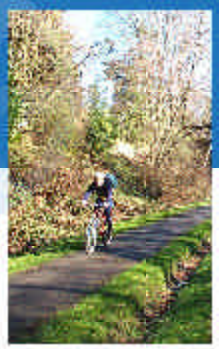

The Transportation Strategic Plan (TSP) Update

2005

"Seattle is making smart transportation choices for a 21st century transportation network."

Gregory J. Nickels, Mayor of Seattle

Get Seattle moving

SDOT
Seattle Department of Transportation

ATTACHMENT A

SDOT

Seattle Department of Transportation

Grace Crunican, Director

Greg Nickels, Mayor

August 2, 2005

Dear Seattle Citizens:

The Seattle Department of Transportation (SDOT) is pleased to present the 2005 update of the Transportation Strategic Plan (TSP)--SDOT's 20-year work plan, describing the actions SDOT will take to accomplish the goals and policies in the Comprehensive Plan, and the Puget Sound Regional Council's Destination 2030 plan and in support of Mayor Nickels' four priorities for Seattle:

1. **Get Seattle Moving:** Transportation will continue to be a paramount issue for our economy, the environment and the people who live in Seattle. In order for businesses to thrive, generating jobs and tax revenues, we must be able to move goods and people around the region efficiently. Building light rail, partnering with the monorail and replacing the Alaskan Way Viaduct are essential efforts to create a 21st century transportation network.
2. **Keep Our Neighborhoods Safe:** Public safety is the paramount duty of the City. Our police and fire personnel are first rate and should be recognized as such. We need to give them the tools—training and equipment—to do these difficult jobs, insure accountability for actions taken, and insure we are the most prepared city in the United States for natural or man-made catastrophes. For transportation, this means ensuring transportation routes are available during a catastrophe and ensuring emergency access remains on our roads and bridges. It also means sidewalks where children can play and on-street bike lanes where bicyclists can get to work safely.
3. **Create Jobs and Opportunity For All:** Economic opportunity during these difficult times means creating jobs and an environment that invites new investment in our City. Seattle's transportation system provides access so that people can get to jobs and goods can get to market.
4. **Build Strong Families and Healthy Communities:** Healthy communities are the heart of a great city. Every part of this city is unique and vital to our growth and our ability to sustain what we love about living and working here. Our diverse cultures bring life, vitality and economic growth to Seattle. We must foster a renewed commitment to our neighborhoods. That means paying attention to the needs of each community and responding to those needs in a meaningful way. Our transportation system should enhance, not detract from the quality of our neighborhoods.

Since 1998, SDOT has used the original TSP to guide our work. Many of the 1998 TSP strategies have been accomplished. For example, Link Light Rail has broken ground, "The Ave" has been completely rebuilt, and Flexcar, Seattle's car sharing program, has more than 130 vehicles in 20 Seattle neighborhoods. Many TSP strategies are integral to SDOT work plans, and others have not been implemented due to lack of funding or changing priorities.

Thank you for your continued interest in transportation in Seattle. Additional copies of the TSP are available from SDOT, 700 5th Ave., Suite 3800, Seattle WA 98104, at www.seattle.gov/transportation/tsphome.htm or by calling 206-684-8542.

Sincerely,

Grace Crunican
Director, Seattle Department of Transportation

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List of Abbreviations

Abbreviation	Definition
AASHTO	American Association of State Highway and Transportation Officials
AWC	Association of Washington Cities
B	Strategy prefix for all strategies in the "Increasing Transportation Choices—Encourage Bicycling—It's the easy healthy way to get around" element.
CIP	Capital Improvement Program
DPD	Department of Planning and Development
E	Strategy prefix for all strategies in the "Improving the Environment" element.
EMS	Environmental Management System
F	Strategy prefix for all strategies in the "Funding the Plan" element.
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
GS	Strategy prefix for all strategies in the "Promoting the Economy—Moving Goods and Services" element.
HCT	High Capacity Transit
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation Systems
ICT	Intermediate Capacity Transit
OM	Strategy prefix for all strategies in the "Protect our Infrastructure" element.
P	Strategy prefix for all strategies in the "Increasing Transportation Choices—Price and Manage Parking Wisely" element.
R	Strategy prefix for all strategies in the "Connect to the Region" element.
RPZ	Residential Parking Zone
S	Strategy prefix for all Strategies in the "Making Best Use of Streets to Move People, Goods and Services" element.
SDOT	Seattle Department of Transportation
STN	Secondary Transit Network
SOV	Single Occupancy Vehicles
T	Comprehensive Plan Policy prefix used in the "Comprehensive Plan Goals and Policies" section of each plan element
TR	Strategy prefix for all strategies in the "Increasing Transportation Choices—Make Transit a Real Choice" element.
TDM	Strategy prefix for all strategies in the "Increasing Transportation Choices—Demand Management" element. Abbreviation for Transportation Demand Management.
TG	Comprehensive Plan Goal
The Plan	City of Seattle Comprehensive Plan, 2004
TMP	Transportation Management Programs
TSP	Transportation Strategic Plan
UVTN	Urban Village Transit Network
VMT	Vehicle Miles Traveled
W	Strategy prefix for all strategies in the "Increasing Transportation Choices—Encourage Walking—It's the easy healthy way to get around" element.

Chapter 1.0: Introduction

"Seattle residents have a clear vision for the future of this city. We want vibrant neighborhoods where we can conveniently shop, live, and be part of a community. We want a healthy environment with clean air and water; and we want a strong, secure economy. These goals are outlined in the City's Comprehensive Plan…. The Transportation Strategic Plan (TSP) will be the City's guide for managing Seattle's transportation system. It outlines the…strategies and actions required to achieve the transportation goals in the Comprehensive Plan. It maps out the policies and investments required to achieve a healthy, efficient transportation system."— 1998 TSP

The Transportation Strategic Plan (TSP) is the 20-year functional work plan for the Seattle Department of Transportation (SDOT). The TSP describes the actions SDOT will take to accomplish the goals and policies in the Comprehensive Plan over the next twenty years. In the intervening years since the 1998 TSP, Seattle has seen much change and growth. Many of the 1998 TSP strategies have been accomplished—Link Light Rail has broken ground, the U-Districts' "The Ave" has been completely rebuilt, and with the success of Flexcar, Seattle's car sharing program has 130 vehicles in 20 Seattle neighborhoods. Some of the 1998 TSP strategies are ongoing efforts that have become integral parts of City work plans and others have not been implemented due to lack of funding or changing priorities. To report on our progress, SDOT prepares a TSP Annual Report that catalogs accomplishments for the year.

The Ave Gets Rebuilt

With the Comprehensive Plan, the City continues the commitment to the land use strategy of building urban villages. The vision for urban villages, to concentrate growth in a series of compact and walkable neighborhoods, is renewed in the 2004 Comprehensive Plan update.

The TSP helps to define the transportation-related components of the Mayor's priorities, to address key transportation issues raised by the City Council about the long-term and day-to-day operations of Seattle's transportation system, and to instigate change within the Seattle Department of Transportation (SDOT). Please note that the TSP and the Seattle Transit Plan are intended solely as planning documents and do not modify the Comprehensive Plan in anyway whatsoever.

1.1 Consistency with Regional and Local Planning Efforts

Seattle's TSP fits within a broader planning context both locally and in the region. TSP strategies must be consistent with the direction of both the City's Comprehensive Plan as well as the Puget Sound Regional Council's (PSRC) Destination 2030 plan. Each of these planning documents serve different yet related functions as described in Figure 1: Planning Context.

1.2 Bringing Together SDOT's Resources

The TSP will address SDOT's new departmental emphasis by defining both day-to-day operational and long-term transportation strategies and the projects, programs and services to implement them (see Figure 2: The TSP --Bringing Together SDOT's Resources).

The TSP will have the Comprehensive Plan Transportation Element as its foundation to ensure that projects and programs implement citywide transportation goals and policies. Creating a useful transportation plan for an operations-focused department such as SDOT is both vital and a challenge. The updated TSP will serve a number of functions for SDOT:

Planning and Programming: As a programming resource, the TSP strategies help prioritize resources and leverage project investments to meet multiple goals for the SDOT and the community. The TSP describes the projects, programs and services that will be implemented through SDOT's capital budget and the operations and maintenance budget over the next 20 years.

Project Development: To develop future projects and programs, the TSP will be a central resource for planning tools, as well as transportation-related data that are critical to sound decision-making. Data resources include Seattle's street classifications, planning areas (e.g., urban village boundaries), traffic volumes, construction activity, transit routes, sidewalk inventories, etc.

Performance and Communication: Defining SDOT's performance goals and then reporting on progress through an annual TSP report will help SDOT communicate success towards these goals. The TSP will assist other City staff, elected officials, our partner agencies and the public comprehend our transportation system, funding realities, and the steps SDOT takes to manage the system as effectively as possible.

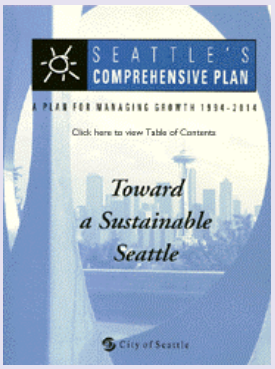
The TSP will serve all of these functions by bringing together the resources needed for transportation planning, project development and funding. Many of these resources, such as Seattle's street classification maps and definitions, currently exist but are not readily available. Once combined, these resources make it easier for SDOT and the community to see the full picture of Seattle's transportation system.

Figure 1: Planning Context

PSRC Destination 2030

THE REGIONAL CONTEXT

- Outlines region-wide goals, policies and actions.
- Anticipates more than we do today to increase mobility.
- Jurisdictions implement through local action.



Seattle's Comprehensive Plan

CITYWIDE GOALS AND POLICIES

- Establishes Urban Village Strategy through Plan goals and policies.
- Sets direction for Seattle's 20 year land use, transportation, community, environment, and economic development activities.

Transportation Strategic Plan

SDOT'S FUNCTIONAL PLAN

- Establishes SDOT's near- and long-term work program.
- An operational plan for SDOT that defines the strategies, projects and programs to accomplish the Comprehensive Plan goals and policies for transportation.
- Includes SDOT's financial plan and defines process for determining funding priorities.

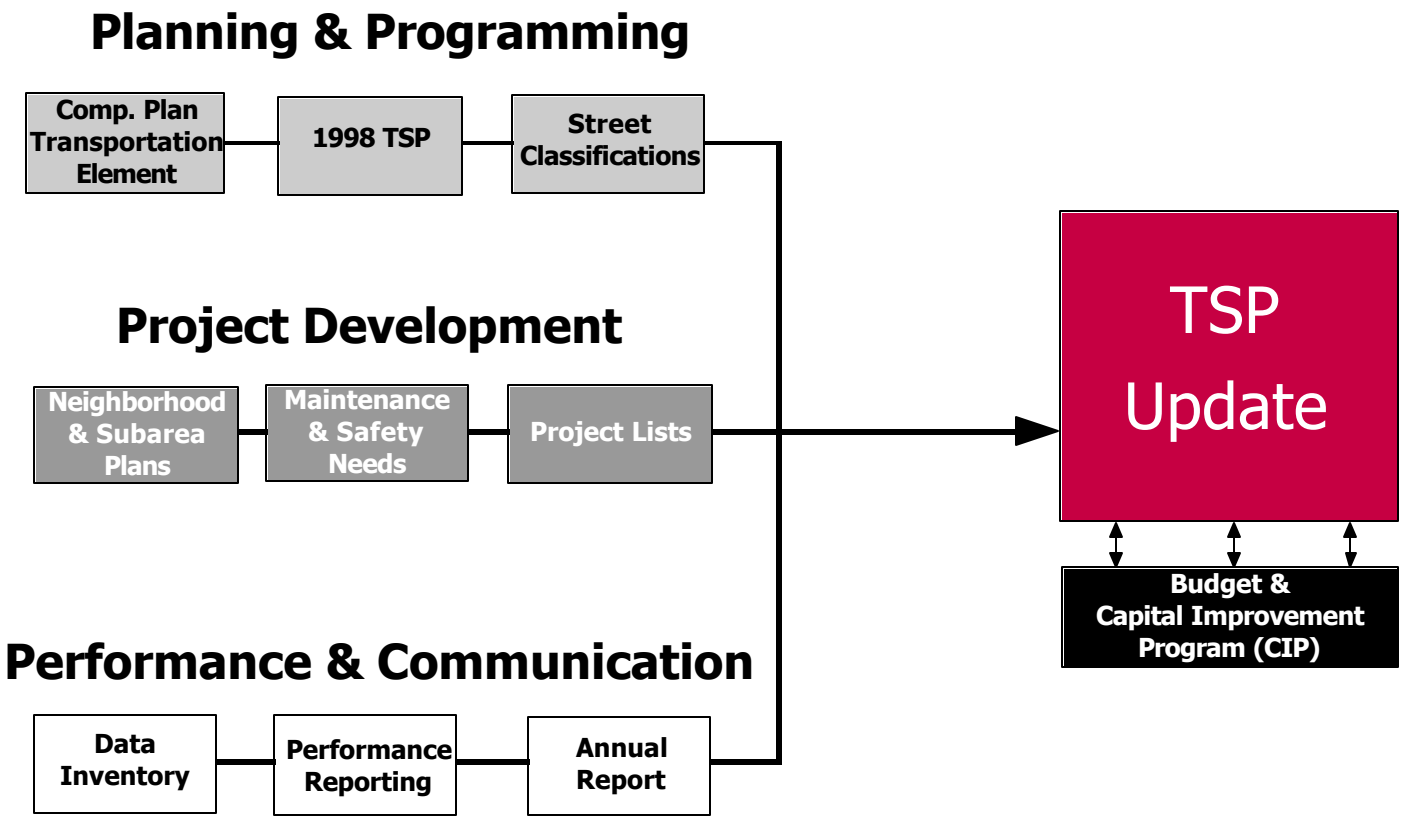
1.3 Key Themes for the TSP

During the TSP process, several recurring themes emerged. These themes, detailed below, are: improve safety; preserve and maintain transportation infrastructure; support the urban village land use strategy, and; provide mobility and access through transportation choices. The TSP establishes a framework for decision-making that balances each of these key themes:

Improve Safety

Promoting public health and safety is the fundamental purpose for government at all levels. SDOT's role as manager of Seattle's transportation system is to operate and maintain this system to support public health and safety.

