway has been the subject of several studies over past years, culminating in its designation as an urban renewal district. The concept plan and redevelopment strategy outline the steps and projects needed to achieve Gateway's regional center status. (Chapter 12: Area Studies, of the TSP provides additional detail.)

## **Themes, Issues, and Constraints**

### ***District Workshop Results***

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit



input on Far Northeast District transportation needs was held on October 8. The most frequently mentioned concerns were:

- **Pedestrian Safety.** Crossing improvements are needed in the area near the San Rafael shopping center in order to reach the area safely. Other areas that need pedestrian safety improvements are on 148<sup>th</sup>, Sandy Boulevard, 162<sup>nd</sup>, and areas adjacent to neighborhood schools.
- **Better Truck Signage.** Effective truck routes and signage are needed to direct big trucks out of the residential areas of the district. Problems also exist around 82<sup>nd</sup> Avenue and the area around 92<sup>nd</sup>/93<sup>rd</sup> and Glisan.
- **Sidewalks.** Completing the network of sidewalks that lead to activity centers in the district is a high priority, especially on Prescott, 122<sup>nd</sup>, Glisan, and Marine Drive, as well as on local streets.
- **Traffic Calming.** Effective solutions to cut-through traffic on local streets are needed. Drivers frequently cut through to avoid left turns on major arterials.
- **Circulation.** A traffic study is needed to examine circulation in the district and determine if different routes would be appropriate.
- **Bicycles.** The bicycle network needs to be completed, including the Tillamook bikeway east to 92<sup>nd</sup>.
- **Resource Allocation.** Spending transportation dollars efficiently was expressed in the following way: “Build sidewalks where pedestrians are first, and no sidewalks where there are not pedestrians.”

### ***Transit Choices for Livability***

Tri-met sponsored a series of workshops and charrettes in 1997 to solicit public input on the City’s transit needs. The number of suggestions reflects the relatively poor transit service in the district. Suggested Far Northeast District transit improvements included:

- **Airport Way Businesses.** Connect Gresham/Rockwood to the Portland Airport with service along Airport Way.
- **Parkrose.** Provide service in the Columbia Corridor area between Parkrose and Gresham/Rockwood along Sandy Boulevard, Fairview, and Wood Village.
- **148<sup>th</sup>/162<sup>nd</sup> Neighborhoods.** Provide north-south connections between neighborhood areas, MAX, and Airport Way.
- **Gateway/Clackamas Town Center.** Provide rapid bus service in the I-205 corridor, with a potential extension to Portland Airport in advance of MAX.
- **Troutdale-Portland Express.** Provide commuter express service on I-84 between Troutdale, Fairview, Wood Village, and Portland.
- **Existing Tri-Met Lines.** Improve the frequency and span of service on line No. 23 – San Raphael.

### ***Outer Southeast Community Plan***

The Outer Southeast Community Plan, adopted by City Council in March 1996, covers the Hazelwood neighborhood (whose northern boundary is NE Halsey) in the Far Northeast District. The community plan's transportation policy and objectives include:

- Ensure that the streets form a network that efficiently allows for travel.
- Reduce congestion and pollution caused by automobile travel.
- Create land use patterns that support transit, bike, and pedestrian travel.

Specific transportation policies for the Hazelwood area are:

- Provide sidewalks in the MAX light rail corridor, and separate them from traffic by street trees and on-street parking.
- Improve the pedestrian orientation of buildings and streets around light rail stations.
- Establish through-connections at approximately 400-foot intervals from east to west and north to south as the opportunity arises.
- Strive for a 200-foot by 400-foot street grid in Gateway, with sidewalks, street trees, and on-street parking.
- Create a sidewalk environment in Gateway that is safe, convenient, and attractive.

### ***Hazelwood Neighborhood Plan***

The Hazelwood Neighborhood Plan was adopted in 1993 to address issues specific to that neighborhood. About half of the neighborhood lies in the Far Northeast District and half in the Far Southeast District, with Burnside dividing the two. Transportation issues and policies relevant to the north half of Hazelwood are:

- Improve access within the neighborhood and between commercial, recreational, employment, and transit sites.
- Improve access by mass transit and alternative modes of transportation, including adding bus service on streets designated for transit by the City (148<sup>th</sup> and 162<sup>nd</sup>).
- Place a high priority on upgrading streets to City standards, including adding curb ramps where missing.
- Support a comprehensive bicycle program for recreational and commuting purposes.

### ***Other Neighborhood Plans***

#### ***Wilkes Community and Rockwood Corridor Plan***

The Wilkes and Rockwood neighborhoods are bordered by NE Sandy Boulevard on the north, SE Stark on the south, NE/SE 148<sup>th</sup> on the west and (generally) NE/SE 162<sup>nd</sup> on the east. City Council adopted the Wilkes Community and Rockwood Corridor Plan on October 22, 1987. While somewhat out of date, the plan addresses many continuing neighborhood issues, including:

- Encourage mixed-use development in the light rail corridor.
- Encourage the efficient use of the transportation network.
- Mitigate the adverse traffic impacts on the community's residential livability and business climate.
- Promote development of pedestrian, bicycle, and transit amenities.
- Locate denser or more intense land uses to take advantage of public transit or to have direct access to arterials.

### *Cully-Parkrose Community Plan*

The Cully Neighborhood Plan (Northeast District) supercedes the Cully portion of the Cully-Parkrose Community Plan. The Parkrose portion of the plan covers the area in the Far Northeast District east of I-205, north of NE Halsey, west of 148<sup>th</sup>, and north to Sandy, plus the area of the Columbia Corridor that stretches between 122<sup>nd</sup> and I-205 and north to the Columbia River. City Council adopted the plan on August 27, 1986. The plan focuses on locating more intense land uses adjacent to I-205 at Gateway or providing them with access to arterials to avoid routing traffic through the neighborhood.

## **Project Suggestions**

### *District Workshop*

Attendees of the 1998 Far Northeast District workshop made the following project suggestions:

- **Pedestrian Crossing Improvements.** Columbia Slough and 138<sup>th</sup>
- **Sidewalks and Pedestrian Amenities.** Station communities; 82<sup>nd</sup>; Killingsworth to Columbia Boulevard; San Rafael between 102<sup>nd</sup> and 122<sup>nd</sup>; 122<sup>nd</sup> between Sandy and Prescott; Prescott between 92<sup>nd</sup> and 102<sup>nd</sup>
- **Safety Improvements.** 148<sup>th</sup> between Glisan and Airport Way; 185<sup>th</sup> between Airport Way and Marine Drive
- **Street Improvements.** 119<sup>th</sup> between Holladay and Halsey; Fremont between 148<sup>th</sup> and 162<sup>nd</sup>
- **Pedestrian Access.** Morris to Brazeo/129<sup>th</sup> to 131<sup>st</sup>; Sandy to Fremont/116<sup>th</sup> to 122<sup>nd</sup>; Sandy to Beech/147<sup>th</sup>/148<sup>th</sup> to 141<sup>st</sup>; Halsey to San Rafael/118<sup>th</sup> to 132<sup>nd</sup> in vicinity of San Rafael shopping center
- **Traffic Calming.** 147<sup>th</sup> between I-84 and Sandy; Fremont to Prescott/92<sup>nd</sup> to 102<sup>nd</sup>
- **Signalization/Intersection Improvements.** 148<sup>th</sup> and Sandy

### *Pedestrian Master Plan*

The Pedestrian Master Plan identifies the following projects for the Far Northeast District:

- **Pedestrian Enhancements.** Woodland Park between 111<sup>th</sup> and 122<sup>nd</sup>/Sacramento from 111<sup>th</sup> to 117<sup>th</sup>, and 111<sup>th</sup> from San Rafael to Sacramento; Parkrose (Prescott between 92<sup>nd</sup> and 122<sup>nd</sup> and 105<sup>th</sup> between Sandy and Skidmore)
- **Sidewalks and Crossing Improvements.** 122<sup>nd</sup> between 122<sup>nd</sup> and 162<sup>nd</sup>; 102<sup>nd</sup> between Brazee and Sandy; 148<sup>th</sup> between Glisan and Airport Way; NE Halsey between 122<sup>nd</sup> and 162<sup>nd</sup>; Shaver between 116<sup>th</sup> and 122<sup>nd</sup>
- **Pedestrian Districts.** Gateway; Ventura Park (122<sup>nd</sup> light rail station)

### ***Bicycle Master Plan***

The Bicycle Master Plan contains a number of projects in the Far Northeast District that have been completed. Projects not yet completed include:

- **Bicycle Boulevards/Bicycle Lanes.** San Rafael between Gateway and 148<sup>th</sup>
- **Bicycle Boulevards.** 162<sup>nd</sup> between Halsey and Sandy; Glisan; Sandy east of 122<sup>nd</sup>
- **Bicycle Lanes.** Prescott; 102<sup>nd</sup>
- **Multi-use Paths.** Columbia Slough Trail; I-84 between I-205 and 122<sup>nd</sup>

### ***Opportunity Gateway Concept Plan and Redevelopment Strategy***

The plan identifies the following key transportation improvements:

- Improve 102<sup>nd</sup> as a boulevard.
- Improve 99<sup>th</sup> to carry local traffic and create a spine for the district.
- Add local street connections.
- Improve free access points on major east-west arterials to create a friendlier environment for pedestrians, transit users, and local traffic.

### ***Outer Southeast Community Plan***

The Outer Southeast Community Plan does not recommend any transportation projects for the area north of Burnside. The Hazelwood Neighborhood Plan recommends the following transportation projects:

- Develop designated pedestrian and bicycle routes in the vicinity of Glendover Golf Course and Gateway.
- Eliminate pedestrian barriers within activity centers.
- Provide sidewalks where they are missing on NE Glisan and Halsey.

## SOUTHEAST DISTRICT

### Introduction

The Southeast District is bounded by two freeways (I-84 to the north and I-205 to the east), the Willamette River to the west (except at SE12<sup>th</sup> along the district's boundary with the Central East side), and Clackamas County to the south. The district covers 19 neighborhoods, as well as portions of two additional neighborhoods: Ardenwald, Brentwood-Darlington, Brooklyn, Buckman, Center, Creston-Kenilworth, Eastmoreland, Kerns, Hosford-Abernathy, Foster-Powell, Laurelhurst, Lents, Mount Tabor, Mount Scott, Montavilla, Powellhurst-Gilbert, Reed, Richmond, South Tabor, Sunnyside, and Woodstock. The Southeast District contains the highest population of the eight Portland transportation districts.

### Land Uses

Southeast is one of the oldest residential areas of Portland. With the opening of the Morrison Bridge in the late 1880s, Portland's early growth jumped across the Willamette River and started to spread east on relatively flat land. New streetcar lines that traveled over the various new bridges linking the eastside to the west became the corridors of residential and commercial growth. These corridors, such as Hawthorne Boulevard, Belmont Street, Division Street, and Woodstock Boulevard, still largely function as the main streets for many Southeast neighborhoods, providing a mix of commercial and residential uses. The residential development surrounding these corridors comprises relatively dense, older single-family houses and apartment buildings. In the past decade, new infill development has included mixed-use projects such as the Belmont Dairy and rowhouses. Most new development is oriented to the main street and the pedestrian.

Some neighborhoods in the Southeast District, such as Lents and Brentwood-Darlington, have lower density and more auto-oriented development than the inner southeast neighborhoods.

Projected population and employment growth between 1994 and 2020 (as reflected in the regional transportation model) for the Southeast District are:

Year	Population	Employment
1994	147,204	61,538
2020	160,223	71,793

### ***2040 Focus Areas***

#### *Town Center*

Lents was already an independent town when the streetcar reached it from Portland, and Lents Junction functioned as a regional center of commerce. The Outer Southeast Community Plan and Lents Neighborhood Plan (adopted in 1992) identified and planned for the Lents town center. The town center lies partly in the far southeast part of the Southeast district and partly in the Far Southeast District, divided by the I-205 freeway. The Lents town center urban renewal district was formed in 1998. The Lents area has experienced slight increases in growth, although the area is generally built out with single-family homes.

The Lents Neighborhood Plan identifies unsafe pedestrian crossings, the need for pedestrian improvements throughout the Lents pedestrian district, an expansion of the pedestrian district to include the Boys and Girls Club, traffic safety needs, and better pedestrian and bicycle routes. (See section on Project Suggestions for details).

### *Main Streets*

The 2040 Growth Concept designates parts of the following streets as main streets. Taken together, these main streets act as a town center for inner southeast Portland:

- E Burnside Street
- SE Belmont Street
- SE 50<sup>th</sup> Avenue
- SE Division Street
- SE Foster Road
- SE Woodstock Boulevard
- SE Milwaukie Avenue
- SE Tacoma Street
- SE 82<sup>nd</sup> Avenue

Many of these areas have received multimodal transportation improvements in recent years, including, Belmont, Hawthorne, Woodstock, Milwaukie, and 82<sup>nd</sup>. A recently completed transportation plan for the Tacoma main street in the Sellwood neighborhood identifies transportation improvements to the main street function. (See Project Suggestions later in this section.)

### *Industrial Areas and Intermodal Facilities*

Brooklyn Yards is the major freight-oriented area in the Southeast District. In addition to that rail yard, a number of large and small industrial and employment firms are located in the district, including Fred Meyer headquarters and Tri-Met offices and operations facilities.

## **Transportation**

The most distinctive feature of the Southeast District's transportation system is its extensive street grid network. This provides excellent connectivity for all modes of travel within the district. Closely spaced collector streets provide good east-west access both through the district and between adjacent districts. Most of these streets are former streetcar lines that extended from Downtown. The north-south arterial network is more limited, with only 39<sup>th</sup> and 82<sup>nd</sup> Avenues extending from one end of the district to the other. No Regional Trafficways run directly through the district; however, access to the regional system is good because three Regional Trafficways run along the edges of the district: I-84 to the north, I-205 to the east, and McLoughlin Boulevard (Highway 99 E) along the western edge. The exception is southbound access to the I-5 freeway.

Most of the arterial street system operates at acceptable levels of service during the peak hours, in part because of the compact spacing of east-west arterials. However, the volume of regional traffic from east of I-205 that cuts through the district as the regional freeway system becomes increasingly congested is a growing concern.

Over the life of the TSP, growth in Clackamas County is expected to significantly increase traffic on SE Foster. Powell Boulevard is also expected to carry significant traffic increases in the future.

The Sellwood Bridge is a major bottleneck because of its heavy use by Washington and Clackamas County commuters. The 1925 bridge is also nearing the end of its life span. The South Willamette River Crossing Study (May 1999) was intended to find a location for a new bridge or recommend that the existing bridge be rebuilt and/or expanded. The study evaluated a number of options, but did not recommend a bridge alternative. The study recommendations were to:

1. Preserve the existing bridge or rebuild it as a two-lane facility.
2. Mitigate traffic growth on Tacoma, Highway 99E in Milwaukie, and State Street in Lake Oswego.
3. Increase transit service and improve transit, bicycle, and pedestrian facilities to support alternatives to driving.
4. Increase motor vehicle capacity on appropriate regional trafficways, such as McLoughlin Boulevard, Highway 224, and I-205.

A study now underway will identify appropriate transit service increases in the 'South Corridor' to support alternatives to driving, consistent with the recommendations of the South Willamette River Crossing Study.

Southeast Portland is well served by transit, relative to other parts of the City. Most of the east-west arterials have transit service with connections to Downtown. Many of these transit lines have among the highest levels of daily ridership within the entire regional transit system, partly because of the district's residential density and compact grid system. North-south service is available on 11<sup>th</sup>/12<sup>th</sup>, 39<sup>th</sup>, and 82<sup>nd</sup> Avenues. There is access to the MAX light rail system at the northern edge of the district, with stations at 39<sup>th</sup>, 60<sup>th</sup>, and 82<sup>nd</sup> Avenues.

Pedestrian mobility in the Southeast District is also good, relative to other areas of the City and region. This is because a high percentage of streets are improved with sidewalks, and good street connectivity exists at both the local and arterial system level. Areas of concern for pedestrian access are related to crossing McLoughlin Boulevard, Powell Boulevard, and 82<sup>nd</sup> Avenue, and access to the Willamette River.

Much of the bicycle network identified in the Bicycle Master Plan within the district is complete. A number of projects have improved bicycle travel, including bicycle boulevards on Ankeny Street, Salm on Street, and Clinton Street. Completion of the Springwater Corridor to the Willamette Greenway Trail will provide a major new bicycle connection to Downtown.

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## Recent Studies and Plans

### *Tacoma Main Street Plan*

City Council approved the Tacoma Main Street Plan in January 2002. The project's termini are the Sellwood Bridge on the west and McLoughlin Boulevard on the east. The plan's purpose is to develop transportation strategies to further Tacoma's role as a main street. Tacoma presents significant transportation challenges because of the more than 30,000 vehicles that travel on it to and from the Sellwood Bridge. The final design includes one travel lane in each direction, full-time on-street parking, gateways at each end of the study area, curb extensions, and streetscape design guidelines. The plan recommends a two-phase approach to improve the street's multimodal function and mitigate for traffic impacts on adjacent streets. Phase I (for immediate implementation) includes lane striping, parking sign removal and replacement, signal timing modifications, and speed bumps on Spokane and Umatilla. Phase II includes all remaining design elements, including curb extensions and medians along Tacoma and a bike boulevard project for Spokane and Umatilla. (Chapter 12: Area Studies, provides a more detailed description.)

## Themes, Issues, and Constraints

### *District Workshop Results*

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit input on Southeast District transportation needs was held on September 30. The most frequently mentioned concerns were:

- **Traffic Concerns.** Improve enforcement of traffic laws, especially speed limits in neighborhoods. Provide better intersection signing and signalization.
- **Commuter Traffic.** SE Tacoma should be a main street, but widening the Sellwood Bridge would change Tacoma to a regional traffic corridor.
- **Pedestrians.** Provide pedestrian crossings and more curb ramps. Complete sidewalks where there are gaps.
- **Bicycles.** Provide more connections for both recreational riding and commuters. Provide more bicycle racks in commercial areas.
- **Parking.** Provide on-street parking and loading zones in commercial areas.
- **Traffic Calming.** Calm traffic near schools and along collectors.
- **Street Design.** Provide special street designs for pedestrian and bicycle routes, pedestrian districts, and around parks.
- **Transit.** Improve bus service on major routes. Put streetcars on main streets.
- **Trucks.** Designate truck routes to control truck traffic.



### ***Transit Choices for Livability***

Tri-Met sponsored a series of workshops and charrettes in 1997 and 1998 to solicit public input on the City's transit needs. Suggested Southeast District transit service improvements included:

- New rapid bus service along Division Street between Downtown and Gresham
- Improved service along SE 11<sup>th</sup> and 12<sup>th</sup>
- New local transit service in the Johnson Creek area to serve neighborhoods and businesses
- New local transit service to improve mobility options and circulation in the Lents area

### ***Outer Southeast Community Plan***

The Outer Southeast Community Plan, adopted by City Council in 1996, includes the following Southeast District neighborhoods: Lents, Foster-Powell, South Tabor, Mt. Scott-Arleta, and Montavilla. The Brentwood-Darlington neighborhood is included within the Outer Southeast Community Plan boundary, but has an adopted neighborhood plan from 1992. For the portion of the study area within the Southeast District, the community plan emphasizes the need to keep through-traffic on arterials. Subarea issues are more diverse:

- **Traditional Urban Neighborhoods (west of 82<sup>nd</sup>).** Encourage main street development along Foster, Stark, and Glisan.
- **82<sup>nd</sup> Avenue/I-205 Corridor.** Place higher-density development along transit streets.
- **Lents Town Center.** Provide coordinated pedestrian, bicycle, automobile, and transit infrastructure to support economic and residential development.

Individual neighborhood plans for areas west of I-205 identify the following transportation issues:

- **Brentwood-Darlington.** Many streets need to be improved, but traffic impacts on residential streets must be minimized.
- **Foster-Powell.** Speeding and traffic volumes affect pedestrian and bicyclist safety.
- **Lents.** Access to and through Lents needs to be improved for a variety of modes.
- **Montavilla.** Accessibility of the neighborhood needs to be improved by expanding transportation choices.
- **Mt. Scott-Arleta.** Transit and traffic need to move safely and smoothly, while encouraging pedestrian and bicycle movement and access for the physically challenged.
- **South Tabor.** Mobility and accessibility need to be maintained by reducing the impact of autos and encouraging alternative forms of transportation.
- **Outer Southeast Business.** High-capacity transit along the I-205 corridor needs to be supported.

### ***Sellwood-Moreland Neighborhood Plan***

City Council adopted the Sellwood-Moreland Neighborhood Plan in 1998. The plan identifies many transportation-related issues, including connections to the river and completion of the Greenway Trail; crossing opportunities along McLoughlin Boulevard; traffic and parking management in commercial areas to support businesses; cut-through traffic; and a poor pedestrian environment resulting from inadequate sidewalk width and crossing opportunities. The plan notes that the major transportation infrastructure challenges are replacing the Sellwood Bridge and building light rail in the McLoughlin corridor. Residents identified improving Tacoma Street as the number one neighborhood need because of the street's regional role in carrying traffic, the lack of on-street parking, narrow sidewalks, and the lack of pedestrian crossing opportunities.

### ***Other Neighborhood Plans***

The City has adopted neighborhood plans for many Southeast District neighborhoods in addition to the Sellwood-Moreland Plan. Transportation-related issues for each plan are summarized below.

#### ***Brooklyn Neighborhood Plan (1992)***

Support an energy-efficient, safe, and pedestrian- and bicycle-friendly system and improvements that promote pedestrian and bicycle movement with connection to the river.

#### ***Buckman Neighborhood Plan (1991)***

Maintain mobility through alternative forms of transportation, and reduce the impact of auto and truck use in the neighborhood.

#### ***Creston Kenilworth Neighborhood Plan (1998)***

Reduce reliance on the private automobile, and improve access by encouraging walking, bicycling, and riding public transit.

#### ***HAND (Hosford-Abernethy Neighborhood Development) Neighborhood Action Plan (1988)***

Reduce impacts of traffic, trucks, and parking in residential areas.

#### ***Kerns Neighborhood Action Plan (1987)***

Encourage efficient use of the transportation network, while minimizing traffic impacts.

#### ***Richmond Neighborhood Plan (1994)***

Increase accessibility to travel destinations, and increase transportation options while reducing negative auto impacts.

#### ***Woodstock Neighborhood Plan (1995)***

Seek transportation improvements that enhance accessibility and livability, improve street connectivity, and reinforce the Woodstock main street.

## Project Suggestions

The following selected project suggestions were used to develop the TSP and the transportation system improvements identified in Chapter 3 of the TSP. Not all project suggestions met the TSP criteria for 'significant' projects. The individual plans cited below contain the complete text of their transportation project suggestions.

### *District Workshop*

Attendees of the 1998 Southeast District workshop made the following project suggestions:

- **Intersection Improvements.** SE Hawthorne at 20<sup>th</sup>; SE 12<sup>th</sup>/Burnside/Sandy; SE 39<sup>th</sup> at Belmont; SE Milwaukie at Powell.
- **Viaduct Improvements.** Bybee at railroad viaduct; Reedway at railroad bridge.
- **Transit.** Improve bus stops along Foster from 52<sup>nd</sup> to 72<sup>nd</sup>; improve pedestrian/bicycle access to light rail stations.
- **Pedestrian.** Improve crosswalks at SE 39<sup>th</sup> and Powell; SE 8<sup>th</sup> and Powell; SE Division and 67<sup>th</sup>; Foster at 96<sup>th</sup>. Provide pedestrian improvements at 28<sup>th</sup> between Burnside and Belmont; add sidewalks on 82<sup>nd</sup> where missing; crossing and sidewalks on McLoughlin between Powell and Holgate
- **Bicycle.** Provide bicycle facilities on arterials crossing I-205 (Halsey, Glisan, Stark-Washington, Division, Powell, Foster-Woodstock).

### *Pedestrian Master Plan*

The Pedestrian Master Plan identifies the following projects for the Southeast District:

- **Pedestrian Overpass.** SE Lafayette from 18<sup>th</sup> to 20<sup>th</sup>
- **Pedestrian District.** Lents improvements (crossings, sidewalks, curb ramps, curb extensions); Montavilla improvements
- **Main Streets.** E Burnside between 28<sup>th</sup> and 33<sup>rd</sup>; SE 13<sup>th</sup> between Malden and Tacoma; SE Milwaukie from Yukon to Tacoma
- **Safety.** SE Foster at Powell
- **Streetscape.** SE Division from Grand to 136<sup>th</sup>; SE Hawthorne from 12<sup>th</sup> to 55<sup>th</sup>
- **Access to Transit.** 60<sup>th</sup> and 82<sup>nd</sup> light rail stations; SE Powell from the Ross Island Bridge to 39<sup>th</sup>; SE 82<sup>nd</sup> from Duke to Clatsop sidewalk
- **Pedestrian Crossings.** SE Powell at Milwaukie; SE Powell at 26<sup>th</sup>; SE 12<sup>th</sup>/Sandy/Burnside; SE Foster at Powell
- **Green Streets.** NE/SE 70s combined pedestrian greenway and bike boulevard; Creston-Kenilworth connections to parks
- **Paths.** SE 36<sup>th</sup> right-of-way from Francis to 36<sup>th</sup> Place

The complete list of pedestrian projects is contained in Appendix E of Volume III of the TSP.

### ***Bicycle Master Plan***

The Bicycle Master Plan contains a number of projects in the Southeast District that have been completed. Projects not yet completed include:

- **Bicycle Lanes.** SE Holgate from 42<sup>nd</sup> to 136<sup>th</sup>; SE Milwaukie from Odeon to Center
- **Bicycle Boulevards.** SE Umatilla from 7<sup>th</sup> to the Tacoma overcrossing; SE 70s from Killingsworth to Clatsop
- **Paths.** Greenway connection between Willamette Greenway Trail and Springwater Corridor

### ***Outer Southeast Community Plan***

The Southeast Community Plan identifies a large number of transportation improvements. PDOT reviewed the suggestions and included them in the TSP as transportation system improvements if they met the criteria for 'significant' projects. Project suggestions from the Outer Southeast Community Plan include:

- Evaluate truck access and conflicts on SE Foster near I-205 and the Lents town center.
- Improve safety for pedestrians and bicyclists traveling along SE Powell east of I-205.
- Include a high-capacity transit station in Lents as part of future high-capacity transit improvements.

Individual neighborhood plans for areas west of I-205 suggest the following projects:

- **Foster-Powell.** Improve pedestrian crossings on SE Powell, particularly at SE 80<sup>th</sup>.
- **Lents.** Add pedestrian crossings along SE Foster, especially at SE 72<sup>nd</sup>, at 92<sup>nd</sup>, and between 92<sup>nd</sup> and I-205.
- **Montavilla.** Improve designated bikeways, including Burnside, SE 72<sup>nd</sup>, and SE 76<sup>th</sup>.
- **Mt. Scott-Arleta.** Improve pedestrian safety along SE Foster Road, SE 82<sup>nd</sup> Avenue, and SE Woodstock Boulevard.
- **South Tabor.** Improve pedestrian crossings on SE Powell between SE 72<sup>nd</sup> and 82<sup>nd</sup> Avenues, particularly at bus stops.
- **Outer Southeast Business.** Improve the SE Foster intersection with SE 82<sup>nd</sup> and design of the street between 82<sup>nd</sup> and 92<sup>nd</sup>.

### ***Neighborhood Plans***

Each adopted neighborhood plan has a series of actions that implement the neighborhood vision:

- **Brentwood-Darlington Neighborhood Plan.** Complete sidewalks on Flavel, Duke, and major north-south streets, including, SE 52<sup>nd</sup>, 60<sup>th</sup>, 72<sup>nd</sup>, and 82<sup>nd</sup>.
- **Brooklyn Neighborhood Plan.** Install pedestrian and bicycle crossings on all four legs of the Milwaukie/Powell intersection.
- **Buckman Neighborhood Plan.** Improve the SE12<sup>th</sup>/Burnside/Sandy intersection.
- **Creston-Kenilworth Neighborhood Plan.** Reconstruct SE Holgate between 39<sup>th</sup> and 52<sup>nd</sup> to improve pavement, drainage, curb ramps, pedestrian crossings, and sidewalks.
- **Hosford-Abernethy Neighborhood Action Plan.** Improve the SE 26<sup>th</sup>/Powell and SE Milwaukie/12<sup>th</sup> intersections for pedestrians and vehicles.
- **Kerns Neighborhood Action Plan.** Improve the streetscape of Sandy Boulevard, and place utilities underground.
- **Richmond Neighborhood Plan.** Improve the pedestrian environment on Hawthorne between 30<sup>th</sup> and 50<sup>th</sup> with wider sidewalks, better crossings, and street trees.
- **Sellwood-Moreland Neighborhood Plan.** Retrofit overpasses at Milwaukie and Bybee to better accommodate pedestrians and bicyclists.
- **Woodstock Neighborhood Plan.** Bring local streets up to City standards where needed to provide safe access to community destinations.

### ***Lents Town Center Urban Renewal Plan***

- **Foster Road.** Improvements include intersection improvements, traffic calming, signal improvements, crossing improvements, and bicycle lane striping.
- **SE 82<sup>nd</sup> Avenue.** Improvements include intersection signals, curb extensions, traffic calming, crossing improvements, and sidewalks.
- **SE 92<sup>nd</sup> Avenue.** Improvements include road surfacing, storm water drainage, street lights, street trees, curbs and curb extensions, traffic calming, signal improvements, crossing improvements, sidewalks, and bicycle lane striping.
- **Areawide.** Improvements include traffic calming, bringing unimproved streets up to urban standards, street trees, and curb extensions.

### **Non-TSP Project Improvements**

In addition to suggestions for significant projects that are incorporated into the TSP, many ideas have been generated to address transportation issues in the Southeast District. A selection of these transportation-related ideas from the district workshop is provided below. The City can address many of these ideas through ongoing activities rather than as capital projects.

- Provide bicycle access from the Sellwood Bridge to Oaks Bottom and Sellwood park.
- Add landscaping, signing, and transit and pedestrian facilities along SE Powell between the Ross Island Bridge and SE Milwaukie.

- Improve intersections at locations such as SE 26<sup>th</sup> and Holgate; SE 39<sup>th</sup> and Belmont; SE 39<sup>th</sup> and Powell; and SE 8<sup>th</sup> and Powell.
- Add pedestrian crossings at Creston and Mt. Scott Parks, and at SE Division and 64<sup>th</sup> and 67<sup>th</sup>.
- Add a four-way stop at SE 76<sup>th</sup> and Center.
- Improve the SE Powell railroad underpass to improve transit, pedestrian, and bicycle facilities.
- Calm traffic on Belmont between 60<sup>th</sup> and 82<sup>nd</sup>; Division between 42<sup>nd</sup> and 43<sup>rd</sup>; Harrison between 39<sup>th</sup> and 43<sup>rd</sup>; and Mill between 80<sup>th</sup> and 90<sup>th</sup>.
- Develop a truck routing plan in the West Clinton area.
- Enforce truck parking regulations.

Other ideas, including expanding transit options with streetcar or light rail service, have been included in new or revised Southeast District objectives. (See Chapter 2, Transportation Element, Policy 6.37 for complete text of Southeast District objectives.)

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## FAR SOUTHEAST DISTRICT

### Introduction

The Far Southeast District is located east of the I-205 freeway and south of E Burnside Street to the City's east and south limits. The area's terrain is primarily characterized by relatively flat land that transitions into hilly terrain to the south. The main topographic features include Powell and Kelly Buttes and Johnson Creek. The district is one of the newest parts of the City, since much of the area has been annexed into the City since the early 1980s. The district includes all of the Pleasant Valley, Powellhurst-Gilbert, Pleasant Valley, Centennial, and Mill Park neighborhoods, and portions of the Hazelwood, Glenfair, and Lents neighborhoods.

### Land Use

Most development in the district is relatively new, transitioning from more rural to more urban since World War II. The predominant land use is low-density, single-family residential on relatively large lots. A significant amount of infill development has occurred in recent years as many of the large single-family lots have gone through minor subdivisions. Commercial development is generally low density, stretched out along the five main arterials that run through the district: Division Street, Powell Boulevard, Foster Road, Stark Street, and 122<sup>nd</sup> Avenue. The Gateway regional center and Lents town center border the district at its western edge. The Lents town center is partly in the Southeast District.

### *2040 Focus Areas*

The Gateway regional center is centered near the confluence of I-205 and I-84 at the far northwest corner of the district. Gateway is the major transit center outside of the Central City and is served by light rail transit between Downtown, Gresham, and the airport. The Lents town center sits at the southwest corner of the district, at the intersection of I-205 and Foster Road. Both Gateway and Lents have recently established urban renewal districts to facilitate needed development and infrastructure improvements as they transition from older suburban-style development to urban, mixed-use areas.

### *Station Communities*

The MAX station communities at 102<sup>nd</sup>, 122<sup>nd</sup>, 148<sup>th</sup>, and 162<sup>nd</sup> are located along the northern boundary of the Far Southeast District. These station communities are within the larger Gateway Plan District that also encompasses the Gateway regional center.

### *Main Streets*

Two designated main streets run through the interior of the district: Division Street from I-205 to 162<sup>nd</sup> Avenue, and 122<sup>nd</sup> Avenue from Burnside to Holgate.

### *Industrial Areas and Intermodal Facilities*

The only two industrial areas within the Far Southeast District are the area immediately east and south of the Lents town center, and an area south of Powell and immediately east of I-205. Projected population and employment growth between 1994 and 2020 (as reflected in the regional transportation model) for the Southeast District are:

Year	Population	Employment
1994	61,961	20,271
2020	105,998	36,743

## Transportation

The general grid pattern of inner Southeast Portland extends east into the Far Southeast District. Unlike the area west of I-205, however, the Far Southeast District is characterized by a much larger block pattern and greater spacing between arterials. Each of the four main east-west arterials – Stark Street, Division Street, Foster Road, and Powell Boulevard—connects to I-205 on the western edge and the Gresham area to the east. Only one main arterial – 122<sup>nd</sup> Avenue – extends the entire north-south length of the district. This pattern tends to concentrate traffic on the main links, resulting in wide street cross-sections, such as Foster Road and Division Street west of 122<sup>nd</sup> Avenue.

The southern section of the district south of Foster Road is a major traffic capacity concern. As a result of growth in the Pleasant Valley and Happy Valley areas, traffic is being funneled onto Foster Road, which has limited potential for expanding traffic capacity because of topographic and environmental constraints. The barrier created by Powell Butte restricts north-south connections east of 136<sup>th</sup> Avenue. At the local street network level, major concerns are the lack of good street connectivity and streets that do not meet City design standards for sidewalks and storm drainage.

While light rail service runs along the northern edge of the district, the network of bus routes is not as dense and frequent as in other districts. Other factors that make it difficult for transit to serve the district efficiently include the relatively low density of development, poor street connectivity, and the lack of sidewalks for pedestrian access.

The general lack of sidewalks and the poor street connectivity also make pedestrian access and circulation within the district difficult. Safe crossings at the major arterials are another basic pedestrian concern. Signalized intersections with protected pedestrian phases are infrequent along many of the arterials. Crossings at unsignalized intersections are difficult because of the wide streets and heavy traffic volumes.

The Springwater Corridor runs east-west through the southern part of the district and is the main feature of the bicycle network. The corridor will eventually provide access directly into the Central City. Recent bicycle projects on 122<sup>nd</sup> Avenue, 148<sup>th</sup> Avenue, and Division Street have improved bicycle access. Access to and within the emerging Gateway regional center is a major remaining problem.

## Recent Studies and Plans

### *Opportunity Gateway Concept Plan and Redevelopment Strategy*

City Council adopted the Opportunity Gateway Concept Plan by resolution in February 2000. The purpose of the study is to support the development of the Gateway regional center over the next 20 years. Gateway has been the subject of several studies over past years,



culminating in its designation as an urban renewal district. The concept plan and redevelopment strategy outline steps and projects to achieve Gateway's regional center status. (Chapter 12: Area Studies, of the TSP provides more detail.)

### ***Lents Town Center Business District Transportation Plan***

The Lents Town Center Business District Transportation Plan is the result of an extensive analysis of transportation alternatives to support the revitalization of the Lents business district. City Council adopted the plan by resolution in January 2000. The plan focuses on the core business area around SE 92<sup>nd</sup>, Foster, and Woodstock, which is the heart of the Lents town center. The main objective is to revitalize this core with a transportation improvement plan. The plan recommends a number of projects, including widening sidewalks, striping bike lanes on 92<sup>nd</sup>, providing more on-street parking, and installing new traffic signals at the intersections of Woodstock and Foster with 90<sup>th</sup> and 91<sup>st</sup>. (Chapter 12: Area Studies, of the TSP provides a more detailed description of the plan.)

## **Themes, Issues, and Constraints**

### ***District Workshop Results***

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit input on Far Southeast District transportation needs was held on October 3. The following issues were discussed:

- **Intersection Improvements.** Far Southeast and areas east and south of Portland have been growing rapidly, and intersection and capacity improvements are needed. Improvements to Foster Road between 120<sup>th</sup> and the City limits, and intersection improvements at Foster and Jenne Road and at Foster and 174<sup>th</sup>, were most frequently mentioned.
- **Signal Timing on Powell.** Travel through the district could be improved with changes to signal timing on this major arterial.
- **Bicycles.** Improved access to the Springwater Corridor from the district is needed. Improved bike lanes and markings are needed on Holgate, Woodstock, and 122<sup>nd</sup>.
- **Improvements to I-205.** Participants raised concerns about the on- and off-ramps at I-205 and Division and Powell. Turn-movement restrictions result in out-of-direction travel.
- **Connections to Transit.** Several people talked about the need to travel north and south within the district by bus. Additional feeder bus service into the Gateway transit center was seen as desirable.

### ***Transit Choices for Livability***

Tri-Met sponsored a series of workshops and charrettes in 1997 and 1998 to solicit public input on City transit needs. Suggested Far Southeast transit service improvements included:

- **Division.** New rapid bus service between downtown and Gresham

- **148<sup>th</sup>/162<sup>nd</sup>.** New north-south connections between residential areas, MAX, and the airport
- **Market/Main, Powell.** Improved transit service on existing lines.
- **I-205.** Rapid bus service, with a potential extension to the airport

### ***Outer Southeast Community Plan***

The Outer Southeast Community Plan, adopted by City Council in 1996, includes the Lents, Hazelwood, Glenfair, Mill Park, Centennial, Powellhurst-Gilbert, and Pleasant Valley neighborhoods in the Far Southeast District. For the part of the study area within the Far Southeast District, the community plan emphasizes the need to keep through-traffic on arterials. Subarea issues are more diverse:

- **Gateway /Mall 205.** Create 200-foot by 400-foot blocks.
- **MAX LRT Corridor.** Establish through-connections at approximately 400-foot intervals.
- **Lents Town Center.** Provide coordinated pedestrian, bicycle, automobile, and transit infrastructure to support economic and residential development.
- **Suburban Neighborhoods.** Improve connections to transit and shopping.
- **Mixed Eras (developing at different times) Neighborhoods.** Promote new streets that form a network that accommodates an efficient development pattern, multimodal capability, and multiple routes for emergency vehicles.
- **Mt. Scott/Johnson Creek.** Improve public access to the Springwater Corridor.

Individual neighborhood plans for areas west of I-205 identify the following transportation issues:

- **Lents.** Improve access to and through Lents for a variety of modes.
- **Hazelwood.** Improve accessibility with expanded paths, trails, and streets that link recreational, commercial, and residential areas.
- **Mill Park.** Discourage reliance on the automobile, and encourage the use of alternatives such as public transit.
- **Centennial.** Upgrade the transportation system to City standards, and encourage alternatives to the automobile.
- **Powellhurst-Gilbert.** Increase the availability of transit; promote local street improvements; and establish a convenient system for bicycling.
- **Pleasant Valley.** Promote an efficient transportation system, while reducing traffic and environmental impacts on residential areas.
- **Outer Southeast Business.** Support high-capacity transit along the I-205 corridor.

## Project Suggestions

### *District Workshop*

Attendees of the 1998 Far Southeast District workshop suggested the following projects:

- **Pedestrian Enhancements.** Along the MAX line
- **Pedestrian/Bicycle Access.** To Cherry Park; 117<sup>th</sup> between Stark and Division; to Lincoln Park (132<sup>nd</sup> to 138<sup>th</sup>/Mill to Lincoln); to Mill Park (119<sup>th</sup> to 122<sup>nd</sup>); to Powellhurst Park (135<sup>th</sup> to 138<sup>th</sup>/Main to Clay); to Mall 205 (96<sup>th</sup> to 102<sup>nd</sup>/Stark to Main); to David Douglas High School (130<sup>th</sup> to 135<sup>th</sup>/Salmon to Mill)
- **Sidewalks, Curbs, Ramps.** 148<sup>th</sup> between Burnside and Powell; 162<sup>nd</sup> between Stark and Powell; 104<sup>th</sup> between Powell and Harold; 103<sup>rd</sup> between Harold and Foster; 111<sup>th</sup> between Powell and Holgate
- **Pedestrian Crossing.** 122<sup>nd</sup> and Market
- **Traffic Calming.** 136<sup>th</sup> (Powell to City limits); 104<sup>th</sup> (Powell to Holgate); 122<sup>nd</sup> (Powell to Holgate); Holgate (92<sup>nd</sup> and 122<sup>nd</sup>)

### *Pedestrian Master Plan*

The Pedestrian Master Plan identifies the following projects for the Far Southeast District:

- **Pedestrian Improvements.** Mill Park (Market from 96<sup>th</sup> to 112<sup>th</sup>, 101<sup>st</sup> from Market to Division, 117<sup>th</sup> from Stark to Division); Powellhurst/Gilbert (Harold from 102<sup>nd</sup> to 128<sup>th</sup>, 122<sup>nd</sup> from Bush to Harold, 111<sup>th</sup> from Holgate to Howard, 110<sup>th</sup> from Harold to Foster)
- **Sidewalks and Crossings.** Powell (69<sup>th</sup> to 174<sup>th</sup>); Holgate (104<sup>th</sup> to 122<sup>nd</sup>); Foster (103<sup>rd</sup> to Foster Place); Division between 136<sup>th</sup> and 174<sup>th</sup>
- **Walkway/Sidewalk.** 112<sup>th</sup> between Foster and Mt. Scott; Mt Scott between 92<sup>nd</sup> and 112<sup>th</sup>; 174<sup>th</sup> between Main and Powell

### *Bicycle Master Plan*

The Bicycle Master Plan contains a number of projects in the Far Southeast District that have been completed. Projects not yet completed include:

- **Bicycle Boulevards.** Mill/Main between 130<sup>th</sup> and the City limits; 135<sup>th</sup> between Glisan and Division
- **Bicycle Lanes.** 103<sup>rd</sup>/Cherry Blossom/112<sup>th</sup>/111<sup>th</sup>; 136<sup>th</sup> between Division and the City limits; Holgate between I-205 and 136<sup>th</sup>; 162<sup>nd</sup> between Halsey and Powell; 174<sup>th</sup> between Halsey and Powell; Halsey between 106<sup>th</sup> and the City limits

### *Outer Southeast Community Plan*

The Outer Southeast Community Plan and individual neighborhood plans identify a large number of transportation improvements. PDOT reviewed the suggestions and included them

in the TSP as transportation system improvements if they met the criteria for 'significant' projects. Project suggestions from the Outer Southeast Community Plan include:

- Evaluate truck access and conflicts on SE Foster near I-205 and the Lents town center.
- Improve safety for pedestrians and bicyclists traveling along SE Powell east of I-205.
- Include a high-capacity transit station in Lents as part of future high-capacity transit improvements.

Individual neighborhood plans for areas west of I-205 suggest the following projects:

- **Centennial.** Provide sidewalks and curbs on Division, Stark, Powell, 148<sup>th</sup>, and 162<sup>nd</sup>.
- **Hazelwood.** Develop pedestrian and bicycle facilities on routes to Gateway, Mall 205, Cherry Park, Mill Park, Lincoln Park, North Powellhurst Park, and David Douglas High School.
- **Lents.** Add pedestrian crossings along SE Foster, especially at SE 72<sup>nd</sup>, at 92<sup>nd</sup>, and between 92<sup>nd</sup> and I-205.
- **Mill Park.** Provide sidewalks along 117<sup>th</sup> and Cherry Blossom; a signalized pedestrian crosswalk at 122<sup>nd</sup> and Madison or Main; and an elevated crossing at 122<sup>nd</sup> and Morrison.
- **Pleasant Valley.** Improve safety at Foster/Jenne Road and Foster/163<sup>rd</sup>, including for pedestrians and bicyclists.
- **Powellhurst-Gilbert.** Develop mass transit on I-205 and sidewalks along Foster.
- **Outer Southeast Business.** Improve the SE Foster intersection with SE 82<sup>nd</sup> and the design of the street between 82<sup>nd</sup> and 92<sup>nd</sup>.

### ***Lents Town Center Urban Renewal Plan***

- **Foster Road.** Provide intersection improvements, traffic calming, signal improvements, crossing improvements, and bicycle lane striping.
- **SE 82<sup>nd</sup> Avenue.** Provide intersection signals, curb extensions, traffic calming, crossing improvements, and sidewalks.
- **SE 92<sup>nd</sup> Avenue.** Provide road surfacing, storm water drainage, street lights, street trees, curbs and curb extensions, traffic calming, signal improvements, crossing improvements, sidewalks, and bicycle lane striping.
- **Areawide.** Provide traffic calming, improvement of unimproved streets up to urban standards, street trees, and curb extensions.

### ***Opportunity Gateway Concept Plan and Redevelopment Strategy***

The plan identifies the following key transportation improvements:

- Improve 102<sup>nd</sup> as a boulevard.
- Improve 99<sup>th</sup> to carry local traffic and create a spine for the district.

- Add local street connections.
- Improve free access points on major east-west arterials to create a friendlier environment for pedestrians, transit users, and local traffic.

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## NORTHWEST DISTRICT

### Introduction

The Northwest District is bounded by the Sunset Highway on the south, the urban service boundary on the west, the Willamette River on the north, and the Central City on the east at the I-405 freeway. The Northwest District encompasses all of the Forest Park, Linnton, Northwest Heights, Northwest Industrial, Sylvan Highlands, Arlington Heights, and Northwest neighborhoods and the far-western portion of the Goose Hollow neighborhood.

### Land Uses

The Northwest District has an enormous diversity of land uses. It contains a large industrial district, primarily north of NW Vaughn and stretching along the Willamette River to the north. The inner-city portion of the district is characterized by the highest-density housing in the city, vibrant main streets, and a mix of housing, institutions, and commercial activity. The district transitions from mixed-use to primarily single-family residential in the west hills. This includes Linnton, once a separate town based on the lumber industry, and Forest Heights, one of the largest housing developments in Portland. It also includes Forest Park, the largest urban forest inside a city in the United States, and Washington Park, which contains the zoo, Forestry Center, and Hoyt Arboretum.

### 2040 Areas

#### *Main Streets*

The 2040 Growth Concept designates four main streets in the Northwest District: NW 23<sup>rd</sup>, NW 21<sup>st</sup>, NW Thurman, and West Burnside. Together, these main streets function as a town center, providing a wide variety of everyday and specialty goods and attracting residents and tourists from throughout the region. The main streets are well served by transit, but also attract many visitors in cars, leading to severe congestion on weekends.

#### *Industrial Area and Intermodal Facilities*

The Northwest industrial area comprises over 80 firms, employing almost 8,000 people, engaged in manufacturing, production, processing, and equipment repair and installation. The Northwest Industrial Neighborhood Association developed a plan in 1999 that identifies the area's transportation needs, including maintaining and upgrading the transportation system and limiting the impacts of non-industrial traffic. The association submitted the plan to the City for adoption, with action anticipated in 2003. The intermodal facilities, including the rail switching yards and truck access to I-405 and shipping terminals, are essential to the health of the district's industries. Employees need transit options to reduce the need for employee parking and retain roadway capacity for trucks.

#### *Residential Neighborhoods*

Linnton and other low-density residential areas are poorly served by transit and have few options other than driving to reach shopping areas. Linnton residents participated in an ODOT-sponsored corridor planning effort for Highway 30. The Hillside area has peak-hour service, and Linnton has 30-minute service throughout the day and 30-minute to 1-hour service on Saturday. Some residents would like that transit service improved. Commuter traffic traveling at relatively high speeds has negative impacts on both neighborhoods. The

Forest Heights neighborhood is not served by public transit, but a private transit service provides some service to the Central City and Washington County.

Projected population and employment growth between 1994 and 2020 (as reflected in the regional transportation model) for the Northwest District are:

<b>Year</b>	<b>Population</b>	<b>Employment</b>
1994	18,782	39,061
2020	26,522	46,543

## **Transportation**

The Northwest District experiences high levels of peak-hour commuter traffic coming in and through the district via Highway 30 (St. Helen's Road), Burnside, and Cornell Road. Traffic volumes and speeds have led to the installation of traffic calming devices on several streets, including Cornell and NW 25<sup>th</sup>. Because commuters were parking on primarily residential streets with inadequate off-street parking, a residential area parking permit program has been instituted. The current program boundaries are from NW 16<sup>th</sup> to the east side of 18<sup>th</sup> and from the north side of Burnside to the south side of Northrup. On-street and off-street parking strategies are being refined for a larger part of the neighborhood and may include pay parking stations, shared parking, and parking demand management.

The Northwest District is bounded by regional freeways with numerous access points and by one major highway – (US 26), and is traversed by Highway 30 (St. Helen's Road). The Fremont Bridge provides a direct link to North Portland, while NW Lovejoy connects to the Broadway Bridge.

Multiple cross-town and radial transit lines serve the district. A MAX light rail station is located at SW 18<sup>th</sup> and Morrison, one block south of the district. The No. 15, 18, and 20 bus lines stop at or near the light rail station, but pedestrian connections across Burnside are difficult. The No. 17 bus serves the eastern portion of Northwest, connecting to the southeast through the Central City. The No. 77 bus serves cross-town travel, connecting to Sauvie Island and St. Johns as well as to the east side as far as Gateway. The Portland Streetcar began serving the Northwest District on Lovejoy (eastbound) and Northrup (westbound) September 2001. The streetcar travels on NW 23<sup>rd</sup> between Lovejoy and Northrup, connecting the main street and Good Samaritan Hospital to the River District, Downtown, and Portland State University.

The Northwest Pedestrian District encompasses the highest-density area of the district, characterized by a tight grid of streets, a complete sidewalk system, excellent transit service, and a wide mix of uses. Portions of two streets within the district – NW 21<sup>st</sup> Avenue and NW 23<sup>rd</sup> Avenue – were retrofitted with curb extensions several years ago. The Pedestrian Master Plan for the pedestrian district identifies additional improvements.

Bike lanes have been added to several streets in Northwest, including, St. Helen's Highway, NW 18<sup>th</sup> and 19<sup>th</sup>, and NW Vaughn. Bike boulevards have been created on NW Raleigh and Overton.

## **Recent Studies and Plans**

### ***Highway 30 Corridor Plan***

The Oregon Department of Transportation developed the Highway Corridor Plan in 1999 with the participation of the City of Portland. The City adopted resolution in support of the plan's recommendations (Resolution No. 35837) on October 27, 1999. The plan's purpose is to manage travel growth in the corridor, while identifying needed improvements that strengthen the role of alternative modes of transportation, improve facility operations, and manage demand through appropriate land use, rather than rely on substantial capacity increases or new facilities. The plan recommends a number of improvements to Highway 30 to reduce conflicts and provide safe pedestrian and bicycle facilities. Northwest Transition Zoning Project

### ***Northwest Transition Zoning Project***

Two areas of the Northwest District were rezoned from IG1 (General Industrial) to EXd (Central Employment) as part of the Northwest Transition Zoning Project (adopted by City Council Ordinance No. 175877 on August 21, 2001). The purpose of the rezoning project was to transition these predominantly industrial areas into areas of mixed-use development. In addition to the rezoning, a plan district was created to ensure appropriate design and ground-floor activity along the Portland Streetcar alignment. Property owned by the CNF corporation south of Thurman, north of Pettygrove, and generally between NW 20<sup>th</sup> and NW 23<sup>rd</sup> was rezoned and covered by a master plan requirement.

### ***Guild's Lake Industrial Sanctuary Plan***

City Council adopted the Guild's Lake Industrial Sanctuary Plan by Ordinance No. 176092 on November 21, 2001. The plan is based on the Northwest Industrial Association's (NINA) desire to protect the industrial sanctuary (north of NW Vaughn) from commercial and residential land use and development patterns that could diminish the sanctuary's role as an industrial district. An adopted plan district will further restrict office and retail uses.

### ***Northwest District Policy Plan (Update)***

The Northwest District Association (NWDA) neighborhood association worked on an update of its 1977 Northwest District Policy Plan for several years. The NWDA board adopted the updated policy plan in 1999 and submitted it to the City for review (as the Northwest Area Plan) in 2000. The Northwest Area Plan is tentatively scheduled for adoption in 2003. It will contain Comprehensive Plan amendments, zoning, regulations, and a list of recommended actions. As a part of the NW Area Plan, a small part of the River District is also being studied for rezoning.

## **Themes, Issues, and Constraints**

### ***District Workshop Results***

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit



input on Northwest District transportation needs was held on October 6. Identified issues included:

- **Traffic Calming.** People raised concerns about traffic speed and volume on local and collector streets in Northwest.
- **Commuter Traffic.** Arterials, such as Burnside and Cornell, carry large peak-hour traffic volumes, creating livability and safety concerns.
- **Bicycles.** More bike lanes are needed on arterials, and more bicycle parking is needed to serve the district.
- **Parking.** The lack of residential and commuter parking needs to be addressed.
- **Connections to Transit.** Improved bus or pedestrian connections are needed to light rail.
- **Pedestrians.** Increased pedestrian access and safety are needed, especially across Burnside. Wider sidewalks are needed to make the pedestrian environment easier to navigate, especially along busy shopping streets.

### ***Transit Choices for Livability***

Tri-Met sponsored a series of workshops and charrettes in 1997 and 1998 to solicit public input on City transit needs. Suggested Northwest transit service improvements included:

- A new connection between Civic Stadium (PGE Park) and the Northwest industrial area, with a link to North and Northeast Portland
- Streetcar service between Good Samaritan Hospital and Portland State University
- All-night service on high-performing bus routes such as the number 15

### ***PGE Park (Civic Stadium)***

A portion of Goose Hollow lies within the Northwest district. Goose Hollow is undergoing radical changes, with the opening of light rail in 1998 and the renovation and expansion of Civic Stadium (now PGE Park) in 2000. Even relatively small events at the stadium saturate parking in Goose Hollow, and larger events saturate parking north into areas of Northwest (Comprehensive Transportation Management Plan, 2000). The stadium renovation is expected to result in more frequent and larger events than in the past. Higher attendance levels will increase parking and traffic impacts on the area. PGE Park has a transportation management plan to address parking issues, and PDOT is developing a parking plan for Northwest Portland to address potential impacts from large events.

## **Project Suggestions (Partial List)**

### ***District Workshop***

Attendees of the 1998 Northwest District workshop suggested the following projects:

- **Traffic Calming.** NW Cornell; NW Macleay; SW Jefferson

- **Pedestrian.** Burnside/18<sup>th</sup>/Morrison; Burnside; Lov ejoy /Northrup; 21<sup>st</sup>/23<sup>rd</sup>; NW Upshur; access to St. John's Bridge
- **Bicycle.** Germantown Road; connect from Cornell to 28<sup>th</sup>/Thurman; connect St. Helen's bike lanes to neighborhood; access to St. John's Bridge
- **Safety.** Thurman/28<sup>th</sup>; Burnside/Park; Burnside/Barnes
- **Circulation.** Decouple Marshall/Lov ejoy ; recreate grid between Sav ier /Thurman and 16<sup>th</sup>/21<sup>st</sup>; 14<sup>th</sup> to two-way
- **Parking.** 21<sup>st</sup>/23<sup>rd</sup>; West over /Johnson; Jefferson
- **Transit.** Express fr om Burnside/23<sup>rd</sup>; expand fareless square; serve Forest Heights; service from Civic Stadium to NW industrial

### ***Highway 30 Corridor Plan***

The Highway 30 Corridor Plan's recommendations for the portion of the corridor within the City's boundaries are:

- **St. Helen's Road (US 30).** Wider sidewalks; median; curb extensions in Linnton; feasibility of pedestrian overpass
- **Circulation.** Signal at 112<sup>th</sup>; realignment of Saltzman/57<sup>th</sup> at Balboa; center-turn lane from Willbridge to Front; Front to 60-foot right-of-way
- **Transit.** Express peak-hour service; Sunday bus service; vanpool service
- **Pedestrian /Bicycle.** Completion of bike lanes; access to St. John's Bridge; sidewalks on bridge

### ***Guild's Lake Industrial Sanctuary Plan***

The Guild's Lake Industrial Sanctuary Plan includes the following transportation projects as actions. Many of the plan's other transportation actions are not projects; some are discussed at the end of the Northwest District needs assessment.

- Improve pedestrian access to transit stops, and improve transit stops to be ADA compliant.
- Add and improve turn and acceleration /deceleration lanes and signalization on US Highway 30 where needed to facilitate truck access.
- Realign the intersection of NW Saltzman and NW Balboa at St. Helens Road to correct offset intersections.
- Construct sidewalks and bicycle lanes where missing along NW St. Helens Road.
- Construct a pedestrian trail along the east side of NW Bridge Avenue between both intersections with St. Helens Road.
- Improve and enhance the multimodal character of NW Vaughn from NW 23<sup>rd</sup> to 27<sup>th</sup> through design, operations, and signing.

### ***Northwest District Policy Plan***

The NWDA board of directors adopted the updated Northwest District Policy Plan on November 1, 1999. The plan contains the following actions relating to transportation projects. When the plan is adopted by the City as the Northwest Area Plan, it will incorporate these actions as appropriate.

- **Pedestrian.** More safe crossings, especially across Burnside and other major arterials; better access to transit, especially to the light rail station; better connections to adjacent neighborhoods; sidewalks widened to pedestrian standards
- **Bicycle.** More safe routes through the neighborhood; more bicycle parking
- **Parking.** Commuter parking in the neighborhood; parking enforcement; shared parking
- **Traffic.** Traffic calming; moving non-local traffic from local streets to appropriate arterials; enforcement; decoupling Everett and Glisan
- **Transit.** Extension of fareless square to Northwest; more shelters

### ***Pedestrian Master Plan***

The Pedestrian Master Plan identifies the following projects for the Northwest District:

- **Stairs.** Thurman /Gordon to Aspen; Vista Ridge Stairs (Vista to Mill St. Terrace); SW Spiral Way right-of-way
- **Sidewalks.** Overcrossing at Burnside/Wildwood; Burnside (Tichner to Sky line); Burnside (Park to 23<sup>rd</sup>)
- **Pedestrian District.** Northwest District upgrades and amenities
- **Bridges.** I-405 at Burnside, Couch, Everett, Glisan, Salmon, Columbia, and Jefferson

### ***Bicycle Master Plan***

The Bicycle Master Plan contains a number of Northwest District projects that have been completed. Projects not yet completed include:

- **Bicycle Lanes.** Front, Sky line, Cornell, Thompson, Burnside, Washington Park

### **Non-TSP Project Issues**

In addition to suggestions for significant projects that are incorporated into the TSP, many ideas have been generated to address transportation issues in the Northwest District. A summary of these ideas is provided below.

- Calm traffic on local streets (for example, NW 19<sup>th</sup>; 22<sup>nd</sup>; 24<sup>th</sup> at Flanders, Lovejoy, and Raleigh; 25<sup>th</sup> at Thurman and Upshur; Hoyt from 20<sup>th</sup> to 23<sup>rd</sup>).
- Evaluate loading restrictions and reduce hours allowed.
- Restrict commuter parking – consider meters, parking permits, etc.

- Reduce speeding on Burnside.
- Enforce parking restrictions at intersections to improve visibility.
- Trim vegetation along slopes.
- Place a four-way stop at 22<sup>nd</sup> and Marshall.
- Add stop bars and stop signs.
- Place street names on both sides of street signs.
- Add bike parking at schools.

Other ideas describe concepts that are being considered for district or citywide policies. These include supporting access to alternative modes of travel to the automobile; supporting driver education; improving the efficiency of on- and off-street parking; adding bike lanes near schools; and supporting employer subsidies and incentives for transit use. Other suggestions related to changes to street classification maps, and were considered for inclusion in the TSP.

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## SOUTHWEST DISTRICT

### Introduction

The Southwest District is located south of Highway 26 and west of the Willamette River, excluding the areas within the Central City. Its westernmost and southernmost boundaries are defined by the City limits. Southwest is the second smallest transportation district in the City (after Northwest).

Southwest Portland is defined by its topography. Council Crest, the highest point in the City, is located in Southwest. Southwest has numerous environmental attributes, including vistas, forests, slopes, and riparian habitats. These attributes can complicate the district's transportation system. Environmental protection zones, narrow and steep streets, sharp turning radii, and severe construction/maintenance challenges are indicative of the district's transportation system.

As one result of these topographical constraints, the Southwest district has relatively low residential density. Commercial districts are concentrated along corridors and along the riverfront. Portland started annexing areas in Southwest Portland in the 1950s and 1960s and continued to do so over time. The incremental and piecemeal annexation contributed to the development of residential areas with substandard streets, which include streets without drainage, sidewalks, curbs, standard widths, or paved surfaces.

### Land Uses

The Southwest District's environmental attributes make it an attractive area to live in. A majority of the land use is low-density residential. Except for Oregon Health Sciences University (OHSU) employment on Marquam Hill, jobs are few compared to the district's population. Higher-density residential development is anticipated along the Beaverton-Hillsdale Highway.

The Southwest Community Plan developed a number of policies and objectives that will affect land uses and transportation in the area. The plan is not adopted, and action items related to zoning are not in effect.

Regional attractors include the Portland Community College Sylvan Campus and the OHSU health complex, which includes Doernbecher Children's Hospital, University Hospital, and Veterans' Affairs Medical Center in the Homestead area.

### **2040 Focus Areas**

#### *Main Streets*

The Southwest District contains two pairs of intersecting 2040 Growth Concept main streets: Multnomah/Capital Highway in Multnomah Village and Garden Home/Olsen Road. The Multnomah Village main streets function like a town center, providing a variety of everyday and specialty goods.

*Town Centers*

The Southwest District contains three 2040 Growth Concept town centers: Hillsdale, Raleigh Hills, (which is primarily residential), and West Portland. These town centers provide a wide variety of everyday and specialty goods and attract residents from throughout the region. The town centers are served by transit; because additional service is needed, however, many visitors arrive in cars. This results in congested streets, an above-average number of surface parking lots, and an unfriendly pedestrian environment.

*Special Area*

The 2040 Growth Concept designates Marquam Hill, home to OHSU and other related medical facilities, as a special area.

Projected population and employment growth between 1994 and 2020 (as reflected in the regional transportation model) for the Northwest District are:

<b>Year</b>	<b>Population</b>	<b>Employment</b>
1994	69,914	39,334
2020	72,742	44,836

**Transportation**

Compared with other districts, Southwest has relatively few major transportation corridors, mainly because the hills act as a natural east-west barrier. The consistent grid pattern prevalent in the rest of the City, including the Central City, is rare in the rest of the Southwest district. Southwest's primary transportation corridors are the I-5 freeway, Barbur Boulevard, Beaverton-Hillsdale Highway, Macadam Avenue, and Sunset Highway (US 26). Barbur Boulevard parallels I-5 along a southwest-northwest axis, while Beaverton-Hillsdale Highway and US 26 have an east-west orientation. Macadam Avenue is the primary link connecting Clackamas and Washington Counties, and runs north-south parallel to the Willamette River. US 26 and I-5 serve primarily commuter traffic to Clackamas and Washington Counties, while Barbur Boulevard, Macadam Avenue, and Beaverton-Hillsdale Highway serve significant local and commuter traffic. Southwest experiences significant commuter traffic for a number of reasons: lack of employment opportunities in the district, proximity to residential growth areas along the western and southern borders, and rapid employment growth in the Downtown and Northeast Districts.

There are a number of congested and unsafe intersections in Southwest. They include the intersections of Multnomah Boulevard/Garden Home Road; Beaverton-Hillsdale Highway/Scholls Ferry Road; Barbur/Terwilliger Boulevards; Capitol Highway/Bertha Boulevard/Beaverton-Hillsdale Highway; and Barbur Boulevard/Capitol Highway.

Transit service in Southwest is concentrated on Barbur Boulevard, Beaverton-Hillsdale Highway, Capitol Highway, Scholls Ferry, and Macadam Avenue. The main lines serving the area to the Downtown include the No. 1, 5 and 12. The Barbur transit center, located at Barber/I-5/Bertha, serves as a major transfer point, including for riders on SMART Transit from Wilsonville. The westside MAX line also provides high-capacity transit service, with a station at the zoo.

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## Recent Plans and Studies

### *The West Portland Town Center Transportation Plan*

The West Portland town center is at the crossroads of three major roadways: SW Barbur Boulevard, SW Capitol Highway, and I-5. The West Portland Town Center Transportation Plan was completed in 1997 (but not adopted) to identify ways to improve transportation connections for vehicles and pedestrians. The plan recommends a number of major changes to the I-5 connections with Barbur to reduce the impact of regional through-traffic, and new local street connections to improve access across I-5 north and south of Capitol Highway. A future I-5/Barbur refinement plan will further refine the study's recommendations and will look at both land use and transportation strategies in the entire I-5/Barbur corridor. (Chapter 4: Refinement Plans and Studies, and Chapter 12: Area Studies, of the TSP provide further details.)

### *Southwest Community Plan*

The Southwest Community Plan was adopted in two phases. City Council adopted the vision, policies, and objectives by Ordinance No. 174667 on July 13, 2000. City Council adopted the Comprehensive Plan and zoning maps, along with 2040 Growth Concept design type boundaries, on November 21, 2001 (Ordinance No. 176090). Appendix C of the TSP contains the complete text of the transportation policies and objectives. A Barbur/I-5 corridor was removed from the Southwest Community Plan for further study. Chapter 4: Refinement Plans and Studies, describes the scope of that proposed study.

### *South Portland Circulation Study*

City Council accepted the South Portland Circulation Study on August 1, 2001 (Resolution No. 34014). (This is the second study with this name. City Council tabled a previous study, which was completed in 1978.)

The study area centers on the west end of the Ross Island Bridge and Naito Parkway between I-405 and Barbur Boulevard. The primary objective was to evaluate the possibility of removing non-local traffic that currently uses local streets in the northern part of the Corbett-Terwilliger-Lair Hill neighborhood and to reunite the west and east portions of the neighborhood with a complete grid of streets. The study recommends a number of changes to the street system, including:

- Rebuild the western Ross Island bridge ramps.
- Change Naito Parkway from a four-lane to a two-lane cross section, with cross street intersections, pedestrian and transit improvements, bike lanes, and street trees.
- Reconfigure the Naito Parkway/Kelly Way intersection from a grade-separated to an at-grade intersection.

(Chapter 12: Area Studies, provides a more detailed description of the study and its recommendations.)

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## Themes, Issues, and Constraints

### *District Workshop Results*

The TSP process included public workshops in each of the eight transportation districts in fall 1998 to discuss transportation issues and community needs. The workshop to solicit input on Southwest District transportation needs was held on October 13. Some of the issues raised include:

- **Connections to Transit/Transit Improvements.** Inadequate transit service is provided for intra- and inter-district travel, especially north-south transit service.
- **Circulation and Connectivity.** There is a lack of circulation and connectivity, especially between Macadam Avenue and the Ross Island Bridge and along the Barbur Boulevard Corridor.
- **Intersection Improvements.** Intersection improvements are needed to improve safety and increase efficiency.
- **Freight Traffic.** There are concerns about trucks using local and neighborhood collector streets, especially Taylors Ferry Road, Vermont Street, Shattuck Road, and Broadway Drive.
- **Pedestrian.** There are concerns about the lack of sidewalks on local and arterial streets, as well as safe pedestrian access to elementary schools.
- **Bicycle.** There is a lack of safe bicycle lanes on major traffic streets.
- **Traffic Calming.** Traffic speeds and volume on local and collector streets merit traffic calming.
- **Sellwood Bridge/Commuter Traffic.** There are concerns about the inadequacy of the Sellwood Bridge and the bottleneck created where bridge traffic intersects with Macadam Avenue, and with the number of commuters from Clackamas County that cross the bridge to Washington County.

### *Transit Choices for Livability*

Tri-met sponsored a series of workshops and charrettes in 1997 and 1998 to solicit public input on City transit needs. Suggested Southwest District transit improvements included:

- Provide service in SW Portland in the area of 35<sup>th</sup>, Stephenson, and Boones Ferry.
- Improve connections to underserved areas via Beaverton-Hillsdale Highway or Washington Square.
- Improve existing lines: Greeley and Vermont, Taylors Ferry, Garden Home, Raleigh Hills.

### **Project Suggestions (Partial List)**



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### ***District Workshop***

Attendees of the 1998 workshop suggested the following projects for the Southwest District:

#### ***Connections to Transit/Transit Improvements***

- Improve transit service along Barbur Boulevard and I-5, including using the corridor to extend light rail service to Tualatin/Tigard.
- Expand the number of buses serving Barbur Boulevard to the equivalent cost level of a light rail addition.
- Provide water taxis.
- Increase north-south transit connectivity along Vermont Street, 45<sup>th</sup> Avenue, Oleson Road, Capitol Highway, Dosch Road, Shattuck Road, and service to west side MAX.
- Use shuttle buses for intradistrict transit service.
- Increase weekend and evening transit service.

#### ***Circulation and Connectivity***

- Study and improve circulation and connectivity between Macadam Avenue and the Ross Island Bridge and along the Barbur Boulevard Corridor, including land uses and the I-5 freeway.

#### ***Intersection Improvements***

- Improve intersections at Garden Home/Multnomah Boulevard; Capitol Highway / Bertha/Beaverton-Hillsdale Highway; Sunset Boulevard/Capitol Highway; Macadam Avenue/Tacoma Street (terminus of the Sellwood Bridge); Taylor's Ferry Road/62<sup>nd</sup> and 26<sup>th</sup> Avenues; Terwilliger/Barbur Boulevard; and Capitol Highway/Vermont Street.

