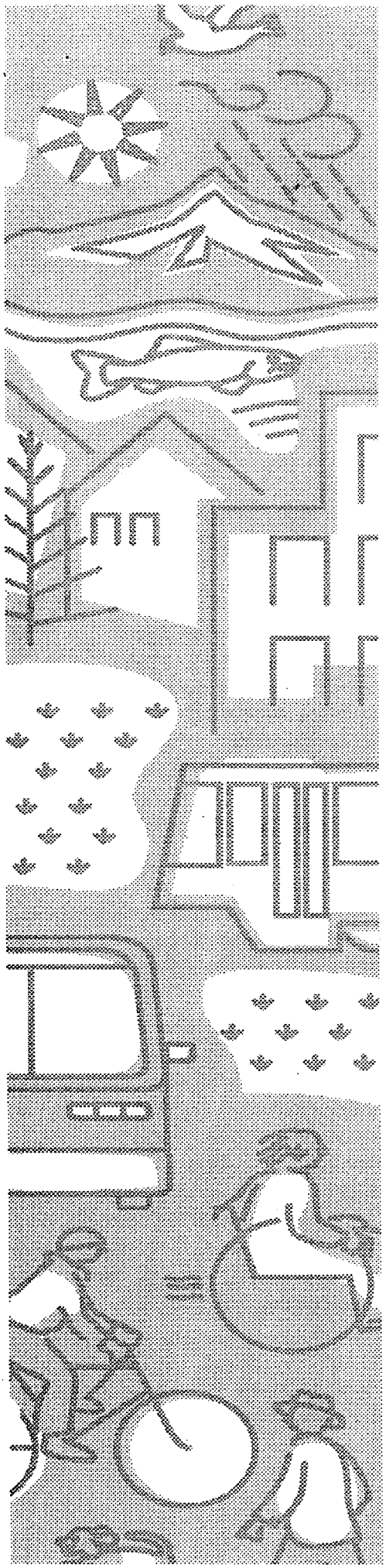

JPACT Recommendations:
Engrossed Version
of Chapter 1

Regional Transportation Plan Update

July 11, 1996

(includes amendments recommended by Metro Council Transportation Planning Committee Chair in July 11, 1996 memo)

METRO

CHAPTER 1

Regional Transportation Policy

A. Context of the Regional Transportation Plan

This Regional Transportation Plan (RTP) is intended to implement the region's 2040 Growth Concept. Included in the Growth Concept are a variety of land use components recognizing the diversity of residential, commercial, industrial, and open space needs that exist within our region. The RTP lays out the policies, systems, and actions to serve those diverse needs.

The RTP reflects the diversity of the 2040 Growth Concept by providing appropriate transportation options to best serve the variety of land use components. For any one land use component, multiple modes are necessary. Higher density regional and town centers need to accommodate a variety of auto, truck, bicycle, transit, and pedestrian users. Industrial areas need good auto, truck, and rail access for freight, while allowing employees and customers to commute by auto, transit, and, in some instances, bicycles. Main streets and station areas are focused on good transit, pedestrian, and bicycle access, but also need to allow for auto access.

The RTP provides a 20-year blue print for transportation decision making. While emphasizing a multi-modal system, the RTP recognizes that the automobile will likely continue to be the primary mode of personal travel over the life of the plan. As such, the RTP includes a number of strategic road investments that attempt to implement the Growth Concept, recognizes additional demand on the system for both people and goods, and reflects the continued use of the automobile for personal and commercial travel.

The RTP also recognizes that significant opportunities exist to reduce reliance on the automobile (particularly the single-occupant use of vehicles) for a number of trip types that will develop as the Growth Concept matures. The RTP, therefore, also emphasizes the need to provide good choices for certain trip types. Even on an occasional basis, the use of alternative modes will help the region maintain its air quality, conserve energy, and minimize pressure on the Urban Growth Boundary. Similarly, the RTP recognizes the need for a multi-modal freight system that includes a balanced system of truck, rail, air, and water routes to best meet the needs of area shippers.

In sum, the RTP provides a diverse set of transportation priorities necessary to implement the diverse and unique attributes embodied in the 2040 Growth Concept.

~~A~~B. Introduction

This chapter presents the overall policy framework for the specific transportation goals, objectives and actions contained in the Regional Transportation Plan (RTP). It also sets a direction for future planning and decision-making by the Metro Council and the implementing agencies, counties and cities. The chapter is organized as follows:

- Transportation Vision Statement and Guiding Principles: This section establishes the basic mission of the plan as a means for implementing the Metro 2040 Growth Concept.

- Urban Form and Land Use: This section describes the individual transportation needs of the 2040 Growth Concept land use components and the relative importance of these components to the region.

- RTP Goals and Objectives: This section describes the policy direction of the plan and establishes in measurable terms how the plan implements the 2040 Growth Concept and what level of accessibility the transportation system is expected to provide.

- Transportation System Design: This section provides objectives regarding the performance and function of each modal element of the transportation system.

Upon completion of the RTP update, the RTP will be evaluated to determine which elements are binding and which are advisory to local governments. Additional language will be added to the RTP to describe these provisions. In the interim, however, the Urban Growth Management Functional Plan (UGMFP) will implement several RTP policies relating to boulevard design, local street connectivity and traffic level of service standards.

~~G~~BC. Regional Vision and Guiding Principles

Implementation of the 2040 Growth Concept requires a departure from traditional transportation planning such that the region must identify key measures of transportation effectiveness which include all modes of transportation. Developing a full array of these measures will require additional analysis. Focusing~~Concentrating~~ development in the ~~high-density~~ most concentrated activity centers, as envisioned in the 2040 Growth Concept, ~~may produce~~ requires the use of alternative modes in order to avoid unacceptable levels of congestion ~~that exceed existing standards, yet signal positive urban development for these areas~~ and to insure that accessibility by alternative modes is attractive. ~~Conversely,~~ tThe continued economic vitality of important industrial areas and intermodal facilities largely depends on preserving or improving access to these areas and maintaining reasonable levels of mobility on the region's main throughways. The unifying theme of the 2040 Growth Concept is to preserve the region's livability while accommodating expected growth -- a principle which calls for transportation planning that is finely tailored to the specific needs of each 2040 Growth Concept land use components.

Transportation Vision Statement

The Regional Transportation Plan seeks to enhance the region's livability through implementation of the 2040 Growth Concept with a transportation system that:

- anticipates the region's future travel needs;

- promotes an appropriate mix of travel modes; and

- supports key elements of the growth concept with strategic system improvements.

Guiding Principles

The Regional Transportation Plan vision has four guiding principles:

1. Provide complete information, timely public notice, full public access to key decisions and support broad-based, early and continuing involvement of the public in all aspects of the transportation planning process;

2. Facilitate development of the 2040 Growth Concept land use components with specific strategies that address mobility and accessibility needs and use transportation investments to leverage desired land use patterns;

3. Ensure that the allocation of fiscal resources is driven by both land use and transportation benefits; and

4. Place a priority on protecting the region's natural environment and livability in all aspects of transportation planning process.

The transportation system plays a critical role in the continued economic health and livability of the region. The regional forecast for the year 2015 predicts nearly 615,000 new residents and more than 500,000 new jobs above 1995 levels for the metro area (excluding Clark County). Substantial investment in transportation improvements is needed to accommodate this growth in a manner that supports the 2040 Growth Concept and preserves the region's livability.

Important measures of livability include mobility and access to jobs, schools, services and recreation, movement of goods and clean air. The RTP must address these needs by improving transportation alternatives to the automobile and ~~choices for how people travel within the region, while~~ seeking a balance between accessibility, system cost, strategic timing and prioritization of improvements and environmental impacts.

Public Involvement

Metro's public involvement policy for regional transportation planning and funding activities is intended to support and encourage broad-based public participation in the development and review of Metro's transportation plans, programs and projects. The policy was developed in response to citizen interest, recent changes in state and federal transportation planning, and in an effort to reach traditionally underserved portions of the population. The public involvement policy was adopted in July 1995.

The public involvement program for the RTP update is tied to the Regional Framework Plan public involvement process, and includes a widely distributed newsletter, fact sheets, periodic workshops, open houses and public meetings, statistical research using focus groups and surveys.

The 21-member RTP Citizen Advisory Committee (CAC) was appointed by the Metro Council ~~to a two-year term in April~~ May 1995 to provide citizen perspectives on transportation issues during

~~provide an ongoing, in-depth public dialogue on all aspects of~~ the RTP update ~~process~~. The committee members live and work throughout the region and bring a broad range of experiences and views to the process. Members of the CAC were selected as delegates for specific constituencies, to ~~representing~~ various citizen, demographic, business and special interest perspectives.

Accessibility and Mobility

Accessibility is the ability to reach a given destination, and is measured in terms of travel costs in both time and money to a given destination. The more places that can be reached for a given cost, the greater the accessibility. Of equal importance is the quality of travel choices to a given destination. Therefore, the relative level of accessibility within the region is governed by both land use patterns and the number of travel alternatives provided in the regional transportation system.

In contrast, mobility is defined as the ability to move people and goods. Mobility improves when the transportation network is refined or expanded to improve capacity of one or more modes, thus allowing people and goods to move more quickly toward a particular destination.

Accessibility to services and markets throughout the urban metropolitan area and maintaining adequate levels of mobility on key components of the regional system are principal objectives of the transportation plan and central to implementation of the 2040 Growth Concept. Residents of the region must have reasonable access to jobs, shopping, personal services and recreation. Commerce in the region depends on both access to statewide, interstate and international travel networks, and general mobility on the regional transportation system. The region's quality of life and economy would suffer without these accessibility and mobility objectives.

System Cost

A cost-effective transportation system will provide adequate levels of accessibility and mobility while minimizing the need for public investment. The RTP emphasizes preservation and efficient use of existing facilities as the best approach in providing an adequate transportation system. Therefore, the cost-effectiveness of the transportation system as a whole is dependent on solutions that provide adequate capacity and connectivity at the lowest total cost.

Timing and Prioritization of System Improvements

The 2040 Growth Concept has established a broad regional vision that will guide all future comprehensive planning at the local and regional levels, including development of the Regional Transportation Plan. The growth concept contains a series of land use building blocks that establish basic design types for the region. Of these, the central city, regional center and industrial area/intermodal facility components are most critical in terms of regional significance and role in implementing the other components of the growth concept.

Because the 2040 Growth Concept is a 50-year plan, many areas envisioned as important centers of urban activity, including several regional centers, station communities and main streets, are currently underdeveloped. Substantial public and private investment will be needed in these

areas over the long-term to realize the 2040 Growth Concept vision. These areas provide the best opportunity for public policy to shape ~~new~~ development, and are, therefore, the best candidates for more immediate transportation system improvements.

During the past several years, the region has experienced unprecedented growth -- a trend that is predicted to continue in the 2015 regional forecast. Subsequently, a significant amount of urbanization is likely to occur while local jurisdictions are in the process of adopting local ordinances that implement the 2040 Growth Concept. Therefore, the phasing of RTP projects and programs will reflect this period of transition, with project identification and selection increasingly tied to implementation of the growth concept.

The RTP includes three implementation scenarios based on varying financial assumptions. The "preferred" system (Chapter 5) includes an optimal package of regional transportation projects and programs that best addresses the region's needs over the 20-year plan period. The "constrained" system (Chapter 7) is limited to those improvements to the regional transportation system that can be made by projecting existing revenue sources for the plan period, and does not adequately meet the region's 20-year needs. The "strategic" system (Chapter 8) includes a mix of regional projects and programs from both the preferred and financially constrained systems. The strategic system represents the minimum set of actions needed to adequately serve the region's 20-year transportation needs, and thus establishes a target for additional funding.

Environmental, Economic & Social Impacts

Transportation systems have a significant effect on the physical and socioeconomic characteristics of the areas they serve. As such, transportation planning must consider larger regional and community goals and values, such as protection of the environment, the regional economy and the quality of life that area residents presently enjoy.