Figure 2: The TSP: Bringing Together SDOT's Resoures



Other City departments work collaboratively with SDOT in these efforts. For example, the Police and Fire Departments are partners on enforcement of traffic laws, promotion of pedestrian and bicycle safety, and attention to street design standards to ensure that emergency vehicles have adequate access throughout the city. City Light and Seattle Public Utilities also work collaboratively with SDOT so that utility and transportation services and facilities are as mutually supportive as possible. For SDOT, managing the transportation system to promote safety is a high priority. In order to serve all users of the public rights-of-way, SDOT considers safety at all phases of a transportation project. Some safety issues that we keep in balance are reducing friction among modes, reducing conflicts and minimizing the consequences in case collisions do occur. Other safety priorities include seismic upgrades of bridges and other structures.

Preserve and Maintain Transportation Infrastructure

SDOT's mission is to preserve the existing transportation infrastructure and use it to its fullest capabilities. Wise operation and maintenance of the transportation system promotes safety, efficiency, infrastructure preservation, and a high quality environment. Maintenance expenditures account for 75% to 80% of SDOT's annual operating budget. This investment represents a very significant and recurring commitment to the conservation of the City's transportation facilities, as dollars spent on maintenance today help ensure that many more dollars are not needed for premature replacement later.

Over the last two decades, even this level of investment in maintenance has not kept pace with the growing needs of aging infrastructure. Over the last two decades, as dedicated transportation funding has declined, the City has increased the share of other City resources dedicated to maintenance of our transportation system. Even this investment, however, has not been able to keep pace.

The results have been an increasing backlog of deferred maintenance and difficult choices between the requirement to maintain the existing system and the equally pressing obligation to develop new and better facilities to meet emerging demands. The City is steadfastly committed to exploring every avenue to develop new and sustainable revenue sources that would allow the City to improve upon maintenance and operations, utilize innovations in technology and best environmental practices, and expand the system to meet future demands.

Support the Urban Village Land Use Strategy

The strong relationship between land development patterns and transportation is recognized by the Comprehensive Plan with policies that focus growth in urban villages and direct transit investments to linking these pedestrian-oriented activity centers. SDOT will continue to support the urban village land use strategy by planning for, and investing in infrastructure in urban villages, to enhance neighborhood livability.

Urban villages are mixed-use, walkable, transit and bike-friendly neighborhoods that are best served by travel modes other than single-occupant vehicles. The urban village strategy is appropriate in Seattle, given our geographic limitations, dense land uses and urban form which limits our ability to increase capacity for vehicular traffic. Outside of urban centers and villages, the City will also strive to align transportation facilities and services to support adjacent land uses.

Provide Mobility and Access through Transportation Choices

Most people will not routinely use alternatives to driving alone unless they have viable choices that provide advantages in terms of travel time, cost, reliability, and convenience. A balanced, well-designed transportation system that allows people to get around by transit, bicycle, and walking is critical to making livable communities. Making all transportation modes efficient and effective choices for travel is also important for people who cannot or choose not to drive, including people with disabilities.

1.4 Transportation Principles

The themes of safety, preservation and maintenance of infrastructure, supporting urban villages and mobility and access apply to all transportation modes. The TSP also establishes a set of transportation principles that provide a statement of intent for each individual mode or implementation element. In addition to setting direction, the transportation principles below, and on the next page, help organize the sections of the Comprehensive Plan Transportation Element, as well as the chapters of the TSP. The TSP Transportation Principles are as follows:

A street being chip-sealed. SDOT uses chip-sealing, a low cost and highly effective surface treatment, to preserve and maintain many of Seattle's non-arterial streets.

Make the best use of the streets we have to move people, goods and services.
Seattle's street system is largely complete, and the opportunity to add new links is limited. We need to make the best use of existing rights-of-way to move people, goods and services.

Increase transportation choices.
Cars will continue to be an important part of Seattle's transportation system. While recognizing that some trips will be made by car, lessen the dependence on the car for all trips. Strive for a more balanced transportation system by giving people viable alternatives to driving alone, including transit, bicycling and walking.

Make transit a real choice.
Make transit a fast, reliable, safe and convenient choice. Connect transit systems to each other and to other modes—such as biking and walking—to increase the usefulness of the whole transportation system for Seattle and the region.

Encourage walking and biking—they're the easy, healthy way to get around.
Construct transportation improvements that make bicycling and walking safe, attractive, easy, and convenient forms of transportation and recreation for people of all ages and abilities.

Price and manage parking wisely.
Price and manage parking to support healthy business districts and transit use. Manage curb space to recognize the importance of principle arterials in moving people, goods and services.

Promote the economy by moving freight and goods.
Support local and regional economic vitality by moving freight and goods efficiently to, from, and through the city. Support policies and actions that improve freight access.

Improve our environment.
Incorporate environmental considerations into every decision to affect a positive change in the environment, Seattle's neighborhoods, and public health.

Connect to the region.
Build a multi-modal transportation system to serve the city and connect to the region. Work with partners to ensure that Seattle's regional interests are met and that the regional transportation system supports smart growth.

Protect our infrastructure.
Get the best return on taxpayers' transportation dollars already invested by maintaining Seattle's infrastructure and keep it operating safely, smoothly and in good repair.

Make the most of transportation investments.
Leverage investments, both public and private, used in transportation projects to get the best return on taxpayer transportation dollars.

The University Bridge, constructed in 1919, carries over 30,000 vehicles, bikes, and pedestrians annually on average.

1.5 Funding the Transportation System

Operations and maintenance needs could absorb all of the City's transportation funding and more. While taking care of the existing system is a very high priority, there is also a tremendous demand for improvements. The City must address safety and mobility challenges and take advantage of opportunities to leverage funding, increase efficiency, and promote economic development. SDOT must also make geographic equity a key criterion in determining the projects, programs and services that are funded. The TSP outlines what the City strives to accomplish, not what the department can currently afford. In fact, only a small number of the projects, programs and services described in the TSP are currently funded.

The Funding Chapter discusses funding opportunities and challenges and describes how projects, programs and services are prioritized for funding. The appendices include information on funded projects and programs, as well as projects and programs for which SDOT will be seeking funding in the future. This approach allows SDOT to define a long range plan to preserve, maintain and improve Seattle's transportation system given financial constraints. Managing our transportation assets in a fiscally responsible way ensures that transportation dollars are available for a wide range of transportation solutions. These

solutions include non-capital strategies (such as reducing travel demand), efficient use of resources, and cost–effective partnerships with other agencies.

The TSP helps SDOT leverage efforts to achieve the maximum benefits for the transportation system using available resources. It is, and will continue to be, SDOT's practice to shape ongoing operations, maintenance and safety-related projects to best address the long-term vision set forth in the Comprehensive Plan.

1.6 Navigating the TSP

The TSP is divided into the following chapters:

Chapter 1.0: Introduction defines the goals of the TSP , the key themes that guide SDOT's work as well as a set of Transportation Principles that provide a statement of intent and set the stage for the strategies, projects, programs and services described in later chapters.

Chapter 2.0: State of the Seattle's Transportation System describes key transportation facts, figures and data resources as existing conditions used in analysis and decision-making at SDOT and by Seattle citizens and elected officials.

Chapter 3.0: Plan Elements includes the twelve plan elements. Each of these elements is organized as follows:

Discussion--A brief discussion about the element, consistent with the discussion section in the Comprehensive Plan.

Comprehensive Plan Goals and Policies--Each modal plan element takes direction from the goals and policies adopted in the related section of the City's 2004 Comprehensive Plan Update. The goals and policies provide guidance and strategic direction for the more specific TSP strategies, projects and programs.

TSP Strategies--The TSP strategies are more specific than the Comprehensive Plan goals and policies, but are not refined to the level of specific projects, programs or services. Many of the strategies are long term efforts and are being developed as projects or programs. Others have specific performance measures that are indicated in Chapter 5: Performance Reporting.

Chapter 4.0: Funding Chapter describes the local, regional, state and federal context for transportation funding, as well as the near- and long-term strategies for funding components of this plan.

Chapter 5.0: Performance Reporting describes SDOT's performance reporting processes.

Appendix A: Projects and Programs that Support TSP Strategies This Appendix describes the specific projects and programs that comprise SDOT's near-term work program and long-range plan. The projects and programs envisioned for near-term implementation (1-6 years) will have a higher level of specificity regarding timing and funding than those after year six. There are some new projects and programs, as well as those that are currently underway within existing strategic planning efforts such as the Freight Mobility Action Plan, the Intelligent Transportation Systems (ITS) Master Plan or the Seattle Parking Management Study.

A number of companion documents are available on the SDOT TSP website that provide additional details about some of the strategies in this plan. These documents include:

- Seattle's Street Classifications Descriptions and Update Process
- The Seattle Transit Plan
- The Freight Mobility Action Plan

- Sub Area Transportation Plans such as the University Area Transportation Study (UATS), and the South Ballard Corridor Study. Other sub area transportation plans will be added to this site as they are completed.

In addition to these documents, the TSP website also includes TSP and SDOT Annual Reports. The website can be accessed at www.seattle.gov/transportation/tsphome.htm.

1.7 Evaluation and Update Process

Periodic reporting of progress in implementing the TSP provides a way for the public to verify that the plan is being implemented. Without a tracking system, plans can be left on the shelf and eventually forgotten. SDOT will strive to do a major update of this plan every five years to be adopted by City Council resolution. Consistent with the 1998 TSP, SDOT will issue an annual report that describes progress towards implementation as well as any changes proposed to the contents of the plan.

A progress report will summarize the strategies that have been implemented, results of evaluations, and performance reporting. It may also include recommendations for changes to specific strategies. Any modifications to the Comprehensive Plan goals and policies will necessitate revision to sections of the TSP. These changes will be documented annually through the TSP Annual report and then completed during the five year update. The most current version of the Comprehensive Plan goals and policies should be accessed online. A link to the Comprehensive Plan website is available on the TSP website.

Chapter 2: State of the City's Transportation System

Chapter 2 describes key existing transportation and land use conditions used in analysis and decision-making at SDOT, by Seattle citizens, and by elected officials. It contains relevant maps and statistics that describe the scale and use of the multi-modal transportation network from regional, citywide, and neighborhood perspectives. The intent is to provide information that improves understanding of how Seattle area residents, jobs, and neighborhoods are connected to each other and the region. The information in this chapter also provides a foundation for decision-making about transportation projects and programs. The maps consolidate information with sources given for easy reference to inform decisions taken by Seattle citizens, planners, and elected officials about Seattle's future.

2.1 Urban Villages and Land Use

The following maps show Seattle's designated urban villages (Figure 3). Note that Delridge and Georgetown are not pictured, because although they do have adopted neighborhood plans, they are not designated urban villages. Figure 4 shows current land use patterns. Seattle is essentially a fully built city with a mature transportation system. Land use and transportation remain fundamentally related and can be mutually supportive. The urban village strategy, described in the Comprehensive Plan, recognizes the land use-transportation relationship by focusing redevelopment in concentrated rather than linear patterns, directing transportation investments to link these pedestrian-oriented activity centers, and providing more opportunities for walking and bicycling within these centers. Over the last ten years, thirty-eight urban villages developed Neighborhood Plans to help support such development. These urban villages will also be priority areas for the City's investments in new capital facilities.

As shown in Figure 3: Urban Centers, Urban Villages, and Manufacturing/Industrial Centers, there are currently six urban centers—Downtown, Capitol Hill/First Hill, Uptown, University District, Northgate, and South Lake Union. Seattle's urban centers absorb most of the City's share of expected new growth. Hub Urban Villages and Residential Urban Villages are smaller in scale for employment and residential development, respectively. Concentrations of both commercial activity and multifamily housing are planned for urban villages at lower densities than will be found in the urban centers. The two manufacturing/industrial centers provide opportunities for current and future industrial businesses to locate in Seattle, providing relatively high-wage jobs that are often accessible to workers without higher education.

Seattle's Comprehensive Plan includes additional land use data and resources. A link to the 2004 Comprehensive Plan Update can be found online at www.seattle.gov/transportation/tsphome.htm.