#### ***Freight***

- Restrict truck traffic to arterials or truck routes through signage or other traffic control means.
- Add a freight-climbing lane to I-5 (southbound I-5, south of the Ross Island Bridge).

#### ***Pedestrian/Bicycle***

- Provide safer crossings along Barbur Boulevard; Multnomah Boulevard; Vermont Street; Hillsdale Town Center; Beaverton-Hillsdale Highway (especially crossings); crossings over I-5; 30<sup>th</sup> Avenue; Garden Home Road; 45<sup>th</sup> Avenue; 19<sup>th</sup> Avenue; and Macadam Avenue.

#### ***Traffic Calming***

- Calm traffic in the Burlingame and Hillsdale retail districts.
- Make traffic calming improvements in West Portland and Maplewood and along Humphrey and Hewett.

#### ***Sellwood Bridge/Commuter Traffic***

- Widen the Sellwood Bridge; replace it with a new bridge; build additional bridges between Clackamas and Multnomah Counties.

- Provide more park-and-ride lots.

### ***Pedestrian Master Plan***

The Pedestrian Master Plan identifies the following projects for the Southwest District:

- **Pathway.** Path along I-5 from SW 5<sup>th</sup> to Custer
- **Connections.** SW connections to schools, parks, shopping, employment, and transit
- **Pedestrian Overpass.** Near Markham School
- **Walkways and Crossings.** SW 35<sup>th</sup> between Luradel and Dickenson; SW Capitol between 35<sup>th</sup> and Miles; between Beaverton-Hillsdale Highway and 31<sup>st</sup>; Multnomah viaduct and Taylors Ferry; Terwilliger to Sunset
- **Walkways.** SW 35<sup>th</sup> from Stephenson to Dickenson; Stephenson from 27<sup>th</sup> to 35<sup>th</sup>; SW Vermont between Shattuck and 30<sup>th</sup>
- **Path and Bridge.** Over Stevens Creek to connect SW Nevada Court to Capitol Hill Road and Bertha Boulevard at Chestnut
- **Path and Stairs.** Between SW Nevada Street to Barbur; SW Woods to SW Sam Jackson Park Road; SW Cable to SW Jackson
- **Stairs.** SW 19<sup>th</sup> right-of-way from Troy to Moss; end of SW Harrison Street at SW 16<sup>th</sup>; SW 16<sup>th</sup> from SW Hall to SW Upper Hall; SW 14<sup>th</sup> right-of-way from SW College to Cardinell
- **Pedestrian District.** Multnomah

Appendix E of the TSP contains the complete list of pedestrian projects.

### ***Bicycle Master Plan***

The Bicycle Master Plan contains a number of projects that have been completed in the Southwest District. Projects not yet completed include:

- **Bicycle Lanes.** SW Vermont west of 30<sup>th</sup>; SW Shuttuck; SW Garden Home; SW Pomona; SW Hamilton; SW Sunset; SW Stephenson; Corbett
- **Bicycle Boulevards.** SW Vermont east of Capitol; SW 1<sup>st</sup>
- **Multi-use Paths.** Willamette Greenway where missing

### **Non-TSP Project Issues**

In addition to suggestions for significant projects that are incorporated into the TSP, many ideas have been generated to address transportation issues in the Southwest District. These have been referred to other programs within PDOT or noted in the TSP and include:

- Cover the I-5 freeway.

- Relieve congestion on Taylor's Ferry Road (between Macadam Avenue and Terwilliger Boulevard).
- Reduce the Beaverton-Hillsdale Highway speed limit to 45 mph.
- Enforce speed limits on Fairmont Boulevard and calm traffic.
- Replace the signal at Broadway Drive and Hoffman Avenue.
- Install a stop sign at the intersection of 62<sup>nd</sup> Avenue and Taylor's Ferry Road.
- Fix the low spot where water collects near the intersection of Capitol Highway and Pomona Street.
- Provide better street lighting at the intersection of Barbur Boulevard and Capitol Highway.
- Build a bridge across the Woods Creek Ravine at Multnomah.
- Improve road drainage throughout Southwest.
- Provide more bus shelters, especially along Barbur Boulevard.



## INTRODUCTION

### Background

The purpose of the master street plans is to increase the efficiency of the transportation system through increased street connectivity and a finer mesh of pedestrian and bikeways. A dense grid of streets helps spread local vehicle trips more evenly over the local street network and reduces congestion on the arterial system. Studies show that improved local street connectivity improves arterial system capacity by as much as 25 percent.

Studies show that distance is one of the most important factors in mode choice. The lack of a dense grid of streets and pedestrian/bicycle connections results in out-of-direction travel that is particularly discouraging to potential pedestrians and bicyclists. The result is increased use of the automobile for trips to nearby (as the crow flies) destinations. Trips need to be relatively short to encourage travel on foot or by bicycle.

Good street connectivity improves emergency response times. Police, fire, and ambulance services can reach their destinations more quickly because there is less out-of-direction travel. Multiple access routes can reduce travel times and provide access options if one route is blocked.

Good local street connections can reduce traffic volumes on other streets by spreading traffic over a denser network. With more intersections, traffic also moves more slowly because side street traffic and stop signs discourage drivers from speeding.

As properties are subdivided and developed, access needs are met primarily through new streets. The City's local street network has grown over time, as outlying areas became more urbanized or older areas are redeveloped. In the past, development was not always required to address connections to adjacent areas as well as internal circulation. The result has been large areas of the City with poor connectivity, particularly in newer areas where the counties previously regulated development.

### State Requirements

Street connectivity must be part of transportation system plans (TSPs) and adopting Ordinances. The Oregon Administrative Rule for State Land Use Goal 12, Transportation, Section 660-012-0020, Elements of Transportation Systems Plans, requires:

A road plan for a system of arterials and collectors and standards for the layout of local streets and other important non-collector street connections....  
The standards for the layout of local streets shall provide for safe and convenient bike and pedestrian circulation necessary to carry out OAR 660-012-045(3)(b).

The State Transportation Planning Rule (TPR) states that the intent of the requirement is to provide guidance on the spacing of future extensions and connections along existing and

future streets that are needed to provide reasonably direct routes for bicycle and pedestrian travel. The rule referenced above goes on to state:

On-site facilities shall be provided which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. Single-family residential developments shall generally include streets and accessways. Pedestrian circulation through parking lots should generally be provided in the form of accessways.

The TPR also states that local jurisdictions should establish their own standards or criteria for providing streets and accessways consistent with the intent stated above. This may be accomplished through standards for spacing of streets or accessways, and standards for excessive out-of-direction travel. The TPR defines 'safe and convenient' access as being:

- Reasonably free from hazards
- Meeting the needs of cyclists and pedestrians, considering destination and length of trip

## **Metro Requirements**

The Metro Council adopted the Urban Growth Management Functional Plan (UGMFP) in 1996. Functional plans are an important regional policy tool that may contain both recommendations and requirements for changes in local comprehensive plans. The UGMFP contains specific requirements for street connectivity in Title 6: Regional Accessibility. This title has subsequently been superseded by the Regional Transportation Plan (RTP), which the Metro Council adopted on August 10, 2000.

The RTP requires jurisdictions to implement two types of street plans:

1. Conceptual street plans that:
  - Map contiguous areas of vacant and redevelopable parcels of five or more acres planned or zoned for residential or mixed-use development
  - Identify appropriate connections to adjacent areas
  - Demonstrate opportunities to extend and connect to existing streets, provide direct public right-of-way routes, and limit the potential of cul-de-sac and other closed-end street designs
2. A street map for new residential or mixed-use development that will require construction of a new street(s) that:
  - Responds to and expands on the conceptual street plan map
  - Provides for street connections no further apart than 530 feet, except where prevented by barriers such as topography, railroads, freeways, pre-existing

development, or water features where regulations do not allow construction of or prescribe different standards for streets

- Provides bicycle and/or pedestrian connections when full street connections are not possible, no further apart than 330 feet, except where prevented by barriers as noted above
- Limits the use of cul-de-sac or closed street systems
- Includes street cross-sections

Conceptual street plans must be adopted as part of local jurisdictions' comprehensive plans. Policy 11.11, Street Plans, in Goal 11B (Chapter 2 of the TSP) includes the objective and map for each master street plan.

### **Areas Meeting Connectivity Requirements**

Many areas of Portland meet the RTP connectivity standards or are not required to have master street plans. The district maps in Policy 11.11 (Chapter 2 of the TSP) show these areas. Areas not required to meet connectivity standards include industrial sanctuaries, open space, and protected environmental areas. In Portland these are areas zoned IG1, IG2, IH, OS, and p.

### **Existing Master Street Plans**

#### ***Southwest and Far Southeast***

The City completed master street plans for the Southwest and Far Southeast transportation districts in June 2001. These two master street plans satisfy the State and regional requirements to identify the location and type of new local street connections. The methodology and criteria used to develop the plans are described briefly below. The SW and Far SE Master Street Plan – Final Report and Recommendations contains quarter-section level maps and tables that detail the recommended connections. The report identifies three objectives to be met:

- Reduce the uncertainty in the development review process regarding when and where new street connections will be an issue.
- Provide for better coordination of the local street system development.
- Comply with the mandates of the State Transportation Planning Rule and Regional Transportation Plan for street connectivity.

The Southwest and Far Southeast master street plans were developed through a number of steps, with mapping associated with each step.

*Step One*

- Define blocks in the study area that meet the spacing standard.
- Define areas being excluded (areas where streets are complete or underway; parcels zoned as park, open space, or industrial; religious or educational institutions).

*Step Two*

- Define remaining areas that have development or redevelopment potential (land value greater than improvement value; different Comprehensive Plan and zoning designations; two-acre or larger parcels).
- Define development constraints (street spacing not met, but parcels don't meet development potential).

*Step Three*

- Define blocks with barriers to connectivity (environmentally constrained).

*Step Four*

- Group the remaining areas into focus areas.

*Step Five*

- Define locations of new connections.
- Determine specificity of connections – specific points or along a block face).
- Apply type of connection – street or pedestrian/bicycle.

The plan's recommendations include information about the location, level of alignment specificity, type of connection, barriers, presence of environmental zones, traffic impacts, field notes, and comments from the public or technical staff.

While the master street plans identify a number of future connections, the absence of a connection does not mean a connection is not needed or feasible. All areas within the study areas are still subject to relevant policy and spacing standards.

***Area-Specific Master Street Plans***

Street plans have been completed, but not adopted into the Comprehensive Plan, for other areas of the City over the past several years. Although they are not specifically intended to meet the State and regional requirements, they do function as master street plans. These plans cover the following areas:

- Gateway regional center
- Airport Way (Columbia Corridor)
- Bridgeton (Northeast district adjacent to Marine Drive)
- South Portland (west end of the Ross Island Bridge)
- North Macadam (Central City)
- River District (Central City)



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Each plan or study is summarized below, along with maps derived from the original documents. The street plans are included under Policy 11.11 as part of the City's Comprehensive Plan. The maps have been modified for inclusion in Chapter 2, Goal 11B, of the TSP.

### ***Areas Not Covered by Master Street Plans***

Master street plans have not been completed for all or parts of the North, Northeast, Far Northeast, Southeast, Northwest, and Central City districts. Other areas were excluded from the Southwest and Far Southeast Master Street Plans: the east light rail corridor (102<sup>nd</sup> to the city limits, NE Glisan to SE Stark), the Hillsdale town center, and the West Portland town center. Master street plans for these areas will be completed as refinement plans of the TSP. Until such plans are completed, the location and implementation of new street and pedestrian/bicycle connections will be governed by Title 17: Public Improvements, and Title 33: Planning and Zoning, requirements in City Code. Title 17 regulations govern developing or redeveloping sites that do not include a land division, and Title 33 regulations govern developing or redeveloping sites that do include a land division. The spacing standards in each title are 530 feet for full street connections and 330 feet for pedestrian/bicycle connections where full street connections are not feasible.

Policy 11.11, Street Plans, in Chapter 2 of the TSP contains maps of the areas where master street plans have not yet been completed. Master street plans are not required for any parts of these areas that meet the connectivity standards.



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## **SOUTH WATERFRONT DISTRICT STREET PLAN, CRITERIA AND STANDARDS**

### **Background**

The North Macadam Street Plan was developed by the Portland Office of Transportation (PDOT) and accepted by City Council as part of the City Engineer's report on November 12, 1996 (see North Macadam District Planning, Chapter 12). Planning efforts continued to refine regulations and guidelines developed for North Macadam. On November 13, 2002, City Council passed Resolution 36111 and Ordinance 177082 adopted the South Waterfront (previously North Macadam) Plan, Zoning Code, and Design Guidelines.

As part of Council's adopting actions, the Office of Transportation was directed to

work with Environmental Service, Planning, Portland Development Commission and other relevant agencies to update the Street Plan for North Macadam, including updates to the Transportation Element of the Comprehensive Plan, the street plan maps, street standards and street plan principles, to be consistent with the policies and Transportation Concept of the North Macadam Plan, and return to City Council for review and acceptance no later than January 20, 2003.

On February 26, 2003, PDOT issued an "Interim South Waterfront Street Plan" to address the immediate need of an updated street plan with the acknowledgement that additional work was needed to address street standard details, allow for community review, and solicit advice from the Design Commission.

### **Street Plan, Criteria and Standards**

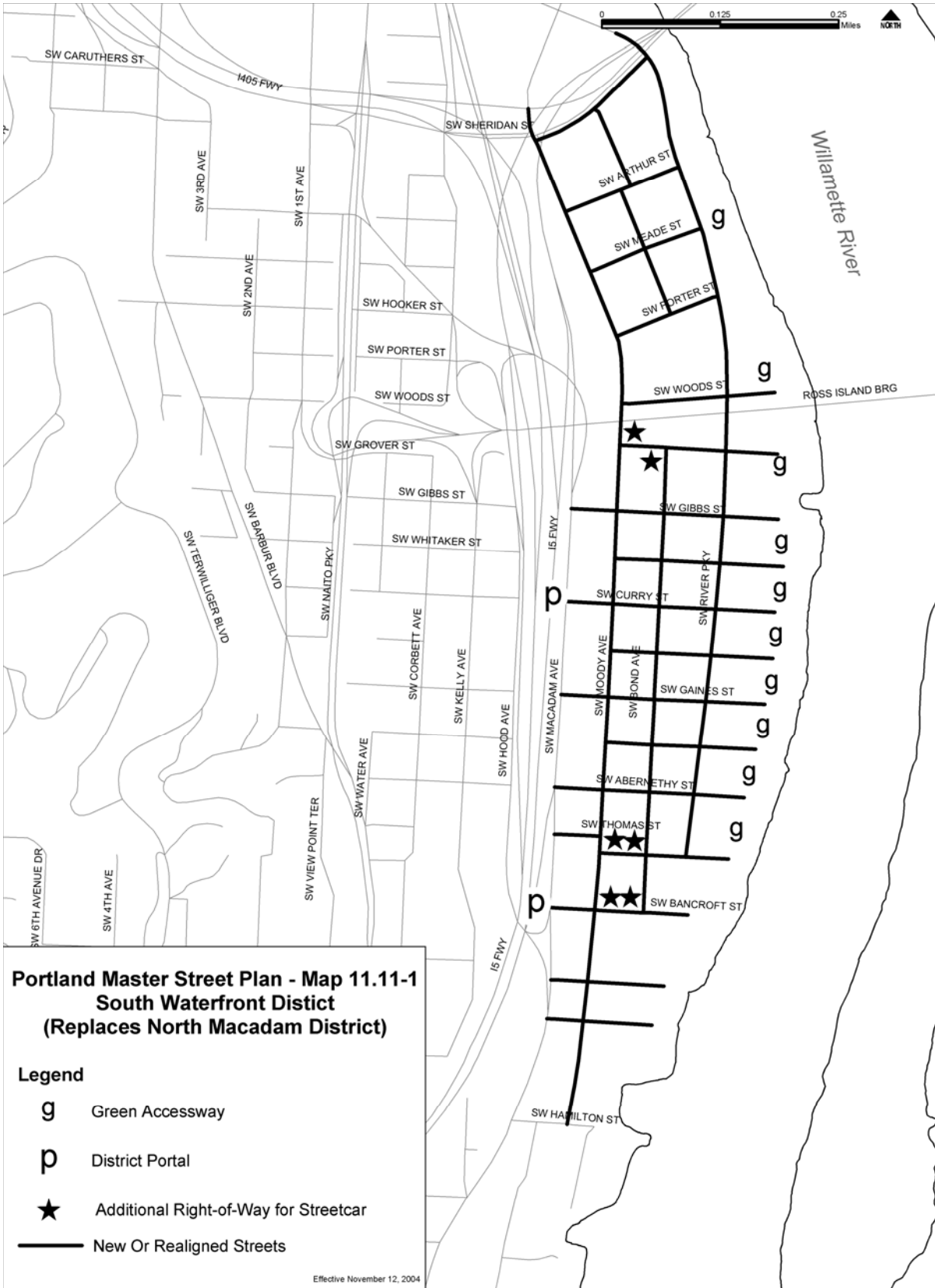
The South Waterfront District Street Plan, Criteria and Standards document was accepted by City Council on October 29, 2003. The document includes a Right-of-Way plan that focuses on the Willamette River, land use and open space network. It creates a balanced multimodal transportation system with east/west streets providing pedestrian circulation and service access while north/south streets provide transit, pedestrian, bike and vehicular mobility within the district. East/west streets are comprised of local and enhanced pedestrian streets that are regularly spaced and provide convenient access from north/south streets to businesses and residences.

Frequently spaced Enhanced Pedestrian Streets provide additional sidewalk widths and pedestrian-scale street lighting. East/west streets also extend to the river through green accessways to provide connectivity throughout the district.

The document also includes street plan principles, such as block sizes of no less than 200 feet and no greater than 500 feet, to promote a walkable and accessible pedestrian environment. The block system will also provide an opportunity to appropriately distribute traffic throughout the District consistent with new street classifications.

## **Street Classifications**

The South Waterfront District Street Plan, Criteria and Standards document includes new street classifications for many of the existing and new streets in the District. All streets are classified based on the seven different street classifications in the Transportation Element of the Comprehensive Plan. Enhanced Pedestrian Streets and Green Accessways describe the look of certain streets rather than their function. The streets also have a classification within the Pedestrian classification system of the Transportation Element of the Comprehensive Plan.





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## **BRIDGETON NEIGHBORHOOD STREET PLAN**

(Transportation Network Concept Plan for the Bridgeton Neighborhood)

### **Background**

City Council adopted the Bridgeton Neighborhood Plan on June 4, 1997 (Ordinance No. 171238). City Council directed the Portland Office of Transportation (PDOT) to develop a transportation network concept plan for Bridgeton to implement action items in the neighborhood plan.

City Council adopted the Transportation Network Concept Plan for the Bridgeton Neighborhood (BTNC) on June 4, 1997 (Ordinance No. 171238 and Resolution No. 35619). The purpose of the concept plan is to address circulation and connections in conjunction with development west of N Haight.

Specifically, the concept plan was intended to ensure that street connections from parcels of five acres or more to N Marine Drive:

1. Must be made at intervals not more than every 660 feet, with more frequent connections in areas planned for mixed use or dense development.
2. Should provide for pedestrian/bicycle connections with dedication by public easements or rights-of-way at a minimum of every 330 feet.
3. Shall provide for auto and truck circulation for local trips only. The specific design of how these modes are accommodated in each circumstance will be determined between the developing property owner and the Office of Transportation.

The Bridgeton Neighborhood Plan contains additional details about the design of new streets in the area.

### **Street Connectivity**

The original street system was provided to serve mostly larger lots, without consideration of future redevelopment. Many of the existing lots were developed to provide support for or service to marine activities along the Columbia River between the Bridgeton area and Tomahawk Island (North Portland Harbor). New demands for residential development have created the need for smaller lots and additional access and connectivity. Issues considered in the planning process included barriers such as the Bridgeton Slough (which bisects the eastern two-thirds of the area) and the shape of the area (long and narrow between N/NE Bridgeton Road and Marine Drive).

The proposed additions to the street system significantly improve both east-west and north-south connectivity, primarily in the western half of the area between the I-5 access ramps and N Haight Street. Overall, the proposed pattern of streets provides for compliance with the street spacing standards, when taking into account existing street spacing between N/NE Bridgeton Road and Marine Drive, and the Bridgeton Slough. The result is significantly

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improved vehicle and/or pedestrian and bicycle access in those areas where little or none occurred before, complementing and connecting to the existing street pattern.

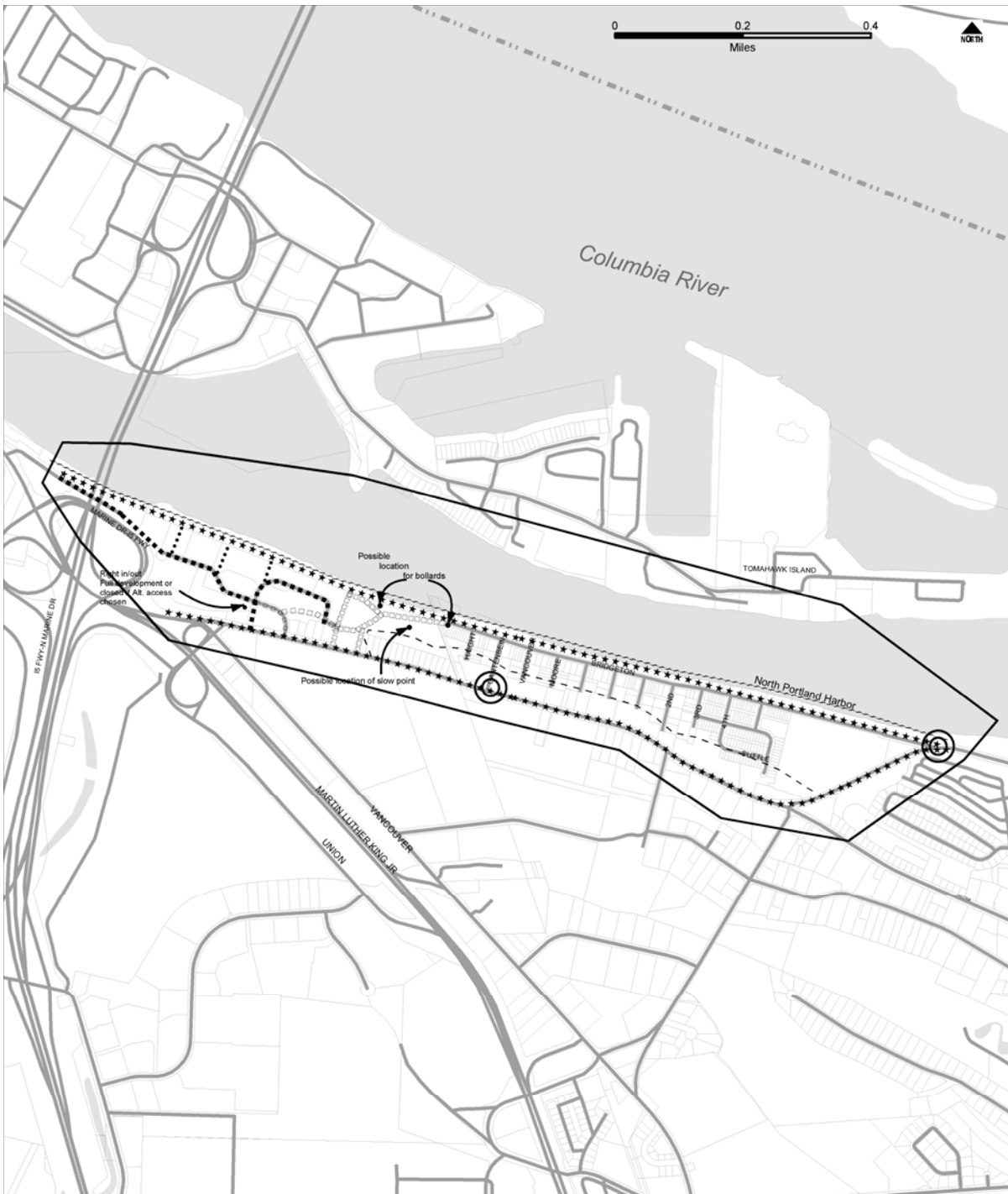
### **Concept Plan Map**

The BTNC map provides a balanced multimodal transportation system, with enhanced east-west access via an extension of N/NE Bridgeton Road to the west, and four new north-south connections to N Marine Drive from the N/NE Bridgeton Road extension. Four new connections to the 40-Mile Loop Trail along the area's northern boundary provide additional connectivity.

N/NE Marine Drive and the 40-Mile Loop Trail provide connections for non-local trips for all modes of traffic. A direct link between the two alignments of the 40-Mile Loop Trail is provided at N Gantenbein Street and at two of the new north-south connections proposed further west.

Two intersections--NE Marine Drive and Bridgeton (east end), and N Gantenbein Street and Marine Drive--are designated as neighborhood gateways.