The RTP measures economic and quality of life impacts of the proposed system by evaluating key indicators, such as job and retail service accessibility, economic benefits to the ~~business~~ community and transportation for the traditionally underserved, including low income and minority households and the disabled. Other key system indicators include reduction in VMT's, travel times, travel speeds, congestion, energy costs, protection of natural resources and air quality impacts. RTP objectives are sometimes in conflict, so each transportation project or program must be evaluated in terms of relative tradeoffs, and how it best achieves an overall balance between those conflicting goals.

~~D~~C~~D~~. Urban Form And Land Use

Regional Urban Growth Goals and Objectives

The Regional Urban Growth Goals and Objectives (RUGGOs) were adopted in 1991 in response to direction by the Oregon Legislature to develop regional land use goals and objectives that would replace those adopted by the Columbia Region Association of Governments. The RUGGOs establish a process for coordinating planning in the metropolitan area in an effort to preserve regional livability. The RUGGOs also provide a policy framework for guiding Metro's regional

planning program, including development of functional plans and management of the region's urban growth boundary.

In 1992, the region's voters approved a charter for Metro that formally gave responsibility for regional land use planning to the agency, and requires adoption of a Regional Framework Plan that integrates land use, transportation and other regional planning mandates. In late 1995, the Metro Council adopted the 2040 Growth Concept, a document that serves as the first step in developing the framework plan. Like the RUGGOs, the growth concept is not a final plan for the region, but rather, is a starting point for developing the Regional Framework Plan, which will be a more focused vision for the future growth and development of this region. The growth concept includes a series of regional measures intended to accelerate both development of the framework plan elements and local implementation of growth concept principles. The 1996 Regional Transportation Plan serves as a functional plan and will be the transportation element of the Regional Framework Plan.

While the 2040 Growth Concept is primarily a land use framework, the success of the concept, in large part, hinges on regional transportation policy. The following are the 2040 Growth Concept land use components and a description of their associated transportation elements. The land use components are grouped according to their relative significance in the region:

Primary Components

The central city, regional centers, industrial areas and intermodal facilities are centerpieces of the 2040 Growth Concept, and form the geographic framework for more locally oriented components of the plan. Thus, implementation of the overall growth concept is largely dependent on the success of these primary components. For this reason, these components are the focus of 2040 Growth Concept implementation policies and infrastructure investments.

- **Central City and Regional Centers**
  Portland's central city already forms the hub of the regional economy. Regional centers in suburban locales such as Gresham, Beaverton and Hillsboro are envisioned in the 2040 Growth Concept as complementary centers of regional economic activity. These areas have the region's highest development densities, the most diverse mix of land uses and the greatest concentration of commerce, offices and cultural amenities. They are the most accessible areas in the region by both auto and public transportation, and have very pedestrian-oriented streets.

  In the 2040 Growth Concept, the central city is highly accessible by a high-quality public transportation system, multi-modal street network and a regional freeway system of through-routes. Light rail lines radiate from the central city, connecting to each regional center. The street system within the central city is designed to encourage public transportation, bicycle and pedestrian travel, but also accommodate auto and freight movement. Of special importance are the bridges that connect the east and west sides of the central city, and serve as critical links in the regional system.

  Regional centers also feature a high-quality radial transit system serving their individual trade areas and connecting to other centers, as well as light rail connections to the central city.

In addition, a fully improved network of multi-modal streets tie regional centers to surrounding neighborhoods and nearby town centers, while regional through-routes will be designed to connect regional centers with one another and points outside the region. The street design within regional centers encourages public transportation, bicycle and pedestrian travel while also accommodating automobile and freight movement.

- **Industrial Areas and Intermodal Facilities**
  Industrial areas serve as "sanctuaries" for long-term industrial activity. These areas are primarily served by a network of major street connections to both the regional freeway system and intermodal facilities. Many industrial areas are also served by freight rail, and have good access to intermodal facilities. Freight intermodal facilities, including air and marine terminals, freight rail yards and common carrier truck terminals are an area of regional concern. Access to these areas is centered on rail, the regional freeway system, public transportation, bikeways and key roadway connections. While industrial activities often benefit from roadway improvements largely aimed at auto travel, there are roadway needs unique to freight movement that are critical to the continued vitality of industrial areas and intermodal facilities.

Secondary Components

While more locally oriented than the primary components of the 2040 Growth Concept, town centers, station communities, main streets and corridors are significant centers of urban activity. Because of their density and pedestrian-oriented design, they play a key role in promoting public transportation, bicycling and walking as viable travel alternatives to the automobile, as well as conveniently close services for surrounding neighborhoods. As such, these secondary components are an important part of the region's strategy for achieving state goals for reducing per-capita automobile travel.

- **Station Communities**
  Station communities are located along light rail corridors and feature a high-quality pedestrian and bicycle environment. These communities are designed around the transportation system to best benefit from the public infrastructure. While they include some local services and employment, they are mostly residential developments that are oriented toward the central city, regional centers and other areas that can be accessed by rail for most services and employment.

- **Town Centers and Main Streets**
  Town Centers function as local activity areas that provide close access to a full range of local retail and service offerings within a few miles of most residents. While town centers will not compete with regional centers in scale or economic diversity, they will offer some specialty attractions of regional interest. Though the character of these centers varies greatly, each will function as strong business and civic communities with excellent multi-modal arterial street access and high quality public transportation with strong connections to regional centers and other major destinations. Main streets feature mixed-use, storefront style development that serve the same urban function as town centers, but are located in a linear pattern along a limited number of bus corridors. Main streets feature street designs that emphasize pedestrian, public transportation and bicycle travel.

- **Corridors**
  Corridors will not be as intensively planned as station communities, but similarly emphasize a high-quality bicycle and pedestrian environment and convenient access to public transportation. Transportation improvements in corridors will focus on nodes of activity -- often at major street intersections -- where transit and pedestrian improvements are especially important. Corridors can include auto-oriented land uses between nodes of activity, but such uses are carefully planned to preserve the pedestrian orientation and scale of the overall corridor design.

Other Urban Components

Some components of the 2040 Growth Concept are primarily of local significance, including employment centers and neighborhoods. Urban activities in these areas often impact the regional transportation system, but are best addressed through the local planning process.

- **Employment Centers**
  Employment centers allow mixed commercial and industrial uses, including some residential development. These areas are primarily served by a network of arterial connections to both the regional freeway system and intermodal facilities. Some employment centers are also served by freight rail. Employment centers are often located near industrial areas, and thus may benefit from freight improvements primarily directed toward industrial areas and intermodal facilities.

- **Neighborhoods**
  In recent decades, the newest neighborhoods have become the most congested largely due to a lack of street connections. A lack of street connections discourages walking and bicycling for local trips in these areas, and forces local auto trips onto the regional multi-modal arterial network. The 2040 Growth Concept envisions master street plans in all areas to increase the number of local street connections to the regional roadway network. However, new connections must be designed to discourage through-travel on local neighborhood streets.

Exurban Components

- **Urban Reserves**
  These reserves, which are currently locatedoutside the UGB, are relatively undeveloped, with limited transportation facilities. Urban reserves are intended to accommodate future growth and will eventually require multi-modal access to the rest of the region. Because they may be added to the urban area during the 20-year RTP planning period, they are included in the RTP functional classification scheme (Chapter 4). General street and public transportation planning is completed prior to urbanization as part of the RTP process, and based on specific 2040 Growth Concept land use policies for these areas. Once urban reserves are brought within the UGB, more detailed transportation system planning at the regional and local level occurs in conjunction with detailed land use planning.

- **Rural Reserves**
  These largely undeveloped reserves are also located outside the UGB, and have very limited transportation facilities. Roadways in these areas are intended to serve rural industry and needs, and urban travel on these routes is accommodated with designs that are sensitive to their basic rural function. Rural reserves will be protected from urbanization for the foreseeable future through state statutes and administrative rules, county ~~zoning~~ land use ordinances, intergovernmental agreements and by limiting rural access to urban through-routes whenever possible. Urban-to-urban travel is generally discouraged on most rural routes, with exceptions identified in this plan.

- **Neighboring Cities and Green Corridors**
  Neighboring cities are separated from the main urban area by rural reserves, but are connected to regional centers within the metropolitan area by limited-access green corridor transportation routes. Green corridor routes will include bicycle and public transportation service to neighboring cities. Neighboring cities will be encouraged, through intergovernmental agreements, to balance jobs and households in order to limit travel demand on these connectors. The region also has an interest in maintaining reasonable levels of through-travel on major routes that pass through neighbor cities and function as freight corridors. Growth of neighboring cities will ultimately affect through-travel and could create a need for bypass routes. Such impacts will also be addressed through coordination with county and state agencies, as well as individual neighboring cities.

~~ED~~E. Transportation System Design

Systemwide Goals and Objectives

The overall goal of the RTP is to develop a safe, efficient and cost-effective transportation system that serves the region's current and future travel needs and implements the 2040 Growth Concept while also recognizing the financial constraints and environmental impacts associated with that system. The remainder of this section: (1) presents the systemwide goals and objectives of this Plan; (2) defines adequate accessibility, mobility and safety and the types of fiscal and environmental constraints that must be addressed; and (3) details the criteria against which the performance of the system will be measured.

System Goal 1: Implement a transportation system that serves the region's current and future travel needs and implements the 2040 Growth Concept.

1. **Objective:** Provide the highest levels of access by multiple modes to, between and within the central city, regional centers, intermodal facilities and industrial areas.*

2. **Objective:** Provide high levels of access by multiple modes to, between and within station communities, town centers, main streets and corridors.

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* Metro will develop performance measures and standards related to levels of access as part of the RTP system development phase and Chapter 1 will be updated as necessary.

3. **Objective:** Provide access by multiple modes to, between and within areas in the region not identified above.

4. **Objective:** Provide more and better transportation choices to destinations throughout the region and serve special access needs for all people, including youth, elderly and disabled.

4 5. **Objective:** Provide adequate levels of mobility for people and goods within the region.

System Goal 2: **Provide a cost-effective transportation system.**

1. **Objective:** Maintain and preserve the existing transportation infrastructure.

2. **Objective:** Improve the efficiency of the existing transportation system.

3. **Objective:** Consider a full range of costs and benefits in the allocation of transportation funds.

4. **Objective:** Use funding flexibility to the degree necessary to implement the adopted Regional Transportation Plan.

5. **Objective:** Establish a set of criteria for project selection based on the full range of policies in this plan and fund projects in accordance with those selection criteria.

6. **Objective:** Adopt transportation system performance measures that reflect the goals of this plan and use them to evaluate and improve transportation systems and projects.

7. **Objective:** Develop a transportation system necessary to implement planned land uses, consistent with the regional level of service standards.

System Goal 3: **Protect the region's livability.**

1. **Objective:** Enhance livability with all regional transportation projects and programs.

2. **Objective:** Give priority to transportation projects and programs that best enhance livability.

System Goal 4: **Protect the region's natural environment.**

1. **Objective:** Meet applicable standards for clean air and water.

2. **Objective:** Minimize the environmental impacts associated with transportation project construction and maintenance activities.

3. **Objective:** Promote alternative modes that help to meet air quality standards.

4. **Objective:** Design transportation systems that promote efficient use of energy.

System Goal 5: **Improve the safety of the transportation system.**

1. **Objective:** Promote safety in the design and operation of the transportation system.

2. **Objective:** Minimize conflicts between modes, particularly between motor vehicles, pedestrians and bicycles.

3. **Objective:** Develop and implement regional safety and education programs.

System Goal 6: **Provide for statewide, national and international connections to and from the region, consistent with the Oregon Transportation Plan.**

1. **Objective:** Provide for the movement of people and goods with an interconnected motor vehicle system.

2. **Objective:** Provide for the movement of people and goods through an interconnected system of air and rail systems, including passenger and freight intermodal facilities and air and water terminals.

3. **Objective:** Mitigate the effect of improved regional access outside the urban area.

Regional Street System Goals and Objectives

In 1991, sweeping changes at the federal, state and regional levels changed the scope of transportation planning. While additional public investments in the regional street system are needed to provide the region with an adequate level of mobility and accessibility, the federal ISTEA has dramatically altered the funding priorities for projects that include federal support. Meanwhile, the state transportation planning rule (TPR) emphasizes the need to promote travel alternatives to the automobile, and sets aggressive goals for reducing per capita automobile travel. At the regional level, the Metro charter directs the agency to complete the Regional Framework Plan, a broad comprehensive plan that will set regional land use and transportation policy.