About Seattle

2000 CENSUS DATA

Population 563,374
# of Households 258,499
Median Household Income ... $45,736
# of Jobs (2002) 479,241

2020 PROJECTED GROWTH

# of Households ..... 305,499 (18% increase)
# of Jobs ..... 569,241 (19% increase from 2002)

2.2 Roadway Data: Street Classifications and Traffic Volumes

Seattle is a built city and the opportunity to add new roadways is extremely limited. Many of the strategies, projects, and programs highlighted in the TSP address making the best use of the existing roadway network to move more people and goods. Transit, walking, bicycling, transportation demand management and the most efficient operation of the existing roadway network are all important components

Figure 3: Urban Centers, Urban Villages, and Manufacturing/Industrial Centers

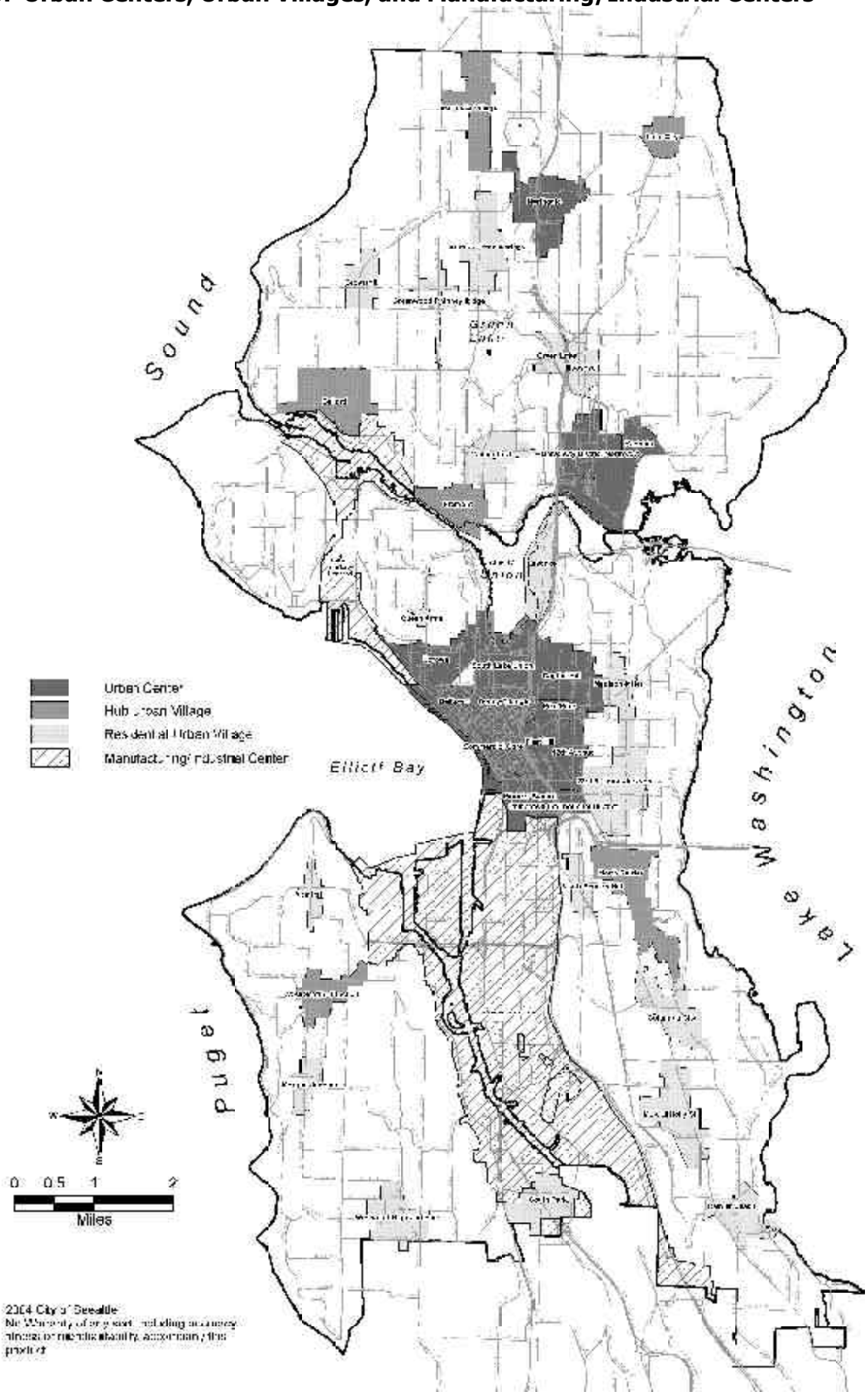
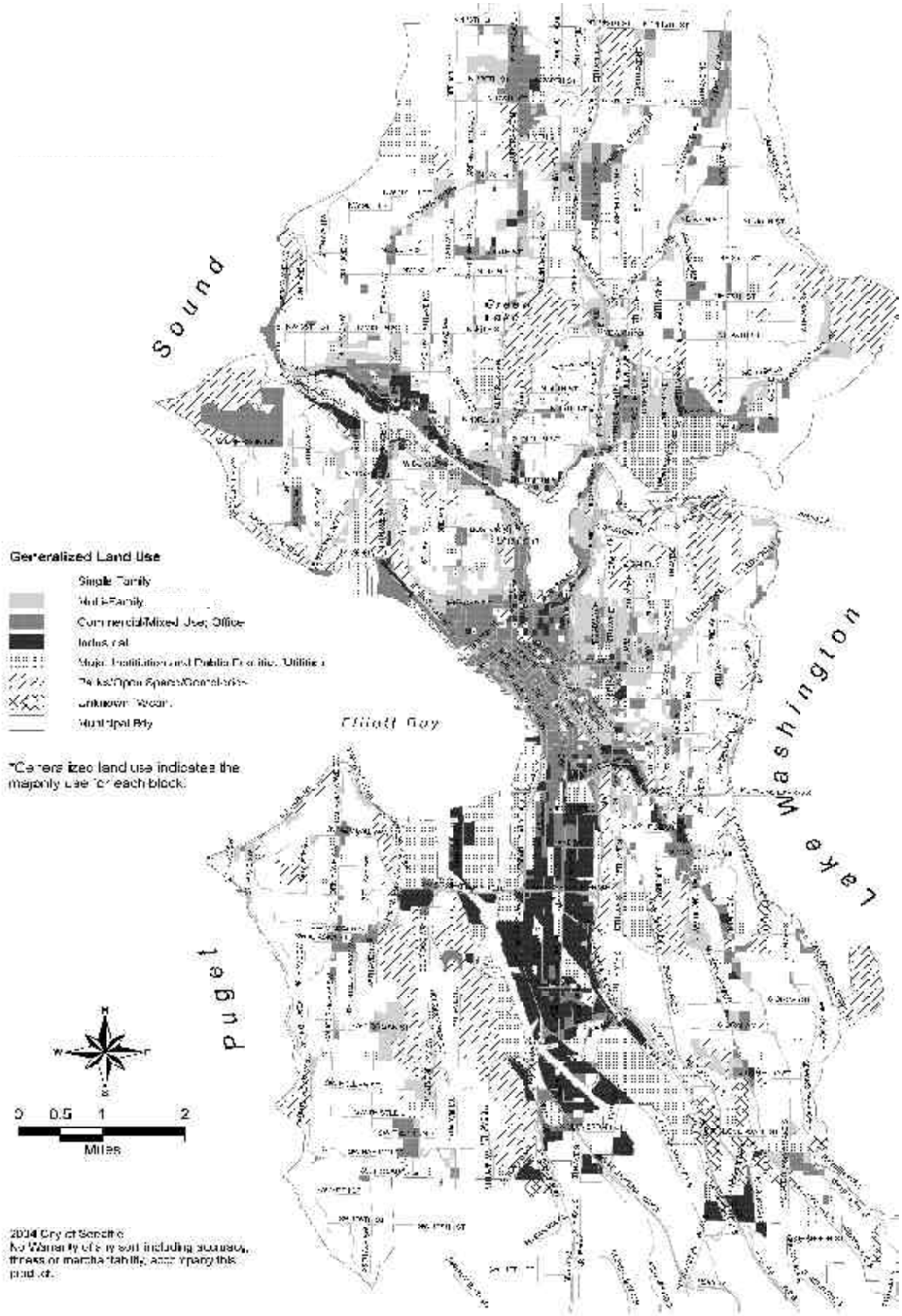


Figure 4: Generalized Existing Land Use



of making the most of our existing transportation network. There are separate sections for each of these here in Chapter 2.0.

Identifying the functions of streets through the development and application of street classifications is one tool SDOT uses to make the best use out of our existing networks. Seattle's street classification maps can be found in Chapter 3.2 of this plan, and the full definition of each street classification is included as Appendix B.

A key data element that helps SDOT plan for, design and manage the arterial street system is average annual daily traffic volumes. SDOT conducts machine counts of vehicle volumes regularly along screenlines (including cordons and corridor locations), for arterial streets analysis, for traffic flow map development, for signal inventory, and for special projects as needed. The volumes on the map segments represent the Average Annual Daily Traffic (AAWDT, 5-day, 24-hour) for that section of roadway for 2003. AAWDT maps (including from previous years) are available at www.seattle.gov/transportation/tfdmaps.htm

2.3 Automobile Availability and Mode Share

SDOT sponsors or participates in Transportation Demand Management (TDM) programs and services that encourage the use of travel modes other than the single occupant vehicle. Many of these programs happen in partnership with other agencies, such as King County Metro and the Downtown Seattle Association. Others are partnerships with community groups such as the Way to Go Seattle programs. Chapter 3.3TDM identifies these programs in more detail. A baseline data source for affecting people's transportation behavior is automobile ownership.

As shown in Figure 5: Automobile Availability, the U.S. Census tracks automobile vehicles available, and the data from the 2000 Census has been analyzed for Seattle urban villages.

Have a Nice Trip…

- **Over 75% of all trips are not work-related. They are taken for shopping, errands, and entertainment.**
- **The average household in King County makes 12 car trips each day, and nearly half of those are to destinations less than three miles from home.**
- **Reducing car use also has significant environmental benefits. Driving motor vehicles causes more than half of our air pollution and is the largest Northwest contributor to global warming.**

"Vehicles available" is defined as the number of passenger cars, vans, and trucks kept at home and available for household use; dismantled or immobile vehicles are excluded. Vehicles per household is computed by dividing aggregate vehicles available by the number of occupied housing units.

Generally, in Seattle, the number of vehicles available per household decreases as residential density, access to transit, parking restrictions, and/or proximity to downtown Seattle all increase. According to the 2000 Census, there were 563,000 people or 270,500 households, and 363,500 vehicles in Seattle proper. That works out to less than one car per person or 1.34 cars per household. A total of 66,000 households have no vehicles at all.

The average vehicles available per household in the six designated urban centers is 0.68, and it is 1.29 in all other urban villages. Outside urban villages the vehicles per household is 1.62. The entire city average is 0.99 vehicles per household. These are 2000 year figures and are across-the-board lower than 1990 figures.

The US Census Journey to Work data is collected every ten years to analyze patterns of how people travel to work. Journey to Work data includes data on where people work, how they get to work, how long it takes to get from their home to their usual workplace, when they leave home to go to their usual workplace, and carpooling.

Figure 5: Automobile Availability (from US Census, 2000)