**Portland Master Street Plan - Map 11.11.2  
Bridgeton Transportation Network Concept**

- ■ ■ ■ Approximate Alternative Locations for New Streets
- □ □ □ Approximate Alternative Locations for New Streets
- ★ ★ ★ ★ 40 Mile Loop Recreational Trail
- ● ● ● Approximate Alternative Locations for New Pedestrian Pathways
- ~~~~~ Scenic Corridors
- Bridgeton Slough
- ⊙ Intersection Improvements by City
- ⊙ Designated Neighborhood Gateways
- City of Portland Boundary

Effective November 12, 2004



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## **GATEWAY REGIONAL CENTER STREET PLAN**

### **Background**

The 2040 Growth Concept identifies the Gateway regional center as the only regional center in Portland. Planning for Gateway began with the Outer Southeast Community Plan and continued with the Opportunity Gateway Concept Plan and Redevelopment Strategy. City Council accepted Opportunity Gateway in February 2000 (Resolution No. 35867). The Outer Southeast Community Plan resulted in a plan district and transit-supportive zoning.

### **Street Connectivity**

A discontinuous network of streets and sidewalks, high volumes of through-traffic, and underutilized property characterize Gateway regional center. Access to the transit stations in Gateway's northwest corner and at 102<sup>nd</sup> and Burnside is problematic. Discontinuous streets discourage walking and bicycling, resulting in significant out-of-direction travel for all modes.

Increasing street connectivity would disperse trips among many alternate routes, thereby reducing congestion, shortening trip lengths, and increasing the mode split for alternatives to the automobile.

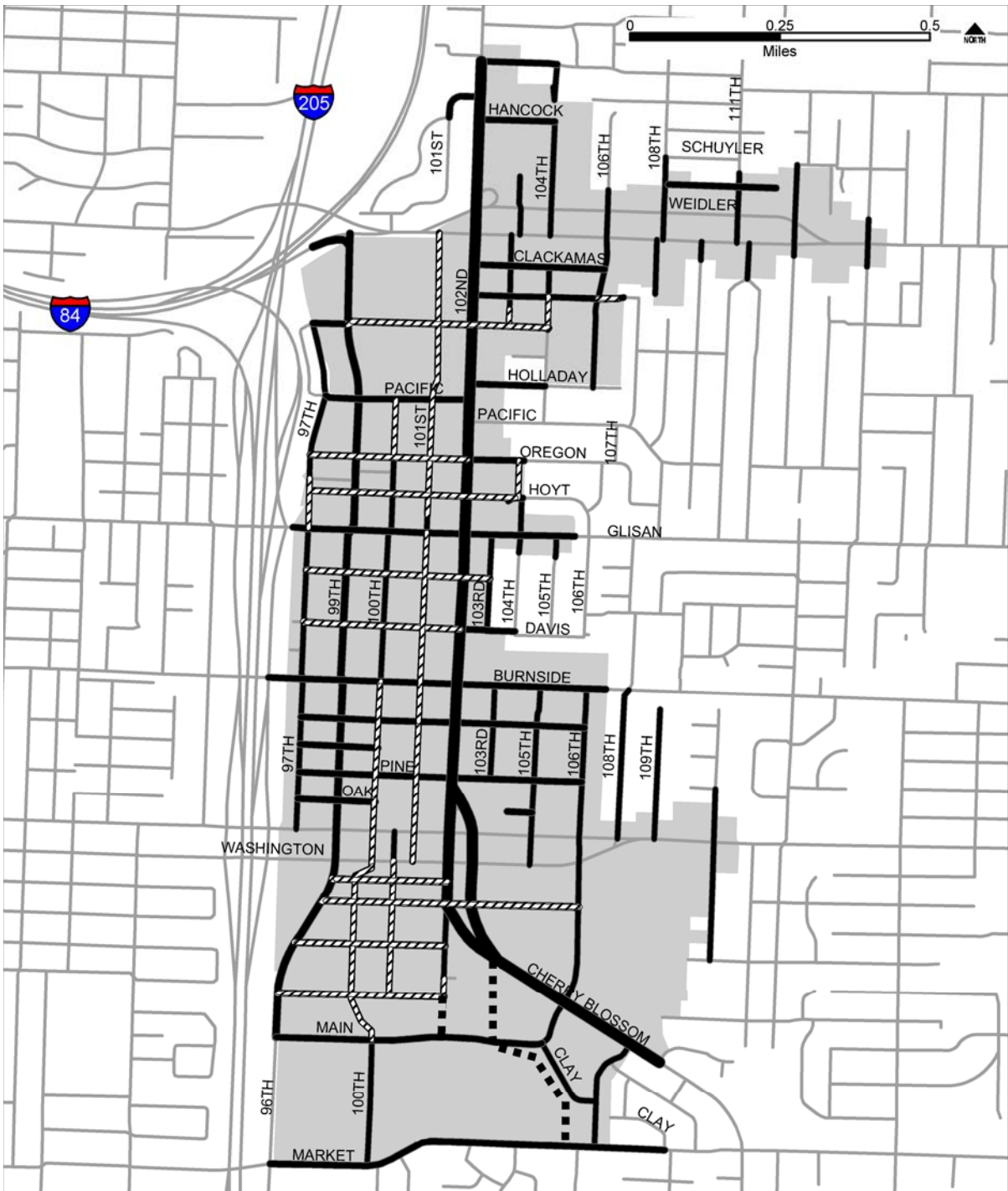
### **Concept Plan Map**

The Opportunity Gateway Concept Plan and Redevelopment Strategy is intended to serve as the 'appropriate vision' for the redevelopment of Gateway as a regional center. The concept plan map is a picture of the regional center's redevelopment potential and build-out in 2019. While the plan map affixes buildings and parks to specific locations, the reality is that new construction will appear somewhat differently. While new streets and connections are identified, they are also subject to change to respond to development opportunities. The Opportunity Gateway report states: "It is rigid enough to be a statement of what is and is not desirable in the Regional Center, and flexible enough to be useful even as redevelopment circumstances change." The map graphically depicts the vision described in the report.

The concept plan map calls for a traditional block configuration, which will help unify the regional center's character. Some of the proposed new connections would greatly change existing circulation patterns. Northeast Multnomah between Fred Meyer's and Mervyn's at the Gateway Shopping Center is shown as a fully functional street, intended to help disperse traffic associated with the transit center. In the southern part of the regional center, several new public streets are shown in the Mall 205 and Plaza 205 properties, breaking up what are now large expanses of parking. Pedestrian pathways connect important routes and destinations where full streets are not possible or appropriate, such as between SE 105<sup>th</sup> and the Adventist Medical Center.

As the major north-south arterial, 102<sup>nd</sup> Avenue is the spine of the district and is targeted for improvements for all modes. Changes to 99<sup>th</sup> Avenue would allow it to act as an additional north-south carrier, improving access for development projects and creating a new local identity the length of the district. Major east-west streets (Stark/Washington, Halsey/Weidler, Burnside, and Glisan) will continue to carry significant volumes of through-

traffic. Better local north-south street connections will link the two main large shopping areas together, and improved connectivity will be provided within each of these shopping areas.



**Portland Master Street Plan - Map 11.11.3  
Gateway District**

-  Existing Streets
-  Proposed New Streets
-  Pedestrian Connection
-  Gateway Regional Center

Effective November 12, 2004



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## **AIRPORT WAY STREET PLAN**

(Airport Way Secondary Infrastructure Plan)

### **Background**

The Columbia Corridor area historically provided a floodplain for the Columbia River. With the introduction of the levee system, some parcels were used for agricultural activities before transitioning into industrial/employment uses. City Council adopted the Columbia South Shore urban renewal area in May 1986 as a way to “expeditiously develop public infrastructure required to support land development and job creation in the South Shore.” The entire urban renewal area contains 2,850 acres of industrial land located east of NE 82<sup>nd</sup> Avenue and west of NE 185<sup>th</sup> and bounded by the Columbia River to the north and NE Sandy Boulevard to the south. The study area for the Airport Way Secondary Infrastructure Plan (SIP) includes the 900 acres located east of NE 138<sup>th</sup>. City Council passed Resolution No. 34268 in April 1987 to select a final alignment for NE Airport Way and allow funding and construction to proceed. With the completion of Airport Way (a five-lane Major City Traffic Street) in 1992, the land became accessible for development.

City Council adopted the SIP (as amended) on June 21, 1995 (Resolution No. 35405) as an administrative guide to extending public infrastructure to land located east of NE 138<sup>th</sup> Avenue, within the Columbia South Shore (Airport Way urban renewal area). The SIP is intended to create an infrastructure plan, including streets, to allow the preparation of capital budgets, establish policies and programs for financing secondary infrastructure, and respond to private development initiatives.

The Comprehensive Plan targets the Airport Way urban renewal area as a critical location for development. Policy 5.20 calls for the City to “Encourage the development of the Columbia South Shore as an industrial employment center which attracts a diversity of employment opportunities while protecting significant environmental resources and maintaining the capacity of the area infrastructure to accommodate future development.”

### **Street Connectivity**

The existing street system consists largely of three east-west oriented streets (NE Sandy Boulevard, NE Airport Way, and NE Marine Drive) and a few north-south streets (122<sup>nd</sup>, 138<sup>th</sup>, 148<sup>th</sup>, and 158<sup>th</sup>). NE Airport Way connects the Portland International Airport to NE 181<sup>st</sup> Avenue at Sandy Boulevard. Airport Way has an interchange with I-205 immediately east of the airport. Access to I-84 is through an interchange on NE 181<sup>st</sup> south of Sandy Boulevard. Several dead-end streets and/or partially improved rights-of-way are used for access to large industrial sites and undeveloped or vacant parcels of land.

The SIP proposes the creation of additional north-south streets, connecting through from NE Sandy Boulevard to NE Marine Drive. Additional streets are proposed to provide access to developable areas of land. Particularly on the eastern end of this area, large areas are designated as open space because of the presence of wetlands and sloughs. The proposed additional streets provide significantly enhanced connectivity. The connectivity is not subject to TPR or RTP street spacing requirements because virtually all of the involved land is industrial and therefore exempt from these requirements. Only a very

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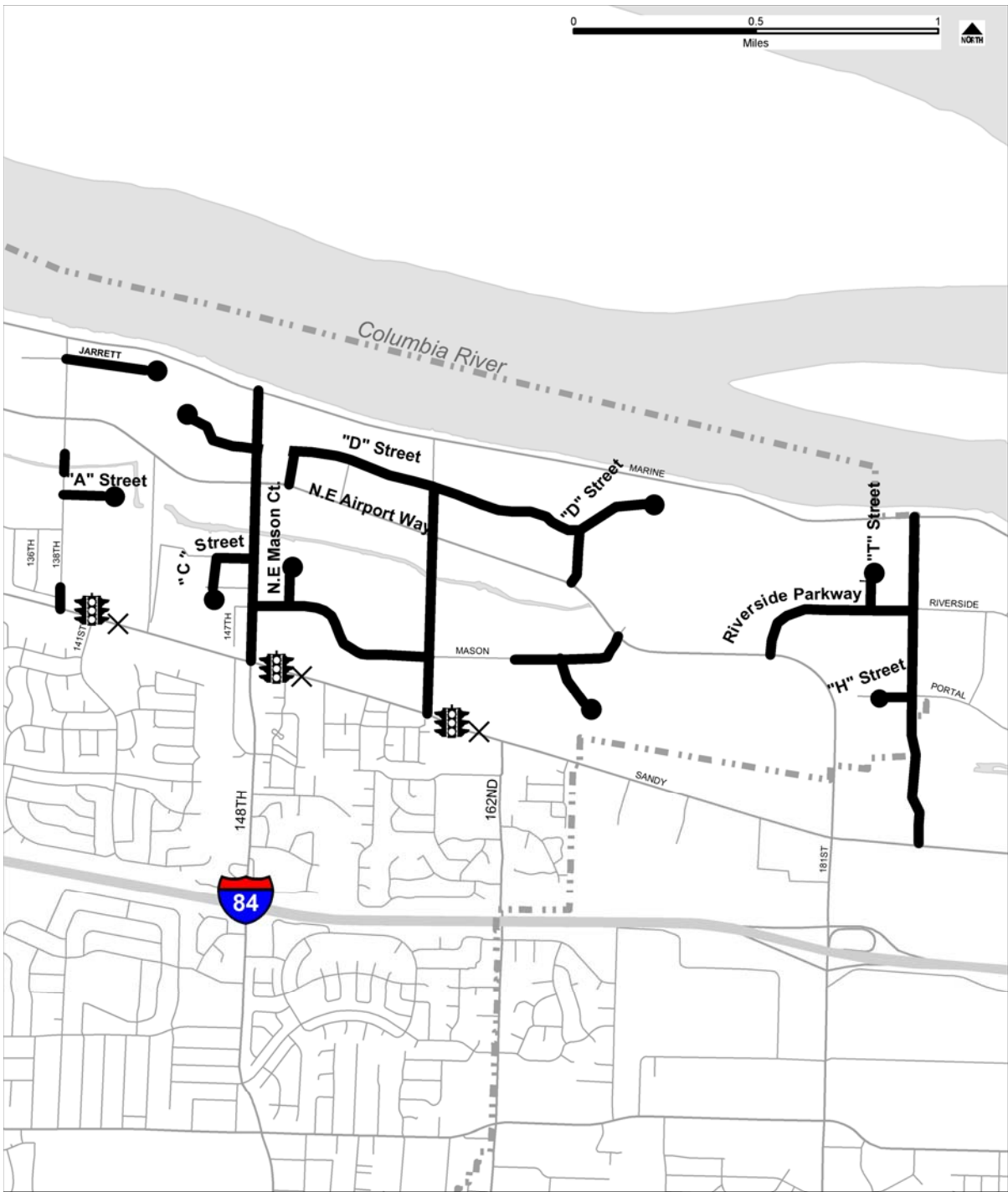
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narrow strip of land, often less than 100 feet deep, between NE Marine Drive and the Columbia River at the east and west ends of the area has residential zoning.

### **Concept Plan Map**

The SIP map shows the creation of, or improvement to, NE 138<sup>th</sup>, 148<sup>th</sup>, 162<sup>nd</sup>, and 185<sup>th</sup> to provide north-south access within this area. Improvements to a portion of NE Mason Street and the creation of NE Riverside Parkway provide additional connectivity. The proposed creation or improvement of other streets provides access only.





**Portland Master Street Plan - Map 11.11.4  
Airport Way Secondary Infrastructure**

- Existing or Proposed New Road Improvements
- City of Portland Boundary
- New Traffic Signal
- New Railroad Crossing

Effective November 12, 2004



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## RIVER DISTRICT STREET PLAN

### Background

The River District encompasses the downtown area between W Burnside, the I-405 freeway, the Fremont Bridge, and the Willamette River. City Council endorsed the River District vision in May 1992. The purpose of the vision is to guide the development of up to 5,500 new housing units, supportive commercial uses, and open space. On April 18, 1996, the Design Commission endorsed The River District Right-of-Way Framework Plans, Design Criteria, and Standards to guide the development of transportation infrastructure to support the developing district. City Council has also adopted or approved the following documents to guide development in the River District:

- River District Housing Implementation Strategy
- River District Strategic Investment Plan
- City/Developer Master Development Agreements
- River District Design Guidelines

In the mid-1800s, the part of the River District that is currently redeveloping was a marshland along the Willamette River, north of Portland. Part of the River District (west of NW 6<sup>th</sup>) is within the Pearl District Neighborhood Association boundaries. According to the Pearl District Development Plan (2001), the marsh was:

...filled to create more land for expanding railroad yards and associated warehousing, by the early 1900s the area had become the transportation hub of the city, and extensively developed with transit, storage and drayage uses. Manufacturing and ancillary uses proliferated as well. The area prospered as an industrial and warehouse district through the first half of the 20<sup>th</sup> century.

Starting in the 1950s, the area reflected the dynamics affecting central urban areas nationwide. . . . The primary users relocated, leaving the District increasingly vacant and marginalized.

In the early 1980s, the Pearl District became the focus of planning efforts to convert under-utilized warehouses and abandoned rail yards into a mixed-use neighborhood. . . . An emerging part of the Pearl was centered on redevelopment of the former Hoyt Street rail yards, in turn offering different choices and a new environment for the District.

### Street Connectivity

The location, design, and use of the internal street system provides the foundation on which the new neighborhood will develop. Generally, the district is made up of Portland's standard 200-foot grid. However, large areas were previously devoted to rail facilities, including switching areas. While many of the railroad tracks have been removed, the district is still home to Union Station and tracks that are generally parallel to, but sometimes separated from, Naito Parkway. The tracks create a barrier that separates the majority of the district from development on both sides of Naito Parkway. New street and pedestrian connections

are important to breach this barrier. In some cases, elevated pedestrian/bicycle connections are necessary to avoid conflicts with train operations.

The district is also home to the City's main post office. Located between NW Hoyt and Lovejoy and NW Broadway and 9<sup>th</sup>, this large land use also creates a significant barrier to circulation, particularly pedestrian circulation. If the post office were to leave the district, new streets would be needed through the site, consistent with the River District vision.

The Portland streetcar travels on NW 10<sup>th</sup> and 11<sup>th</sup> before heading west on NW Northrup and after heading east on NW Lovejoy. The 1995 CCTMP anticipated the streetcar alignment and classified these streets as Transit Access Streets, which are now an important transportation facility in the TSP. (Chapter 2: Transportation Element, of the TSP describes street classifications). The plan for new streets and accessways in the River District responds to this major transportation investment.

As land is developed or redeveloped in the River District, streets and access corridors are created through the land division process. Access corridors are landscaped pedestrian walkways through large parcels that approximate the original 200-foot block pattern. The access corridors may be for pedestrians only or may be shared facilities that accommodate pedestrians and vehicles. Public access easements ensure public access.

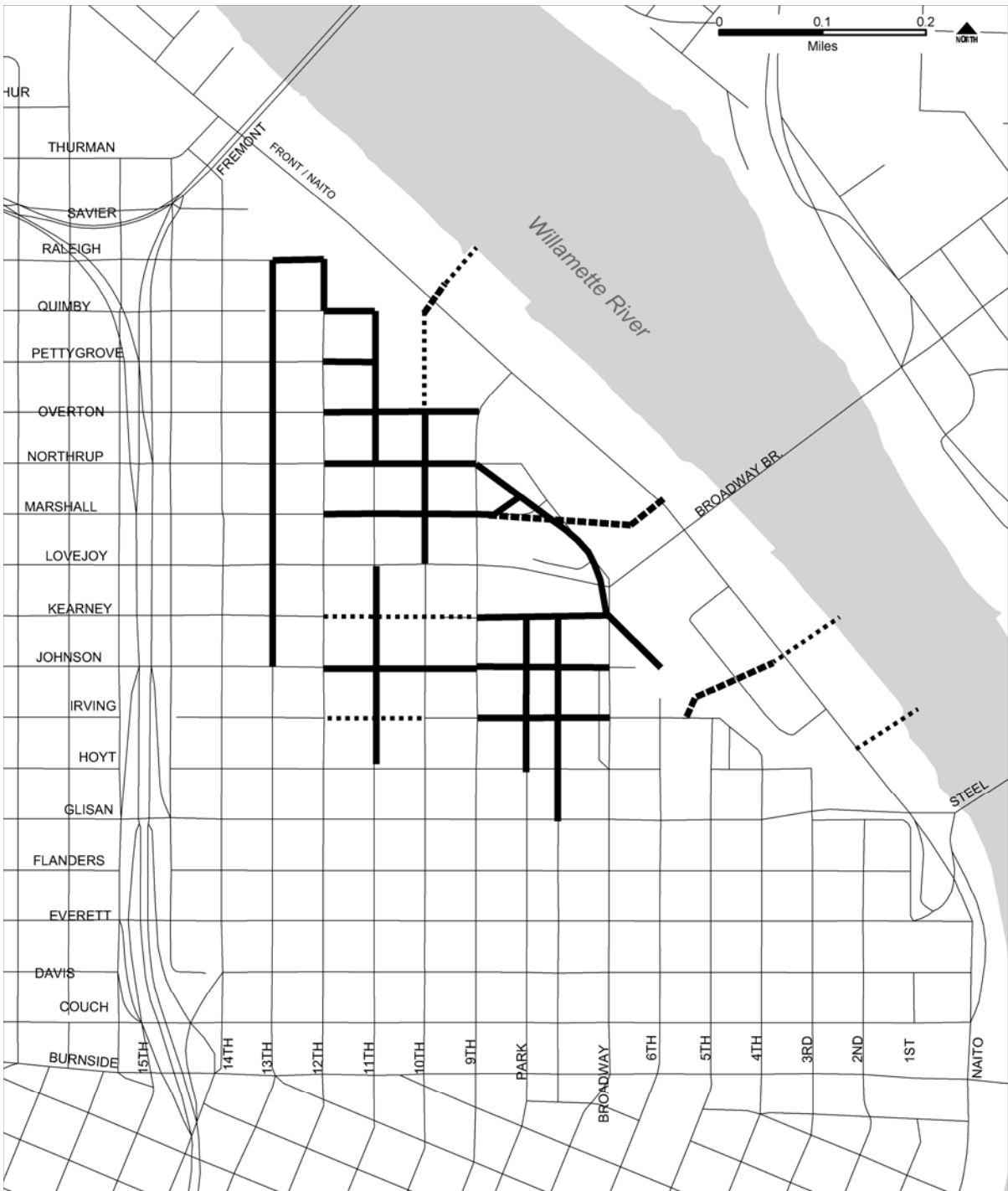
## Concept Plan Map

The Concept Plan map for the River District reflects a number of sources that provide the structure for the River District Street Plan:

- River District Development Plan (approved by City Council May 1992)
- Hoyt Street Yards Master Plan and development agreements with the City of Portland (land use action LUR 93-00279 SU and subsequent amendments)
- The River District Right-of-Way - Framework Plans, Design Criteria, Design Standards (endorsed by the Portland Design Commission April 1996)
- Pearl District Development Plan (approved by City Council October 2001)

The Concept Plan map shows new streets, pedestrianways (access corridors), and pedestrian bridges. The streets and pedestrianways will be built in conjunction with development and redevelopment of sites. The design and function of the streets will be consistent with the TSP classifications and applicable framework plans, design criteria, and design standards in The River District Right-of-Way document.

One pedestrian bridge, connecting NW Irving to new development northeast of the remaining railroad tracks, has been built consistent with the Concept Plan map. One other pedestrian bridge is envisioned, connecting the eastern end of NW Marshall to new development north of the Broadway Bridge. A continuation of the boardwalk being developed on the eastern side of three new parks between NW 10<sup>th</sup> and 11<sup>th</sup> would cross Naito Parkway to the Centennial Mill and the Willamette Greenway and connect to the Willamette Greenway.



**Portland Master Street Plan - Map 11.11.5  
River District**

- New Street
- .....** Pedestrian Ways
- Pedestrian Bridge

Effective November 12, 2004



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## **SOUTHWEST PORTLAND MASTER STREET PLAN**

### **Study Area**

The Southwest Portland Master Street Plan generally includes all of southwest Portland, from the Willamette River west to the City limits, and from US 26 south to the City limits. The following portions of the area are excluded from the study because a street plan already exists or will be completed as part of a TSP refinement plan:

- Central City (refinement plan)
- Marquam Hill (study underway)
- North Macadam (preliminary plan complete; further study underway)
- Hillsdale (refinement plan)
- West Portland town center and Barbur/I-5 corridor (refinement plan)

### ***Land Use***

Southwest Portland is dominated by residential use, with interspersed commercial/retail uses. Commercial/retail uses are found almost exclusively in two situations: in strip commercial activity along major arterials such as Beaverton-Hillsdale Highway and Barbur Boulevard, or in long-standing 'village' or town center locations such as Multnomah Village and Hillsdale. Several large institutions also occupy significant tracts of land, including Oregon Health Sciences University, Lewis and Clark College, Portland Community College-Sylvania, cemeteries such as Riverview Cemetery, and parks such as Marquam Nature Park, Council Crest Park, Gabriel Park, and Tryon Creek State Park. The Southwest District has virtually no industrial uses.

### ***Zoning***

The Southwest Portland Master Street Plan area includes almost all City commercial zones, except some designed specifically for the Central City. The area includes nearly all the residential zones, excluding only the densest zones. There is no industrial zoning apart from a few parcels zoned for employment. Open space zoning is applied to the numerous parks, open spaces, and cemeteries. Environmental overlays are applied to areas with steep slopes, streams, wetlands, and other identified natural resources.

### ***Area Character***

Topography largely establishes the area's character. Steep slopes and numerous streams and gullies are dispersed throughout the area. Portland's highest points, Council Crest, Healy Heights, and the Sylvan area, topped by radio towers, define the northern boundary. The Willamette River defines the eastern boundary. On the west and south, Portland joins adjacent jurisdictions with a less dense development pattern.

Development is fairly consistently suburban, dominated by single-dwelling homes on medium to large lots. A significant number of multi-dwelling uses are located in the eastern part of the district and along major arterials. Traditional village centers are transitioning to a more urban character, including more multi-dwelling uses, sidewalks, and taller buildings. Terrain and drainage features have contributed to a street system with less connectivity and more out-of-direction travel than most City residents typically encounter. Only a few

arterials (such as Capitol, Barbur Boulevard, Macadam Avenue, and Beaverton-Hillsdale Highways) and the historic ferry roads –(Boones, Scholls and Taylors) radiate from the center of town. Many of the area’s local service streets and collectors are not fully improved. A lack of sidewalks and useable shoulders contributes to a street system that is not particularly pedestrian friendly.

### ***2040 Focus Areas***

The regional 2040 Growth Concept identifies a number of design types in Southwest Portland: the Hillsdale and West Portland town centers; the eastern portion of the Raleigh Hills town center; and the main street segments on SW Macadam, in Multnomah Village, and at the Garden Home/Oleson Road intersection. The Southwest Community Plan established boundaries for all of these 2040 areas except the West Portland and Raleigh Hills town centers.

### **Issues and Constraints**

The Southwest District continues to need a connected street system, including bicycle/pedestrian accessways, but is limited by barriers such as terrain, streams, environmental resources, and existing development. With expected increases in the number of households and dwelling units in the area, completion of the local street system will be necessary to provide access to the anticipated areas of new development and from those areas to neighborhood activity areas, transit, and arterials.





**Portland Master Street Plan - Map 11.11.6  
Southwest District**

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|--|--|
| <ul style="list-style-type: none"> <li>»»»»» Pedestrian/Bicycle Connection Points &amp; Alignment Uncertain</li> <li>»»»»» Street Connection Points &amp; Alignment Uncertain</li> <li>— — — Pedestrian/Bicycle Connection Points &amp; Alignment Certain</li> <li>— — — Street Connection Points &amp; Alignment Certain</li> <li>♦ Pedestrian/Bicycle Connection Points Certain &amp; Alignment Uncertain</li> <li>♦ Street Connection Points Certain &amp; Alignment Uncertain</li> <li>- - - Existing Pedestrian Trails</li> </ul> | <ul style="list-style-type: none"> <li>Meets Street Spacing Standard</li> <li>City of Portland Boundary</li> <li>Transportation District Boundary</li> <li>Unincorporated Areas within the Portland Urban Services Boundary</li> </ul> |
|--|--|

Note: I-5/Barbur Corridor and Marquam Hill are excluded. Effective November 12, 2004



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## **FAR SOUTHEAST PORTLAND MASTER STREET PLAN**

### **Study Area**

The Far Southeast Portland Master Street Plan includes nearly all of the Far Southeast Transportation District, from I-205 east to the City limit, and from Burnside south to the City limits. Some portions of this area are excluded from the plan: the Gateway regional center because a street plan already exists, and Burnside light rail station areas (102<sup>nd</sup> to 162<sup>nd</sup>, NE Glisan to SE Stark), where master street plans will be completed as part of TSP refinement plans.

### ***Land Use***

The Far Southeast is predominantly in residential use, with interspersed commercial/retail uses. Commercial/retail uses are located in strip commercial development along arterials such as 122<sup>nd</sup> and Division or in malls such as Mall 205 or the San Rafael Shopping Center. Institutions, such as colleges, hospitals, and schools, can create barriers, but offer limited opportunities for street connections. Cemeteries and parks also occupy significant tracts of land in the district. There are only a few pockets of industrial uses, principally near the Lents town center.

### ***Zoning***

The Far Southeast Master Street Plan Study area includes virtually all of the various City commercial zones, except some designed specifically for the Central City. The area includes nearly all the residential zones, excluding only the most dense zones. The employment and industrial zoning currently in place is confined primarily to the southern edge of the district. Significant tracts of open space zoning exist, with Powell Butte the largest. Environmental overlays are applied to areas with steep slopes and near streams and wetland areas, principally in the southeast portion of the district.

### ***Area Character***

Terrain and the density of development largely determine the area's character. Some less developed areas display a rural appearance, with open fields and large out-buildings. The majority of the district has a more suburban appearance, with large tracts of single-dwelling homes on medium to large lots. Some areas display a more urban character, with smaller lots and buildings closer to the street. Steep slopes with numerous streams and gullies are located in the southern portion of the area, along Johnson Creek and in Pleasant Valley.

Long-term county stewardship, along with recent population growth, has resulted in relatively few public streets in some areas, and large redevelopable parcels of land. Many of the area's local service streets and collectors are not fully improved. The lack of sidewalks results in a street system that is not particularly pedestrian friendly. The lack of public streets contributes significantly to out-of-direction travel patterns, and very wide major arterials carry many local trips as well as through-trips.

### ***2040 Focus Areas***

The regional 2040 Growth Concept identifies a number of design types in Far Southeast Portland: the Gateway regional center (including two light rail stations); the Lents town center; the light rail station communities at 122<sup>nd</sup>, 148<sup>th</sup>, and 162<sup>nd</sup>; and main street segments on Division and 122<sup>nd</sup>. The master street plan developed for Gateway through the Opportunity Gateway process is described later in this chapter. The vast majority of the area in the Lents town center east of I-205 meets connectivity standards or is in industrial zoning. A master street plan for the light rail corridor will be the subject of a refinement plan for the TSP. The main street areas are included in the Far Southeast District Master Street Plan.

### **Issues and Constraints**

Barriers (such as terrain, streams, and existing development) will continue to limit a connected street system, including bicycle/pedestrian accessways, in Far Southeast Portland. With expected increases in the number of households and dwelling units in the area, however, completion of the local street system will be needed even more to provide multimodal access to areas of new development and from those areas to neighborhood activity centers, transit, and arterials.



**Portland Master Street Plan - Map 11.11.7  
Far Southeast District**

- Pedestrian/Bicycle Connection Points & Alignment Uncertain
  - Street Connection Points & Alignment Uncertain
  - Pedestrian/Bicycle Connection Points & Alignment Certain
  - Street Connection Points & Alignment Certain
  - ◇ Pedestrian/Bicycle Connection Points Certain & Alignment Uncertain
  - ◇ Street Connection Points Certain & Alignment Uncertain
  - Existing Pedestrian Trails
- Meets Street Spacing Standard
  - City of Portland Boundary
  - /// Transportation District Boundary
  - /// Unincorporated Areas within the Portland Urban Services Boundary

Note: Gateway Regional Center and Light Rail Corridor are excluded. Effective November 12, 2004



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## **SOUTH PORTLAND CIRCULATION STUDY**

### **Background**

The South Portland Circulation Study encompasses the area at the west end of the Ross Island Bridge. A 1943 ODOT project for Harbor Drive included widening Front Avenue (now Naito Parkway) through south Portland. Later transportation changes in 1950 and 1970 enhanced connections between the Ross Island Bridge and Naito Parkway, further dividing the Corbett-Terwilliger-Lair Hill neighborhood and routing regional traffic into an established urban neighborhood. In the mid-1970s, the Portland Bureau of Planning undertook a study of south Portland and its traffic conditions. City Council did not approve the plan, which recommended closing Front Avenue. However, the Council indicated that it would reconsider the plan, pending improvements to the interchange of I-5 and Terwilliger. The improvements to I-5/Terwilliger were completed in 1992.

City Council adopted the South Portland Circulation Study (SPCS) on August 1, 2001 (Resolution No. 36014). The SPCS recognizes that this area needs improved local access, circulation, safety, and livability. Piecemeal regional transportation improvements over the years have resulted in poor connectivity between the regional transportation elements and within the neighborhood. The SPCS calls for restoring much of the historic street pattern of the neighborhood, while continuing to provide transportation access to the downtown and Lloyd Center areas. It addresses the needs of the Corbett and Lair Hill neighborhood area and access between the Ross Island Bridge and SW Naito Parkway.

### **Street Connectivity**

The existing street system consists of the remnants of a traditional Portland 200-foot block pattern, with some modifications to accommodate topography, as well as more recent regional transportation system elements that have severely limited east-west access opportunities. SW Naito Parkway most notably affects east-west access within the neighborhood. The disconnection of SW Naito Parkway to a limited access arterial pattern creates an artificial barrier to local neighborhood trips between two halves of what had been one neighborhood. This barrier has also made non-local trips in and out of the neighborhood more difficult. Significant out-of-direction travel has been created for both vehicles and pedestrian/bicycle movement.

The SPCS proposes restoring several of the historic east-west connections across SW Naito, recreating most of the historic neighborhood connectivity. The existing connections to the Ross Island Bridge, in the middle of the neighborhood, are shifted to the north, lessening the regional traffic impacts on the neighborhood and making the connection to downtown and other regional routes more efficient. Eight local street reconnections will provide compliance with RTP and TPR requirements by providing typical street connections at intervals of approximately 200 feet. However, the I-5 freeway continues to present a significant barrier to local trips and connectivity from this neighborhood to the North Macadam District within the SPCS area.

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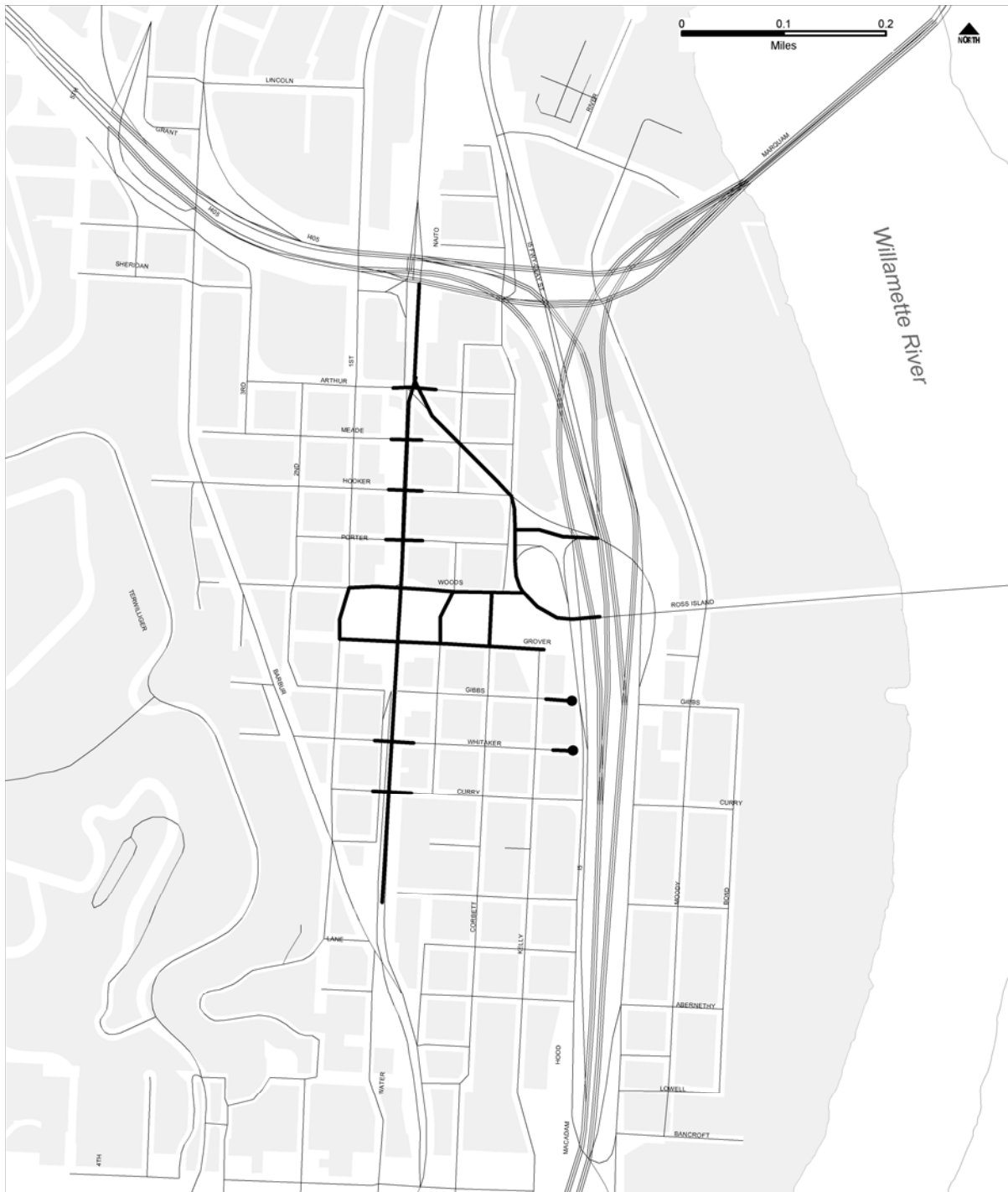
## Concept Plan Map

The SPCS map provides for significant reconnection of a typical Portland 200-foot block pattern and reestablishes convenient east-west movement. The new connections will be designated Local Service Streets, providing local circulation for all modes of travel. Additionally, non-local and other longer trips are accommodated by reconnecting the neighborhood to SW Naito Parkway, which the TSP designates as a Neighborhood Collector Traffic Street.

Southwest Curry, Whitaker, Grover, Woods, Porter, Hooker, Meade, and Arthur Streets are reconnected to and across SW Naito Parkway, providing multimodal access within the neighborhood. SW Naito Parkway provides non-local trip access to the Ross Island Bridge (I-26) east, at SW Arthur Street; to SW Barbur Boulevard (which in turn provides access south and west); and to I-405 and the south downtown streets to the north (which in turn provide access to I-26, I-5 and I-84).

The North Macadam Framework Plan (discussed in the North Macadam section of this chapter) identifies several new pedestrian connections reaching over I-5 to the Corbett-Terwilliger-Lair Hill neighborhood. Potential alignments for these connections are along the Ross Island Bridge, Gibbs Street, and Gaines Street corridors. An extension of Arthur Boulevard from NW Naito Parkway to River Parkway, with an underpass at I-5, could provide vehicular and pedestrian access. The South Portland concept plan map includes the connections over I-5 at Gaines and Gibbs.





**Portland Master Street Plan - Map 11.11.8  
South Portland District**

- Proposed New Streets or Existing Street Improvements
- Discontinued Connection

Effective November 12, 2004



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## **NORTH MACADAM DISTRICT STREET PLAN**

### **Background**

The North Macadam District boundaries are the Willamette River, I-5, the Marquam Bridge, and SW Hamilton Court. The district comprises approximately 128 acres, most of which is a largely undeveloped area that needs significant transportation improvements as it develops into a mixed-use neighborhood. As part of the Central City, the North Macadam District is included in the Central City Transportation Management Plan (CCTMP), adopted by City Council on December 6, 1996 (Ordinance No. 169535).

The North Macadam District was historically an industrial area, with large areas devoted to ship and barge building, warehousing, and manufacturing. Most of these uses are now gone. The North Macadam Urban Renewal Plan, adopted by City Council on August 11, 1999 (Ordinance No. 173651), furthers and encourages redevelopment of the area.

City Council accepted the North Macadam Street Plan on November 13, 1996 as part of the City Engineer's report and recommendations on streets in the district. The plan is intended to "assure an urban form emerges in the North Macadam District that supports high-density development and increases the access and mobility opportunities for pedestrians, transit patrons and bicyclists."

### **Street Connectivity**

The existing street system is a remnant of an industrial road and access network that connected various uses and functions within large areas of industrial development, with no defined circulation system. Much of the area lacks streets; where streets do exist, the network is fragmented and incomplete. The development of the I-5 freeway in the early 1960s further isolated the area, and limited road access opportunities occurred only on the north and south ends of the district.

Additions to the existing street grid system will significantly improve connectivity and distribution for internal auto trips and auto trips either beginning or ending in North Macadam. New pedestrian facilities--including sidewalks, new pedestrian/bicycle accessways to the Willamette Greenway, and at least one new pedestrian and bicycle bridge across I-5 will greatly enhance local circulation and access. These pedestrian and bicycle improvements will also improve access to transit service and increase mode split for alternatives to the automobile.

### **Concept Plan Map**

The North Macadam District Street Plan map provides a balanced transportation system that uses three primary multimodal streets for north and south travel and extends the existing grid from the west, eastward to the Willamette River. Each street serves a specific function and provides choices for pedestrian, bike, and transit mobility and access throughout the district. The plan also provides opportunities for even traffic distribution within the district, using integrated traffic control techniques such as narrow travel lanes, curb extensions, traffic circles with public art, and rotaries to avoid shortcuts and through-traffic on local streets.

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Southwest Bancroft, Gibbs, Sheridan, and Moody provide multimodal access into the district. Southwest Bond and Moody (realigned to meet Bond) provide the major north-south auto and transit access through and within the district. Southwest River Parkway provides pedestrian-oriented north-south access within the district, from SW Lowell to SW Moody, via SW Sheridan. In the southern half of the district, SW Moody continues to serve local north-south auto access, from SW Gibbs and back to SW Macadam, south of Bancroft.

East-west streets north of the Ross Island Bridge extend between SW Moody and SW River Parkway, providing local access. South of the Ross Island Bridge, SW Gibbs, Curry, and Gaines extend between SW Macadam and River Parkway, providing local access and access to SW Macadam for non-local trips. Southwest Abernethy also connects with SW Macadam. The east-west streets are extended east from SW River Parkway via pedestrian and bicycle accessways to the Willamette Greenway, providing additional local access and access to the Greenway Trail.

Planning for North Macadam continues, including a revised street concept map.

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## **Transportation System Plan for the Urban Pockets of Unincorporated Multnomah County**

### ***Background***

In January 2002, the Multnomah County Board of Commissioners adopted the City of Portland's comprehensive plan, zoning code, and zoning maps for the urban unincorporated areas, and transferred responsibility for development review for land use in these areas to the City. The Transportation System Plan for the Urban Pockets of Unincorporated Multnomah County (TSP for the Pockets) was developed by the Portland Office of Transportation (PDOT) and Multnomah County through a Transportation and Growth Management grant.

This plan resolves a development review coordination issue between Multnomah County and the City of Portland. The TSP for the Pockets will allow development to proceed in an orderly way by addressing:

- Inadequacy of transportation infrastructure
- Circulation and connectivity
- Pedestrian and bicycle travel
- Transit service
- Traffic impacts

The unincorporated pockets are located within Portland's Urban Services Boundary adjacent to the Northwest, Southwest and Far Southeast transportation districts identified in the City's Transportation System Plan (TSP).

The plan also addresses City Council directives related to the Pleasant Valley planning process. The Pleasant Valley Plan District was adopted by City Council on December 15, 2004 (Ordinance No. 178961). The adopting ordinance directed the Portland Office of transportation to incorporate policy language, maps, and projects into its (TSP).

### ***Project Objectives***

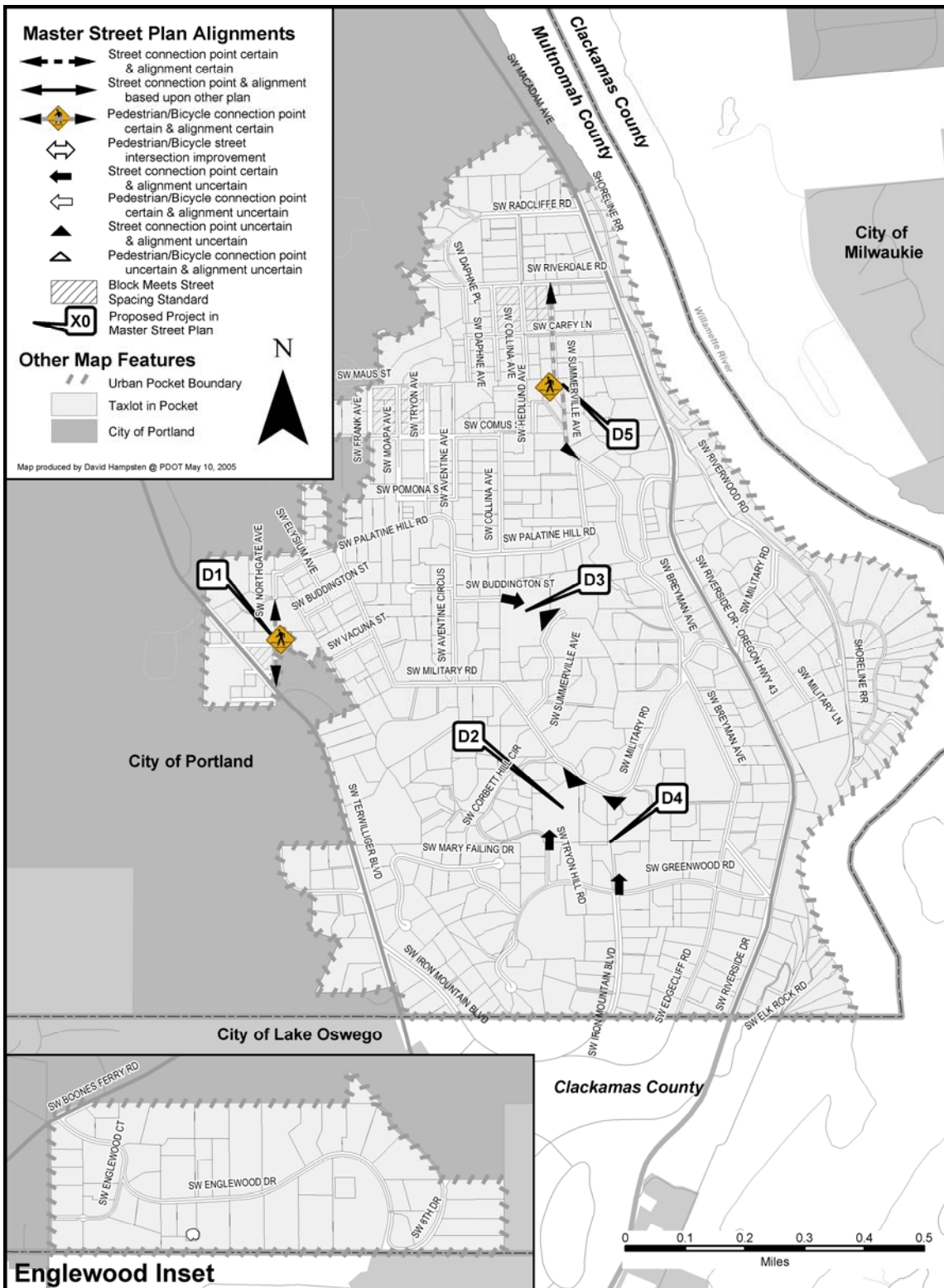
The purpose of the TSP for the Pockets is to establish a set of street classification maps that align Multnomah County classifications to City classification designations.

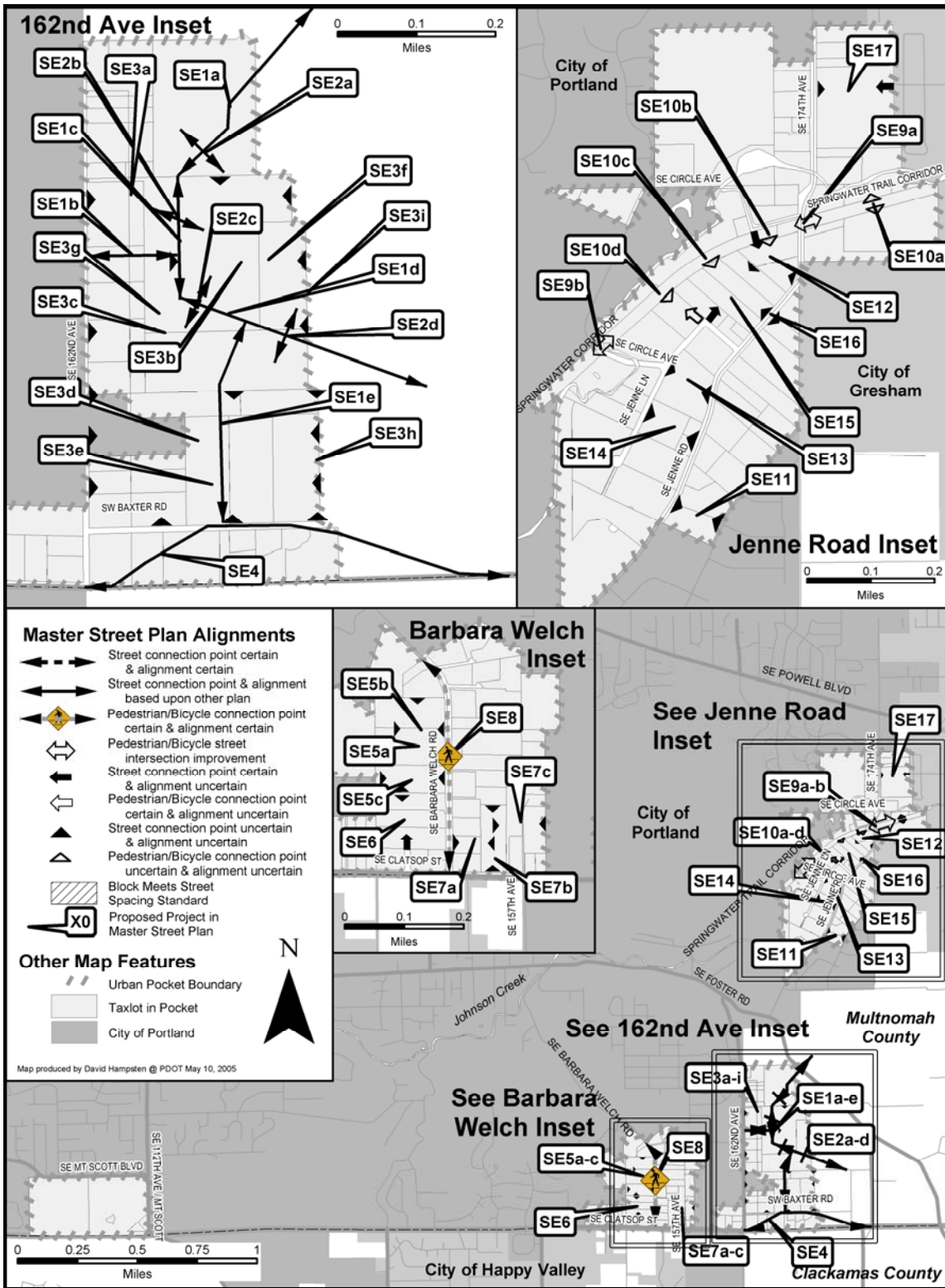
The projects resolves the differences in policy definitions, provides smooth transitions between County and City classifications and standards and eliminates gaps in the classification of the street network.

The project included development of master street plans for these pockets to identify key street connections and pedestrian/bicycle accessways to meet connectivity standards. The master street plans will provide safe, convenient, and reasonably direct routes for all modes and identify transportation infrastructure needs for the pockets and nearby areas.

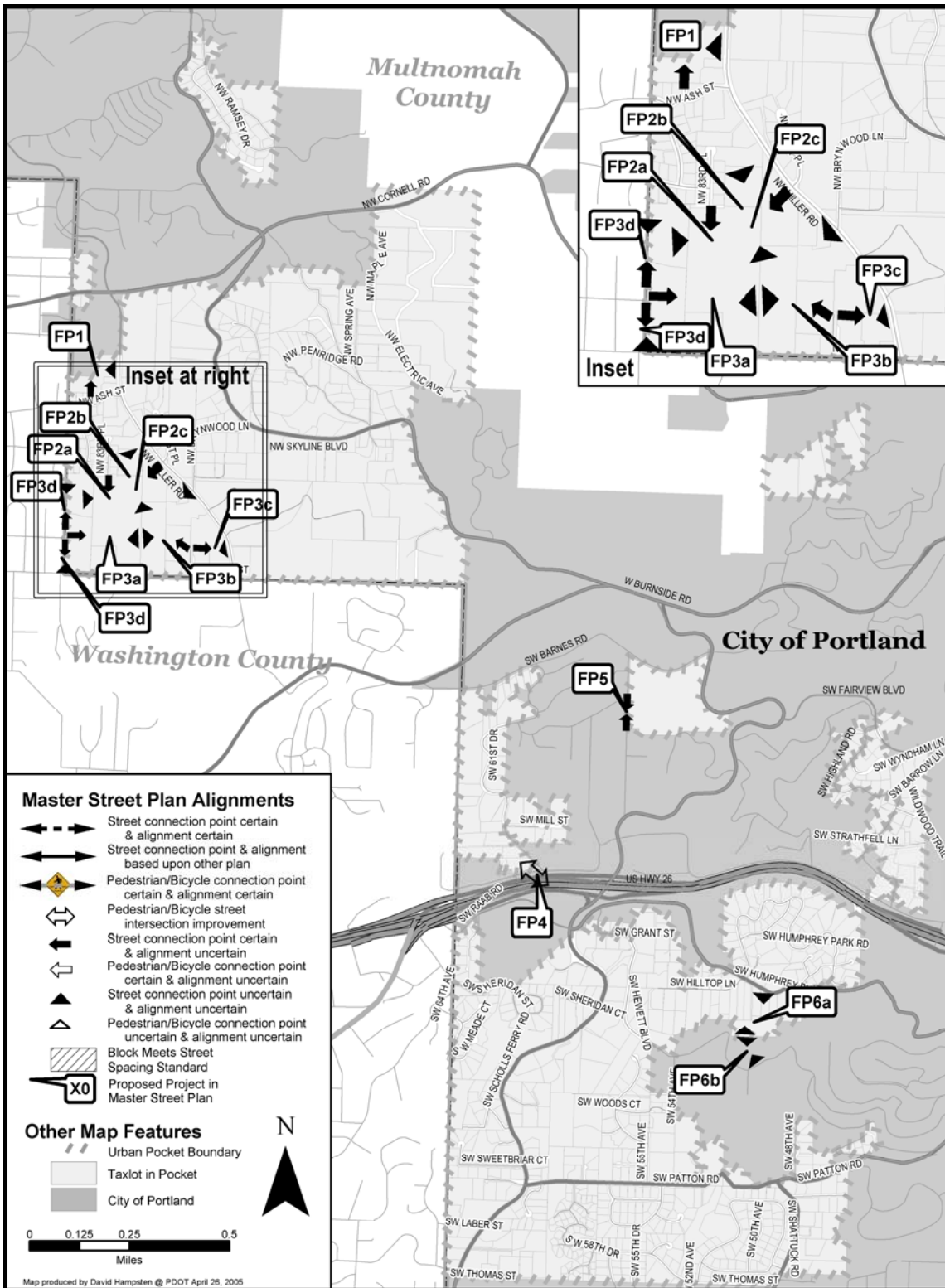
**Master Street Plan Connections**

Seg ID	Street Name	From	To	Street Classification	Alignment Status	Slope	Notes
<b>Dunthorpe</b>							
D1	SW Northgate	SW Palatine Hill Rd	SW Terwilliger Blvd	Ped/Bike	Certain	13%	Pedestrian easement
D2		SW Tyron Hill Rd	SW Military Rd	Local Street	Uncertain	3%	Street connection
D3		SW Buddington St	SW Summerville Ave	Local Street	Uncertain	5%	Street connection
D4		SW Military Rd	SW Iron Mountain Blvd	Local Street	Uncertain	2%	Street connection
D5	SW Summerville	SW Riverdale Rd	SW Palatine Hill Rd	Ped only	Certain	12%	Ped facility along Summerville R.O.W., with stairs, max slope 22%
<b>Far Southeast</b>							
SE1a-g		SE 162nd Ave	SE 170th Ave	Collector	Uncertain	3%	Pleasant Valley Concept Plan
SE2a-d		SE 162nd Ave	SE 170th Ave	Local Street	Uncertain	4%	Pleasant Valley Concept Plan
SE3a-h		SE 162nd Ave	SE 170th Ave	Collector or Local Street	Uncertain	3%	Portland style blocks & grid alternative to PVCP
SE4		SE 162nd Ave	SE 168th Ave	Collector	Uncertain	2%	Pleasant Valley Concept Plan - future bridge approach
SE5a-c		700' N of SE Clatsop St	1500' N of SE Clatsop St	Local Street	Uncertain	9%	Grid in focus area; 15% at steepest
SE6		SE Clatsop St	700' N of SE Clatsop St	Local Street	Uncertain	4%	Connects FSE5a to existing ROW
SE7a-c		SE Clatsop St	SE Barbara Welch	Local Street	Uncertain	6%	Loose grid connecting properties
SE8	SE Barbara Welch	Along SE Barbara Welch		Ped/Bike	Certain	5%	Bike/Ped safety improvements along roadway. Environmental impacts to be mitigated.
SE9a-b	Springwater Trail	SE Jenne/174th Ave & SE Circle Ave	Springwater Trail	Ped/Bike	Certain	none	Street crossing safety improvements
SE10 a-d		Along Springwater Trail		Ped/Bike	Uncertain	none	Require bike/ped connections to adjacent properties
SE11		SE Bears paw St	SE Jenne Rd	Local Street	Uncertain	13%	Street connection
SE12		SE Jenne Rd	SE Circle Ave	Local Street	Uncertain	3%	Street connection
SE13		SE Jenne Rd	SE Circle Ave	Local Street	Uncertain	4%	Street connection
SE14		SE Jenne Rd	SE Circle Ave	Local Street	Uncertain	7%	Street connection
SE15		SE Jenne Rd	SE Circle Ave	Local Street	Uncertain	2%	Street connection
SE16		SE Jenne Rd		Local Street	Uncertain	3%	Street connection
SE17		SE 174th Ave	SW 11th St (Gresham)	Local Street	Uncertain	1%	Coordinate with 174th/Jenne rebuild
<b>Forest Park/SW Hills</b>							
FP1		NW 84th Pl	NW Miller Rd	Local Street	Uncertain	5%	Street connection
FP2a		NW 83rd Pl	NW Miller Rd	Local Street	Uncertain	7%	Street connection
FP2b-c		NW 83rd Pl	NW Miller Rd	Local Street	Uncertain	9%	Street connection
FP3a		NW 85th Ave	NW 82nd Ave	Local Street	Uncertain	5%	Street connection
FP3b		NW 82nd Ave	NW Tuality Way	Local Street	Uncertain	6%	Street connection
FP3c		NW Tuality Way	NW Miller Rd	Local Street	Uncertain	7%	Street connection
FP3d		NW 85th Ave	NW Stark St	Local Street	Uncertain	5%	Street connection
FP4	SW 61st Ave	SW 61st Ave	at Sunset Hwy	Ped/Bike	Certain	0%	Bike/Ped connection, ramp to bikepath
FP5	SW 57th Ave	SW Salmon St	SW Main St	Local Street	Certain	10%	Roadway would use existing ROW
FP6a		SW Humphrey Blvd	S end of pocket	Local Street	Uncertain	8%	Street connection
FP6b		SW Hewett Blvd	N end of pocket	Local Street	Uncertain	11%	Connects 6a to SW Hewitt in Portland











## INTRODUCTION

Over the course of the Transportation System Plan (TSP) development, the City of Portland also conducted a number of area studies that inform the TSP's content. These planning studies focus on key areas that will accommodate employment and housing growth, as identified in the Region 2040 Growth Concept. Each study identifies issues that affect the area's ability to meet its intended 2040 design types. The studies also identify implementation strategies, including transportation improvements and, in some cases, changes to land use regulations. The studies' recommended changes to the transportation system are incorporated into the TSP.

This chapter summarizes the approach and findings of the following area studies:

- Burnside Transportation and Urban Design Plan
- Central Eastside Development Opportunity Strategy
- Columbia Transportation Corridor Study
- Division Green Street/Main Street
- Eastside Streetcar Alignment Study
- Eastside Transit Alternative Analysis
- Foster Road Transportation and Streetscape Plan
- Freight Master Plan
- Hollywood and Sandy Plan
- I-5 Transportation and Trade Partnership
- Killingsworth Improvements Planning Project
- Lents Town Center Business District Transportation Plan
- North Macadam District Planning
- Northwest District Plan
- Opportunity Gateway Concept Plan
- Pleasant Valley Plan District

- **Portland Aerial Tram Study**
- **Powell/Foster Corridor Transportation Plan**
- **Red Electric Trail Planning Study**
- **Russell Street Improvements Planning Project**
- **St. Johns/Lombard Plan**
- **St. Johns Truck Strategy**
- **South Portland Circulation Study**
- **Swan Island Trails Action Plan**
- **Tacoma Main Street Plan**
- **Transportation System Plan for the Urban Pockets of Unincorporated Multnomah County**
- **West Portland Town Center Transportation Plan**
- **2004 South/North Land Use Final Order Amendment**
- **2040 Centers Transportation Strategies and Mode Split Targets Project**

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## **BURNSIDE TRANSPORTATION AND URBAN DESIGN PLAN**

### **Introduction**

For over a century, Burnside Street has played an important role in Portland's transportation system. As the major east-west route through the City, it touches the Northwest, Pearl, and Downtown districts, the Old Town-China Town, Goose Hollow, Kerns and Buckman neighborhoods, the Central Eastside District, and provides access for residents, employees and visitors to the downtown. The plan provides a vision for Burnside that integrates it more fully into downtown Portland and creates a street that connects, instead of divides the districts and neighborhoods to the north and south on both sides of the river. The plan was adopted by City Council Resolution (No. 36114) on December 11, 2002.

### ***Study Location***

The project study area includes Burnside Street from W 24<sup>th</sup> Avenue on the west side to NW 15<sup>th</sup> and NE Sandy Boulevard on the east side. It also reaches one half-block north of Couch Street and one block south of Ankeny Street on both sides of the Willamette River.

### ***Purpose***

Much of the street and sidewalks on Burnside are failing or are in poor condition and need reconstruction or repair. Before undertaking major maintenance and construction expenditures, a plan was needed to address the future role of Burnside and how it could continue to serve its many functions, including as a major thoroughfare carrying heavy traffic through downtown and across the river. In addition, Burnside's narrow sidewalks make it uncomfortable for pedestrians, difficult to cross because of the heavy traffic, and a barrier between neighborhoods. The prohibitions on left turns in many locations limits access to downtown Central City.

The planning process included a number of steps including a pre-planning phase to identify issues and needs and to determine the scope of the project. Subsequent steps include an inventory and analysis phase, developing and evaluating conceptual options, developing a draft concept plan, and adoption.

### **Recommendations**

Based on more than two years of work, the Burnside Transportation and Urban Design Plan's recommendations respond to the diverse needs of the Central City and its surrounding neighborhoods. The plan identifies catalyst development opportunities, functional and aesthetic improvements to the right-of-way, and establishes a blueprint for public and private investment.

The plan features seven catalyst development areas, expansion of the downtown one-way grid to Couch Street from East 14<sup>th</sup> Avenue to West 15<sup>th</sup> Avenue excluding the Burnside Bridge from NE 3<sup>rd</sup> Avenue to NW 2<sup>nd</sup> Avenue and a series of special places. Burnside and Couch become a couplet, which reduces the width of Burnside and balances traffic on both streets. Burnside would serve eastbound traffic while Couch would serve westbound traffic.

The 12<sup>th</sup>/Sandy/Burnside intersection, currently unsafe and congested, on the east side would be reconfigured to simplify transportation for vehicles, transit, pedestrians, and bikes. Left turns would be allowed at Martin Luther King, Jr. Boulevard, Grand, and 7<sup>th</sup> Avenue, and on-street parking would be instated fulltime on Burnside and Couch from the Burnside Bridge to East 14<sup>th</sup> Avenue.

Using “leftover” right-of-way on the north side of Burnside would create opportunities to bring social and economic vitality to the central Burnside area. A number of options were identified including enhanced pedestrian space and activities such as “pop-out” cafes and restaurants or additional parking. A subsequent design process will determine the ultimate use of the remaining public right-of-way.

The plan proposes transforming SE Ankeny into a special street with its own identity to bolster the established entertainment district within the central Burnside area.

A Flanders Bike Boulevard will provide a continuous bike route from Waterfront Park to Westover in the Northwest district.

On the west side, reducing traffic lane widths between W 15<sup>th</sup> and 23<sup>rd</sup> Avenues from 11-foot to 10-foot lanes would allow sidewalks to be expanded to 10 feet. Additional sidewalk width would be obtained from private development as properties redevelop. Additional traffic signals would be placed at 20<sup>th</sup> Place and 22<sup>nd</sup> Avenue.

**Policy Changes**

The couplet design shifts the function of Burnside to NE and NW Couch and to the streets where the couplet transitions – NE 3<sup>rd</sup> and 4<sup>th</sup> and NW 2<sup>nd</sup> and NW 15<sup>th</sup>. Following are the recommended street classification changes that will require amendments to the Transportation Element of the Comprehensive Plan.

<b>Street</b>	<b>Segment</b>	<b>Classification</b>	<b>Description</b>
<i>E/W Burnside</i>			No change
<i>NE/NW Couch</i>	NE 14 <sup>th</sup> – NE 3 <sup>rd</sup> and NW 2 <sup>nd</sup> – NW 15 <sup>th</sup>	Traffic Transit Bicycle* Emergency Response Freight Street Design	Major City Traffic Street Major Transit Priority Street No change Major Emergency Response Street No change Regional Main Street
	NE 14 <sup>th</sup> – NE 3 <sup>rd</sup> , NW 2 <sup>nd</sup> – NW 9 <sup>th</sup> ,  I-405 – NW 15 <sup>th</sup>  NW 9 <sup>th</sup> – I-405	Pedestrian	City Walkway   No change
NE Sandy	Between NE 12 <sup>th</sup> and NE 14 <sup>th</sup>	All	With the physical closure of Sandy Boulevard between 12 <sup>th</sup> and 14 <sup>th</sup> , all street classifications for this segment should be

			removed.
<i>NE 3<sup>rd</sup>, NE 4<sup>th</sup>, NW 2<sup>nd</sup>, and NW 15<sup>th</sup></i>	between Couch and Burnside	Traffic Transit Bicycle Pedestrian Freight Emergency Response Street Design	Major City Traffic Street Major Transit Priority Street No change City Walkway No change Major Emergency Response Street Regional Main Street

*\*NW Flanders:* With the completion of the NW Flanders bike and pedestrian bridge, NW Flanders should be reclassified to a City Bikeway between I-405 and Naito Parkway.

### Implementation

The Burnside project on the Major Transportation Improvements list (Chapter 3 of the TSP) is being updated by splitting it into four projects.

As the project moves forward into preliminary engineering, the design of intersections, couplet transitions and traffic signals will be further refined. Special consideration will be given to ensuring safe and efficient bus operations and to coordination of improvements with the addition of light rail to the transit mall.

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## **CENTRAL EASTSIDE DEVELOPMENT OPPORTUNITY STRATEGY**

### **Introduction**

The Portland Development Commission (PDC), in conjunction with a citizen and business steering committee, the Portland Office of Transportation (PDOT), the Portland Bureau of Planning, and the Portland Bureau of Parks and Recreation, are completing the Central Eastside Development Opportunity Strategy (DOS) for a portion of the Central Eastside, which is a subdistrict of the Central City. The current schedule calls for a review of the DOS in spring 2002.

### ***Study Area***

The DOS area lies entirely within the Central Eastside Industrial District. Stretching from SE Morrison on the north to SE Caruthers on the south, the DOS area lies between the Willamette River and the railroad mainline; at SE Caruthers Street, the DOS area lies between the river and SE Grand Boulevard.

### ***Study Purpose***

The DOS was initiated to determine the feasibility of capturing new jobs and development and to establish a vision for the area. This area was selected because of the availability of vacant/developable land. The study reviews the transportation infrastructure to determine if it is adequate to serve new jobs and development, which provide for more dense employment and different work patterns, and examines how the infrastructure could provide better connections to the Central City and surrounding districts.

### ***Previous Studies***

Previous studies reflect a long-term concern with access to and from the Central Eastside and identify several opportunities to improve that access.

- The Central Eastside Transportation Study (July 1990) reviewed existing transportation policies, evaluated current and future transportation conditions, and developed a set of improvement options and recommendations for the study area. The recommended improvements included several surface street projects (restriping, construction, extension, signalization, improvements, railroad crossings); highway improvements (realignment, ramps, reconstruction, signalization); transit improvements; and pedestrian and bicycle improvements.
- The I-5 Southbound Access Study (November 1995) identified and evaluated alternative freeway access routes and supporting improvements to I-5 southbound from the Central Eastside. This study concentrated on assessing the differences between connecting a Water Avenue ramp directly to I-5, versus improving the connection to the Ross Island Bridge as a way to I-5 on the west side of the Willamette River. City Council rejected the recommendation for a Water Avenue ramp connection.



- The Central City Transportation Management Plan (December 1995) addressed the entire Central City. The plan identifies connection to the existing transportation infrastructure as a discrete policy for the Central Eastside (Policy 2.1: System Investments). It also identifies a need for access to the Central Eastside from the I-5 freeway system. Policy 20: Central Eastside, states: “Preserve the Central Eastside as an industrial sanctuary while improving freeway access and expanding the area devoted to the Eastbank Esplanade.”

All of these previous studies also recognize concerns about parking in the Central Eastside, especially for people working or shopping downtown; barriers to convenient pedestrian and bicycle movement; and inadequate transit service.

## **Existing Conditions**

### ***Land Use***

No single type of land use dominates the DOS area. The area includes institutions, offices, distribution, and manufacturing uses. The KPTV offices, Portland Community College, and the Oregon Museum of Science and Industry are located in the southern portion. The northern portion is occupied more by manufacturing and distribution. Several surface parking lots and vacant parcels add to the redevelopment potential. The surrounding area is largely dominated by truck-related manufacturing and distribution uses. Martin Luther King, (MLK) Jr. Boulevard and Grand Avenue serve as the area’s commercial/retail corridor.

### ***Zoning***

The Portland Comprehensive Plan designates the majority of the area as industrial sanctuary, including heavy and general industrial uses. Some portions of the study area are designated for employment uses. Willamette Greenway overlay zoning protects the riverbank.

### ***Transportation***

Bridges largely determine the study area’s character. The Marquam, Hawthorne, and Morrison bridges pass through the DOS area above grade. The bridge approach structures and elevated portion of I-5 dominate the area’s appearance, and also limit development opportunities.

It is anticipated that both area-generated (employment) traffic and pass-through north/south traffic will continue to increase in this area, creating serious demand for the available traffic capacity, particularly along the MLK/Grand corridor. It is also assumed that commercial/retail growth will continue within this corridor. Access to the Ross Island Bridge and I-5 southbound continues to be indirect and difficult.

East/west travel in the area has been and remains an issue as well, particularly for pedestrians and bicyclists trying to access the river and greenway. The Eastside Esplanade runs along the east bank of the Willamette and provides an attractive environment that draws people, both locally and regionally. Access to the surrounding areas and particularly to

I-5 southbound remain circuitous and at times difficult. This situation is exacerbated during peak hours when the MLK/Grand corridor operates as a commuter access route.

## **Recommendations**

The Central Eastside DOS report summarizes key elements of the steering committee's oversight of the study and describes the vision, plan, strategies and action items for its implementation. Further refinement of the transportation recommendations is needed to address the traffic impacts of the proposed vision. Two particular issues need to be addressed in more detail, as follows.

Implementing the Central Eastside DOS vision may suggest the need to enact potential amendments to the Comprehensive Plan and Zoning Code. In this event, further transportation analysis and findings are required regarding potential impacts on the regional transportation system, given the requirements of the Transportation Planning Rule.

Also, the Central Eastside DOS vision introduces a potential new blend of employees and visitors into the area that may have different transportation service needs and expectations than that of current businesses. Further refinement of the DOS should address potential street use conflicts that may occur concerning on-street parking, loading activities and the mixing of truck and automobile traffic.

## ***Transportation Projects***

The Central Eastside DOS confirms that most of the transportation projects identified in the 1991 Central Eastside Transportation Study are still viable and would help serve the DOS vision. These and other potential new projects identified by the DOS include:

- I-5/McLoughlin Ramps
- Belmont-King ramp realignment and intersection improvement
- Clay/King restriping and intersection improvement
- Yamhill/Taylor Couplet
- SE Stark Street
- Grand Avenue Bridgeheads improvements
- SE Main (or SE Salmon) signals with King and Grand
- 

## ***Other Transportation Recommendations***

Other transportation recommendations and action items are identified by the Central Eastside DOS that will require more study and definition before they can be categorized as projects. These include:

- Strengthen Water Avenue as the primary north-south multi-modal street in the DOS area
- Investigate potential for streetcar connections to the CEID from Downtown and Lloyd Districts
- Improve vertical connections between the viaducts and Water Avenue for pedestrian access to transit services

- Improve SE 2<sup>nd</sup> Avenue for trucks and loading functions
- Initiate transit service along Water Avenue and the entire length of the King-Grand couplet through the district
- Investigate, decide and implement improved access from the study area to southbound I-5
- Preserve south-north light rail transit corridors
- Consider future construction of a below-grade integrated transportation facility incorporating high-speed rail, freight rail and I-5.

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## **COLUMBIA CORRIDOR TRANSPORTATION STUDY**

### **Introduction**

City Council accepted the Columbia Corridor Transportation Study by Resolution No. 35811 on August 4, 1999.

### ***Study Area***

The Columbia Corridor reaches from the Rivergate Industrial District on the west to the City of Troutdale on the east. The Columbia River is its northern boundary, and N Columbia Boulevard, NE Lombard Street, and NE Sandy Boulevard are its southern boundary. The Columbia Corridor Transportation Study area includes only about the eastern two-thirds of this area, from Portland Road east to the city limits.

### ***Study Purpose***

Bicycle and pedestrian advocates, and residents living adjacent to NE Marine Drive east of I-5 were central to the initiation of this study. The study looks at ways to reduce or remove the impacts of truck traffic on NE Marine Drive and NE 33<sup>rd</sup> Drive. Conflicts exist between bicyclists/pedestrians and truck traffic. Heavy traffic, excessive speeds, and numerous access points along NE Marine Drive create additional friction. Future growth of industrial uses in the corridor will create the need for additional traffic capacity.

### ***Objectives***

The study's five objectives were:

- Develop an interconnected intermodal and multimodal transportation network using existing arterials to serve the area.
- Determine if the transportation network will be able to accommodate the planned levels of development based on Comprehensive Plan designations, and determine whether designations should be modified to reflect the capacity of the network.
- Improve efficiency and access along and between NE Columbia and NE Lombard to primarily serve intermodal goods movement using these arterials.
- Determine environmental impacts and neighborhood mitigation/protection for residential areas close to NE Lombard, which may result from increased truck traffic.
- Develop a strategy to improve NE Marine which will enhance regional recreation opportunities in the Columbia Corridor.

### ***Companion Study***

The St. John's Truck Strategy will provide a transportation vision for the westernmost one-third of the corridor. The focus of this companion study is to reduce truck through-trips in

predominantly residential areas and to improve the existing routes for truck local and through-trips.

## **Existing Conditions and Issues**

### ***Demographics***

The Columbia Corridor is home to approximately 7,500 residents and 2,100 firms that employ more than 41,000 people. It provides a significant opportunity for employment growth because of the large amount of developable land, primarily zoned for employment or industrial use. Corridor employment is anticipated to be 64,000 people by 2010, an increase of 55 percent.

### ***Land Use***

The area encompasses diverse land uses. Single-family homes lie adjacent to industrial uses along the edge of the river and within the East Columbia and Bridgeton neighborhoods. The predominant land use in the eastern two-thirds of the corridor is industrial. Encouraged by numerous transportation advantages, including shipping terminals, airfreight facilities, three freeways, and two national railroads, the industrial uses are largely devoted to the movement of goods and merchandise. Heavy machinery manufacturing and airport-related businesses are also common within the area. Two airports (Portland International and Troutdale), several golf courses, and a large regional recreation facility are located within the study boundary.

### ***Zoning***

Portland's Comprehensive Plan designates the majority of the area as an industrial sanctuary, allowing heavy and general industrial uses. Some portions of the study area are designated for employment uses. Environmental overlay zoning protects the riverbank and the Columbia River Slough that meanders through the area. Open space zoning protects several recreational facilities in the corridor that provide opportunities for golf, motor sports, and field sports.

### ***Transportation***

#### *Traffic*

East-west travel in the corridor is accomplished via NE Marine Drive on the north edge and NE Columbia and Lombard Streets on the south edge. Northeast Lombard Street is actually a series of connected road segments, including (from east to west) NE Sandy Boulevard, NE Killingsworth Street, N Portland Highway, and N and NE Lombard Street. City street designations encourage the use of NE Columbia as the primary arterial for east-west truck trips and access to major employers. Poor connections between NE Columbia and NE Lombard have led to inefficient use of available roadway capacity and congestion.

NE Marine Drive and NE 33<sup>rd</sup> Drive are designated as scenic routes, with facilities for pedestrian and bicycle recreation. The internal collector street system is incomplete because of the airport uses, environmental constraints of the Columbia Slough system, and undeveloped lands.

An origin and destination survey found that both NE Columbia and NE Marine are used primarily for local truck access and circulation in the corridor, not truck through-trips.

### *Transit*

Light rail transit service between downtown Portland and Portland International Airport began in September 2001, after this study was adopted. The line serves Cascade Station, the emerging commercial center adjacent to the airport.

Bus service in the corridor is both limited and intermittent. At the time of the study, eight bus lines served the area, each serving only a small portion of the overall corridor. Most transit demand occurs along NE Columbia where employment is concentrated, but is largely underserved by transit.

### *Pedestrians and Bicycles*

Pedestrian and bicycle facilities are mostly lacking on the corridor's street system. Inconvenient and discontinuous access to facilities inhibits travel by these modes.

## **Recommendations**

The study recommends alleviating identified issues and future capacity problems for the existing transportation system by directing excess traffic to existing underutilized facilities before considering construction of new, extended, or widened roadways. Proposed solutions fall into five categories: expanded transit service, transportation demand management, safety and traffic management projects, connectivity improvements, and system improvements.

- Expanded transit service within the corridor will include light rail to the airport (completed September 2001), fixed bus routes, and paratransit services.
- The formation of the Columbia Corridor Transportation Management Association provides additional opportunities to reduce traffic volumes and/or peak hour traffic volumes through flexible work hours, telecommuting, vanpooling, and carpooling.
- Safety and traffic management improvements will include signalization of certain intersections, improved pedestrian crossings, bike path improvements, and traffic calming measures such as truck traps or semi-diverters, pedestrian refuges, and lowered speed limits.
- Connectivity improvements will enhance local circulation and make it easier for truck traffic to use appropriate streets. Such improvements include left-turn lanes, new connections between roadways, and redesign and reconstruction of certain intersections.
- System improvements will include coordination of traffic signals and access management strategies.

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## ***Transportation Projects***

The study identifies transportation projects to improve access and circulation in the corridor. The improvements fall under two categories: regional and major city traffic street improvements, and neighborhood collector and local street improvements.

### *Regional and Major City Traffic Street Improvements*

- Reconstruct NE 82<sup>nd</sup> intersections with NE Columbia and NE Lombard
- Reconstruct MLK Jr. Blvd between NE Lombard and NE Columbia
- Improve capacity at NE Columbia/I-205 interchange
- Install I-205 auxiliary lane
- Improve signal system along NE Columbia and NE Lombard
- Improve capacity at NE Airport Way/I-205 interchange
- Construct Port of Portland International Center street improvements
- Improve I-5 freight mobility
- Reconstruct NE 33<sup>rd</sup>/NE Columbia interchange

### *Neighborhood Collector and Local Street Improvements*

- Construct Bridgeton neighborhood street improvements
- Construct NE Marine improvements, including signal upgrades, traffic calming, and pedestrian and bicycle facilities
- Improve NE 47<sup>th</sup> intersections with NE Cornfoot and NE Columbia
- Add left-turn lanes at major intersections along NE Cornfoot
- Connect NE Columbia and NE Cornfoot over Columbia Slough
- Realign NE Alderwood/Cully Blvd intersection
- Extend NE Marx
- Widen NE Alderwood between NE 82<sup>nd</sup> and NE Cornfoot
- Extend NE Cornfoot to NE 82<sup>nd</sup>
- Improve NE 138<sup>th</sup>, NE 148<sup>th</sup>, and NE 158<sup>th</sup> to City standards

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## **DIVISION GREEN STREET/MAIN STREET**

### **Background**

The Division Green Street/Main Street project was a collaborative effort between the City of Portland Bureau of Planning and Office of Transportation and the community to improve the livability and economic vitality of the SE Division Street corridor. The project study area was SE Division between SE 11<sup>th</sup> and SE 60<sup>th</sup> Avenues. The study area is adjacent to four neighborhood associations (HAND, Richmond, Mt. Tabor, and South Tabor) and is within the Division/Clinton Business Association. The project was initiated at the request of DivisionVision, a coalition of the affected neighborhood groups and business association.

### **Project Goals**

The purpose of the project was to create a plan with goals, objectives, and implementation strategies to create a pedestrian-friendly commercial district that reflects and reinforces community values, including a focus on sustainable and “green” development. Project considerations included:

- Improving access to transit
- Improving safety for pedestrians, bicyclists, and drivers
- Improving traffic signalization
- Examining alternative vehicle lane and on-street parking configurations
- Examining innovative rainwater management techniques
- Examining land use patterns in relation to existing zoning
- Proposing zoning changes consistent with project goals
- Examining “green” building techniques

### **Plan Elements**

The Division Green Street/Main Street Plan was created through the work of an 18-member Citizen Working Group, a technical advisory committee, and members of the community in collaboration with City staff. Citizens expressed a desire to focus commercial activity in elongated nodes along the street interspersed with quieter residential areas, to create art and water features at these nodes, and to integrate the five nearby primary and secondary schools into the fabric of the corridor.

The goals of the plan focus on four themes: Healthy Community, Clean and Green Environment, Shared Economy, and Making a Place. Goals were developed for each of these themes and a number of objectives for each goal. Although the Division Green Street/Main Street Plan has a land use/transportation orientation, the goals and objectives also focus on the overall health and vitality of the street and the community. Goals address environmental health, integrating green infrastructure and building into the corridor, connecting the community, fostering an educational landscape and taking advantage of cultural and historic assets.

The Plan includes a rezoning proposal to nearly eliminate nonconforming uses, and it created design standards in the Main Street Corridor Overlay Zone to support the urban design for the corridor that is desired by the community.



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## **Transportation Issues and Outcomes**

The community identified a number of characteristics of the Division corridor that interfered with their goals – traffic volumes and speeds, the presence of pro-time (part time) lanes between SE 11<sup>th</sup> and SE 28<sup>th</sup> Place, inadequate opportunities for pedestrian crossings, and the lack of cohesiveness and pedestrian amenities along the street. A number of alternatives were developed and analyzed by the CWG and the community at workshops. There was general consensus on a number of improvements at key locations to smooth traffic flow and enhance pedestrian crossing opportunities. The community considers “7 Corners” the complex intersection of Division, Ladd, 20<sup>th</sup>, and 21<sup>st</sup> to be the heart of the community. A number of improvements are recommended to improve safety for all users including moving bus stops, adding bike lanes and bike “boxes”, curb extensions, pedestrian signal improvements and adding a crosswalk.

The corridor-wide alternatives were narrowed to two – creating two travel lanes the entire length of the corridor with full-time parking and eliminating the pro-time lanes only between 13<sup>th</sup>/14<sup>th</sup> and 19<sup>th</sup> and retaining pro-time lanes from “7 Corners” to 28<sup>th</sup> Place.

## **Next Steps**

The plan is intended to guide the Division Streetscape and Reconstruction Project that will repave the street and build streetscape improvements between SE 6<sup>th</sup> and SE 39<sup>th</sup> Avenues. The street repaving and construction is funded with a combination of federal and local funds and is scheduled to begin in 2007.

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## **EASTSIDE STREETCAR ALIGNMENT STUDY**

### **Introduction**

The Portland Streetcar is part of the City's growth management strategy. Ridership on the westside streetcar has grown and leveraged a significant amount of new investment. The impetus for evaluating an extension of the streetcar service came out of the Lloyd District Development Strategy completed in July 2001. The development strategy identifies opportunities for additional development and amenities to leverage the development. One of the sub-areas of the Lloyd District is the Central Core between NE Halsey and Holladay Streets and NE 6<sup>th</sup> and 9<sup>th</sup> Avenues. It has the potential for high-density, high-rise development. Streetcar can play a role in connecting to other parts of the district and to westside streetcar as well as to the Central Eastside.

### ***Purpose***

In January 2003, an Eastside Streetcar Alignment Study Steering Committee was appointed. The steering committee was asked to prepare recommendations on the Eastside Streetcar alignment for consideration by City Council. This preliminary assessment included:

- Preferred alignment
- Public support
- Public process
- Federal funding
- Oversee workshops

A technical committee was formed to conduct the analysis of the options and prepare recommendations for the Steering Committee.

### **Findings**

#### ***Preferred Alignment***

A loop transit system as called for in the Central City Plan was preferred by the committee. The loop would connect Lloyd District and the Central Eastside to the downtown and other Central City districts. The preferred alignment on the eastside is Martin Luther King, Jr. Boulevard and Grand with a jog to NE 7<sup>th</sup> at Oregon to better serve the Central Core of Lloyd District. Three phases are recommended. Phase 1 from NW Lovejoy to NE 7<sup>th</sup> to Oregon; Phase 2 from Oregon to Water Avenue; and Phase 3 crossing either a new Caruthers bridge or the existing Hawthorne Bridge and connecting to the existing streetcar.

#### ***Public Support***

The Steering Committee conducted public meetings and two public workshops to assess public opinion. There was strong general support for extending the streetcar to the eastside but a variety of opinions on specific alignments.

### **Recommendations**

The Steering Committee recommended a number of actions:

1. **Steering Committee.** Retain the steering committee with broad representation to take their recommendations to decision making bodies.
2. **Citizen Process.** Support the existing Streetcar Citizen Advisory Committee process by adding new members to represent eastside interests.
3. **Environmental Assessment.** Commence the environmental assessment process in consultation with the Federal Transit Administration (FTA) for Phase 1.
4. **Alternatives Analysis.** Petition the FTA to waive the alternatives analysis as the eastside streetcar is an extension of the existing system.
5. **Conceptual Engineering.** Commence conceptual engineering of Phase 1 of the eastside streetcar preparing street alignment, proposed stop locations and assessment of Broadway Bridge requirements for rail installation.
6. **Finance Plan.** Phase 1 of the eastside streetcar is estimated to cost \$39.6 million (in 2003 dollars). Federal funding in the amount of \$19.8 million should be sought to support Phase 1 construction.
7. **Engineering Funds.** Seek Housing and Urban Development (HUD) Funds to cover engineering.
8. **Amend Regional Transportation Plan.** Amend the RTP and City's TSP to include the eastside streetcar alignment and project.
9. **Development Proposal.** Phase the streetcar extension to coincide with development commitments adjacent to the alignment.

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## **EASTSIDE TRANSIT ALTERNATIVE ANALYSIS**

### **Purpose**

The purpose of the Eastside Transit Alternatives Analysis is to develop, evaluate and select a transit alternative that is responsive to community needs and the travel demand in the Central City and which serves as a catalyst for economic development and supports and focuses land use. The goals for the project are intended to:

- Reduce reliance on the auto for trips to, from and within the Central City.
- Improve Central City transit circulation, capacity, connectivity and local access that facilitates economic development and promotes the vitality of the Central City.
- Support existing and future streetcar and light rail investments in the region by expanding the system and increasing ridership in a cost-effective manner.
- Support economic development.
- Support community goals and has strong public acceptance.

### **Alternatives**

Alternatives include the No Build/Baseline alternative (referred to henceforth as the No-Build Alternative) and a streetcar alternative including a full loop, and minimum operable segments -Oregon Street, Morrison Street and Oregon Museum of Science and Industry (OMSI). In addition, a two-way Grand Avenue alignment was included as a design option to the MLK/Grand alignment.

The Streetcar Alternative includes three Minimum Operable Segments. Each MOS is a potential terminus for the first phase of streetcar construction. In order to maintain full loop connectivity for purposes of comparison, connecting bus service would link each MOS to OMSI and RiverPlace, connecting with the existing Portland Streetcar via the Hawthorne Bridge. The Oregon MOS would terminate in the Lloyd District at the Oregon Convention Center and would be compatible with either the MLK/Grand Couplet or the Two-way Grand Design Option. The Morrison MOS would terminate at SE Morrison Street and would be feasible with either the MLK/Grand couplet or the Two-way Grand Design Option. The OMSI MOS would terminate immediately south of OMSI. A flyover would be constructed over the Union Pacific railroad right of way, and would be feasible with either the MLK/Grand couplet or the Two-way Grand Design Option.

The alternatives were evaluated based on how well they performed relative to the project's evaluation measures:

- improve Central City transit ridership, improve eastside transit ridership,
- improve north/south transit connectivity and capacity through the Central Eastside,
- improve transit circulation in the Central City, serve important visitor destinations,
- easily identifiable,
- reduce demand for parking,
- consistency with state, regional and local land use plans and policies,
- land use plans and policies have demonstrated results that create a transit friendly environment for the project,
- economic development policies and the private sector support the proposed transit investment

- economic development potential in the Lloyd District and Central Eastside
- assessment of federal funding sources
- assessment of operating revenue sources
- assessment of cost-effectiveness, comparing ridership and costs

The Full Loop alternative was found to have the best overall improvement in total transit travel times to/from and within the corridor compared to the No-Build alternative. The MOS alternatives would have somewhat less improvement, in part because of required transfers along the central eastside for some origin and destination pairs.

## **Conclusions**

The Eastside Project Steering Committee recommended a “locally-preferred alternative” based on the evaluation of the alternatives against the measures. The streetcar is the mode of choice because it will result in higher ridership than an equivalent level of bus service. Streetcar provides better opportunities for land uses that foster a compact urban form, reduce vehicle miles traveled and a higher transit mode split and has strong community support. The Full Loop Alternative is the ultimate build out assuming capital and operating funds become available because it is the most cost-effective, provides the best transit circulator function, and will have the highest ridership. OMSI would be the logical interim terminus until such time that the proposed Caruthers Bridge or other Willamette River crossing is viable. City Council approved Resolution No. 36425 on July 5, 2006 adopting the Eastside Transit Alternatives Analysis Locally Preferred Alternative Recommendation and the Eastside Transit Project Work Program Considerations.

## **Next Steps**

The “locally preferred alternative” will be forwarded to the Federal Transit Administration for their review and comment. Before a construction grant application can be submitted, additional environmental analysis and financing work needs to be completed as well as an evaluation of any needed mitigation, especially on MLK, Jr/Grand.

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## **FOSTER ROAD TRANSPORTATION AND STREETScape PLAN**

### **Introduction**

The Foster Transportation and Streetscape Plan was initiated at the request of the community through the Foster Target Project. The goal of the planning process was to develop a plan that would outline improvements for the street and sidewalk on Foster Road to improve the safety and appearance of the street and support the people and businesses of the surrounding community.

### ***Study Location***

The project area includes the public right-of-way of SE Foster Road from SE 50<sup>th</sup> to SE 90<sup>th</sup> Avenues.

### ***Project Funding***

The planning process was funded by the City of Portland and by a grant from the State of Oregon's Transportation and Growth Management Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development.

### **Recommendations**

The City Council adopted the Foster Transportation and Streetscape Plan by resolution (No. 36158) on July 9, 2003. The project goals are to:

- 1) Make the street a safe, pleasant, attractive, and comfortable place to walk;
- 2) Create a safe walking environment for pedestrians walking along and across the street;
- 3) Provide a safe corridor for vehicle travel that maintains an acceptable level of service and ensures smooth, consistent traffic movement;
- 4) Improve transit service on Foster; and
- 5) Ensure bicyclists can safely ride on and across Foster, and access Foster-area businesses.

In addition to physical improvements for vehicles, pedestrians and transit, and streetscape improvements, the plan recommends new City Bikeway classifications as follows:

SE Raymond Street from 72<sup>nd</sup> to 82<sup>nd</sup>, SE 82<sup>nd</sup> from Raymond to Liebe, SE Liebe to 86<sup>th</sup> Court, SE Steele between 86<sup>th</sup> Court and 87<sup>th</sup>, and 87<sup>th</sup> from Steele to Ellis. The streets on the bikeway route would be evaluated for any improvements necessary to meet the City's criteria for a bikeway.

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## FREIGHT MASTER PLAN

### Background

The Freight Master Plan (FMP) was identified as a future study in the 2002 TSP. In doing the FMP, the City recognized the need to better understand freight-related issues to ensure that Portland's transportation network could support the projected increased demand for freight movement. Portland is more dependent on freight movement than most US cities. According to the Oregon Department of Employment, one out of nine jobs in the Portland areas are in the transportation sectors. The FMP was adopted by City Council on May 10, 2006 (Ordinance No. 178520, effective date, June 9, 2006).

### Freight Policies

The freight-related policies in the TSP have been rewritten to address balancing freight mobility needs with community impacts and other transportation modes. The policies focus on the three main goals of the FMP:

- **Mobility** – improving the reliability and efficiency of the freight network to meet increased demands and to identify where to invest in system improvements
- **Livability** – strategies for reducing community impacts from freight movement and balances truck movement needs with those of other transportation modes
- **Healthy economy** – promoting a multimodal transportation system that supports long-term economic development by recognizing the role of goods delivery in supporting healthy and vibrant mixed-use centers and main streets

### Street Classifications

The FMP includes a new freight network classification system based on a hierarchy of freight-related and use access.

- **Regional Truck Way:** Primarily serves heavy freight activities for interregional and interstate freight movements. Serves both industrial and commercial land uses via access ramps (e.g., I-5, US 30).
- **Priority Truck Street:** Serves heavy freight activities in and between freight districts and provides truck access and circulation to industrial land uses (e.g., Going Street, NW Front Street, and St. Helens Road).
- **Major Truck Street:** Primarily serves goods delivery for truck mobility between commercial centers and corridors and provides truck access and circulation to regional main streets (e.g., Sandy Boulevard, MLK, Jr. Boulevard, SE Powell Boulevard).
- **Truck Access Street:** Primarily serves goods delivery for distribution of truck trips in neighborhoods and provides truck access and circulation for delivery of goods and services to commercial and residential uses (e.g., N. Interstate Avenue, NE 33<sup>rd</sup> Avenue, N. Lombard Street).
- **Freight District Street:** Provide local truck circulation and access on streets located within a freight district unless classified with a higher designation (e.g., Swan Island and NW Industrial Districts).

Other freight elements are also included – Main and branch rail lines and freight facilities – that contribute to a multimodal freight system.

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## **System Improvements**

System improvements are grouped into the same three core values listed under policies.

**Mobility improvements** – Providing upgrades at key freight interchanges. Implementing Intelligent Transportation System improvements (variable message signs, closed-circuit cameras). Upgrading load-restricted bridges and seismic upgrades.

**Livability improvements** – Truck route signage program to direct truck movements onto appropriate routes. Partner with railroad operators and ODOT to institute ‘quiet zones’ to reduce train whistle noise and improve track safety.

**Healthy economy improvements** – Access and circulation improvements within freight districts. Partnerships with the Portland Development Commission and Port of Portland to implement transportation improvements that enhance the marketability of industrial sites.

The FMP also includes a section on trucks and street design that lays the foundation for the development of The Portland Design Guide for Trucks that will vary street designs based on street classifications and existing constraints.



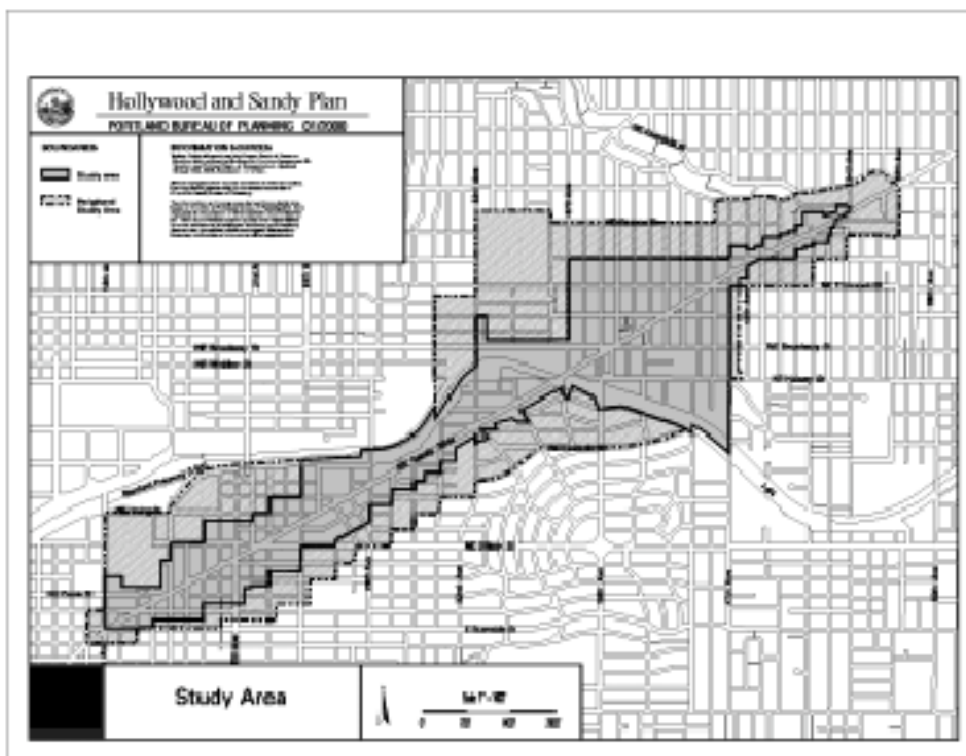
## HOLLYWOOD AND SANDY PLAN

### Introduction

The Hollywood and Sandy Plan is the outcome of a comprehensive land use, transportation, and public services planning study for the Hollywood District and a portion of Sandy Boulevard. The Portland Bureau of Planning and PDOT, in coordination with other agencies, began the study in November 1997. City Council took action on the final plan in April 2000 through Ordinance No. 174325 and Resolution No. 35875.

### *Study Location*

The study area includes Sandy Boulevard between NE 12<sup>th</sup> Avenue and NE 54<sup>th</sup> Avenue and extends north and south of the street for approximately one to three blocks, depending on location. The Hollywood District portion of the study area is located between NE Tillamook Street on the north, I-84 on the south, NE 37<sup>th</sup> Avenue on the west, and NE 47<sup>th</sup> Avenue on the east.



### *Study Purpose*

The Region 2040 Growth Concept designates Sandy as a main street and the Hollywood area as a town center and station community, based on their historic development patterns and the light rail station near NE 42<sup>nd</sup> and Halsey Street. The intent of the 2040 designations is to direct growth to locations and in ways that will result in mixed use areas that take advantage of existing and planned transportation facilities and other infrastructure and encourage modes of travel other than the automobile.

### ***Goals and Objectives***

The study's goals were to:

- Enhance business and economic vitality
- Reinforce the connection between the Hollywood Transit Center and the business core
- Promote housing and mixed-use development
- Enhance the pedestrian experience
- Enhance building character
- Improve and enhance the transportation system
- Maintain adequate parking
- Promote open spaces and gathering spaces
- Enhance community services and activities
- Maintain public and private infrastructure facilities

### ***Transportation Elements***

The Hollywood and Sandy transportation concept was developed to meet the following three objectives:

- Address community concerns related to transportation
- Support desired land use and zoning patterns
- Meet State and regional needs and requirements

### **Existing Conditions**

#### ***Demographics***

The Hollywood and Sandy planning study area encompasses the entire Hollywood neighborhood, as well as parts of the Kerns, Laurelhurst, Grant Park, and Rose City Park neighborhoods. Population in most of the study area has been relatively stable. Overall, a small population increase occurred between 1980 and 1990 (34,176 versus 34,439), but the number of households declined.

People from various racial backgrounds, age groups, and professions live in the study area, similar to the composition of the City of Portland as a whole. Also similar to the City as a

whole, the number of people who drive alone to work increased from 1980 to 1990, ranging from a high of 68 percent in Laurelhurst to a low of 51 percent in Buckman.

### ***Land Uses***

Existing land uses result from the study area's evolution from a streetcar suburb to an automobile-oriented commercial district. The current mix of land uses along Sandy Boulevard includes industrial, retail, office, residential, and other uses. Large auto sales businesses are one of the defining land uses. Many of the existing commercial storefront buildings date from the streetcar era and are located at major intersections and other locations that were once streetcar stops. The Hollywood District is predominately commercial north of Sandy; south of Sandy, it has a mix of uses, including churches, medical offices, and high-density residential development. The light rail station and transit center are located near 42<sup>nd</sup>, south of Halsey.

Little new development has occurred within the study area since 1980. The study area is surrounded by moderate-density residential development around the lower stretch of Sandy and predominately single-family residential around Hollywood and near Sandy north and east of Hollywood.

### ***Economic Development***

The primary/local trade areas for businesses in the study area are the nearby neighborhoods. Because of the study area's location and characteristics (proximity to downtown Portland, access to the freeway, the presence of a street grid and sidewalks throughout the area, and frequent bus and light rail service), it also houses businesses that rely on a regional trade area. Changes in retailing, such as internet shopping, may result in redevelopment opportunities as car dealerships relocate or change business practices. Although Hollywood is well located as a shopping district for adjacent neighborhoods, its traffic circulation system and the proximity of other major shopping areas results in a sizable portion of local consumer dollars 'leaking' out of the trade area to stores in competing retail areas.

### ***Transportation***

#### *Traffic*

Sandy Boulevard in the Hollywood District has multiple and sometimes conflicting transportation functions, including providing freeway access, serving as a State highway, linking the neighborhoods to the Central City, providing access to shopping, and serving as a transit hub. The Hollywood Transit Center serves four bus lines and MAX light rail.

Interstate 84 carries about 181,700 vehicles (both directions) east of the Hollywood District and about 170,600 west of Hollywood. As one of the few I-84 locations with a full interchange, the Hollywood area attracts freeway users, contributing to traffic volumes and circulation issues. Sandy Boulevard is a State highway and Major City Traffic Street that functions well for moving cars through the project area by prohibiting left turns at most major intersections between NE 12<sup>th</sup> and NE 43<sup>rd</sup>. These left-turn prohibitions were put in place in the early 1980s in conjunction with other transportation changes that addressed congestion and crashes.