The federal ISTEA specifies a planning process that discourages projects that primarily benefit single occupancy vehicle (SOV) travel, and calls for consideration of alternative modes in all transportation planning decisions. In particular, funding for projects that primarily benefit SOV auto travel on the roadway system may be limited, while projects that benefit bicycle, pedestrian, public transportation and freight travel are more likely to be funded.

The TPR focuses on the link between land use and transportation, and requires the region to consider land use policies when developing transportation plans. At the local level, cities and counties are required to revise development standards to promote public transportation, pedestrian and bicycle travel, orient new buildings toward major transit stops and local street designs that require less right-of-way width and improve pedestrian circulation. Under the TPR,

local transportation plans must also include policies that promote completion of local street networks.

The Regional Framework Plan will echo many of these issues, and provide a land use and transportation context for local comprehensive plans. The policies and key system elements of the RTP will serve as the transportation component of the Regional Framework Plan. The regional urban growth goals and objectives (RUGGOs), adopted by the region in 1991, will guide development of the framework plan.

Together, these requirements have elevated the importance of street designs in regional planning. This section addresses these mandates with street design concepts intended to mix land use and transportation planning in a manner that supports individual 2040 Growth Concept land use components. These design concepts reflect the fact that streets perform many, often conflicting functions, and the need to reconcile conflicts among travel modes. The design classifications will work in tandem with the modal system maps shown in Chapter 4 of this plan.

Regional Street Design Goals and Objectives

Goal 1: Provide regional street design concepts to guide local implementation of the 2040 Growth Concept.

1. **Objective:** Develop a system of regional street design concepts that fully integrate automobile, public transportation, pedestrian, bicycle and freight needs as they relate to 2040 Growth Concept land use components.

2. **Objective:** Develop and maintain a regional street design map in Chapter 4 of this plan that identifies appropriate street design classifications for facilities of regional significance. This map shall:

   - respond to regional land use needs presented by the 2040 Growth Concept;
   - be consistent with the regional motor vehicle, public transportation, freight, bicycle and pedestrian system maps in Chapter 4 of this plan; and
   - be developed with ~~parcel~~geographically-specific design designations.

3. **Objective:** Develop guidelines ~~standards~~ for appropriate transition areas between street design types.

Goal 2: ~~Develop street performance standards for~~ Support local implementation of regional street design concepts in local transportation system plans (TSPs).

1. **Objective:** Provide model street designs as a resource for local TSP development.

2. **Objective:** Develop RTP street design guidelines to support local TSP development.

3. **Objective:** Develop RTP street design standards where regional design interests warrant consistency among local design standards.

4. **Objective:** Consider safety, right-of-way, environmental, storm water management and topographic constraints, while satisfying the general intent of the regional street design concepts.

Goal 3: Manage the regional street system to achieve the access and mobility needs of the 2040 land use components.

1. **Objective:** Provide for through travel on major routes that connect major regional destinations ~~and emphasize efficient travel speeds~~.

2. **Objective:** Provide access from local areas to ~~adjacent~~nearby regional or community-scale activity centers.

Regional Street Design Concepts

The regional street design concepts are intended to serve multiple modes of travel in a manner that supports the specific needs of the 2040 land use components. The street design concepts fall into five broad classifications:

- *Throughways* that emphasize motor vehicle travel and connect major activity centers;

- *Boulevards* that serve major centers of urban activity and emphasize public transportation, bicycle and pedestrian travel while balancing the many travel demands of intensely developed areas;

- *Streets* that serve transit corridors, main streets and neighborhoods with designs that integrate many modes of travel and provide easy pedestrian, bicycle and ~~transit~~ public transportation travel;

- *Roads* that are traffic oriented; with designs that integrate all modes but primarily serve motor vehicles; and

- *Local streets* that complement the regional system by serving neighborhoods and carrying local traffic.

These design concepts apply to the regional system as it relates to specific 2040 Growth Concept land use components. Figure 1.1 provides a chart of regional street design classifications for roadways that serve a given 2040 land use. The most appropriate street design classification for roadways that serve a given land use is indicated with a solid square(s). ~~The~~ fFollowing Figure 1.1 is a detailed description of the purpose and design emphasis of each design types.

Figure 1.1

Regional Street Design Classifications and the 2040 Growth Concept

Regional Street Design Classifications		Primary Components			Secondary Components				Other Urban Components			
		Central City	Regional Centers	Industrial Areas	Station Communities	Town Centers	Main Streets	Corridors	Employment Areas	Inner Neighborhood	Outer Neighborhood	Exurban Areas
Throughways	Freeway	■	■	■	■	■	■	■	■	■	■	■
	Highway	■	■	■	■	■	■	■	■	■	■	■
Boulevards	Regional Boulevard	■	■	□	■	■	■**	□	□	□	□	
	Community Boulevard	■	■	□	■	■	■**	□	□	□	□	
Streets	Regional Street	□	□	□	□	□	■	■	□	■	■	
	Community Street	□	□	□	□	□	■	■	□	■	■	
Roads	Urban Road			■					■			
	Rural Road											■

■ *Most appropriate street design classification*

□ *Appropriate street design classification in transition areas*

** *Main Streets feature Boulevard designs along key segments and at major intersections*

Throughways

The purpose of these facilities is to connect major activity centers within the region, including the central city, regional centers, industrial areas and intermodal facilities to one another and to points outside the region. Throughways are divided into limited access Freeway designs where all intersections have separated grades, and Highways that include a mix of separate and at-grade intersections.

Both Freeways and Highways are designed to provide high speed travel for longer motor vehicle trips throughout the region, are primary freight routes and serve all 2040 Growth Concept land use components. In addition to facility designs that promote mobility, Throughways may also benefit from access management and Advanced Traffic Management System (ATMS) techniques. These facilities may carry transit through-service, with supporting amenities limited to transit stations. These facilities may also incorporate transit-priority design treatment where appropriate, and may incorporate light rail or other high-capacity transit.

Freeways

Freeways usually consist of four to six vehicle travel lanes, with additional lanes in some situations. They are completely divided, with no left turn lanes. Freeway designs have few street connections, and they always occur at separated grades with access controlled by ramps. There is no driveway access to Freeways or buildings oriented toward these facilities, and only emergency parking is allowed. Freeway designs do not include pedestrian amenities, with the exception of improved crossings on overpasses and access ramps. Bikeways designed in conjunction with Freeway improvements usually follow parallel routes.

Highways

Highways usually consist of four to six vehicle travel lanes, with additional lanes in some situations. Highway designs have few street connections, and they may occur at same-grade or on separate grades. Highways are usually divided with a median, but also have left turn lanes where at-grade intersections exist. There are few driveways on Highways, and buildings are not oriented toward these facilities. On-street parking is usually prohibited in Highway designs, but may exist in some locations. Highway designs include striped bikeways and sidewalks with optional buffering. Improved pedestrian crossings are located on overpasses, underpasses and at same-grade intersections.

Boulevards

Boulevards are designed with special amenities that promote pedestrian, bicycle and public transportation travel in the districts they serve. Boulevards serve the multi-modal needs of the region's most intensely developed activity centers, including the central city, regional centers, station communities, town centers and some main streets. As such, these facilities may benefit from access management, traffic calming and ATMS techniques that reinforce pedestrian, bicycle and public transportation travel. Boulevards are divided into regional and community scale designs.

Regional Boulevards

Regional Boulevards mix a significant amount of motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These designs feature low to moderate vehicle speeds and usually include four vehicle lanes. Additional lanes or one-way couplets may be included in some situations. Regional Boulevards have many street connections and some driveways, although combined driveways are preferable. These facilities may include on-street parking when possible. The center median serves as a pedestrian refuge and allows for left turn movements at intersections.

Regional Boulevards are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Pedestrian improvements are substantial on boulevards, including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special crossing amenities at major

intersections. These facilities have bike lanes or wide outside lanes where bike lanes are not physically possible, or shared roadways where motor vehicle speeds are low. ~~striped or shared bikeways~~. They also serve as primary freight routes, and ~~often~~ may include loading facilities within the street design.

Community Boulevards

Community Boulevards mix motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These facilities are designed for low motor vehicle speeds and usually include four vehicle lanes and on-street parking. Fewer vehicle lanes may be appropriate in some situations, particularly when necessary to provide on-street parking. Community Boulevards have many street connections and some driveways, although combined driveways are preferable. Where appropriate, center medians offer a pedestrian refuge and allow for left turn movements at intersections.

Community Boulevards are designed to be transit-oriented, with high quality service that is supported by substantial transit amenities at stops and station areas. Pedestrian improvements are also substantial, including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special crossing amenities at major intersections. Community Boulevards have striped or shared bikeways and some on-street parking. These facilities also serve as secondary freight routes, and may include loading facilities within the street design.

Streets

Streets are designed with amenities that promote pedestrian, bicycle and public transportation travel in the districts they serve, particularly where development densities warrant special transit and pedestrian design consideration. Streets serve the multi-modal needs of the region's corridors, neighborhoods and some main streets. As such, these facilities may benefit from access management, traffic calming and ATMS techniques that enhance pedestrian, bicycle and public transportation travel, while providing appropriate vehicle mobility. Streets are divided into regional and community scale designs.

Regional Streets

Regional Streets are designed to carry significant vehicle traffic while also providing for public transportation, bicycle and pedestrian travel. These facilities serve a development pattern that ranges from low density residential neighborhoods to more densely developed corridors and main streets, where buildings are often oriented toward the street at major intersections and transit stops. Regional Street designs accommodate moderate motor vehicle speeds and usually include four vehicle lanes. Additional motor vehicle lanes may be appropriate in some situations. These facilities have some to many street connections, depending on the district they are serving. Regional Streets have few driveways that are combined whenever possible. On-street parking may be included, and a center median serves as a pedestrian refuge and allows for left turn movements at intersections.

These facilities are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Although less substantial than in Boulevard designs, pedestrian improvements are important along Regional Streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing amenities at major intersections. Regional Streets have bike lanes or wide outside lanes where bike lanes are not physically possible, or shared roadways where motor vehicle speeds are low. ~~striped or shared bikeways~~. They also serve as primary freight routes, and may include loading facilities within the street design, where appropriate.

Community Streets

Community Streets are designed to carry vehicle traffic while providing for public transportation, bicycle and pedestrian travel. These facilities serve low density residential neighborhoods as well as more densely developed corridors and main streets, where buildings are often oriented toward the street at main intersections and transit stops. ~~Regional~~ Community Street designs allow for moderate motor vehicle speeds and usually include four motor vehicle lanes and on-street parking. However, fewer travel lanes may be appropriate when necessary to provide for on-street parking. These facilities have some to many street connections, depending on the 2040 Growth Concept land-use components they serve. Community Streets have few driveways that are shared when possible. A center median serves as a pedestrian refuge and allows for left turn movements at intersections.

Community Streets are transit-oriented in design, with transit amenities at stops and station areas. Although less substantial than in Boulevard designs, pedestrian improvements are important on Community Streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing features at major intersections. Community Streets have striped or shared bikeways. These facilities also serve as secondary freight routes, and may include loading facilities within the street design, where appropriate.

Roads

Roads are traffic-oriented designs that provide motor vehicle mobility in the 2040 Growth Concept land use components they serve and accommodate a minimal amount of pedestrian and public transportation travel. These facilities may benefit from access management and ATMS techniques. Roads serve the travel needs of the region's low density industrial and employment areas as well as rural areas located outside the urban growth boundary (UGB). Roads are, therefore, divided into urban and rural designs.

Urban Roads

These facilities are designed to carry significant motor vehicle traffic while providing for some public transportation, bicycle and pedestrian travel. Urban Roads serve low density industrial areas, intermodal facilities and employment centers where buildings are less ~~rarely~~ oriented toward the street. These facilities also serve new urban areas (UGB additions) where plans for urban land use and infrastructure are not complete. Urban Roads are designed to accommodate moderate vehicle speeds and usually include four motor vehicle lanes, although additional lanes may be appropriate in some situations. These designs have some

street connections, but few driveways. Urban Roads rarely include on-street parking, and a center median primarily serves to optimize motor vehicle travel and to allow for left turn movements at intersections.