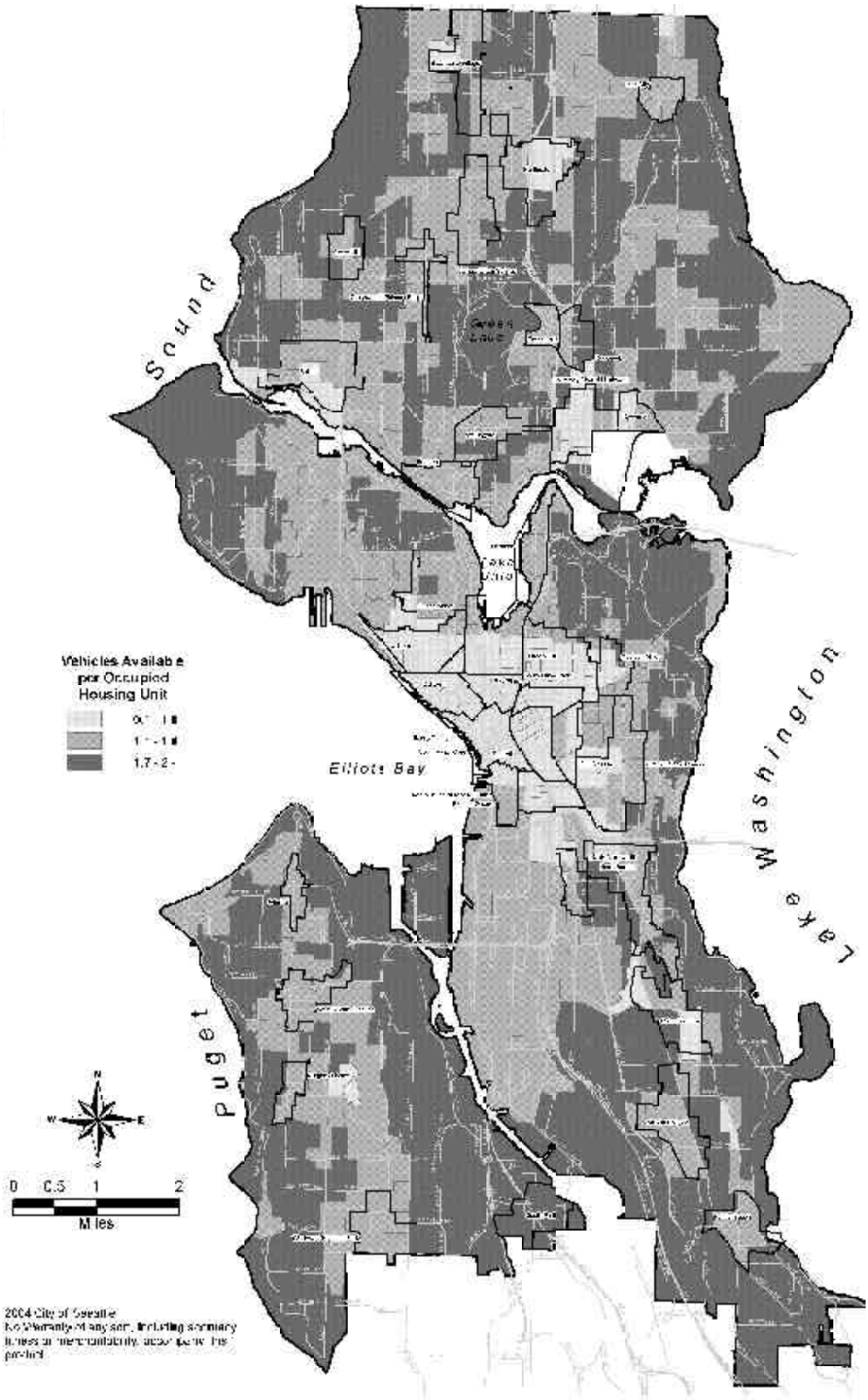


Figure 6: Mode Share by Census Tract

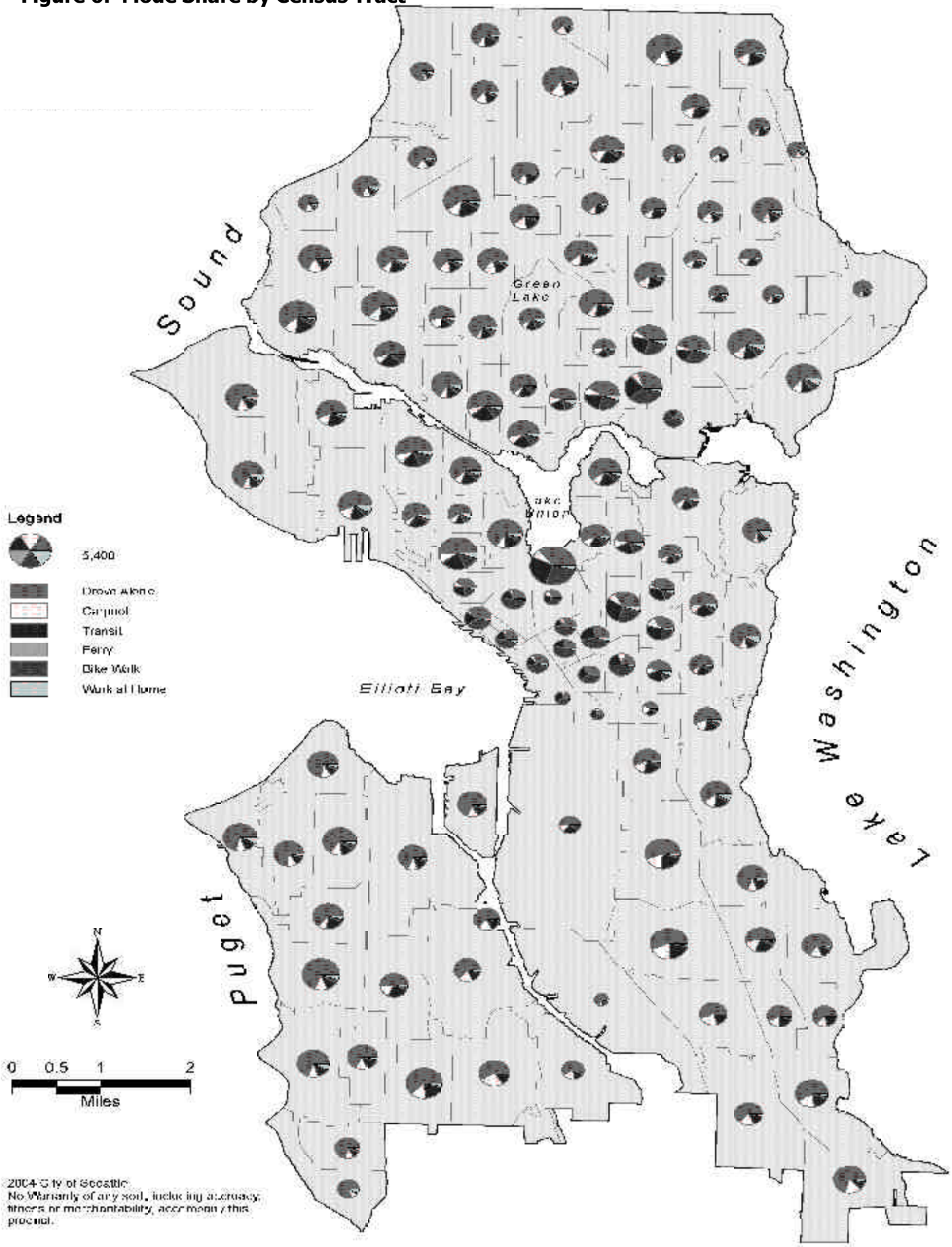


Figure 6: Mode Share by Census Tract, displays the mode of commute to work for Seattle residents based on 2000 Journey to Work data.

2.4 Local and Regional Transit System

The City needs a plan for developing a transit system that supports as well as leads the development of Seattle's urban villages, as set forth by the City's Comprehensive Plan. Clearly, Seattle will need good transit service to provide people a real mobility choice. The Seattle Transit Plan was approved in 2005 by SDOT to provide direction on how Seattle can achieve the transit system it needs.

Seattle's transit system has taken many forms over the years and continues to expand to support an ever increasing demand for transit service. The City of Seattle is not the local transit operator but does work closely with local, regional and state public transportation and transit providers. SDOT works closely with transit providers to permit and construct transportation facilities that support transit use such as sidewalks near transit zones and bus pads.

In 2003-2004, SDOT worked with internal and external stakeholders to draft a vision of Seattle's future transit network. The vision is shown in Figure 7: Seattle's Future Transit Network, and shows Seattle's regional high and intermediate capacity transit corridors as well as key transit passenger facilities, e.g. multimodal hubs and transportation centers. Along with Seattle's Urban Village strategy, it provided the direction needed to develop the Seattle Transit Plan.

The following information summarizes the Draft Seattle Transit Plan Existing Conditions chapter:

2.4a Local Transit Service and Facilities

Bus: King County Metro Transit (Metro) provides most of Seattle's local (and local express) transit service (see Figure 8: Metro Bus Routes). Metro's bus system is primarily focused on four areas: 1) increasing peak market share, 2) expanding core network services, 3) integrating with Sound Transit, and 4) addressing local subarea priorities. In 2002, Seattle, Shoreline, and Lake Forest Park, (the West subarea), received almost 1.89 million annual service (platform) hours, generating slightly over 60 million annual rides. This was about 71 percent of Metro's total system ridership of slightly over 85 million annual rides (excludes ridership from Sound Transit buses operated by Metro and ride free area passengers). The West subarea generated about 66 percent of Metro's fare revenue in 2002. The core network for Seattle is listed in Table 1: Seattle's Core Service Connections.

Seattle's Transit Market
(Source: US Census, 2000)

Seattle Employees who use public transportation to get to work ..... 17% percent

Time it takes the average Seattle worker to get to work ..... 23.8 minutes

U.S. average time it takes an average worker to get to work ..... 24.4 minutes.

Streetcar: The George Benson Waterfront Streetcar Line is operated by Metro. The streetcar line runs along Alaskan Way and South Main Street from Myrtle Edwards Park to the International District, with nine station stops. In 2003, it had 403,590 passenger boardings.

Water Taxi: In 1997, King County Metro began operating the Elliott Bay Water Taxi on a seasonal basis, running between Seacrest Park in West Seattle to Pier 55 in downtown Seattle. In 2003, the water taxi had 116,833 passenger boardings between April 21 and November 28.

Van Pool: King County Metro's vanpool program is the largest in the country and last year generated 1,793,748 passenger trips with 663 vans in service.

Figure 7: Planned and Potential High and Intermediate Capacity Transit Network

(**Note**: A color version of this map can be found in the Seattlle Transit Plan, Figure 10. It can be accessed online at www.seattle.gov/transportation/docs/Figure10SeattleFutureTransitNetwork2.pdf)