Major north-south arterials along Sandy are NE 12<sup>th</sup>, 20<sup>th</sup>, 28<sup>th</sup>, and 54<sup>th</sup>. Other arterials in the study area are NE Broadway, 39<sup>th</sup>, 42<sup>nd</sup>, and 47<sup>th</sup> in the Hollywood District. Northeast Broadway is two-way until 37<sup>th</sup>, where southbound traffic is routed to Sandy or Halsey.

### *Transit*

Transit service is excellent throughout the study area, with four Tri-Met bus lines and MAX light rail serving Hollywood and several other bus lines crossing Sandy along its length. Completion of the MAX line to the airport will result in rerouting the #12 bus so it continues on Sandy rather than being routed through the transit center.

### *Pedestrians and Bicycles*

The study area has sidewalks along almost all streets. The major barriers for pedestrians are the lack of safe crossing opportunities along Sandy and substandard sidewalk widths along most streets. The exception is the core area of Hollywood, where there are wide sidewalks along Sandy, and crosswalks and pedestrian-activated signals at all signalized intersections.

Designated bicycle lanes are provided along 12<sup>th</sup> north of Sandy and on Glisan east of Sandy. Portions of Tillamook and Hancock are developed as an east-west bicycle boulevard with striped lanes in Hollywood. Portions of NE 42<sup>nd</sup> and 47<sup>th</sup> are developed with bike lanes in Hollywood. Sandy Boulevard is designated as a City Bikeway, but has no bicycle lanes.

### *Parking*

The availability of on-street parking varies along the length of Sandy. In some places, on-street parking is lacking because of large curb cuts, bus zones, and turn lanes. Parking is generally prohibited in the core of Hollywood along Sandy to allow wide sidewalks and lane configurations. The remainder of Hollywood typically has on-street parking, and many businesses along Sandy and within Hollywood have off-street parking. Many older buildings were constructed without off-street parking, including the Hollywood Theater in the center of the district.

## **Recommendations**

To develop the transportation concept, the study analyzed several alternatives. The preferred transportation concept envisions more frequent pedestrian crossings along Sandy, enhanced transit stops, more opportunities to make left turns at key nodes, wider sidewalks, and more on-street parking.

In Hollywood, the transportation concept is intended to simplify circulation, particularly at the intersections of Broadway, NE 39<sup>th</sup>, and Sandy, and to improve signage to public parking. The concept includes circulation changes that will reduce travel times for buses through the transit center and improve the pedestrian environment to and within the transit center.

## ***Transportation Projects***

The study identified a large number of projects to address transportation issues along Sandy and within the Hollywood District. The Hollywood and Sandy Plan groups these projects into three categories: circulation and parking, transit, and pedestrian/bicycle. Some of the projects for each area of the plan are listed below.

### *Sandy Boulevard - Circulation and Parking*

- Intelligent transportation measures, including central traffic signal monitoring and traffic flow management
- 18<sup>th</sup>/Sandy – Convert pedestrian signal to full signal
- 20<sup>th</sup>/Sandy – Add curb extensions at all corners and enlarge island
- 22<sup>nd</sup>/Sandy/Glisan – Realign intersection, install full traffic signal
- 33<sup>rd</sup>/Sandy – Add eastbound left-turn pocket, modify signal to allow left turns, build curb extensions
- Selectively close streets that intersect Sandy at oblique angles

### *Sandy Boulevard – Transit*

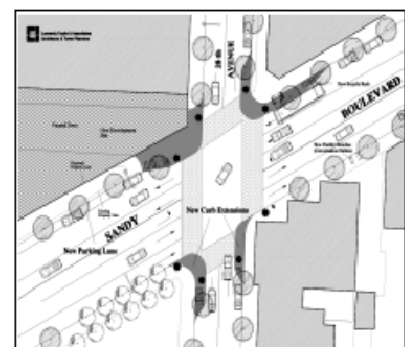
- Reevaluate bus stop spacing to align with new pedestrian plazas, crossings, and nodes
- Develop route #12 as a frequent bus with preferential transit measures
- Add shelters at bus stops and include schedule information and lighting

### *Sandy Boulevard – Pedestrian/Bicycle*

- Implement enhanced pedestrian nodes at 20<sup>th</sup>, 28<sup>th</sup>, 33<sup>rd</sup>, and 42<sup>nd</sup>
- Add new signalized pedestrian crosswalks at 14<sup>th</sup>, 31<sup>st</sup>, and 35<sup>th</sup>
- Add curb extensions or medians to improve pedestrian crossings
- Reinforce 24<sup>th</sup> as the north/south bicycle connection between Ankeny and Glisan
- Widen sidewalks along Sandy as properties redevelop

### *Hollywood – Circulation and Parking*

- Reconfigure Sandy between 40<sup>th</sup> and 42<sup>nd</sup> to add on-street parking on north side of street
- 37<sup>th</sup>/Sandy – Restripe lanes for more through movement
- 39<sup>th</sup>/Halsey – Add westbound left-turn lane, increase northbound turn radius, modify signal
- 40<sup>th</sup>/Sandy – Reconfigure intersection to remove 'jug handle' turn
- 41<sup>st</sup>/Halsey – Signalize intersection
- 45<sup>th</sup>/Sandy – Install full traffic signal
- 47<sup>th</sup>/Sandy – Create left turn pocket westbound, modify signal



Redesigned intersection at NE 28th Avenue and Sandy provides pedestrian amenities

*Hollywood – Transit*

- Add bus shelters, rider information, amenities
- Improve signage to transit center, add ‘real time’ information boards
- Reconfigure transit center to remove onsite circulation lane
- Add second access to light rail platform

*Hollywood – Pedestrian/Bicycle*

- 37<sup>th</sup>/Sandy – Add curb extensions
- 42<sup>nd</sup> – Add pedestrian improvements to enhance it as a Pedestrian Street
- Add bicycle parking along streets and at transit center
- Increase width of sidewalks as redevelopment occurs

***Other Transportation Recommendations***

In addition to transportation projects, the plan recommends other transportation improvements for the Sandy corridor and Hollywood District. These include closing unused curb cuts to create more on-street parking opportunities, encouraging shared parking arrangements to increase parking availability, seeking vendors and concessionaires at the transit center, establishing transportation management associations, and evaluating locations and financing for public or private parking structures.

To meet the requirements of Metro’s Regional Transportation Plan (RTP), the plan establishes mode split goals for Hollywood and Sandy. It also identifies benchmarks for these goals and for other performance indicators. In 1994, non-single-occupant-vehicle (SOV) trips comprised 39 percent of all trips to, from, and within the Hollywood District and 34.9 percent of all trips to, from, and along Sandy Boulevard. The plan establishes a non-SOV goal of 55 percent for Hollywood and 50 percent for Sandy by 2020.

The plan also establishes benchmarks for transit service, transportation demand management, sidewalks, and bicycle facilities for both the Sandy corridor and Hollywood District. In addition, it establishes benchmarks for parking, residential and employment density, and mix of uses for Hollywood.

The plan provides detailed street design guidelines for major intersections along Sandy: 20<sup>th</sup>, 28<sup>th</sup>, 33<sup>rd</sup>, 42<sup>nd</sup>, and 52<sup>nd</sup>. (See Hollywood and Sandy Plan, Appendix J for complete text.) The street guidelines will be used to guide project development for Sandy Boulevard. The TSP is proposing several projects for Sandy Boulevard and the Hollywood District that will carry out the Hollywood and Sandy Plan and incorporate the plan’s recommendations for an improved environment for all modes of travel.

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## **I-5 TRANSPORTATION AND TRADE PARTNERSHIP**

### **Introduction**

The Regional Transportation Plan (RTP) and TSP identified a Major Refinement Plan for “Interstate 5 North from Interstate 84 to Clark County.” The I-5 Trade and Transportation Partnership was formed in 1999 to address the issues identified in the refinement plan – freight mobility and access needs. The I-5 Partnership was comprised of Washington and Oregon citizens and leaders to respond to concerns about growing congestion on I-5 and develop a recommended Strategic Plan for the I-5 Corridor between I-84 and I-205 in Washington.

### **Background**

Interstate 5 is the only continuous interstate on the West Coast and between Portland and Vancouver, Washington it experiences some of the region’s worst congestion. Interstate 5 provides a key economic connection to two major ports, deep-water shipping, up-river barging, two transcontinental rail lines, and industrial districts. For residents of the region, I-5 provides one of two crossings of the Columbia River for access to work, recreation, shopping, and entertainment purposes. An average of 125,000 trips are made across the I-5 bridge every day.

In 1999, a bi-state leadership committee considered the problems in the corridor and recommended that a public process be initiated to develop a plan for the I-5 corridor based on the following findings:

- Doing nothing in the I-5 corridor is unacceptable. While there are some transportation improvements planned in the corridor, they are insufficient to address the transportation and economic needs of the corridor. Without additional improvements, congestion in the corridor will increase to unacceptable levels.
- There must be a multi-modal solution in the I-5 corridor, but there is no silver bullet. The needs of the corridor will require highway, transit, and rail improvements, and better management of traffic demand.
- Transportation funds are limited. Paying for improvements in the I-5 corridor will require new funds. The scale of improvements needed in the corridor far exceeds currently available state and federal funds. Assuming the current structure of public funding, tolling will be required to pay for a new Columbia River crossing and other corridor improvements.
- The region must consider measures that promote transportation-efficient development. This includes a better balance of housing and jobs on both sides of the river and other measures that manage additional demand.

In January 2001, the Washington and Oregon governors initiated the Portland/Vancouver I-5 Transportation and Trade Partnership (I-5 Partnership). A 28-member task force was established to guide development of the Strategic Plan for the corridor.

A number of option packages were analyzed, all of which included new river crossing capacity across the Columbia River for transit and vehicles. Each option package was

evaluated against three scenarios – existing conditions 2000, no build 2020, and baseline 2020.

## **Recommendations**

On January 29, 2003, City Council adopted Resolution No. 36120, endorsing the recommended Portland/Vancouver I-5 Transportation and Trade Study Strategic Plan. The recommendations are summarized as:

- Three through lanes in each direction on I-5, including southbound through Delta Park;
- A phased light rail loop in Clark County, in the vicinity of the I-5, SR 500/45h Plain and I-205 corridors;
- An additional span or a replacement bridge for the I-5 crossing of the Columbia River, with up to two additional lanes in each direction for merging and two light rail tracks;
- Interchange improvements and additional merging lanes where needed between SR 500 in Vancouver and Columbia Boulevard in Portland, including a full interchange at Columbia Boulevard;
- Capacity improvements for freight rail that will improve freight and inter-city passenger rail services;
- Bi-state coordination of land use and management of our transportation system to reduce demand on the freeway and to protect the corridor investments;
- Involving communities along the corridor to ensure that the final project outcomes are equitable and committing to establish a fund for community enhancements; and
- Develop additional transportation demand and system strategies to encourage more efficient use of the transportation system.

The resolution included a recommendation that the Oregon Department of Transportation (ODOT) and TriMet partner with the City in a Hayden Island land use and circulation study to address land use, development, and circulation issues on Hayden Island as part of the environmental studies for the bridge influence area in recognition that properties on Hayden Island could be impacted by the recommended transportation investments.

## **Implementation**

Before any improvements recommended in the plan can be made, a formal environmental process must be conducted under the National Environmental Policy Act (NEPA) to identify the specific design of improvements and the impacts. The NEPA process includes public participation and a thorough assessment of environmental and community impacts. Plans for mitigating impacts that cannot be avoided will need to be developed.

On January 8, 2004, City Council adopted Resolution No. 36195, endorsing the formation of a Bi-State Coordination Committee and its Charter to replace the Bi-State Transportation Committee and expand its scope to include transportation, land use, economic development, and environmental justice issues in the vicinity of the I-5 corridor in the Portland-Vancouver area. The committee will be a forum to discuss and make recommendations concerning land use, economic development, transportation, and environmental justice issues of bi-state significance.



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## **KILLINGSWORTH IMPROVEMENTS PLANNING PROJECT**

### **Introduction**

Killingsworth Street is designated as a Region 2040 main street and a station community. It functions as the center for commercial and educational activity for surrounding neighborhoods. In 2002 and 2003, with funding from a state Transportation Growth Management grant, the Portland Office of Transportation worked with community members and business representatives to develop a plan for street improvements along N/NE Killingsworth. The planning project was adopted by City Council on August 7, 2003 (Resolution No. 36161).

### ***Study Location***

The project area is N/NE Killingsworth Street right-of-way between N Interstate Avenue on the west and NE Martin Luther King, Jr. Boulevard on the east. A larger study area includes businesses and institutions that are connected to the project area but are not contained within it. The larger study area allows the project to develop solutions to traffic issues related to the project area. The Killingsworth study area includes Killingsworth Street from N Greeley Avenue to NE Martin Luther King, Jr. Boulevard. Local streets perpendicular to Killingsworth Street between N Emerson Street and N Jessup Street were also included in the study area to identify opportunities to improve access to Killingsworth Street from adjacent neighborhoods.

### ***Study Purpose***

The plan addresses streetscape improvements, including trees, curb ramps and sidewalk improvements, street lights, pedestrian crossing and bus stop changes, traffic signs, trash containers, bicycle access, and art. The plan creates a public investment strategy for the street to improve the quality of the street for local businesses and residents and helps strengthen the connection between Killingsworth Street, the Interstate MAX, the surrounding community, and major destinations such as Portland Community College Cascade. Through improving these connections the project also helps bridge the divide caused by the I-5 freeway.

### **Recommendations**

The recommended transportation improvements adopted by the 19-member Citizens Advisory Committee reflect the community's vision for a vibrant mixed-use Killingsworth main street. The plan calls for reconstructed and widened sidewalks with different streetscape treatments applied in:

- the residential area between N Interstate and N Michigan,
- the main street commercial area between N Michigan and N Borthwick,
- the main street commercial area between N Commercial and N Williams, and
- the campus area between N Borthwick and N Commercial to match the character of those street segments.

The campus area includes improvements to the N Kerby "promenade" between Killingsworth and Jefferson High School.

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Curb extensions are proposed at key locations for street crossings and transit stops, and in areas with narrow sidewalk width to add space for trees and street lights. The plan also identifies transit stop improvements, new ornamental street lights and street furniture such as benches, bike racks, and street art to improve the pedestrian environment. Two design options to widen and landscape the I-5 over-crossing bridge are included.

### **Implementation**

The Killingsworth Street Improvements Project will be implemented through a combination of publicly and privately funded improvements. Design standards and guidelines have also been created through the project to ensure that improvements to individual sites that occur prior to public improvements area consistent with the recommended design of the street.

Phase 1 of the project will complete sidewalk improvements between N Commercial Avenue and N Interstate Avenue. Phase 1 improvements emphasize the key crossing and sidewalk improvements in the main street and campus areas and connect the area with the new Interstate MAX station.

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## **LENTS TOWN CENTER BUSINESS DISTRICT TRANSPORTATION PLAN**

### **Introduction**

The Lents Town Center Business District Transportation Plan results from an intensive analysis of transportation alternatives to support the revitalization of the Lents business district. PDOT and PDC managed the plan, which City Council accepted by Resolution No. 35854 on January 12, 2000.

### ***Study Location***

The plan focuses on the historic core of the Lents business district (the area surrounding the intersection of SE 92<sup>nd</sup> and SE Foster) and the function of the three arterial streets serving the core area: SE 92<sup>nd</sup>, SE Foster, and SE Woodstock.

### ***Study Purpose***

The Lents business district is at the heart of the Lents town center and Lents urban renewal district. City Council created the urban renewal district in 1998 to support revitalization of this economically depressed area and support its designation as a town center in the Region 2040 Growth Concept.

A top priority of the urban renewal plan is to revitalize the core of the business district. The plan directs the City to develop an economic development strategy and to identify transportation infrastructure improvements to support economic development, consistent with the town center concept. The purpose of the Lents Town Center Business District Transportation Plan is to create a comprehensive transportation improvement plan, paying specific attention to improving multimodal accessibility to support the commercial redevelopment goals of the business district.

### ***Objectives***

A citizen advisory committee developed plan objectives to guide the process and to help evaluate proposed alternatives. The objectives include:

- Enhance the pedestrian access and circulation throughout the business district; improve connections into the neighborhood and to transit service.
- Ensure transportation improvements support local commercial redevelopment opportunities.
- Develop a strategy for the provision and management of adequate on and off-street parking to support commercial development.
- Improve transit service and connections; coordinate with high-capacity transit in the I-205 corridor.

- Create a more attractive environment for pedestrians and commercial development through streetscape design and planning.
- Determine the feasibility of decoupling Foster/Woodstock.
- Keep through (non-local) traffic off local streets.
- Maintain acceptable traffic levels of service and stabilize traffic speeds.
- Ensure safety for all modes of travel.
- Improve bicycle access and circulation to and through the business district.

## **Existing Conditions**

### ***Traffic***

Congestion is a problem along 92<sup>nd</sup> in the evening rush hour because of inadequate storage for southbound vehicles between Foster and Woodstock. Significant future growth in traffic volumes is expected. It is anticipated that new development east of I-205 will substantially increase traffic volumes on Foster. Increased traffic congestion on I-205 is likely to increase traffic volumes on 92<sup>nd</sup>, a parallel route.

Although a survey found that most traffic obeyed the posted speed of 35 mph on Foster and Woodstock, people perceive traffic speed as detrimental to the pedestrian and retail environment. This perception results from the current cross-section of the streets, which have narrow sidewalks and no on-street parking to act as a buffer for pedestrians.

### ***Transit***

Transit service to downtown Portland is considered good relative to the rest of the region. However, there are poor transit connections to link Lents to the Gateway regional center to the north and the Clackamas regional center to the south.

### ***Pedestrians and Bicycles***

Pedestrian access and circulation is poor in the business district because of the narrow sidewalk widths, lack of sufficient signalized crossings along Foster and Woodstock, and the volume and speed of traffic moving through the area. The absence of amenities such as landscaping and street trees also makes the area uninviting to pedestrians.

Bike lanes are provided along Foster and Woodstock, creating an adequate east-west connection to the core business district. The north-south connection along SE 92<sup>nd</sup> is incomplete because bike lanes are missing north of Woodstock.

### ***Parking***

On-street parking is limited along Foster and Woodstock. Peak-hour restrictions further reduce the supply at key demand times. Current use of the existing supply is low.

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## **Recommendations**

Using the plan's objectives for guidance, two transportation system alternatives were developed and evaluated. The plan recommends retaining and enhancing the existing one-way Foster/Woodstock couplet through the business district. The plan also includes a streetscape developed in conjunction with the preferred street network and provides specific design guidelines for sidewalks, street trees, and street lighting.

### ***Transportation Projects***

The plan recommends the following transportation improvements:

- Widen the sidewalks along Foster, Woodstock, and 92<sup>nd</sup> Avenue
- Stripe bike lanes on 92<sup>nd</sup> Avenue
- Provide on-street parking along both sides of Foster and Woodstock
- Install new traffic signals at the intersections of Woodstock and Foster with 90<sup>th</sup> and 91<sup>st</sup>

### ***Other Transportation Recommendations***

The plan also recommends the following actions:

- Study the feasibility and desirability of providing a direct connection between Harold and Ellis in the vicinity of 92<sup>nd</sup>.
- Work with Metro and Tri-Met to study and develop a high-capacity transit system in the I-205 corridor, including a station in Lents.

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## **NORTH MACADAM DISTRICT PLANNING**

### **Introduction**

The North Macadam District is a 130-acre sub-district of Portland's Central City. As the last major undeveloped area of the Central City, this area presents the opportunity to create a vibrant new urban district.

Several planning efforts have occurred to define a development strategy for the district. Currently, the Planning Bureau, PDC, PDOT, the Bureau of Environmental Services, and the Parks Bureau are jointly refining the North Macadam Framework Plan. Adoption of the updated plan is expected in summer 2002.

### ***Study Area***

The North Macadam District is located along the Willamette River south of Portland's downtown area. As defined by the Central City Plan, the North Macadam sub-district is bounded by the I-5 freeway to the west, the Willamette River to the east, the Marquam Bridge to the north, and Hamilton Court to the south.

### ***Study Purpose***

North Macadam has the potential become a vibrant mixed-use urban district of Portland's Central City. The purpose of the City's planning efforts is to develop a common vision for how the district should develop and to establish a regulatory framework to support the vision's realization.

### ***Previous Studies***

#### *North Macadam Framework Plan*

The North Macadam Framework Plan was initiated by PDC and the North Macadam Steering Committee in June 1997 and accepted by City Council in August 1999. The plan defines goals, objectives, and an overall vision to guide future redevelopment of the North Macadam District. It also describes an implementation strategy, including proposed actions the public and private sectors can take to achieve the vision, and conceptual amendments to the City's Comprehensive Plan and development code to support the vision.

#### *Urban Renewal District*

City Council accepted the North Macadam Urban Renewal District on August 11, 1999. The urban renewal district will provide tax increment dollars to fund the public improvements needed to support redevelopment. Urban renewal will also leverage the private investments required to realize the vision presented in the Framework Plan, and will be the primary mechanism for creating public/private partnerships.

*North Macadam Proposed Revisions to Plans and Title 33: Zoning Code*

When the Framework Plan and urban renewal district were created, the Bureau of Planning was directed to propose amendments to existing plan policies, development regulations, and design guidelines. The proposed amendments are currently under review.

*North Macadam Street Plan*

The North Macadam Street Plan was developed by PDOT and accepted by City Council as part of the City Engineer's report on November 12, 1996. The Street Plan identifies the optimum location, dimensions, and right-of-way requirements for future public streets and accessways to support urban development of the district. The plan integrates various urban design and transportation planning principles and provides multimodal services for current and planned land uses in the district.

*North Macadam Right-of-Way Criteria and Street Standards*

Street standards developed for North Macadam in 1997 add further detail to the Street Plan guidelines. The design criteria and standards in this document establish a detailed common understanding of the required improvements for streets and accessways within the public right-of-way.

*North Macadam Transit and Parking Strategies*

PDC asked PDOT in 1999 to help develop a parking and transit strategy for the North Macadam District. PDOT analyzed the relationship between travel demand and transit and parking. Using the Metro travel model, PDOT calculated the number and types of trips produced by and attracted to North Macadam, and determined the level of transit service and amount of parking required over the next 20 years.

## **Existing Conditions**

### ***Demographics***

Historically, North Macadam was an active industrial district with companies involved in manufacturing, shipbuilding, and steel production. Today, North Macadam has large plots of vacant land and a mixture of smaller industrial and commercial businesses. It currently accommodates approximately 3,000 jobs and 300 housing units. By 2020, the district is envisioned to grow to 8,500-10,000 jobs and 1,500-3,000 housing units.

### ***Land Use***

The district currently consists primarily of vacant land. The district has remained largely undeveloped for many reasons, including inadequate infrastructure and soil contamination. The primary limitations on future development are transportation access and circulation constraints and lack of transit service.

### ***Zoning***

The majority of North Macadam is currently zoned central commercial, which is intended to provide for a broad range of uses in the City's most urban commercial districts. The Planning

Bureau initiated a process in 1999 to update the Central City Plan and Title 33: Zoning Code and to create regulations specific to North Macadam and consistent with the Framework Plan vision. The proposed changes add bonus options and overlays to encourage the desired mixture of jobs and housing. The proposed zoning also includes a 100-foot greenway along the Willamette River shoreline.

### ***Transportation***

#### *Traffic*

Only a small portion of the planned street network identified in the North Macadam Street Plan has been completed to date. Two new north-south streets are planned. Bond is designated as a Traffic Access Route and will serve as the primary street through the center of the district. River Parkway is designated a Local Service Street and will serve developments along the eastern edge of the district and the greenway. East-west local service streets are also planned to provide for circulation within the district. Pedestrian and bicycle accessways will connect this new street system to the greenway trail.

Vehicle access to North Macadam is limited to two primary traffic portals: SW Moody/Harbor Drive to the north and SW Bancroft to the south. Although traffic congestion currently is not a major issue in the district, limited vehicle access and circulation will be a growing issue and a constraint on development potential as the district develops.

#### *Transit*

Current transit service is minimal, with only a few bus lines travelling along the western and northern edges of the district. However, extensive transit improvements are planned to meet the growing demand of residents, employees, and visitors. Multiple new bus lines, the Central City streetcar, light rail, and an aerial connection from Oregon Health Sciences University (OHSU) are all proposed to serve the district. A transit hub is proposed near SW Moody and Gibbs to provide a focussed connection between these transit investments.

#### *Pedestrians and Bicycles*

All streets in the district will meet or exceed City guidelines for sidewalks. A number of enhanced pedestrian streets are proposed to provide an improved pedestrian environment at key retail locations.

Bond Street is designated as a Central City Bikeway and will serve as the primary on-street bike route through the district. The greenway trail will be built to accommodate both bicycle and pedestrian traffic and will also serve an important transportation and recreation function.

#### *Parking*

Parking in North Macadam will be provided through a mixture of on-street spaces, surface lots, and structured lots. Because of the constrained street network and access portals, managing the supply of parking is of key importance to the district's future viability. Proposed parking regulations will manage the supply of off-street parking to improve mobility, promote the use of alternative modes of transportation, maintain air quality, and enhance the urban form of the district.



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## **NORTHWEST DISTRICT PLAN**

### **Introduction**

The Northwest District Plan (NWDP) updates the 1977 Northwest District Policy Plan in the Comprehensive Plan. The plan includes new Comprehensive Plan policies, objectives and implementation actions along with new zoning regulations in Title 33. It also amends the Guild's Lake Industrial Sanctuary Plan and the Central City Plan.

### ***Study Location***

The Northwest study area is generally bounded on the south by West Burnside Street, on the north by NW Vaughn Street and NW St. Helen's Road, on the east by the I-405 freeway and on the west by the Hillside neighborhood and Forest Park. The boundary of the Northwest District Plan generally corresponds to the Northwest district neighborhood, except for those portions that are within the Guild's Lake Industrial Sanctuary (north of NW Vaughn Street) and the central City (west of I-405 and along West Burnside Street) plan areas.

### ***Study Purpose***

The plan provides policy direction for the Northwest District in the areas of land use, urban design, transportation, housing, and economic development. The (NWDP) builds upon the 1999 Northwest District Association (board-adopted) Northwest District Neighborhood Plan. The NWDP is intended to protect and enhance the livability, urban character and economic vitality of the Northwest District neighborhood while providing guidance for change over time.

The NWDP was adopted by City Council in two parts – the plan itself, and a parking plan that further amends the Northwest District Plan and plan district.<sup>1</sup> The overall plan was adopted by City Council on September 24, 2003 (Ordinance No. 177920, effective November 8, 2003). The parking plan was adopted on November 5, 2003 (Ordinance No. 178020, effective date December 20, 2003).

## **Northwest District Plan Transportation Policy and Objectives**

The transportation policy for the NWDP states, "Provide a full range of transportation option for moving people and goods thereby supporting neighborhood livability and commerce and reducing reliance on the automobile."

The adopted objectives support:

- Increasing the availability of, and incentives to, alternatives to the automobile.
- Maintaining and reinforcing the historic street grid.
- Providing safe and convenient access to public transit and improving service.
- Maintaining and improving bicycle and pedestrian connections.
- Enhancing the main streets and streetcar line as pedestrian places.
- Providing convenient bicycle parking.

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<sup>1</sup> The NWDP is under appeal. If the appeal is upheld, this section will be modified to reflect the outcome and projects in Chapter 3 of the TSP may need to be modified or changed.

- Preserving the function of local streets and using traffic calming methods as needed.
- Avoiding street improvements that would accommodate increased vehicular traffic
- Discouraging through-commuter and truck traffic in residential zones.

### ***Northwest District Plan Parking Policy and Regulations***

The Parking Policy states, “Provide and manage parking to serve the community while protecting and enhancing the livability and urban character of the district.” Its objectives support:

- Reducing the demand for automobile parking.
- Providing efficient use of on- and off-street parking.
- Providing for a limited amount of additional structured parking while minimizing its impact on the main streets and streetcar line.
- Discouraging parking by PGE patrons and Central City commuters.
- Encouraging turn over of on-street visitor parking and focusing it along NW 21<sup>st</sup> and 23<sup>rd</sup> Avenues.
- Encouraging new parking to be in structures and limiting new surface lots.

### ***Northwest District Master Street Plan***

The NWDP includes a master street plan for the part of the district that currently has oversized blocks and EXd (Mixed employment) zoning. The master street plan becomes a new objective in Goal 11B, Policy 11.11, Street Plans, of the Transportation Element of the Comprehensive Plan. The master street plan will guide the location of new streets as this part of the district redevelops and intensifies over time. The new NW 20<sup>th</sup> connection could act in concert with improvements at the NW 23<sup>rd</sup>/Vaughn/I-405 ramps improvement identified in the Action Chart.

### **Northwest District Transportation Fund**

As part of the Northwest District Plan, Council adopted a Northwest Transportation Fund Bonus Option for the Transition Subarea and for the North of Vaughn area. Non-residential uses can generate a lot of peak-hour traffic that will negatively impact the neighborhood’s streets. By requiring development to contribute to a fund when building over a 1:1 floor area ratio, money will be accumulated that can finance the needed transportation improvements.

City Council adopted Ordinance No. 177993 on October 22, 2003, amending Title 17, Public Improvements, to implement the Northwest Transportation Fund. The Northwest Transportation Fund revenues can be used to provide transportation improvements in the area bounded by NW Pettygrove Street, NW Nicholai Street, the I-405 freeway and NW 27<sup>th</sup> Avenue. The revenues can also be used in the immediate vicinity of this area if the need arises. The revenues can be used to address both existing deficiencies and the transportation impacts of growth. No specific projects are earmarked for funding although the intersection of NW 23<sup>rd</sup> and NW Vaughn was identified during the planning process as needing improvements to address congestion and to be improved as a gateway to the Northwest District neighborhood.

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## OPPORTUNITY GATEWAY CONCEPT PLAN

### Introduction

The Opportunity Gateway Concept Plan is the result of a year-long planning process to determine long-term transportation, land use, parks, and other public services in the Gateway regional center. PDC managed the project, in cooperation with PDOT, the Planning Bureau, and the Parks Bureau. City Council accepted the plan by Resolution No. 35867 on February 23, 2000.

### *Study Location*

The study area comprises approximately 600 acres. It is bounded on the north by the NE Halsey/Weidler couplet, on the south by SE Market Street, on the west by I-205, and on the east by a ragged line to the east of 102<sup>nd</sup> that delineates the boundary between single-family zoning and multi-family zoning.

### *Study Purpose*

The Region 2040 Growth Concept designates Gateway as a regional center, the only area within the City of Portland to receive such a designation. Gateway occupies an important position in the regional hierarchy of development. The district is envisioned to become a center of activity for east Portland--a destination for employment, shopping, and recreation as well as home to thousands of people.

### *Project Principles, Goals, and Objectives*

#### *Standing Principle*

##### ESTABLISH THE GATEWAY REGIONAL CENTER

The purpose of all urban renewal activities is to facilitate the full and productive use of the land for appropriate regional center uses. The regional center concentrates compact mixed-use development that is home to a range of travel and housing options, and multiple opportunities for community interaction and economic advancement. It is a physical and functional center for housing, employment, and services. It is physically defined by a pedestrian orientation that contributes to a clear and attractive identity. It is distinguished by the ongoing efforts of citizens, government, and investors to be a part of the individual and institutional choices that shape the look, feel, and function of the regional center.

#### *Subordinate Principles*

##### 1. Utilize Information Public Participation

###### Goals and Objectives

- Inclusiveness
- Leadership
- Education
- Accountability

##### 2. Maximize Investment in the District

###### Goals and Objectives

- Community Investment
  - Strategic Public Investment
  - Policy-Supportive Private Investment
3. Establish a Distinctive Identity  
Goals and Objectives
- Unity and Coherence
  - Attractive Appearance/Deliberate Design
  - Elimination of Visual Blight
  - High-Visibility Projects
4. Support Compact Development  
Goals and Objectives
- Respect Adjacent Neighborhoods
  - Efficient Land Use
  - Focus on Station Areas
5. Support a Mixture of Land Uses  
Goals and Objectives
- Within the District
  - Within Development Projects
6. Create a Mixture of Public Spaces  
Goals and Objectives
- Parks and Plazas
  - Rights-of-Way
  - Public Buildings
7. Establish a Pedestrian Orientation  
Goals and Objectives
- Safety/Amenities
  - Destinations
  - Connectivity/Accessibility
  - Visual Interest
8. Expand and Improve Travel Options  
Goals and Objectives
- Street Grid
  - Facilitate Non-Auto Trips
  - Transit Improvements
  - Traffic Management
9. Expand and Improve Housing Options  
Goals and Objectives
- Mixed Income
  - Home Ownership
  - Neighborhood Compatibility
  - Minimize Residential Displacement

## 10. Enhance Economic Opportunities

### Goals and Objectives

- Support Small Local Business
- Employment Center
- Family Wage Jobs
- Complement I-205 Corridor Development

## **Existing Conditions**

### ***Demographics***

Largely developed after World War II, the Gateway area is characterized by low-density, suburban-style development. It consists primarily of small and medium-sized businesses, medical and dental offices, national retail chains, and a mixture of single-family and multi-family housing. Today, it has a relatively small population and large employment base. The largest employer in the district is the Adventist Medical Center, with more than 2,000 employees. Like many inner-ring suburban areas, Gateway shows signs of disinvestment and stagnation: few new businesses, a lack of parks and open space, an aging building stock, vacant and poorly maintained property, and a jumble of unplanned land uses.

### ***Land Use***

Existing land uses in the study area result from mostly unregulated suburban development following World War II. The north and south ends are dominated by auto-oriented retail uses surrounded by large surface parking lots. The southern third is composed of low-intensity industrial uses. The northern two-thirds is filled with aging single-family and multi-family use, with strip commercial on 102<sup>nd</sup> Avenue.

Little new development has occurred within the study area since 1980. During the last five years, however, this trend has begun to reverse itself, particularly with regard to multi-family housing. Several new large-scale residential developments have been built in Gateway, and several more are being planned.

### ***Economic Development***

The primary/local trade areas for business in the study are the nearby neighborhoods. Traffic modeling done for the area shows that more than half of the traffic on 102<sup>nd</sup> is of local origination. The area has excellent access. It is served by two freeways (I-84 and I-205), two light rail lines, eastside MAX and airport MAX, one major north-south urban arterial, 102<sup>nd</sup>, and five east-west urban arterials (Stark, Washington, Glisan, Halsey, and Weidler) that serve many regional destinations. It is also well located between the existing commercial centers at Lloyd District, Gresham, and Portland International Airport.

The ease of access to Gateway has made it particularly attractive for new multi-family residential development in the last five years.

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## Transportation

### *Traffic*

The urban arterials and Gateway have multiple and sometimes conflicting transportation functions, including freeway access, linking neighborhoods to the regional center, and serving as a major regional transit hub (the largest outside of downtown Portland).

Major traffic congestion currently occurs on Glisan at both the freeway entrance and 102<sup>nd</sup> and will continue in the future. Other arterials operate at near capacity, both now and in the future. High levels of congestion also occur around the Gateway Transit Center as a result of bus and auto access to the rail platforms and parking. For example, over 200 buses pass through the intersection of NE 99<sup>th</sup> and Pacific during both the a.m. and p.m. peak hours.

### *Transit*

Gateway has the best transit service in the region, outside of downtown Portland. With the opening of Airport MAX in September 2001, light rail headways at the Gateway Transit Center will be approximately every three minutes. Planned transit service changes after Airport MAX is opened will provide 15-minute service on Halsey/Weidler, Stark, and Washington. Line 15 will travel the length of the district from Main Street to the Parkrose park-and-ride facility.

### *Pedestrians and Bicycles*

There is a bike path along I-205 and bike lanes along some of the east-west arterials (Halsey, Glisan, and Stark). The north-south bike access is limited.

Pedestrian facilities are equally, if not more, lacking. Pedestrian travel is restricted by the lack of a local street network; as a result, most pedestrian travel is indirect and inconvenient.

### *Parking*

Parking is abundant in Gateway, except in and around the transit center park-and-ride lot at the Gateway light rail station. Parking there is scarce, resulting in widespread use of on-street parking in the adjacent neighborhood after the park-and-ride lot is full.

## Recommendations

This intensive two-year planning process resulted in a concept plan map and associated public infrastructure improvements and redevelopment strategies. The concept map will guide future development and policy decisions affecting Gateway. The most important principle illustrated in the map is the unification of the 650-acre district, using an improved street network and park system.

### *Transportation Projects*

The plan identifies the following key transportation improvements:

- Improve SE 102<sup>nd</sup> as a boulevard.
- Transform SE 99<sup>th</sup> into a local carrier and spine for the district's new identity.
- Create additional north-south local street connections.

- Improve freeway access points on major east-west arterials to create a friendlier environment for local traffic, pedestrians, and transit users.

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## PLEASANT VALLEY PLAN DISTRICT

### Background

The Pleasant Valley Plan District was created to manage growth in an area that was added to the Urban Growth Boundary in 1998. In 2000, the cities of Portland and Gresham, in partnership with Metro, Clackamas and Multnomah Counties, and the Johnson Creek Watershed Council, embarked on the Pleasant Valley Concept Plan. The Concept Plan is a guide to the creation of a new 1,532-acre community neighborhood south of Gresham and east of Portland. The planning process created a vision and a plan for the transition of a rural community of 800 residents into an urban community of approximately 12,000 residents and 5,000 jobs. The Pleasant Valley Plan District is the City's implementing tool for the Pleasant Valley Concept Plan and the Pleasant Valley Implementation Plan. The Pleasant Valley Plan District was adopted by City Council on December 15, 2004 (Ordinance No. 178961).

### Pleasant Valley Concept Plan

Key features of the Pleasant Valley Concept Plan include:

- A mixed-use town center as the focus of retail, civic and related uses.
- A new elementary school and middle school located adjacent to 162<sup>nd</sup> Avenue.
- The location of major roads away from important historic resources and 'park blocks' that connect the town center to the historic central section of Foster Road.
- A framework for protection, restoration and enhancement of the area's streams, flood plains, wetlands, riparian area and major tree groves through the designation of areas as 'environmentally sensitive/restoration areas' (ESRAs).
- Designation of a 'neighborhood transition design area' adjacent to the ESRA so that neighborhood development is compatible with adjacent green corridors.
- A 'green' stormwater management system intended to capture and filter stormwater close to the source through extensive tree planting throughout the valley, 'green' street designs, swale conveyance and filtration of run-off, and strategically placed stormwater management facilities.
- Nine neighborhood parks dispersed throughout and a 29-acre community park centrally located between the utility easements north of Kelley Creek.
- A network of trails including east-west regional trails paralleling Kelley Creek and north-south regional trails following the BPA power line easement.
- A reorganization of the valley's arterial and collector street system to create a connected network that will serve urban levels of land use and all modes of travel.
- Re-designation of Foster Road from arterial to local street status between Jenne Road and Pleasant Valley Elementary School. The intent is to preserve the two-lane, tree-line character of Foster Road and to support restoration efforts at the confluence areas.
- A network of transit streets that serve three mixed-use centers and seven nodes of attached housing.
- A variety of housing organized in eight neighborhoods.
- Planned housing that is 50 percent attached, 50 percent detached and has an overall density of 10 dwelling units per net residential acre.
- Two five-acre mixed-use neighborhood centers.



- Employment opportunities in the town center, mixed-use employment district, and general employment district as well as home-based jobs.

The cities of Gresham and Portland have agreed to adopt similar policies and development codes to achieve the goal of ‘creating a complete community’. Portland will eventually annex approximately 290 acres of the study area and Gresham will annex the other 1,242 acres.

### **Pleasant Valley Implementation Plan**

In 2002, Gresham and Portland started the Pleasant Valley Implementation Plan project. The purpose of the implementation plan was to create a report that would provide a bridge document between the 2002 Concept Plan and final comprehensive plan amendments, ordinances and intergovernmental agreement. The Pleasant Valley Implementation Plan was completed in December 2003. The Plan includes:

- A plan district map with refined residential land use districts
- Draft land use districts and development code
- Major street functional and design classifications
- A street connectivity plan and bike and trail plan
- A State Goal 5 natural resources analysis and draft regulatory code
- A public facility plan for water, wastewater, stormwater, transportation, and parks to generally describe projects, costs, timing, and funding options
- An annexation analysis and strategy report to compare infrastructure costs and revenues, nest fiscal positions in sub-areas of Pleasant Valley, and preliminary annexation strategies.

### **Transportation**

Goal 8 of the Concept Plan states, “Pleasant Valley shall be a community where a wide range of safe and convenient transportation choices are provided.” The intent is to transition a transportation system that was designed to serve the farm-to-market travel needs of an agricultural community to an urban system adequate to serve the growing demand and reduce its impact on the area’s streams and wetlands.

The Implementation Plan defines the transportation system for the area. The plan includes:

- A functional classification for streets
- Street design types illustrating street cross-section designs and location of collector and arterial streets
- Connectivity plan that responds to Metro’s requirements of an overall spacing standard of 530 feet
- A bike and trail plan that includes regional trails and additional local walking/hiking trails.
- An illustrative street plan that helps illustrate the recommended spacing for local street connections with the collector and arterial street network.

### **Pleasant Valley Natural Resources Overlay Zone**

An overlay zone was adopted by the City for Pleasant Valley that differs in several substantial ways from the City's existing environmental protection program. The overlay zone protects continuous natural areas along streams, but allows new development in some cases. In terms of transportation, standards for rights-of-way are intended to protect natural resources by requiring bridges where streets cross streams, limiting fill and excavation, requiring mitigation, and limiting street to only those shown in the Pleasant Valley Street Network Plan along with common greens and pedestrian connections.

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## **PORTLAND AERIAL TRAM STUDY**

### **Introduction**

The Portland Aerial Tram study grew out of the Marquam Hill Plan (2003) as a transportation tool to address growth in traffic on Marquam Hill due to institutional uses and to link to South Waterfront where Oregon Health Sciences University (OHSU) intended to expand. As the Marquam Hill Plan was in its final stages in early 2002, the Portland Aerial Transportation, Inc. (PATI) was created as a non-profit board to provide oversight of the design and construction of the tram. The PATI board asked PDOT to undertake an independent analysis of connection options between Marquam Hill and South Waterfront. A public process was developed and presented to the Portland Planning Commission for advice and to City Council for acceptance.

### ***Background***

OHSU, along with other developer parties, has recognized the value of developing in South Waterfront, but recognized its access limitations. OHSU participated in early transportation planning efforts for South Waterfront, including looking at ways to connect to Marquam Hill. OHSU concluded that of the options available, an aerial tram would be the best way of making this connection. Construction of an aerial tram was proposed to serve new development in South Waterfront, including an OHSU expansion, and the concept was included as a “study item” in the Marquam Hill Plan, adopted by City Council in July 2003.

In order to assess the various alternatives for connecting Marquam Hill to South Waterfront, and to provide a clear public process, PDOT developed a “Process for Consideration of a Suspended Cable Transportation System.” The process was comprised of five primary steps:

- Phase 1: Process Development
- Phase 2: Project Assessment
- Phase 3: Policy Evaluation
- Phase 4: Design Development
- Phase 5: Preliminary Engineering/Final Engineering/Construction

The intent of the process was to evaluate and select the best options for connecting Marquam Hill to South Waterfront and to provide City Council with a public go/no-go decision on the preferred option at the end of each phase. The process was intended to respond to the fact that the tram, if it were to be developed further, would be a public transportation project, located within the public right-of-way and owned by a public agency.

To date, City Council has taken action on the first three stages of the process. The Process Development Phase was accepted by Resolution No. 36071 on May 23, 2002; the Project Assessment Phase was accepted by Resolution No. 36085 on July 10, 2002; and the Policy Evaluation Phase was completed by City Council as part of their adoption of the Marquam Hill Plan on July 10, 2002. Since then City Council has taken a number of actions to complete Phase 4 including a work plan, approving contracts with PATI, directing PDOT to undertake a competitive design competition, and approving contracts for pre-construction services. The Portland Aerial Tram Final Report and Recommendations (adopted by City Council Resolution No 36224 on June 10, 2003) provides the information that City Council needs to complete the Design Development phase of the process and direct the completion of

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the Final Engineering and Construction phase. Upon completion of the Design Development phase and the acceptance of those recommendations, the primary decisions related to the tram project will be in place, with the exception of contractual items which will be finalized as the tram design is completed.

### **Recommendations**

The Final Recommendations and Report includes a Concept Plan that is a vision for the South Portland area, providing an urban design context for the aerial tram project and reflecting the community's desire to improve the neighborhood consistent with long-standing neighborhood priorities. The implementation of the Concept Plan is the key to ensuring that neighborhood livability improves, that tram impacts are reduced or offset, and that the tram is integrated into Portland's urban fabric and transportation system. Out of the Concept Plan came recommendations for the area that are organized in five categories: Marquam Hill, Terwilliger Parkway, Lair Hill, South Waterfront, and Regional. Within the five categories, projects are prioritized into three tiers.

### **Implementation**

City Council directed PDOT to proceed with implementation of the Tier 1 Study and Project Lists, although many projects will be done through other entities, including OHSU, the Parks Bureau, and private property owners. Many of the projects are already included in the TSP. Projects and one study are being added to the TSP with its first update.

In addition, the Council directed the City Engineer to complete the final design for the tram and to issue the design as a City Standard Improvement in the Right-of-Way.

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## **POWELL/FOSTER CORRIDOR TRANSPORTATION PLAN**

### **Introduction**

In the fall of 2002, Metro commenced a Phase 1 Corridor Transportation Plan. The need for a study was identified in the Regional Transportation Plan (RTP) and the TSP. The purpose of Phase 1 was to define and preliminarily evaluate an initial range of multi-modal alternatives that will accommodate the 2020 corridor travel demand in a way that supports the 2040 Concept Plan. The Cities of Portland and Gresham, Multnomah and Clackamas counties, the Oregon Department of Transportation (ODOT) and TriMet partnered with Metro in this planning effort. The plan was funded by Metro and the State Transportation Growth Management Grant Funds.

### ***Study Location***

The Powell/Foster Corridor study area is generally defined as follows: 1) The northern boundary is roughly north of division Street from OR Highway 99E (McLoughlin Boulevard) in Portland to 242<sup>nd</sup>/Hogan Road in Gresham; 2) The eastern boundary is roughly 242<sup>nd</sup>/Hogan Road from Burnside Street to OR Highway 212 and 232<sup>nd</sup> from OR 212 to OR 224; 3) The southern boundary runs roughly along the Clackamas River from 232<sup>nd</sup> to OR 212, northward along 152<sup>nd</sup>, 147<sup>th</sup> and 145<sup>th</sup>, along SE Clatsop and SE Flavel from 147<sup>th</sup> to 36<sup>th</sup>, and just south of Tomas Street from 36<sup>th</sup> to OR 99E; 4) The Western boundary is OR 99E from Bybee Boulevard to Hawthorne Boulevard.

### ***Study Purpose***

Due to extensive growth in the eastern part of the study area, congestion has become an increasingly serious problem in the Powell/Foster Corridor. This congestion will continue to increase as the unincorporated rural communities of Pleasant Valley and the Damascus area develop and add substantial amounts of new housing and jobs. Despite regional policy changes to level of service (LOS) standards that permit greater levels of congestion, changes are needed within the Corridor to provide multi-modal access to Portland's Central City, to Regional Centers in Gresham and Portland, and to Town Centers in Lents, Pleasant Valley, and Damascus as well as to Employment Areas identified in the 2040 Concept Plan.

The goal of the Powell/Foster Corridor Transportation Plan is to identify the complementary transit, roadway, bicycle and pedestrian networks and transportation demand management (TDM) and transportation system management (TSM) strategies that meet the Corridor's anticipated 20-year travel demand based on projected land uses.

Some of the key criteria used to develop and evaluate alternative were:

- Cost effectiveness
- Impacts to neighborhoods and the environment
- Preservation of the through movement function of the alternatives
- Safety; and
- Opportunities for access management.

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## Alternatives Evaluation

Metro and David Evans (DEA), with input from the Powell/Foster Technical Advisory Committee (TAC) and Project Management Group (PMG), conducted a preliminary evaluation of the initial range of multi-modal alternatives for primary roadway segments within the Powell/Foster Corridor. The evaluation of initial alternatives was based on system-wide and corridor-level travel performance measures, as well as planning level environmental and engineering measures.

## Recommendations

The Phase I recommendations are organized by transportation mode and facility segment or route. Projects have been prioritized into three categories based on needs: short-term (within 5 years); intermediate term (5 – 10 years); and long-term (10+ years). (The recommendations below affect facilities within Portland only.)

**Powell Boulevard (Ross Island Bridge to I-205).** Develop and implement streetscape improvements to Powell between the Ross Island Bridge and SE 50<sup>th</sup> Avenue, including pedestrian crossing improvements.

**I-205/Powell Boulevard Interchange.** Design the short-term design and construct improvements to allow full turn movements at the Powell Boulevard and I-205 interchange. Pursue the study in the TSP to plan and design modifications to the existing overpass with full access ramps to I-205.

**Powell Boulevard (I-205 to SE 174<sup>th</sup>).** In the short term, conduct a project development study to determine the right-of-way requirements and general dimensions needed to support four traffic lanes, plus turn lanes where needed, as well as bike lanes and sidewalks. The project development study should examine detailed needs and develop schematic designs that support multi-modal transportation needs and planned land uses in this segment. It should include significant community input and address specific needs for turn lanes, lane widths, signals and other traffic control, bicycle facilities, pedestrian refuges, bus stops, stormwater management, and access management. For the segments from 122<sup>nd</sup> to 162<sup>nd</sup> Avenues, alternative interim improvement approaches may be considered, subject to further specific needs analysis and compatible with the long term planned street improvements.

**Foster Road (Powell Boulevard to I-205).** Implement the Inner Foster Transportation and Streetscape Plan.

**Foster Road (I-205 to Jenne Road).** Widen Foster Road to a four-lane section from Se 122<sup>nd</sup> to Barbara Welch Road and advance a range of alternatives to be studied in Phase II of the Powell/Foster Corridor Transportation Plan from Barbara Welch Road to Jenne Road. The Phase II Plan should consider the need for, and feasibility of, various two to four lane configurations east of Barbara Welch.

**Jenne Road/New 174<sup>th</sup> Avenue.** As part of Phase II of the Corridor Plan, complete a project development study of a new extension of SE 174<sup>th</sup> between Jenne and the future Giese Roads. A new extension of SE 174<sup>th</sup> may be in lieu of widening Jenne Road to three lanes between Foster and Powell.

**Transit Recommendations.** The study affirms the RTP designation of Foster Road as Rapid Bus. Roadway design should incorporate transit-preferential treatment for transit. Transit preferential treatments should also be included in the design of Powell between I-205 and SE 174<sup>th</sup>. The study recommends improvement in north-south bus service serving the growing areas.

**Bicycle/Pedestrian Recommendations.** Significant pedestrian and bicycle improvements are needed throughout the corridor to provide connections to regional and town centers and other key land uses and encourage the use of alternative modes. Streets within Portland's portion of the study area with TSP pedestrian/bicycle projects are: SE 92<sup>nd</sup>, SE Division, SE 122<sup>nd</sup>, SE Holgate, SE 111<sup>th</sup>/112<sup>th</sup>, Foster/Woodstock within Lents, SE 50<sup>th</sup>/52<sup>nd</sup>, and SE 136<sup>th</sup>.

***METRO COUNCIL ADOPTED ON OCTOBER 23, 2003 RECOMMENDATIONS TO IMPLEMENT THE ROADWAY, BICYCLE, PEDESTRIAN, AND TRANSIT IMPROVEMENTS THROUGH CHANGES TO THE RTP AND LOCAL TRANSPORTATION PLANS, DEVELOP MORE DETAILED DESIGN AND ENVIRONMENTAL STUDIES OF SPECIFIC IMPROVEMENTS AND, IN SOME CASES, ADDITIONAL ANALYSIS DURING THE NEXT PHASE OF THE CORRIDOR STUDY.***

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## **RED ELECTRIC TRAIL PLANNING STUDY**

### **Background**

The Southwest Urban Trails Plan, completed in July 2000 by the Portland Office of Transportation (PDOT), recommended the Red Electric historic rail alignment as one of seven possible walking routes in southwest Portland. In January 2003, the Fanno Creek Greenway Trail Action Plan was finalized, recommending that the Red Electric alignment be studied as the easternmost portion of that regional trail system extending to Tigard. In October 2003, Portland Parks and Recreation, with the assistance of the Office of Transportation, began the Red Electric Trail Study to investigate potential routes for an east-west trail that would extend the Fanno Creek Greenway Trail, creating a continuous, 16-mile bicycle and pedestrian trail between the Willamette and Tualatin Rivers.

### **Process**

A comprehensive public involvement process was developed that focused initially on landowners and neighbors living along potential routes. A public open house was held in June and October 2004. A draft trail study was released for public review and comment in August/September 2005.

Staff reviewed potential routes and trail types in the field to evaluate road crossings, note sight distance constraints, select potential sidewalk locations and locate right-of-way encroachments.

### **Recommendations**

The process resulted in a recommended route, with some other options that could still meet project criteria and result in a safe and useful east-west route for a diversity of trail users. The trail would look different along various stretches of the route, based on existing conditions, topography, and other features. Cost estimates were developed for each project-sized segment. It will likely take decades to design and construct all segments, but will ultimately offer increased recreational opportunities as well as transportation use to southwest Portland residents and visitors.

Once City Council has taken action on the study, the Transportation System Plan classification maps (and potentially master street plan map) for southwest Portland will be updated to reflect the adopted alignment.



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## **RUSSELL STREET IMPROVEMENTS PLANNING PROJECT**

### **Introduction**

North Russell Street was the main street of the original City of Albina and connected the Lower Albina industrial area and the river with the commercial hub at the intersection of Russell Street and N Williams Avenue. It forms the core of the Russell Street historic district that was adopted in 1993 by City Council. In 2002 and 2003, with funding from a state Transportation Growth Management grant, the Portland Office of Transportation worked with community members and business representatives to develop a plan for street improvements along N/NE Killingsworth. The Russell Street Improvement Planning Project was adopted by City Council on November 19, 2003 by resolution (No. 36184).

### ***Study Location***

The project area is N Russell Street right-of-way between N Interstate Avenue on the west and N Williams Avenue on the east. It also includes N Mississippi between N Interstate and N Russell and N Albina between N Interstate and N Russell. Russell Street is the main east-west corridor in the Lower Albina area and provides a connection from the Mississippi/Albina light rail station, as do Albina and Mississippi, and the Lower Albina Industrial area to the major employment center at Legacy Emanuel Hospital and the residential part of the Eliot neighborhood.

A larger study area includes Emanuel Hospital, Harriet Tubman Middle School and the Lower Albina Industrial Sanctuary. The larger study area allows the project to develop solutions to pedestrian and traffic issues on streets connected to the project area.

### ***Study Purpose***

During the development of the 2002 MAX Station Area Revitalization Strategy, business owners and community members in the Eliot neighborhood were concerned about the impact the new light rail station at Mississippi/Albina would have in their area. Their concerns led to this study to plan street improvements for the Russell Street corridor.

The goals of the study were to:

- Identify barriers to pedestrian and bicycle access to the light rail station;
- Define priority access routes for pedestrian and bicycle travel, and any needed improvements along those routes;
- Create a streetscape design plan for N Mississippi and N Albina Avenues from N Interstate to N Russell and N Russell Street from N Interstate to N Williams;
- Identify streetscape improvements and create attractive, safe, and convenient pedestrian and bicycle access to light rail and to support planned land uses;
- Provide connections to the residential part of the Eliot neighborhood and Emanuel Hospital Street via N Russell Street; and
- Enhance the pedestrian environment around the light rail station.

The specific objectives were to:

- Recognize the diverse historic, cultural, and ethnic identity of N Russell Street east and west of I-5.

- Design improvements in a way that accommodates through truck traffic serving businesses in the industrial area.
- Identify improvements to create not only safe and convenient pedestrian and bicycle access to light rail, but improvements that draw and motivate people to want to explore this unique area and benefit from the transportation opportunities.
- Provide connections to the Eliot neighborhood and Emanuel Hospital via Russell Street.
- Enhance pedestrian environment around the light rail station.
- Balance the needs of retaining businesses in the Lower Albina Industrial Sanctuary with the needs of providing safe pedestrian access to the light rail station for existing institutions and residents.
- Plan bicycle access around truck access, on-street parking and the limited right-of-way.

A 19-member Community Advisory Committee was appointed to advise the project team on the design process, evaluate the public comments, and represent the varying perspectives in the project area.

## **Recommendations**

The preferred design concept in the plan is the “Ribbon with Places,” which features a continuous element, or “ribbon” that would help guide people from one end of the project area to the other. Places identified by the community as most important will be given attention with special improvements.

The plan calls for new sidewalks, street trees and streetlights throughout the project. These elements will be applied differently in the three types of design districts.

The most distinct ribbon element is the plan to incorporate unique markers in the sidewalk. The markers are conceived of as bronze diamonds, with a design that reflects the community’s chosen theme. New pedestrian-scaled streetlights will give a unified look and more street trees will be added in the project area west of I-5. A gateway element will be added at N Interstate and N Russell. Gateways will also be added at N Interstate and Albina and at N Interstate and Mississippi. The installations will include signage or maps. Lighting and art will be used to enliven the dreary area under the I-5 underpass.

Curb extensions will be used a key crosswalk locations and a new entrance to Lillis-Albain Park will be constructed. The sidewalk along the north side of Russell between Gantenbein and Williams will be widened (with permission from Legacy Emanuel Hospital) to include benches, planters, trees, and historic markers.

Additional elements will include bus stops for the No. 33 bus line, which was rerouted onto Fremont between Williams and Interstate, new pedestrian crossings with curb extensions at N Albina, N Borthwich, and N Ross. Other pedestrian crossings will be improved at N Commercial and Flint. An improved crossing with curb extensions and overhead signs will be installed at N Williams and N Stanton. Speed bumps will be installed on N Flint and flashing school beacons will be added to the school zone signs.

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**Implementation**

The improvements outlined in the plan will cost approximately \$3.3M. Improvements could be phased and some incremental improvements have been implemented through the City's curb ramp program and an audible pedestrian signal was installed in 2003.

The Portland Development Commission will be a key funding partner in implementing the street improvements since the study area is in an urban renewal area.

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## **ST. JOHNS/LOMBARD PLAN**

### **Introduction**

The St. Johns/Lombard Plan was initiated in the fall of 2001 to address community desires for a more livable economically viable town center and main street. The plan was funded in part by a State Transportation and Growth Management grant. The plan addresses land use, transportation, housing, and commercial and economic vitality. City Council adopted the St. Johns/Lombard Plan on May 26, 2004 (Ordinance No. 178452, effective date July 10, 2004).

### ***Study Area***

The St. Johns/Lombard plan area includes the St. Johns town center (downtown St. Johns, the hillside of Cathedral Park, and the Willamette riverfront), and N Lombard Street from Columbia Park to downtown St. Johns (N Woolsey to N Richmond). The plan includes parts of four neighborhood associations: The Friends of Cathedral Park, the Community Association of Portsmouth, St. Johns, and University Park. Two business associations are involved in the plan area – St. Johns Boosters and the North Portland Business Association.

### ***Planning Goals***

A number of planning goals and objectives were developed and used to guide development of policies and actions. The planning goals are:

- Enhance the identity of the St. Johns and Lombard area
- Implement the Region 2040 town center and main street designations in this area
- Foster revitalized St. Johns and Lombard Street commercial areas
- Provide opportunities for new housing along the Lombard main street and near the St. Johns town center
- Provide for a balanced multi-modal transportation system
- Unify the community with safe, accessible, and attractive parks and open spaces
- Promote sustainable development practices and environmental quality

### **Recommendations**

**Urban Development Concept.** The St. Johns/Lombard Plan urban development concept identifies gateways, attraction/focal points, community corners, a primary framework street, secondary framework streets, enhanced pedestrian connections, and pedestrian/bicycle trails. The primary framework streets are the key streets that provide identity in the core pedestrian and retail area in downtown St. Johns and on the Lombard main street.

In St. Johns the primary framework street is N Lombard between Richmond and St. Louis and on Lombard the primary framework street is between Van Houten and Fiske. The primary framework streets are important multi-modal streets and may be the focus of more intense land uses. The secondary framework streets serve as important routes for pedestrian and vehicle activity and may be the focus of more intense land use activity.

**Transportation Policy.** The transportation policy for St. Johns/Lombard states, “Provide for a balanced multi-modal transportation system that supports the urban development concept and land use vision for the town center and main street.”

## **Implementation**

### ***Action Items***

The action items for the St. Johns/Lombard Plan include a number of transportation improvements. Town center improvements include a new traffic signal, realignment of an existing island, curb extensions, lighting and pedestrian connections. Along Lombard, the improvements include curb extensions, street lighting, and bicycle improvements. These projects are being added to the Transportation System Plan (TSP). Also included as an action item is the St. Johns master street plan, which will also be included in the TSP with this update. Other action items identify the Plan's support for implementation of the entire St. John's Truck Strategy.

### ***Code Changes***

The St. Johns/Lombard Plan also includes a number of zoning code changes including a new plan district for the town center and new main street overlays. The zoning and Comprehensive Plan designations have been updated to better reflect the town center and main street objectives.

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## **ST. JOHNS TRUCK STRATEGY**

### **Introduction**

Prepared by PDOT, the St. Johns Truck Strategy identifies interim or short-term improvements to address truck circulation and access issues on the north peninsula. City Council accepted the strategy as a report from the project advisory committee on July 11, 2001, in conjunction with a minority report. Staff was directed to prepare a follow-up report to resolve issues related to the St. Johns Bridge rehabilitation project.

### ***Study Area***

Situated on the west end of the Columbia Corridor, the St. Johns study area includes all of the North Portland peninsula, east to NE Martin Luther King Jr. Boulevard and south to N Columbia Boulevard and Cary Boulevard and the railroad 'cut.' The study area occupies approximately the western one-third of the Columbia Corridor.

### ***Study Purpose***

Residents living in and around St. Johns were central to the initiation of this study. The study's purpose was to look at ways to reduce or remove the impacts of truck traffic on residential and commercial/retail streets, while providing for truck movement across the peninsula from Columbia Boulevard, I-5, and the industrial areas to the St. Johns Bridge. The identified impacts included truck volume, vibration, cut-through truck traffic, and conflicts between modes.

### ***Objectives***

The plan has two primary objectives:

- Identify ways in which truck routing can be improved to and from the St. Johns Bridge, Rivergate, and I-5.
- Determine how non-local truck traffic can be eliminated or reduced on residential and retail/commercial streets.

Additionally, City Council directed the study's advisory committee to:

- Utilize the existing local and regional street system.
- Provide a short-term solution (two to five years).
- Limit combined solutions to \$10 million.
- Coordinate with other North Portland projects.
- Carefully analyze solutions so as not to shift a problem to a different location.

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## ***Companion Study***

The Columbia Corridor Transportation Study has provided a transportation vision for the eastern two-thirds of the corridor. The focus of this companion study was to look at ways to reduce or remove the impacts of truck traffic on NE Marine Drive and NE 33<sup>rd</sup> Drive. The identified impacts included speeding, volume, vibration, cut-through traffic, and conflicts between modes.

## **Existing Conditions**

### ***Demographics***

Both employment and residential population are anticipated to increase throughout the Columbia Corridor, including the St. Johns Truck Strategy study area. Employment is predicted to increase from 21,344 positions in 1994 to 35,989 positions by 2020, with non-retail employment more than doubling. With one exception, employment increases will occur mostly through infill and expansion. The Port of Portland is expected to provide approximately 400 acres of new industrial land on West Hayden Island for marine-related business. The number of households in the study area is expected to grow from 12,229 in 1994 to 14,984 by 2020.

### ***Land Use***

Besides the natural components of the sloughs and lakes, this area has long been established as a place where blue-collar workers live close to jobs and industry. Meat processing and shipbuilding have both played important roles in the character and development of the area, which was originally an independent city.

The dominant land use along the edge of the Willamette and Columbia rivers is industrial. The area south of Columbia Boulevard (which mostly comprises the St. Johns and Cathedral Park neighborhoods) is a mix of single-family and multifamily homes and commercial/retail activities. The area's industries are largely devoted to the movement of goods and merchandise, facilitated by numerous transportation advantages, including shipping terminals, nearby airfreight facilities, three freeways, and two national railroads. Heavy machinery manufacturing and other businesses are also common within the area.

### ***Zoning***

The Portland Comprehensive Plan designates the majority of the industrial lands for industrial sanctuary, including heavy and general industrial uses. Some portions of the study area are designated for employment uses. Environmental or Willamette Greenway overlay zoning protects the riverbank, Smith and Bybee Lakes, and the Columbia River Slough that meanders through the area.

### ***Transportation***

East-west travel in the corridor is accomplished via N/NE Marine Drive on the north edge and N/NE Columbia Boulevard and Lombard Street on the south edge. Lombard Street is designated as US 30 Bypass, but passes through concentrations of commercial/retail activity

with significant residential use. City street designations encourage the use of Columbia as the primary arterial for east-west truck trips and access to major employers. West of I-5, Marine Drive is expected to provide access to the Rivergate Industrial District, Terminal 6, and eventually West Hayden Island.

Travel between Columbia Boulevard and the St. Johns Bridge (US 30 Bypass) is currently unrestricted and undefined for trucks, resulting in an overly pervasive truck presence in the St. Johns neighborhood.

Non-local trucks adversely affect residential and commercial/retail streets, with the impacts including truck volume, vibration, and mode conflicts. Additionally, no streets between Columbia Boulevard and the St. Johns Bridge are designated for trucks. The recommended truck streets need improvements to specifically accommodate trucks, and many streets need safety and convenience improvements to accommodate all modes.

## **Recommendations**

City Council accepted both the advisory committee's report and recommendations and the minority report submitted by one advisory committee member. Council also directed staff to investigate the impact of limiting vehicle weight on streets leading to the St. Johns Bridge or on the bridge itself, including the economic impact on the trucking community.

The majority report to Council includes the following recommendations:

1. Designation of a truck route between Columbia Boulevard and the St. Johns Bridge. Portions of Lombard Street, St. Louis Avenue, and Ivanhoe Street would be designated as Major Truck Streets.
2. Follow-up studies to investigate the success of adopted/implemented projects and to recommend remedial or alternative actions if necessary; and a study of the type and quantity of hazardous materials and materials routing currently allowed.
3. A program of education and enforcement to provide interested and affected parties with a point of contact, information services, and enforcement of truck regulations; and a citywide truck sign program for design and placement of new signs and maintenance of existing signs.
4. Recommended projects that fall into two categories: 1) traffic calming and 2) safety and truck street improvements:
  - Traffic calming for Lombard Street (Pier Park to St. Louis), Fessenden (Columbia Way to St. Louis), St. Louis (Fessenden to Lombard), and pedestrian and bicycle safety on Columbia Boulevard.
  - Redesign/rebuilding of intersections at Lombard/St. Louis/Ivanhoe, Ivanhoe/Philadelphia, and Columbia Boulevard/Portland/Columbia Way, and the street segment of Burgard and Lombard from the main Rivergate entrance to Terminal Road.



The minority report includes the following recommendations:

1. Mandate all truck traffic on the already established Truck Route: US 30 to I-405 to Fremont Bridge to Marine Drive (and reversed).
2. Build a bridge between US 30 and Rivergate/St. Johns.
3. Build a road along the railroad track cut that runs north/south under viaduct between N Ida and N Carey.
4. No trucks over 18,000 pounds on the St. John's Bridge.

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## **SOUTH PORTLAND CIRCULATION STUDY**

### **Introduction**

Conducted by PDOT, the South Portland Circulation Study provides a long-term vision to guide transportation improvements that will reconnect the Lair Hill neighborhood with the surrounding area. City Council accepted the report and recommendations by Resolution No. 36014 on August 1, 2001.

### ***Study Area***

This study area is centered on the west end of the Ross Island Bridge and Naito Parkway between I-405 and Barbur Boulevard. It extends mostly over the north half of the Corbett-Terwilliger-Lair Hill (CTLH) neighborhood.

### ***Study Purpose***

Over time, the Lair Hill community has become a crossroads for many of the region's vital transportation links, including I-405, I-5, and the Ross Island Bridge. As the transportation system grew, no freeway ramps were built in this area; instead, regional traffic was routed along local and collector streets. As a result, the community has been physically split in two and separated from the Willamette River and downtown Portland.

City Council tabled a 1978 South Portland Circulation Study because outer southwest Portland neighborhoods opposed the study's main proposals to reconfigure the Ross Island Bridge ramps and close Naito Parkway to traffic at both Barbur Boulevard and I-405. The study's recommendations were tabled until the Terwilliger Bridge and its access ramps to I-5 could be rebuilt. Once the northbound ramp to I-5 was completed, access to southwest neighborhoods would improve, removing the objections to modifying Naito Parkway and the Ross Island Bridge. The Terwilliger Bridge and ramps were finished in the late 1980s, and the new South Portland Circulation Study was begun in 1997.

### ***Objectives***

The study's primary objectives include:

- Stop non-local traffic from using local streets within this neighborhood
- Provide access to the river
- Reunite the street grid

### **Existing Conditions**

#### ***Land Use***

South Portland is a diverse area of single-family and multifamily housing and commercial uses. Historic buildings are interspersed throughout the area. Offices are located primarily on the north and south portions of the study area. Retail activity is minimal. Although the area is close to the Willamette River, parks and open space are limited.

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## ***Transportation***

### *Traffic*

Several major travel corridors traverse the area, creating confusing travel patterns that cause traffic congestion. South Portland has some of the highest accident locations in the City (as measured against the number of vehicle miles traveled statewide), including the SW Naito Parkway connection to the Ross Island Bridge and the intersection of SW Kelly and SW Whitaker.

### *Transit*

The area has numerous north-south Tri-Met lines that provide good transit service to downtown Portland. However, the linear nature of major north-south arterials, coupled with the lack of east-west street connections, has resulted in diminished transit service. Most cross-town destinations require riders to transfer downtown. Although transit service on Barbur, Naito Parkway, and Macadam is frequent, residents who do not live adjacent to these routes find access difficult because of inadequate connectivity.

### *Pedestrians and Bicycles*

Pedestrian and bicyclists circulation is difficult. The major arterials and highways that divide the area are hard to cross because they have high traffic and, in some cases, serve as physical barriers. Numerous crossings are unsafe, and bicycle facilities are minimal.

## **Recommendations**

The study recommends the following actions:

- A total rebuild of the Ross Island Bridge ramps
- Changing the character of Naito Parkway from a four-lane, limited-access expressway design to a two-lane neighborhood collector/main street with east-west cross-street intersections, pedestrian/transit improvements, bike lanes, and street trees
- Reconfiguration of the Naito Parkway/Kelly Way intersection from grade-separated to at-grade

All these amenities will reunite the severed halves of the Lair Hill neighborhood, supporting its historic landmark designation.

The study supports transportation policies that encourage the use of multiple modes to increase the person-carrying capacity of the transportation system, yet are sensitive to the unique design features of the community.

### *Implementation*

The project is included in the RTP as part of the Financially Constrained System, but it does not have committed funding. It would cost \$28,293,000 million in 1998 dollars to complete the recommended plan.

The next steps toward implementation include additional preliminary and final design engineering that would require two years to complete.

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## **SWAN ISLAND TRAILS ACTION PLAN**

### **Introduction**

A Swan Island Pedestrian Plan was identified as a study in the 2002 TSP. The purpose of the study was to “identify pedestrian improvements and implementation strategies on Swan Island and connections on and off Swan Island.” The 1998 Pedestrian Master Plan identified the need for a plan for the area. The Swan Island Transportation Management Association (TMA) and PDOT worked with the Swan Island Business Association, the Port of Portland, businesses, residents, and other agencies to develop the Swan Island Trails Action Plan. The plan was accepted by City Council on June 30, 2004 (Resolution No. 36231).

### ***Background***

The plan was initiated by the Swan Island TMA in fall, 2003 with funding from the TMA and the River Renaissance project and completed in January, 2004. The mission of the plan was to create a broad partnership of area businesses, residents and institutions to advocate for the Swan Island to River Vision in cooperation with relevant agencies, including the City, Metro, and the Port of Portland.

Swan Island provides a number of valuable assets to the regional and local community including family-wage jobs and access to the Willamette River. Access to and throughout the Island is challenging for pedestrians, bicyclists, and other non-motorized users. The Plan’s vision is to create a network of safe and attractive bike/pedestrian routes to and through Swan Island that:

- 1) improves access to employment and increases recreational opportunities for area residents and employees,
- 2) fills in missing links in a regional network of trails and bike routes, and
- 3) enhances the attraction for users with restored and well-maintained habitats and landscapes.

The Swan Island Trails Action Plan examined nine trail connections on and adjacent to Swan Island to improve connectivity and access to employment and the Willamette River.

The Swan Island Trails Action Plan contains five sections: Design Guidelines, Trail Projects, Maintenance Guidelines, Funding, and Opportunities.