Urban Roads serve as primary freight routes, and often include special design treatments to improve freight mobility. These facilities are designed for transit through-service, with limited amenities at transit stops. Sidewalks are included in Urban Road designs, although buffering is optional. Pedestrian crossings are included at intersections. Urban Roads have striped bikeways.

Rural Roads

Rural roads are designed to carry rural traffic while accommodating limited public transportation, bicycle and pedestrian travel. In some cases rural roads serve to connect urban traffic to throughways. Rural roads ~~These facilities~~ serve urban reserves, rural reserves and green corridors, were development is widely scattered and usually located away from the road. These facilities are designed to allow moderate motor vehicle speeds and usually consist of two to four motor vehicle lanes, with ~~additional~~ occasional auxiliary lanes appropriate in some situations. Rural Roads have some street connections and few driveways. On-street parking occurs on an unimproved shoulder, and is usually discouraged. These facilities may include center turn lanes, where appropriate.

Rural Roads serve as primary freight routes and often provide important farm-to-market connections. Special design treatments to improve freight mobility are therefore important in these designs. Rural Roads rarely serve public transportation, but may include limited amenities at rural transit stops where transit service does exist. Bicycles and pedestrians share a common striped shoulder on these facilities, and improved pedestrian crossings occur only in unique situations (such as rural schools or commercial districts).

Local Street Design

Local streets serve the immediate travel needs of the region at the neighborhood level. These facilities are multi-modal, and are designed to serve most short automobile, bicycle and pedestrian trips. They generally do not carry freight in residential areas, but are important to freight movement in industrial and commercial areas. Local streets may serve as transit routes in some situations. Local street designs include many connections with other streets, and bicycle and pedestrian connections where topography or development patterns prevent full street extensions.

The design of local street systems is generally beyond the scope of the RTP. However, the aggregate effect of local street design impacts the effectiveness of the regional system when local travel is restricted by a lack of connecting routes, and local trips are forced onto regional facilities. The following connectivity principles should guide future development of local street designs:

- Planning jurisdictions should create local street system plans or performance measures to ensure connections that meet regional connectivity standards. Local streets include all facilities not identified on the regional design map in Chapter 4 of this plan;.

- Local street system plans should anticipate opportunities to incrementally extend and connect local streets over time in primarily developed areas, and local design codes should encourage these connections as part of the development review process;.

- Local street design codes should allow street systems to serve a mix of development types within a continuous street pattern;.

- Local street designs should encourage pedestrian travel by ensuring that the shortest, most direct routes are provided to nearby existing or planned commercial services, schools, parks and other neighborhood destinations;.

- Local street design and zoning ordinances should ensure that neighborhood residents have access to existing or planned commercial services that provide for daily or weekly needs, including groceries, pharmacies and gas stations, without using Throughways, Regional Boulevards, Regional Streets or Urban Roads;.

- Where appropriate, local design codes should allow narrow street designs to conserve land, calm traffic or promote connectivity; ~~and~~.

- Closed street systems and cul-de-sac designs should be limited to situations where topography or existing development patterns prevent full street extensions or where connections would compromise local street function. Environmental impacts should also be considered in the development of local street systems.

Regional Street System Management

Identifying land use priorities and serving the associated transportation needs is the first step of the transportation planning process. Once appropriate transportation systems are defined (e.g., freeways, transit, freight, etc.) and as additions to existing systems are built, the next critical step is to define the best ways of operating the facilities and systems. The following RTP goals and policies establish the region's heightened commitment to Transportation System Management (TSM). TSM addresses travel demand by managing existing transportation facilities rather than by building new roadways. TSM can relieve congestion, improve the safety and efficiency of transportation facilities during all times of day, and benefit all users of the regional system. Appropriate TSM techniques will be used to achieve specific goals of the regional street design concepts described in this section. There are four broad categories of TSM:

Facility Design

Facility design techniques address roadway safety and operations with minor roadway reconstruction. Projects might include re-striping travel lane widths, realigning roadways to enhance sight distances and geometry at intersection approaches, channeling of turning movements (e.g., stripping or roadway widening to provide left turn pockets, right turn

lanes, bus pullouts, etc.), improved signage of cross streets and activity centers and signalization control and phasing adjustment.

Access Management

Access management techniques reduce opportunities for conflict between through-movements and vehicles turning off and onto the roadway. They also reduce conflict between motor vehicles, pedestrians and bicycles. Examples include closing and/or consolidating commercial driveways, minimizing connection of local streets to regionally significant arterials and selectively prohibiting left turn and "U-turn" movements at and between intersections.

Traffic Calming

Traditionally, traffic calming techniques have been applied to existing neighborhood streets and collectors to protect them from *intrusion of through-traffic* seeking to avoid congested major facilities during peak periods and high-speed traffic at all hours. These "retrofit" techniques include speed bumps, traffic-rounds and traffic barriers and ~~are rarely appropriate for use~~ have not been typically used on larger regional facilities. They are, however, critical design elements that address secondary local effects of the regional system and operational policies promoted in the RTP.

Another class of calming techniques is defined in the RTP and are embedded in the design of streetscapes serving pedestrian-oriented land uses. These include narrowed travel lanes, wider sidewalks, curb-corner extensions, planted median strips and other features designed to unobtrusively reduce motor vehicle speeds and buffer pedestrians from the myriad effects of adjacent motor vehicle movements.

Advanced Traffic Management System (ATMS)

ATMS refers to proven traffic management techniques that use computer processing and communications technologies to optimize performance of multi-modal roadway and public transportation systems. A mature ATMS system will integrate freeway, arterial and public transportation management systems. A blueprint of the region's planned ATMS system is described in the ODOT/FHWA sponsored Portland-area ATMS Plan published in 1993. The ATMS Plan recognizes the inter-relationships between high-speed, limited access through-routes and the parallel system of regional and local minor arterials and collectors. ATMS provides techniques and management systems to facilitate region-wide auto, truck and transit vehicle mobility (i.e., ATMS prioritizes longer trips on freeway and arterial through-routes). ATMS systems also manage "short-trip" facilities that emphasize access to commercial/residential uses. Most important, the ATMS Plan emphasizes the importance of fully integrating through-route and local-system traffic management for optimum performance.

Regional Street System Management Goals and Objectives

Goal 1: Use TSM techniques to optimize performance of the region's transportation systems. Mobility will be emphasized on corridor segments *between* high priority land use designations. Access and livability will be emphasized *within* such designations. Selection of appropriate TSM techniques will be according to the functional classification of corridor segments.

1. **Objective:** Implement an integrated, regional ATMS program addressing:

   - Freeway Management (such as ramp meters and automated incident detection or rapid response)

   - Arterial Signal Coordination (such as comprehensive adjustment of signal timing to minimize stop-and-go travel, consistent with adjacent land use, street design type and function, and which coordinates with freeway and interchange operations)

   - Transit Operation (such as expanded reliance on Tri-Met's computer-aided fleet location and dispatch system and its integration with freeway and arterial management systems, with special emphasis on relaying incident detection data to allow rerouting of buses)

   - Multi-Modal Traveler Information Services (such as broadcast radio and television; highway advisory radio; variable message signs; on-line road reports; and on-board navigation aids)

2. **Objective:** Develop access management plans for urban areas that are consistent with regional street design concepts. For rural areas, access management should be consistent with Rural Reserve and Green Corridor land use objectives.

3. **Objective:** Integrate traffic calming elements into new street design as appropriate consistent with regional street design concepts, and as a method to optimize regional street system operation without creating excessive local travel on the regional system.

4. **Objective:** Continue to restripe and/or fund minor reconstruction of existing transportation facilities consistent with regional street design concepts.

Regional Street System Implementation

While the primary mission of the RTP is implementation of the 2040 Growth Concept, the plan must also address other transportation issues that may not directly assist in implementing the growth concept. The plan must also protect the region's existing investments by placing a high priority on projects or programs that maintain or preserve infrastructure. The purpose of this section is to establish these key issues as the most important criteria when selecting transportation projects and programs. The following goals and objectives reflect this need to integrate 2040 Growth Concept objectives with other transportation needs or deficiencies in the development of the preferred, financially constrained and strategic RTP systems contained in Chapters 5, 7 and 8:

Regional Street System Implementation Goals and Objectives

Goal 1: Implement a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs.

1. **Objective:** Place the highest priority on projects and programs that best serve the transportation needs of the central city, regional centers, intermodal facilities and industrial areas.

2. **Objective:** Place a high priority on projects and programs that best serve the transportation needs of station communities, town centers, main streets and corridors.

3. **Objective:** Place less priority on transportation projects and programs that serve the remaining components of the 2040 Growth Concept.

4. Objective: Emphasize projects and programs that provide or help promote a wider range of transportation choices.

Goal 2: Emphasize the maintenance, ~~and~~ preservation and effective use of transportation infrastructure in the selection of the RTP projects and programs.

1. **Objective:** Place the highest priority on projects and programs that preserve or maintain the region's transportation infrastructure.

2. **Objective:** Place less priority on projects and programs that modernize or expand the region's transportation infrastructure.

Goal 3: Anticipate and address system deficiencies that threaten the safety of the traveling public in the implementation of the RTP.

1. **Objective:** Place the highest priority on projects and programs that address safety-related deficiencies in the region's transportation infrastructure.

2. **Objective:** Place less priority on projects and programs that address other deficiencies in the region's transportation infrastructure.

Regional Street System Performance

Implementation of the 2040 Growth Concept requires a departure from traditional transportation planning such that the region must identify key measures of transportation effectiveness which include all modes of transportation. Developing a full array of these measures will require additional analysis. Focusing~~Concentrating~~ development in the ~~high-density~~ most concentrated activity centers, including the central city, ~~and~~ regional centers and station communities, ~~may produce~~ requires the use of alternative modes in order to avoid unacceptable levels of congestion ~~that exceed existing standards, yet signal positive urban development for these areas~~ and to insure that accessibility by alternative modes is attractive. ~~Conversely,~~ tThe continued economic

vitality of important industrial areas and intermodal facilities largely depends on preserving or improving access to these areas and maintaining reasonable levels of mobility on the region's main throughways. Therefore, regional congestion standards and other regional system performance measures are tailored to reinforce the specific development needs of the individual 2040 Growth Concept land use components.

Regional Motor Vehicle System

The motor vehicle system provides access to the central city, regional centers, industrial areas and intermodal facilities, with an emphasis on mobility between these destinations. These goals and objectives recognize the need to accommodate a variety of trip types on the regional motor vehicle system that include personal errands, commuting to work or school, commerce, freight movement and public transportation. In general, this plan recognizes there would be a higher degree of mobility during the mid-day from the peak-hour.

Traditionally, the automobile has been the dominant form of passenger travel, and much of the region's roadway system has been designed to accommodate growing automobile demands. ~~However~~In addition, the motor vehicle system also plays an important role in the movement of freight, providing the backbone for commerce in the region. The motor vehicle system also serves the bus element of the regional public transportation system (which carries the largest share of public transportation riders). Finally, motorcycles and mopeds also use the motor vehicle system, and provide more fuel-efficient alternatives to automobile travel. Although motorcycles and mopeds are governed by the same traffic laws as other motor vehicles, they have special parking and security needs.

Although focused on motor vehicle travel, the system described in this section is multi-modal, with design criteria intended to serve motor vehicle mobility needs, while reinforcing the urban form of the 2040 Growth Concept. While the motor vehicle system usually serves bicycle and pedestrian travel, the system is designed to limit impacts of motor vehicles on pedestrian and transit-oriented districts.

Regional Motor Vehicle System Goals and Objectives

Goal 1: Provide 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 regional mobility.

1. **Objective:** Maintain a system of principal arterials for long distance, high speed ~~state-wide~~, interstate, inter-region and intra-region travel.

2. **Objective:** Maintain an appropriate level of mobility on the motor vehicle system during periods of peak demand.

3. **Objective:** Maintain an appropriate level of mobility on the motor vehicle system during off-peak periods of demand.

4. **Objective:** Provide an adequate system of local and collector streets that supports the regional system.