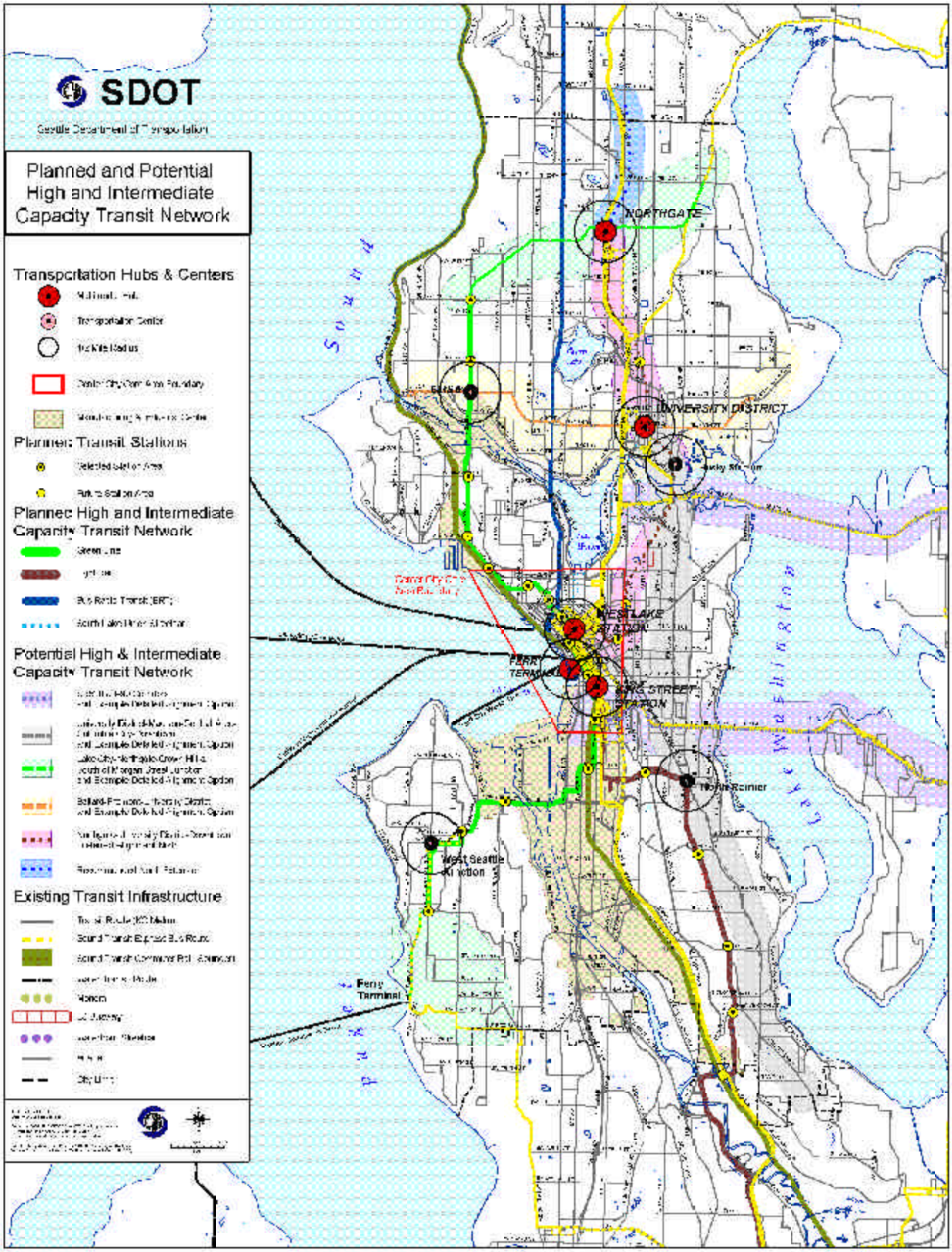


Figure 8: Seattle's Future Transit Network

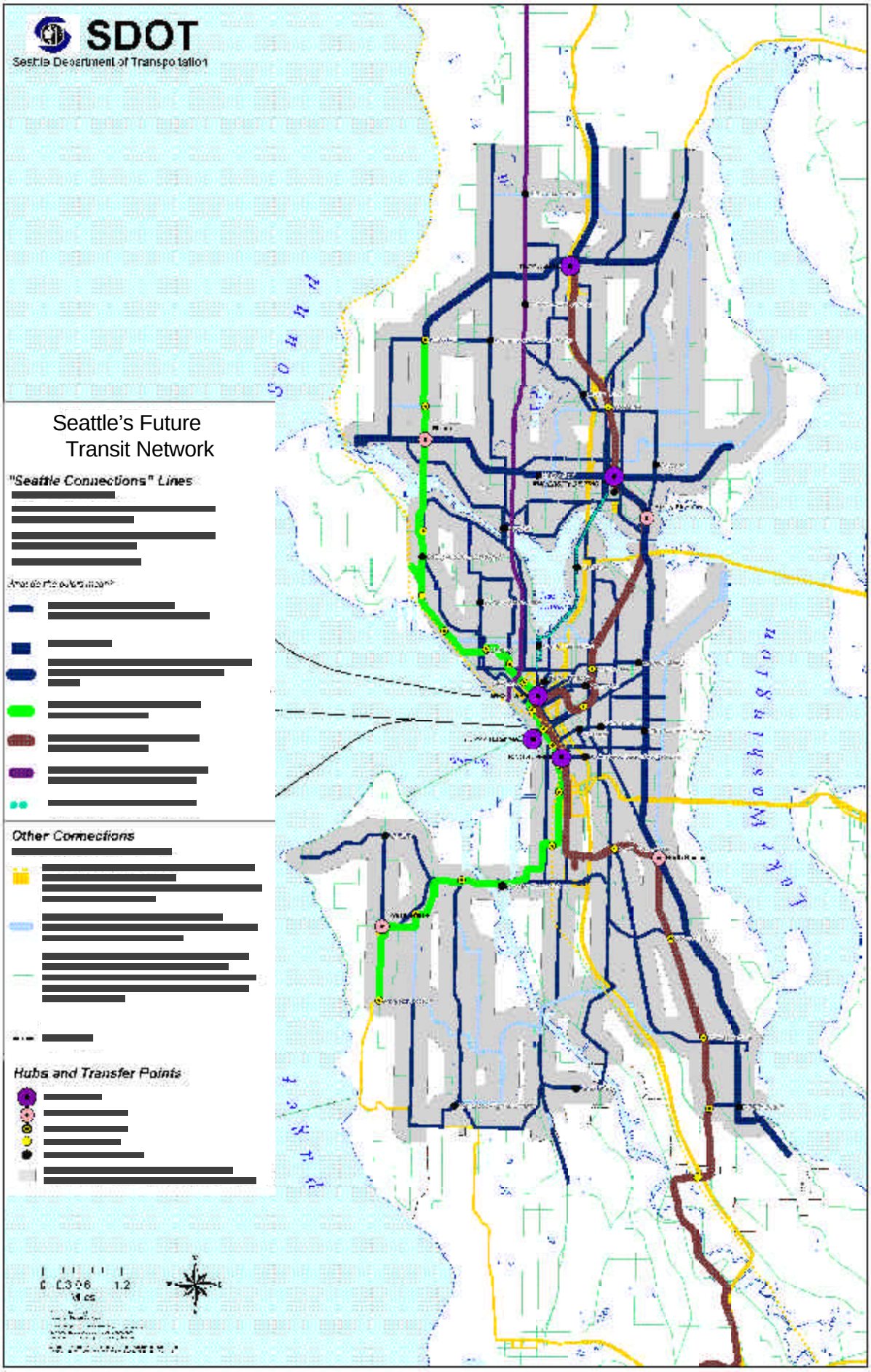


Table 1: Seattle's Core Service Connections
(Source: King County Metro Six-Year Transit Development Plan for 2002 to 2007, adopted December 2002)

Description			2001 Frequency
Between these places		**Via Primary Corridor and Destination**	**2001 Actual peak/mid/eve (min)**
Admiral	White Center	California Ave. SW	30/30/30
Aurora Village	Seattle CBD	Aurora Ave. N	10/20/30
Ballard	Northgate	24th Ave. NW, Holman Rd. NW	30/30/60
Ballard	Seattle CBD	15th Ave. W	10/10/30
Ballard	U District	NW Market St., N & NE 45th St.	10/15/15-30
Beacon Hill	Seattle CBD	Beacon Ave. S	5-10/10/20-30
Bellevue	U District	SR-520	15/30/60
Burien	Seattle CBD	Ambaum Blvd. SW, Delridge Way SW	15/30/30
Capitol Hill	Seattle CBD	15th Ave. E, Pine St.	10/15/30
Capitol Hill	Seattle CBD	Broadway E, Pine St.	10/10/30
Capitol Hill	Seattle CBD	Madison St.	10/15/30
Capitol Hill	Seattle Ctr.	Denny Way	15/30/30
Central Area	Seattle CBD	Jefferson - James	7-8/7-10/15
Federal Way	Seattle CBD	I-5	30/30/-
Fremont	Seattle CBD	Dexter Ave. N.	10-15/15/30
Greenwood	Seattle CBD	Greenwood Ave. N	15/15/30
Kent	Seattle CBD	W Val Hwy., Southcenter Blvd., Interurban, I-5	15/30/30
Kirkland	Seattle CBD	108th NE and SR-520	10-15/30/30
Loyal Hts.	U District	NW 85th St.–15th Ave. NE	10/15/30
Madrona	Seattle CBD	Union St.	15/15/30
Northgate	Seattle CBD	I-5	4-8/15/60
Northgate	Seattle CBD	Wallingford Ave. N., Aurora Ave. N	20/20/30
Northgate	U District	Roosevelt WY. NE, 5th Ave. NE	10-15/15/30
Queen Anne	Seattle CBD	5th Ave. N., Taylor Ave. N.	10-15/20/30
Queen Anne	Seattle CBD	Queen Anne Av. N	5-10/15/15
Rainier Beach	Seattle CBD	Rainier Ave. S	10/10/30
Renton	Seattle CBD	MLK WY., I-5	7-15/30/—
Sea-Tac Airport	Seattle CBD	I-5	30/30/30
U District	Seattle CBD	Pine St., 23rd Ave. E	10-15/15/30
U District	Seattle CBD	I-5	5-8/7-10/—
U District	Seattle CBD	Eastlake Ave. E, Fairview Ave. N	12/15/15
U District	Columbia City	23rd Ave. E, MLK Jr. Way S	10/15/30
U District	Woodinville	SR-522, Bothell	30/60/—
West Seattle	Seattle CBD	Fauntleroy Ave. SW, W. Seattle Bridge	15/15/30
Core Service Connections in King County Served by Sound Transit			
Bellevue	Seattle CBD	I-90, Bellevue WY. NE	5-8/15/30
Issaquah	Seattle CBD	I-90	30/30/60
Redmond	Seattle CBD	SR-520	15/30/30
Woodinville	Seattle CBD	SR-522, I-5	30/30/30

Paratransit: King County Metro provides curb-to-curb transportation for people who are unable to use regular bus service due to disabilities through the ADA Paratransit Program (Access Transportation). King County residents who are low income and are either age 18 to 64 and have a disability or are age 65 or over qualify for the Taxi Scrip Program, which offers a 50% subsidy for taxi service via pre-purchased scrip. In 2003, Metro provided about 1,024,500 ACCESS passenger rides and about 52,300 taxi passenger rides.

Other King County Metro Services: Other King County Metro programs and services include custom buses, special event service, the U-Pass program with the University of Washington, bikes on buses, vanpools, and a ride-match service.

Transitways: The E-3 busway and downtown Seattle transit tunnel provide Metro, as well as Sound Transit, exclusive right-of-way for its bus operations. In addition, Seattle provides bus-only lanes on some arterial streets. Since 1994, transit-only or HOV lanes have been built along Aurora Avenue, Howell St. and 2nd Avenue (southbound only) in downtown Seattle, Pacific St. in the University District, and the West Seattle Freeway.

Park and Rides: King County Metro and WSDOT operate ten permanent and three leased park and ride lots in Seattle with approximately 2,300 parking spaces. The Northgate Transit Center south of the Northgate Mall provides almost 1300 of these spaces. The park and ride lots are free of charge.

2.4b Intermediate Capacity Transit Service

The City identifies intermediate capacity transit as enhanced-capacity transit services that would be interconnected, and operate faster and more reliably than existing bus service (City of Seattle, Seattle Transit Study for Intermediate Capacity Transit, Final Report 2001).

Monorail: In November 2002, Seattle voters approved an intermediate capacity transit project when they created the Seattle Popular Monorail Authority, also referred to as the Seattle Monorail Project (SMP). SMP's purpose is to fund, build, operate, own, and maintain a 14-mile monorail Green Line, connecting the Crown Hill Residential Urban Village, Ballard Hub Urban Village, Uptown/Queen Anne Urban Center, Downtown Urban Center, Duwamish Manufacturing/Industrial Center, West Seattle Junction Hub Urban Village, and the Morgan Junction Residential Urban Village.

Construction of the Green Line is expected to start in 2005. The entire Green Line is scheduled for full operation in 2009. Travel times will be approximately six minutes between Queen Anne and Pike Place Market, 20 minutes from downtown to West Seattle, and 12 minutes from downtown to Ballard. The Monorail Green Line is expected to attract approximately 69,000 daily trips.

The City of Seattle currently operates a monorail on a mile of elevated guideway between Westlake Mall in downtown Seattle and the Seattle Center. It carried about 2 million riders in 2002. The monorail is currently undergoing repairs due to a fire in early 2004.

2.4c Regional High Capacity Transit Service

Sound Transit is the regional transit authority for the Puget Sound area (which includes portions of King, Snohomish, and Pierce Counties). It was created in 1996 by voters within its boundary and has been planning and implementing the first phase of its "Sound Move" regional transit plan. The Sound Move plan includes: operation of a 24-mile light rail system (called "Link") between SeaTac and the University District (via downtown Seattle and the Rainier Valley), with possible extension to Northgate; peak period commuter rail services (called "Sounder") along existing rail lines between downtown Seattle, Tacoma and Everett; and regional bus services connecting major centers throughout Sound Transit's service area.

Link Light Rail: The initial segment of Link will be 14-miles long connecting Downtown , North Beacon Hill, North Rainier, Columbia City, MLK at Holly St., and south to the City of SeaTac. Link trains are expected to start service from downtown Seattle to South 154th Street by 2009 and by 2020 are projected to carry at least 42,500 riders a day.

Regional Express Bus: Sound Transit's Regional Express provides express bus service between suburban areas in the three-county service area and downtown Seattle, West Seattle, and the University District. Currently, there are a total of 20 bus routes that provide this all-day, two-way express service with limited stops.

Commuter Rail: Sounder commuter rail service between Tacoma and Seattle began in 2000 and between Everett and Seattle in 2003. Besides King Street Station, where Tacoma and Everett services will serve downtown Seattle, there are two provisional Sounder stations identified for Seattle in Georgetown and Ballard. In 2002, Sounder carried 817,405 annual passenger trips using 9,494 annual service hours.

2.4d Waterborne Transit

Ferries: Washington State Ferries (WSF) is operated by WSDOT's Marine Division. Ferries serve the Colman Dock Ferry Terminal in downtown Seattle and the Fauntleroy Ferry Terminal in West Seattle. More than half of the WSF ridership are commuters.

In 2002, Colman Dock averaged 27,510 ferry passengers per day and carried 8,022 vehicles per day. There are three routes that serve the Colman Dock: 1) Bainbridge-Seattle, 2) Bremerton-Seattle, and 3) Vashon-Seattle. The Seattle-Vashon route is a peak period, commuter passenger only ferry service for the weekdays and Saturdays. Only the Vashon Island ferry serves the Fauntleroy ferry terminal. The Fauntleroy-Vashon-Southworth route carried 3,108,107 in 2002.

In 2002, the annual ridership for WSF Seattle routes to Colman Dock was: Bainbridge-Seattle, 6,727,650; Bremerton-Seattle (passenger only); 681,830; Bremerton-Seattle, 2,212,150; Vashon-Seattle (passenger only), 228,327. Therefore, the total 2002 WSF ferry ridership at Colman Dock was 9,849,957.

Recent changes in state law and reductions in Washington State Ferries passenger-only ferry service have resulted in new operators of passenger-only ferry service across Puget Sound. Weekday, commuter service from Bremerton and Kingston now operates and planning for new service from Southworth is underway. In 2005, as part of a Six-Year Plan Transit Plan Strategy, King County Metro will conduct a study regarding the role of waterborne transit service in King County and will analyze from Vashon to Seattle, West Seattle to Seattle's Central Waterfront, and potential new markets serving Lake Union and Lake Washington.

The Elliott Bay Water Taxi runs between West Seattle and Seattle's Central Waterfront

2.5 Commute Patterns for Pedestrians and Bicycles

Walking patterns are documented within the US Census as part of the journey to work data. These data sources are helpful to identify areas for improving pedestrian conditions, among other purposes. Figure 9: Percentage of Workers Commuting by Foot, shows the US Census journey to work patterns for those that walk to work. Generally, walking commuting is higher surrounding major employment destinations such as downtown Seattle and the University of Washington.

The City of Seattle has, over the last 20 years built, and continues to build, an extensive urban trail system for bicyclists and pedestrians. One key data resource is the pattern of bicycle commuting across the city.

Generally, bicycle commuting is higher along urban trails such as the Burke-Gilman trail and surrounding major employment destinations such as downtown Seattle and the University of Washington. Figure 10: Percentage of Workers Commuting by Bicycle, shows such bicycle commuting patterns.