### **Design Guidelines**

The Design Guidelines illustrate guidelines for implementing shared use paths, sidewalks, walking trails, ADA access, landscaping and re-vegetation, and treating trails in environmentally sensitive areas. Included are some green street concepts that use infiltration strips and bio-swales.

### **Trail Projects**

The Trail Projects section includes detail on the nine proposed trails on and adjacent to Swan Island. These are:

- Willamette Bluff Trail
- Lagoonside Trail
- Basin Avenue
- Waud Bluff Trail
- Railroad Trail
- Landfill Trail and connections
- River to Lagoon Trail
- North Going Street connections
- North Greeley

Each potential project includes a map of the trail, section drawings, descriptive information about the trail, the type and width of the proposed trail, habitat in the alignment, ownership and issues, and cost estimates. In some cases alternative alignments are included.

### **Maintenance, Funding and Opportunities**

The Maintenance Guidelines outline the various tasks for trail maintenance and a recommended schedule for completion of the tasks. The Funding section outlines various federal, state, and local funding opportunities for trails on Swan Island. The Opportunities section discusses trail opportunities, re-vegetation opportunities, and stormwater treatment opportunities to use in conjunction with trail implementation.

### **Implementation**

The Swan Island TMA is interested in moving four projects forward as their first priority. These are: Willamette Bluff Project (currently on TSP reference list), Waud Bluff Trail, Basin Avenue Improvements, and the Landfill Trail.

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## TACOMA MAIN STREET PLAN

### **Introduction**

The Tacoma Main Street Plan, managed by PDOT, recommends transportation improvements to enhance the main street character of SE Tacoma. City Council accepted the plan by Resolution No. 36052 on January 23, 2002.

### ***Study Location***

The plan focuses primarily on SE Tacoma between the Sellwood Bridge to the west and SE McLoughlin Boulevard to the east. It also considers local street impacts between SE Nehalem to the north and SE Umatilla to the south.

### ***Study Purpose***

Traffic impacts on Tacoma are a long-standing livability issue in the Sellwood-Moreland neighborhood. More than 30,000 vehicles travel through the heart of this historic neighborhood every day on their way to the Sellwood Bridge, which is the only bridge crossing between the Ross Island Bridge in downtown Portland and I-205 in Oregon City. Approximately one-third to one-half of this traffic is regional. The street design emphasizes its current role as a through route for vehicles.

Regional, City, and neighborhood policies envision a more pedestrian-friendly, neighborhood-oriented commercial and residential main street function for Tacoma. The planning challenge was to balance the needs for local multi-modal access and circulation with the impacts and needs of the regional traffic the street also serves.

### ***Objectives***

With guidance from policy, a community survey, existing conditions information, and input from the first public open house, the project's advisory committee identified the following plan objectives:

- Create a high-quality pedestrian-oriented street. Improve safety, convenience of crossings, and the design of the sidewalk area.
- Support the continued redevelopment of SE Tacoma as a commercial destination that serves the needs of the neighborhood and supports the region's growth management goals. Key issues include on-street parking, traffic, and pedestrian access.
- Reduce the barrier effect of SE Tacoma that divides the neighborhood, and protect the function and character of the surrounding local street network. Key issues include traffic diversion and bicycle and transit access.

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## **Existing Conditions**

### ***Land Uses***

Existing commercial uses are strongly oriented to SE 13<sup>th</sup> and SE 17<sup>th</sup>. A small node of commercial development also exists near the bridgehead. The areas between these three nodes reflect Tacoma's origins as a residential street before the construction of the Sellwood Bridge. The land uses are primarily residential, with a mix of single-family and multifamily dwellings.

### ***Zoning***

The zoning along Tacoma supports continued neighborhood-oriented commercial development around the bridgehead node and between 13<sup>th</sup> and 17<sup>th</sup>. These areas are zoned storefront commercial (CS). The area between the bridgehead and 13<sup>th</sup> is zoned for medium-density residential, with a Comprehensive Plan designation that allows for a mix of commercial and residential development in the future. East of 17<sup>th</sup>, the zoning supports a mix of single-family and multi-family residential development.

### ***Economic Development***

The market area assessment for the Tacoma main street area found that the area has a strong market in the surrounding area, enhanced by the regional traffic passing through. In addition, 13<sup>th</sup> has a regional draw because of its concentration of antique stores. Factors that work against future main street development include the poor quality of the pedestrian environment and potential competition with existing main street areas within the neighborhood, such as the Milwaukie-Bybee area.

### ***Transportation***

#### *Traffic*

Three pinch points on SE Tacoma affect the flow of traffic through the area. The two-lane Sellwood Bridge constrains the volume of traffic in each direction to 1,800 vehicles per hour. The demand in the p.m. peak hour exceeds this capacity and is expected to grow in the future. Heavy turn movements at the intersections with 13<sup>th</sup> and 17<sup>th</sup> also place a strain on the street's capacity. Both intersections are operating above design capacity. These capacity constraints cause increased congestion.

Traffic diversion is a byproduct of congestion, and the local street network is affected by cut-through traffic. Traffic on 17<sup>th</sup> avoids the left turn at the SE Tacoma intersection by cutting through on SE Linn or SE Marion, local service streets. At 13<sup>th</sup>, SE Spokane is a favored alternative to congestion at the Tacoma/13<sup>th</sup> intersection. The McLoughlin Neighborhoods Project has addressed some of these concerns with traffic calming.

#### *Transit*

The area is generally well served by transit. Three bus routes connect the area with downtown Portland, Marquam Hill, the Milwaukie Transit Center, and the Rose Quarter Transit Center. One bus shelter is located at the Tacoma/13<sup>th</sup> intersection, which has the highest passenger activity in the area.

### *Pedestrians and Bicycles*

Tacoma's pedestrian facilities are lacking. The eight-foot sidewalks do not meet minimum standards for basic streetscape elements, such as street trees and comfortable pedestrian passage, associated with vital pedestrian environments. The ban on peak-hour on-street parking removes a buffer for pedestrians from the heavy traffic.

Adequate crossings are also missing along Tacoma. No crosswalks occur between 13<sup>th</sup> and the bridge, the segment with the highest traffic volumes and speeds.

Tacoma has no dedicated facilities for bicycles. The Bike Master Plan calls for the development of a bike boulevard couplet on Spokane and Umatilla, which run parallel to Tacoma.

### *Parking*

The available supply of on-street parking is regulated by time of day. In the peak traffic hours, on-street parking is restricted between 17<sup>th</sup> and the bridge in order to create two additional lanes for traffic. These time restrictions create a potential utilization problem; during off-peak hours, motorists tend to avoid parking in the curb lane. The time restrictions in the evening peak hour also coincide with peak on-street parking demand. The lack of full-time parking also restricts the ability to add curb extensions to the roadway.

## **Recommendations**

The planning process considered ten cross-section alternatives. The final recommendation includes the following basic design elements:

- Provide one travel lane in each direction during all hours.
- Provide full-time on-street parking.
- Create gateways at the east and west ends of the Tacoma main street that will also serve as pedestrian refuges.
- Construct curb extension to facilitate pedestrian crossings.
- Implement streetscape design guidelines, including wider sidewalks, street trees, pedestrian-scale street lighting, and bus shelters where ridership warrants.

## ***Transportation Projects***

### *Phase I*

Implement basic traffic management elements immediately, including:

- Lane striping
- Parking sign removal and replacement
- Signal timing modifications
- Speed bumps on Spokane and Umatilla, subject to the approval of adjacent property owners



*Phase II*

Implement all remaining design elements, including:

- Curb extensions and medians along Tacoma
- Spokane and Umatilla bike boulevard project

**TRANSPORTATION SYSTEM PLAN FOR THE URBAN  
POCKETS OF UNINCORPORATED MULTNOMAH COUNTY**

[see Chapter 11 for details]

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## **WEST PORTLAND TOWN CENTER TRANSPORTATION PLAN**

### **Introduction**

The West Portland Town Center Transportation Plan identifies transportation improvements that support long-term development of a town center in the West Portland area. The plan was completed in December 1997. Although City Council has not formally accepted the plan, some of the projects identified in the plan are incorporated into the TSP. In addition, one of the refinement plans identified in both the RTP and Portland's TSP calls for further study of the Barbur/I-5 corridor, including the West Portland town center area.

### ***Study Location***

The West Portland town center includes the area surrounding the intersection of SW Capitol Highway/SW Barbur/I-5. The study area is bounded by SW Brugger/SW Alice to the north, SW Arnold to the south, SW 35<sup>th</sup> to the east, and SW 50<sup>th</sup> and I-5 to the west.

### ***Study Purpose***

Most of the current impediments to town center-level development in West Portland are transportation related. West Portland is at the crossroads of three major arterials in SW Portland, which complicates access between the arterials, as well as pedestrian access from the surrounding neighborhood into the commercial core. The purpose of the plan is to identify ways to improve connections among the major facilities and overall pedestrian access to and across these facilities.

### **Existing Conditions**

#### ***Land Use***

West Portland town center is a mix of residential and commercial uses, with open space interspersed. As a result of natural and manmade barriers, these uses occur as distinct sub-districts. The wooded areas associated with the various open spaces serve as natural barriers between adjacent land uses. The wall-like barrier of SW Barbur/I-5 limits connections between uses.

Most of the existing land use designations do not support a town center designation because they do not ensure a mixture of pedestrian-oriented activities.

#### ***Economic Development***

SW Barbur's proximity to I-5 is a constraint to redevelopment, particularly for housing. Opportunities for substantial mixed-use redevelopment occur in underutilized sites, but may require relocating existing businesses or reconfiguring development around existing structures.

Traffic congestion and the lack of pedestrian amenities on SW Barbur restrict the linkages required for optimum development of a mixed-use town center. Similarly, topographic constraints are a significant barrier to future development.

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## ***Transportation***

### *Traffic*

Regional traffic dominates the town center area. The I-5 access ramps in the heart of the area draw traffic from outside the town center. Topographic and other physical constraints push regionally-oriented traffic onto district streets such as Capitol, Taylors Ferry, and Huber. As a result, peak-hour operating conditions at key intersections are generally poor. These conditions also cause access problems from these streets to adjacent land uses.

### *Transit*

Four transit routes serve the Barbur Transit Center. Boardings from the transit center average 800-900 persons per day. The 400-space park-and-ride lot is at capacity almost daily.

### *Pedestrians and Bicycles*

Pedestrian facilities in the area are inadequate. The sidewalks are discontinuous, and crosswalks do not meet City standards for spacing. The combination of I-5 and Barbur creates an almost impenetrable barrier for pedestrians, with only two crossing points: at Capitol and the pedestrian bridge at the transit center.

Bicycle facilities are virtually non-existent, with the exception of a bike lane planned for Barbur.

## **Recommendations**

The plan recommends a number of major changes to the I-5 connection with Barbur Boulevard to reduce the impact of regional through-traffic, as well as new local street connections to improve access across I-5 north and south of Capitol.

Most of the plan's recommendations require additional study. A TSP refinement plan (see Chapter 4) will study the Barbur and I-5 corridor. The refinement plan will evaluate both land use and appropriate transportation changes for the corridor, which includes the West Portland town center area.

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## **2004 SOUTH/NORTH LAND USE FINAL ORDER AMENDMENT**

### **Introduction**

The 2004 South/North Land Use Final Order (LUFO) Amendment amends earlier LUFOs for the South/North Light Rail Project. This 2004 South/North LUFO Amendment includes revisions and additions which consist of: The South Corridor Project Locally Preferred Alternative, revisions to reflect the final design of the Interstate MAX alignment and station locations and deletion of light rail transit from Milwaukie to the Clackamas Regional Center. The Metro Council adopted the 2004 South/North LUFO Amendment by Resolution No. 03-3372. City Council action occurred on May 19, 2004 with the adoption of Resolution No. 36216.

### **Elements of the Amendment**

#### ***I-205 Light Rail Transit***

The I-205 LRT Project extends south from the Gateway transit center station along an LRT route to be located primarily with the I-205 right-of-way, serving stations located at SE Main Street (including a park-and-ride lot), Division Street, Powell Boulevard (including a park-and-ride lot), Foster Road, Flavel Street and Fuller Road (including a park-and-ride lot, ending at a station at the Clackamas Regional Center terminus (which also included a park-and-ride lot).

In addition, the I-205 Project will increase the number of trains in downtown Portland to a point where the capacity of the downtown cross-mall is exceeded. The Project includes light rail on the Transit Mall between the Steel Bridge and Portland State University (PSU). The proposed downtown Transit Mall alignment is similar to the alignment approved in the original 1998 South/North LUFO with the following changes:

The location of a proposed station in the vicinity of NW Irving is moved to a location on NW 6<sup>th</sup> Avenue between Glisan and Irving Streets.

- The location of proposed stations between Burnside and NW Couch Streets is moved to a location between NW Couch and NW Davis Streets.
- The location of proposed stations between SW Washington and SW Stark Streets has been extended to a location between SW Washington and SW Oak Streets.
- The proposed location of stations on SW 5<sup>th</sup> and SW 6<sup>th</sup> Avenues at Madison and Jefferson have been changed to allow stations on SW 5<sup>th</sup> and 6<sup>th</sup> within the existing street right-of-way between SW Main and Columbia Streets on SW 6<sup>th</sup> and between SW Madison and Columbia on SW 5<sup>th</sup>.
- The proposed light rail route has been revised to include an alternative that extends south on SW 5<sup>th</sup> and SW 6<sup>th</sup> Avenues south of SW Montgomery Street to a terminus at PSU at SW Lincoln. This extension includes a pair of stations on SW 5<sup>th</sup> and 6<sup>th</sup> Avenues between SW Mill and Montgomery Streets and a second set of stations on SW 5<sup>th</sup> and 6<sup>th</sup> Avenues between SW College and Jackson Streets.

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### ***Milwaukie Light Rail Transit***

The 2004 South/North LUFO Amendment deletes the LRT segment from the 1998 LUFO from Milwaukie to Clackamas Regional Center and makes the following changes to the existing downtown Portland to the Milwaukie LUFO alignment:

- Identifies a study area for a possible light rail route alignment from the downtown Portland Transit Mall at SW Lincoln Street and SW 5<sup>th</sup> Avenue eastward along SW Lincoln Street, and an extension of SW Lincoln Street, to I-5. (This study area will be further analyzed. Any final decision would require a further proposed amendment of the LUFO.) This area is immediately adjacent to the proposed extension of the Portland Transit Mall, a change from the 1998 LUFO.
- Revises the light rail route and station locations from the intersection of SE Powell Boulevard south to McLoughlin Boulevard, changing the alignment from SE 18<sup>th</sup> Avenue to SW 17<sup>th</sup> Avenue.
- Designates a study area for a section of land south of Tacoma Street and generally north of Highway 224, between McLoughlin Boulevard east to the Tillamook Branch railroad line. This provides an opportunity to address issues of concern identified by the City of Milwaukie and included in the South Corridor Locally Preferred Alternative. Once solutions are identified and there is agreement to proceed, an amendment to this LUFO will be addressed.
- Designates a study area at the Lake Road terminus south of Washington Street in Milwaukie and north and northeast of McLoughlin Boulevard.

### ***Interstate MAX***

During final design and construction of the Interstate MAX, several changes were made to the location of the light rail route, stations, and park-and-ride lots. These changes were made to be consistent with the full-funding grant agreement approved by the US Department of Transportation, Federal Transit Administration. These technical changes from the 1999 North Corridor Interstate MAX LRT Project LUFO are:

- Albina Station: the light rail station was relocated from the block between N Knott and N Russell Streets approximately 800 feet south along N Interstate Avenue to the block between N Mississippi and N Albina Avenues.
- Overlook Park Station: the Overlook Park light rail station platforms were relocated approximately 325 feet south along N Interstate Avenue, so that the southbound platform extends south from N Overlook Boulevard and the northbound platform extends north from N Fremont Street.
- Prescott Station: the N Going Street station boundary shown north and south of the intersection between N Going Street and N Interstate Avenue was relocated to a position on the north side of N Prescott Street along N Interstate Avenue to N Skidmore Street.
- The Kenton Station was shifted from the center to the east side of N Interstate Avenue.

### ***Portland Mall Revitalization Conceptual Design Report***

The Portland Mall Revitalization Conceptual Design Report (CDR) was developed to address three key issues: an overall revitalization strategy, the locations of light rail stations, and the

configuration of the stations. The priorities established for the Portland Mall Revitalization Project were to:

1. Reestablish the Mall as a multi-modal spine through downtown with a vibrant and interactive streetscape.
2. Establish a unique sense of place and arrival by celebrating the various “urban rooms” of the Mall and by treating each Mall station as a special civic space.
3. Make a direct link between public infrastructure improvements and new development.
4. Reestablish the Mall as a premier public space.
5. Design the Portland Mall to be flexible enough to adapt to changing conditions.

The project objectives were to:

- Improved transit service to support future downtown growth
- Enliven and renovate the Mall to create great public spaces and a safe pedestrian environment
- Support and promote further investments in downtown business, residential, cultural and institutional uses
- Design and construct the Mall on schedule, within budget and with minimal impacts.

## **Recommendations**

The recommendations of the Report include:

### ***Urban Design Vision and Concept***

The changes to the Mall should enhance the functional quality, ease the maintenance burden and reflect the character variations of the “urban rooms” along the length of the Mall. Develop the station areas so that each becomes a “station as place.”

### ***Transit Operations and Transportation Strategy***

Putting light rail on the Mall requires a careful re-balancing of the users of the Mall.

Study options for improving downtown bus service

Reduce bus noise and air quality impacts

Preserve and enhance the high quality pedestrian environment of the Mall

Preserve good downtown bicycle access

Maximize flexibility and consider improving auto access

### ***Development Strategy***

The goal is to create a direct link between the planning and design of the Mall and the implementation of development strategies. The objectives are:

- Create a shared commitment to the Mall among private owners and public agencies
- Encourage infill development opportunities that leverage new investment
- Enhance the relationship between ground floor uses and public space to create a better business environment
- Use the “station as place” concept to focus development
- Provide a safe and accessible retail environment

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### ***Mall Management Strategy***

A coordinated management of the Mall is essential to the revitalization effort. A Mall Management entity is recommended to take responsibility for the maintenance and operation of the streets and to assist with coordinating development efforts.

### ***Station Locations***

The report recommends that all station platforms be located on the right side of the street at the following locations:

- SW Jackson/College
- SW Montgomery/Mill (consideration is being given to move the 6<sup>th</sup> Avenue station at SW Montgomery/Mill Streets to SW Harrison/Montgomery to reduce access impacts and streetcar conflicts)
- SW Jefferson/Madison
- SW Yamhill/Morrison (Pioneer Square/Courthouse)
- SW Oak/Pine (US Bank Plaza)
- NW Couch/Davis
- NW Glisan/Hoyt (Union Station)

### ***Multi-modal Access***

The recommendations include right side platforms and a multi-modal travel lane along the entire length of the Mall to improve access for autos, service vehicles, bicycles, and other modes of travel.

### ***Mall Configuration***

#### *North Mall Configuration*

The North Mall will include buses travelling on the light rail trackway except for the block between Davis and Everett. Autos and bicycles travel in the left lane and turning movements remain as they are currently.

#### *Central Mall Configuration*

Between SW Madison and Burnside buses and light rail will operate in the two right lanes and autos in the left lane. Light rail will travel in the center lane until approaching station blocks when it transitions over to a right side platform. Buses travel in the center lane through non-station blocks and pull into the right lane at their designated stops.

#### *South Mall Configuration*

On 6<sup>th</sup> Avenue between SW Madison and SW Jackson buses and light rail operate in the two right lanes. There will be two auto lanes on the left side of Clay Street to accommodate traffic coming off of I-405. At SW Clay, one lane forces a left turn and one lane continues north. On 5<sup>th</sup> Avenue buses and light rail operate in the two right lanes. One auto lane will travel southbound until College Street, after which autos will have the left lane and share two



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middle lanes with a low volume of buses. Streetcars share the auto lane with autos for two blocks between SW Market and Montgomery.

### *Vehicle Pullouts*

The report includes “Vehicle Pullout Guidelines” which would allow four vehicle pullouts between SW Alder and W Burnside with future consideration of two additional pullouts. The pullouts would be for service delivery and drop off only. No short-term parking would be allowed.

During preliminary and final engineering additional issues to be resolved include: street trees, paving materials, public art, special lighting, utility relocations, transit shelters, intersection design, street lighting, street furnishings, and vehicle turnout design.

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## **2040 CENTERS TRANSPORTATION STRATEGIES AND MODE SPLIT TARGETS PROJECT**

### **Introduction**

State and regional requirements for Portland's TSP Plan include the development of performance measures and benchmarks to monitor progress in implementing the plan over 20 years. The 2040 Centers Transportation Strategies and Mode Split Targets project, funded by a Transportation Growth Management grant, was designed to help develop the measures and benchmarks, specifically for town centers and light rail station communities in the City of Portland, as designated by the 2040 Growth Concept.

### ***Study Location***

The project focuses on three town centers (Hillsdale, St. Johns, West Portland) and four eastside MAX light rail station communities (60<sup>th</sup>, 82<sup>nd</sup>, 122<sup>nd</sup>, and 148<sup>th</sup>). Other planning processes address the remaining centers in Portland (Gateway regional center, Hollywood town center and Lents town center).

The boundaries for each area were developed in conjunction with the City's Comprehensive Plan Update Project, which ensured compliance with Metro's Urban Growth Management Functional Plan (UGMFP). Various methodologies were used to determine area boundaries, reflecting the various levels of planning that had been undertaken in each area.

### ***Study Purpose***

The project has the following objectives:

- Development of quantitative measures for transportation and land use characteristics that could be applied to the TSP requirements
- Assignment of non-single occupancy vehicle (SOV) mode split targets for each study area
- Identification of strategies for increasing the non-SOV mode split in these areas

### **Elements**

The project has three essential work elements: analysis of Metro's travel forecast data, development of the performance measures, and assessment of the selected study areas.

### ***Travel Forecast Model Assessment***

Metro's travel forecast model was the primary data resource for the baseline mode split information in each of the seven study areas. The 1,260 travel analysis zones were aggregated into a 105-zone system to approximate the boundaries of the 2040 design types. Using origin and destination data from the travel forecast model, baseline mode splits for 1994 base year and 2020 future year were calculated and compared against the UGMFP mode split targets for 2040 design types.

The analysis showed that the overall non-SOV mode split experienced a relatively small increase between the 1994 base year and the 2020 future year. Most of the study areas are at or near the 45 percent target established by the UGMFP for the 2020 future year. The shared ride element of the non-SOV mode split garnered the largest percentage of trips in both the base and future years. In 2020, however, the transit, walk, and bicycle modes showed substantial growth, while the mode share for shared rides declined. The rationale for this adjustment is that the land use and transportation assumptions in the 2020 model represent an optimistic view of the region's investment in infrastructure improvements and land use practices.

Additional findings from the travel forecast model include:

- 'Homebased other trips' account for the largest percentage of person trips in the model, but the overall mode shares for transit, walking, and bicycling are very low.
- Study areas exhibiting a mature pedestrian network and good street connectivity had higher mode shares for transit use, walking and bicycling.
- SOV reduction strategies have traditionally focused on the work trip, resulting in relatively higher mode shares for alternative modes in this category.
- In 2020, modeled transit network improvements increased transit mode split from between 1 percent and 6 percent, depending on the study area.

### ***Development of the Descriptors***

The development of performance measures, called descriptors in the project, relied on substantial research, including a literature review, expert interviews, and a work session with the TSP technical advisory committee. The objective was to identify measures predictive of a higher level of walking, bicycling, and transit use in a given area.

The research resulted in the identification of categorical elements and associated measures, including density, diversity, urban design, transit service, transportation demand management programs, parking management, and demographics. These descriptors were then applied to the seven study areas to assess current ability to meet the 2020 non-SOV mode split target and identify improvements to help each center achieve the desired target.

### ***Assessment of Study Areas***

Case studies were developed for each of the seven study areas to analyze the descriptors and identify improvements needed to affect non-SOV mode split. Each case study included a study area profile depicting land use, transportation, and demographics; baseline values for each of the descriptors; and analysis of current and future travel behavior based on the travel forecast model.

An overall assessment of the study areas found:

- Most of the centers have zoning and comprehensive plan designations that support the desired mix of uses and density.
- The level of pedestrian infrastructure and street connectivity varies based on the age of the center. Study areas built out in the past 30 years are more likely to have missing sidewalks, unsafe crossings, and a low street connectivity ratio.
- The majority of the planned bicycle network in each study area has yet to be constructed.
- Study areas that developed in the past 30 years have a higher ratio of vehicle parking to commercial building space than older areas. In general, however, there was ample free surface parking.
- In many study areas, the on-street parking restrictions conflict with the transit- and pedestrian-friendly commercial zoning.

## **Recommendations**

The project identifies a target non-SOV mode split, as well as programmatic strategies and capital improvements to help achieve the desired mode split over the 20-year timeframe.

The project recommendations include:

- Adopt a 45 percent non-SOV mode split target for town centers and station community design types.
- Prepare a development plan for each study area that implements the desired growth and form of commercial and residential uses.
- Evaluate zoning and Comprehensive Plan designations for study areas not included in recent community planning efforts to ensure land use regulations are compatible with desired character.
- Coordinate with Tri-Met to implement service improvements on regional and primary routes to levels identified in the RTP.
- Work with Tri-Met to develop a secondary transit network for each study area to improve accessibility between the center and the surrounding community.
- Create a master street plan for each study area that identifies new street connections and accessways.
- Complete the pedestrian and bicycle networks.
- Adopt pedestrian districts in the 60<sup>th</sup>, 82<sup>nd</sup> and 148<sup>th</sup> station communities and expand the pedestrian district boundaries in the 122<sup>nd</sup> station community.

- Identify north-south bicycle connections to the 60<sup>th</sup> and 82<sup>nd</sup> station communities and provide secure, long-term bicycle parking at all the light rail stations.
- Increase opportunities for on-street parking in the commercial districts.
- Evaluate potential for creating transportation management associations in the study areas to reduce SOV commute trips.



# TRANSPORTATION and LAND USE ALTERNATIVES

13

## INTRODUCTION

As part of its Region 2040 planning process, Metro considered four alternative transportation and land use scenarios. The recommended alternative was adopted and acknowledged in the 1995 Regional Urban Growth Goals and Objectives (RUGGOs) as the 2040 Growth Concept. A detailed transportation system was developed and modeled for each alternative, including the adopted 2040 Growth Concept.

The Regional Transportation Plan (RTP) then identified a number of scenarios, reflecting various funding levels, to implement the adopted 2040 Growth Concept. Portland's Transportation System Plan (TSP) is based on the 2040 Growth Concept and the RTP analysis.

## REGION 2040 ALTERNATIVES

Metro analyzed a status quo 'base case' scenario and three growth concepts for their impacts on land consumption, travel times and distances, and the effects of increased density on air quality, open space, and different types of urban forms.

### Base Case

The Base Case assumed that development would occur in land use patterns similar to those occurring in the region from 1985 to 1990. Using five-year increments of growth, it assumed that the urban growth boundary (UGB) would move outward. When streets became congested, roads were assumed to be widened up to five lanes for arterials and six lanes for freeways. The construction of three new freeways was assumed: the Sunrise Corridor, Westside Bypass, and Mt. Hood Parkway. This scenario represented the most new road construction of the four alternatives.

Because the Base Case had the greatest expansion of the UGB, auto travel increased, resulting in a five percent jump in vehicle miles traveled (VMT) over 1990 levels, in part because of the dispersed population and large amount of new road construction. The non-auto share of regional travel—including bicycle, pedestrian, and transit—was the lowest of all the alternatives.

### Concept A

Concept A was based on 'growing out' and adding land for residential development to the UGB. It assumed that existing neighborhoods would not experience significant change and new neighborhoods would be added both inside and outside the current UGB. The road system for Concept A included the same three freeways as the Base Case, but had slightly fewer lane miles of other road improvements. Concept A also assumed a radial, high-capacity transit system would be centered in the Downtown, with service 'spokes' to the south, north, east, west, and northwest and two to the southeast.

Concept A expanded the transit and highway systems, had the highest congestion, highest air pollution, second-lowest transit ridership, most dispersed population, and highest cost for water service. Total VMT more than doubled over 1990 levels. VMT per capita remained about the same.

### **Concept B**

Concept B was based on 'growing up' rather than out, by increasing densities within the current UGB. It had the fewest roadway improvements, with less than a five percent increase in lane miles over the 1990 level. Transit hours of service were seven percent more than for Concept A. Although Concept B had the highest level of transit, bicycle, and pedestrian travel of the alternatives, it also had the second-highest level of congestion.

### **Concept C**

Concept C combined aspects of both A and B, but accommodated about one-third of the growth in neighboring 'satellite' cities. It assumed that about two-thirds of the residents of these satellite cities also worked in them. The UGB was assumed to increase by 23,500 acres, much less than Base Case and Concept A, but much more than Concept B. Some satellite cities would require major investments to provide adequate connections to the center of the region, while others already had major highway connections. Concept C assumed a radial high-capacity transit system and light rail routes on Highway 217 and I-205. It relied on 'green' corridors to limit access to and minimize urban development pressure on resource lands.

Concept C had less need for transportation improvements in the metropolitan region, resulting in a reduction in VMT within the UGB but an increase outside. It had the lowest levels of traffic congestion and the second-highest levels of transit, bicycle, and pedestrian travel.

## **2040 GROWTH CONCEPT (RECOMMENDED ALTERNATIVE)**

The Recommended Alternative is a combination of Concepts A, B, and C. As discussed in the RTP, its approach to urban form contains the following elements:

- Expanding the UGB to a modest extent
- Using land more wisely through infill and redevelopment, emphasizing higher-density and mixed-use development in key centers and corridors
- Focusing jobs and shopping closer to where people live
- Expanding transportation choices
- Protecting prime farmland, rural reserves, open spaces, and other environmentally sensitive lands

The Recommended Alternative is more compact than any alternative except Concept B and has the lowest VMT of any alternative except Concept C (which exported one-third of the growth to neighboring cities). It has less congestion than any alternative except Concept C



(again because of Concept C's exported traffic) and the least cost for providing roads inside the UGB.

The Recommended Alternative was adopted and acknowledged in the 1995 Regional Urban Growth Goals and Objectives as the 2040 Growth Concept.

### **Transportation Analysis**

The RTP analyzed the expected land use and employment patterns for the year 2020, based on implementation of the 2040 Growth Concept.

By 2020, the Portland metropolitan region (including Clark County) is predicted to have approximately 2.3 million residents, a 51 percent increase from 1994. Employment in the region is expected to grow by 70 percent during the same period, bringing the number of jobs in 2020 to 1.6 million.

Metro divided the region into seven subareas for the analysis. The incorporated portions of Portland fall into five subareas. The bulk of the City is in the Portland Central City and Neighborhoods subarea. Other parts of the City fall within the West Columbia Corridor, East Multnomah County, Urban Clackamas County, and Pleasant Valley and Damascus.

Table 13.1 shows the 2020 population and employment forecast for RTP subareas. (Chapter 10: Needs Assessment, provides additional detail about Portland's share of this population and employment growth.)

**Table 13.1**  
**2020 Population and Employment Forecast by RTP Subarea**

Combined RTP Subarea	Population			Employment		
	1994	2020	Increase	1994	2020	Increase
<b>Multnomah County</b>						
Portland Central City & Neighborhoods	376,495	428,309	+14%	334,882	449,548	+34%
West Columbia Corridor	9,465	18,899	+100%	51,010	98,497	+93%
East Multnomah County	188,734	258,694	+37%	68,195	107,610	+58%
<i>Subtotal</i>	<i>574,694</i>	<i>705,902</i>	<i>+23%</i>	<i>454,087</i>	<i>655,655</i>	<i>+44%</i>
<b>Clackamas County</b>						
Urban Clackamas County	133,322	207,615	+56%	77,691	143,500	+85%
Damascus/Pleasant Valley	13,425	125,397	+834%	3,908	33,084	+746%
<i>Subtotal</i>	<i>146,747</i>	<i>333,012</i>	<i>+127%</i>	<i>81,599</i>	<i>176,584</i>	<i>+116%</i>
<b>Washington County<sup>1</sup></b>						
North Washington County	229,807	368,064	+60%	134,090	293,477	+119%
South Washington County	195,111	264,722	+36%	122,156	202,873	+66%
<i>Subtotal</i>	<i>424,918</i>	<i>632,836</i>	<i>+49%</i>	<i>256,246</i>	<i>496,350</i>	<i>+94%</i>
Clark County, Washington	282,437	480,387	+70%	123,759	228,523	+85%
Areas outside UGB <sup>2</sup>	123,868	196,806	+59%	31,956	53,844	+68%
<i>Total (four-county region)</i>	<i>1,552,664</i>	<i>2,348,943</i>	<i>+51%</i>	<i>947,647</i>	<i>1,610,956</i>	<i>+70%</i>

Source: Metro

<sup>1</sup> This subarea includes areas of Clackamas County west of the Willamette River.

<sup>2</sup> These figures include growth in small cities and rural residential land uses that fall within the 1,260 transportation analysis zones used for RTP modeling. In addition, some of the growth expected for outside the UGB is part of the expected expansion of the current UGB.

Regional population and employment growth will result in increased travel demand for people and freight. The RTP looked at four transportation alternatives for implementing the adopted 2040 Growth Concept: a 2020 no-build system, a financially constrained system, a preferred system, and a priority system. These alternatives are summarized below. The RTP provides additional description and findings.

### ***2020 No-Build Transportation System***

If no new transportation projects are constructed, the proportion of the region's arterial streets experiencing congestion is predicted to increase from 6 percent in 1994 to almost 25 percent in 2020.

### ***2020 Financially Constrained Transportation System***

The 2020 Financially Constrained Transportation System assumes funding levels based on existing and proposed resources that can reasonably be expected to be available during the 20-year RTP period. This system plan is required by federal transportation planning regulations and constitutes the federally recognized plan. It focuses the limited revenue in key 2040 design type areas throughout the region, including the Central City, industrial areas and intermodal facilities, and regional and town centers.

This system represents a major shortfall in revenue, compared to the needs identified in the preferred system. It would result in significant congestion in the evening peak period on most principal arterial routes, including I-84 west of I-205, portions of the Sunset Highway, I-5, and I-205. Significant traffic would spill over from I-84 into the Gateway regional center, including onto parallel arterials (Halsey, Glisan, Burnside, Stark, and Division). Arterial routes such as Foster Road would become very congested because of the lack of parallel streets and inadequate transit service.

### ***2020 Preferred Transportation System***

The 2020 Preferred Transportation System was developed to meet regional performance measures, implement the 2040 Growth Concept, and respond to all regional transportation needs. Based on predicted population and employment growth, more than 800 projects would be needed to build a complete transportation system. Full implementation of this system would require new unspecified revenue sources at the local, regional, state, or federal level. While some congestion is predicted to remain on the regional transportation system during peak periods, the preferred system would meet the overall travel needs of the region.

Under this system, Portland would continue to experience congestion in several corridors. I-5 north from the Marquam Bridge to the Columbia River would continue to be congested during the evening peak period despite several major transportation improvements. The I-5 Trade Corridor Study is addressing the need for improved freight movement in that corridor. Northbound I-205 from Airport Way to Vancouver would exceed standards during the evening peak. Other corridors with predicted future congestion are targeted for significant transit improvements.

### ***2020 Priority Transportation System***

The 2020 Priority Transportation System responds to the highest-priority needs, given current transportation funding constraints, but also assumes a major increase over existing resources. It includes 650 priority projects, which would be adequate to serve most of the region's transportation needs during the next 20 years. (The RTP describes the full set of transportation projects.) Many needs would remain unmet, however, particularly in developing areas near the urban fringe. The priority projects target key bottlenecks and focus on supporting the most important 2040 land use components, including the Central

City, industrial areas and intermodal facilities, regional centers, town centers, and major transit corridors.

#### *Analysis of the 2020 Priority Transportation System*

The 2020 Priority Transportation System is intended to meet the Transportation Planning Rule (TPR) definition of an 'adequate' system. Although it does not meet all of the region's identified transportation needs, it adequately addresses overall needs for the next 20 years, given current funding limitations. By carefully phasing in needed improvements and using system management and demand management strategies, the priority system outperforms the preferred system in a number of measures, including less growth in VMT per capita, less single-occupant vehicle travel, and shorter average vehicle trips. While there will be a slight increase in delays over the preferred system, the priority system results in adequate mobility and access for freight movement in the region.

## **LOCAL LAND USE AND TRANSPORTATION ANALYSIS**

Portland's Comprehensive Plan was adopted October 16, 1980 (effective date January 1, 1981). Since 1981, the Comprehensive Plan has been amended numerous times through legislative efforts. Since the 1995 adoption of the Region 2040 Growth Concept, the Comprehensive Plan has been legislatively amended with adoption of the following plans:

- Outer Southeast Community Plan (encompassing 10 neighborhoods and one business area), including subsequent transportation analysis for Gateway and Lents town centers
- Woodstock Neighborhood Plan
- Downtown Community Association Residential Plan
- Bridgeton Neighborhood Plan
- Hillsdale Town Center Plan
- Sellwood-Moreland Plan
- Hollywood and Sandy Plan
- Southwest Community Plan
- Guild's Lake Industrial Sanctuary Plan

These plans considered land use and transportation alternatives (where appropriate) and are consistent with the Region 2040 Growth Concept. Chapter 10: Needs Assessment, and Chapter 12: Area Studies, in this document contain brief summaries of these plans and the recommended transportation improvements.

Planning is currently underway for several other areas of the City: St. Johns town center, N Lombard main street, and the Northwest District neighborhood, which includes several main streets.

## INTRODUCTION

The State Transportation Planning Rule (TPR) requires each Transportation System Plan (TSP) to include a financing program. This financial plan is designed to meet the State requirements for a financing program, as well as to establish a financial framework for making investment choices in the City's transportation system over the next 20 years.

The financial plan estimates the fiscal requirements to support the land uses in Portland's Comprehensive Plan, and allows jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms to build the transportation system. As required by the TPR, the financial plan is linked with the TSP's transportation system improvements (identified in Chapter 3), which include planned transportation projects along with the general timing, rough cost estimate, and service provider for each project. According to the TPR, however, anticipated project timing and financing provisions, however, are not considered land use decisions.

In addition to the State requirements, the TSP financial plan is based on other elective principles. For example, it recognizes that agency partnerships are often required to fund transportation improvements. Coordination among the Portland Office of Transportation (PDOT), Metro, the Oregon Department of Transportation (ODOT), Tri-Met, the Port of Portland, and the Portland Development Commission (PDC) is essential to successfully implement the TSP.

The TSP financial plan also presents various financial scenarios that respond to a reasonable range of existing and potential new revenue sources and funding capacities. These scenarios provide a context for choices among the types and number of transportation improvements that may be implemented over the 20-year timeframe of the TSP.

Another principle guiding the financial plan is the importance of maintenance and system operations needs as well as capital improvement planning. Stewardship is one of the TSP's themes. Stewardship means proactive management of Portland's transportation system through the efficient use of resources, non-capital solutions to transportation needs, and innovative approaches to infrastructure management.

The City's current transportation investment is approximately \$5.5 billion of assets (based on replacement costs), including streets, sidewalks, bridges, traffic signals, and streetlights. Most of the State TSP requirements focus on issues of urban growth and system expansion. It is also important, however, to recognize that expanding the transportation system presents long-term fiduciary responsibilities for local governments.

## THE ROLE OF THE REGIONAL PLANNING AGENCY

To set the context for the TSP financial plan, it is useful to review the role of the regional planning agency in distributing federal and State transportation funds. As a condition for receiving federal capital and operating assistance, the Federal Highway Administration (FHA) and Federal Transit Administration (FTA) jointly require each urbanized area to have

a transportation planning process that results in a regional transportation plan consistent with the area's planned development. Metro is designated by the Governor as the metropolitan planning organization (MPO) to carry out the federal transportation and related air quality planning requirements, in cooperation with ODOT and Tri-Met.

### **Metro Authority for Transportation Planning**

Metro has legislative authority for urban transportation planning from three primary sources:

- Title 23 (Highways) and Title 49 (Transportation) Code of Federal Regulations
- Oregon Revised Statutes – Chapter 268
- Metro Charter

In accordance with these requirements, Metro must have adopted a long-term Regional Transportation Plan (RTP). The RTP guides and coordinates the combined efforts of jurisdictions and agencies responsible for the region's roadway and transit facilities. Financing for transportation facilities and services is complex, comprising a number of single-purpose sources of local funds, dedicated State and local roadway and transit taxes, and a number of federal roadway and transit funding programs.

(Chapter 7: Background, contains additional information about Metro's role in the development and review of the City's TSP.)

### **The Regional Transportation Plan as a Basis for Financial Planning**

Pursuant to federal planning regulations, metropolitan long-range plans such as Metro's RTP must include a financial plan that demonstrates the consistency of proposed transportation investments with available and projected sources of revenue. The financial plan compares the estimated revenue from existing and proposed funding sources that can reasonably be expected to be available for transportation uses, and the estimated costs of constructing, maintaining, and operating the total transportation system (existing plus planned) over the 20-year period of the plan.

The RTP ensures geographic consistency within the regional transportation system; multimodal coordination in efficient and cost-effective combinations of transportation investments; land use interrelationships among cities and counties within the transportation system; and cost-effective financing to address the growing travel demand in the region. The RTP establishes a unified policy direction for the federally funded transportation system and recommends a balanced program of highway, transit, and demand management programs to implement that policy direction.

#### ***Financially Constrained System***

The financially constrained system is the RTP's federally recognized system of planned transportation improvements and financial plan assumptions. This system is limited to projects and programs that can be funded by current sources of revenue and new sources of revenue that can be reasonably expected to be available during the 20-year period. The

revenue sources may include assumptions about current and future federal and State funds, as well as locally generated revenues that support projects identified in the regional system.

The financially constrained system is the basis for various federal requirements and regulations. It is used to evaluate compliance with air quality standards established by the Clean Air Act Amendments of 1990. Metropolitan areas that do not meet air quality standards may face sanctions, including potential loss of federal highway funds and limits on industrial expansion. The Metro RTP has been demonstrated to conform with the Clean Air Act.

Projects must be identified in the RTP's financially constrained system to be eligible for federal funding through the Metropolitan Transportation Improvement Program (MTIP, discussed below under Federal Funding sources).

The RTP has found that the revenue amounts assumed for the financially constrained system are not adequate to meet the region's 20-year transportation needs. Analysis of that system shows that unacceptable levels of congestion will occur over time and that it will not be possible to provide or maintain the access requirements of industrial areas and accommodate the growth expected in centers. For this reason, the RTP priority system was created.

The priority system includes more projects than the financially constrained system, with increased revenue requirements to support the additional projects. The RTP does not consider the priority system to be the full set of the region's transportation needs. Given revenue limitations, however, the priority system addresses the highest-priority needs with a potentially attainable increase in revenues (compared to the preferred system, discussed below). Funding the priority system will still require a substantial increase in revenues compared to existing resources.

The priority system serves an important role as part of the RTP that demonstrates compliance with TPR requirements for a regional TSP. Metro and the State have determined that the priority system fulfills the TPR requirement to identify an adequate system of transportation improvements that meet adopted performance measures. The priority system must also be incorporated into local transportation system plans to demonstrate their consistency with the regional plan.

Projects listed in the priority system cannot be funded through the MTIP unless they are also listed on the financially constrained system. The priority system list serves as a source of future projects to be added to the financially constrained system as part of future RTP updates.

### ***Preferred System***

The RTP defines the preferred system as the complete set of improvements needed to fully implement the 2040 Growth Concept during the 20-year planning period and accommodate the forecasted regional growth. In some cases, this system includes placeholder projects, where a transportation need has been identified, but more analysis is needed to determine specific projects to meet that need.

The cost of building the preferred system greatly exceeds existing and reasonable expectations of revenue capacities. As with the priority system, preferred system projects cannot be funded through the MTIP unless they are also listed on the financially constrained system.

## **TRANSPORTATION FUNDING PROGRAMS**

### **Federal Funding Sources**

In accordance with the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) of 1998, and other federal legislation, Metro distributes most federal funds. As the federally designated MPO for the Portland urban region, Metro is required to establish both an RTP and a Metropolitan Transportation Improvement Program (MTIP). The RTP provides the policy basis for system planning and prioritization of transportation projects in the region. The MTIP directs allocation of federal funds over four-year time periods, with updates every two years. The MTIP must contain projects that are consistent with the RTP.

The RTP must identify a list of projects considered to be candidates for funding under a financially constrained assumption of revenues. This list is limited to projects and programs that can be funded by current funding sources and new sources of revenue that can reasonably be expected to be available during the 20-year plan period. Revenue assumptions for local transportation system plans may include scenarios of additional new sources beyond those contained within the RTP's financially constrained system.

### ***Highway Trust Fund***

Congress provides Highway Trust Fund revenues for road-related projects through the Federal Highway Administration (FHWA), to ODOT and then to Metro. Congress provides Highway Trust Fund revenues for transit-related projects through the Federal Transit Administration (FTA), to Tri-Met and to Metro. Federal gas tax and various truck taxes are the primary sources of these funds. The Highway Trust Fund is the primary source of federal transportation revenues to local jurisdictions, as distributed through the MTIP.

Some of these revenues are limited to a particular purpose, such as bridge replacement. Most of the funds, however are flexible and can be spent on roads, bikeways, sidewalks, transit capital, transportation system management or transportation demand management and air quality programs.

The RTP estimates that approximately \$874 million of Highway Trust Fund money will be allocated to the Metro region during the next 20 years.

### ***Federal Categorical Funds***

The Federal Trust Fund comprises various programs for specific purposes. Surface Transportation Program (STP) funds are very flexible and may be applied toward nearly any transportation project or program. Congestion Management/Air Quality (CMAQ) funds support alternative mode projects and demand management programs.



Enhancement Funds are limited to various activities that reduce reliance on the single occupant vehicle (SOV), right-of-way preservation, historic preservation, and environmental mitigation for transportation projects. Demonstration Funds are for specific projects designated directly by Congress. Funds are also available for bridge and safety projects. Borders and Corridors, a new federal category, funds large-scale projects vital to economic trade.

The FTA provides Transit Formula Funds for transit capital purchases such as buses and maintenance facilities. Transit Discretionary Funds are for major new transit capital projects. In the Portland region, Transit Discretionary Funds have been used primarily to provide the federal portion of capital cost construction of the regional light rail system.

## **State Funding Sources**

In accordance with State statutes, the Oregon Transportation Commission (OTC) distributes State revenues for transportation projects from the State Highway Trust Fund. The fund derives its revenues from the statewide gas tax, vehicle registration fees, and the truck weight/mile tax. Use of trust fund monies is limited to road and bridge construction and maintenance, and preservation of the existing transportation system.

### ***Statewide Transportation Improvement Program***

The Statewide Transportation Improvement Program (STIP) is a four-year construction program that fulfills federal TEA-21 requirements. It comprises projects that use various federal and State funding programs, and includes projects on the State, City, and county transportation systems, as well as projects in the national parks, national forests, and Indian reservations in the State. ODOT must include the MTIP in its STIP without change. The Governor is designated to resolve any disagreements between Metro's MTIP and ODOT's STIP.

The STIP is a project scheduling and funding document, rather than a planning document. Projects are identified through various planning processes. The Oregon Transportation Plan (OTP) is the State transportation policy plan that addresses all modes of transportation. It provides overall direction for the allocation of resources; coordination of the different modes of transportation; the relationship of transportation to land use, livability, economic opportunity, the environment, and energy usage; public involvement in transportation planning; coordination with local governments and other agencies; and transportation financing. TSPs do the same on the local level.

### ***Traditional Levels of State Funding***

Oregon has the lowest combined motor vehicle tax structure in the western United States. Only 8 percent of State Highway Trust Fund revenues are dedicated to projects that modernize highways. To stabilize the declining conditions of pavement and bridges statewide, the State's funding priorities are for operations and maintenance. This focus on preserving existing infrastructure has reduced funding for modernization projects to the minimum allowed by law. This amounts to about \$51 million statewide in 2001. In the Portland metropolitan region, ODOT will spend only \$12.7 million for modernization

projects. (These figures describe conditions before the Oregon Transportation Investment Act was enacted, as described below.)

### ***Oregon Transportation Investment Act***

The Oregon Transportation Investment Act (OTIA) of 2001 provides additional revenue for modernization and preservation projects statewide. The OTIA increases fees on vehicle title transfers and is expected to raise about \$71.2 million each biennium. It authorizes ODOT to sell \$400 million in bonds backed by these new revenues. The OTC allocates funding to specific projects, based on screening criteria and prioritization factors. The OTC requests input from Metro's Joint Policy Advisory committee on Transportation (JPACT) regarding regional priorities.

Approximately half of the program, or \$200 million, is provided statewide for pavement preservation projects and bridge replacement/rehabilitation projects. Local bridges in Portland may qualify for funding through OTIA, but must compete with State bridges and other local bridges based on a technical ranking system. Preservation projects are limited primarily to ODOT district highways. In Portland, these would include Sandy Boulevard, 82<sup>nd</sup> Avenue, Powell Boulevard, Macadam Avenue, Lombard Street, and Martin Luther King, Jr. Boulevard. Priority is assigned to projects that facilitate jurisdictional transfer to local government. It is expected that OTIA preservation funds will provide the primary funding for a segment of Sandy Boulevard in the Hollywood area and two or three bridges.

Another \$200 million is allocated to modernization projects statewide. ODOT Region 1 (which includes the Portland metropolitan area) is expected to receive about \$70 million. The criteria for these projects emphasize capacity improvements that demonstrate "readiness"--i.e., project designs and environmental processes are complete or not expected to cause delays. It is expected that OTIA modernization funds will partly fund the East End Columbia/Lombard Connector project.

### **Current Local Funding Sources**

Existing local funding sources for developing the TSP financial plan include general transportation revenues, urban renewal funds, system development charges, Port of Portland funds, local improvement districts (LIDs) and permit fees. Potential new or additional revenues may include a street user fee or transportation utility fee, a new regional revenue source, or increases in gas tax revenues or other existing revenue sources.

Revenue assumptions in the TSP must be broadly consistent with those in the RTP, particularly concerning transportation revenues distributed through Metro. The TSP may also include revenue assumptions for local transportation funding mechanisms.

### ***General Transportation Revenues***

General transportation revenues (GTR) come primarily from State gas tax and vehicle registration distributions and local parking fee revenues. GTR is a flexible funding source that may be applied to a wide range of capital improvement projects, maintenance activities, and operating expenses. Nearly all other local funding sources have some sort of dedicated restrictions for their expenditures, and are typically limited by project purpose, scale, timing,

or location. Its flexibility makes GTR the most useful funding source for implementing TSP policy goals. GTR funding allows projects to be selected to meet a specific unmet need or a broad range of benchmarks. GTR also allows for flexibility in matching federal or State funds or leveraging projects of opportunity.

Many forums and sources have documented the problems with relying on GTR for capital or maintenance needs. The basic problem is that the gas tax has not increased since 1993, while vehicle –miles traveled in the metropolitan area have increased by 40 percent since 1980. Partly because of improved vehicle fuel efficiency, motorists now pay about half as much gas tax per mile as they did in 1972. Without periodic gas tax rate increases, real tax revenues have also been reduced by inflation over time. Over the past five years, gas tax revenue has dropped 7 percent compared to the consumer price index.

The TSP financial scenarios (discussed later in this chapter) assume three alternative levels of GTR revenue capacities.

### ***Urban Renewal Funds***

Portland voters created PDC as an urban renewal agency in 1958. PDC's purpose is to deliver projects and programs in selected areas of the City to achieve housing, economic development, and redevelopment goals. Each designated urban renewal district has a plan that defines projects or programs needed to help the district achieve its long-term land use goals. Many urban renewal districts are located within key 2040 Growth Concept areas, such as the Central City, regional centers, town centers, main streets and industrial areas.

A tax increment financing mechanism is used to create urban renewal funds. Basically, the growth in property tax revenues generated within an urban renewal district is used to secure bonds to finance projects and programs within that district. Each urban renewal plan area includes many transportation projects and programs, which have been incorporated into the TSP's list of transportation system improvements. Funds generated within each district must be spent within that district and are not available to finance TSP projects outside the district. Potential urban renewal funds available for TSP transportation improvements can be estimated from PDC's Five-Year Business Plan and projected trends.

### ***System Development Charges***

The City adopted a system development charge (SDC) in 1997 as a financing mechanism to help compensate for the traffic impacts created by urban growth. The SDC is applied to capital improvement projects that increase transportation system capacity as necessary to serve new development. The SDC cannot be used to address existing system deficiencies or operating and maintenance activities.

Funds are generated through a one-time fee assessed on new development. The rate that is charged is indexed on the number of vehicle trips the new development creates, based on nationally compiled statistics on traffic generation. SDC rates may be reduced for transit-oriented developments, certain minimum housing densities, development along transit lines, and low-income housing. Credits may be applied toward elective or required construction of arterial improvements greater than the share of the new development's impact.

In accordance with State law, SDC funds may be applied only to an established list of capital improvement projects, which in Portland is 36 projects city wide. These projects are incorporated into the TSP's list of transportation system improvements. The SDC alone is not expected to fully fund construction of any of the qualifying projects; additional matching funds will be required. The current estimated cost of the listed SDC projects is approximately \$95.9 million, with SDC funds contributing an estimated \$64.2 million.

The projects eligible for SDC funding are considered a high priority because of the funding commitments made by ordinance. SDC funds are restricted to the established SDC projects list and are not available for other TSP projects. The SDC ordinance and program expires in 10 years (2007) unless City Council reissues it. The projected revenue identified in the SDC ordinance, as adjusted by actual receipts and trends, may be used to estimate potential SDC funds available for TSP transportation improvements.

### ***Port of Portland Funds***

The Port of Portland is a transportation agency within the City of Portland that is responsible for providing cost-competitive freight and passenger access to regional, national, and international markets. The Port also owns several thousand acres of industrial and commercial property, operates several marine and aviation terminals, and coordinates its planning activities with truck and rail service providers. These Port facilities and businesses located on Port properties substantially contribute to Portland's employment base and the region's economy. Planning for good multimodal access to these terminals and properties is an important objective of Portland's TSP.

The Port produces a Port Transportation Improvement Program (PTIP) that identifies a list of 5-, 10-, and 20-year transportation system investments that provide access to existing and expanding Port facilities and property developments. Projects and information contained in the PTIP is coordinated with Metro's MTIP, and relevant projects are incorporated into the TSP's list of transportation system improvements.

The Port generates its funds through passenger facility charges, parking revenues, and lease revenues. Port funds may be spent only for projects and services on or serving Port property and are therefore not available for other TSP projects city wide. Port funds leverage private investments in transportation improvements and are combined with City, State, and federal funds to support projects identified in the PTIP. The projected revenue sources identified in the PTIP, and the RTP financially constrained revenue assumptions, can be used to estimate potential Port funds available for TSP transportation improvements.

### ***Local Improvement Districts***

Property owners can use local improvement districts (LIDs) to initiate construction of street improvements. LID participants are eligible to finance the completed improvements for periods of up to 20 years. Interest rates the City offers through tax-exempt bonds are typically lower than conventional alternatives. Assessments are secured by property liens. A variety of assessment formulas are used. The assessed properties must receive benefit from the improvement, and the assessment formula must be equitable.

State law and City code govern the formation of LIDs, the assessment methodology, and other factors. LIDs are usually funded by the participants, but may also be combined with

other project funding sources to leverage available resources. Examples of LID projects include the Central City streetcar and the Lower Albina overcrossing. LIDs can be formed only for capital improvements, not for maintenance. The City accepts maintenance responsibility for streets after they are improved to current City standards.

Because projects vary widely in terms of complexity, cost, and property owners' willingness to pay, historical trends provide only a rough estimate of potential LID funds available for TSP transportation improvements. If potential LID project subsidies became available through a new local revenue source to defray costs, it would be reasonable to assume greater initiation of LIDs citywide. Two of the TSP financial scenarios include an assumption of LID project subsidies, as discussed later in this chapter.

### ***Permits***

Private parties build part of Portland's transportation system through the issuance of various street improvement permits. Permits support certain capital programs. The Minor Street Permit Program includes all non-residential projects with construction values less than \$25,000, normally including sidewalks and frontage improvements. The Subdivision Street Program includes the construction of local streets in residential subdivisions. The Commercial/Industrial Program includes the local streets serving commercial and industrial land uses. The Substandard Street Program is for construction of streets that incorporate minimum safety features, drainage features, and utilities, and addresses immediate needs rather than long-term street improvement standards.

Permit revenues from each project are applied directly back to that project and are not a funding source for any other capital improvement needs identified in the TSP.

### ***General Fund***

Although the City's general fund comprises discretionary revenues, its application toward transportation capital improvements has historically been limited. A substantial majority of general fund revenues is applied toward operating expenses, particularly for public safety purposes (e.g., police and fire protection services). The general fund contributed \$5.4 million toward capital projects in fiscal year (FY) 2001-02, with \$1.3 million of that amount allocated to transportation capital projects. Over the past several years, the general fund has contributed \$500,000 annually toward street lighting capital projects. It is reasonable to assume that general fund support will continue to be available for street lighting projects, but not for other capital improvement needs identified in the TSP.

### **Potential New Local Funding Sources**

The TRP allows and suggests that jurisdictions assess the adequacy of existing revenues to build the transportation system, but also investigate alternative funding mechanisms that may be promising and applicable. In developing the TSP financial plan, potential new local funding sources that were assessed include general obligation bonds, increases in the county gas tax, a City gas tax, a county vehicle registration fee, a City parking tax, and a street utility fee. A special excise tax, an auto sales tax, and a real estate transfer tax were also considered, but rejected as impractical. The financial analysis of the RTP discusses other potential funding mechanisms, but they are intended for regional purposes only.

Each potential new local funding source is described below in terms of its legal framework, revenue use and administration, and estimated revenue potential.

### ***General Obligation Bonds***

#### ***Legal Framework***

General obligation (G. O.) bonds can be used only for capital construction and improvements. Recent limitations exclude their use for anticipated maintenance repairs and for supplies and equipment not intrinsic to the structure. Issuance of G.O. bonds is subject to bonded indebtedness limitations. Voters must approve G.O. bonds.

General obligation bonds approved since the passage of Measure 50 are required to meet the double majority election test: 50% percent of the registered voters must vote, and a majority of those voting must cast a yes ballot. Elections held at a general election, in November of even-numbered years, do not have to meet the double majority test. Measure 50 placed tighter restrictions on the use of unlimited tax general obligation bond proceeds. Equity issues may be raised based on the relatively weak connection between value of property and use of the transportation system.

#### ***Revenue Use and Administration***

Over the last 10 years, governments within Multnomah County have used G. O. bonds to raise significant revenue for public improvements. Excluding schools and serial levies, 11 local government general obligation bonding efforts succeeded in the Portland region. Unlimited tax general-obligation bonds are relatively easy to administer. Revenue is collected in property tax billings.

#### ***Revenue Potential***

The Measure 50 voting requirements and the restrictions on the use of proceeds will most likely slow future increases in G.O. bond debt. From 1990 to 1997, 65 percent of the bonded debt measures placed before Multnomah County voters passed. The November 1998 election ballot contained twice as many measures as any other election in the 1990s. Only two of the eight proposals (25 percent) passed.

### ***County Gas Tax***

#### ***Legal Framework***

County gas tax revenues can be used to fund either operating or capital costs. The Oregon Constitution restricts their use to roads and bridges, not transit. Multnomah County currently collects a \$.03 per gallon gasoline tax. The Board of County Commissioners could increase this tax through passage of an ordinance, which would be subject to voter referendum.

In general, gas taxes tend to measure demand for use of transportation facilities; the equity of charges is therefore relatively high. However, forecasted increases in fuel efficiency will decrease equity between miles driven and taxes paid. There is also some concern that businesses do not pay their fair share with a local gas tax because they do not pay transportation taxes based on trips generated.

*Revenue Use and Administration*

The county gas tax generated approximately \$7.8 million in FY 1999; every one cent per gallon generates about \$2.6 million. Based on the current shared revenue agreement, Portland receives about 80 percent (\$6.2 million) and the county receives 20 percent (\$1.6 million) of this amount. County gas taxes are collected with the State gas tax and do not require additional administrative efforts.

*Revenue Potential*

Assuming that Multnomah County drivers do not change their purchasing practices as a result of a localized tax increase, a five-cent increase in Multnomah County's gas tax would generate about \$13 million per year. If the current shared revenue agreement remained in effect, Portland would receive \$10.4 million (80 percent) and Multnomah County would receive \$2.6 million (20 percent). For each one-cent increase, Portland would receive about \$2.1 million and Multnomah County would receive about \$.5 million. Recent increases in the price of gas have increased resistance to raising gas taxes.

*City Gas Tax**Legal Framework*

City gas tax revenues can be used to fund either operating or capital costs. The Oregon Constitution restricts their use to roads and bridges. Revenue generated from non-fuel purchases can be used for non-road and bridge purposes.

State statute gives cities the authority to establish a City gas tax. Portland's charter grants the City specific, not general, taxing authority. Portland's specific charter authority does not allow collection of a gas tax without a voter-approved change to the City charter. Portland does have the authority to levy a business license tax on gas stations and truck stops. The tax would require similar businesses to be treated equally.

Gas purchase within the City is closely tied to use of the City's roads and bridges. However, there may be equity issues between residents who purchase their gas from inside versus outside the City, and for Portland gas stations that compete with other cities. Another potential issue is that some businesses may not pay their fair share because the burden is placed on those that buy gas rather than those that generate traffic. Forecasted increases in fuel efficiency will also decrease the relationship between miles driven and taxes paid.

*Revenue Use and Administration*

Portland businesses currently pay a City of Portland business license fee of 2.2 percent of adjusted net profits, with a minimum fee of \$100. Multnomah County's business license fee is 1.45 percent of adjusted net profits. The City currently collects the business license fee for Multnomah County within Portland. A City gas tax could be collected as part of the business license tax system and would not require significant additional administrative efforts.

*Revenue Potential*

No good forecasts currently exist for the amount of revenue that a Portland gas tax could generate. The tax could be based on gross revenues, including some non-fuel revenues. Recent increases in the price of gas have increased resistance to raising gas taxes.

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## ***County Vehicle Registration Fee***

### ***Legal Framework***

The county vehicle registration fee can be used to fund either operating or capital costs. The State Constitution restricts its use to roads and bridges.

The 1989 Oregon Legislature granted counties the authority to impose a county vehicle registration fee of up to \$15 per year. The Board of County Commissioners can increase this tax through passage of an ordinance, which must be submitted to the voters for approval. ODOT collects revenues from registration fee and pays them to the counties that establish the registration fees. The county ordinance provides for payment of at least 40 percent of the money to cities within the county, unless the county and the cities within the county's jurisdiction agree to a different distribution.

In general, vehicle registration fees are generally, but not directly, related to actual transportation system use. For example, an owner of two cars pays twice as much tax as an owner of one, regardless of the number of miles driven. Fees based on trips generated or fuel purchase are more accurate indicators of transportation system use. Another potential issue is that some businesses may not pay their fair share because the burden is placed on those that register vehicles rather than on those that generate traffic.

### ***Revenue Use and Administration***

A county vehicle registration fee could be collected as part of the existing collection system for the State vehicle registration fee and would not require additional administrative efforts. Although the distribution of revenue could be negotiated by intergovernmental agreement, Portland would have to share revenues with Multnomah County and other cities.

### ***Revenue Potential***

Multnomah County currently has just over 620,000 registered vehicles. Each dollar of a county registration fee would therefore generate about \$620,000, minus ODOT's collection costs: \$5 generates approximately \$3.1 million; \$10 generates approximately \$6.2 million, and \$15 (the limit) generates about \$9.3 million. Multnomah County voters narrowly rejected a Multnomah County registration fee in 1998.

## ***City Parking Tax***

### ***Legal Framework***

A City parking tax can be used to fund either operating or capital costs. Additional legal work would be required to determine if the Oregon Constitution would restrict the use of a City parking tax collected through the business license fee to roads and bridges.

State law does not preclude cities from developing a City parking tax. However, Portland's charter grants the City specific, not general, taxing authority. Portland's specific charter authority does allow Portland to collect a parking tax without a voter-approved change to the City charter. Portland does have the authority to levy a business license tax on businesses, based on available parking. The tax would need to be structured so it treats similar businesses equally. For example, findings that show businesses are dependent on and benefit from the transportation system could support the additional business license tax on parking.



In general, parking spaces are a relatively weak measure of transportation system use. For example, a church with a parking lot used once a week would pay as much as a business that uses its parking spaces every day. In addition, if the tax is applied to non-paid parking, it would be extremely difficult to identify parking spaces for some business and residential properties. Restricting the parking tax to paid parking structures (garages and surface lots) would create significant equity issues.

### *Revenue Use and Administration*

There would be substantial administrative costs if the new fee were applied beyond paid parking. A citywide database of parking for all properties would be needed. Once the database was developed, the City parking tax could be collected with the business license tax and would not require significant additional administrative effort. The City currently collects the business license fee for Multnomah County within Portland.

### *Revenue Potential*

PDOT currently has insufficient data for a detailed analysis of the revenue that could be generated from a citywide parking tax. The revenue would be significantly reduced if the fee were applied only to paid parking garages and lots.

### *Street Utility Fee*

#### *Legal Framework*

Street utility fees charge street users for maintenance and replacement costs. Similar to water, sewer, and other utility fees commonly used to pay for public services, street utility fees allocate costs to the system's users, based on their use of the system. A common approach is to develop a rate structure based on the correlation between land use and trip generation.

A few Oregon cities currently use street utility fees. It is critical to structure the street utility fee so it is defined as a fee, not a tax. It is relatively easy to meet this standard by basing the rate methodology on trip generation rates and by dedicating the resources to specific transportation services.

Street utility fees can be structured to be extremely equitable. Street operating, maintenance, and improvement costs emanate from vehicle trips. Extensive data support using land use as an indicator of trip generation. Basing the fee on the number of trips generated by land use provides a strong relationship between use of the transportation system and assessed fees.

The street utility fee must ensure that the system user, rather than the property owner, is charged, and that properties that do not generate trips (such as vacant buildings or undeveloped properties) are not charged. Another potential issue is that while national data show typical average trip numbers for various land uses, great variation may exist at the individual local level.

### *Revenue Use and Administration*

Most cities collect street utility fees on existing City utility bills, which can substantially reduce collection costs. Multnomah County collects property information, including land use and total square feet of improvements, that could be used to calculate rates. The City

considered enacting a street utility fee, or street maintenance and improvement fee (SMIF), in fall 2001, but the City Council withdrew its enacting ordinance.

### *Revenue Potential*

A street utility fee is capable of generating revenue levels to cover existing shortfalls. Rate methodologies and fees structures currently used by Oregon cities would generate \$8 to 16 million dollars of gross revenues annually if applied to Portland. Portland residents have traditionally supported user fees as a way to finance public services. Public acceptance is high if there is public consensus that the service being offered is needed.

### *Other Potential New Local Revenues*

Other new revenue sources have been investigated to a certain degree and are potentially available for use. However, most have a low level of public acceptance or would require difficult or costly initiation processes or administration.

### *Special Excise Tax*

Excise taxes are levied on specific types of commodities. Commodities that are relatively price insensitive (e.g., cigarettes and alcohol) are often used for this type of tax. Because of the relationship with road usage, excise taxes on automotive parts would seem to be the most logical for funding transportation services. The public would likely view this tax as a sales tax and give it limited support. The tax would increase costs for specific Portland businesses.

### *Auto Sales Tax*

An auto sales tax would levy a tax on all new cars sold in the City of Portland. The City does not have the authority to levy a sales tax, so voters would have to approve a change in the City charter. A sales tax would act as an access charge to the transportation system. However, a tax on the retail selling price of autos does not parallel the use of transportation facilities. The public would likely have a negative view of a sales tax on autos, similar to its view of a general sales tax.

### *Real Estate Transfer Tax*

A real estate transfer tax is based on the selling price of real estate when property is sold. Relative to other revenue sources, there is a very weak connection between the purchase of real estate and the cost of providing transportation services to a specific user.

## **TSP FINANCIAL PLAN FRAMEWORK**

The TSP financial plan framework provides the working assumptions for the various revenue sources, and presents and evaluates the alternative TSP financial scenarios.

### **TSP Revenue Assumptions**

The TSP financial plan is based upon revenue capacity assumptions for both local and regional/State sources. For the most part, local revenue sources are assumed to be a constant 20-year multiplication of adjusted current revenues; in two scenarios, some potential new revenues are also provided. Regional/State sources are projections of

revenues to support Portland projects that will be funded through the MTIP and OTIA. Metro distributes MTIP funds, and the OTC distributes OTIA funds.

Existing local revenue sources include general transportation revenues (gas tax and parking revenues), urban renewal funds, system development charges, Port of Portland funds, LIDs, permit funds, the general fund, and other miscellaneous funds and interagency transfers. Potential additional revenues used for the development of the TSP financial scenarios include a new local revenue source, a new regional revenue source, and an increase in gas tax revenues or other existing revenue sources. All revenues and project costs from the TSP's major improvements list are based on current year dollar values and not adjusted for inflation.

In developing the financial assumptions for the TSP, the base year funding amounts are usually adjusted by the spending average of the past three to five years for each revenue source. This allows for adjustments to annual variations so trends are not projected from potentially atypical annual figures. The methodologies used for the TSP financial plan are very generalized, which is appropriate for long-term and policy-level planning. Actual implementation and funding of TSP projects will occur through the City's Capital Improvements Program, which is more specific in terms of revenue availability and allocations.

The financial assumptions for each revenue source are described below.