5. **Objective:** Develop improved measures of traffic generation and parking patterns for regional centers, town centers, station communities and main streets.

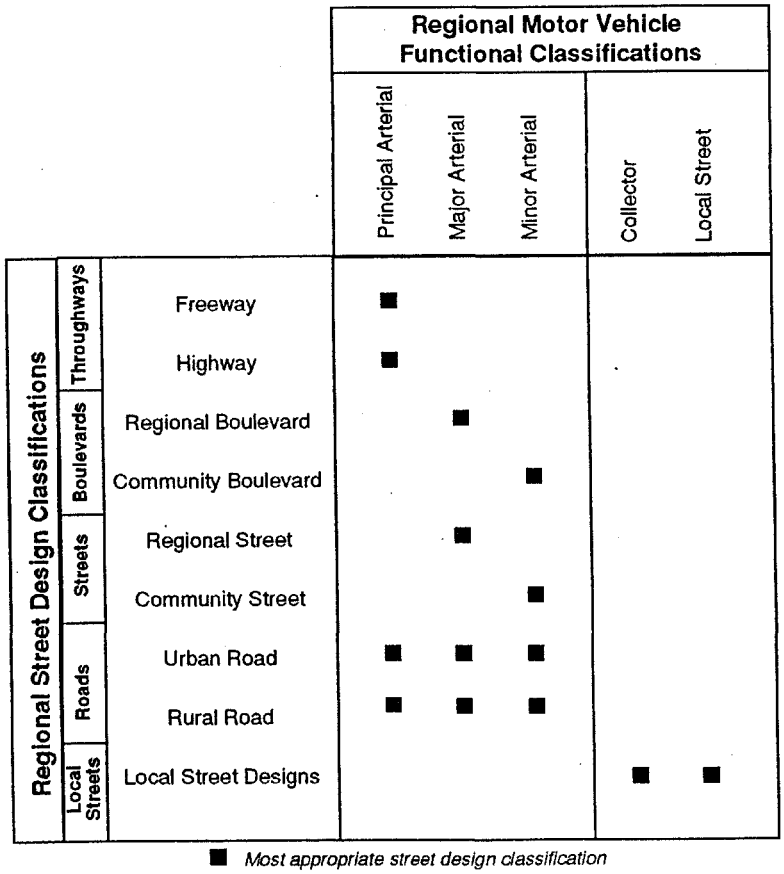
6. **Objective:** Develop improved measures of freight movement as defined in the 2040 Growth Concept.

Regional Motor Vehicle Classification System

The motor vehicle system includes principal arterials, major arterials and minor arterials and collectors of regional significance. These routes are designated on the motor vehicle system map in Chapter 4. Local comprehensive plans also include additional minor arterials, collectors and local streets. Figure 1.2 provides a chart of the regional motor vehicle functional classifications and their relationship to the regional street design classifications. The most appropriate street design classification for roadways that serve a given functional classification is indicated with a solid square(s). Following Figure 1.2 is a detailed description of the regional functional classification categories.

Figure 1.2

Relationship Between the Regional Street Design Classifications and the Regional Motor Vehicle Functional Classifications



The following are the regional functional classification categories:

Principal Arterials: These facilities form the backbone of the motor vehicle network. Motor vehicle trips entering and leaving the urban area follow these routes, as well as those destined for the central city, regional centers, industrial areas or intermodal facilities. These routes also form the primary connection between neighbor cities and the urban area. Principal arterials serve as major freight routes, with an emphasis on mobility. These routes fall within regional freeway ~~and~~, highway and road design principles.

Principal Arterial System Design Criteria:

- Principal arterials should provide an integrated system that is continuous throughout the urbanized area and also provide for statewide continuity of the rural arterial system.

- The principal arterial system should serve the central city, regional centers, industrial areas and intermodal facilities, and should connect key freight routes within the region to points outside the region.

- A principal arterial should provide direct service: (1) from each entry point to each exit point or (2) from each entry point to the central city. If more than one route is available, the most direct route will be designated as the principal arterial when it ~~complements~~ supports the planned urban form.

- ~~Principal arterial routes outside the Urban Growth Boundary should be treated as "Green Corridors," with very limited access and intergovernmental agreements designed to protect rural areas from the effects of urban through-travel.~~

Major Arterials: These facilities serve as primary links to the principal arterial system. Major arterials, in combination with principal arterials, are intended to provide general mobility for travel within the region. Motor vehicle trips between the central city, regional centers, industrial areas and intermodal facilities should occur on these routes. Major arterials serve as freight routes, with an emphasis on mobility. These routes fall within regional boulevard, regional street, urban road and rural road design principles.

Major Arterial System Design Criteria:

- Major arterials should provide motor vehicle connections between the central city, regional centers, industrial areas and intermodal facilities and connect to the principal arterial system. If more than one route is available, the more direct route will be designated when it ~~complements~~ supports the planned urban form.

- Major arterials should serve as primary connections to principal arterials, and also connect to other arterials, collectors and local streets, where appropriate.

- Freight movement should not be restricted on the principal arterial network.

- The principal and major arterial systems in total should comprise 5-10 percent of the motor vehicle system and carry 40-65 percent of the total vehicle miles traveled.*

Minor Arterials: The minor arterial system complements and supports the principal and major arterial systems, but is primarily oriented toward motor vehicle travel at the community level connecting town centers, corridors, main streets and neighborhoods. As such, minor arterials usually serve shorter trips than principal and major arterials, and therefore must balance mobility and accessibility demands. Minor arterials may serve as freight routes, providing both access and mobility. These routes fall within community boulevard, community street, urban road and rural road design principles.

Minor Arterial System Design Criteria:

- Minor arterials generally connect town centers, corridors, main streets and neighborhoods to the nearby regional centers or other major destinations.

- Minor arterials should connect to major arterials, collectors, local streets and some principal arterials, where appropriate.

- The principal, major and minor arterial system should comprise 15-25 percent of the motor vehicle system and carry 65-80 percent of the total vehicle miles traveled.*

Collectors: While come collectors are of regional significance, most of the collector system operates at the community level to provide local connections to the minor and major arterial systems. As such, collectors carry fewer motor vehicles than arterials, with reduced travel speeds. However, an adequate collector system is needed to serve these local motor vehicle travel needs. Collectors ~~should~~ may serve as freight access routes, providing local connections to the arterial network. Collectors fall within the plan's local street design principles.

Collector System Design Criteria:

- Collectors should connect neighborhoods to nearby centers, corridors, station areas, main streets and other nearby destinations.

- Collectors should connect to minor and major arterials and other collectors, as well as local streets.

- The collector system should comprise 5-10 percent of the motor vehicle system and carry 5-10 percent of the total vehicle miles traveled.*

Local Streets: The local street system is used throughout the region to provide for local circulation and access. However, arterials in the region's newest neighborhoods are often the most congested due to a lack of local street connections. The lack of local street connections forces local auto trips onto the principal and major arterial network, resulting in significant

* Metro will test the "system percentage" design criteria as part of the RTP system development phase to verify their appropriateness.

congestion on many suburban arterials. These routes fall within the plan's local street design principles.

Local Street System Design Criteria:

- Local streets should connect neighborhoods, provide local circulation and give access to adjacent centers, corridors, station areas and main streets.

- The local street system should be designed to serve local, low speed motor vehicle travel with closely interconnected local streets intersecting at no more than 660-foot intervals. Closed local street systems are appropriate only where topography, environmental or infill limitations exist. Local streets should connect to major and minor arterials and collectors at a density of 8-20 connections per mile.

- Direct freight access on the local residential street system should be discouraged~~, except where alternatives would create an unusual burden on freight movement~~.

- Local streets should comprise 65-80 percent of the motor vehicle system and carry 10-30 percent of the total vehicle miles traveled.*

Regional Public Transportation System

The regional public transportation system is a key component in providing access to the region's most important activity centers, and for 25 years has been the centerpiece to the region's strategies for improving air quality and reducing reliance on the automobile as a mode of travel. Since the construction of the transit mall in the early 1970s, peak-hour transit ridership to downtown Portland has grown to more than 40% of work trips, and the system has expanded to include light rail transit.

In 1994, the region's residents overwhelmingly approved funds to extend light rail as part of the South/North transit project. Public transportation service is also prominent in Metro's 2040 Growth Concept, such that key elements of the concept, including regional centers, town centers, corridors, main streets and station communities, are strongly oriented toward existing and planned public transportation. The overarching goal of the public transportation system within the context of the 2040 Growth Concept is to provide an appropriate level of access to regional activities for everyone residing within the Urban Growth Boundary (UGB).

~~Transit service~~ Public transportation should ~~be provided to~~ serve the entire urban area, and the hierarchy of service types described in this section define what level of service is appropriate for specific areas. The public transportation section is divided into two parts. The first defines the regional public transportation system components that are the basis for implementing the 2040 Growth Concept. The second section provides specific goals and objectives for implementing the

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* Metro will test the "system percentage" design criteria as part of the RTP system development phase to verify their appropriateness.

appropriate level and type of public transportation service for each 2040 Growth Concept land use designation.

Regional Public Transportation System Components

The following public transportation system components establishes a network that serves the needs of individual 2040 land use components. This system serves as the framework for consistency among plans of local jurisdictions and Tri-Met. Underlying this network of fast and frequent service is a secondary network of local bus, park-and-ride and demand responsive type service that provide local public transportation. Specific elements of the secondary network will be developed by Tri-Met and local jurisdictions. Tri-Met is the primary public transportation provider for the metropolitan region and is committed to providing the appropriate level of service to achieve regional objectives and to implement the 2040 Growth Concept. However, the RTP recognizes providers other than Tri-Met to serve special transportation needs. While this is not required in the RTP, Metro is committed to helping coordinate agreements to address special needs as they arise. Such special needs may include private, public/private partnerships, or public actions, as appropriate. The following sections present a description of the modes that comprise the regional public transportation system (primary and secondary), the principal 2040 Growth Concept land uses (primary and secondary) served by each mode, and facility design guidelines to provide an appropriate operating environment and level of pedestrian and bicycle accessibility.

Primary Transit Network

The Primary Transit Network (PTN) is a long range transit network designed to serve the growth patterns adopted in the 2040 Growth Concept. The PTN supports intensification of specific land uses identified in the growth concept by providing convenient transit access and improved transit service connectivity. The PTN consists of four major transit modes (e.g., Light Rail Transit (LRT), Regional Rapid Bus, Frequent Bus and primary bus service) that operate at frequencies of 15 minutes or less all day. Specific modes of the PTN will target service to primary land use components of the 2040 Growth Concept including central city, regional centers, industrial areas and intermodal facilities (includes the Portland International Airport). Some secondary land-use components comprised of station communities, town centers, main streets and corridors will also be served by the PTN. Any transit trip between two points in the central city, regional centers, town centers, main streets, stations areas or corridors can be completed on the PTN. The functional and operational characteristics of the PTN's major transit modes are described below.

Light Rail Transit

Light rail transit (LRT) is a high speed and high capacity service that operates on a fixed guideway within an exclusive right-of-way (to the extent possible) that connect the central city with regional centers. LRT also serves existing regional public attractions such as civic stadium, the convention center, and the Rose Garden), and station communities (secondary land use component) LRT service runs at least every 10 minutes during the weekday and weekend midday base periods, operates at higher speed outside of the CBD and makes very few stops. A high level of passenger amenities are provided at transit stations and station communities including schedule information, ticket machines, lighting, benches, shelters, bicycle parking and commercial

services. The speed and schedule reliability of LRT can be maintained by the provision of signal preemption at grade crossings and/or intersections. ~~Other rail options include commuter rail along existing heavy rail lines, which may become economically feasible for serving specific destinations in the greater metropolitan region.~~

Regional Rapid Bus

Regional Rapid Bus provides high frequency, high speed service along major transit routes with limited stops. This service is a high-quality bus that emulates LRT service in speed, frequency and comfort. A high level of transit amenities are provided at major transit stops and at station communities. Regional Rapid Bus passenger amenities include schedule information, ticket machines, lighting, benches, covered bus shelters and bicycle parking.