Figure 9: Percentage of Workers Commuting by Foot (Journey to Work, US Census, 2000)

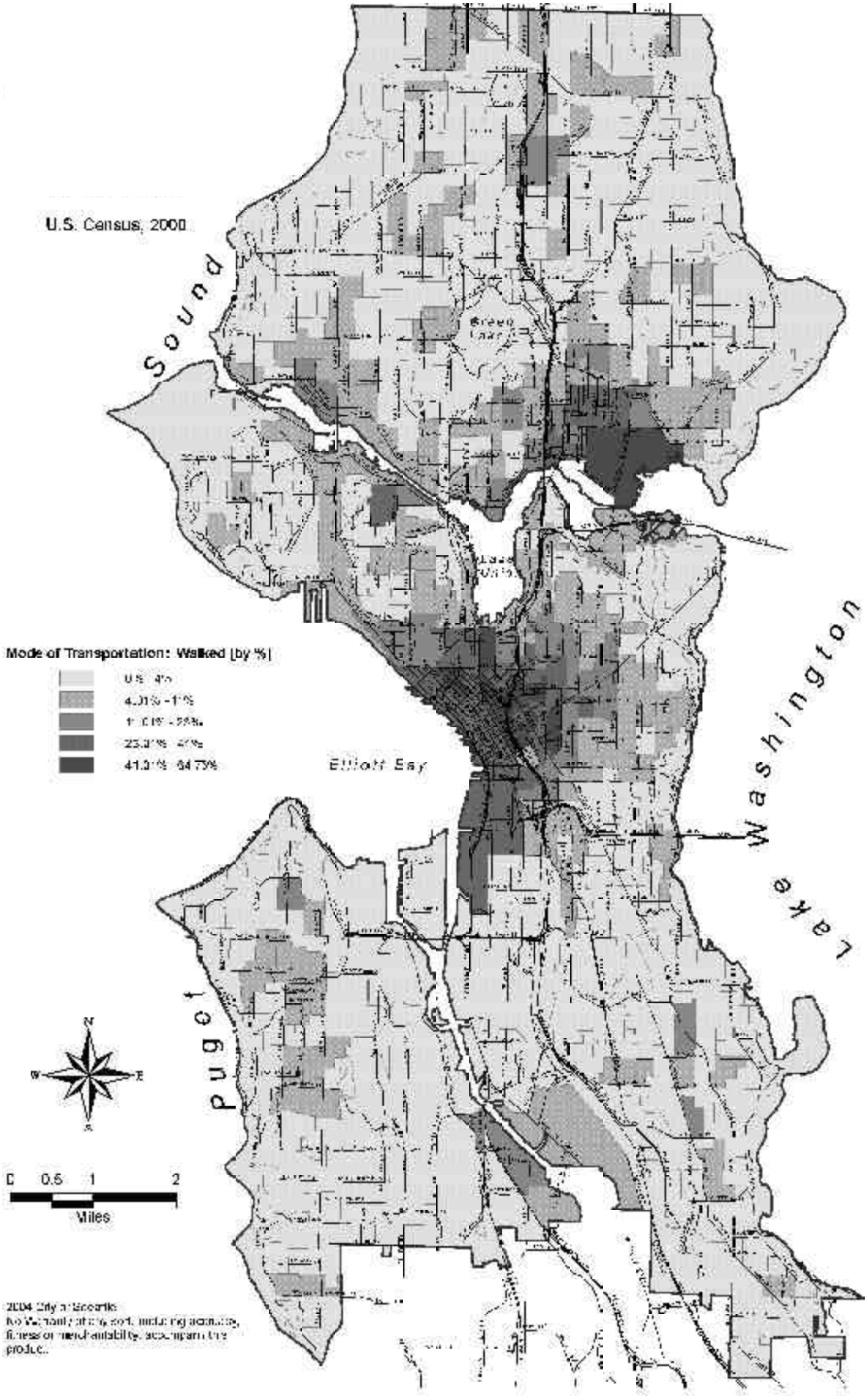


Figure 10: Percentage of Workers Commuting by Bicycle (Journey to Work, US Census, 2000)

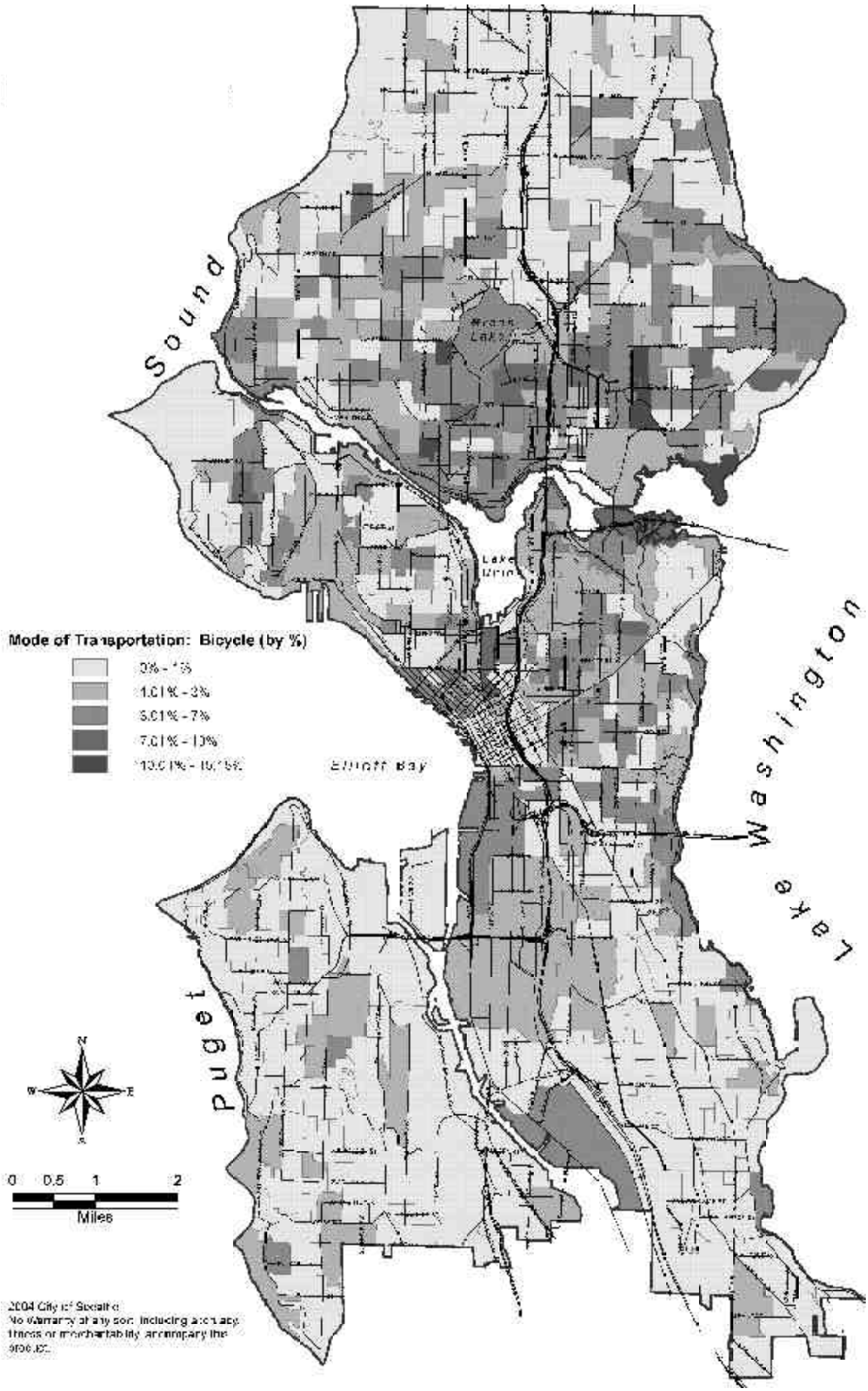
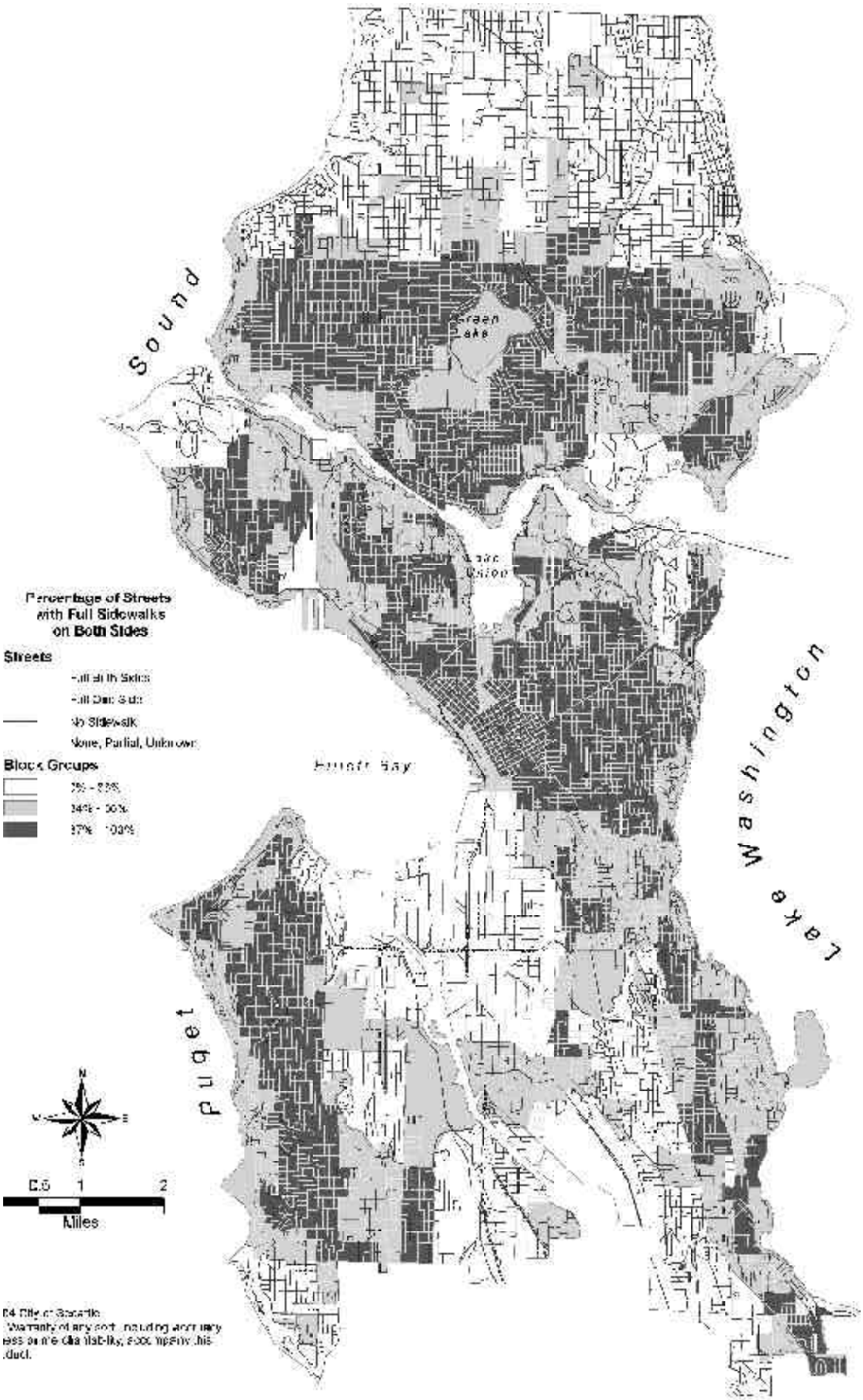


Figure 11: Percentage of Streets with Full Sidewalks on Both Sides



2.6 Sidewalk Inventory

SDOT collected a sidewalk inventory using aerial photographs and GIS. Since it is only about 85% accurate, a field check is always needed to confirm whether a sidewalk actually exists at particular location. The inventory mapped in Figure 11: Percentage of Streets with Full Sidewalks on Both Sides, describes those areas of Seattle where most streets have sidewalks and where there are major deficiencies.

2.7 Seattle's Topography

Seattle's topography is a key factor influencing transportation patterns, especially walking. The map in Figure 12: Seattle's Topography, gives a city-wide view of topography.

2.8 On and Off Street Parking

As part of the implementation of recent city-wide parking studies and neighborhood parking management programs, SDOT is working to create a city-wide inventory of on-street parking controls, including the location and usage of parking pay stations and meters, time-limit (1, 2, 3, 4-hour) signs, load zones (passenger, commercial vehicle, 30-min), and residential parking zones (RPZs). While not complete, this parking inventory is used several ways and is continually added to by fieldwork or use of Department asset management programs. The following highlights the parking data available to date.

2.8a Existing On-Street Parking Supply

In 2003, there were about 9,000 on-street parking meters in Seattle. About 70% are in downtown Seattle. Many of the existing on-street meters are being replaced by new parking pay stations. Most neighborhood business districts have either paid parking or 1- and 2-hour parking signs to provide customer parking for nearby businesses. There are 22 Residential Parking Zones (RPZs) in Seattle, most surrounding hospitals, universities and other major traffic generators. Figure 13: Parking Classifications...North Seattle, and Figure 14: Parking Classifications...Central Business District, indicate the locations of the RPZs and on-street meters and pay stations.