### ***MTIP Funds***

The revenue estimates for MTIP funds are based on RTP assumptions regarding federal and State revenues that could be available for RTP projects in Portland. It is assumed that MTIP funds will cover the regional contribution of projects listed on the RTP's financially constrained system for which Portland is the sponsoring jurisdiction. These MTIP funds include current authorizations for Portland (and Port of Portland) projects, plus future revenues estimates based on assumed distribution formulas developed as part the RTP. The RTP (Chapter 4: Financial Analysis, and supporting documents) provides additional information regarding MTIP funding capacity assumptions.

Over a 20-year period, MTIP funds are assumed to provide \$270.4 million toward projects in the Portland TSP that are also on the RTP's financially constrained system. The MTIP funds are assumed to be available only for projects on the regional system.

### ***OTIA Funds***

Estimated revenues from the 2001 OTIA are derived from the obligated distributions. The OTIA provides funding for modernization (capacity-adding) projects, projects on State interchanges and multilane highways, pavement preservation projects on State district highways, and bridge preservation projects on both the State and local systems. The OTIA funds available for modernization projects would typically not apply toward reducing Portland's financial responsibilities for these facilities. The OTIA funds available for pavement and bridge preservation may, however, fund projects that would otherwise require substantial local funding participation.

Current OTIA distributions will provide \$5.2 million for bridges and \$7.9 million for pavement preservation, a total of \$13.1 million for projects that could otherwise require some level of funding from Portland. For at least one of the TSP financial scenarios, it is reasonable to assume the State will extend the OTIA; replenishing it every other biennium at the same rate would provide \$65.5 million over the 20-year planning period. These new funds would have the same project qualifying limitations as the original OTIA. The assumed OTIA revenues are contained within the MTIP totals for the TSP financial scenarios.

### ***Urban Renewal Funds***

Urban renewal funds are programmed through PDC's Five-Year Business Plan, which includes a category of projects classified as transportation improvements. The current Five-Year Business Plan programs an average of approximately \$13.5 million per year for transportation projects. Typically the annual adopted budgets for transportation projects and actual expenditures are less than this amount. It is somewhat difficult to develop revenue projections for urban renewal funds due to the Oregon Supreme court decision in *Shilovs. Multnomah County, et al.*

However, based on a ten-year average of annual expenditures, a relatively conservative estimate of \$6 million per year of urban renewal funds is assumed to be available for TSP transportation improvements, or \$120 million over the 20-year planning period. Of this total, \$52.6 million is assumed to be applied toward projects in the RTP financially constrained system. The remaining \$67.4 million may be applied to other transportation projects, but the projects must be in designated urban renewal districts.

For one of the financial scenarios an increase of 25% of urban renewal funds (i.e. an additional \$30 million) is assumed to be available to support TSP projects in urban renewal districts in addition to those identified on the financially constrained system. This scenario produces \$150 million over 20-years assuming an average annual rate of \$7.5 million.

### ***System Development Charges***

As defined in the SDC enacting ordinance in 1997, SDC funds apply toward funding a specific list of projects. The revenue to be generated by SDC collections was estimated at approximately \$64 million over the 10-year life of the ordinance. The actual amount collected depends upon growth rates, building activity, and the extent of credits allowed toward rates on a case-by-case basis. Actual SDC revenue collections have been less than the estimated amount.

The SDC revenues available for TSP transportation improvements are assumed to be \$3 million per year, or \$60 million over the 20-year planning period. This is approximately half of the annual amount the ordinance originally estimated; however, the total also assumed the ordinance would be issued for an additional 10-year period. Of the \$60 million total, half (\$30 million) is assumed to apply toward projects on the RTP's financially constrained system. The remaining \$30 million may be applied to other transportation projects that are on either the current SDC project list or on a future expansion of the list.

For one of the financial scenarios an increase of 25% of SDC funds (i.e. an additional \$15 million) is assumed to be available to support TSP projects in addition to those identified on the financially constrained system, producing \$75 million over 20 years.

### ***Port of Portland Funds***

The Port of Portland Transportation Improvement Plan (PTIP) forecasts general revenue from various sources to address transportation needs and finance capital improvements. The 2001 PTIP estimates approximately \$60 million in Port revenues over a 20-year period, leveraging another \$193.3 million in private and other funds. Additional funds are anticipated from federal, State, and other sources to complete PTIP projects. Some PTIP projects are listed as an unfunded need.

The RTP assumes approximately \$179.8 million will be available from Port funds to finance projects in the financially constrained system. The TSP financial plan assumes this same amount of revenue, all to be applied only to projects in the PTIP and the RTP financially constrained system. For one of the financial scenarios a modest increase of approximately 10% of Port funds is assumed to be available to support Port projects in addition to those identified on the financially constrained system.

### ***Local Improvement Districts***

Although annual variations occur, LID funding for TSP purposes can be estimated from recent historical data over the past several years and from Capital Improvement Program (CIP) projections. This produces an estimated base assumption of approximately \$2 million per year, or \$40 million over the 20-year planning period. LID funding is primarily used for local residential street improvements, but is not limited to these projects. It is assumed that approximately 10 percent of the LID funds are available for major TSP transportation improvements.

The amount of LID funds assumed to be available for TSP projects varies by the TSP financial scenarios, as discussed later in this chapter. Based on the research and revenue estimates developed for the proposed SMIF in 2001, a LID subsidy of \$2 million per year would leverage an equal or greater amount of additional contributions from private sources. Accordingly, two of the financial scenarios assume an increase of LID revenues from \$40 million to \$80 million over the 20-year TSP planning period, plus an additional \$15 million in one of these scenarios to account for new private implementation projects.

### ***Permit Funds***

Funding capacities derived from street improvement permits can be estimated from activity data over the past several years and from CIP projections. This produces an estimate of approximately \$1.15 million per year, or \$23 million over the 20-year planning period. Private expenditures for street improvements through the permit process may be applied toward a wide range of capital projects.

### ***General Fund***

Over the past several budget years, the general fund has supported street lighting capital improvements at a rate of approximately \$500,000 per year. Over a 20-year period, this would amount to \$10 million, which is the estimate used in the TSP financial plan assumptions. The TSP further assumes that this entire amount will be used for street lighting capital improvements only.

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### ***General Transportation Revenues***

GTR has been very unstable in recent years as a funding source for capital improvements. Both the GTR's funding capacities and its availability for capital projects have declined because the priority is to provide a reasonable service level for system maintenance needs. GTR is the most flexible of the revenues available for TSP projects and may be applied toward any targeted need or policy objective.

The GTR revenue assumptions for the TSP financial scenarios vary as follows:

As a base assumption, the current distributions and near-term forecasts are extended over the 20-year planning period. This produces a total of \$25 million, based on a GTR average of \$2 million per year for the first five years of the planning period, declining to \$1 million per year for the remaining 15 years.

Based on the revenue estimates developed for the proposed SMIF, the declining GTR balance is replenished and stabilized at \$2 million per year for the entire 20-year planning period, or \$40 million total. This provides a reasonable assumption for at least one of the financial scenarios.

Another estimate may be based on longer-term historic trends, where gas tax rates were regularly increased to provide stable funding for capital improvements, as well as to keep pace with inflation. For the five years before 1998, GTR revenues available for capital improvement projects averaged approximately \$9 million per year in year 2001 dollars. It is therefore reasonable that at least one of the financial scenarios assume that these historic rates of GTR support for capital improvements are returned. Because of assumptions regarding other new local revenues (as discussed below), a more conservative assumption of \$5.0 million per year is used in one of the financial scenarios. This produces \$100 million of GTR revenues over the 20-year planning period.

### ***Other Local Revenue***

Other funding is primarily derived from sources such as miscellaneous grants and interagency funding from other bureaus, the county, and other cities. Based on a current annual amount of \$1.43 million, this produces \$28.6 million over the 20-year planning period.

Based on revenue estimates developed for the proposed SMIF, a City subsidy of \$1 million per year would be developed to contribute toward storm drainage costs associated with new street construction. With this additional \$1 million per year, plus the existing amount from other local sources, these funds would produce \$48.6 million over the 20-year period of the TSP. It is reasonable to assume that this increase in revenue, or an amount of up to 10% over current levels, would be available for TSP projects under at least one of the financial scenarios.

### ***New Local Revenue***

It is reasonable for at least one of the TSP financial scenarios to assume implementation of a new local revenue source. This new source would either be derived from the potential new

local funding sources described previously in this chapter, some combination of these potential new sources, or an increase in one or more of the existing revenue sources.

Although City Council did not enact the 2001 SMIF proposal, the SMIF provides a reasonable model for both the funding capacity of a new street user fee and the relative distribution of funds for maintenance, local street improvement subsidies, and capital improvements.

This street utility was estimated to generate \$59.7 million over five years, with about half (\$30 million) available for TSP projects. If extended over the 20-year planning period, this would produce \$120 million.

### ***New Regional Revenue***

Chapter 4: Financial Analysis, of the RTP discusses existing revenues and their funding capacities. Section 5.4 of the RTP analyzes priority system financing. These two sections of the RTP discuss potential new revenue sources and funding concepts, and provide a basis for assumptions about a new regional revenue source for use in the TSP financial plan.

New sources that could apply to TSP projects include an increased State gas tax, an increased State vehicle registration fee, a regional gas tax, a regional vehicle registration fee, peak-period pricing, a vehicle-miles-traveled fee, and an off-street parking fee. The RTP also discusses new local revenues that could be applied to regional facilities, most of which are described in this chapter.

It is reasonable for at least one of the TSP financial scenarios to assume that a new regional revenue source is developed and applied toward financing Portland projects that are also in the RTP priority system. It is also assumed that this new regional revenue does not duplicate any new local revenue source. The amount of new regional revenue distributed to Portland TSP projects may be based on the distribution formulas used for the MTIP revenue assumptions. The TSP assumption is that \$77.3 million of new regional revenues will be available for financing TSP projects that are also in the RTP priority system.

### **TSP Financial Scenarios**

The following three financial scenarios have been developed for the TSP financial plan:

- Scenario A: “No New Revenue”
- Scenario B: “New Local Revenue”
- Scenario C: “Plan Level Funding”

The scenarios provide a range of choices for investment in the City’s transportation system, both in terms of the scale of funding assumed to be available from the various revenue sources and the emphasis applied to the different project or activity categories. (The funding capacities of current and potential new revenue sources were discussed previously in this chapter.)

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### ***Financial Scenario Terminology***

The *financially constrained system* is the RTP's federally recognized system of planned transportation improvements and financial plan assumptions. It is the system used to determine regulatory compliance with various federal requirements, such as air quality. Only those revenues that are "reasonably expected" to be available may be assumed in the financially constrained system. Because this RTP system provides a baseline for federal regulations, it is important to ensure that all financial scenarios accommodate these projects.

The *priority system* provides a larger set of projects than the financially constrained system and more fully addresses the highest-priority regional needs with a potentially attainable increase in revenues. Because this system is the basis for determining local TSP compliance with the RTP and serves as the base case for analyses of land use proposals and actions, it is important to ensure that at least one of the financial scenarios accommodates the projects identified in the priority system.

The *major transportation improvements list* (also called *major projects in this chapter*) and the *reference list* are the two basic types of projects in the TSP. Major projects are the more traditional capital improvement projects that provide some level of modernization or functional upgrading. All TSP projects that are also in the RTP are major projects. In the financial plan, the reference list is basically a funding placeholder for various project categories that do not qualify as major projects. Examples include traffic calming projects, spot safety improvements, local street construction, or preservation projects needed to rehabilitate a facility rather than substantially upgrade or change its function. (Chapter 3: Transportation System Improvements, of the TSP more fully describes these project divisions.)

*Discretionary revenues* and *dedicated revenues* are the two basic types of revenue source divisions in the TSP. Discretionary revenues typically may be expended on any type of project or transportation service. Dedicated revenues are limited to a specific project purpose, category, location, or established set of projects. For example, general fund revenues used in the financial scenarios are assumed to finance only street lighting projects, and Port funds are used only for projects on or accessing Port properties and facilities. (The previous discussion of revenue sources addressed these limitations more fully.) Some exceptions that apply are discussed under the specific assumptions for each financial scenario.



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## ***Scenario A: No New Revenue***

### ***Funding Assumptions***

This scenario uses the funding levels assumed for the RTP's financially constrained system, plus existing levels of funding for existing State and local sources. Table 14.1 shows the specific assumed funding amounts from each revenue source.

It is important to note that Scenario A: No New Revenue differs from an existing resources scenario. Scenario A projects existing base revenue assumptions over 20 years. Revenues keep pace with inflation (and project costs are held constant), and sources that have termination dates (such as OTIA and SDC) are assumed to be reissued to extend over the life of the 20-year plan.

Scenario A produces approximately \$756.8 million over 20 years. After assigning revenues to the RTP financially constrained system projects (\$543.4 million) and accounting for local match requirements for MTIP funds (\$8.9 million), approximately \$204.5 million is available for other TSP projects. Of this \$204.5 million subtotal amount, \$118.5 million (58 percent) is applied toward major projects and \$86 million (42 percent) toward reference list projects. Also, of the \$204.5 million subtotal, \$188.4 million are dedicated funds and only about \$16.1 million are discretionary funds.

### ***Scenario Emphasis***

Scenario A allows for funding the highest-priority projects on the regional system in Portland and some capital improvement projects on the local street system. Many projects requested by the community are not funded, however, because a growing percentage of locally controlled discretionary revenues must be used to maintain aging infrastructure. There is a strong emphasis on major projects because a large amount of projected funds are dedicated to specific purposes and are not available for reference list needs.

### ***Analysis Summary***

This scenario does not meet policy objectives in several areas. It does not address the issue of declining revenues for maintenance and operations needs. Local community priorities reflected in the reference list categories (such as traffic calming, spot safety improvements, and local street paving and upgrades) basically remain at current service levels and are not adequately addressed. The scenario does not fund all projects in the regional priority system, which may result in potential issues concerning TSP compliance with the RTP.

**Table 14.1**  
**Scenario A: No New Revenue (\$ millions)**

Funding Sources	20-Year Revenues	20-Year RTP Expenditures		Local Distributions <sup>9</sup>	
		Constrained RTP	Local Match <sup>8</sup>	Dedicated	Discretionary
MTIP Funds <sup>1</sup>	\$270.4	\$270.4	\$0	\$0	\$0
Urban Renewal <sup>2</sup>	\$120.0	\$52.6	\$0	\$67.4	\$0
System Development Charges <sup>3</sup>	\$60.0	\$30.0	\$0	\$30.0	\$0
Port Funds <sup>4</sup>	\$179.8	\$179.8	\$0	\$0	\$0
Local Improvement Districts <sup>5</sup>	\$40.0	\$3.1	\$0	\$36.9	\$0
Permit Fees	\$23.0	\$0	\$0	\$23.0	\$0
General Fund	\$10.0	\$0	\$0	\$10.0	\$0
General Trans. Revenue <sup>6</sup>	\$25.0	\$0	\$8.9	\$0	\$16.1
Other Funds <sup>7</sup>	\$28.6	\$7.5	\$0	\$21.1	\$0
New Local Revenue	\$0	\$0	\$0	\$0	\$0
New Regional Revenue	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$756.8</b>	<b>\$543.4</b>	<b>\$8.9</b>	<b>\$188.4</b>	<b>\$16.1</b>

Notes: (Refer to text for further explanation of these notes.)

<sup>1</sup>The MTIP amount is derived from RTP financial data and assumed combined distribution formulas to Portland and the Port of Portland. OTIA revenues are contained within the MTIP total.

<sup>2</sup>Urban Renewal amount is derived from an adjusted ten-year average of annual expenditures for transportation projects.

<sup>3</sup>System Development Charges are based on the ten-year SDC ordinance extended over the 20-year plan period.

<sup>4</sup>Port funds amount is derived from RTP financial data.

<sup>5</sup>Local Improvement Districts (LID), Permit Fees and general Fund amounts are derived from five-year average annual expenditures and CIP projections.

<sup>6</sup>General Transportation Revenue (GTR) is based on current year distributions and near-term forecasts extended over the 20-year plan period.

<sup>7</sup>Other Funds include miscellaneous grants and interagency funds based on CIP data.

<sup>8</sup>The local match for MTIP and New Regional Revenue is assumed to be 10%. General Transportation Revenue is assumed to contribute 33% of the match. The remaining 67% is derived from Urban Renewal, SDC, Port and LID funds.

<sup>9</sup>Local Distributions are derived from the revenues remaining after funds are distributed to cover RTP project cost obligations.

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## ***Scenario B: New Local Revenue***

### ***Funding Assumptions***

This scenario uses all of the funding levels and sources from Scenario A, plus a new locally controlled revenue source and a LID subsidy to provide additional funding for local streets. It assumes the same level of revenue support, including local match, for regional projects in the financially constrained system as Scenario A. Table 14.2 shows the specific assumed funding amounts from each revenue source.

This scenario produces approximately \$951.8 million over 20 years. In addition to funding projects in the financially constrained system, it provides approximately \$399.5 million for other TSP projects. Of this \$399.5 million subtotal amount, \$118.5 million (30 percent) is applied toward major projects and \$281 million (70 percent) toward reference list projects. Also, of the \$399.5 million subtotal, \$248.4 million are dedicated funds and \$151.1 million are discretionary funds. This increase in discretionary funds over Scenario A is due to the new local revenue source and an increase in GTR revenue.

### ***Scenario Emphasis***

Scenario B provides new funding for additional local livability improvements. These new projects are intended to address school access and safety, traffic safety hazards, minor intersection and signal projects, traffic calming, and various pedestrian and bicycle improvements. Substantial new funding is available for local street improvements and paving unimproved streets. Scenario B also funds the same level of major capital projects as Scenario A.

This scenario also provides more funding for maintenance needs and stabilizes GTR revenues at \$2 million per year. It still funds only the highest-priority projects in the regional system, however, and does not provide additional funding over Scenario A for major capital projects on the local system.

### ***Analysis Summary***

This scenario improves upon Scenario A and meets additional needs. It returns adequate service levels to address community transportation priorities that have been reduced in scale or eliminated by current budget shortfalls. It makes substantial gains toward addressing currently unmet needs to improve local streets to City standards citywide. The new local revenue source and GTR stabilization provide more funding flexibility to respond to needed programmatic adjustments over time.

This scenario still does not fund all projects in the regional priority system, however, which may result in potential issues concerning TSP compliance with the RTP. It also does not fund many major local project needs.

**Table 14.2**  
**Scenario B: New Local Revenue (\$ millions)**

Funding Sources	20-Year Revenues	20-Year RTP Expenditures		Local Distributions <sup>10</sup>	
		Constrained RTP	Local Match <sup>9</sup>	Dedicated	Discretionary
MTIP Funds <sup>1</sup>	\$270.4	\$270.4	\$0	\$0	\$0
Urban Renewal <sup>2</sup>	\$120.0	\$52.6	\$0	\$67.4	\$0
System Development Charges <sup>3</sup>	\$60.0	\$30.0	\$0	\$30.0	\$0
Port Funds <sup>4</sup>	\$179.8	\$179.8	\$0	\$0	\$0
Local Improvement Districts <sup>5</sup>	\$80.0	\$3.1	\$0	\$76.9	\$0
Permit Fees	\$23.0	\$0	\$0	\$23.0	\$0
General Fund	\$10.0	\$0	\$0	\$10.0	\$0
General Trans. Revenue <sup>6</sup>	\$40.0	\$0	\$8.9	\$0	\$31.1
Other Funds <sup>7</sup>	\$48.6	\$7.5	\$0	\$41.1	\$0
New Local Revenue <sup>8</sup>	\$120.0	\$0	\$0	\$0	\$120.0
New Regional Revenue	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$951.8</b>	<b>\$543.4</b>	<b>\$8.9</b>	<b>\$248.4</b>	<b>\$151.1</b>

Notes: (Refer to text for further explanation of these notes.)

<sup>1</sup>The MTIP amount is derived from RTP financial data and assumed combined distribution formulas to Portland and the Port of Portland. OTIA revenues are contained within the MTIP total.

<sup>2</sup>Urban Renewal amount is derived from an adjusted ten-year average of annual expenditures for transportation projects.

<sup>3</sup>System Development Charges are based on the ten-year SDC ordinance extended over the 20-year plan period.

<sup>4</sup>Port funds amount is derived from RTP financial data.

<sup>5</sup>Local Improvement Districts (LID), Permit Fees and general Fund amounts are derived from five-year average annual expenditures and CIP projections, plus an increase of \$40.0 million over Scenario A based on data derived from the Street Maintenance and Improvement Fee (SMIF) assumptions.

<sup>6</sup>General Transportation Revenue (GTR) is based on current year distributions and near-term forecasts extended over the 20-year plan period, plus an increase of \$15.0 million over Scenario A based on data derived from SMIF assumptions.

<sup>7</sup>Other Funds include miscellaneous grants and interagency funds based on CIP data, plus an increase of \$20.0 million over Scenario A based on data derived from SMIF assumptions.

<sup>8</sup>New Local Revenue amount, not provided in Scenario A, is based on data derived from SMIF assumptions.

<sup>9</sup>The local match for MTIP is assumed to be 10%. General Transportation Revenue is assumed to contribute 33% of the match. The remaining 67% is derived from Urban Renewal, SDC, Port and LID funds.

<sup>10</sup>Local Distributions are derived from the revenues remaining after funds are distributed to cover RTP project cost obligations.

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### ***Scenario C: Plan Level Funding***

#### ***Funding Assumptions***

This scenario includes all the funding levels and sources from Scenario B, plus a new regional revenue source for transportation. It increases certain local revenues by 10% and increases GTR funding. The assumed GTR increase along with a portion of the new local revenue source reflects typical levels available for capital projects before 1998. Scenario C assumes the same level of revenue support, including local match, for regional projects in the financially constrained system as Scenario A and Scenario B. In addition, it provides revenue support for TSP projects on the RTP priority system in Portland. Table 14.3 shows the specific assumed funding amounts from each revenue source.

This scenario produces approximately \$1.17 billion over 20 years. It funds TSP projects that are on both the RTP's financially constrained system and in the RTP priority system in Portland. In addition, it provides approximately \$537.2 million for TSP projects on the local system. Of this \$537.2 million subtotal amount, \$256.1 million (48 percent) is applied toward major projects and \$281 million (52 percent) toward reference list projects. Also, of the \$537.2 million subtotal, \$328.7 million are dedicated funds and \$208.5 million are discretionary funds.

#### ***Scenario Emphasis***

Scenario C funds all the capital improvement projects identified under Scenario B, plus additional major projects on both the regional and local systems serving Portland. It also provides additional funding for maintenance needs and for local livability improvements. This scenario provides substantial increases in discretionary funds, primarily through the implementation of a new local revenue source and by replenishing GTR funds to \$4.5 million per year. It also more closely matches regional revenue with regional projects and local revenue with local projects.

#### ***Analysis Summary***

This scenario improves upon Scenario B and meets TSP policy objectives in a satisfactory or better manner. It makes sizeable gains toward addressing current unmet needs for preservation and rehabilitation projects. It returns community transportation priorities to adequate service levels and allows for potential enhancements in system management activities. It also makes substantial gains toward addressing currently unmet needs to improve local streets to City standards citywide.

The new revenue sources and GTR replenishment provide local funding flexibility, makes available a pool of discretionary funds to meet various policy objectives and performance measures, and can respond to needed programmatic adjustments over time. Scenario C funds all regional priority system projects, alleviating potential issues concerning TSP compliance with the RTP.

**Table 14.3**  
**Scenario C: Plan Level Funding (\$ millions)**

Funding Sources	20-Year Revenues	20-Year RTP Expenditures		Local Distributions <sup>11</sup>	
		Constrained & Priority RTP	Local Match <sup>10</sup>	Dedicated	Discretionary
MTIP Funds <sup>1</sup>	\$270.4	\$270.4	\$0	\$0	\$0
Urban Renewal <sup>2</sup>	\$150.0	\$52.6	\$0	\$97.4	\$0
System Development Charges <sup>3</sup>	\$75.0	\$30.0	\$0	\$45.0	\$0
Port Funds <sup>4</sup>	\$198.0	\$179.8	\$0	\$18.2	\$0
Local Improvement Districts <sup>5</sup>	\$95.0	\$3.1	\$0	\$91.9	\$0
Permit Fees	\$23.0	\$0	\$0	\$23.0	\$0
General Fund	\$10.0	\$0	\$0	\$10.0	\$0
General Trans. Revenue <sup>6</sup>	\$100.0	\$0	\$11.5	\$0	\$88.5
Other Funds <sup>7</sup>	\$50.7	\$7.5	\$0	\$43.2	\$0
New Local Revenue <sup>8</sup>	\$120.0	\$0	\$0	\$0	\$120.0
New Regional Revenue <sup>9</sup>	\$77.3	\$77.3	\$0	\$0	\$0
<b>Total</b>	<b>\$1,169.4</b>	<b>\$620.7</b>	<b>\$11.5</b>	<b>\$328.7</b>	<b>\$208.5</b>

Notes: (Refer to text for further explanation of these notes.)

<sup>1</sup>The MTIP amount is derived from RTP financial data and assumed combined distribution formulas to Portland and the Port of Portland. OTIA revenues are contained within the MTIP total.

<sup>2</sup>Urban Renewal amount is derived from an adjusted ten-year average of annual expenditures for transportation projects, plus an increase of 25% assumed for local revenues in this scenario.

<sup>3</sup>System Development Charges are based on the ten-year SDC ordinance extended over the 20-year plan period, plus an increase of 25% assumed for local revenues in this scenario.

<sup>4</sup>Port funds amount is derived from RTP financial data, plus an increase of 10% assumed for local revenues in this scenario.

<sup>5</sup>Local Improvement Districts (LID), Permit Fees and general Fund amounts are derived from five-year average annual expenditures and CIP projections, plus an increase of \$40.0 million over Scenario A based on data derived from the Street Maintenance and Improvement Fee (SMIF) assumptions, plus an additional \$15 million in this scenario.

<sup>6</sup>General Transportation Revenue (GTR) is based on current year distributions and near-term forecasts extended over the 20-year plan period, plus an increase of \$75.0 million over Scenario A based on historic CIP funding level support.

<sup>7</sup>Other Funds include miscellaneous grants and interagency funds based on CIP data, plus an increase of \$20.0 million over Scenario A based on data derived from SMIF assumptions, plus an increase of \$2.1 million assumed for this scenario.

<sup>8</sup>New Local Revenue amount, not provided in Scenario A, is based on data derived from SMIF assumptions.

<sup>9</sup>New Regional Revenue, not provided in Scenario A or B, is the amount required to support Priority RTP projects.

<sup>10</sup>The local match for MTIP and New Regional Revenue is assumed to be 10%. General Transportation Revenue is assumed to contribute 33% of the match. The remaining 67% is derived from Urban Renewal, SDC, Port and LID funds.

<sup>11</sup>Local Distributions are derived from the revenues remaining after funds are distributed to cover RTP project cost obligations.

***Funding Summary of Financial Scenarios***

Table 14.4 summarizes and compares the funding assumptions for Scenarios A, B, and C.

**Table 14.4  
Funding Summary of Financial Scenarios**

	<b>Scenario A No New Revenue</b>	<b>Scenario B New Local Revenue</b>	<b>Scenario C Plan Level Funding</b>
Total 20-Year Revenue – All Sources	\$756,800,000	\$951,800,000	\$1,169,400,000
20-Year Expenditures – RTP Constrained	\$543,400,000	\$543,400,000	\$543,400,000
20-Year Expenditures – RTP Priority	\$0	\$0	\$77,300,000
Local Match	\$8,900,000	\$8,900,000	\$11,500,000
Local Revenues - After RTP Expenditures	\$204,500,000	\$399,500,000	\$537,200,000
Local Projects – Major Improvements	\$118,500,000	\$118,500,000	\$256,100,000
Local Projects – Reference List	\$86,000,000	\$281,000,000	\$281,000,000





## INTRODUCTION

The monitoring of system performance has long been a part of operational management of the transportation system. A more recent trend is to apply performance monitoring to the evaluation of transportation policy and planning objectives. The benefits of performance monitoring in transportation planning include:

- Measurement of and feedback on existing policies and plans
- Informed decision making
- Increased accountability through periodic reporting

The Transportation System Plan (TSP) incorporates a set of performance indicators and measures to monitor the results of the plan over its 20-year span. These serve as the dynamic link between TSP policies and plan implementation by providing a periodic feedback and update process to ensure the TSP satisfies the City's transportation and land use goals. Performance monitoring satisfies mandated benchmarks specified by the State Transportation Planning Rule (TPR). It also provides criteria for advancing major capital improvements from the TSP into the capital improvement program (CIP).

## REQUIREMENTS

### Transportation Planning Rule

The TPR supports the use of performance monitoring by requiring TSPs to adopt interim benchmarks. TPR Section 660-012-0035 specifically identifies the following three objectives that require measurable interim benchmarks:

- In metropolitan planning organization (MPO) areas of more than 1 million population, reduce vehicle miles traveled per capita by 10 percent within 20 years of adoption of a plan as required by OAR 660-012-0055 (1).
- Increase the modal share of non-automobile vehicle trips (transit, bicycle, pedestrian).
- Increase average automobile occupancy (persons per vehicle).

In addition, TPR Section 660-012-0045 requires the implementation of a parking plan that achieves a 10 percent reduction in the number of parking spaces per capita in the MPO area over the life of the TSP. The TSP supports the regional reduction in parking through implementation measures identified in the Transportation Demand Management and Parking Plan (Chapter 5: Modal and Management Plans).

The TPR requires jurisdictions to set five-year interim benchmarks to ensure progress toward meeting these objectives. If benchmarks are not met, the TPR stipulates that the TSP must be amended to include new or additional efforts to meet the requirements.

## Regional Transportation Plan

Policy 19 of Metr o's 2000 Regional Transportation Plan (RTP) requires local jurisdictions to establish non-single-occupant vehicle (non-SOV) mode split targets for each 2040 design types, consistent with the RTP's mode split targets as identified in Table 15.1.

**Table 15.1**  
**RTP Non-SOV Modal Targets**

2040 Design Type	Non-SOV Modal Target
Central City	60-70%
Regional Centers Town Centers Main Streets Station Communities Corridors	45-55%
Industrial Areas Intermodal Facilities Employment Areas Inner neighborhoods Outer Neighborhoods	40-45%

## DEFINITIONS

The TSP refers to the process of plan evaluation over time as '*performance monitoring*.' Within this framework, the TSP uses '*performance indicator*,' '*performance measure*,' and '*benchmark*' to label the distinct elements of performance monitoring.

An *indicator* is categorical term for a particular feature of the transportation system. Indicators are conceptual and qualitative. No single indicator provides a comprehensive evaluation of the transportation system. Instead, each indicator contributes a piece of information that, when considered with all other indicators, provides a complete picture of the transportation system's status.

A *performance measure* is a quantitative method of analysis used to evaluate the condition or status of an indicator. Quantified results from performance measures can be compared to baseline data over time. This is very important for measuring improvement or maintenance of existing conditions. There is no single approach that is most applicable or appropriate for measuring performance. Rather, many alternative methodologies exist to evaluate each indicator.

A *benchmark* is the expressed goal of the indicator. Benchmarks are expressed in quantitative terms. The TSP includes five-year interim benchmarks for several of the performance indicators.

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## RESEARCH AND DEVELOPMENT

The TSP performance indicators and measures result from an extensive research and evaluation process. In the initial phase of TSP development, several studies were prepared to provide background information about applying performance monitoring in transportation planning and identifying specific performance indicators and methodologies for measuring. These studies include:

- Portland Centers Descriptors, prepared by Tim Houchen.
- 2040 Centers Transportation Strategies and Mode Split Targets Project, a TGM grant-funded report. (See Chapter 12: Area Studies, for more information.)
- Traffic System Performance Evaluation, prepared by JHK & Associates.

The TSP citizen advisory committee (CAC) and technical advisory committee (TAC) provided integral input into the development of the TSP's performance monitoring system. Based on the CAC's TSP vision, together with the City's Comprehensive Plan Goal 6 policies, the following key policy areas were identified to represent TSP goals and guide the selection of the TSP performance indicators:

- Cost effectiveness
- Economic development
- Environmental quality
- Mobility and access
- Neighborhood livability
- Safety and efficiency
- Transportation choice
- Land use integration

By applying the research findings to the key policy areas, an initial set of 20 performance indicators and measures was identified. The TSP CAC and TAC then worked with staff to narrow the pool of candidate indicators and measures, using the following four criteria:

- **A manageable number of indicators should be created.**  
*A range of indicators should be identified to capture the state of the transportation system without being too large or unwieldy.*
- **Data should be relatively easy to collect and maintain.**  
*Data should not be too difficult or time consuming to gather. An important outcome of the indicator process is guidance about more efficient ways to target organizational resources, including staff time. If data become too cumbersome to collect, there are diminishing returns in terms of feedback information provided versus the staff time investment.*

- **PDOT should control or have major influence on the ability to achieve the benchmarks.**  
*PDOT should maintain responsibility for meeting established benchmarks and has the authority to make changes in the transportation system to realize these goals. While many of the agreed-upon indicators involve cooperation with other jurisdictions, PDOT should retain a principal role in the decision making regarding elements of the transportation system related to these indicators.*
- **There should be an overall balance among indicators.**  
*It should be recognized that the combined set of indicators contributes something to the overall evaluation of the transportation system. Integral to this is the recognition that all transportation modes are of equal importance.*

The narrowing process resulted in the selection of 13 indicators. Baseline data collection took place after the preferred set of performance indicators and quantitative measures were determined.

## TSP PERFORMANCE MONITORING

The TSP uses a two-tiered approach to monitor transportation system performance. The following first-tier indicators are required by the TPR and RTP to show progress toward meeting State and regional policy goals.

- Vehicle miles traveled per capita
- Non-single-occupancy vehicle (SOV) mode split
- Auto occupancy per capita

Baseline data for the first-tier indicators are derived from Metro's regional travel forecast model (regional model), created using EMME/2 transportation modeling software. As mandated by the TPR and RTP, five-year interval benchmarks are identified for the first-tier indicators.

The ten second-tier indicators are deemed essential to monitor in order to meet policy goals for Portland's transportation system over the course of the TSP.

- Bikeway network
- Condition of street system
- Efficient use of resources
- Freight movement
- Intelligent transportation system (ITS) corridor performance
- Pedestrian network
- Stream habitat restoration
- Street connectivity
- System safety
- Transportation demand management (TDM)

These second-tier indicators do not include interim benchmarks.

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## First-Tier (Required) Performance Indicators with Benchmarks

### *Vehicle Miles Traveled per Capita Indicator*

#### *Policy Area(s)*

- Environmental quality
- Mobility and access
- Safety and efficiency
- Transportation choice

#### *Performance Measure(s)*

- Average vehicle miles traveled/capita/day for residential production trips
- Average vehicle miles traveled/capita/day for employment production trips
- Average vehicle miles traveled/capita/day for employment attraction trips

#### *Objective*

Vehicle miles traveled (VMT) is a measure used to describe total automobile use on a daily or annual basis. It is an important descriptor of changes in travel demand in an urban area and is a good indicator of the reliance on autos for urban mobility. VMT is more comprehensive than other indices used to measure travel by automobile because it incorporates both the number of vehicle trips and the length of those trips.

#### *Methodology*

The City relies on Metro's regional model to estimate travel within the region. Two methodologies can be used to estimate VMT: a network-based approach and a trip-based approach. The type of methodology selected depends on the desired data output. Calculations for the TSP use a trip-based approach, which multiplies average vehicle trip length (derived from the model) by the number of vehicle trips to establish VMT. Since the regional model can identify vehicle trips by origin, destination, and purpose, this approach is valuable for subregional analysis. Local travel is identified through intrazonal trips (travel within a zone).

All VMT calculations for the TSP rely on data from the City's conversion of the regional model under the 2020 strategic scenario of the RTP (round 3). The most recent year for which model data are available is 1994.

The daily travel demand from the regional model is separated into its component trip purposes. The TPR definition of VMT excludes commercial and external trip purposes, buses, heavy trucks, and through-trips, and these are therefore not calculated in the model. Daily auto person trips by purpose are multiplied by auto occupancy rates for each purpose to create daily vehicle trips. Finally, VMT is obtained by multiplying vehicle trips by the zone-to-zone distances. (See Appendix A.1 for a detailed discussion of the methodology used to calculate VMT per capita.)

#### *Baseline Data*

Table 15.2 presents the VMT per capita for each of the districts, the City, and the region as a whole. It is important to note that the regional VMT shown here includes the entire four-county area. In the RTP, VMT was calculated excluding both Clark County and the area outside of the urban growth boundary (UGB).

**Table 15.2**  
**1994 and 2020 VMT per Capita**

District	VMT Productions <sup>1</sup>				VMT Attractions <sup>2</sup>	
	Residential Trips <sup>3</sup>		Employment Trips <sup>4</sup>		Employment Trips	
	1994	2020	1994	2020	1994	2020
Downtown sub district	3.47	2.18	3.15	2.95	13.73	9.00
Lower Albina sub district	5.17	2.79	4.39	3.42	18.25	9.73
Lloyd Sub district	7.86	2.81	6.36	4.85	25.26	15.60
Central East side Industrial Sub district	5.19	3.81	3.81	3.87	17.05	16.24
N. Macadam Sub district	8.71	5.55	4.84	4.58	17.66	15.90
Goose Hollow sub district	4.43	2.52	3.62	4.07	20.40	13.44
North	8.82	7.34	6.90	6.79	27.68	26.94
Northeast	8.55	7.83	7.67	8.78	33.26	35.70
Southeast	8.31	7.23	5.97	6.32	27.36	27.90
Far Northeast	11.95	10.68	6.59	6.86	29.60	28.27
Far Southeast	11.89	11.08	7.18	6.57	33.02	27.03
Southwest	10.92	10.64	5.83	5.82	28.13	30.09
Northwest	8.01	8.96	4.78	4.68	22.85	22.14
City	9.35	8.53	5.44	5.49	24.19	22.24
Region (for comparison)	12.25	12.23	5.89	5.88	25.96	23.68

<sup>1</sup> VMT Productions – All week day vehicle miles traveled for trips produced in a district, regardless of destination.

<sup>2</sup> VMT Attractions - All week day vehicle miles traveled for trips attracted to the district, regardless of origin.

<sup>3</sup> Residential VMT – Includes all home-based trip purposes and the residential component of the non-home-based, non-work purposes.

<sup>4</sup> Employment VMT – Includes all non-home-based trip purposes except the residential component of the non-home-based, non-work purposes.

### Interim Benchmarks

Table 15.3 lists the City's interim benchmarks for reduction of VMT per capita. The TPR calls for a 10 percent reduction in VMT per capita in the Portland metropolitan region over 20 years. The 2020 regional model output estimates a decline in the City's VMT per capita of 9 percent for residential production trips, 8 percent for employment attraction trips, and an increase of 1 percent for employment production trips.

**Table 15.3**  
**VMT per Capita Reduction Benchmarks**

VMT Type	VMT per Capita Reduction Targets			
	5-year	10-year	15-year	20-year
Residential Productions	2.5%	5%	7.5%	10%
Employment Productions				
Employment Attractions				

### Non-Single-Occupancy Vehicle (SOV) Mode Split Indicator

#### Policy Area(s)

- Environmental quality
- Transportation choice

#### Performance Measure(s)

- City wide non-SOV mode split
- Non-SOV mode split by 2040 regional center, town center, and station community

*Objective*

The objective of this performance indicator is to increase the percentage of non-SOV daily person trips within Portland. Non-SOV person trips include transit, bicycling, walking, or shared rides (two or more to a vehicle) as modes of transportation. This indicator represents all of the factors leading to increases in non-SOV mode share, including land use changes and system improvements such as increased transit service, TDM programs, bike lanes, and sidewalks.

*Mode split is the percentage of person trips taken using each of the possible modes.*

*Methodology*

Non-SOV mode split is the aggregation of mode split for shared ride, transit, bicycle, walk, and school bus person trips. The 1994 base year and 2020 future year mode split are derived from the RTP preferred scenario (round one) regional model run. Factors from travel behavior surveys applied to auto person trips are used to calculate SOV use. These factors include auto ownership, age and income, transit accessibility, parking costs, trips distance, trips purpose, and relative travel time. (The 2040 Centers Transportation Strategies and Mode Split Targets Project report, chapter 2, contains a detailed discussion of methodology.)

*Baseline Data*

Table 15.4 shows changes in non-SOV mode split for each transportation district. District values include all trips to, from, and within a district. Citywide non-SOV mode split is expected to increase from 38 percent in 1994 to 43 percent in 2020.

**Table 15.4  
Non-SOV Mode Split by Transportation District**

<b>District</b>	<b>1994</b>	<b>2020</b>
Central Business District	46.28%	63.91%
Lower Albina	31.29%	46.54%
Lloyd District	35.19%	46.34%
Central Eastside Industrial District	34.13%	42.42%
North Macadam	25.88%	41.55%
Goose Hollow	45.47%	65.85%
North	35.81%	37.13%
Northeast	37.55%	39.09%
South east	39.27%	42.06%
Far NE	35.33%	37.18%
Far SE	37.58%	39.18%
Southwest	35.25%	37.52%
Northwest	34.80%	41.83%
<i>City</i>	<i>37.99%</i>	<i>42.97%</i>
<i>Region (for comparison)</i>	<i>38.04%</i>	<i>39.44%</i>

Table 15.5 lists the 1994 and 2020 non-SOV mode split for key 2040 design types, excluding the Central City, which is reported by subdistrict in Table 15.4. Baseline data are not currently available for the new Airport MAX or the Interstate MAX station communities.

**Table 15.5**  
**Non-SOV Mode Split by 2040 Design Type**

<b>2040 Center</b>	<b>1994</b>	<b>2020</b>
Gateway Regional Center	37%	39%
Hollywood Town Center	39%	45%
Lents Town Center	43%	43%
St. Johns Town Center	42%	40%
West Portland Town Center	38%	37%
60 <sup>th</sup> Station Community	42%	44%
82 <sup>nd</sup> Station Community	42%	44%
122 <sup>nd</sup> Station Community	40%	41%
148 <sup>th</sup> Station Community	43%	48%

### *Interim Benchmarks*

The interim benchmarks listed in Table 15.6 are set citywide and for key 2040 design types, including the Central City. The 20-year benchmarks are consistent with the RTP's 2040 regional non-SOV mode split targets.

The citywide benchmarks track non-SOV mode split across all areas of the City, from urban Central City to suburban southeast Portland. The 20-year citywide benchmark is slightly lower than the 2040 design type benchmarks because it takes into consideration the differences in travel characteristics of these diverse areas.

The 2040 design type benchmarks originate from the non-SOV mode split goals recommended in the 2040 Centers Transportation Strategies and Mode Split Targets Project.

The Central City benchmarks derive from the RTP's 2040 target mode split for this design type. In addition, Policy 3 of the Central City Transportation Management Plan (CCTMP) identifies 2010 transit and pedestrian/bicycle mode split targets for commuter trips. Although the TSP Central City benchmark takes into account additional modes and trip purposes, it is consistent with CCTMP policy goals. Refinements to the current CCTMP targets will occur during the CCTMP update process, which begins in 2002.

**Table 15.6**  
**Non-SOV Interim Benchmarks**

<b>Type</b>	<b>Benchmarks</b>			
	<b>5-Year</b>	<b>10-Year</b>	<b>15-Year</b>	<b>20-Year</b>
Citywide	38%	38.5%	39%	40%
Central City	45%	50%	55%	60%
Regional Centers, Town Centers, and Station Communities	40%	41%	43%	45%



### ***Auto Occupancy per Capita Indicator***

#### *Policy Area(s)*

- Environmental quality
- Mobility and access
- Safety and efficiency

#### *Performance Measure(s)*

- Average persons per vehicle

#### *Objective*

Increasing the number of people per vehicle, particularly for trips during normal commuting times when there is the greatest constraint on capacity, reduces congestion and improves the overall efficiency of the transportation system. Increasing the average auto occupancy also reduces total vehicle miles traveled per capita, helping to minimize air pollution and mitigate parking problems.

#### *Methodology*

The data are derived from Metro's regional travel forecast model, and represent Metro's 2020 strategic scenario of the RTP (round 3). The base year is 1994.

#### *Baseline Data*

Table 15.7 shows the average number of persons per vehicle by transportation district. The City average is 1.20 persons per vehicle in 1994, dropping slightly to 1.19 in 2020. There are no significant differences between districts or horizon years. There is a slight decrease for most City districts over the planning horizon.

**Table 15.7**  
**Average Auto Occupancy by Transportation District (persons)**

<b>District</b>	<b>1994</b>	<b>2020</b>
Central Business District	1.19	1.19
Lower Albina	1.16	1.16
Lloyd District	1.19	1.18
Central Eastside Industrial District	1.16	1.17
N. Macadam	1.14	1.17
Goose Hollow	1.19	1.21
North	1.19	1.18
Northeast	1.20	1.19
Southeast	1.21	1.20
Far Northeast	1.20	1.18
Far Southeast	1.21	1.20
Southwest	1.19	1.18
Northwest	1.17	1.17
<i>City</i>	<i>1.20</i>	<i>1.19</i>
<i>Region (for comparison)</i>	<i>1.20</i>	<i>1.19</i>

*Interim Benchmarks*

Benchmarks are not set for this measure. Metro has proposed a TPR revision that limits jurisdictional responsibility for benchmarking auto occupancy. Metro reasons that the information from the regional travel demand model is not useful to set objectives, since vehicle occupancy appears to be driven more by demographics, family size, and school-age versus aging populations than by transportation policy. The shared ride survey data show only the smallest variation over time.

**Second-Tier (Supplemental) Performance Indicators*****Bikeway Network Indicator***

- *Policy Area(s)*
- Environmental quality
- Mobility and access
- Neighborhood livability
- Safety and efficiency
- Transportation choice
- Transportation and land use integration

*Performance Measure(s)*

- Percentage of City bikeway network completed

*Objective*

The most frequently cited obstacle to increasing bicycle mode share is the threat of unsafe traffic conditions. Improvements to the bike network, such as striping and signage, have increased the safety of bicycle travel in the City. The bike network is defined by the Bicycle Master Plan, adopted in 1996 and most recently updated in 1998. This indicator tracks progress toward completing the bicycle network over the 20-year timeframe of the TSP.

*Methodology*

Bicycle facilities are grouped into four categories: lanes, boulevards, paths, and signed connections. Within each category are three levels of bicycle facility completion:

- Facilities that currently exist
- Facilities that are planned and funded
- Facilities that are recommended

MapInfo<sup>®</sup> GIS software application tools are used to measure total mileage of each category, by level of completion. The City's bicycle coordinator maintains the database.

*Baseline Data*

Table 15.8 lists the status of the City's efforts to complete the bikeway network, as of February 2001. The City's bicycle network is 35 percent complete.

**Table 15.8**  
**City Bicycle Network Completion Status (in miles)**

<b>Bicycle Facilities</b>	<b>Existing</b>	<b>Planned</b>	<b>Recommended</b>	<b>Total Miles</b>	<b>% Completed</b>
Lanes	139.0	17.4	266.5	423.0	33%
Boulevards	25.8	2.4	51.8	80.0	32%
Paths	51.6	14.3	31.7	97.6	53%
Signed Connections	0	24.6	0	24.6	0%
<i>Total</i>	<i>216.4</i>	<i>58.7</i>	<i>350.0</i>	<i>625.2</i>	<i>35%</i>

### ***Condition of Street System Indicator***

#### *Policy Area(s)*

- Cost effectiveness
- Neighborhood livability
- Safety and efficiency

#### *Performance Measure(s)*

- Five year average of unmet pavement need

#### *Objective*

The ability to keep the road system in good repair is an important indicator of transportation system health. This measure tracks success in reducing Portland's backlog of streets needing maintenance. The Bureau of Maintenance (BOM) currently tracks annual unmet pavement needs to determine the backlog of street maintenance. Large backlogs indicate a growing pool of streets that are deteriorating and will need increasingly costly repairs over time.

#### *Methodology*

The performance measure is calculated using the BOM pavement management system.

#### *Baseline Data*

Table 15.9 lists unmet pavement needs for 1996 to 2000. For these baseline years, there are 496 lanemiles of unmet need. The five year trend indicates a continuous increase in unmet need.

**Table 15.9**  
**Unmet Pavement Need (in lane miles)**

<b>Type of Unmet Need</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>5-Year Average</b>
Major Rehabilitation/ Reconstruction	67.1	67.6	79.8	72.2	72.3	71.8
Structural Overlay	150.3	153.9	133.9	109.7	106.0	130.8
Preservation Overlay	127.6	131.3	127.2	143.7	155.3	137.0
Slurry Seal	146.1	141.7	153.6	171.3	168.1	156.2
<i>Total</i>	<i>491.1</i>	<i>494.5</i>	<i>494.5</i>	<i>496.9</i>	<i>501.7</i>	<i>495.7</i>

*Source: Status & Condition Report 1999 (Bureau of Maintenance 2000)*

### ***Efficient Use of Resources Indicator***

#### *Policy Area(s)*

- Cost effectiveness

#### *Performance Measure(s)*

- Percentage of capital budget from non-general transportation revenues (GTR)
- Ratio of GTR dollars to non-GTR dollars

#### *Objective*

GTR (a combination of the City's of State gas tax distribution, vehicle registration distribution, and local parking revenues) is the Portland Office of Transportation's (PDOT) most flexible funding source. GTR dollars are not dedicated to specific uses, so may be applied to local projects, programs, or maintenance or may be used to match federal, state, or other agency (e.g., Portland Development Commission or Port of Portland) funds. The objective of this performance measure is to take full advantage of the power of GTR to leverage other funds. The caveat to this strategy is that Portland's discretionary funds are committed to earmarked projects, leaving less flexibility to meet local transportation policy objectives.

#### *Methodology*

Information is derived from PDOT's annual adopted CIP budget.

#### *Baseline Data*

Table 15.10 lists the distribution of CIP funds between GTR and non-GTR sources, by total dollars and percentage. The baseline data is derived from the most current adopted budget for fiscal year 2001-2002. The baseline budget year shows that 94 percent of PDOT's CIP budget was funded by non-GTR sources. For every \$1 of GTR, PDOT leverages nearly \$16 from other sources.

**Table 15.10  
Distribution of CIP Funds by GTR and Non-GTR Funds**

Fiscal Year	Total CIP Funds	GTR Funds		Non-GTR Funds	
		Dollars	% of CIP	Dollars	% of CIP
2000-2001 <sup>1</sup>	\$51,264,800	\$4,326,889	8%	\$46,937,911	92%
2001-2002 <sup>2</sup>	\$29,843,248	\$1,931,738	6%	\$27,911,510	94%
2002-2003 <sup>3</sup>	\$38,330,787	\$1,869,758	5%	\$36,461,029	95%

<sup>1</sup>Data derived from City of Portland adopted budget for 2000-2001

<sup>2</sup>Data derived from City of Portland adopted budget for 2001-2002

<sup>3</sup>Data derived from FY2002-2003 CIP budget request

***Freight Movement Indicator***

*Policy Area(s)*

- Economic development
- Mobility and access
- Safety and efficiency

*Performance Measure(s)*

- Number of hours of truck delay caused by congestion in the p.m. peak
- Number of hours of truck delay caused by congestion in the mid-day

*Objective*

Freight mobility within and through Portland is key to the region’s economic vitality. Delay in goods shipment incurs significant costs for businesses and consumers and detracts from the City’s commercial competitiveness. The intent of this measure is to track progress toward accommodating the freight movement needs of commerce and industry. The goal is to minimize hours of delay to trucks on Major Truck Streets during both peak and off-peak times.

*Methodology*

The data for this performance measure are derived from the RTP strategic scenario (round 3) regional model results. The model base year is 1994. Freight delay is defined as the increased travel time attributable to congestion. This is the time increment accrued on road links above a 90 percent volume/capacity ratio. Only the positive differences are summed. Roads within the City are compared to all roads in the region.

*Baseline Data*

Freight delay is measured for both the 2-hour p.m. peak and the 1-hour mid-day off-peak periods. The results are presented in Table 15.11. Mid-day (off-peak) delay in the 1994 model base year is quite small. Trucks encounter very few delays as a result of congested facilities in this time period. In the scenario representing the 2020 constrained RTP conditions, hours of truck delay are expected to increase significantly because of a rise in congestion.

**Table 15.11  
Truck Delay (Hours)**

	<b>1994 Mid-Day 1-Hour</b>	<b>2020 Mid- Day 1-Hour</b>	<b>1994 P.M. 2-Hour</b>	<b>2020 P.M. 2-Hour</b>
City Street System	1.8	29.3	82.0	344.5
Region	6.5	82.2	129.9	809.2

### ***ITS Corridor Indicator***

#### *Policy Area(s)*

- Mobility and access
- Safety and efficiency

#### *Performance Measure(s)*

- Average a.m. peak-hour travel time by ITS corridor
- Average p.m. peak-hour travel time by ITS corridor
- Average off-peak travel time by ITS corridor

#### *Objective*

VMT growth is expected to outstrip population growth in the Portland metropolitan region during the next 20 years. Given the cost and livability impacts of expanding capacity on the motor vehicle network, it is increasingly important to maximize the efficiency of traffic movement on existing arterials, without adding new lanes. The aim of intelligent transportation systems (ITS) is to address peak-period travel to help manage unusual high-volume traffic incidents (for example, public events and collisions on parallel highway and arterial routes) and reduce bottlenecks to provide efficient, consistent traffic flow through a travel corridor.

#### *Methodology*

Travel time is the proxy measure for the efficiency of vehicle movement along significant radial and circumferential routes. Measurements performed every five years provide an indication of travel time change in a given corridor, and give planners and traffic engineers information about where to target land use and transportation projects (including ITS projects) to better balance travel patterns in the identified corridors. Degradation of travel time in a given corridor can trigger prioritization of ITS projects such as better signal timing.

Corridor travel time is measured using the PC-Travel for Windows software application. (See Appendix A.2 for detailed description of methodology.)

A starting point, ending point, and intermediate nodes are identified before performing the travel time measurement. The starting, ending, and intermediate nodes are typically intersections, with some exceptions (such as bridge abutments or other fixed landmarks).

The goal is to travel at a speed that is comparable with the rest of traffic. Each node passing is recorded, and the clock is stopped at the end of the route. If the route ends in an intersection, timing is complete after departing the intersection. Since variations occur between runs, approximately five to eight runs are performed in each direction for each route to ensure accuracy. Runs are performed for both the a.m. and p.m. peak periods, and during the off-peak period.

#### *Baseline Data*

Table 15.12 lists the ITS corridors and the 2001 baseline travel time, measured in minutes and fractions of minutes. (See Appendix A.3 for travel time and travel speed by ITS corridor.)

**Table 15.12**  
**Travel Time in ITS Corridors (minutes and fractions of minutes)**

Corridor	A.M. Peak	Mid-Day	P.M. Peak
<i>SW Macadam</i>			
(NB) SE 15th – SW Lincoln	12.68	8.66	9.52
(SB) SW Jackson -- SE 15th	11.16	10.99	13.73
<i>SW Barbur</i>			
(NB) SW 68th Avenue-SW Lincoln	13.55	13.38	17.05
(SB) SW Jackson -- SW 68th Ave	14.02	12.80	15.40
<i>Burnside</i>			
(EB) NW Skyline -- NE 14th Ave.	11.24	13.93	19.58
(WB) NE 14th Ave. -- NW Skyline	13.80	14.52	17.51
<i>NW Yeon/St Helens Rd.</i>			
(NB) SW 14th and Washington -- Lombard x-Walk E/	14.03	12.55	13.57
(SB) Lombard x-Walk E/ -- SW 14th and Washington	14.90	13.68	12.73
<i>NE MLK/Grand</i>			
(NB) Market -- Kilpatrick	14.66	14.38	16.14
(SB) Kilpatrick -- Market	12.50	13.19	18.71
<i>NE Sandy Blvd.</i>			
(EB) E 9th Ave. -- NE 105th	13.94	13.94	17.61
(WB) NE 105th -- E 9th Ave.	13.59	14.06	16.01
<i>SE Powell Blvd.</i>			
(EB) SW Jackson -- E/174th	23.55	25.10	30.72
(WB) E/174th -- SW Jackson	27.77	23.89	25.48
<i>SE McLoughlin</i>			
(NB) SE Ochoco St. -- SE Taylor	7.79	6.06	6.28
(SB) SE Taylor -- SE Ochoco St.	5.96	5.99	7.92
<i>N/NE Lombard</i>			
(EB) N Alta Ave. -- NE 104th	19.85	22.25	24.39
(WB) NE 104th -- N Alta Ave.	20.63	22.01	23.85
<i>NE/SE 82nd</i>			
(NB) SE Clackamas St. -- Pacific Equipment D/W	15.59	16.90	19.60
(SB) Pacific Equipment D/W -- SE Clackamas St.	15.25	18.28	21.35

## Notes:

Values are averages of between 5-8 runs completed for each corridor /direction /time of day combination.  
NB=northbound; SB=southbound; EB=eastbound; WB=westbound

### ***Pedestrian Network Indicator***

#### *Policy Area(s)*

- Environmental quality
- Mobility and access
- Neighborhood livability
- Safety and efficiency
- Transportation choice
- Transportation and land use integration

*Performance Measure(s)*

- Percentage of streets designated as City Walkways or located in a Pedestrian District with completed sidewalks

*Objective*

The intent of this indicator is to measure progress toward completing Portland's City Walkway network over a 20-year period. The Pedestrian Master Plan design guidelines will be used to determine whether a street segment has facilities that are complete. The baseline data will be derived from the Infrastructure Management System (IMS).

*Methodology*

The sidewalk information will be obtained from PDOT's IMS database.

*Baseline Data*

Baseline data for this indicator are not currently available. Baseline data will be identified when the sidewalk asset class information becomes available in IMS.

***Stream Habitat Restoration Indicator****Policy Area(s)*

- Environmental quality
- Neighborhood livability

*Performance Measure(s)*

- Percentage of culverts reconstructed

*Objective*

As part of its response to the listing of salmonids under the Endangered Species Act, the City of Portland has been investigating the degree to which culverts obstruct salmonid access and movement within local watersheds. Culverts and other instream structures may impede adult migration to spawning areas, smolt migration to the ocean, or juvenile movement within the watershed during rearing. The City is evaluating culverts for the purpose of prioritizing impassable or partially passable culverts for replacement with more passable structures (e.g., arch culverts or bridges).

*Methodology*

Ultimately, the goal of a salmon recovery program should be to restore access to designated critical habitat. However, replacement of passage obstructions in an urban environment can be very expensive, and funds available for salmon recovery are limited. Objective criteria for ranking replacements and upgrades have been developed to provide the most benefit to salmon populations per unit of project cost.

The Riparian and Waterbody Construction and Maintenance technical team of the City's ESA Program uses the following criteria for rating culverts and other passage obstructions: (1) degree of blockage; (2) amount of habitat above the culvert; (3) quality of habitat above the culvert; (4) maintenance considerations; (5) environmental zone designation; (6) proposed future land use; (7) presence of steelhead; (8) fish access from downstream; and (9) expense of replacement.



The culvert ranking is a dynamic list that will change as information or conditions change. Appendix A.4 contains a full description of the culvert ranking process and an explanation of how criteria are weighted.

#### Baseline Data

Table 15.13 lists the high-ranking culverts identified for replacement. Currently, none of the culverts listed have been reconstructed or replaced. However, construction on the SE 162<sup>th</sup>/Foster replacement project will begin in summer 2002.

**Table 15.13**  
**Culverts Identified for Replacement**

No.	Culvert Location	Culvert Identification	Total Score	Replacement Cost for Bottomless	Replacement Cost for Bridge
1	SE Flavel Street	JC09	84	\$1,231,135	\$1,162,752
2	162 <sup>nd</sup> and Foster	JC10	81 <sup>1</sup>	\$800,000 <sup>1</sup>	
3	SE Brookside Drive	JC07	73	\$297,419	\$642,646
4	SW Boones Ferry	TC01	73	\$1,045,422	\$1,408,346
5	SE 45 <sup>th</sup> and Caldw	VC03	67	\$566,002	\$688,653
6	SW 45 <sup>th</sup> Drive	VC06	67	\$3,144,392	\$2,615,250
7	NW Cornell Road	BC01	63	\$1,324,446	\$2,341,613
8	SW Maplecrest Drive	TC04	63	\$397,383	\$550,667
9	SE Tacoma Street	CS03	62	\$382,697	\$535,680
10	NW Miller Road	CM03	61	\$1,267,381	\$1,817,941
11	SE 45 <sup>th</sup> Avenue	JC02	61	\$283,693	\$450,349
12	SE 162 <sup>nd</sup> Avenue	JC12	61	\$522,005	\$934,006
13	SW 18 <sup>th</sup> Place	TC05	60	\$685,519	\$672,749
14	SE Glenwood Street	CS05	60	\$270,841	\$468,875
15	SW 58 <sup>th</sup> Avenue	FC02	59	\$255,283	\$304,012
16	SE Mt. Scott Boulevard	JC03	57	\$658,545	\$695,642
17	SW Hamilton Street	FC03	57	\$1,262,961	\$955,490
18	SW Dosch Road	FC08	56	\$550,988 <sup>2</sup> \$1,450,585 <sup>4</sup>	\$728,073 <sup>3</sup>
19	SE 28 <sup>th</sup> Avenue	CS06	56	\$256,659	\$371,963
20	SE 44 <sup>th</sup> Avenue	JC01	55	\$170,518	\$275,200
21	NW Mill Ridge Road	CM02	55	\$968,782	\$1,409,351
22	SW 45 <sup>th</sup> Avenue	FC04	55	\$280,822	\$344,572
23	SW Dosch Road	FC07	55	\$1,967,189 <sup>5</sup>	\$1,850,872 <sup>3</sup>
24	SW Arnold Street	TC02	55	\$395,293	\$478,739
25	SW Lancaster Street	TC09	55	\$375,480	\$487,368
26	SW Vermont Street	VC01	55	\$1,330,543	\$1,082,124 <sup>3</sup>

<sup>1</sup>Funding has already been identified for this location. The bottomless option was selected for this culvert.

<sup>2</sup>Only includes replacement to connection with FC07.

<sup>3</sup>Does not include cost to acquire property and recontour topography for open channel away from street crossings.

<sup>4</sup>Additional to replace to end of FC07.

<sup>5</sup>Replaces 655' ± with 655' ± continuous culvert.

***Street Connectivity Indicator****Policy Area(s)*

- Mobility and access
- Neighborhood livability
- Transportation choice
- Transportation and land use integration

*Performance Measure(s)*

- Percentage of city blocks with longest block face less than 570 feet

*Objective*

The TPR requires local jurisdictions to develop standards for local street layouts that improve pedestrian and bicycle access. The RTP requires the development of street master plans for emerging areas greater than five acres and the application of street spacing standards to both existing areas and emerging areas when new development occurs. This performance indicator tracks Portland's progress toward improving street connectivity over time.

*Methodology*

Metro originally defined a block spacing standard of 660 feet for auto connectivity and 330 feet (half the original) for bike/pedestrian connectivity. A later study determined there are diminishing returns on connectivity (relative to capital investment) with connections more frequent than 530 feet. Based on this finding, the standard was reduced to 530 feet for auto connectivity. The standard for bike/pedestrian connectivity remains at 330 feet.

Information for this performance measure was derived from cadastral maps maintained by the PDOT mapping group. Blocks were created from right-of-way outline data using Modular GIS Environment (MGE) software. The longest face of each block was calculated in MapInfo software and then the data was converted into the ArcView 3.2 shapefile format.

City blocks are contiguous tax lots defined on all sides by full street connections. Tax lots separated by alleyways did not meet this criterion and, for the purpose of this performance measure, were considered contiguous.

City blocks with their centers within IG1, IG2, IH, OS, or overlay zones were excluded from analysis because increased connectivity within designated protected and industrial sanctuary areas conflicts with other City goals.

City block length is defined as the linear measure of the longest street segment associated with a City block, measured between street centerline intersections. Because this measure is intended to characterize the block face, not inclusive of street width, the methodology was refined by adding an average of 40 feet to Metro's 530-foot measure to account for intersection spacing between blocks. The resultant performance measure is the percentage of City blocks, by district, with a longest block face street segment equal to or less than 570 feet.

*Baseline Data*

Table 15.14 lists the number and percentage of blocks meeting the 570-foot connectivity standard. Blocks were grouped by the TE District containing their geographic center. Baseline information is derived from December 1997 cadastral data maintained by the PDOT mapping group. Results were adjusted to correct for blocks having their geographic centers in the excluded zoning areas identified above. Additionally, as described above, constituent sub-blocks separated by alleyways were not considered complete blocks and were not counted individually. Instead, only the larger block they form was tallied into the final results.

**Table 15.14  
Percentage of Street Connectivity by TE District**

<b>TE District</b>	<b>Blocks less than or equal to 570'</b>	<b>Blocks greater than 570'</b>	<b>Total Blocks in District</b>	<b>Percentage of Blocks that meet Metro's Standard</b>
Central City	545	33	578	94%
North	664	440	1104	60%
Northeast	1690	684	2374	71%
Far Northeast	79	341	420	19%
Southeast	2163	1163	3326	65%
Far Southeast	157	447	604	26%
Northwest	285	153	438	65%
Southwest	713	615	1328	54%

***System Safety Indicator***

*Policy Area(s)*

- Neighborhood livability
- Safety and efficiency

*Performance Measure(s)*

- Number of intersections identified as Level A – Critical Condition for safety. (Level A – Critical Condition are intersections with 20 or more crashes within the past four years, and a crash cost greater than or equal to \$48,000 per million entering vehicles or a crash rate equal to or greater than 1.60 crashes per million entering vehicles.)
- Traffic fatalities per 1000 capita (includes vehicles, bicycles, and pedestrians)
- Traffic injuries per 1000 capita (includes vehicles, bicycles, and pedestrians)

*Objective*

Improving transportation system safety is an integral part of the City's planning efforts. In addition to causing property damage, collisions are responsible for a significant number of fatalities and injuries, lost work time, and family trauma. Children are especially vulnerable in collisions. For these reasons, it is an important City goal to decrease collisions between all modes through safety improvements and education.

### *Methodology*

Data for these measures is compiled from yearly crash data supplied by the Oregon Department of Transportation (ODOT), Transportation Development Branch, and Transportation Data Section. The data derives from records originally received by the Oregon Department of Vehicles.

PDOT's Bureau of Transportation System Management staff analyze the data for the number of crashes involving fatalities, injuries, and property damage per entering vehicle and the cost of accidents per intersection, to create a high accident location list.

The high accident location list identifies intersections in the City with 20 or more reported crashes in the four-year period between January 1996 and December 1999. All crash totals represent those reported crashes that occurred within intersections. The only exception is elaborate or complicated intersections, in which crashes that occurred in all applicable zones of those intersections were counted. Because crashes are underreported, this list should not be considered to definitively represent all intersections with 20 or more crashes occurring in the period between January 1996 and December 1999, nor should it be considered to represent all crashes occurring at the intersections listed. Appendix A.5 includes the complete list of high-accident locations.

The equation used to compute the collision rate (collisions per million entering vehicles) for these locations is:

- $Crash\ Rate = Total\ Crashes / (ADT \times 340\ days \times 4\ years / 1,000,000\ vehicles)$   
ADT is the approximate weekday daily traffic volume entering the intersection. Note that the volume used is considered to be approximate for a number of reasons—for example, there is daily variation in counts; the count may not have been taken specifically at the intersection; or the count may not be recent enough to reflect current conditions.

Level A – Critical Condition intersections are a subset of the high accident location list.

### *Baseline Data*

As of July 1999, the City had 18 intersections identified as Level A – Critical Condition. The intersections are listed below:

- E Burnside at 80<sup>th</sup>
- N Cook at Williams
- N Broadway at Vancouver/I-5 SB off-ramp
- N Alberta at Missouri
- NE Weidler at Grand
- NE Halsey at 47<sup>th</sup>/Euclid
- NW Bridge at Germantown
- NW Broadway at Davis
- NW Everett at 6<sup>th</sup>
- SE Ankeny at 6<sup>th</sup>
- SE Stark at 2<sup>nd</sup>
- SE Stark at 102<sup>nd</sup>
- SE Main at 162<sup>nd</sup>
- Hawthorne Bridge (west end)
- SW Madison at 6<sup>th</sup>
- SW Market at 1<sup>st</sup>
- SW Naito at Ross Island Bridge
- SW Oak at 5<sup>th</sup>

Table 15.15 includes fatal and injury crash data for the years 1996 – 2000. The table demonstrates a reduction in serious traffic incidents in the City over the past five years.

**Table 15.15  
Fatal and Injury Crashes Per Thousand Capita (1995-2000)**

Year	City Population	Fatal Crashes		Injury Crashes	
		Number	Crashes/1000 population	Number	Crashes/1000 population
1996	503,000	55	.11	6271	12.47
1997	508,500	45	.09	5938	11.68
1998	509,600	44	.09	4981	9.77
1999	512,400	37	.07	4439	8.65
2000	531,600	35	.07	5107	9.61

As of 2000, the City incurred .07 fatal crashes and 9.61 injury crashes for every 1000 Portland residents.

***Transportation Demand Management Indicator***

*Policy Area(s)*

- Environmental quality
- Transportation choice
- Transportation and land use integration

*Performance Measure(s)*

- Number of employees participating in local transportation management associations (TMAs)

*Objective*

This measure recognizes the importance of education and transportation demand management programs in encouraging the use of transportation alternatives. Transportation management associations (TMA) are formalized employer-based groups that promote transportation demand strategies to reduce single-occupancy vehicle trips by their employees, with a goal of increasing the number of employees who have access to transportation demand management programs.

*Methodology*

The individual TMAs maintain participation data.

*Baseline Data*

As of January 2002:

- Lloyd District TMA – 6,290 employees
- Swan Island TMA – 6,790 employees



## INTRODUCTION

The following sections of this chapter constitute the findings for the Transportation System Plan (TSP). The findings are grouped under several sections – General Findings, Statewide Planning Goals Findings, Transportation Planning Rule (TPR) Findings, Metro Urban Growth Management Functional Plan (UGMFP) Findings, 2000 Regional Transportation Plan (RTP) Findings, and Portland Comprehensive Plan Goals Findings. The findings were adopted by City Council on October 30, 2002 (Ordinance No. 177028). The City Council ‘directives’ are included at the end of this chapter. The ‘directives’ are the actions that Council took in adopting the TSP.

### General Findings

The City of Portland adopted its Comprehensive Plan on October 16, 1980 (effective date January 1, 1981). The Plan was acknowledged as being in conformance with Statewide Land Use Planning Goals by the Land Conservation and Development Commission (LCDC). Upon its adoption, the Plan complied with State Goal 12: Transportation.

In April 1991, the LCDC adopted an Administrative Rule for Goal 12 (660-012), the Transportation Planning Rule (TPR), which imposed additional requirements on local jurisdictions to achieve compliance with Goal 12.

The TPR requires local jurisdictions to develop transportation system plans (TSP) to ensure that the transportation system will support travel and land use patterns that will avoid air pollution, traffic, and livability problems faced by other areas of the country. The TSP also incorporates the requirements of State Land Use Goal 11: Public Facilities and becomes the public facilities plan for transportation for the City.

The Public Facilities Plan for the City was adopted by City Council Ordinance No. 161770 on April 5, 1989. The Public Facilities Plan for Transportation includes a list of major transportation projects intended to serve the needs of the City for the following 20 years. The TSP updates the list of transportation projects in the Public Facilities Plan.

The Transportation Element of the Comprehensive Plan (TE) was adopted by City Council by Ordinance 165851 (effective date October 23, 1992) to update the Transportation Goal and Policies to comply, in part, with the TPR. The TE also updated and incorporated the Arterial Streets Classification Policy (ASCP), including district policies and street classification descriptions and maps into the Comprehensive Plan.

The Central City Transportation Management Plan (CCTMP) was adopted by City Council in 1995 (effective date January 1, 1996). Its Goal, policies, and objectives and classification maps are adopted as part of the Comprehensive Plan. The CCTMP is part of the TE and is the transportation system plan for the Central City.

The TE was updated in 1996 and adopted by City Ordinance No. 170136 (effective date June 21, 1996). This update was Phase 1 of the City's effort to develop a transportation system plan for the City and includes amendments to Goal 6 and its policies, street classifications, and Goals 1, 2, 7, and 11.

On November 6, 1996, City Council adopted (Ordinance No. 170704, effective date January 1, 1997) regulations for "Interim Implementation of the Transportation Planning Rule." This set of regulations amended Title 33 and incorporated the majority of the requirements of the TSP.

On November 21, 1996, the Metro Council adopted the region's *Urban Growth Management Functional Plan (UGMFP)*. Title 2 of the *UGMFP* is entitled, "Regional Parking Policy." Title 2 contains a requirement for cities and counties to establish minimum and maximum parking regulations. Title 6 of the *UGMFP* is entitled, "Regional Accessibility." Title 6 imposed requirements on local jurisdictions to adopt regional street design guidelines, design standards for connectivity, and transportation performance standards.

On October 11, 2000, City Council adopted (Ordinance No. 174980), effective date November 20, 2000) amendments to Title 33 to implement the requirements of Title 2 of the *UGMFP*. The adopted amendments revised minimum parking requirements and added maximum parking requirements consistent with the standards established in Title 2.

On April 26, 2002, notice of proposed action was mailed to the Oregon Department of Land Conservation and Development (DLCD) in compliance with the post-acknowledgment review process required by OAR-660-020.

The amendments support Portland's long term commitment to efficient land use and its commitment to encourage alternative modes of transportation and reduce auto trips.

Citizen involvement and public outreach for the project is outlined in the findings for Goal 1, Citizen Involvement, below.

## Statewide Planning Goals Findings

State planning statutes require cities to adopt and amend comprehensive plans and land use regulations in compliance with the state land use goals.

**Goal 1, Citizen Involvement**, requires provision of opportunities for citizens to be involved in all phases of the planning process. The preparation of the TSP has provided numerous opportunities for public involvement. Portland Comprehensive Plan findings on Goal 9, Citizen Involvement, and its related policies and objectives also support this goal. The amendments are supportive of this goal in the following ways:

- On October 19, 1994, to initiate public involvement, a Transportation System Plan Forum was held to provide information about the TSP process and its relationship to regional planning efforts and to solicit public participation in the planning effort.
- Phase 1 of the TSP process included an extensive public involvement process that commenced in 1994 with five briefings to District Neighborhood Coalition boards on October 11 (two held), 16, 18, and 26 in 1995.



- A Citizen Advisory Committee (CAC) was formed in early 1995 with recommendations from District Coalition boards and other groups for potential members. CAC members were selected based on: interest group representation, geographic area representation, interest in transportation issues, and familiarity with specific transportation modes. The size of the CAC varied between 10 and 16 members over the length of the TSP process, with 30 people serving on the TSP during its two phases. Over the life of the TSP process, 60 CAC meetings were held between 1995 and 2002. These meetings were open to the public and minutes were taken and made available to anyone requesting them.
- Public workshops on policy and street classification changes were held on November 6, 13, 14, and 16 in 1995.
- Three Planning Commission hearings were held on January 23, 1996 and March 12, 1996 to consider the staff recommendation. The notices for the public hearings were mailed to approximately 8,000 people. Notices for all the public hearings were mailed to the local neighborhood associations and other interested persons who requested such notice. The Planning Commission public hearings were also advertised in the Oregonian. The staff recommendation was available 10 days in advance of the Planning Commission hearing.
- Notice of the City Council public hearing was mailed 45 days in advance of the hearing to approximately 800 people, including those who presented oral and/or written testimony at previous hearings, or were previously notified of public hearing dates.
- On May 15, 1996, the City Council held a public hearing on the Planning Commission recommended draft.
- Phase II of the TSP began immediately following adoption of Phase I on May 22, 1996. The first major event was a series of eight district workshops to discuss transportation needs on September 30, and October 1, 3, 6, 7, 8, 13, and 17 in 1998.
- Three TSP newsletters, mailed to the TSP mailing list and distributed at public events, were published in 1995, 1998 and 1999. The third newsletter summarized the outcome of the district workshops held the previous autumn.
- In 1999, six focus groups were held on June 21 and July 13, 15, 21, 22, and 26, and on January 4, 2000, a seventh meeting was held. The purpose of the focus groups was to discuss citywide and district transportation policy changes.
- In 2001, 10 Neighborhood District Coalition briefings were held on June 7, 13, 18, 19, 26, and 28, on July 11, 16, 19, and 28 and on September 18 to report progress on the TSP, including key elements that would be available for review at upcoming workshops.
- During the two phases of the TSP, two brochures were printed and distributed at numerous events or mailed out upon request. The second brochure, printed in 2001 in preparation of the release of the draft TSP was mailed to citizens on the TSP mailing list, placed in district coalition offices, and distributed at public events.

- Three citywide TSP Preview workshops were held on December 8, 12, and 13 in 2001 to guide participants through a series of stations that described the various elements of the TSP. Preliminary drafts of the elements were available for review and comment. Notice was mailed to approximately 2000 persons, groups, associations, and businesses.
- In addition to TSP-sponsored events, information, brochures, and newsletters were available at approximately 21 events targeted at varying audiences.
- Eight TSP presentations were made to groups throughout the City during Phase I and II of the TSP, including to the Oregon Trucking Association on March 14, 2002, and the Citywide Land Use and Transportation Working Group on March 25, 2002.
- The draft TSP was placed on the Portland Office of Transportation web site on May 15, 2002. Previous to that date, general information on the TSP was available on the web site.
- Notice of the Planning Commission hearings on June 11 and June 25, 2002, was mailed to approximately 2,600 persons and groups on May 9, 2002. The mailing included notification to the TSP mailing list, neighborhood and business associations, and the mailing list used by the Bureau of Planning for legislative projects.

**Goal 2, Land Use Planning**, requires the development of a process and policy framework which acts as a basis for all land use decisions and assures that decisions and actions are based on an understanding of the facts relevant to the decision. The amendments are supportive of this goal because the TSP project followed the process established in the Comprehensive Plan and Title 33, including notice and the availability of documents in advance of public hearings. Portland Comprehensive Plan findings on Goal 1, Metropolitan Coordination, and its related policies and objectives also support this goal.

The TSP does not affect **Goal 3, Agricultural Lands** and **Goal 4, Forest Lands**, because these lands are not located within the City of Portland.

**Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources**, requires the conservation of open space and the protection of natural and scenic resources. The TSP is consistent with this goal because the only impact on open space that TSP projects would have is to support the development of links in the Willamette Greenway Trail, the Springwater Corridor, and trails along the Columbia Slough.

The TSP is consistent with this goal because scenic and historic areas are not intended to be impacted by transportation projects listed in the TSP. Where there is a potential for impacts on these resources, further analysis will be completed as part of project design. If impacts are identified, the project will be modified to avoid the impact or mitigation will be included as part of the project design.

The TSP is consistent with this goal because natural areas are not intended to be impacted by transportation projects listed in the TSP. Where there is a potential for impacts on these resources, further analysis will be completed as part of project design. The project development process, as described in Chapter 6 of the TSP, includes the evaluation of

environmental impacts and the completion of necessary reviews to evaluate the impacts on environmentally-sensitive areas. If impacts are identified, the project will be modified to avoid the impact or mitigation will be included as part of the project design. The projects with potential impacts on natural resources are identified in Chapter 16 in Table 16.1. These projects may be subject to further review through environmental review or greenway review.