Frequent Bus

Frequent Bus provides high frequency local service along major transit routes with frequent stops. This services include a high level of transit preferential treatments and passenger amenities along the route such as covered bus shelters, curb extensions, reserved bus lanes, lighting, median stations and/or signal preemption.

Primary Bus

Primary bus service is provided on most major urban streets. This type of bus service operates with maximum frequencies of 15 minutes with conventional stop spacing along the route. Transit preferential treatments and passenger amenities such as covered bus shelters, lighting, signal preemption and curb extensions are appropriate at high ridership locations.

Secondary Transit Network (STN)

The secondary transit network is comprised of secondary bus, mini-bus, paratransit and park-and-ride service. Secondary service is focused more on accessibility, frequency of service along the route and coverage to a wide range of land use options rather than on speed between two points. Secondary transit is designed as an alternative to the single-occupant vehicle by providing frequent, reliable service. Secondary bus service generally is designed to serve travel with one trip end occurring within a secondary land use component.

Secondary Bus

Secondary bus lines provide coverage and access to primary and secondary land use components. Secondary bus service runs as often as every 30 minutes on weekdays. Weekend service is provided as demand warrants.

Minibus

These services provide coverage in lower density areas by providing transit connections to primary, and secondary land use components. Minibus services, which may range from fixed route to purely demand responsive including dial-a-ride, employer shuttles and bus pools,

provide at least a 60 minute response time on weekdays. Weekend service is provided as demand warrants.

Paratransit

Paratransit service is defined as non-fixed route service that serves special transit markets, including "ADA" service throughout the greater metro region.

Park-and-Ride

Park-and-ride facilities provide convenient auto access to regional trunk route service for areas not directly served by transit. ~~Bike and walk~~ Bicycle and pedestrian access as well as ~~bike accommodations for~~ parking and storage accommodations for bicyclists are considered in the siting process of new park-and-ride facilities. In addition, the need for a complementary relationship between park-and-ride facilities and regional and local land use goals exists and requires periodic evaluation over time for continued appropriateness.

Other ~~Transit~~ Public Transportation Options

Other public transportation ~~transit~~ options may serve ~~become economically feasible for serving~~ certain destinations in the metropolitan areas. These services include commuter rail ~~along existing heavy rail lines,~~ and streetcars. ~~passenger rail connecting the region to other urban areas, and inter-city bus service that provide statewide access to the region's rail and air terminals.~~

Interurban Public Transportation

The federal ISTEA has identified interurban travel and passenger "intermodal" facilities (e.g., bus and train stations) as a new element of regional transportation planning. The following interurban components are important to the regional transportation system:

Passenger Rail

Inter-city high-speed rail is part of the state transportation system and will eventually extend from the Willamette Valley north to British Columbia. Amtrak already provides service south to California and east to the rest of the continental United States. These systems should be integrated with other public transportation services within the metropolitan region with connections to passenger intermodal facilities. High-speed rail needs to be complemented by urban transit systems within the region.

Inter-city Bus

Inter-city bus connects points within the region to nearby destinations, including neighboring cities, recreational activities and tourist destinations. Several private inter-city bus services are currently provided in the region.

Passenger Intermodal Facilities

Passenger intermodal facilities serve as the hub for various passenger modes and the transfer point between modes. These facilities are closely interconnected with urban public transportation service and highly accessible by all modes. They include Portland International Airport, Union Station and inter-city bus stations.

Regional Public Transportation System Goals and Objectives

Figure 1.~~1~~23 provides a hierarchy of public transportation service for 2040 Growth Concept land use components. "Core service" is defined as the most efficient level of public transportation service planned for a given land use and is indicated with a solid square(s). Specific goals and objectives reference Figure 1.~~1~~23.

Figure 1.3

Hierarchy of Public Transportation Services and the 2040 Growth Concept

Service Types	Primary Components				Secondary Components				Other Urban Components		
	Central City	Regional Centers	Industrial Areas	Intermodal Facilities	Station Communities	Town Centers	Main Streets	Corridors	Employment Areas	Inner Neighborhood	Outer Neighborhood
LRT	■	■		□**	■	□					
Regional Rapid Bus	■	■			□			□			
Frequent Bus	■	■			□	□	■	□			
Primary Bus	■	■	□		□	■	□	■			
Secondary Bus	□	□	■	■	□	□	□	□	■	■	□
Mini-bus	□	□	□		□	□	□	□	■	□	■
Paratransit	□	□	□		□	□	□	□	□	□	□
Park-and-Ride		□			□	□		□		□	■

■ *Best public transportation mode(s) designed to serve growth concept land use components*

□ *Additional public transportation mode(s) that may serve growth concept land use components*

** *Anticipated LRT services to Portland International Airport*

Goal 1: Develop a public transportation system that provides regional access to ~~serves~~ 2040 Growth Concept primary land use components (central city, regional centers, industrial areas, intermodal facilities) and special regional destinations (such as major colleges or entertainment facilities) with an appropriate level, quality and range of public transportation ~~available~~.

1. **Objective:** Provide a full range of public transportation services to the central city with core service provided by LRT, Regional Rapid Bus and Frequent Bus.

2. **Objective:** Provide a full range of public transportation services to regional centers with core service provided by LRT, Regional Rapid Bus, Frequent Bus and primary bus.

3. **Objective:** Serve industrial areas with primary and secondary public transportation services with core service provided by secondary bus.

4. **Objective:** Serve intermodal facilities with a mix of primary public transportation services with core service to freight facilities provided by secondary bus and core service to the Portland International Airport (passenger facility) provided by LRT.

5. **Objective:** Ensure that existing regional destinations located outside of the primary land use areas are served with LRT, rapid bus, frequent bus or primary bus.

Goal 2: **Develop a public transportation system to provide community access to ~~serve~~ the 2040 Growth Concept secondary land use components (station communities, town centers, main streets, corridors) and special community destinations (such as local colleges or entertainment facilities) with high quality ~~transit service~~.**

1. **Objective:** Develop a network of primary and secondary public transportation services to growth concept station communities with core service provided by either LRT and/or Regional Rapid Bus.

2. **Objective:** Develop a network of primary and secondary public transportation services to growth concept town centers with core service provided by primary bus.

3. **Objective:** Develop a network of primary and secondary public transportation services to growth concept main streets with core service provided by Frequent Bus.

4. **Objective:** Develop a network of primary and secondary public transportation services to growth concept corridors with core service provided by primary bus.

5. **Objective:** Ensure that existing community destinations located outside of the secondary land use areas are served with frequent bus or primary bus.

Goal 3: **Develop a reliable, convenient and accessible system of secondary public transportation ~~service~~ that provides access to ~~serve~~ the 2040 Growth Concept "other urban components" (e.g., employment areas, outer neighborhoods and inner-neighborhoods).**

1. **Objective:** Provide secondary public transportation services to employment areas with core service provided by mini-bus.

2. **Objective:** Provide secondary public transportation services to inner neighborhoods with core service provided by secondary bus.

3. **Objective:** Provide secondary public transportation services to outer neighborhoods with core service provided by mini-bus.

4. **Objective:** As appropriate, consider providing secondary bus or other public transportation alternatives to serve outlying regional destinations.

Goal 4: Continue to develop fixed-route service and complementary paratransit services which comply with the Americans with Disabilities Act of 1990 (ADA).

1. **Objective:** Provide service to persons determined to be eligible for ADA paratransit that is comparable with service provided on the fixed route system.

2. **Objective:** Continue to work with local jurisdictions to make public transportation stops and walkway approaches accessible.

Goal 5: Continue efforts to maintain transit as the safest forms of motorized transportation in the region.

1. **Objective:** Improve the existing level of safe public transportation operations.

2. **Objective:** Reduce the number of ~~reportable~~ avoidable accidents involving transit vehicles.

3. **Objective:** Improve the existing level of passenger safety and security on ~~the~~ public transportation ~~system~~.

Goal 6: Expand the amount of information available about ~~the~~ public transportation ~~system~~ to allow more people to use the system.

1. **Objective:** Increase awareness of public transportation and how to use it through expanded education and public information media and easy to understand schedule information and format.

2. **Objective:** Improve the system for receiving and responding to feedback from public transportation ~~riders~~ users.

3. **Objective:** Explore new technologies to improve the availability of schedule, route, transfer and other service information.

Goal 7: Continue efforts to make public transportation an environmentally friendly form of motorized transportation.

1. **Objective:** Continue to reduce the amount of air pollutants and noise generated by public transportation vehicles.

Regional Freight System

Developing and adopting the Regional Freight Network and associated system goals and objectives acknowledges that the movement of goods and services makes a significant contribution to the region's economy and wealth, and that it contributes to our quality of life. The region's relative number of jobs in transportation and wholesale trade exceeds the national average. The regional economy has historically, and continues to be closely tied to the transportation and distribution sectors. This trend is projected to increase. Freight volume is projected (by the 2040 Commodity Flow Analysis) to grow two to three times by 2040 - a rate faster than population growth.

The significant growth in freight projected by the 2040 Commodity Flow Analysis indicates the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to continue maintaining and enhancing the freight transportation network. The 2040 Land Use Scenario identifies industrial sanctuaries for distribution and manufacturing activities; the RTP freight network identifies the transportation infrastructure and intermodal facilities that serve these land uses and commodities flowing through the region to national and international markets. The following goals and objectives direct the region's planning and investment in the freight transportation system.

Regional Freight System Goals and Objectives

Goal 1: Provide efficient, cost-effective and safe movement of freight in and through the region.

1. **Objective:** Maintain a reasonable and reliable travel (transit) time for moving freight through the region in freight transportation corridors.

   - Freight Operation (such as weigh-in-motion, automated truck counts, enhanced signal timing on freight connectors)

   - Where appropriate, consider improvements that are dedicated to freight travel only

2. **Objective:** ~~Include~~ Consider the movement of freight when conducting multi-modal transportation studies, as identified in the RTP of local transportation system plans (TSPs).

3. **Objective:** Work with the private sector, local jurisdictions, ODOT and other public agencies to:

   - develop the regional Intermodal Management System (IMS) and Congestion Management System (CMS);

   - monitor the efficiency of freight movements on the regional transportation network;

- identify existing and future freight mobility problems and opportunities; and

- reduce inefficiencies or conflicts on the freight network.

4. **Objective:** ~~Implement TSM improvements that enhance the efficiency of the existing infrastructure;~~ cCoordinate public policies to reduce or eliminate conflicts between current and future land uses, transportation uses and freight mobility needs, including those relating to:

   - land use changes/encroachments on industrial lands; and

   - transportation and/or land use actions or policies that reduce accessibility to terminal facilities or reduce the efficiency of the freight system ~~result in lower speeds or less service on the freight network~~.

5. **Objective:** Ensure that jurisdictions develop local strategies that provide adequate freight loading and parking strategies in the central city, regional centers, town centers and main streets.

Goal 2: **Maintain and enhance the region's competitive advantage in freight distribution through efficient use of a flexible, continuous, multi-modal transportation network that offers competitive choices for freight movement.**

1. **Objective:** Provide high-quality access between freight transportation corridors and the region's intermodal facilities and industrial sanctuaries.

Goal 3: **Protect and enhance public and private investments in the freight network.**

1. **Objective:** Improve opportunities for partnerships between the private freight transportation industry and public agencies to improve and maintain the region's integrated multi-modal freight network:

   - Work with the private transportation industry, Oregon Economic Development Department, Portland Development Commission, the Port of Portland and others to identify and realize investment opportunities that enhance freight mobility and support the state and regional economy.

2. **Objective:** Analyze market demand and linkages in estimating and expanding the life of public investments in the freight network.

3. **Objective:** Encourage efforts to provide flexible public funding for freight mobility investments.

~~4. **Objective:** Give priority to investments, projects and actions that enhance efficient freight movement on the designated regional freight network.~~

- ~~Where appropriate, make improvements to main freight routes that minimize freight/non-freight conflicts on connector routes.~~

Goal 4: ~~Ensure~~Promote the safe operation of the freight system.

1. **Objective**: Correct existing safety deficiencies on the freight network relating to:
   - roadway geometry and traffic controls;
   - bridges and overpasses;
   - at-grade railroad crossings;
   - truck ~~traffic~~ infiltration in neighborhoods;
   - congestion on interchanges and hill climbs; and
   - hazardous materials movement.
2. **Objective:** Identify and monitor potential safety problems on the freight network:
   - Collect and analyze accident data related to the freight network using the IMS data base.