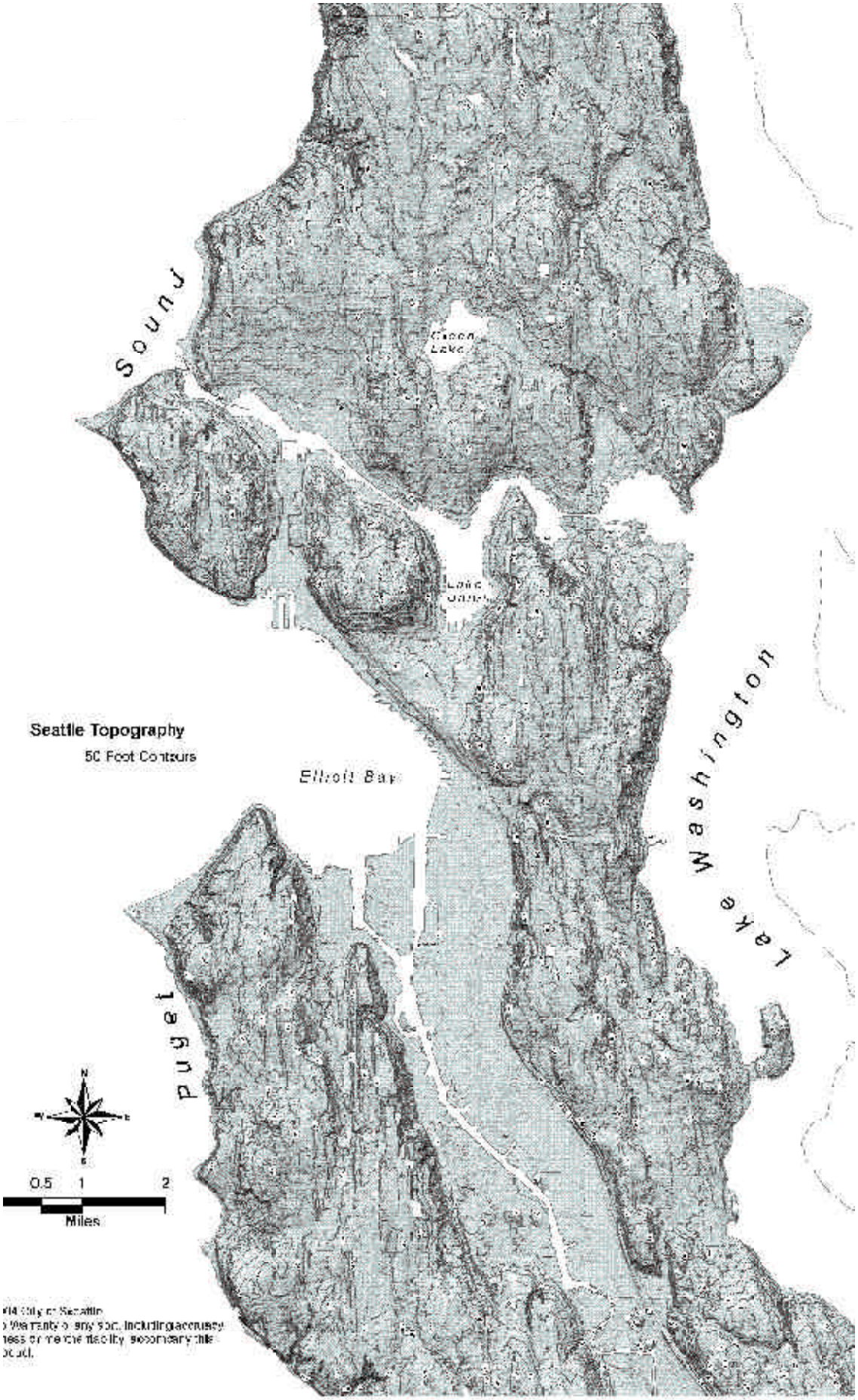
2.8b Existing Off-Street Parking Supply

The Puget Sound Regional Council examines off-street parking in Seattle's Central Business District, First Hill, Uptown, South Lake Union, and the University District neighborhoods, as well as other regional urban centers. Their study is one of the best available to gauge the level of parking use in the more congested parts of Seattle.

In the Seattle Central Business District (CBD) in 2002, there were about 58,500 off-street parking spaces with an average occupancy rate for the downtown Seattle CBD of 64 percent. Occupancy rates for First Hill, Uptown, South Lake Union and the U-District varied, especially with the extent of event parking in Seattle Center and surface parking lots in South

New Parking Pay Stations are in place in Downtown and several neighborhood business districts.

Figure 12: Seattle's Topography



Lake Union. This data is displayed in Figure 15: Parking Survey--Off-Street, Center City Area, and Figure 16: Parking Survey--Off-Street, University District Area . In comparison, Downtown Bellevue had about 32,600 parking spaces and had an average occupancy rate of 60 percent.

2.8c Neighborhood-Based Parking Studies

In 1999, based on a 1998 TSP parking strategy, the City of Seattle completed the Comprehensive Neighborhood Parking Study (CNPS). This study documented on and off-street parking conditions in 26 Seattle neighborhood business and residential districts from parking data collected in the fall of 1999. The study areas were samples within the urban village areas, representing typical neighborhood commercial, residential and office development in the broader neighborhood. The data found that the majority of neighborhoods were using between 40 to 70 percent of their overall parking capacity, although there were eight study areas that were using more than 75 percent of their on-street parking capacity. Table 2 provides parking supply, utilization and duration for the surveyed areas.

2.8d Carpool Parking

City-registered carpools qualify for discounted parking in specially designated on-street parking areas in and surrounding downtown Seattle and other major employment centers.

2.9 Main Freight Connections from Port of Seattle Facilities

Freight mobility is a central consideration in all transportation infrastructure decisions. A considerable amount of freight activity is generated by, or destined for, the Port of Seattle facilities adjacent to Seattle's Center City neighborhoods. The Port of Seattle facilities are unique among West Coast ports: the container operations are within the urban core, adjacent to a busy downtown, a tourist-friendly waterfront, and two sports stadiums that attract millions of people to Seattle each year.

The Port's container business is growing rapidly, and it is expected to double annually, within the time frame of this Plan. The growing trade brings family-wage jobs, supports service providers, and contributes to the tax base of the City. In 2003, the Port's marine terminals directly provided about 9,700 jobs, generating $480.7 million in wages and salaries with an average salary of about $50,000—well over the statewide average. This activity generated almost $1.44 billion in revenue for local businesses. The City in turn received $13.1 million in taxes from these activities. The success of the Port's cargo operations is highly dependent on a well-functioning transportation system that allows for efficient and reliable truck access to intermodal facilities, warehouse and distribution centers, and the freeway system.

The maps in Figure17: Existing Connector Routes between Port Terminals and the Freeway Network, and Figure 18: Existing Connector Routes between Port Terminals and Railroad Intermodal Facilities, describe key routes that connect Port of Seattle terminal facilities to the regional and statewide highway network, and to railroad intermodal facilities.

Freight mobility is critical to Seattle's economic health. Intermodal connections including those between Port of Seattle terminals, regional and statewide highways and rail intermodal facilities are all key components of the freight network.

Figure 13: Parking Classifications: Residential Parking Zones and Parking Pay Stations and Meters, North Seattle (as of December 2004)

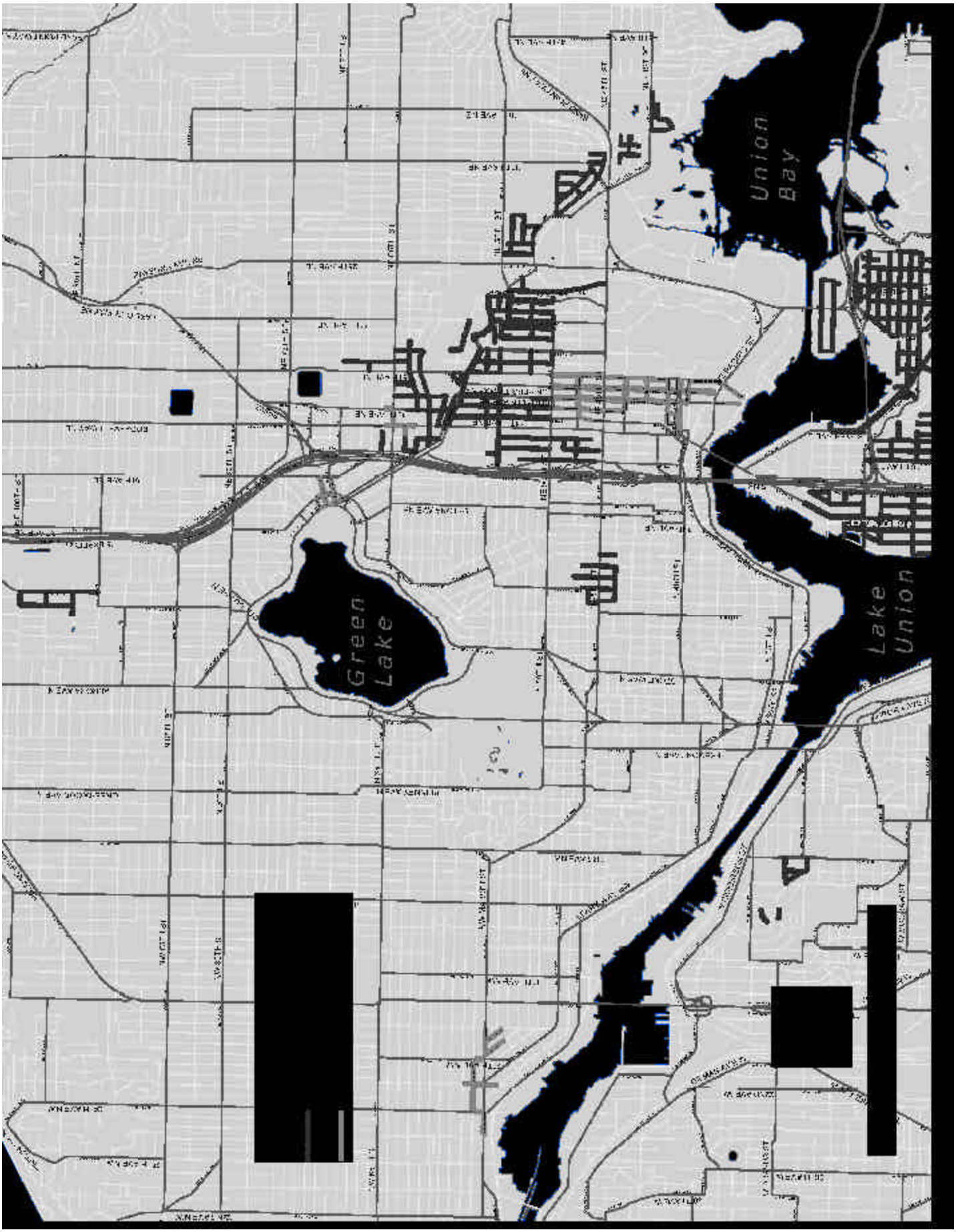


Figure 14: Parking Classifications: Residential Parking Zones and Parking Pay Stations and Meters, Central Business Districts (as of December 2004)