**Goal 6, Air, Water and Land Resource Quality**, requires the maintenance and improvement of the quality of air, water and land resources. The TSP is consistent with this goal because it contains many projects that support a more compact land use pattern and encourages the use of alternatives to the automobile. Less reliance on the automobile results in lower levels of air and water pollution. Portland Comprehensive Plan findings on Goal 8, Environment, and its related policies and objectives also support this goal.

**Goal 7, Areas Subject to Natural Disasters and Hazards**, requires the protection of life and property from natural disasters and hazards. The TSP is consistent with this goal because soil stability is addressed by a combination of existing and acknowledged Goal 5 regulations and building codes. TSP transportation projects must be consistent with these existing regulations. As part of the project development process, evaluation of existing conditions and application for relevant permits is made prior to construction.

**Goal 8, Recreational Needs**, requires satisfaction of the recreational needs of both citizens and visitors to the state. The TSP is consistent with this goal because it identifies and includes projects for recreational facilities, such as the Willamette Greenway Trail, that are also recreational facilities. The TSP also identifies pedestrian and bicycle projects that connect residential areas to recreational destinations including Tryon Creek State Park, Powell Butte, and Mt. Tabor.

**Goal 9, Economic Development**, requires provision of adequate opportunities for a variety of economic activities vital to public health, welfare, and prosperity. The TSP is consistent with this goal because it reinforces the City's freight network with transportation projects that will provide access to freight facilities and employment sites, including Columbia South Shore and Guild's Lake Industrial District. Portland Comprehensive Plan findings on Goal 5, Economic Development, and its related policies and objectives also support this goal.

**Goal 10, Housing**, requires provision for the housing needs of citizens of the state. The TSP is consistent with this goal because it reinforces the livability of Portland's neighborhoods by including bicycle and sidewalk projects such as the 70s Greenstreet and Bikeway, the Mill Park Pedestrian Improvements, and SW 30<sup>th</sup> Bicycle and Pedestrian Improvements. Portland Comprehensive Plan findings on Goal 4, Housing, and its related policies and objectives also support this goal.

**Goal 11, Public Facilities and Services**, requires planning and development of timely, orderly and efficient public service facilities that serve as a framework for urban and rural development. The TSP is consistent with this goal because it updates the Public Facilities Plan for Transportation by updating relevant Comprehensive Plan policy 11B: Public Rights-of-Way and completely updating the project list of significant transportation improvements. Portland Comprehensive Plan findings on Goals 11 A through I, Public Facilities, and related policies and objectives also support this goal.

**Goal 12, Transportation**, requires provision of a safe, convenient and economic transportation system. The TSP is consistent with this goal because it completely updates the City's transportation policies and meets all the requirements of the Transportation Planning Rule, including balancing the needs of all users of the transportation system and strengthening each modal network through the identification of projects. Findings for the TPR follow the Statewide Planning Goal findings. Portland Comprehensive Plan findings on Goal 6, Transportation, and its related policies and objectives also support this goal.

**Goal 13, Energy Conservation**, requires development of a land use pattern that maximizes the conservation of energy based on sound economic principles. The TSP is consistent with this goal because it supports a balanced transportation system that encourages additional walking, bicycling, and transit trips and reduces reliance on the single-occupant vehicle. New connectivity standards will result in a street system with less out-of-direction travel. Portland Comprehensive Plan findings on Goal 7, Energy, and its related policies and objectives also support this goal.

**Goal 14, Urbanization**, requires provision of an orderly and efficient transition of rural lands to urban use. The TSP is consistent with this goal because it supports the intensification of development in Portland, by providing a multimodal transportation system. The TSP supports the regional urban growth boundary by improving mobility and accessibility inside the urbanized areas, and consequently reducing the potential need for conversion of rural lands to urban uses. New connectivity standards will increase the efficiency of the street system and support infill development. Portland Comprehensive Plan findings on Goal 2, Urban Development, and its related policies and objectives also support this goal.

**Goal 15, Willamette River Greenway**, requires the protection, conservation, enhancement, and maintenance of the natural, scenic, historic, agricultural, economic, and recreational qualities of land along the Willamette River. The TSP is consistent with this goal because it includes transportation projects that enhance the recreational quality of the Greenway such as an extension of the Greenway Trail from the Sellwood Bridge south to the City boundary and the Greenway Trail through the North Macadam district.

**Goals 16, 17, 18, and 19** deal with **Estuarine Resources, Coastal Shorelines, Beaches and Dunes, and Ocean Resources**, respectively, and are not applicable to Portland as none of these resources are present within the city limits.

## **Transportation Planning Rule Findings**

The Transportation Planning Rule (TPR) was adopted in 1991 and amended in 1996 to implement Statewide Planning Goal 12 (Transportation). Local jurisdictions are required to comply with the TPR and adopt TSPs as part of their comprehensive plans. The TSP complies with the TPR because it is adopted as part of Portland's Comprehensive Plan and meets the specific requirement as noted below.

**Section 660-012-0000, the Purpose**, of the TPR is to promote the development of safe, convenient and economic transportation systems. The purpose of the rule is to reduce reliance on the automobile so that the air pollution, traffic and other livability problems faced by urban areas in other parts of the country might be avoided. The TSP is supportive of the purpose (660-012-0000) because it contains policies, projects, and strategies to reduce

reliance on automobiles including improving the pedestrian and bicycle networks, managing the system to manage congestion and improving transit speeds and reliability.

**Section 660-012-0020(1), Coordinated Network of Transportation Facilities**, of the TPR requires TSPs to establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs. The TSP complies with this requirement because it incorporates transportation improvements on the state, regional and local networks for all modes.

**Section 660-012-0020(2)(a), Determination of Transportation Needs**, of the TPR requires TSPs to include a determination of transportation needs as provided in 660-012-0030. The TSP fulfills this requirement as demonstrated in the findings below for 660-012-0030 of the TPR.

**Section 660-012-0030(1)(a), Determination of Transportation Needs**, of the TPR requires TSPs to identify state, regional and local transportation needs relevant to the planning area and the scale of the transportation network being planned. Transportation needs are based on projections of future travel demand as modified by policy objectives, including those in Statewide Planning Goal 12 and the TPR, especially those for avoiding principal reliance on any one mode of transportation. The TSP meets this requirement because it incorporates the state and regional needs identified in the Regional Transportation Plan (RTP). Local needs are identified in Chapter 10 of the TSP and summarized in the modal and management plans in Chapter 5. Needs were identified in adopted land use and transportation plans, through a series of district workshops, and by examining relevant transportation data such as the 1996 TSP Inventory, summarized in Chapter 9 of the TSP.

**Section 660-012-0030, Determination of Transportation Needs (1)(b)**, of the TPR requires TSPs to identify the needs of the transportation disadvantaged. The TSP meets this requirement because it identifies areas in the City not well-served by transit in its 1996 Inventory, and the findings of recent transit studies and plans including the Tri-County Elderly and Disabled Transportation Plan.

**Section 660-012-0030, Determination of Transportation Needs (1)(c)**, of the TPR requires TSPs to identify the needs for movement of goods and services to support industrial and commercial development. The TSP meets this requirement because the Freight and the Air, Rail, Water, and Pipeline modal plans in Chapter 5 summarize the needs for these modes. Chapter 10 of the TSP identifies, citywide and by transportation district, the needs for goods movement including the outcomes of recent transportation studies such as the Columbia Transportation Corridor Study, the Central Eastside Development Opportunity Study, and the St Johns Truck Strategy which are also detailed in Chapter 12. Chapter 9 summarizes the 1996 TSP Inventory including elements of the freight movement system that need upgrading.

**Section 660-012-0030, Determination of Transportation Needs (3)(a)**, of the TPR requires TSPs to use 20-year population and employment forecasts in determining state, regional, and local needs. The TSP is consistent with this requirement because it relied on the 20-year forecasts contained in the regional transportation model.

**Section 660-012-0030, Determination of Transportation Needs (3)(b)**, of the TPR requires TSPs to include, as part of their determination of needs, measures to reduce reliance on the automobile. The TSP is consistent with this requirement because the regional transportation scenario upon which the TSP is based includes measures such as parking costs, transit availability, and transportation management associations in large centers to reduce reliance on the automobile.

**Section 660-012-0020(3)(b), Road Plan**, of the TPR requires an inventory, assessment of capacity, and conditions for the street system. The TSP meets this requirement because it includes the 1996 TSP Inventory. The inventory includes the status and condition of streets, structures such as bridges, signs and signals, lighting, parking meters, traffic calming devices, pavement condition, and number of lanes and lane widths. The TSP relied on the regional transportation model for an assessment of street capacity and on other data such as traffic counts and accident information.

**Section 660-012-0020(3)(b-c), Road Plan**, of the TPR requires a map and description of planned facilities/services/improvements and a description of the responsible provider. The TSP meets this requirement because Chapter 3 includes maps and project descriptions for major transportation improvements. Included in the chapter are state, regional, and local street improvements in Portland as identified in the RTP and based on local needs not identified in the RTP.

**Section 660-012-0020(2)(b), Road Plan**, of the TPR requires a plan that includes a system of arterials and collectors and standards for the layout of local streets and other important non-collector street connections. The TSP is consistent with this requirement because Chapter 2, Maps 6.34.1 through 6.40.1 and Map 2.1 are the Motor Vehicle classification maps for the City. The maps include Regional Trafficways, Major City Traffic Streets, District Collectors, Neighborhood Collectors, Traffic Access Streets and Local Service Traffic Streets. The TSP includes Policy 6.20, Connectivity, and Policy 11.11, Street Plans, that establish the spacing standards for new streets. Connectivity standards for lands that are being divided have been incorporated into Title 33, Planning and Zoning, through the Land Division Update Project (Ordinance 175965, effective July 1, 2002). The TSP includes amendments to Title 17 that give the City Engineer authority to implement the street spacing standards in all residential, commercial, and employment zones within the City. Policy 11.11, Objectives F. through N. and their associated maps 11.11.1 through 11.11.16 are street plans showing where street connectivity is met and where new street and pedestrian/bicycle connections are needed.

**Section 660-012-0020(3)(a), Public Transportation Plan**, of the TPR requires an inventory and assessment of public transportation services including services for the transportation disadvantaged. The TSP is consistent with this requirement because it includes the 1996 TSP Inventory which includes (and is summarized in Chapter 9), the existing transit network; transit centers, stops, and park-and-rides; the fleet; frequency, ridership, and loading; special transit services; location of unserved or underserved populations; and inter-city bus and rail services.

**Section 660-012-0020(2)(c), Public Transportation Plan**, of the TPR requires a plan for public transportation that includes existing and planned transit streets, terminals, major transit stops, and park-and-ride stations. The TSP is consistent with this requirement because Chapter 2, Maps 6.34.2 through 6.40.2 and Map 2.2 are the Public Transportation

Maps for the City. The maps include Regional Transitways, Major Transit Priority Streets, Transit Access Streets, Community Transit Streets, Local Service Transit Streets, Transit Stations, Passenger Intermodal Facilities, and Inter-city Passenger Rail lines. Policy 6.6, Transit Street Classification Descriptions, contain stop spacing guidance rather than specific major transit stop locations. For purposes of orienting development to major transit stops, Portland requires orientation along the entire length of transit streets rather than only at major transit stops. The Portland approach exceeds the TPR requirements consistent with Section 660-012-0005(4) of the TPR.

**Section 660-012-0020(3)(b-c), Public Transportation Plan**, of the TPR requires a map and description of planned facilities/services/improvements and a description of the responsible provider. The TSP meets this requirement because Chapter 3 includes maps and project descriptions for major transportation improvements. Listed in the chapter are state, regional, and local public transportation improvements in Portland as identified in the RTP and based on local needs not included in the RTP. The Public Transportation and Transportation Disadvantaged Plan in Chapter 5 identifies other land use and transportation strategies to improve public transportation in Portland. Some of these strategies, such as encouraging compact development that supports and improves access to public transportation are implemented through land use regulations rather than the TSP. Recent studies that have implemented these land use strategies are summarized in Chapter 12, Area Studies.

**Section 660-012-0020(3)(a), Bicycle Plan**, of the TPR requires an inventory and assessment of bicycle facilities. The TSP is consistent with this requirement because it includes the 1996 TSP Inventory which describes (and is summarized in Chapter 9) the miles of existing and planned bikeways, the width of the facilities, their condition and surface, and the responsible jurisdiction. The Bicycle Master Plan (adopted in 1996) identified all of the projects needed to address the parts of the bicycle system not completed. The TSP project list in Chapter 3 and the Neighborhood Livability and Safety reference list in Appendix E.2 include all of the bicycle projects not yet completed.

**Section 660-012-0020(2)(d), Bicycle Plan**, of the TPR requires a plan for a network of bicycle routes throughout the planning area. The TSP is consistent with this requirement because it incorporates and updates the policy and project sections of the Bicycle Master Plan that was completed and adopted in May 1996. The City classifies bicycle streets as City Bikeways, Off-Street Paths, or Local Service Bikeways as described in Chapter 2, Policy 6.7. In Chapter 2, Map 6.34.3 through Map 6.40.3 and Map 2.3 show the bicycle network for the City.

**Section 660-012-0020(3)(b-c), Pedestrian Plan**, of the TPR requires a map and description of planned facilities/services/improvements and a description of the responsible provider. The TSP meets this requirement because Chapter 3 includes maps and project descriptions for major pedestrian improvements. Listed in the chapter are state, regional, and local pedestrian improvements in Portland as identified in the RTP and based on local needs not included in the RTP.

**Section 660-012-0020(3)(a), Pedestrian Plan**, of the TPR requires an inventory and assessment of pedestrian facilities. The TSP is consistent with this requirement because it includes the 1996 TSP Inventory (summarized in Chapter 9), which describes the location and condition of sidewalks and curb ramps and parties responsible for maintenance of the

facilities. The sidewalk inventory is broken out by miles of sidewalk per transportation district and percentage of streets with and without sidewalks. The Pedestrian Master Plan (adopted in 1998) identified the projects needed to complete the pedestrian system as identified by the community during the development of the plan. The TSP project list in Chapter 3 and the Neighborhood Livability and Safety reference list in Appendix E.2 include all of the pedestrian projects not yet completed. Sidewalks are also completed in conjunction with adjacent development or through the local improvement district process.

**Section 660-012-0020(2)(d), Pedestrian Plan**, of the TPR requires a plan for a network of pedestrian routes throughout the planning area. The TSP is consistent with this requirement because it incorporates and updates the policy and project sections of the Pedestrian Master Plan that was completed and adopted in April 1998. The City classifies Pedestrian Districts and pedestrian streets as City Walkways, Off-Street Paths, or Local Service Walkways as described in Chapter 2, Policy 6.7. In Chapter 2, Map 6.34.4 through Map 6.40.4 and Map 2.4 show the pedestrian network for the City.

**Section 660-012-0020(3)(b-c), Bicycle Plan**, of the TPR requires a map and description of planned facilities/services/improvements and a description of the responsible provider. The TSP meets this requirement because Chapter 3 includes maps and project descriptions for major pedestrian improvements. Listed in the chapter are state, regional, and local pedestrian improvements in Portland as identified in the RTP and based on local needs not included in the RTP.

**Section 660-012-0020(2)(e); Air, Rail, Water, and Pipeline Transportation Plan**, of the TPR requires TSPs to identify where major facilities are located or planned within the planning area. The TSP meets this requirement because the TSP Inventory includes maps and text describing these facilities including airports, mainline facilities, major freight facilities (marine terminals, rail facilities, airports, reload facilities, truck terminals, distribution facilities, carriers, and freight forwarder and custom brokers), and pipelines. The air and rail facilities are shown on the Transit Maps 6.34.2 through 6.40.2 and on the Freight Maps 6.34.5 through 6.40.5.

**Section 660-012-0020(2)(f), Transportation System Management**, of the TPR requires TSPs to address travel demand with measures which may include traffic signal improvements, traffic control devices, channelization, access management, ramp metering, and restriping for HOV lanes. The TSP is supportive of this policy because it includes Policy 6.15, Transportation System Management which calls for giving preference to transportation improvements that use existing roadway capacity efficiently and improve the safety of the system. Objective B supports using measures including synchronizing signals. Policy 6.16, Access Management, supports using access management in situations where needed to ensure the safe and efficient operation of higher-speed, heavily traveled streets. Chapter 5 includes the Transportation System Management plan that includes projects, programs, and strategies to make the system more efficient and safer without capacity increases. As detailed in Chapter 3 the projects include citywide transit signal priority improvements and Map 3.10 and the accompanying text describe intelligent transportation system (ITS) projects along major corridors and at congested locations.

**Section 660-012-0020(2)(f), Demand Management, and Section 660-012-0020(2)(g), Parking Plan**, requires a plan that includes measures such as those that encourage the use of alternative modes, ridesharing and vanpool programs, and trip-



reduction ordinances, reduce parking spaces per capita, and minimum and maximum parking ratios. The TSP is consistent with this requirement because Policy 6.29, Travel Management supports demand management programs and measures, including developing neighborhood-based programs, customizing alternative transportation programs for businesses in employment areas and regional centers, supporting car sharing programs. Policy 6.27, Off-Street Parking, supports regulating parking to promote good urban form by eliminating off-street parking requirements in areas with high-quality transit, pedestrian, and bicycle facilities; redeveloping parking lots into transit-supportive uses; and limiting new parking. The Transportation Demand Management Plan in Chapter 5 summarizes the programs and strategies, including support for transportation management associations. In 1996, the City adopted minimum and maximum parking ratios consistent with Metro standards in Title 2 of the Urban Growth Management Functional Plan (UGMFP). Chapter 6 includes additional Title 33 amendments that eliminate off-street parking in areas well-served by transit.

**Section 660-012-0025(2), Complying with Statewide Goals**, of the TPR requires findings of compliance with applicable statewide planning goals. The TSP is consistent with this requirement because statewide planning goal findings are included in earlier sections in these findings that demonstrate compliance.

**Section 660-012-0025(2), Complying with Comprehensive Plan**, of the TPR requires findings of compliance with applicable acknowledged comprehensive plan policies. The TSP is consistent with this requirement because the findings of compliance with Portland's Comprehensive Plan are contained in later sections of these findings that demonstrate compliance.

**Section 660-012-0035(1), Evaluation and Selection of Transportation System Alternatives**, of the TPR requires that TSPs evaluate the following as components of system alternatives: improvements to existing facilities, new facilities, TSM measures, TDM measures, and a no-build system. The TSP is consistent with this requirement because it relied on the 2000 RTP evaluation of alternatives – the no-build system, the priority system, and the preferred system. Each alternative had a combination of projects that included these components. Chapter 13 summarizes the regional approach to developing system alternatives that the City's TSP relied on.

**Section 660-012-0035(2), Evaluation and Selection of Transportation System Alternatives**, of the TPR requires local governments in large MPO areas to evaluate alternative land use designations, densities, and design standards to meet local and regional transportation needs and consider increasing residential densities and establishing minimum densities, increasing commercial densities in designated community centers, designating land for shopping development near residential areas, and balancing land uses for housing and jobs. The TSP is consistent with this requirement because it relied on the adopted 2040 Growth Concept for the land use alternatives called for in this section. In developing the 2040 Growth Concept, Metro, in coordination with local jurisdictions, directed growth to compact centers and along main streets. The City has refined the Growth Concept through more recent land use studies including the Outer Southeast Community Plan, the Southwest Community Plan, and the Hollywood/Sandy Plan, resulting in increased residential and commercial densities in the Gateway regional center, Lents town center, Hillsdale town center, Hollywood town center and the Sandy main street. The results are areas zoned and developing as mixed use neighborhoods with neighborhood shopping and

in close proximity to employment areas in the City. Sites within the City have been rezoned and developed for affordable housing projects near employment areas of the City, including the Johns Wood project in north Portland. Chapter 13 summarizes the regional approach to developing land use alternatives that resulted in the 2040 Growth Concept and the local plans that have refined the Growth Concept since its adoption.

**Section 660-012-035(3)(a), Appropriate Transportation Facilities and Services,** of the TPR requires that TSPs include types and levels of transportation facilities and services appropriate to serve the land uses identified in the jurisdiction's Comprehensive Plan. The TSP is consistent with this requirement because the projects listed in Chapter 3 are based on needs that respond to the Comprehensive Plan Map. Analysis in the RTP and TSP are based on the City's Comprehensive Plan Map.

**Section 660-012-035(3)(b), Air and Water Quality,** of the TPR requires that the transportation system is consistent with state and federal standards for protecting air, land, and water quality. The TSP is consistent with this requirement because it conforms to the 2000 RTP and both the Financially Constrained System and the 2020 Priority System have been found to conform to federal air quality requirements. The TSP is consistent with the Portland Comprehensive Plan, which is acknowledged as complying with water resource requirements. In the TSP Economic, Social, Environmental, and Energy (ESEE) analysis, potential impacts on Goal 5, 7, and 15 resources have been identified. Projects that will potentially impact these resources will need to be further evaluated before proceeding with project development.

**Section 660-012-035(3)(c), Economic, Social, Energy, and Environment Impacts,** of the TPR requires TSPs to minimize adverse economic, social, environmental and energy consequences. The TSP is consistent with this requirement because several policies and objectives and its 20-year list of projects carry out the goals of the City to support economic development through improving access and mobility for employees and the movement of goods. A well-designed and maintained transportation system as defined by the TSP, supports commercial development in centers and along main streets, employment and industrial areas of the City, and the movement of goods in, out, and through the region.

The TSP is consistent with this requirement because its 20-year list of projects carry out the goals of the City to support the social well-being of the community by providing increased accessibility to destinations such as jobs, shopping, schools, and recreation by a variety of means. TSP projects such as boulevard treatments and Greenstreets enhance the pedestrian realm and increase opportunities for personal interaction. Other TSP projects such as intelligent transportation system (ITS) improvements, intersection improvements, and upgrading of facilities improve the social environment of the community by reducing or eliminating safety hazards.

The TSP is consistent with this requirement because new policies and objectives support the City's goals for environmental protection. New policies and objectives address the environmental consequences of transportation choices (Policy 6.3, Objective F), the protection of natural vegetation and topography on certain streets (Policy 6.11, Objective G), meeting the City's sustainability goals in environmentally-responsible ways (Policy 11.8), using environmentally-safe products in transportation activities (Policy 11.8, Objective D), minimizing runoff and erosion in ground-disturbing transportation projects (Policy 6.11,

Objective E), reusing and recycling materials and composting leaves (Policy 6.11, Objective B), maintaining equipment to minimize air, water, and noise pollution (Policy 6.11, Objective C), using best management practices to address environmental impacts of maintenance activities (Policy 11.12, Objective C). In project selection criteria, the TSP emphasizes environmental protection (Policy 11.9, Objective G) and in designing and developing projects, it requires incorporating sustainable design solutions (Policy 11.8, Objective G) and minimizing impacts on the natural environment (Policy 11.10, Objective O). Projects on the 20-year list that have potential impacts on the environment must be reviewed for ESEE impacts as a part of project development and have appropriate mitigation measures incorporated into their design. The list of the projects that will need ESEE review is included in Chapter 16 in Table 16.1. Many TSP projects support the environmental goals of the City by encouraging walking, bicycling, and using transit and thereby reducing the growth in automobile trips and the air and water pollution associated with the automobile. Projects with potential impacts on protected environmental resources are subject to further evaluation through the environmental or greenway land use reviews.

The TSP is consistent with this requirement because new policies and objectives support energy conservation by encouraging walking, bicycling, and using transit as alternatives to the automobile. These policies and objectives are: Policy 6.3, Transportation Education and Objectives C, D, and E; Policy 6.22, Pedestrian Transportation, and its objectives; Policy 6.23, Bicycle Transportation, and its objectives; Policy 6.24, Public Transportation, and Objectives A, D, E, F, and H; Policy 6.28, Travel Management, its objectives; Policy 6.33, Congestion Pricing, and Objective B, and Policy 11.8 Environmental Sustainability in Transportation, Objective F. The 20-year list of TSP projects implements these policies and objectives by including numerous projects that support walking, bicycling, and taking transit such as new bike lanes, pedestrian facilities, and transit-preferential treatments along transit corridors.

**Section 660-012-035(3)(d), Minimization of Conflicts**, of the TPR requires TSPs to minimize conflicts and facilitate connections between modes of transportation. The TSP is consistent with this requirement because, in its development the needs for each mode was examined and connections among modes were inventoried and included on the appropriate classification map in Chapter 2. Where needed, transportation improvements were identified in Chapter 3 to support multimodal travel and the improved functioning of multimodal transfer points.

**Section 660-012-0035(3)(e), Reduce Reliance on the Automobile**, of the TPR requires TSPs to avoid principal reliance on any one mode of transportation and reduce principal reliance on the automobile. This is to be accomplished by selecting a transportation alternative that achieves the required reduction in vehicle miles traveled per capita. The TSP is consistent with this requirement because transportation improvements were selected that support alternatives to the automobile and limit improvements to support the automobile except where needed to support freight movement.

**Section 660-012-0035(4), Reduce VMT per Capita**, of the TPR requires TSPs to achieve a 10 percent reduction in vehicle miles traveled per capita within 20 years of adoption of the TSP. The RTP shows a reduction in VMT per capita of 9 percent for residential production trips, 8 percent for employment attraction trips, and an increase in 1 percent for employment production trips. The TSP is consistent with this requirement because, in addition to the transportation improvements included in the RTP, the TSP

includes many additional improvements for alternative modes and is undertaking initiatives in the St Johns, Lents, and Hollywood town centers, the Gateway regional center and the Central City that will encourage additional walking, bicycling, and transit trips. Chapter 15 includes benchmarks for reducing VMT per capita that show a 10 percent reduction over the next 20 years is achievable for Portland.

**Section 660-012-0045(5), Alternative Standards**, of the TPR, allows LCDC to authorize an alternative standard in place of the VMT reduction. The RTP uses an alternative to the VMT reduction that identifies parking management measures, transportation demand management (TDM) programs, and additional transit service as the types of actions that are most effective in increasing the non-single occupant vehicle (SOV) mode share. Their primary alternative is the modal targets for 2040 Growth Concept design types. The TSP incorporates these modal targets in Chapter 16, System Performance, Table 15.6. The TSP also incorporates, through its project list and the Transportation Demand Management (TDM) and Parking Modal Plan, the regional projects to reduce automobile trips including transportation management associations for the Lloyd and North Macadam districts in the Central City, the Gateway regional center, the Swan Island industrial area, and the Columbia Corridor industrial/employment area and frequent bus improvements in major transit corridors. Other transportation demand management measures that are implemented through programs identified in the TDM and Parking Modal Plan include, expanded fareless square areas or free shuttles for centers, neighborhood-based programs, and parking meter districts outside of the Central City. Parking management is accomplished by having maximum parking ratios throughout the City for all non-residential uses. In large areas of the City – Central City and Gateway – there are no parking minimums further reducing the demand for parking. While providing additional transit service is a Tri-Met and regional funding responsibility, the TSP supports increased transit service through including projects on the 20-year list such as frequent bus service on major transit corridors, extending light rail to Vancouver and street car to North Macadam, TMAs, access to transit, and transit stop improvements.

**Section 660-012-0045(6), Measurable Objectives**, of the TPR, requires regional TSPs to include measurable objectives for mode share for non-automobile trips, average automobile occupancy, and a trip lengths. The non-SOV mode share by 2040 design type from the RTP is incorporated into the TSP in Chapter 16, System Performance. The RTP proposes that the average vehicle occupancy and trip measures be optional because travel data indicate that they are not the most appropriate measures for evaluating TSP performance. The TSP includes auto occupancy as a performance measure but does not set benchmarks for the same reasons cited in the RTP. The projected auto-occupancy for 2020 remains nearly constant from the 1994 data. Trip length is best calculated on a regional basis rather than a smaller subregional level. Data for Portland would be skewed because of the large number of trips that come to the Central City from throughout the region and beyond. Performance measures that the TSP does include relating to reducing vehicle miles traveled are: 1) percentage of City bikeway network competed; 2) percentage of City blocks meeting connectivity standards; 3) number of employees participating in TMAs; and 4) percentage of City Walkway and Pedestrian District streets with completed sidewalks.

**Section 660-012-0035(7), Interim Benchmarks**, of the TPR requires TSPs to include interim benchmarks to assure satisfactory progress towards meeting the requirements of 660-0012-035 at five-year intervals over the 20-year life of the plan. The TSP is consistent with this requirement because Chapter 15 supplies baseline data and benchmarks for

increasing non- SOV mode split and reducing VMT per capita. In addition, the TSP will track performance in a number of other areas, but does not create benchmarks for them. These other performance measures are: average auto occupancy, miles of bikeway network completed, unmet pavement need in miles, percentage of funding from general funds versus non-general fund monies, truck delay in hours, travel time in ITS corridors, percentage of streets with completed sidewalks, culvert replacement, blocks meeting street connectivity, traffic safety, and TMA enrollment.

**Section 660-012-0040(1) and (2)(a-c), Transportation Financing Program**, of the TPR requires TSPs to include a financing program that lists planned transportation facilities and major improvements, an estimate of timing, and rough cost estimates. The TSP is consistent with this requirement because Chapter 3 includes descriptions of the major transportation system improvements for the next 20 years by district, including a general estimate of timing and rough cost estimates.

**Section 660-012-0040(2)(d), Transportation Financing Program**, of the TPR requires TSPs to include policies to guide selection of transportation facility and improvement projects for funding in the short-term to meet the standards and benchmarks of 660-012-0035(4-6). The TSP is consistent with this requirement because Policy 11.9, Project Selection, and its nine objectives in Chapter 2 require giving priority to transportation projects that contribute to a reduction in vehicle miles traveled per capita; promote a compact urban form through mixed-use and pedestrian-friendly development; and increase walking, bicycling, and transit use.

**Section 660-012-0040(3), Transportation Financing Program**, of the TPR requires TSPs to include in the transportation financing program a discussion of the facility provider's existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of the identified transportation improvements. The TSP is consistent with this requirement because Chapter 14 describes state, regional and local funding for transportation mechanisms and the ability of identified and new resources to fund the system. The financial program identifies three scenarios and the levels of funding necessary for each.

**Section 660-012-0045(1)(c), Implementation of the TSP**, of the TPR requires regulations that provide for consolidated review of land use decisions required to permit a transportation project. The TSP is consistent with this requirement because Title 33, Section 720.040, Concurrent Reviews, provides for a consolidated land use review process for all land use applications. This includes transportation projects that require a land use review including public rights-of-way in the greenway, environmental, and scenic resource overlay zones, whether the project involves creating new rights-of-way or expanding or vacating rights-of-way.

**Section 660-012-0045(2)(a), Implementation of the TSP**, of the TPR requires TSPs to include measures that control access, such as driveway and road spacing, median control, and signal spacing standards consistent with the functional classification of streets. The TSP is consistent with this requirement because Policy 6.16, Access Management, provides the policy basis for access management and amends Title 17, Chapter 28, which controls the location and width of driveways. The TSP incorporates and amends Title 17, Chapter 88, Street Access, which controls the location and spacing of streets.

**Section 660-012-0045(2)(b), Implementation of the TSP**, of the TPR requires TSPs to include standards to protect operation of roads, transitways and major transit corridors. The TSP is consistent with this requirement because the City Engineer has authority through Title 17 to permit or not permit changes to City rights-of-way. The TSP policies in Chapter 2 provide guidance in determining which streets must be protected as traffic and transitways.

**Section 660-012-0045(2)(c), Implementation of the TSP**, of the TPR requires TSPs to protect public use airports by controlling land uses within airport noise corridors and imaginary surfaces, and by limiting physical hazards to air navigation. The TSP is consistent with this requirement because it includes in the Air, Rail, Water and Pipeline Modal Plan a discussion of the Title 33 regulations that protect Portland International Airport. These regulations are Chapter 33.470, the Portland International Airport Noise Impact zone, which limits uses within the 65 and 68 Ldn noise contours. The City's Comprehensive Plan Map limits or prohibits residential uses within these noise contours by zoning the areas with zones that do not allow residential development. Limited residential development consistent with the regulations in 33.470 must include recorded noise disclosure statements and noise easements granted to the Port of Portland (Section 33.470.050). Title 33, Chapter 33.400, Aircraft Landing zone limits the height of structures within the imaginary surfaces. Adjustments to the Aircraft Landing zone limits can only be granted with the approval of the Federal Aviation Administration and the Port of Portland.

**Section 660-012-0045(2)(d), Implementation of the TSP**, of the TPR requires TSPs to include a process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites. The TSP is consistent with this requirement because Title 33, Section 720.040, Concurrent Reviews, provides for a consolidated land use review process for all land use applications.

**Section 660-012-0045(2)(e), Implementation of the TSP**, of the TPR requires TSPs to include a process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites. The TSP is consistent with this requirement because Title 33, Section 800.070, Conditions of Approval, allow the City to attach conditions to the approval of all discretionary reviews.

**Section 660-012-0045(2)(f), Implementation of the TSP**, of the TPR requires TSPs to provide notice to public agencies providing transportation facilities and services, to Metro, and to ODOT. The TSP is consistent with this requirement because the Office of Planning and Development Review provides notice to affected transportation agencies of land use and land division applications including those within airport noise corridors and imaginary surfaces which affect airport operations. Tri-Met and ODOT are notified of all land use reviews and are provided an opportunity to respond.

**Section 660-012-0045(2)(g), Implementation of the TSP**, of the TPR requires TSPs to include measures to insure that amendments to land use designations, densities, and design standards are consistent with the functions, capacities, and levels-of-service of facilities identified in the TSP. The TSP is consistent with this requirement because Title 33, Chapters 33.810, Comprehensive Plan Map Amendments; 33.815, Conditional Uses; 33.820, Conditional Use Master Plans; 33.835, Goal, Policy, and Regulation Amendments; 33.850, State Planning Goal Exceptions; and 33.855, Zoning Map Amendments, require land use applications that could impact streets to be consistent with their function, capacity, level of service or other performance measures.

**Section 660-012-0045(3)(a), Implementation of the TSP**, of the TPR requires TSPs to require bicycle parking facilities as part of new multifamily residential development of four units or more, new retail, office and institutional developments, and all transit transfer stations and park-and-ride lots. The TSP is consistent with this requirement because in 1996 amendments to Title 33, Chapter 266, Parking and Loading, to require short- and long-term bicycle parking as a part of all new multifamily, commercial, industrial and institutional development. The regulations also apply to these uses when expanding or making major improvements.

**Section 660-012-0045(3)(b), Implementation of the TSP**, of the TPR requires TSPs to require on-site pedestrian and bicycle facilities within new subdivisions, multifamily development, planned developments, shopping centers, commercial districts adjacent to residential areas and transit stops, and neighborhood activity centers within one-half mile of the development. The TSP is consistent with this requirement because Title 33, Chapters 33.120, Multifamily Zones, 33.130, Commercial Zones, and 33.140, Industrial and Employment Zones, require pedestrian connections to adjacent streets for all development, and for large retail development set back from the street, to adjacent sites. Chapter 33.654, (effective date July 1, 2002) regulates land divisions and requires street and pedestrian connections within the site and connecting to streets and pedestrianways adjacent to the site.

**Section 660-012-0045(3)(b)(B), Implementation of the TSP**, of the TPR requires TSPs to provide bikeways along arterials and major collectors and sidewalks along arterials, collectors, and most local streets. The TSP is consistent with this requirement because Policy 6.7, Bikeway Classification Descriptions, and the district maps showing where the bikeway classifications are applied, which includes major streets, including most Major City Traffic Streets, District Collectors, Neighborhood Collectors, and some local streets. Policy 11.10, Street Design and Right-of-Way Improvements, Objective G, requires sidewalks on both sides of all new street improvement projects, except where physical constraints preclude them. Policy 11.10 also requires street improvements to comply with the Pedestrian Design Guide and the Bicycle Master Plan design guidelines for locating and building appropriate bicycle and pedestrian facilities.

**Section 660-012-0045(3)(b)(D), Implementation of the TSP**, of the TPR requires TSPs to establish their own standards or criteria for providing streets and accessways consistent with the TPR. The TSP is consistent with this requirement because Chapter 33.654 includes the spacing standards for streets and accessways in sites dividing for development effective date July 1, 2002. The TSP includes amendments to Chapter 33.251, Manufactured Homes and Mobile Home Parks, and Chapter 33.293, Superblocks, to improve connectivity. The TSP also includes amendments to Title 17, Chapter 17.88, Street Access, by adding street and pedestrian/bicycle connection spacing standards consistent with those in Title 33 and giving the City Engineer authority to require this level of connectivity.

**Section 660-012-0045(3)(e), Implementation of the TSP**, of the TPR requires TSPs to require internal pedestrian circulation within new office parks and commercial developments be provided through clustering of buildings, construction of accessways, walkways and similar techniques. The TSP is consistent with this requirement because Title 33, Chapters 33.130 and 33.140 allows office and commercial development to cluster

buildings and requires all buildings on site to be connected with pedestrian walkways and connected to adjacent streets.

**Section 660-012-0045(4)(a), Implementation of the TSP**, of the TPR requires TSPs to provide measures to ensure that transit routes and transit facilities are designed to support transit use through provisions for bus stops, pullouts and shelters, optimum road geometrics, on-street parking restriction and similar facilities. The TSP is consistent with this requirement because Policy 6.6, Transit Street Classification Descriptions, includes guidelines for transit-preferential treatments on Regional Transitways, Major Transit Priority Streets, and Transit Access Streets. Policy 6.24, Public Transportation, and its objectives support the design and construction of transit facilities including transit preferential treatments. Policy 11.10 Street Design and Right-of-Way Improvements, Objective H. calls for including improvements that enhance transit operations, safety, and travel times in projects on existing and planned transit routes. Title 17 gives the City Engineer authority to establish street standards and to require frontage improvements for new and redeveloping sites. The TSP includes an amendment expanding the City Engineer authority to require frontage improvements for sites that are making major improvements, but not increasing occupancy (Section 17.88.020).

**Section 660-012-0045(4)(b)(A), Implementation of the TSP**, of the TPR requires TSPs to require new retail, office and institutional buildings at or near major transit stops to provide convenient pedestrian access to transit through walkways connecting building entrances and streets adjoining the site. The TSP is consistent with this requirement because the 1996 TPR amendments added this requirement to Title 33 for all multifamily, commercial (all C zones) and employment development (EGI and EX zones) adjacent to any transit street other than Regional Transitways that are also Regional Trafficways (Sections 130.240 and 140.240).

**Section 660-012-0045(4)(b)(B), Implementation of the TSP**, of the TPR requires TSPs to require new retail, office and institutional buildings at or near major transit stops to provide pedestrian connections to adjoining properties except where impractical. The TSP is consistent with this requirement because Title 33 requires pedestrian connections to adjacent streets (Sections 33.120.255, 33.130.240, and 33.140.240). The TSP amends Section 33.815.105 (approval criteria for institutions in residential zones) to include consideration of connectivity and impacts on pedestrian, bicycle, and transit circulation. Since most Portland blocks are small, and buildings are required to be built near the sidewalk, sidewalks provide the most direct connections to adjacent properties without directing pedestrians through parking lots. Title 33 also requires connections to adjacent properties for large retail development sites where buildings are allowed to be set back from the street with smaller buildings adjacent to the transit street (Sections 33.130.215.C and 33.140.215.C).

**Section 660-012-0045(4)(b)(B), Implementation of the TSP**, of the TPR requires TSPs to require new retail, office and institutional buildings at or near major transit stops to locate buildings within 20 feet of a transit stop, transit street or intersecting plaza. The TSP is consistent with this requirement because it amends Title 33 to require buildings to be no more than 10 feet from transit streets (Sections 33.120.220.B, 33.130.215.B, and 33.140.215.B).

**Section 660-012-0045(4)(d), Implementation of the TSP**, of the TPR requires TSPs to include regulations for designating preferential parking areas in new development for



employee parking. The TSP is consistent with this requirement because the 1996 Title 33 TPR amendments included requirements for preferential carpool parking in new commercial development (Section 33.266.110.C).

**Section 660-012-0045(4)(e), Implementation of the TSP**, of the TPR requires TSPs to include regulations for allowing existing development to redevelop a portion of existing parking areas for transit-oriented uses. The TSP is consistent with this requirement because the 1996 Title 33 TPR amendments included a provision to convert up to 10 percent of required parking to a transit-oriented plaza that includes a shelter and seating area (Section 33.266.110.B.5).

**Section 660-012-0045(4)(f), Implementation of the TSP**, of the TPR requires TSPs to include road systems for new development that can be served by transit, including pedestrian access. The TSP is consistent with this requirement because designated transit streets are located to provide citywide transit coverage and these streets are built based on Policy 6. 5, Transit Street Classification Descriptions, include direction for pedestrian access. The TSP classifies streets adjacent to transit streets (other than Regional Transitways on freeways) as City Walkways or Pedestrian-Transit Streets to ensure that adequate pedestrian facilities are built over time. The Pedestrian Design Guide, which is incorporated into the TSP through the Pedestrian Modal Plan in Chapter 5, establishes the appropriate level of pedestrian improvements for City Walkways.

**Section 660-012-0045(4)(g), Implementation of the TSP**, of the TPR requires TSPs to ensure that, along existing or planned transit routes, the types and densities of land uses are adequate to support transit. The TSP is consistent with this requirement because, as planning studies are done, the Comprehensive Plan is updated to increase residential densities along transit streets and to place mixed-use zoning along main streets and in centers. Since the 2040 Growth Concept was adopted for the region in 1995, Portland has adopted a number of plans to be consistent with Policy 2.12, Transit Corridors, 2.17, Transit Stations and Transit Centers, and 2.18, Transit-Supportive Density. These studies include: Goose Hollow Station Community Plan, Albina Community Plan, Hollywood and Sandy Plan, Bridgeton Neighborhood Plan, Outer Southeast Community Plan (including plans for the Gateway regional center and Lents town center), Hillsdale Town Center Plan, and the Southwest Community Plan.

**Section 660-012-0045(5)(a) Reduce Reliance on the Automobile**, of the TPR requires TSPs to allow transit-oriented development along transit routes. The TSP is consistent with this requirement because all commercial zones in Portland allow a mix of uses, including residential uses by right, as does the EX, Central Employment zone. The RH zone allows up to 20 percent of new development to contain retail and office uses if within 1000 feet of a light rail station and through conditional use approval (Section 33.120.100.B.2). The RX zone allows varying percentages of retail and office uses by right or through a conditional use approval (Section 33.120.100B.3). These zones are typically placed near transit lines or clustered in areas with significant transit service such as the Central City, Gateway regional center, town centers and light rail stations, and along main streets consistent with the characteristics of the zones as defined in Sections 33.120.030, 33.130.030, and 33.140.040 and as shown on the Comprehensive Plan Map.

**Section 660-012-0045(5)(b) Reduce Reliance on the Automobile**, of the TPR requires TSPs to implement a demand management program to meet the benchmarks in the

TSP. The TSP is consistent with this requirement because it includes a Demand Management and Parking Plan in Chapter 5 with projects, programs and strategies to help meet the benchmarks established in Chapter 15. Features of the TDM Plan include sponsoring and assisting with transportation management associations, sponsoring alternative transportation promotion events, facilitating carpool programs, expanding Fareless Square, and school education programs. The funding for these programs are through TSP projects, including TMAs, and through on-going transportation programs in coordination with Tri-Met.

**Section 660-012-0045(5)(c) Reduce Reliance on the Automobile**, of the TPR requires TSPs to implement a parking plan that achieves Portland's share of the region's reduction of 10 percent parking spaces per capita. The TSP is consistent with this requirement because it includes a Demand Management and Parking Plan in Chapter 5 with programs and strategies to help reduce parking spaces per capita over the planning period. Features of the Parking Plan include instituting parking minimums and maximums citywide that conform to Metro's requirements, expanding the area covered by parking meter districts, and allowing required parking areas to be redeveloped with transit plazas and bicycle parking. In addition, the TSP includes amendments to Title 33 to require parking lots over three acres in size to provide street-like features along driveways. (Section 33.266.110.F). Title 33 currently does not require any off-street parking in a number of zones – EX, CX, CS, CM, CO1 and CO2, and RX. The TSP includes an amendment exempting development from minimum parking requirements within 500 feet of transit streets with high-quality transit service (Section 33.266.110.B.3). The TSP also references in the TDM and Parking Plan the City's program for residential parking districts, which are being expanded to include commercial areas as well as residential, to reduce commuter and event parking from impacting residential and mixed-use neighborhoods.

**Section 660-012-0045(5)(c), Reduce Reliance on the Automobile**, of the TPR requires TSPs to require major industrial, institutional, retail and office developments to provide a transit stop on site or a connection to transit when the transit operator requires the improvement. The TSP is consistent with this requirement because development in the C and E zones must provide a direct connection between its main entrance and adjacent streets, including transit streets (Sections 33.130.240 and 33.140.240). The TSP amends Section 33.815.105, Institutional and Other Uses in the R Zones, and 33.848, Impact Mitigation Plans, to include connectivity and impacts on transit circulation to ensure that institutions that are conditional uses or in Institutional Residential zones meet the intent of this requirement.

**Section 660-012-0045(6), Bicycle and Pedestrian Improvements in Developed Areas**, of the TPR requires TSPs to identify improvements for bicycles and pedestrians to meet local travel needs in developed areas. The TSP is consistent with this requirement because the Pedestrian and Bicycle Master Plans have been incorporated in the TSP in Chapter 3, Transportation System Improvements, and in the Pedestrian and Bicycle Modal Plans in Chapter 5. The master plans were adopted in 1996 and 1998 and include a description of needs and projects to address these needs. The list of transportation system improvements in Chapter 3 identify a number of bicycle and pedestrian projects to fill in gaps in the pedestrian and bicycle networks, including pedestrian bridges, retrofitting bike lanes to existing streets, extending the Willamette Greenway Trail, making pedestrian connections to light rail stations, and improving pedestrian facilities in pedestrian districts. Title 33 land division regulations and Title 17 impose the street and pedestrian/bicycle

connections in already developed areas that are redeveloping as well as in large vacant areas (Chapter 33.654: Rights-of-Way).

**Section 660-012-0045(7), Local Street Standards**, of the TPR requires TSPs to establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The TSP is consistent with this requirement because it incorporates street standards into Chapter 6 that minimize street and pavement widths in single-family residential zones. Street widths are as narrow as 40 feet and pavement widths as narrow as 20 feet in the RF through R7 zones. As zoning becomes more intense, street widths are proportionately wider to accommodate higher levels of traffic. Street widths are greater in Pedestrian Districts and along City Walkways to accommodate wider sidewalks and higher levels of pedestrian activity. Streets designated as City Bikeways are sized to accommodate appropriate bicycle facilities. The street standards minimize overall width and pavement width to only what is needed to accommodate applicable street designations and included required elements.

**Section 660-012-050(3), Project Development**, of the TPR requires project development to include findings of compliance with applicable requirements where those findings have not been made as part of the transportation system plan or refinement plan. The TSP is consistent with this section of the TPR because it states that findings, necessary for project development, will be completed before projects are approved. The TSP includes adequate findings to exempt transportation projects within existing rights-of-way except those impacting significant Goal 5, 7, or 15 resource sites. Title 33 requires new rights-of-ways and the expansion or vacation of existing rights-of-way in environmental or greenway zones to go through a land use review (Section 33.10.030.B, When the Zoning Code Applies). Chapter 16 includes a list of projects (Table 16.1) that are subject to further review for Goal 5 resource impacts.

**Section 660-012-0060, Plan Amendments**, of the TPR requires local governments to ensure that plan amendments, which significantly affect the transportation system, be consistent with adopted land use and transportation plans. The TSP is consistent with this requirement because Title 33, Chapter 810, Comprehensive Plan Map amendments, requires that all Comprehensive Plan policies, including the Transportation Element of the Comprehensive Plan (consisting of the Goal 6, Transportation; Goal 11B, Public Rights-of-Way; and the Central City Transportation Management Plan) be considered. The Transportation Element is the policy portion of the Transportation System Plan. Adopted land use plans are also part of the Comprehensive Plan and are referenced and incorporated in Goal 3, Neighborhoods. The Transportation Element of the Comprehensive Plan (Chapter 2 and Chapter 3, Transportation System Improvements) constitutes the transportation plan for Portland. The performance standards for the transportation system as adopted in the 2000 RTP are incorporated in Policy 11.13, Performance Measures. In Chapter 5, the Motor Vehicle Modal Plan identifies the strategies for the Gateway regional center, designated as an 'Area of Special Concern' by the 2000 RTP to meet established levels-of-service. The procedures for evaluating Comprehensive Plan Map amendments are contained in Chapter 33.810, Comprehensive Plan Map Amendments; 33.730, Quasi-Judicial Procedures; and 33.740, Legislative Procedures. The TSP has been evaluated against the Comprehensive Plan policies and adopted plans that are part of the Comprehensive Plan as demonstrated in these findings.

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## Metro Urban Growth Management Functional Plan Findings

**Title 1, Requirements for Housing and Employment Accommodation**, requires that each jurisdiction contribute its fair share to increasing the development capacity of land within the Urban Growth Boundary. This requirement is to be generally implemented through city-wide analysis based on calculated capacities from land use designations. The TSP is consistent with this title because it incorporates transportation policies in Chapter 2 to support the transition to a more compact and dense urban form by building a multi-modal transportation system. Many of the transportation projects identified in Chapter 3 provide the necessary transportation improvements to accommodate increased development capacity planned in Portland's 2040 centers and main streets. Chapter 6 includes Title 33 amendments to development standards, including building setbacks, transit street orientation, pedestrian circulation, and bicycle parking, that coordinate land use with supportive transportation infrastructure including transit, pedestrian and bicycle facilities.

**Title 2, Regional Parking Policy**, regulates the amount of parking permitted by use for jurisdictions in the region. The TSP is consistent with this title because it includes a Demand Management and Parking Plan in Chapter 5 with programs and strategies to help reduce parking spaces per capita over the planning period. Features of the Parking Plan include the parking minimums and maximums (adopted in 2000) that conform to Metro's requirements, expanding the area covered by parking meter districts, and allowing required parking areas to be redeveloped with transit plazas and bicycle parking. In addition, the TSP includes amendments to Title 33 to require parking lots over three acres in size to provide street-like features along driveways. (Section 33.266.110.F). Title 33 currently does not require any off-street parking in a number of zones – EX, CX, CS, CM, CO1 and CO2, and RX. The TSP includes an amendment exempting development from minimum parking requirements within 500 feet of transit streets with high-quality transit service (Section 33.266.110.B.3). The TSP also references in the TDM and Parking Plan the City's program for residential parking districts, which are being expanded to include commercial areas as well as residential, to reduce commuter and event parking from impacting residential and mixed-use neighborhoods.

**Title 3, Water Quality and Flood Management Conservation**, calls for the protection of the beneficial uses and functional values of resources within Metro-defined Water Quality and Flood Management Areas by limiting or mitigating the impact of development in these areas. The TSP is consistent with this title because Goal 6 Transportation policies and objectives require the development of a balanced transportation system that reduces the reliance on automobiles in an effort to provide for a healthy and livable environment that includes clean water. In particular, Policy 11.8, Environmental Sustainability in Transportation, directs PDOT to manage the transportation system in an environmentally responsible way. The City's 'green building policy' directed PDOT to audit its practices to identify areas where environmentally sustainable practices could be employed. Significant changes were made toward sustainable practices as a result of this audit. Chapter 6 describes the various implementation actions and changes in practice by PDOT. Chapter 15 includes a Stream Habitat Restoration performance measure to track the removal and/or replacement of culverts that impede fish passage. Chapter 16, Table 16-1 identifies the TSP projects that could have impacts on environmentally-sensitive areas of the City, including wetlands and waterbodies. These projects will be subject to additional review if they impact protected natural resources through either an environmental review or a greenway review.

**Title 4, Retail in Employment and Industrial Areas**, calls for retail development in Employment and Industrial areas that supports these areas and does not serve a larger market area. The TSP is consistent with this title because it identifies a balanced transportation system that coordinates and supports the desired land use pattern with the appropriate level and mix of transportation improvements.

**Title 5, Neighbor Cities and Rural Reserves**, defines Metro's policy regarding areas outside of the Urban Growth Boundary. This title does not apply because the TSP plan area is within the urban growth boundary.

**Title 6, Regional Accessibility**, recommends street design and connectivity standards that better serve pedestrian, bicycle and transit travel and that support the 2040 Growth Concept. With adoption of the 2000 RTP in August 2000, Title 6 was deleted from the Urban Growth Management Functional Plan and its requirements incorporated into the 2000 RTP.

**Title 7, Affordable Housing**, recommends that local jurisdictions implement tools to facilitate development of affordable housing. The TSP is consistent with this title because the plan makes no changes to the City's policies, regulations, or programs related to affordable housing.

**Title 8, Compliance Procedures**, outlines compliance procedures for amendments to comprehensive plans and implementing ordinances. The TSP is consistent with this title because the required notices and findings have been provided to Metro in a timely manner.

**Title 9, Performance Measures**, ensures the measure of progress toward implementing the UGMFP and 2040 Growth Concept. The TSP is consistent with this title because it includes a set of performance indicators in Chapter 15 to track the extent to which Portland is meeting both the regional transportation goals and its own local goals over the 20-year life of the plan.

## **2000 Regional Transportation Plan (RTP) Findings**

Regional planning statutes require cities to adopt and amend comprehensive plans and land use regulations in compliance with regional goals. The Regional Transportation Plan (RTP) contains requirements that must be addressed. The RTP contains a list requirements – policy consistency, forecast consistency, street connectivity compliance, alternative mode analysis, motor vehicle analysis consistency, transit service planning compliance, and project development compliance – that are addressed below.

**Policy 1.0, Public Involvement**, establishes a process for involving the public through provision of complete information, timely public notice, full public access to key decisions and supporting broad-based, early and continuing involvement of the public in all aspects of the transportation planning process that is consistent with Metro's adopted local public involvement policy for transportation planning. This includes involving those traditionally under-served by the existing system, those traditionally under-represented in the transportation process, the general public, and local, regional and state jurisdictions that own and operate the region's transportation system. The TSP is consistent with this policy because Policy 6.2, Public Involvement, and the objectives of the TSP establish a similar public involvement process for making transportation decisions including consideration of

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Metro's Local Public Involvement Policy for Transportation Planning. The TSP included numerous citywide and district workshops and open houses, focus groups and public events to solicit input. A Citizen's Advisory Committee met 60 times over the course of the TSP development. Public notice requirements have been met.

**Policy 2.0, Intergovernmental Coordination**, requires coordination among the local, regional and state jurisdictions that own and operate the region's transportation system to better provide for state and regional transportation needs. The TSP is consistent with this policy because it includes Policy 6.1, Coordination, which requires that the City coordinate with affected state and federal agencies, local governments, special districts, and providers of transportation services when planning for transportation. The TSP process involved a technical advisory committee that included representatives from Metro; the Oregon Department of Transportation; the Port of Portland; Tri-Met; Multnomah, Washington, and Clackamas Counties; and the City of Gresham.

**Policy 3.0, Urban Form**, facilitates implementation of the 2040 Growth Concept with specific strategies that address mobility and accessibility needs and use transportation investments to leverage the 2040 Growth Concept. The TSP is consistent with this policy because Policy 6.17, Coordinate Land Use and Transportation, calls for implementing the 2040 Growth Concept through long-range transportation and land use planning and the development of efficient and effective transportation projects and programs. The projects identified in the TSP are intended to focus transportation investment in 2040 priority areas by supporting alternatives to the automobile to and within centers and main streets. Projects to support 2040 industrial areas are included in each phase of the TSP.

**Policy 4.0, Consistency Between Land-use and Transportation Planning**, ensures that the identified function, design, capacity and level of service of transportation facilities are consistent with applicable regional land use and transportation policies as well as the adjacent land-use patterns. The TSP is consistent with this policy because Policy 6.18, Adequacy of Transportation Facilities, ensures that amendments to the Comprehensive Plan, zone changes, conditional uses, master plans, impact mitigation plans, and land use regulations that change allowed land uses are consistent with the identified function and capacity of, and adopted performance measures for, affected transportation facilities.

**Policy 5.0, Barrier-Free Transportation** provides access to more and better transportation choices for travel throughout the region and serves special access needs for all people, including youth, elderly and disabled. The TSP is consistent with this policy because Policy 11.10, Street Design and Right-of-Way Improvements, Objective K, ensures that transportation facilities are accessible to all people and that all improvements to the right-of-way comply with the Americans with Disabilities Act of 1990.

**Policy 5.1, Interim Special Needs Transportation Policy**, supports serving the transit and transportation needs of elderly and disabled in the region. The TSP acknowledges in its Public Transportation and Transportation Disadvantaged Modal Plan the recommendations of the Tri-County Elderly and Disabled Transportation Plan. The TSP supports the development of elderly and disabled transit-supportive development with transportation projects in compact centers, includes the standards of the City's Pedestrian Design Guide for accessible and safe pedestrian facilities, and includes street and pedestrian spacing standards that create good street connectivity and walkable blocks.

**Policy 5.2 Interim Job Access and Reverse Commute Policy**, supports serving the transit and transportation needs of the economically disadvantaged in the region by connecting low-income populations with employment areas and related social services.

**Policy 6.0, Transportation Safety and Education**, calls for improving the safety of the transportation system and encouraging bicyclists, motorists and pedestrians to share the road safely. The TSP is consistent with this policy because Policy 6.3, Transportation Education, and its objectives support education programs that focus on transportation safety and travel choices.

**Policy 7.0, The Natural Environment**, calls for protecting the region's natural environment. The TSP is consistent with this policy because Policy 11.8, Environmental Sustainability in Transportation, calls for meeting the City's sustainability goals by designing, constructing, installing, using, and maintaining the transportation system in efficient, innovative, and environmentally responsible ways. Policy 11.10, Street Design and Right-of-Way Improvements, Objective O, supports minimizing impacts on the natural environment, consistent with the City and regional response to the Endangered Species Act, in the planning, design, and development of transportation projects. Policy 11.12, Maintenance, Objective C, supports the use of best management practices to address environmental impacts of maintenance activities.

**Policy 8.0, Water Quality**, calls for protecting the region's water quality. The TSP is consistent with this policy because Policy 11.8, Environmental Sustainability in Transportation, Objective A, calls for integrating best management practices into all aspects of the Portland Office of Transportation activities. Objective C, calls for maintaining equipment and facilities to minimize air, water, and noise pollution. Objective E calls for minimizing runoff and erosion in all ground-disturbing activities, including construction, excavation, landscaping, and trench work.

**Policy 9.0, Clean Air**, supports protecting and enhancing air quality so that as growth occurs, human health and visibility of the Cascades and the Coast Range from within the region is maintained. The TSP is consistent with this policy because Policy 11.8, Environmental Sustainability in Transportation, Objective C, calls for maintaining equipment and facilities to minimize air, water, and noise pollution, and Objective D calls for using environmentally safe products. Policy 11.9, Project Selection, Objective C calls for using good resource management and minimizing or reducing negative impacts to the natural environment.

**Policy 10.0, Energy Efficiency**, supports designing transportation systems that promote efficient use of energy. The TSP is consistent with this policy because Policy 11.8, Environmental Sustainability in Transportation, supports designing, constructing, installing, using, and maintaining the transportation system in efficient, innovative, and environmentally responsible ways. Objective F supports using alternative energy sources to power equipment whenever feasible.

**Policy 11.0, Regional Street Design**, calls for designing regional streets with a modal orientation that reflects the function and character of surrounding land uses, consistent with regional street design concepts. The TSP is consistent with this policy because it incorporates a new policy, 6.11, Street Design, which incorporates the regional street design descriptions and classifications.

**Policy 12.0, Local Street Design**, supports designing local street systems to complement planned land uses and to reduce dependence on major streets for local circulation. The TSP is consistent with this policy because Policy 11.10, Street Design and Right-of-Way Improvements, calls for designing improvements to existing and new transportation facilities to implement transportation and land use goals and objectives. Objective J of this policy requires designing and building residential streets to minimize pavement width and total right-of-way width, consistent with the operational needs of the facility and taking into account the needs of both pedestrians and vehicles.

**Policy 13.0, Regional Motor Vehicle System**, provides for a regional motor vehicle system of arterials and collectors that connect the central city, regional centers, industrial areas and intermodal facilities, and other regional destinations, and provide mobility within and through the region. The TSP is consistent with this policy because Policy 6.5, Traffic Street Classification Descriptions, describes the hierarchy of traffic streets to support the regional and local motor vehicle system. The classification maps for each district identify the network of traffic-classified streets consistent with RTP classifications. The Motor Vehicle modal plan includes a matrix that shows the consistency between Portland's and Metro's motor vehicle classifications.

**Policy 14.0, Regional Public Transportation System**, supports providing an appropriate level, quality and range of public transportation options to serve this region and support implementation of the 2040 Growth Concept. The TSP is consistent with this policy because Policy 6.6, Transit Street Classification Descriptions, describes the hierarchy of transit streets and facilities to support the regional and local transit system. The classification maps for each district identify the network of transit-classified streets consistent with the RTP classifications. The Public Transportation and Transportation Disadvantaged modal plan includes a matrix that shows the consistency between Portland's and Metro's transit classifications.

**Policy 14.1, Public Transportation System Awareness and Education**, supports expanding the amount of information available about public transportation to allow more people to use the system. The TSP is consistent with this policy because Policy 6.3, Transportation Education, supports programs that support a range of transportation choices. Objective A calls for publicizing activities and the availability of resources and facilities that promote a multimodal transportation system.

**Policy 14.2, Public Transportation Safety and Environmental Impacts**, supports continuing efforts to make public transportation an environmentally-friendly and safe form of motorized transportation. The TSP is consistent with this policy because Policy Public Transportation, Objective D, supports transit-preferential measures to ensure public transit is efficient and safe. Objective A and H support light rail and the street car as more environmentally-friendly forms of public transportation.

**Policy 14.3, Regional Public Transportation Performance**, supports providing transit service that is fast, reliable and has competitive travel times compared to the automobile. The TSP is consistent with this policy because Policy 6.24, Public Transportation, supports a convenient public transit system. Objective D supports transit-preferential measures on Major Transit Priority Streets to achieve travel times competitive with the automobile and to improve service reliability.



**Policy 15.0, Regional Freight System**, provides for efficient, cost-effective and safe movement of freight in and through the region. The TSP is consistent with this policy because Policy 6.9, Freight Classification Descriptions, supports a hierarchy of truck streets to support the regional and local freight system. The classification maps for each district identify the network of truck-classified streets consistent with RTP classifications. The Freight modal plan includes a matrix that shows the consistency between Portland's and Metro's freight classifications.

**Policy 15.1, Regional Freight System Investments**, supports protecting and enhancing public and private investments in the freight network. The TSP is consistent with this policy because Policy 6.29, Freight Intermodal Facilities and Freight Activity Areas, supports developing and maintaining an intermodal transportation system for the safe, efficient, and cost-effective movement of freight, goods, and commercial vehicles in Portland. The TSP project list includes freight-related improvements throughout the City to support more efficient freight movement.

**Policy 16.0, Regional Bicycle System Connectivity**, provides for a continuous regional network of safe and convenient bikeways connected to other transportation modes and local bikeway systems, consistent with regional street design guidelines. The TSP is consistent with this policy because 6.7, Bikeway Classification Descriptions, includes a hierarchy of bikeways to support the regional and local bikeway system. The classification maps for each district identify the network of bicycle-classified streets and off-street paths consistent with RTP classifications. The Bicycle modal plan includes a matrix that shows the consistency between Portland's and Metro's bicycle classifications.

**Policy 16.1, Regional Bicycle System Mode Share and Accessibility**, supports increasing the bicycle mode share throughout the region and improve bicycle access to the region's public transportation system. The TSP is consistent with this policy because Policy 6.23, Bicycle Transportation, and its objectives support making the bicycle an integral part of daily life in Portland, completing a network of bikeways and increasing bicyclist safety and convenience. The TSP project list includes a large number of bicycle projects to support this policy and implement the bicycle network.

**Policy 17.0, Regional Pedestrian System**, supports designing the pedestrian environment to be safe, direct, convenient, attractive and accessible for all users. The TSP is consistent with this policy because 6.8, Pedestrian Classification Descriptions, includes a hierarchy of pedestrianways to support the regional and local pedestrianway system. The classification maps for each district identify the network of pedestrian-classified streets and off-street paths consistent with RTP classifications. The Pedestrian modal plan includes a matrix that shows the consistency between Portland's and Metro's pedestrian classifications.

**Policy 17.1, Pedestrian Mode Share**, supports increasing walking for short trips and improve pedestrian access to the region's public transportation system through pedestrian improvements and changes in land-use patterns, designs and densities. The TSP is consistent with this policy because Policy 6.22, Pedestrian Transportation, and its objectives promote walking as the mode of choice for short trips, such as walking to transit, parks, schools, and neighborhood shopping, and completing the pedestrian network to provide a safe and convenient environment for pedestrians. The TSP project list includes a large number of pedestrian projects to support this policy and implement the pedestrian network.

**Policy 17.2, Regional Pedestrian Access and Connectivity**, provides for direct pedestrian access, appropriate to existing and planned land uses, street design classification and public transportation, as a part of all transportation projects. The TSP is consistent with this policy because Policy 6.11, Street Design, includes the appropriate pedestrian improvements for each street design classification consistent with Metro's Creating Livable Streets Handbook. Policy 11.10, Street Design and Right-of-Way Improvements, Objective G, requires including sidewalks on both sides of all new street improvement projects, except where there are severe topographic or natural resource constraints.

**Policy 18.0, Transportation System Management**, supports transportation system management techniques to optimize performance of the region's transportation systems. The TSP is consistent with this policy because Policy 6.15, Transportation System Management, gives preference to transportation improvements that use existing roadway capacity efficiently and improve the safety of the system by promoting transportation choices, employing transportation system management measures, and designing and building a system that can be safely navigated by all users. The TSP project list includes a number of projects to improve the efficiency of the transportation system.

**Policy 19.0, Regional Transportation Demand Management**, calls for enhancing mobility and supporting the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options. The TSP is consistent with this policy because Policy 6.28, Travel Management, supports reducing congestion, improving air quality, and mitigating the impact of development-generated traffic by supporting transportation choices through demand management programs. The TSP project list includes support for transportation management associations in the Central City, centers, and employment areas.

**Policy 19.1, Regional Parking Management**, supports managing and optimizing the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP policies and objectives. The TSP is consistent with this policy because Policy 6.25, Parking Management, and its objectives call for managing the parking supply to support neighborhood and business district vitality, auto trip reduction, and improved air quality. Specifically, Objective A calls for implementing measures to achieve Portland's share of the mandated 10 percent reduction in parking spaces per capita over the next 20 years. Objective C calls for development parking management programs and strategies that improve air quality, reduce congestion, promoting alternatives to driving alone, and educating and involving neighborhoods and businesses.

**Policy 19.2, Peak Period Pricing**, supports managing and optimizing the use of highways in the region to reduce congestion, improve mobility and maintain accessibility within limited financial resources. The TSP is consistent with this policy because Policy 6.33, Congestion Pricing and its objectives advocate for a regional, market-based system to price or charge for auto trips during peak hours and supporting pricing strategies that are based on the environmental and social costs of motor vehicles. Objective C supports experiments in equitable and efficient pricing of new motor vehicle transportation facilities.

**Policy 20.0, Transportation Funding**, ensures that the allocation of fiscal resources is driven by both land use and transportation benefits. The TSP is consistent with this policy

because Policy 6.1, Coordination, Objective A, calls for coordinating the funding and development of transportation facilities with regional transportation and land use plans and with public and private investments. Objective B supports Portland's participation in Metro's processes for allocating and managing transportation funds and resources to achieve maximum benefit with limited available funds.

**Policy 20.1, 2040 Growth Concept Implementation**, calls for implementing a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs. The TSP is consistent with this policy because Policy 6.17, Coordinate Land Use and Transportation, supports implementing the Comprehensive Plan Map and the 2040 Growth Concept through long-range transportation and land use planning and the development of efficient and effective transportation projects and programs.

**Policy 20.2, Transportation System Maintenance and Preservation**, emphasizes the maintenance, preservation and effective use of transportation infrastructure in the selection of the RTP projects and programs. The TSP is consistent with this policy because Policy 11.12 supports activities and programs that preserve, maintain, and prevent deterioration of the transportation system. Objective E calls for coordinating capital improvement programs development with ongoing maintenance needs in addition to preservation and rehabilitation projects.

**Policy 20.3, Transportation Safety**, calls for anticipating and addressing system deficiencies that threaten the safety of the traveling public in the implementation of the RTP. The TSP is consistent with this policy because Policy 6.15, Transportation System Management gives preferences to transportation improvements that use existing roadway capacity efficiently and improve the safety of the system. Policy 11.9, Project Selection, Objective B, requires addressing existing deficiencies and hazards by improving pedestrian, bicycle, and vehicular safety in project selection.

**Forecast Consistency (RTP Section 6.4.9)**, requires consistency with the 2020 population and employment forecasts. The TSP is consistent with this requirement because as noted in Chapter 3, Transportation System Improvements, and Chapter Chapter 10, Needs Assessment, the TSP relied on the needs analysis and findings of the 2000 RTP and its transportation modeling assumptions.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires the development of a future street plan map of key street connections for all contiguous parcel(s) of vacant or redevelopable land of 5 acres or more planned or zoned for residential or mixed-use development. The TSP complies with this requirement because Policy 6.20 Connectivity, and its objectives and Policy 11.11, Street Plans, and its objectives provide the policy basis for Portland's approach to meeting connectivity standards through the development of master street plans. Policy 11.11, Objectives F through N and their associated maps, show the areas of the City with completed master street plans and areas of the City that currently meet connectivity standards or are exempt from the connectivity standards. Chapter 4, Refinement Plans and Studies, identify the areas of the City that do not currently have master street plans. Portland will complete refinement plans for these areas consistent with Section 660-012-0025 (3) of the TPR. Connectivity standards will continue to be met in these areas until the refinement plans are completed because Title 33, Planning and Zoning,

Chapter 33.654 (effective July 1, 2002) requires land division actions to meet the connectivity standards in Section 6.4.5 of the RTP. The TSP includes amendments to Title 17, Public Improvements, Chapter 17.88, to authorize the City Engineer to require street and pedestrian/bicycle connections that meet the connectivity standards in Section 6.4.5. These two regulatory mechanisms provide the City with authority to implement key street connections and local street connectivity on all sites developing or redeveloping within Portland.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires that new residential or mixed-use development that proposes or is required to construct or extend street(s) to provide a site plan that:

- provides full street connections with spacing of no more than 530 feet between connections except where prevented by barriers
- provides bike and pedestrian accessways in lieu of streets with spacing of no more than 330 feet except where prevented by barriers
- limits use of cul-de-sacs and other closed-end street systems to situations where barriers prevent full street connections
- includes no closed-end street longer than 220 feet or having no more than 25 dwelling units
- includes street cross-sections demonstrating dimensions of ROW improvements, with streets designed for posted or expected speed limits.

The TSP complies with this requirement because it includes amendments to Title 17, Public Improvements, Chapter 17.88, that authorize the City Engineer to require street and pedestrian/bicycle connections that meet the connectivity standards in Section 6.4.5. The amendments include the authority for the City Engineer to ask for the elements of this requirement noted above. The recently adopted land division code includes standards for dead-end streets (33.654.110.c.2) that limit them to no more than 200 feet in length and serving not more than 18 units. Chapter 33.654 also includes direction to ensure that most streets will be through streets except where constraints, such as steep slopes or environmental zones on or near a site may influence the location or preclude connected rights-of-way.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires street design standards that allow for and encourage consideration of narrow street designs. The TSP complies with this requirement because the section of Chapter 6 titled, Street Standards and Guidelines, contains the street standards in use in Portland. The RTP defines 'skinny streets' as those that are no more than 46 feet of total right-of-way, with pavement widths of no more than 28 feet. Local streets built in Portland in the RF through R7 zones meet this requirement with right-of-way widths between 40 and 46 feet on streets and pavement widths between 20 and 26 feet. Local streets in the R5 zone meet this requirement for streets with parking no on-street parking with right-of-way widths between 40 and 44 feet and pavement widths of 20 feet. Other local streets in single-dwelling zones also meet this requirement for pavement width, but include additional right-of-way width to accommodate wider sidewalks on City Walkways and in Pedestrian Districts.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires street design standards that allow for and encourage short, direct public ROW routes to connect residential uses with nearby commercial services, schools, parks and other neighborhood facilities. The TSP complies with this requirement because it includes amendments to Title 17.88, Through Streets, which includes City Engineer authority to limit the use of cul-de-sac

and closed streets. Street connectivity standards for no more than 530-foot spacing ensures blocks will be short and provide direct, public connections. Where street connections cannot be made the street connectivity requirements provide for frequent pedestrian/bicycle connections. The TSP includes street standards in use by the City for all zones. The designs are consistent with posted or expected speed limits with pavement widths and land widths as narrow as possible consistent with the need to accommodate each mode.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires street design standards that allow for and encourage consideration of opportunities to incrementally extend streets from nearby areas. The TSP complies with this requirement because recently adopted land division regulations in Title 33 (effective date, July 1, 2002) require new street and pedestrianway connections consistent with the RTP standards for all land divisions whether in newly developing or infill situations (Section 33.654.110). The TSP amends Title 17.88, Through Streets, to give the City Engineer authority to require the same levels of connectivity for all development in residential and commercial zones.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires street design standards that allow for and encourage consideration of traffic calming to discourage traffic infiltration and excessive speeds on local streets. The TSP complies with this requirement because Policy 6.13, Traffic Calming, and its objectives provide the policy basis to use traffic calming measures to preserve and enhance neighborhood livability, and in high-density 2040 Growth Concept areas to calm traffic to levels that are comfortable for bicyclists and pedestrians.

**Street Connectivity Compliance (RTP Section 6.4.5)**, requires a street connectivity approach for redevelopment of existing land uses. The TSP complies with this requirement because all of the street connectivity policies and standards apply to redeveloping properties as well as development on vacant land.

**Alternative Mode Analysis Consistency (RTP Section 6.4.6)**, requires local TSPs to adopt modal targets for non-single-occupant vehicles (SOV). The TSP complies with this requirement because Chapter 15 of the TSP contains mode share targets for 2040 Growth Concept design types consistent with the non-SOV targets contained in the RTP.

**Alternative Mode Analysis Consistency (RTP Section 6.4.6)**, requires local TSPs to adopt street connectivity provisions. The TSP complies with this requirement because street connectivity regulations are contained in Chapter 33.654, Rights-of-Way, of Title 33, Planning and Zoning, and apply to land division actions, and amendments to Chapter 17.88, Through Streets, applies to all new or expanding residential and commercial development.

**Alternative Mode Analysis Consistency (RTP Section 6.4.6)**, requires local TSPs to adopt Title 2 parking requirements. The TSP is consistent with this requirement because Portland adopted parking minimums and maximums in 2000 consistent with the standards in Title 2. Chapter 6 of the TSP amends Title 33, Chapter 266, Parking and Loading, to require 'street-like' features for development sites that have parking lots that exceed three acres in size.

**Alternative Mode Analysis Consistency (RTP Section 6.4.6)**, requires local TSPs to support implementation of transit pass programs in regional centers. The TSP is consistent with this requirement because Policy 6.28, Travel Management, and its objectives support

demand management programs for institutions and other large employers. The Motor Vehicle Plan in Chapter 5 of the TSP contains the action plan for Gateway that includes strategies to reduce demand through a transportation management association. The TSP project list includes development of a transportation management association in the Gateway regional center.

**Alternative Mode Analysis Consistency (RTP Section 6.4.6)**, requires local TSPs to support implementation of transportation management associations. The TSP is consistent with this requirement because Policy 6.28, Travel Management, and its objectives support demand management programs for institutions and other large employers. The TSP project list includes development of transportation management associations in the Central City, the Gateway regional center, as well as in other large employment areas such as Swan Island and Columbia Corridor.

**Motor Vehicle Analysis Consistency (RTP Section 6.4.7)**, requires level of service (LOS) standards in the RTP to be incorporated into local TSPs. The TSP is consistent with this requirement because the LOS Table 1.2 in the RTP is incorporated into Policy 11.13, Performance Measures, Objective A. The LOS table will be used in the development and adoption of, and in amendments to, the TSP and in legislative amendments to the Comprehensive Plan Map.

**Motor Vehicle Analysis Consistency (RTP Section 6.4.7)**, requires an action plan for areas designated as areas of special concern because they do not meet the RTP LOS standards. The TSP is consistent with this requirement because the Gateway regional center's action plan is contained in the Motor Vehicle modal plan in Chapter 5. The action plan contains the following elements consistent with this requirement:

- Adopt non-SOV modal targets – 41 percent for home-based work trips.
- Adopt RTP street connectivity provisions – master street plan map in Policy 11.11.3.
- Adopt parking ratios consistent with Title 2 of the Urban Growth Management Functional Plan – minimum parking requirements are contained in section 33.266 of the Zoning Code. The Gateway plan district requirements (33.526 of the Zoning Code) for minimum parking is zero for all uses. The maximums are the same as have been adopted for the rest of the City outside the Central City.
- The TSP project list includes development of a TMA for Gateway that would develop strategies to improve its mode split including transit incentives.
- Modify the adopted plan to support additional mixed-use development, consistent with the 2040 Growth Concept – development in Gateway is governed by the Gateway Plan District, which establishes zoning and development regulations and Opportunity Gateway. The policies, guidelines, and standards are summarized in the Motor Vehicle modal plan in Chapter 5.

**Transit Service Planning Compliance (RTP Section 6.4.10)**, requires local jurisdictions to adopt the transit system map. The TSP complies with this requirement because it includes Maps 6.34.2, 6.35.2, 6.36.2, 6.37.2, 6.38.2, 6.39.2, and 6.40.2 for the seven transportation districts outside the Central City and Map 2.2 in Chapter 2.

**Transit Service Planning Compliance (RTP Section 6.4.10)**, requires local jurisdictions to adopt regulations requiring retail, office and institutional building at major transit stops to:

- locate buildings within 20 feet of or provide pedestrian plaza at the major transit stop and
- provide direct pedestrian connections between a building and a major transit stop.

The TSP complies with the intent of these requirements and exceeds them because Title 33, Chapters 120, 130, and 140 requires multifamily, commercial, and some employment uses to locate their buildings and main entrances within 25 feet of property lines along the entire length of streets that have a transit classification. The same chapters of Title 33 also require direct pedestrian connections between the main entrances of buildings and adjacent transit streets. The TSP amends the setback from transit to clarify the intent of the regulations and ensure that the orientation of buildings is to higher classified transit streets. The amendments change the setback to a maximum of 10 feet measured from the property line rather than the curb.

**Transit Service Planning Compliance (RTP Section 6.4.10)**, requires local jurisdictions to adopt regulations requiring retail, office and institutional building at major transit stops to:

- provide a transit passenger landing pad accessible to disabled persons,
- provide an easement or dedication for passenger shelter and underground utility connection from the new development to the transit amenity, and
- provide lighting at a transit stop.

The TSP is consistent with these requirements because the TSP relies on the Pedestrian Design Guide to ensure that, as property develops or redevelops, sidewalks are widened to ensure that adequate space will be provided in the right-of-way for transit facilities. The recommended width for sidewalks designated as City Walkways and local streets in Pedestrian Districts is 12 feet. The recommended width for arterial streets in Pedestrian Districts is 15 feet. A transit shelter can be accommodated in either width sidewalk. Transit streets are, in most cases also designated as City Walkways. Transit streets not designated as City Walkways are limited access freeways and highways. Institutions outside of commercial and employment zones are regulated through the conditional use review process and must address adequacy of transportation services, including transit facilities and sidewalks. Portland applies these sidewalk requirements throughout the City, not only at 'major transit stops' as defined in the RTP.

**Transit Service Planning Compliance (RTP Section 6.4.10)**, requires local jurisdictions to consider designation of pedestrian districts or other implementing land use regulations to address the following:

- A connected street and pedestrian network, preferably through a local street and pedestrian network plan covering the affected area
- Designated pedestrian districts should consider transit/bike/pedestrian interconnection, parking and access management, sidewalk and accessway location and width, street tree location and spacing, street crossing and intersection design for pedestrians, pedestrian scale street lighting and furniture, and traffic speeds.

The TSP complies with this requirement because Policy 6.8, Objective A, describes the Pedestrian District classification. Portland has 15 existing Pedestrian Districts outside the Central City, six pedestrian districts inside the Central City, and the TSP includes six new Pedestrian Districts. Pedestrian Districts have a mix of zoning, high-quality transit service, and a high level of street connectivity. The TSP supports Pedestrian Districts with projects to improve their pedestrian environments.

**Transit Service Planning Compliance (RTP Section 6.4.10)**, requires local jurisdictions to provide direct, logical pedestrian crossings at transit stops and marked crossings at major transit stops. The TSP complies with this requirement because Policy 11.10, Objective E; the Pedestrian Modal Plan in Chapter 5; and the Project Development guidelines in Chapter 6 incorporate the Pedestrian Design Guide, which provides guidance for locating and constructing pedestrian crossings.

**Transit Service Planning Compliance (RTP Section 6.4.10)**, requires local jurisdictions to consider street designs that anticipate planned transit stop spacing, location and facilities consistent with the regional street design guidelines. The TSP complies with this requirement because Policy 6.6, Transit Street Classification Description, objectives include transit stop spacing criteria. These criteria are used when new streets are constructed or existing streets are modified.

**Transit Service Planning Compliance, (RTP Section 6.4.10)**, requires local jurisdictions to consider street designs that anticipate planned transit stop spacing, location and facilities consistent with the regional street design guidelines. The TSP complies with this requirement because it includes Policy 6.6, Transit Street Classification Descriptions, and its eight objectives that include direction for transit improvements and stop spacing consistent with each designation. These transit classification descriptions are considered in conjunction with Policy 6.11, Street Design Classification Descriptions, are derived from and are consistent with the RTP Street Design classifications. The classifications and their associated design elements are considered when making changes to a street.

**Project Development Compliance (RTP Section 6.7.3)**, requires local jurisdictions to consider system management to address or preserve existing street capacity during transportation project analysis. The TSP complies with this requirement because Policy 6.15, Transportation System Management, gives preference to transportation improvements that use existing roadway capacity efficiently. The project development process (as described in Chapter 6) includes, as its first step, policy review, which reviews all relevant policies including street design policies and guidelines.

**Project Development Compliance (RTP Section 6.7.3)**, requires local jurisdictions to consider regional street design policies and guidelines during transportation project analysis. The TSP complies with this requirement because the project development process (as described in Chapter 6) includes, as its first step, policy review, which reviews all relevant policies including street design policies and guidelines.

## **Portland Comprehensive Plan Goals Findings**

The City's Comprehensive Plan was adopted by the Portland City Council on October 16, 1980, and was acknowledged as being in conformance with the statewide planning goals by the Land Conservation and Development Commission on May 1, 1981. On May 26, 1995, the LCDC completed its review of the City's final local periodic review order and periodic review work program, and reaffirmed the plan's compliance with the statewide planning goals.

**Goal 1, Metropolitan Coordination**, calls for the Comprehensive Plan to be coordinated with federal and state law and to support regional goals, objectives and plans. The TSP is consistent with this goal because it responds to and complies with the Statewide Planning



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Goals, including the Transportation Planning Rule and with the 2000 RTP, the regional transportation plan.

- a) **Policy 1.1, Urban Growth Boundary**, calls for support of the concept of an Urban Growth Boundary for the Portland metropolitan area. The TSP supports this policy because it provides for a multimodal transportation system that will support the compact growth called for in the 2040 Growth Concept.
- b) **Policy 1.3, Urban Services Boundary**, calls for the establishment and maintenance of an Urban Services Boundary for the City of Portland. The TSP supports this policy because it addresses and classifies streets with Portland's urban services boundary consistent with 2000 RTP classifications.
- c) **Policy 1.4, Intergovernmental Coordination**, calls for continuous participation in intergovernmental affairs with public agencies to coordinate metropolitan planning and project development and maximize the efficient use of public funds. The TSP supports this policy because it was prepared in compliance with the RTP and with the participation of representatives from Metro, the Port of Portland, ODOT, Tri-Met, and adjacent cities and counties. The City participated in the development of the RTP to ensure that it and the TSP would be consistent and compatible.

**Goal 2, Urban Development**, calls for maintenance of Portland's role as the major regional employment and population center by expanding opportunities for housing and jobs, while retaining the character of established residential neighborhoods and business centers. The TSP is consistent with this goal because it supports a multimodal transportation network that will accommodate planned growth at an urban scale as called for on the Comprehensive Plan Map.

- a) **Policy 2.1, Population Growth**, calls for accommodating the projected increase in city households. The TSP supports this policy because its list of projects to address transportation needs is based on the projected changes in households over the planning period.
- b) **Policy 2.2, Urban Diversity**, calls for promotion of a range of living environments and employment opportunities for Portland residents. The TSP supports this policy because it encourages and includes regulations to ensure that an efficient, affordable transportation system will be implemented, which, in turn, helps to keep housing affordable and easily accessed by alternatives to the automobile.
- c) **Policy 2.6, Open Space**, calls for provision of opportunities for recreation and visual relief by preserving existing open space, establishing a loop trail that encircles the city and promoting recreational use of the city's rivers, creek, lakes and sloughs. The TSP supports this policy because it classifies and identifies projects to enhance recreational trails, including the Willamette Greenway Trail, that also serve as recreational facilities..
- d) **Policy 2.7, Willamette River Greenway Plan**, calls for implementation of the Willamette River Greenway Plan, which preserves a strong working river while promoting recreation, commercial and residential waterfront development along the Willamette south of the Broadway Bridge. The TSP supports this policy because it acknowledges the dual purpose of the Willamette Greenway Trail as both a recreational

and transportation facility and supports the completion of the trail by including Greenway Trail projects in its list of significant transportation improvements..

- e) **Policy 2.9, Residential Neighborhoods**, calls for allowance of a range of housing types to accommodate increased population growth while improving and protecting the city's residential neighborhoods. The TSP supports this policy because it includes district policies that address neighborhood livability and because it includes numerous transportation projects that are intended to reduce traffic infiltration and improve bicycle and pedestrian connectivity within neighborhoods and to nearby shopping, education, and activity centers.
- f) **Policy 2.10, Downtown Portland**, calls for maintenance and reinforcement of downtown Portland as the principal retail, commercial, service, cultural and high density housing center in the city and region; and calls for implementation of the Downtown Plan. The TSP supports this policy because it incorporates the policies and street classifications of the Central City Transportation Management Plan that was adopted in 1995 to carry out the Central City Plan and the Downtown Plan.
- g) **Policy 2.11, Commercial Centers**, calls for expanding the role of major established commercial centers that are well served by transit in a manner compatible with the surrounding area. The TSP supports this policy because it includes projects that are intended to support commercial centers, including the Hollywood, Lents, and Hillsdale town centers and the Gateway regional center.
- h) **Policy 2.12, Transit Corridors**, calls for providing a mixture of activities along major transit routes and Main Streets that supports the use of transit and is compatible with the surrounding area. The TSP supports this policy because it reinforces the attractiveness of transit corridors and main streets by including numerous projects along them such as pedestrian improvements.
- i) **Policy 2.13, Auto-Oriented Commercial Development**, calls for allowing auto-oriented commercial development to locate on streets designated as Major City Traffic Streets by the Arterial Streets Classifications and Policies; and calls for allowing neighborhood level auto-oriented commercial development near neighborhoods where allowed densities will not support transit- and pedestrian- oriented development. The TSP is consistent with this policy because it continues to designate specific streets as Major City Traffic Streets.
- j) **Policy 2.14, Industrial Sanctuaries**, calls for encouraging the growth of industrial activities by preserving industrial land primarily for manufacturing purposes. The TSP supports this policy because it includes Freight Districts as one of its freight classifications and supports truck movement on all streets within the Freight Districts. The TSP includes numerous projects that support freight movement both within Freight Districts and on access corridors to and from them.
- k) **Policy 2.15, Living Closer to Work**, calls for locating greater residential densities, including affordable housing, near major employment centers, including Metro-designated regional and town centers, to reduce vehicle miles traveled per capita and maintain air quality; and calls for encouraging home-based work where the nature of the work is not disruptive to the neighborhood. The TSP supports this policy because it

identifies and supports short and frequent blocks, sidewalks, bicycle lanes and transit service that will provide increased transportation options and access to nearby jobs.

- l) **Policy 2.16, Strip Development**, calls for discouraging the development of new strip commercial areas and focusing future activity in such areas to create a more clustered pattern of commercial development. The TSP supports this policy because even on streets with strip commercial areas, it continues to require and refine regulations that buildings must orient to transit and pedestrians if the street is also classified as a transit street.
- m) **Policy 2.17, Transit Stations and Transit Centers**, calls for encouraging transit-oriented development patterns at light rail transit stations and at transit centers to provide for easy access to transit service. The TSP supports this policy because it identifies and includes projects that reinforce transit-oriented development at transit stations and centers, including transit preferential treatments and pedestrian enhancements.
- n) **Policy 2.18, Transit Supportive Density**, calls for establishing average minimum residential densities of 15 units per acre within one-quarter mile of existing and planned transit streets, Main Streets, town centers, and transit centers, and 25 units per acre within one-half mile of light rail stations and regional centers. Where existing development patterns preclude these densities, this policy calls for encouraging infill through accessory units or allowing increased density on vacant lots. The TSP supports this policy because it identifies and includes transportation projects near existing and planned transit streets, main streets, town centers, and transit centers, including pedestrian and bicycle improvements and improvements to transit operations. Town centers and transit stations have a Pedestrian District classification and associated pedestrian-improvement projects to support the higher level of pedestrian activity are expected in these areas.
- o) **Policy 2.19, Infill and Redevelopment**, calls for encouraging infill and redevelopment as a way to implement the Livable City growth principles and accommodate expected increases in population and employment. The TSP supports this policy because it includes transportation projects that support infill and redevelopment including instituting street connectivity standards for infill situations. The projects are intended to encourage walking, biking, and taking the bus as options to driving, which allow greater densities without greater congestion.
- p) **Policy 2.22, Mixed Use**, calls for continuation of a mechanism that will allow for the maintenance and enhancement of areas of mixed use character where such areas act as buffers and where opportunities exist for the creation of mixed use nodes. The TSP supports this policy because specific district policies address these mixed use nodes and the need to serve them with an efficient and convenient transportation system. Some of the nodes identified and supported with projects are the NE 60<sup>th</sup>/Prescott/Cully nodes and mixed use main street such as NW 23<sup>rd</sup>.
- q) **Policy 2.25, Central City Plan**, calls for encouraging continued investment within Portland's Central City while enhancing its attractiveness for work, recreation and living through implementation of the Central City Plan. The TSP supports this policy because it incorporates the CCTMP policies and classifications into the TSP and includes numerous

projects in the Central City intended to enhance its attractiveness and support it as the most intensely developed part of the region.

- r) **Policy 2.26, Albina Community Plan**, calls for promotion of the economic vitality, historic character and livability of inner north and inner northeast Portland by implementation of the Albina Community Plan as a part of this Comprehensive Plan. The TSP supports this policy because the North and Northeast District policies and objectives are supportive of the goals of the Albina Community Plan and the TSP includes numerous projects to enhance the livability and economic vitality of the Albina Community Plan area.
- s) **Policy 2.27, Outer Southeast Community Plan**, calls for promotion of the economic vitality, diverse residential character, environmental quality, and livability of Outer Southeast Portland by implementation of the Outer Southeast Community Plan as part of this Comprehensive Plan. The TSP supports this policy because the Southeast and Far Southeast District policies and objectives are supportive of the goals of the Outer Southeast Community Plan including supporting the Gateway regional center and the Lents town center with numerous projects. TSP projects also support the residential neighborhoods with many pedestrian and bicycle projects that enhance livability and access to activity centers such as parks, schools and shopping.

**Goal 3, Neighborhoods**, calls for preservation and reinforcement of the stability and diversity of the city's neighborhoods while allowing for increased density. The TSP is consistent with this goal because the District policies and objectives reflect the need to accommodate growth while preserving and enhancing livability, and supports these policies with projects that improve bicycle and pedestrian connections.

- a) **Policy 3.1, Physical Conditions**, calls for providing and coordinating programs to prevent the deterioration of existing structures and public facilities. The TSP supports this policy because it includes numerous projects that support existing transportation facilities such as rebuilding vehicle and pedestrian connections, reconstructing deteriorating streets such as NW 23<sup>rd</sup>, and retrofitting existing substandard streets with pedestrian and bicycle facilities.
- b) **Policy 3.5, Neighborhood Involvement**, provides for the active involvement of neighborhood residents and businesses in decisions affecting their neighborhood. The TSP supports this policy because the neighborhood associations and the general public were invited to participate at district workshops and citywide workshops in developing the policies and projects in the TSP. Notice was provided to neighborhood associations and over 2,500 residents, groups, and businesses of the TSP events and public hearings.
- c) **Policy 3.6, Neighborhood Plan**, calls for the maintenance and enforcement of neighborhood plans that are consistent with the Comprehensive Plan and that have been adopted by City Council. The TSP supports this policy because the adopted neighborhood plans action charts were used to develop transportation projects in the TSP.
- d) **Policy 3.8, Albina Community Plan Neighborhoods**, calls for inclusion as part of the Comprehensive Plan neighborhood plans developed as part of the Albina Community Plan. The TSP supports this policy because the neighborhood plans adopted as part of

the Albina Community Plan, particularly their action charts were used in developing the projects for the TSP.

- e) **Policy 3.9, Outer Southeast Community Plan Neighborhoods and Business Plan**, calls for inclusion as part of the Comprehensive Plan neighborhood and business plans developed as part of the Outer Southeast Community Plan. The TSP supports this policy because the neighborhood plans adopted as part of the Outer Southeast Community Plan, particularly their action charts were used in developing the projects for the TSP.

**Goal 4, Housing**, calls for enhancing Portland's vitality as a community at the center of the region's housing market by providing housing of different types, tenures, density, sizes, costs and locations that accommodates the needs, preferences, and financial capabilities of current and future households. The TSP is consistent with this goal because implementation of the multimodal transportation network identified as transportation improvements will support new residential development in undeveloped areas and in areas that are infilling or redeveloping.

- a) **Policy 4.7, Balanced Communities**, calls for striving for livable mixed-income neighborhoods throughout Portland that collectively reflect the diversity of housing types, tenures, and income levels of the region. The TSP supports this policy because it provides transportation improvements in all parts of the City, supporting existing neighborhoods and developing neighborhoods, such as the River District, that are developing with a mix of housing types and costs.

**Goal 5, Economic Development**, calls for promotion of a strong and diverse economy, which provides a full range of employment and economic choices for individuals and families in all parts of the city. The TSP is consistent with this goal because the policies and their objectives support a transportation network that serves employment centers including Columbia South Shore, Swan Island, Guild's Lake and provides multimodal connections to these areas to support the movement of good and access for employees.

- a) **Policy 5.1, Urban Development and Revitalization**, calls for encouraging investment in the development, redevelopment, rehabilitation and adaptive reuse of urban land and buildings for employment and housing opportunities and supporting Downtown Portland and the Lloyd District as the major regional employment, cultural, business, and government center. The TSP supports this policy because it incorporates the Goal, policies, and objectives of the CCTMP, which provides for a transportation system to support growth in the Central City. The TSP includes transportation improvements in the Central City identified by the Portland Development Commission to support growth and economic vitality in the Central City.
- b) **Policy 5.4, Transportation System**, calls for promotion of a multi-modal regional transportation system that encourages economic development. The TSP is consistent with this policy because it incorporates the regionally-significant transportation projects identified in the RTP for Portland that support pedestrian, bicycle, transit, freight, and motor vehicle movement.
- c) **Policy 5.5, Infrastructure Development**, calls for promotion of public and private investments in public infrastructure to foster economic development in Council-

designated target areas. The TSP supports this policy because it incorporates multimodal transportation projects in the City's urban renewal areas including Gateway, Lents, Interstate, and the Central City.

- d) **Policy 5.8, Diversity and Identity in Industrial Areas**, calls for promotion of a variety of efficient, safe and attractive industrial sanctuary and mixed employment areas in Portland. The TSP supports this policy because it includes numerous projects to improve the transportation network in the City's industrial sanctuaries and major employment areas, including Columbia South Shore, Rivergate, and Swan Island.
- e) **Policy 5.10, Columbia South Shore**, calls for encouraging the development of the Columbia South Shore as an industrial employment district which attracts a diversity of employment opportunities while protecting significant environmental resources and maintaining the capacity of the area infrastructure to accommodate future development. The TSP supports this policy because it includes multimodal transportation improvements in Columbia South Shore identified through a recent study and by the Port of Portland as needed to support its growth as an industrial employment district.

**Goal 6, Transportation**, calls for protection of the public interest and investment in the public right-of-way and transportation system by

- encouraging development of a balanced, affordable and efficient transportation system consistent with the Arterial Streets Classifications and Policies;
- providing adequate accessibility to all planned land uses;
- providing safe and efficient movement of people and goods while preserving, enhancing, or reclaiming neighborhood livability;
- minimizing the impact of inter-regional trips on City neighborhoods, commercial areas, and the City street system;
- reducing reliance on the automobile and per capita vehicle miles traveled;
- building the use of the City street system to control air pollution, traffic, and livability problems; and
- maintaining the infrastructure in good condition.

The TSP is consistent with this goal because it incorporates the values identified in the Goal while reformatting it for consistency with other Goals in the Comprehensive Plan.

- a) **Policy 6.1, Intergovernmental Coordination**, calls for coordinating transportation facilities and improvements with development activities and with regional transportation and land use plans. The TSP supports this policy because it continues to contain this policy while expanding it to include coordination with all agencies, local governments, special districts, and providers of transportation services.
- b) **Policy 6.2, Regional and City Travel Patterns**, calls for traffic to use streets in a manner consistent with the Arterial Streets Classifications of those streets. The TSP supports this policy because it continues to include this policy while reformatting it consistent with other Comprehensive Plan policies.
- c) **Policy 6.3, No New Regional Trafficways**, calls for accommodation of any future increases in regional traffic through improvements to existing traffic ways. The TSP

supports this policy because it continues to include this policy while reformatting it consistent with other Comprehensive Plan policies.

- d) **Policy 6.4, Coordinate Land Use and Transportation Planning**, calls for coordinating land use planning with transportation planning and requires that the Transportation Element be a guide in land use planning and in the transportation project development process. The TSP supports this policy because it continues to include this policy while reformatting it consistent with other Comprehensive Plan policies. The part of the policy requiring the Transportation Policies to be used as approval criteria in certain land use reviews has been deleted because the approval criteria for these types of land use reviews have been amended as part of the TSP to include their applicable content.
- e) **Policy 6.5, Neighborhood Collector and Local Service Street Traffic Management**, calls for managing traffic on Neighborhood Collectors and Local Service streets according to the hierarchy established in the Transportation Element, and the land uses they serve. The TSP supports this policy because the policy has been included in the TSP while being reformatted to be consistent with other policies of the Comprehensive Plan.
- f) **Policy 6.6, Urban Form**, calls for supporting a regional form composed of mixed-use centers served by a multi-modal transportation system. The TSP supports this policy because its intent has been incorporated into a new Policy 6.20, Connectivity. The first sentence of the policy has been deleted, but its intent – to support the regional growth concept of mixed-use centers – has been added to Policy 6.17, Coordinate Land Use and Transportation.
- g) **Policy 6.7, Public Transit**, calls for development of transit as the preferred form of person trips to and from the Central City, regional and town centers, and light rail stations at all times. The TSP supports this policy because it has been incorporated into Policy 6.24, Public Transportation, while reformatting the policy consistent with other Comprehensive Plan policies.
- h) **Policy 6.8, Regional Rail Corridors**, calls for assigning priority to the funding and development of the regional mass transit system in order to reduce both the need for new regional traffic facilities and reliance on the automobile. The TSP supports this policy because its intent has been incorporated into Policy, 6.24, Objective A and B.
- i) **Policy 6.9, Transit-Oriented Development**, calls for increasing residential densities on residentially-zoned lands and encouraging transit-oriented development along Major City Transit Streets and Regional Transitways, as well as in activity centers, at existing and planned light rail transit stations, and at transit centers, in conformance with the Comprehensive Plan and Zoning Code. The TSP supports this policy because it is incorporated into Policy 6.19, Transit-Oriented Development. Objectives D. and E. relating to park-and-ride facilities have been incorporated into Objective G of Policy 6.24, Public Transportation. Objective F. has been deleted because monitoring of park-and-ride activities is not done as a separate activity. The Parking Management staff respond to complaints and implement area parking permit programs Citywide.

- j) **Policy 6.10, Barrier-Free Design**, calls for transportation facilities to be accessible to all people, and requires that all improvements to the transportation system in the public right-of-way comply with the Americans With Disabilities Act of 1990. The TSP supports this policy because its intent is included in Policy 11.10, Street Design and Right-of-Way Improvements, Objective K.
- k) **Policy 6.11, Pedestrian Transportation**, calls for planning for, and completion of, a pedestrian network that increases the opportunities for walking to shopping and services, institutional and recreational destinations, employment, and transit. The TSP supports this policy because it is incorporated into the TSP as Policy 6.22, Pedestrian Transportation. Objective E. relating to education has been incorporated into Policy 6.3, Transportation Education, and Objective F. has been incorporated into Policy 11.9, Project Selection.
- l) **Policy 6.12, Bicycle Transportation**, calls for making the bicycle an integral part of daily life in Portland, by implementing a bikeway network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer. The TSP supports this policy because it is incorporated into the TSP as Policy 6.23, Bicycle Transportation. The objectives have revised slightly to emphasize the focus of the City's bicycle program. Objective G relating to education and encouragement has been incorporated into Policy 6.3, Transportation Education.
- m) **Policy 6.13, Transportation Demand Management**, calls for requiring the use of transportation demand management techniques such as carpooling, ridesharing, flexible work hours, telecommuting, parking management, and employer-subsidized transit passes to mitigate the impact of development-generated traffic. The TSP supports this policy because it has been incorporated into the TSP as Policy 6.28, Travel Management. The last sentence of the policy relating to preferential carpool parking has been deleted because the requirement for carpool parking was incorporated into the Zoning Code in 1996.
- n) **Policy 6.14, Parking Management**, calls for managing the parking supply to take into account both transportation capacity and parking demand, and implementing measures to achieve Portland's share of a regional per capita parking space reduction. The TSP supports this policy because it has been incorporated into the TSP as Policy 6.25, Parking Management, while being reformatted to be consistent other Comprehensive Plan policies.
- o) **Policy 6.15, On-Street Parking Management**, calls for managing the supply, operations and demand for parking and loading in the public right-of-way to encourage economic vitality, traffic safety, and livability of residential neighborhoods. The TSP supports this policy because it has been incorporated into the TSP as Policy 6.26, On-Street Parking Management while being reformatted to be consistent with other Comprehensive Plan policies.
- p) **Policy 6.16, Off-Street Parking**, calls for the provision of adequate, but not excessive, off-street parking for all land uses. The TSP supports this policy because it has been incorporated into the TSP as Policy 6.27, Off-Street Parking Management while being reformatted to be consistent other Comprehensive Plan policies.



- q) **Policy 6.17, Institutional Parking**, calls for encouraging institutions to regulate parking facilities to first provide short-term parking for users, and secondly, to use demand management to minimize the amount of employee parking required. The TSP supports this policy because it has been incorporated into the TSP as Objective D of Policy 6.28, Travel Management.
- r) **Policy 6.18, Clean Air and Energy Efficiency**, calls for encouraging the use of all modes of travel that contribute to clean air and energy efficiency. The TSP is supportive of this policy but deletes it because the policy intent is covered by existing Comprehensive Plan Policy 7.6, Energy Efficient Transportation.
- s) **Policy 6.19, Multimodal**, calls for coordination of the planning, development, and interconnection of all modes of passenger transportation. The TSP supports this policy because it has been incorporated into the TSP as Policy 6.32, Multimodal Passenger Service, while being reformatted consistent with other Comprehensive Plan policies.
- t) **Policy 6.20, Northwest Corridor Passenger Rail Service**, calls for expanding Northwest Corridor passenger rail service between Eugene, Portland, Seattle, and Vancouver, BC. The TSP supports this policy because it has been incorporated into the TSP as Objective E. of Policy 6.32, Multimodal Passenger Service.
- u) **Policy 6.21, Freight Intermodal Facilities and Freight Activity Areas**, calls for development and maintenance of a multimodal transportation system for the safe and efficient movement of goods within the city. The TSP supports this policy because it incorporates it into the TSP as Policy 6.29, Freight Intermodal Facilities and Freight Activity Areas. Objective D. relating to a Lower Albina overcrossing has been deleted because the project is nearing completion and the facility is now on the appropriate street classification maps.
- v) **Policy 6.22, Right-of-Way Opportunities**, calls for preservation of existing and abandoned rail rights-of-way and examination of their potential for future rail freight, passenger service, or recreational trail uses. The TSP supports this policy because it has been incorporated into the TSP as Policy 6.21, Right-of-Way Opportunities, while being reformatted to be consistent with other Comprehensive Plan policies.
- w) **Policy 6.23, South of Portland River Crossing**, calls for locating a new Willamette River bridge crossing south of the City of Portland to serve suburban travel demand between Clackamas and Washington Counties. The TSP does not include this policy because the regional study for a new Willamette River crossing has been completed and the decision has been made not to build a new bridge within the life of the TSP. Additional studies are being completed to provide alternatives, including the possibility of light rail or other transit options.
- x) **Policy 6.24, Market-Based Congestion Management**, calls for advocating a regional, market-based system to price or charge for an auto trip during peak travel hours. The TSP supports this policy because it is incorporated into Policy 6.33, Congestion Pricing.

- y) **Policy 6.25, Access Management**, calls for the City to work with the Oregon Department of Transportation to develop access management agreements for state highways within the City. The TSP supports this policy because it is incorporated and updated into Policy 6.16, Access Management.
- z) **Policy 6.26, Central City Transportation Management Plan**, calls for including portions of the Central City Transportation Management Plan as part of the Comprehensive Plan. The TSP supports this policy because it incorporates the CCTMP Goal, policies, and objectives, classification maps, and glossary terms into the TSP.
- aa) **Policy 6.27, Adequacy of Transportation Facilities**, calls for ensuring that amendments to the Comprehensive Plan, or to land use regulations, that change allowed land uses and significantly affect a transportation facility are consistent with the identified function, capacity and level of service of the facility. The TSP supports this policy because it incorporates it as Policy 6.18, Adequacy of Transportation Facilities.
- bb) **Policy 6.28, Public Involvement**, calls for carrying out a public involvement process that is consistent with Metro guidelines and provides information about transportation issues and processes to citizens, especially to those traditionally under-served by transportation services. The TSP supports this policy because it incorporates it as Policy 6.2, Public Involvement, while reformatting it to be consistent with other Comprehensive Plan policies.
- cc) **Policy 6.29, Transportation Education**, calls for publicizing activities and the availability of resources and facilities to encourage use of alternate modes of travel to the automobile. The TSP supports this policy because it incorporates it into the TSP as Policy 6.3, Transportation Education.
- dd) **Policy 6.30, Street Vacations**, calls for allowing street vacations only when there is no existing or future need for the right-of-way, the established city street pattern will not be significantly interrupted, and the functional purpose of nearby streets will be maintained. The TSP supports this policy because it incorporates it into the TSP as Policy 6.21, Right-of-Way Opportunities, and reformats it to be consistent with other Comprehensive Plan policies.
- ee) **Arterial Streets Classifications and Policies** describe the types of automobile, transit, bicycle, pedestrian, and truck use that should be emphasized on each street and how future street improvements and public and private development relate to those uses. The TSP supports these classifications and policies because the classifications and policies are incorporated into the TSP as Policies 6.4, Classification Descriptions; 6.5, Traffic Street Classification Descriptions; 6.6, transit Street Classification Descriptions; 6.7, Bikeway Classification Descriptions; 7.8, Pedestrianway Classification Descriptions; and 6.9, Freight Classification Descriptions. The classifications have been combined and revised to include the CCTMP classification descriptions and cover the entire City.
- ff) **North District Policies and Classification Maps** include policies specific to the North Transportation District and accompanying maps that classify the streets for

automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.34, North Transportation District, and its objectives and accompanying classification maps.

- gg) **Northeast District Policies and Classification Maps** include policies specific to the Northeast Transportation District and accompanying maps that classify the streets for automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.35, Northeast Transportation District, and its objectives and accompanying classification maps.
- hh) **Far Northeast District Policies and Classification Maps** include policies specific to the Far Northeast Transportation District and accompanying maps that classify the streets for automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.36, Far Northeast Transportation District, and its objectives and accompanying classification maps.
- ii) **Southeast District Policies and Classification Maps** include policies specific to the Southeast Transportation District and accompanying maps that classify the streets for automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.37, Southeast Transportation District, and its objectives and accompanying classification maps.
- jj) **Far Southeast District Policies and Classification Maps** include policies specific to the Far Southeast Transportation District and accompanying maps that classify the streets for automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.38, Far Southeast Transportation District, and its objectives and accompanying classification maps.
- kk) **Northwest District Policies and Classification Maps** include policies specific to the Northwest Transportation District and accompanying maps that classify the streets for automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.39, Northwest Transportation District, and its objectives and accompanying classification maps.
- ll) **Southwest District Policies and Classification Maps** include policies specific to the Southwest Transportation District and accompanying maps that classify the streets for automobile, transit, bicycle, pedestrian, and truck use. The TSP supports these policies and maps because it incorporates and updates them as Policy 6.40, Southwest Transportation District, and its objectives and accompanying classification maps.

**Goal 7, Energy**, calls for promotion of a sustainable energy future by increasing energy efficiency in all sectors of the city by ten percent by the year 2000. The TSP is consistent with this goal because it includes policies, projects, and programs that will result in a more

convenient multimodal transportation system that will encourage walking, bicycling, and taking transit.

- a) **Policy 7.4, Energy Efficiency Through Land Use Regulations**, calls for promoting residential, commercial, industrial, and transportation energy efficiency and the use of renewable resources. The TSP supports this policy because its policies will support energy efficiency by improving the connectivity of the street grid, reducing travel distances and encouraging alternative modes of travel to the automobile.
- b) **Policy 7.6, Energy Efficient Transportation**, calls for providing opportunities for non-auto transportation and for reducing gasoline and diesel use by increasing fuel efficiency. The TSP supports this policy because its policies, projects, and programs are intended to encourage transportation choices as alternatives to the automobile, including completion of the region's light rail system, constructing pedestrian and bicycle facilities, and transit-preferential measures to speed bus travel.

**Goal 8, Environment**, calls for maintenance and improvement of the quality of Portland's air, water, and land resources, as well as protection of neighborhoods and business centers from noise pollution. The TSP is consistent with this goal because its policies, projects and regulations will result in a more connected street grid, which supports more trips made by walking, bicycling, or taking transit. Reducing the percentage of trips made by single-occupant automobiles will contribute to improved air and water quality and minimize the need for projects that increase the capacity of the street system to accommodate cars.

- a) **Policy 8.2, Central City Transportation Management Plan**, calls for the Central City Transportation Management Plan to be the guide for future city efforts to maintain air quality standards while allowing for expanded employment and housing opportunities throughout the Central City. The TSP supports this policy because it incorporates the CCTMP into the TSP, including its policies that support air quality.
- b) **Policy 8.3, Air Quality Maintenance Strategies**, calls for implementation of the action elements of the Central City Transportation Management Plan and ozone maintenance plan to provide for long-term maintenance of air quality standards. The TSP supports this policy because it incorporates the CCTMP into the TSP, including the actions of the CCTMP that support the ozone maintenance plan.
- c) **Policy 8.4, Ride Sharing, Bicycling, Walking, and Transit**, calls for promoting the use of alternative modes of transportation such as ridesharing, bicycling, walking, and transit throughout the metropolitan area. The TSP supports this policy because its policies, projects and programs focus on promoting the use of alternative modes of travel, including new bicycle and pedestrian facilities and transit preferential measures to speed bus movement. The TSP supports educational efforts to make people aware of transportation choices.
- d) **Policy 8.8, Groundwater Protection**, calls for protection of domestic groundwater and surface water resources from potential pollution through a variety of regulatory measures relating to land use, transportation, and hazardous substances. The TSP supports this policy because its street standards minimize pavement widths to reduce stormwater runoff.

- e) **Policy 8.9, Open Space**, calls for protection of Portland parks, cemeteries and golf courses through an Open Space designation on the Comprehensive Plan Map. The TSP supports this policy because it includes policies and projects to support off-street paths in parks, cemeteries, and golf courses where these paths serve a transportation function as shown on the classification maps.
- f) **Policy 8.14, Natural Resources**, calls for conservation of significant natural and scenic resource sites and values through a combination of programs which involve zoning and other land use controls, purchase, preservation, intergovernmental coordination, conservation, and mitigation. The policy also calls for balancing the conservation of significant natural resources with the need for other urban uses and activities through the evaluation of economic, social, environmental, and energy consequences of such actions. The TSP supports this policy because the TSP includes an ESEE analysis that evaluates transportation projects that might impact these resources. Where an adequate analysis cannot be done because of inadequate information, the TSP calls for an ESEE analysis as part of project development.
- g) **Policy 8.21, Portland International Airport Noise Impact Area**, calls for ensuring compatible land use designations and development within the noise impacted area of the Portland International Airport while providing public notice of the level of aircraft noise and mitigating the potential impact of that noise within the area. The TSP supports this policy because it includes an Air, Rail, Water, and Pipeline Modal Plan that acknowledges the needs of the airport and the need to regulate for noise impacts in the vicinity of the airport.

**Goal 9, Citizen Involvement**, calls for improved methods and ongoing opportunities for citizen involvement in the land use decision-making process. The TSP is consistent with this goal because its development included numerous opportunities for public involvement as detailed in the State Goal 1 findings.

- a) **Policy 9.1, Citizen Involvement Coordination**, calls for encouraging citizen involvement in land use planning projects through coordination with community organizations, availability of planning reports and notice of public hearings. The TSP supports this policy because it has been developed with numerous public outreach efforts throughout its development including focus groups with District Coalition boards, briefings with the same organizations, and attendance at neighborhood meetings and events. The TSP and early drafts were made available to the public in advance of hearings and notices were mailed to over 8,000 people for the district workshops in 1998, over 2,000 people for the citywide open houses in 2001, and approximately 3,000 people for the Planning Commission hearing. In addition, notices were inserted into newspapers and neighborhood newsletters prior to public events and hearings.
- b) **Policy 9.3, Comprehensive Plan Amendment**, calls for allowing for the review and amendment of the adopted Comprehensive Plan which ensures citizen involvement opportunities for the city's residents, businesses and organizations. The TSP supports this policy because the process for amending the Comprehensive Plan, as described in Title 33, was followed in its development.

**Goal 10, Plan Review and Administration**, requires that Portland's Comprehensive Plan undergo a periodic review to assure that it remains an up-to-date and workable

framework for land use development. The TSP is consistent with this goal because the TSP updates Goals 6 and 11B of the Comprehensive Plan. The TSP is updated every five years to ensure that it remains consistent with and responds to updates of other parts of the Comprehensive Plan.

- a) **Policy 10.1, Comprehensive Plan Review**, calls for implementing a process for the review of the Comprehensive Plan goals, policies, objectives, and implementation provisions on a periodic basis. The TSP supports this policy because it includes revised and new policies and objectives and revised and new implementing regulations.
- b) **Policy 10.4, Comprehensive Plan Map**, calls for the Comprehensive Plan Map to be the official long range planning guide for uses and development in the city. The TSP supports this policy because it updates the street classification maps for the City which are adopted as part of the Comprehensive Plan.
- c) **Policy 10.6, Amendments to the Comprehensive Plan Goals, Policies, and Implementing Measures**, requires that all proposed amendments to goals, policies, and implementing ordinances be reviewed by the Planning Commission prior to action by the City Council. The TSP supports this policy because the proposed amendments to the Comprehensive Plan and to amendments to Title 33 have been reviewed by the Planning Commission in two hearings on June 11 and June 25, 2002.
- d) **Policy 10.7, Amendments to the Comprehensive Plan Map**, requires that amendments be supportive of the overall Comprehensive Plan and Map, be consistent with the Statewide Planning Goals, and be consistent with any adopted applicable area plans. When the amendment is from a residential, or urban commercial, Comprehensive Plan Map designation to another non-residential designation the policy requires that there be no net loss of housing units. The TSP supports this policy because the maps being adopted as part of the Comprehensive Plan include street classification maps for each district of the City and street master plan maps that complement the Comprehensive Plan Map.
- e) **Policy 10.8, Zone Changes**, requires that base zone changes within a Comprehensive Plan Map designation be to the corresponding zone stated in the designation. The policy also requires that such zone changes be granted when it is found that public services are sufficient. The TSP is not inconsistent with this policy because no changes are being made to the base zones.
- f) **Policy 10.10, Amendments to the Zoning and Subdivision Regulations**, requires amendments to the zoning and subdivision regulations to be clear, concise, and applicable to the broad range of development situations faced by a growing, urban city. The TSP supports this policy because amendments to Title 33 will codify transportation policies that have been used as approval criteria used for land use reviews since 1992. The result will be consolidated approval criteria for each land use review with potential transportation impacts.

**Goal 11 A, Public Facilities, General**, calls for provision of a timely, orderly and efficient arrangement of public facilities and services that support existing and planned land use patterns and densities. The TSP is consistent with this goal because one of the primary

elements is the 20-year list of transportation projects, including relative time frames, that will address transportation needs associated with existing and planned land use.

- a) **Policy 11.1, Service Responsibility**, describes the responsibilities of the City of Portland within its Urban Services Boundary (both within and outside of its jurisdictional boundary), including service provision, coordination, education, and public participation. The TSP supports this policy because it is a comprehensive approach to serving the transportation needs of the City as a whole over the next 20 years. Transportation services for unincorporated areas within Portland's Urban Services Boundary are provided by the applicable county.
- b) **Policy 11.2, Orderly Land Development**, calls for urban development to occur only where urban public facilities and services exist or can be reasonably made available. The TSP supports this policy because it does not include provision of transportation services for areas where urban development is not planned.
- c) **Policy 11.3, Orderly Service Extension**, calls for improvement and expansion of urban public facilities or services to not stimulate development that significantly precedes the ability to provide all other necessary urban public facilities and services at uniform levels. The TSP supports this policy because it does not include the provision of transportation infrastructure in areas where development is not planned.
- d) **Policy 11.4, Capital Efficiency**, calls for supporting maximum use of existing public facilities and services by encouraging higher density development and development of vacant land within already developed areas. The TSP supports this policy because it includes transportation improvements in areas planned for higher density development and the development of vacant land within already developed areas, including centers, main streets and station areas.
- e) **Policy 11.5, Cost Equitability**, calls for the costs of improvement, extension and construction of public facilities, where possible, to be borne by those whose land development and redevelopment actions made the improvement necessary. The TSP supports this policy because it includes projects that serve growth and are developed with transportation system development fees.
- f) **Policy 11.6, Public Facilities System Plan**, calls for development and maintenance of a coordinated Public Facilities System Plan that provides a framework for the provision of urban public facilities and services within Portland's Urban Services Boundary. The TSP supports this policy because it updates the Public Facilities Plan for transportation and will be incorporated into the citywide update of the Public Facilities Plan now underway.
- g) **Policy 11.7, Capital Improvement Program**, identifies the capital improvement program as the annual planning process for major improvements to existing public facilities and construction of new facilities. The TSP supports this policy because it includes Policy 11.9, Project Selection, which specifies the approval criteria for moving transportation projects from the TSP 20-year list to the capital improvement program.

**Goal 11 B, Public Rights-of-Way**, calls for preservation of the quality of Portland's land transportation system, protection of the City's capital investment in public rights-of-way,

and implementation of street improvements in accordance with identified needs and balanced resource allocation. The TSP is consistent with this goal because the revised goal for 11B continues to incorporate these values.

- a) **Policy 11.8, Maintenance**, calls for assigning first funding priority to maintenance of the existing street system. The TSP supports this policy because the new Policy 11.12, Maintenance, include the statement to support activities and programs that preserve, maintain, and prevent deterioration of the existing transportation system.
- b) **Policy 11.9, Transit Corridors**, calls for assigning priority to improvements that promote more effective public transportation for those streets functioning as transit corridors. The TSP supports this policy because Policy 6.24, Objective D, calls for implementing transit-preferential measures on Major Transit Priority Streets. The new Policy 11.10, Objective H, calls for including improvements that enhance transit operations, safety, and travel times in projects that are located on existing or planned transit routes. The TSP list of projects include many projects intended to improve travel times for transit vehicles along priority corridors.
- c) **Policy 11.10, Street Improvements**, calls for allowing improvements to public rights-of-way only if consistent with the street classifications in the Arterial Streets Classifications and Policies. The TSP supports this policy because the new Policy 11.10, Objective A calls for making improvements to public rights-of-way that are consistent with their street classifications.
- d) **Policy 11.11, Local Service Street Improvements**, calls for constructing of local service streets in accordance with existing and planned neighborhood land use patterns and accepted engineering standards, including the provision of sidewalks on most streets. The TSP supports this policy because the new Policy 11.10, Objectives G, J, M, and P require sidewalks on both sides of all new street improvements, constructing local residential streets to minimize pavement width and total right-of-way width, encouraging the formation of local improvement districts to provide transportation infrastructure, and considering the desired character of the area including neighborhood livability.
- e) **Policy 11.12, Transit Improvements**, calls for constructing or modifying transit streets to promote more efficient and effective public transportation and to improve pedestrian access to transit. The TSP supports this policy because the new Policy 11.10, Objective H supports improvements on transit streets that enhance transit operations, safety, and travel times.
- f) **Policy 11.13, Bicycle Improvements**, calls for providing bikeway facilities appropriate to the street classifications, traffic volume, and speed in the design and construction of all new or reconstructed streets. The TSP supports this policy because the new Policy 6.7, Bicycle Classification Descriptions, and its objectives describe the appropriate design of bicycle facilities for City Bikeways, Off-Street Paths, and Local Service Bikeways. Objective A calls for considering the following factors in determining the appropriate design treatment for City Bikeways: traffic volume, speed of motor vehicles, and street width. Policy 11.10, Objective F requires that planned bicycle facilities be provided in conjunction with street improvements.



- g) **Policy 11.14, Public Bicycle Parking**, calls for providing for safe short- and long-term bicycle parking throughout the Central City and in other areas of the City where needed. The TSP supports this policy because the new Policy 6.23, Bicycle Transportation, and its Objective E, call for providing end-of-trip facilities, specifically short-term and long-term bicycle parking in commercial districts, along main streets, in employment centers and multifamily developments, at schools and colleges, in industrial developments, at special events, in recreational areas, at transit facilities, and at intermodal passenger stations.
- h) **Policy 11.15, Pedestrian Improvements on Arterials**, calls for providing for safe pedestrian movement along all new or reconstructed streets classified as Neighborhood Collectors or above and developing additional pedestrian walkways where needed. The TSP supports this policy because the new Policy 6.22, Pedestrian Transportation, and its objectives, and the new Policy 11.10, Objective G call for completing the pedestrian network with priority in Pedestrian Districts; routes to schools, shopping and parks; routes to transit centers, stations, and stops; and along both sides of all new street improvements.
- i) **Policy 11.16, Local Improvement Districts**, calls for encouraging the formation of local improvement districts (LIDs) in currently developed areas to make street improvements. The TSP supports this policy because the new Policy 11.10, Objective M encourages the formation of LIDs for the construction of transportation infrastructure, which may include streets, curbs, or other structures; pedestrian or bicycle facilities; drainage; and street trees.
- j) **Policy 11.17, New Construction**, calls for requiring that construction of new streets be of high quality materials in order to minimize future maintenance costs. The TSP supports this policy because the new Policy 11.10, Objective E, calls for using a variety of transportation resources in developing and designing projects for City Streets. These resources, including the Pedestrian Design Guide, the Bicycle Master Plan - Appendix A, the Standard Construction Specifications manual, and the Design Guide for Public Street Improvements, specify the appropriate materials for each street improvement.

**Goal 11 C, Sanitary and Stormwater Facilities**, calls for an efficient, adequate, and self-supporting wastewater collection treatment and disposal system which will meet the needs of the public and comply with federal, state and local clean water requirements. The TSP is consistent with this goal because it incorporates Metro's Green Streets handbook into Policy 11.10, Objective D, as a resource that will be considered when designing streets on the regional system.

- a) **Policy 11.27, Impervious surfaces**, calls for limiting the increase of Portland's impervious surfaces without unduly limiting development in accordance with the Comprehensive Plan, when necessary. The TSP supports this policy because Policy 11.10, Objective J, calls for constructing local residential streets to minimize pavement width and total right-of-way width, consistent with the operational needs of the facility.

**Goal 11 F, Parks and Recreation**, calls for maximizing the quality, safety and usability of parklands and facilities through the efficient maintenance and operation of park improvements, preservation of parks and open space, and equitable allocation of active and passive recreation opportunities for the citizens of Portland. The TSP is consistent with this

goal because the district pedestrian and bicycle classification maps include recreational trails where they also serve a transportation function including providing needed connectivity where street connectivity is inadequate. Projects on the TSP 20-year list include a segment of the Willamette Greenway Trail and a Kelly Point Park access trail.

**Goal 11 G, Fire**, calls for the development and maintenance of facilities that adequately respond to the fire protection needs of Portland. The TSP is consistent with this goal because it incorporates the results of the Emergency Response Classification Study. The TSP adds an Emergency Response network of streets that must remain easily passable by emergency response vehicles. The new Policy 6.10, Emergency Response Classification Descriptions, and Policy 6.14, Emergency Response, describe the need to provide a network of emergency response streets that facilitate prompt response to emergencies.

**Goal 11 H, Police**, calls for the development and maintenance of facilities that allow police personnel to respond to public safety needs as quickly and efficiently as possible. The TSP is consistent with this goal because it incorporates the results of the Emergency Response Classification Study. The TSP adds an Emergency Response network of streets that must remain easily passable by emergency response vehicles. The new Policy 6.10, Emergency Response Classification Descriptions, and Policy 6.14, Emergency Response, describe the need to provide a network of emergency response streets that facilitate prompt response to emergencies.

**Goal 11 I, Schools**, calls for the enhancement of educational opportunities of Portland's citizens through assistance in planning educational facilities. The TSP is consistent with this goal because it supports schools by identifying transportation improvements that allow students to access schools safely.

- a) **Policy 11.62, Safety**, calls for providing traffic improvements, such as sidewalks and bikeways, to promote safe routes to schools where attendance area reorganization requires longer travel distances for students. The TSP supports this policy because the new Policy 6.22, Pedestrian Transportation, and Objective A, encourages walking to schools and Policy 11.9, Project Selection, Objective D, calls for giving priority to projects that support safe routes to school. The new Policy 6.23, Bicycle Transportation, and its Objective H, support completing a bicycle network that would promote bicycling as safe and convenient transportation to schools. The TSP 20-year list includes numerous projects that would improve the pedestrian and bicyclist environment in the vicinity of schools.

**Goal 12, Urban Design**, calls for the enhancement of Portland as a livable city, attractive in its setting and dynamic in its urban character by preserving its history and building a substantial legacy of quality private developments and public improvements for future generations. The TSP is consistent with this goal because the new Policy 6.11, Street Design, includes design elements and design treatments for all street designs. The design elements and treatments for Regional Main Streets and Community Main Streets are intended to respond to and further the goal of creating attractive streets.

- a) **Policy 12.4, Provide for Pedestrians**, calls for providing a pleasant, rich and diverse experience for pedestrians which includes comfortable, safe and attractive pathways. The TSP supports this policy because the new Policy 6.20, Connectivity, Policy 6.21, Right-of-Way Opportunities, and Policy 6.22, Pedestrian Transportation, call for a complete

pedestrian network that increases the opportunities for walking. Specifically, Policy 6.20, Objective C, calls for convenient and safe pedestrian connections to transit routes, schools, and parks as well as within and between new and existing residential developments, employment areas and other activity centers. Policy 6.21, and its Objectives A and B, require maintaining rights-of-way where needed to provide pedestrian connections. Policy 6.22 and its Objective C. calls for improving the pedestrian environment by implementing pedestrian design guidelines to ensure that all construction in the right-of-way meets a pedestrian quality standard.

**Portland City Code 33.835.040, Approval Criteria for Goal, Policy and Regulation Amendments**, includes two applicable approval criteria. The TSP meets these as follows:

- a) Amendments to the Zoning Code must be found to be consistent with the Comprehensive Plan and the Statewide Planning Goals. The TSP code amendments are consistent with this approval criterion because the findings on the Comprehensive Plan and the Statewide Planning Goals demonstrate this consistency. The TSP code amendments are consistent with the intent or purpose statements of the base zones, overlay zones, plan districts, and use and development regulations because they are minor amendments to update terms, carry out state and regional mandates, and do not change the intent or purpose of the regulations.
- b) Amendments to the goals and policies of the Comprehensive Plan must be found to be consistent with the Comprehensive Plan and the Statewide Planning Goals. The TSP amendments to Goal 6 and Goal 11B are consistent with this criterion because the findings demonstrate this consistency.

## **Council Directives**

The following statements are the City Council 'directives' that explain how each part of the TSP is adopted and how it fits into the structure of the City's Comprehensive Plan.

- a. Adopt the Transportation System Plan, Volumes 1, 2, and 3, and the Inventory, dated September 2002, which is attached as Exhibits A, B, C, and D;
- b. Repeal the Transportation Element of the Comprehensive Plan, as adopted by Ordinances No. 165851 and No. 170136;
- c. Amend Portland's Comprehensive Plan to incorporate the Goals, Policies, Objectives, Maps, and Glossary of Terms of the Transportation System Plan as shown in Chapter 2 of Exhibit A, including amendments to the Central City Transportation Management Plan classification maps;
- d. Amend the Public Facilities Plan's, as adopted by Ordinance No. 161770, by replacing the List of Significant Projects in Exhibit C with the 20-year Major Transportation Improvements List and Maps, as shown in Chapter 3 of Exhibit A, as a support document to Portland's Comprehensive Plan;

- e. Adopt the list of regional and Portland refinement plans, as shown in Chapter 4 of Exhibit A, as a support document Portland's Comprehensive Plan;
- f. Adopt the remainder of Volumes 1, 2, and 3, and the Inventory, as shown in Exhibits A, B, C, and D as support documents for Goal 6 and 11B of the Comprehensive Plan;
- g. Amend Portland's Comprehensive Plan to incorporate revisions to Goals 2, 5, and 12 as shown in Chapter 6 of Exhibit A;
- h. Amend Title 16, Vehicles and Traffic, as shown in Chapter 6 of Exhibit A;
- i. Amend Title 17, Public Improvements, as shown in Chapter 6 of Exhibit A;
- j. Amend Title 33, Planning and Zoning, as shown in Chapter 6 of Exhibit A;
- k. Adopt the explanations, as shown in Chapter 2, and the commentary for Titles 16, 17, and 33, as shown in Chapter 6, and contained in Exhibit A, as an expression of legislative intent and as further findings to support City Council's action;
- l. Publish reformatted versions of Volumes 1, 2, and 3 that reflect City Council action, including revisions to the Financial Plan in Chapter 14 of Exhibit B as needed to reflect changes to Chapter 3 of Exhibit A, and to update technical data; and

**Table 16.1**  
**TSP Projects Subject to Environmental/Greenway Review**

<b>ID</b>	<b>PROJECT NAME</b>	<b>DESCRIPTION</b>	<b>LEAD AGENCY</b>	<b>OVERLAY ZONE*</b>
20037	Morrison Bridge, SE/SW: Pedestrian and Bicycle Improvements	Improve bicycle and pedestrian access on the Morrison Bridge	Multnomah County	g
20051	Steel Bridge, NE (East Ramps): Seismic Retrofit	Seismic retrofit.	Portland	g
20082	Aerial Tram, SW	Develop and implement an aerial tram between Marquam Hill and North Macadam. Project implementers include Oregon Health Science University, Portland Aerial Tram Inc , and others.	Portland	c, p
30010	Denver Viaduct, N: Reconstruct Viaduct	Rebuild viaduct and add pedestrian walkway/bikeway.	ODOT/Portland	c
30016	Going/Greeley, N: Climbing Lane and Interchange Improvements	Redesign Going/Greeley interchange including climbing lane on Going to improve truck movement.	Portland	c
30019	Hayden Island/Rivergate, N: Rail Access	Rail access from Rivergate to Hayden Island development.	Port	c
30020	I-5, N (Columbia River - Columbia Bl): Bridge Widening	Improve I-5/Columbia River bridge (local share of joint project) based on recommendations in I-5 Trade Corridor Study.	ODOT	c
30022	I-5, N (Expo Center - Lombard): Widening Freeway	Widen I-5 to three lanes in each direction from Lombard to the Expo Center exit.	ODOT	c
30033	Light Rail Extension, Phase 2, N, Expo Center - Vancouver WA	Extend light rail service from Expo Center to Vancouver, WA.	Tri-Met	c
30036	Lombard, N (Rivergate - Ramsey): Multi-modal Improvements	Provide for preliminary and final engineering to manage the increase in traffic at N. Ramsey and Rivergate Blvd including sidewalks and bike lanes. Widen Lombard from N. Simmons Rd to 600' south of N. Rivergate Blvd and add a signal at Ramsey Blvd.	Portland/ODOT	c
30039	Marine Dr, N (at Rivergate West): Rail Crossing, Phase II	Reroute rail tracks and construct an above-grade rail crossing at Rivergate West entrance to improve safety and reduce vehicle and rail traffic conflicts.	Port	p
30045	River Ave, N (Port Center Way - River Ave): Street Extension	Secondary access road from Swan Island connecting to the Lower Albina Overcrossing at River. Improvements include roadway, drainage, pedestrian path & bike routes.	Portland	g, i
30046	Rivergate Bicycle & Pedestrian Trail, N	Construct a 8500' section of 40-mile loop trail on north side of Columbia Slough in Rivergate.	Port	c, p
30048	Lombard Overcrossing, N	Construct overpass from Columbia/Lombard intersection into South Rivergate entrance to separate rail and vehicular traffic. Project includes motor vehicle lanes, bike lanes, and sidewalks.	Portland/Port	c
30049	St. Johns Bridge Restoration, N	Complete restoration improvements.	ODOT	g
30053	West Hayden Crossing, N	New four-lane bridge from Marine Drive to Hayden Island to serve as the primary access to marine terminals on the island.	Portland/Port	c
30054	Barnes Rail Yard - Bonneville Rail Yard, N: Track Expansion	Construct additional unit train trackage between Bonneville and Barnes Yards to support unit train movement between South Rivergate and the Columbia Corridor.	Port	c

ID	PROJECT NAME	DESCRIPTION	LEAD AGENCY	OVERLAY ZONE*
40009	47th/Cornfoot, NE: Intersection Improvements	Widen and reconfigure intersection to better facilitate truck turning movements to the cargo area located within the airport area. Project includes sidewalks and bikeway improvements.	Portland	c
40019	92nd Ave, NE, (Alderwood - Columbia Bl): Street Improvements	Improve 92nd to better facilitate circulation in the Portland International Center development. Scope of project not fully defined.	Portland	p
40036	Cornfoot, NE (47th-Alderwood): Road Widening & Intersection Improvements	Road widening project including lighting and landscaping, left turn lanes, and bike lanes (47th - Airtrans Way). Signalize Cornfoot/Airtrans intersection and reconfigure traffic flow. Stripe bike lanes (Airtrans - Alderwood).	Portland	c
40073	Southwest Quad, NE (at 33rd): Access to PDX Properties	Provide street access from 33rd into the SW Quad property.	Port	c, p
40080	Marine Dr, NE (6th - 33rd & Gantenbein - Vancouver Way): Bikeway	Retrofit bike lanes to existing street and complete off-street paths in missing locations.	Portland	c
50008	138th, NE (Marine Dr - Sandy): Street Improvements	Address traffic flow and widen from 2 to 4 lanes.	Portland	p
50011	158th, NE (Columbia Slough - Sandy Bl): Street Improvements	Reconstruct street to industrial standards, add sidewalks, stripe bike lanes, curb and storm drainage, and construct bridge to replace culverts at main slough crossing.	Portland	p
50017	105th/Clark/Holman, NE: Street Improvements	Upgrade Clark Rd (between Glass Plant Rd and 105th/Holman) and the intersection of Clark/105th/Holman to city standards. Curbs, drainage, walkways, and bikeways will be installed.	Portland	c,p
50030	Marine Drive/122nd, NE: Intersection Improvements	Signalize and widen dike to install left turn lane on Marine Drive.	Portland	p
50035	Sandy Bl, NE (122nd - City Limits): Multi-modal Improvements	Widen street to three or five lanes with sidewalks and bike lanes.	ODOT	c
60006	Burnside, W (23rd - Skyline): Multi-modal Improvements	Retrofit bikeway to existing street, improve sidewalks, lighting, crossings and provide traffic signal & left-turn lane at Burnside/Skyline.	Portland	c, p
60024	Wildwood Trail Bridge, NW/SW	Construct pedestrian overcrossing where Burnside intersects the Wildwood Trail to eliminate at-grade crossing.	Portland	c, p
70007	82nd Ave, SE (Schiller - City Limits), SE: Street Improvements	Expand into fully curbed, 4-lane, 60-foot wide roadway w/ continuous left-turn lane, sidewalks, street trees, storm drainage improvements, street lighting, & ROW acquisition.	ODOT/ Portland	c, p
70030	McLoughlin (99E), SE (Ross Island Bridge - Clatsop): Multi-modal Improvements	Provide access management, reversible travel lane from Ross Island Bridge to Harold and widen to six lanes from Harold to I-205. Include pedestrian and bike facilities.	ODOT	c
70037	Johnson Creek Bl, SE (32nd - 45th): Street Improvements	Complete final design of phase 2 improvements including storm sewer, ROW acquisition, and reconstruction including bike lanes and sidewalks.	Portland/ Milwaukie	c, p
70044	Mt. Scott Bl, SE (92nd - 112th): Pedestrian Improvements	Build a continuous walkway for pedestrian travel and access to transit with crossing improvements at transit stop locations.	Portland	c, p

ID	PROJECT NAME	DESCRIPTION	LEAD AGENCY	OVERLAY ZONE*
70053	Springwater Corridor Trail, SE (Sellwood Bridge - Springwater Trailhead): Access Improvements	Construct multi-use path designed for bicycle and pedestrian use from trailhead to Sellwood Bridge including access connector over McLoughlin (99E) and undercrossing ramps at Sellwood Bridge .	Portland	c, p
80007	174th & Jenne Rd , SE (Foster - Powell): Multi-modal Improvements	Roadway improvements to increase safety and capacity to accommodate increased residential development. Widen roadway to three lanes and provide bike lanes, sidewalks to provide better transportation links in this vital north/south link.	Portland	c
80011	Foster Rd, SE (136th - Jenne): Multi-modal Improvements	Widen street to three lanes to provide two travel lanes, continuous turn lane, bike lanes, sidewalk, and drainage. Replace Foster Rd bridge over Johnson Creek. Reconstruct Foster/Barbara Welch & Foster/162nd intersections.	Portland	c, p
90007	35th Ave, SW (Taylors Ferry - Stephenson): Bicycle & Pedestrian Improvements	Bike lanes (Taylors Ferry to Stephenson), sidewalks, crossing improvements, and median islands (Taylors Ferry - Dickinson) to improve safety for school children.	Portland	c, p
90008	45th Ave, SW (B-H Hwy to Taylors Ferry): Bicycle & Pedestrian Improvements	Stripe bike lanes (Cameron - Taylors Ferry), provide sidewalk and crossing improvements (east side of Cullen - Iowa) and construct path/stairway (Cullen to B-H Hwy).	Portland	c, p
90013	Arnold, SW (Boones Ferry - 35th): Bicycle & Pedestrian Improvements	Construct bikeway and pedestrian facilities.	Portland	c, p
90016	Barbur Blvd, SW (3rd - Terwilliger): Multi-modal Improvements	Construct Improvements for transit, bikes and pedestrians. Transit improvements include preferential signals, pullouts, shelters, left turn lanes and sidewalks.	Portland/ODOT	c, p
90033	Garden Home Rd, SW (Capitol Hwy - Multnomah): Multi-modal Improvements	Reconstruct road to three lanes with signal improvements at Multnomah intersection, drainage, bike lanes, sidewalks and curbs.	Portland	c, p
90051	Nevada St/Ct, SW: Path & Stair/Bridge	Construct a path and bridge over Stevens Creek to connect Nevada Ct to Capitol Hill Road & Bertha Blvd at Chestnut.	Portland	c, p
90053	Palatine St, SW (27th-Lancaster): Street Extension	Complete neighborhood collector to provide multi-modal access to Lancaster Rd.	Portland	c
90065	Taylors Ferry, SW (Macadam - 35th): Bicycle & Pedestrian Improvements	Widen shoulder in uphill direction on SW Taylors Ferry Rd from Macadam to Terwilliger to provide bicycle climbing lane and stripe bike lanes from Terwilliger to 35th. Construct sidewalks for pedestrian travel and access to transit.	Portland	c

\* Overlay zones subject to Environmental Review include 'c' – conservation zone and 'p' – protection zone. Greenway overlay zones include 'g' – river general and 'i' – river industrial.