Regional Bicycle System

The bicycle is an important component in the region's strategy to provide a multi-modal transportation system. The 2040 growth concept focuses growth in the central city and regional centers, station communities, town centers and main streets. One way to meet the region's travel needs is to provide greater opportunity to use bicycles for shorter trips.

The regional bikeway system identifies a network of bikeways throughout the region that provide for bicyclist mobility between and accessibility to and within the central city, regional centers and town centers. A complementary system of on-street regional bikeway corridors, regional multi-use trails and local bikeways is proposed to provide a continuous network. In addition to major bikeway corridors that create a network of regional through routes, the system provides accessibility to and within regional and town centers. ~~Adoption of the Regional Bicycle Plan element of the RTP continues the region's recognition of bicycling as an important transportation alternative.~~ Metro's 1994 travel behavior survey found that places in the region with good street continuity, ease of street crossing and gentle topography experience more than a three percent bicycle mode share, while lower density areas experience around one percent bicycle mode share. A greater understanding of bicycle travel is still needed, and development of a regional bicycle forecasting model is underway. Implementation of the regional bicycle plan element of the RTP will provide for consistently designed, safe and convenient routes for bicyclists between jurisdictions and to major attractions throughout the region, will work toward

increasing the modal share of bicycle trips, and will encourage bicyclists and motorists to share the road safely.

Regional Bicycle System Goals and Objectives

Goal 1: Provide a continuous regional network of safe and convenient bikeways integrated with other transportation modes and local bikeway systems.

1. **Objective:** Integrate the efforts of the state, counties and cities in the region to develop a convenient, safe, accessible and appealing regional system of bikeways.

2. **Objective:** Ensure that the regional bikeway system functions as part of the overall transportation system.

Goal 2: Increase the modal share of bicycle trips.

1. **Objective:** Develop and update a system of regional bikeways that connect activity centers as identified in the 2040 Growth Concept and the Regional Framework Plan.

2. **Objective:** Promote increased bicycle use for all travel purposes.

3. **Objective:** Coordinate with Tri-Met to ensure improved bicycle access and parking facilities at existing and future LRT stations, transit centers and park-and-ride locations.

4. **Objective:** Develop travel-demand forecasting for bicycles use and integrate with regional transportation planning.

Goal 3:Ensure that all transportation projects include bicycle facilities using established design standards appropriate to regional land use and street classifications.

1. **Objective:** Ensure that bikeway projects, bicycle parking and other end-of-trip facilities are designed using established standards, and that bikeways are connected with other jurisdictions and the regional bikeway network.

2. **Objective:** Ensure that jurisdictions implement bikeways in accordance with established design standards.

3. **Objective:** Ensure integration of multi-use paths with on-street bikeways using established design standards.

5. **Objective:** Provide appropriate short and long term bicycle parking and other end-of-trip facilities at regional activity centers through the use of established design standards.

Goal 4: Encourage bicyclists and motorists to share the road safely.

1. **Objective:** Coordinate regional efforts to promote safe use of roadways by bicyclists and motorists through a public awareness program.

2. **Objective:** Expand upon local traffic education programs to provide region wide coverage and actively distribute safety information to local jurisdictions, law enforcement agencies, schools and community organizations that informs and educates bicyclists, pedestrians and motorists.

3. **Objective:** Reduce the ~~number~~ rate of bicycle-related accidents in the region.

4. **Objective:** Identify and improve high-frequency bicycle-related accident locations.

Regional Pedestrian ~~Program~~System

By providing dedicated space for those on foot or using mobility devices, pedestrian facilities are recognized as an important incentive that promotes walking as a mode of travel. Throughout this document, the term "walking" should be interpreted to include traveling on foot as well as those pedestrians using mobility aids, such as wheelchairs. Walking for short distances is an attractive option for most people when safe and convenient pedestrian facilities are available. Combined with adequate sidewalks and curb ramps, amenities such as benches, curb extensions, marked street crossings, landscaping and wide planting strips make walking an attractive and convenient mode of travel. The focus of the regional pedestrian systemprogram is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds.

A well-connected, high–quality pedestrian environment facilitates walking trips by providing safe and convenient access to pedestrian destinations within a short distance. Public transportation use is enhanced by pedestrian improvements, especially those facilities that connect stations or bus stops to surrounding areas or that provide safe and attractive waiting areas. Improving walkway connections between office and commercial districts and surrounding neighborhoods provides opportunities for residents to walk to work, shopping or to run personal errands. This reduces the need to bring an automobile to work and enhances public transportation and carpooling as commute options. An integrated pedestrian system supports and links every other element of the regional transportation system and complements the region's urban form and growth management goals.

Regional Pedestrian ~~Program~~ System Goals and Objectives

Goal 1: Increase walking for short trips and improve access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.

1. **Objective:** Increase the walk mode share for short trips, including walking to public transportation, near and within the central city, regional centers, town centers, main streets, corridors and LRT station communities.

2. **Objective:** Improve ~~pedestrian~~ walkway networks serving ~~those~~ transit centers, stations and stops ~~with high frequency transit service~~.

Goal 2: Make the pedestrian environment safe, convenient, attractive and accessible for all users.

1. **Objective:** Complete pedestrian facilities (i.e., sidewalks, street crossings, curb ramps) needed to provide safe and convenient pedestrian access to and within the central city, regional centers, town centers, main streets, corridors and to the region's ~~primary~~ public transportation network.

2. **Objective:** Improve street amenities (e.g., landscaping, pedestrian-scale street lighting, benches and shelters) affecting the pedestrian and transit user near and within the central city, regional centers, town centers, main streets, corridors and the primary transit network.

Goal 3: Provide for pedestrian access, appropriate to existing and planned land uses, street classification and public transportation ~~service~~, as a part of all transportation projects.

1. **Objective:** Focus priority among regionally funded pedestrian projects on those projects which are most likely to increase pedestrian travel, improve the quality of the pedestrian system, and help complete pedestrian networks near and within the central city, regional centers, town centers, main streets, corridors and LRT station communities.

2. **Objective:** Integrate pedestrian access needs into planning, programming, design and construction of all transportation projects.

Goal 4: Encourage motorists, bicyclists and pedestrians to share the roadway safely.

1. **Objective:** Coordinate regional efforts to promote safe use of roadways by motorists, bicyclists and pedestrians through a public awareness program.

2. **Objective:** Expand upon local traffic education programs to provide region wide coverage, and actively distribute safety information to local jurisdictions, law enforcement agencies, schools and community organizations that informs and educates motorists, bicyclists and pedestrians.

Regional Transportation Demand Management Program

~~The following describes the goals, objectives and performance measures for the region's transportation demand management program.~~

Regional Transportation Demand Management

Transportation demand management (TDM) is not one action, but rather a series of actions to promote shared ride and the use of alternative modes, especially during the most congested times of the day. The term TDM encompasses the strategies, techniques and supporting actions that

encourage non–single occupant vehicle travel (i.e., transit, walk, bike, carpool and telecommute), as well as measures to reduce per-capita vehicle miles traveled (VMT).

The primary benefit of managing travel demand is to minimize the need to expand the capacity of the region's transportation system (i.e., building new highways or adding lanes to existing highways) and make more efficient use of non–SOV modes (transit, walk, bike, carpool and telecommute) of travel. Managing travel demand will also help the region reduce overall per-capita vehicle travel, reduce air pollution and maximize energy conservation in a relatively low–cost manner.

An important consideration for selecting demand management measures is to combine those that are mutually supportive into a comprehensive program. This approach is important to the success of TDM because of the close linkages between many TDM measures and programs at the regional and local level. Therefore, local jurisdictions should consider the design of demand management measures in a comprehensive manner in the preparation of local system plans and incorporate policies that implement those combinations of TDM measures that best support regional goals and that meet local needs for both work and non-work travel.

In addition, the state's Transportation Planning Rule (TPR) requires a 10 percent reduction in VMT per capita by 2015 and a 10 percent reduction in parking spaces per capita by 2015. In order to provide for maximum achievement of the TPR, air quality and accessibility goals, local jurisdictions should incorporate policies that support and help implement the TDM measures and projects listed in Chapter 5.

The following describesthe region's TDM program goals, and objectives ~~and performance measures~~. Goals and objectives are in part to assist the region to meet state goals for reducing parking and vehicle miles per capita. It is understood that TDM strategies will be area specific following further analysis as part of the systems element of the RTP (scheduled to be completed in December 1996). Consequently, many of the TDM policies may not be applicable to areas such as the Central City where significant transportation demand management, public transportation and other alternative mode actions are in place as a result of the Central City Transportation Management Plan (CCTMP).

Regional TDM Program Goal and Objectives

The function of TDM support programs are to: (1) provide the physical amenities necessary to make non-SOV modes more attractive; (2) provide incentives (monetary and non-monetary) to encourage people to use non-SOV modes; ~~and~~ (3) remove barriers such as regulation and/or restrictions that would make it more difficult for people to choose non-SOV modes; and (4) reduce travel demand.

TDM support programs are designed to help the region achieve the TPR VMT per capita and parking space per capita reduction goals, complement local jurisdiction efforts to assist employers in implementing measures to meet DEQ's Employee Commute Options (ECO) rule, and to help the region achieve its 2040 Growth Concept land use accessibility goals.

Goal 1: Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuteing, bicycleing and ~~pedestrian~~ walking options.

1. **Objective:** Provide transit supportive design and infrastructure in 2040 Growth Concept central city, regional centers, town centers, station communities, main streets and along designated transit corridors.

2. **Objective:** Develop and encourage local access to Tri-Met's regional carpool matching database.

3. **Objective:** Coordinate with Tri-Met on the provision of regional vanpool service to major employment centers.

Goal 2: Promote policies and strategies that reduce travel by single occupant vehicles (SOV) in order to help the region achieve the 10 percent reduction in vehicle miles traveled (VMT) per capita and 10 percent reduction in parking spaces per capita as required by the Transportation Planning Rule (TPR) over the planning period, and that improve air quality.

1. **Objective:** Implement appropriate parking ratios and investigate other measures throughout the region that reduce parking demand or lead to more efficient parking design options.

2. **Objective:** Support efforts to provide maximum allowable tax benefits and subsidies to users of alternative modes of transportation

3. **Objective:** Conduct further study of market-based strategies such as parking pricing, congestion pricing and parking-cash out as measures to promote more compact land use development, increase alternative mode shares, ~~and to~~ reduce VMT and encourage more efficient use of resources.

4. **Objective:** Investigate the use of HOV lanes to reduce roadway congestion.

Goal 3: Provide incentives for employers and developers to build/locate in the 2040 Growth Concept central city, regional centers, town centers, station communities and transit corridors to promote more compact land use.

1. **Objective:** Provide density bonus for employers and developers who locate or build in the central city, regional centers, town centers, station communities and along transit corridors.

2. **Objective:** As conditions permit, provide lower than average~~reduce the average~~ local traffic impact fees for development in the 2040 Growth Concept central city, regional centers, town centers, station communities and transit corridors.

3. **Objective:** Include transit oriented design guidelines in local development approval process.

Goal 4: Continue to coordinate efforts to promote TDM at the regional and local level.

1. **Objective:** Continue to use the TDM Subcommittee as a forum to discuss TDM issues and implementation procedures.

2. **Objective:** Provide TDM materials that outline available ~~the~~ regional programs and services to the public and to local jurisdictions in the region ~~that are available~~.

Goal 5: Implement TDM support programs to reduce the need to travel, and to make it more convenient for people to use alternative modes for all trips throughout the region.

1. **Objective:** Encourage development of public/private TDM partnerships with service providers.

2. **Objective:** Promote the establishment of Transportation Management Associations (TMAs) in areas identified as major employment, retail and/or regional centers.

3. **Objective:** Work with local jurisdictions and neighborhood organizations to develop citizen outreach efforts to provide options and marketing material to residential areas.

4. **Objective:** Promote flexible work hours and/or compressed work weeks for employees with public and private sector employers.

5. **Objective:** Work with local employers to promote telecommuteing as a viable option for commuting (this can include the establishment of centralized telecommute centers).

6. **Objective:** Allow use of HOV lanes by motorcycles with single riders in order to further reduce congestion.

Goal 6: Increase public knowledge and understanding about TDM as a tool to reduce congestion, reduce air pollution, implement the 2040 Growth Concept and to help the region meet the TPR VMT per capita and parking per capita reduction targets.

~~1. Objective: Expand Tri-Met's public outreach and education program.~~

~~2~~1. **Objective:** Maintain information on TDM services available for local employers.

32. **Objective:** Promote public sector involvement in employer-based TDM programs and provide examples of successful programs.

TDM Infrastructure/ Support Programs

~~Parking Management~~

~~*[Note: the parking section is still being developed and coordinated with the results of the parking inventory and implementation of Growth Concept interim measures for parking.]*~~

~~The state's Transportation Planning Rule (TPR) requires that the Regional Transportation Plan (RTP) include methods to reduce parking spaces per capita by 10 percent over the next 20 years. The requirement is one aspect of the rule's overall objective to reduce single-occupant vehicle travel, promote alternative modes and encourage pedestrian friendly urban areas. However, the mode of travel used to make a trip is directly influenced by the convenience and cost of parking. As parking in densely developed areas becomes less convenient and more costly, alternative modes of travel become relatively more attractive. In addition, as alternative modes of travel are increasingly used for work trips, scarce parking spaces are released for shopping and other non-work purposes. Parking management is therefore particularly important in areas that are currently developed at high densities (Central City) and in areas planned for new high-density development such as Regional Centers and Town Centers.~~

~~In addition, parking management programs should be complementary to other TDM strategies aimed at meeting DEQ's Parking Ratio Rule and to those aimed at increasing both ridesharing and public transportation use. t~~

Regional Parking Management

The State Transportation Planning Rule (TPR) requires that the Regional Transportation Plan (RTP) include methods to reduce non-residential parking spaces per capita by 10 percent over the next 20 years (by 2015). The requirement is one aspect of the rule's overall objective to reduce per-capita vehicle miles traveled (VMT), promote alternative modes and encourage pedestrian and bicycle friendly development.

The mode of travel is directly influenced by the convenience and cost of parking. As auto parking in densely developed areas becomes less convenient and more costly, alternative modes of travel (e.g., public transportation, bicycle, walk and telecommute) become relatively more attractive. In addition, as alternative modes of travel are used more for work and non-work trips, the demand for scarce parking decreases. The reduction in demand will allow the region to develop more compactly and provide the opportunity for redevelopment of existing parking into other important and higher end uses.

The regional parking management program is designed to be complementary to the Transportation Demand Management (TDM) element of the RTP, meet the 10 percent reduction in parking spaces per capita required by the Transportation Planning Rule (TPR), assist with implementation of the Department of Environmental Quality's voluntary parking ratio program contained in the region's Ozone Maintenance Plan, and support ~~the~~ implementation of the "Interim Parking" measures adopted in ~~the Regional Framework Plan~~ Urban Growth Management Functional Plan.

Regional Parking Goals and Objectives

Goal 1: Reduce the demand for parking by increasing the use of alternative modes for accessing the central city, regional centers, town centers, main streets and employment areas.

1. Objective: Encourage the designation of preferential parking stalls for carpool, vanpool, motorcycle, bicycle and moped parking at major retail centers, institutions and employment centers.

2. Objective: Consider the redesignation of existing parking as park-and-ride spaces.

3. Objective: Consider the use of timed parking zones.

Goal 2: Reduce the number of off-street parking spaces per capita.

1. Objective: Promote the use and development of shared parking spaces for commercial and retail land uses.

2. Objective: Require no more parking in designated land uses than the minimum as shown in the Regional Parking Standards Table shown in Title 2 of the Urban Growth Management Functional Plan

3. Objective: Establish parking maximums at ratios no greater than those listed in the Urban Growth Management Functional Plan parking standards table under Zone A (Appendix 1)

   (note: Parking spaces are subject to the regional parking maximums. Parking spaces in structures may apply for limited increases in this ratio, not exceeding 20%. Parking for vehicles that are for sale, lease, or rent are exempt from the standard). The criteria for zone A is defined as:

   - within 1/4 mile of bus stops with 20 minute or less headways in the A.M. and P.M. peak hours with existing service or an adopted Tri-Met 5-year service plan; or
   - within 1/2 mile of light rail stations; or
   - within a 2040 Growth Concept design type (except neighborhoods).

   (Distances are calculated along public rights-of-way and discounted for steep slopes. It is recommended that cities or counties also include within Zone A non-residential areas with a good pedestrian environment within a 10-minute walk of residential areas with street and sidewalk designs and residential densities which can be shown to have significant non-auto mode choices. Zone B is the rest of the region)

5. Objective: Establish parking maximums (*see notation in Objective 2*) at ratios no greater than those listed in the Regional Parking Standards Table under Zone B for areas outside of Zone A.

Goal 3: Provide regional support for implementation of the voluntary parking provisions of the Portland region's Ozone Maintenance Plan.

1. Objective: Allow property owners who elect to use the minimum parking ratios shown in the Regional Parking Standards Table as maximum ratios to be exempted from the Employee Commute Options (ECO) program.

2. Objective: Provide priority DEQ permit processing to land owners who elect to use the minimum parking ratios as maximum ratios.

Goal 4: Manage and optimize 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 goals and objectives.

1. Support local adoption of parking management plans within the central city, regional centers, town centers, main streets and employment centers.

M E M O R A N D U M

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1794

METRO

Date: July 1, 1996

To: JPACT

From: Michael Hoglund, Transportation Planning Manager

Subject: 1998-2001 STIP/MTIP Schedule

The Oregon Department of Transportation (ODOT) has released a ***draft*** schedule for development of the 1998-2001 State Transportation Improvement Program (STIP). As you know, ISTEA requires that Metropolitan Transportation Improvement Programs (MTIPs) be incorporated into a consolidated STIP. The proposed schedule recognizes this requirement and accommodates a joint MTIP/STIP development, review, and adoption process.

Implications of the schedule will be briefly discussed at your July meeting. The TIP Subcommittee is reviewing the schedule in more detail and will forward recommendations on proceeding with a joint Metro/ODOT process. JPACT will review that process in August. Recent discussions with ODOT staff indicate a willingness to postpone project submittal until September. That will allow more time for JPACT and the Metro Council to provide a policy context for that submittal.

As with all funding allocations, a number of issues will need to be addressed throughout the process. Following is a limited list of anticipated issues.

- What will be the specifics of the Metro/ODOT process and what will be the requirements for local jurisdictions and agencies to submit projects?
- What is the actual target size (in dollars) of the Metro area program and should jurisdiction/agency submittals be limited?
- Will the program target size prohibit certain "big-ticket" projects from competing?
- What technical criteria will be used to rank projects? Who will be responsible for criteria related data and information?
- What will the public involvement process be to review projects and technical scores?
- What key decision points will require Metro Council/JPACT/OTC guidance (e.g., approval of criteria)?
- What are the implications of the next Legislature and the Governor' Transportation Initiatives on the process and size of the program?

In addition to the proposed schedule, also attached for your information are the following items from ODOT's STIP Development Manual:

- Appendix F: Funding Levels and Splits. The tables show preliminary funding allocations to the regions for modernization and safety; pavement preservation; and bridge preservation. Region 1 has been allocated $71.09 million for modernization. This allocation does not include any potential Congestion Mitigation and Air Quality (CMAQ) or Transportation Enhancement funds. Region 1 received approximately $5 to $6 million/year in those funds during the current ISTEA authorization. The OTC will finalize the allocations in July.

Please note that as of the date of this memo, ODOT was revising the target amount for this region to include a Metro allocation of Surface Transportation Program funds (about $10 million per year) and an estimate for CMAQ and Transportation Enhancement funds. We hope to have those estimates available at the July meeting.

MH

1998 - 2001 STIP DEVELOPMENT SCHEDULE

APRIL/MAY 1996	**Program Recommendations to OTC** *Governor's Committees go public* **Begin Program Update; Develop Pool of Potential Projects** *Identify Criteria* *Start preliminary data collection for Traffic Modeling*
JUNE 1996	**Distribute Final Manual and Continue Program Update** **Committees Report to Governor**
JULY 1996	**Governor's Committees Report to OTC** **Update Revenue Projections**
AUGUST 1996	**Deadline for Submission of Project Proposals** **Begin Work on Traffic Analysis**
OCTOBER 16, 1996	**Review Draft Program with OTC**
NOVEMBER 1996	**Publish Preliminary STIP and distribute** **Begin Public Involvement**
JAN./FEB. 1997	**Hold Formal Public Hearings**
MARCH 1997	**March 12 Review Proposed Pgm. Modifications With OTC** **March 13 JPAC Review** **Begin CAAA Conformity Analysis (~ 4 Months)** *As available, submit conformity to FHWA*
JULY 1997	**Public Review of Conformity Determinations** *30 days required* *Legislature Goes Home*
AUGUST 1997	**Deadline for Local Adoption of MTIPs** **Finalize STIP**
SEPTEMBER 1997	**OTC Adopts the STIP** **Submit STIP for Federal Review**
OCTOBER 1997	**Begin Next Cycle**

APPENDIX F: FUNDING LEVELS and SPLITS

1998-2001 STIP REGIONAL ALLOCATIONS BY PROGAM

Amounts are Shown in Millions and are the 4-Year Program Average

EQUITY SPLITS FOR MODERNIZATION, BIKE & SAFETY

REGION	PERCENT	TOTAL MOD & BIKE	SAFETY
REGION 1	34.6%	**$ 71.09**	**$ 38.34**
REGION 2	29.8%	**$ 61.23**	**$ 33.02**
REGION 3	15.7%	**$ 32.26**	**$ 17.40**
REGION 4	10.5%	**$ 21.57**	**$ 11.63**
REGION 5	9.4%	**$ 19.31**	**$ 10.41**
4-Yr. TOTAL	100.0%	$ 205.46	$ 110.80

Note: Approximately $9.2M of additional funds will be allocated to the HEP Program for safety projects that will be prioritized by the Traffic Section.

NEEDS SPLIT FOR PAVEMENT PRESERVATION

REGION	PERCENT	NONINTERSTATE TOTAL
REGION 1	10%	**$ 23.20**
REGION 2	25%	**$ 58.00**
REGION 3	13%	**$ 30.16**
REGION 4	24%	**$ 55.68**
REGION 5	28%	**$ 64.96**
4-Yr. TOTAL	100%	$ 232.00

Note: Approximately $160M of additional funds will be allocated to INTERSTATE MAINTENANCE, where projects are selected by a central committee.

NEEDS SPLIT FOR BRIDGE PRESERVATION

REGION	PERCENT	TOTAL STATE BRIDGE
REGION 1	38.70%	**$ 61.30**
REGION 2	33.14%	**$ 52.50**
REGION 3	21.15%	**$ 33.50**
REGION 4	3.16%	**$ 5.00**
REGION 5	3.85%	**$ 6.10**
4-Yr. TOTAL	100.00%	$ 158.40

Note: Approximately $41.6M of additional funds will be allocated to the LOCAL BRIDGE PROGRAM, where projects are selected by a central committee.

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

June 25, 1996

The Honorable Jim Bunn
U.S. Congress
1517 Longworth Building
Washington, D.C. 20515

Dear Congressman Bunn:

On behalf of Metro and all of the members of the Joint Policy Advisory Committee on Transportation (JPACT), we want you to know how enormously grateful we are for your tireless efforts in securing the first step toward full authorization for the South/North light rail project. We know that securing such language through the Appropriations Committee took dedicated work on your part and true leadership skills.

Hopefully, within a decade, the South/North project will be swiftly and efficiently serving tens of thousands of persons everyday while helping to maintain the region's noted quality of life. We look forward to working with you in the years to come to ensure that the project becomes a reality.

Please let us know if there is anything we can do to help you in your future endeavors. And, again, congratulations on a bold and well-executed strategy!

Sincerely,

Mike Burton
Executive Officer

Rod Monroe
JPACT Chair

MB:lmk

CC: JPACT
Metro Council