Figure 15: Parking Survey--Off Street, Center City Area

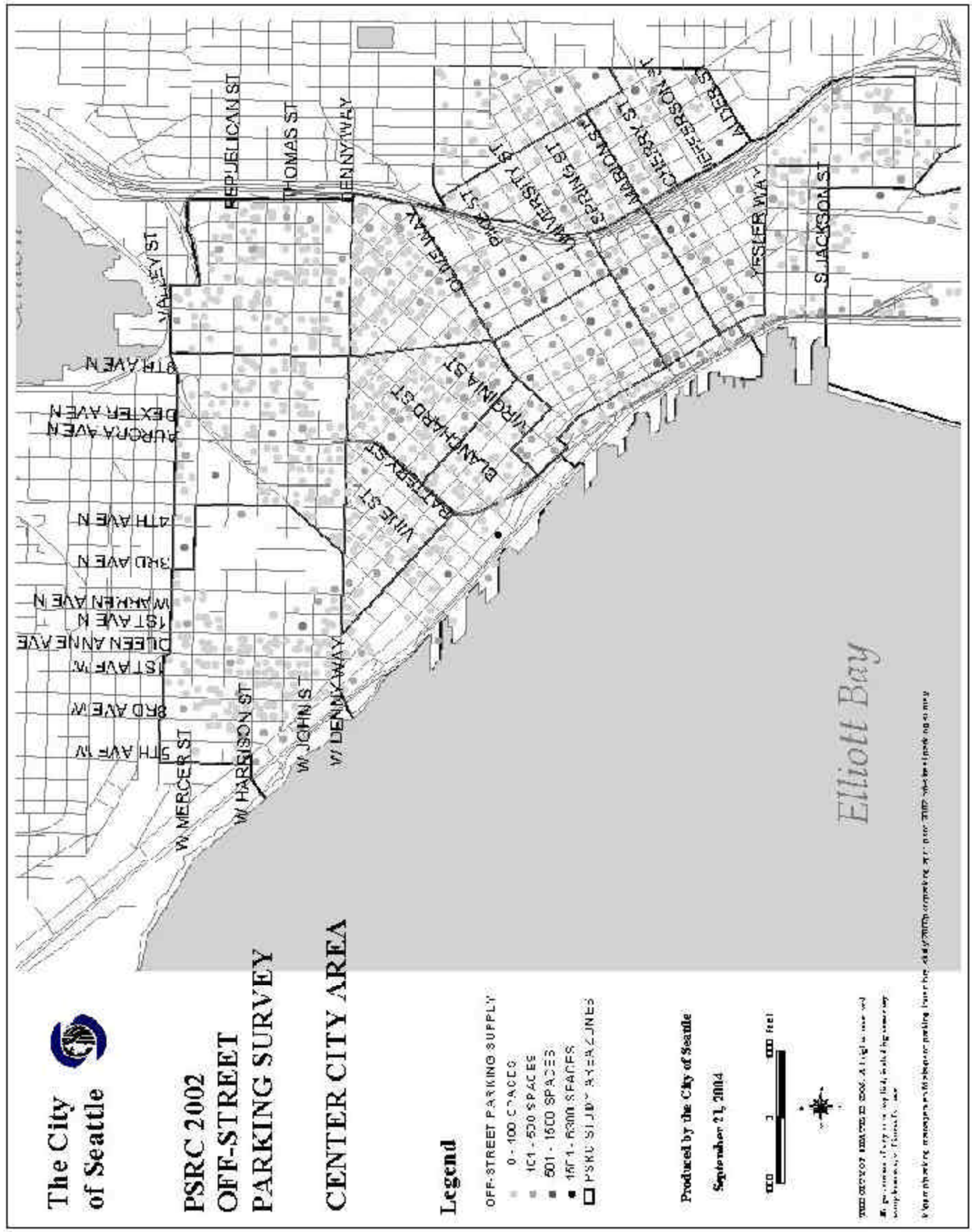


Figure 16: Parking Survey--Off Street, University District Area

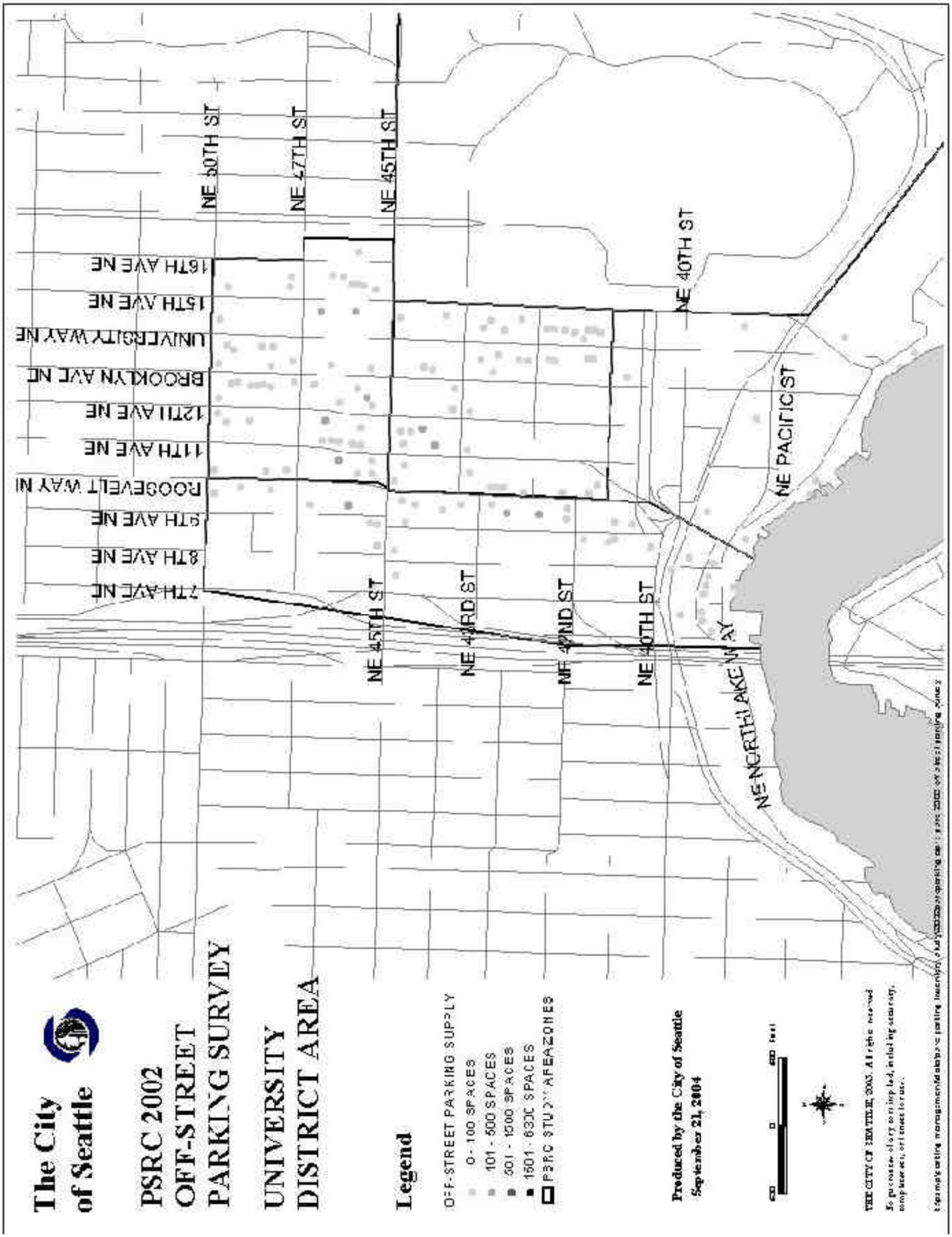


Table 2: On- and Off-street Parking Supply and Utilization Data
Comprehensive Neighborhood Parking Study, City of Seattle, 1999

Parking Usage

		Parking Spaces				Average			Peak Hour			Peak Hour
Area		On-Street	Off-Street	Loading	Total	On-Street	Off-Street	Total	On-Street	Off-Street	Total	
Urban Center Neighborhoods												
1	U-District University Way	323	1,280	77	1,680	57%	47%	49%	70%	64%	63%	12 – 1 pm
2	U-District Greek Row	452	1,191	49	1,692	93%	32%	49%	96%	36%	53%	1 – 2 pm
3	U-District West Residential	240	1,573	14	1,827	77%	60%	63%	83%	72%	73%	12 – 1 pm
4	Uptown - Lower Q Anne	376	1,838	40	2,254	69%	66%	66%	76%	81%	80%	1 – 2 pm
5	Uptown West Residential	285	676	15	976	88%	65%	71%	96%	76%	81%	11 – 12 pm
6	Pike-Pine	495	497	35	1,027	84%	59%	71%	91%	79%	81%	6 – 7 pm
10	Northgate	109	793	2	904	62%	57%	58%	77%	74%	72%	9 – 10 am
13	Capitol Hill - Broadway	269	893	43	1,205	69%	51%	55%	75%	65%	66%	1 – 2 pm
14	Capitol Hill West Residential	260	452	16	728	87%	61%	70%	94%	96%	89%	4 – 5 pm
15	Capitol Hill East Residential	264	297	5	566	75%	33%	53%	84%	40%	58%	5 – 6 pm
16	First Hill	559	2,421	49	3,029	71%	73%	72%	79%	89%	85%	5 – 6 pm
17	Denny Triangle	210	1,540	24	1,773	61%	76%	74%	71%	90%	87%	12 – 1 pm
21	Belltown	361	1,188	55	1,604	62%	68%	66%	87%	75%	73%	6 – 7 pm
Total spaces/Average rates		**4,203**	**14,639**	**424**	**19,266**	**75%**	**61%**	**64%**	**84%**	**75%**	**75%**	
Residential Urban Village Neighborhoods												
8	Crown Hill	320	991	4	1,315	31%	34%	34%	40%	43%	40%	9 – 10 am
18	Rainier Beach	276	879	0	1,155	17%	17%	17%	18%	18%	18%	5 – 6 pm
22a	North Beacon Hill (S. Atlantic)	385	576	0	961	78%	64%	69%	86%	76%	80%	11 – 12 pm
22b	North Beacon Hill (S. Lander)	208	226	3	437	31%	40%	36%	39%	62%	49%	1 – 2 pm
23a	Columbia City (MLK Jr Way S.)	186	134	0	320	61%	29%	48%	74%	39%	58%	6 – 7 pm
23b	Columbia City (S. Rainier)	388	757	13	1,158	45%	41%	43%	52%	52%	52%	12 – 1 pm
24	MLK @ Holly	671	1,615	0	2,286	20%	44%	37%	23%	50%	42%	4 – 5 pm
25	Henderson station area	142	96	3	241	16%	15%	15%	20%	29%	22%	8 – 9 am
26	Green Lake	181	239	18	438	76%	48%	60%	83%	55%	64%	11 – 12 pm
27	Eastlake	425	971	20	1,416	69%	51%	56%	78%	59%	64%	11 – 12 pm
28	Roosevelt	561	413	20	994	66%	45%	57%	74%	53%	64%	1 – 2 pm
29	Upper Queen Anne	548	499	12	1,059	69%	55%	62%	76%	73%	73%	12 – 1 pm
30	Wallingford	550	382	18	950	56%	47%	52%	62%	60%	61%	1 – 2 pm
Total spaces/Average rates		**4,841**	**7,778**	**111**	**12,730**	**51%**	**42%**	**45%**	**57%**	**51%**	**53%**	
Hub Urban Village Neighborhoods												
7	Broadview/Bitter Lk/Haller	347	2,489	0	2,836	32%	28%	28%	40%	37%	37%	9 – 10 am
9	Ballard	486	1,702	35	2,223	55%	20%	28%	59%	22%	30%	9 – 10 am
31	North Rainier	248	2,347	3	2,598	38%	36%	36%	50%	47%	47%	12 – 1 pm
32	Fremont - North of Canal	426	1,498	22	1,946	73%	62%	64%	82%	82%	80%	11 – 12 pm
33	Fremont - Sea Pac Univ	400	1,346	15	1,761	57%	73%	69%	67%	83%	79%	12 – 1 pm
34	Lake City	550	1,294	20	1,864	49%	38%	41%	51%	45%	46%	5 – 6 pm
35	South Lake Union - Cascade	398	1,355	21	1,774	73%	47%	53%	88%	67%	72%	9 – 10 am
36	South Lake Union - Mercer	365	891	31	1,287	73%	37%	47%	91%	48%	60%	12 – 1 pm
37	West Seattle Junction	629	1,338	14	1,981	50%	39%	42%	53%	48%	49%	12 – 1 pm
Total spaces/Average rates		**3,849**	**14,260**	**161**	**18,270**	**56%**	**40%**	**44%**	**64%**	**51%**	**53%**	
Grand total spaces/average rates		**12,893**	**36,677**	**696**	**50,266**	**60%**	**49%**	**56%**	**68%**	**61%**	**66%**	

There are two categories of routes:

Existing Seaport Highway Connector — identifies routes that provide safe, reliable, efficient and direct access between a Port marine facility and the state highway or interstate system.

Existing Seaport Intermodal Connector – identifies routes that provide safe, reliable, efficient and direct access between a Port terminal and a railroad intermodal facility located in Seattle or other area in King County.

These routes have a number of common characteristics: they are on designated arterial streets, have a high frequency of use by freight, provide two-way travel and direct access between Port facilities and the regional interstate system, and provide road access to marine facilities. Some Highway Connectors and Intermodal Connectors are located on the same street. These routes describe existing conditions, and they do not represent a distinct street classification or Street Type (see Chapter 3.2: Making the Best Use of the Streets We Have to Move People, Goods and Services, Strategies S.3. and S.4.).

2.10 Transportation Infrastructure

Successful operation and maintenance of the transportation system promotes safety, efficiency, infrastructure preservation, and a high quality environment. Maintenance costs consume 75 to 80% of the SDOT annual operating budget. This investment represents a significant and recurring commitment to the conservation of our city's transportation facilities, as dollars spent on maintenance today help ensure that more dollars are not needed for premature replacement later.

Effective maintenance of the transportation system means the City will have to plan for future maintenance activity and must also address the significant backlog of unmet maintenance needs that currently exists. The City's highest transportation priority is to take care of its existing transportation infrastructure — valued at an estimated $7.6 billion. A breakout of this inventory by major cost elements is as follows:

- Pavement: $4.7 Billion
- Roadway Structures: $2.4 Billion
- Traffic Management Control Devices: $113 Million
- Pedestrian & Bike Facilities: $314 Million
- Neighborhood Traffic Control Devices: $8 Million
- Street Trees & Landscaping: $123 Million

2.11 Pavement Conditions

This section details existing conditions of much of the transportation system, including arterial and non-arterial street pavement conditions and maintenance needs, the traffic signal system and optimization corridors completed, the bridge structures inventory, and high collision accident data.

The SDOT Pavement Engineering and Management Section develops and maintains the pavement management database system; acquires and analyzes field data on pavement condition; keeps records on paving accomplishments; maintains and updates City priorities for maintenance paving; and participates in the development, execution and acceptance of paving

Maintaining and improving Seattle's transportation facilities is fundamental to supporting a vibrant, livable city in the future. Following are examples of the major elements comprising Seattle's transportation system:

3,931	lane miles pavement	4,700	crosswalks
1,524	arterial lane miles	24,000	curb ramps
2,389	non-arterial miles	32 miles	bike trails
148	bridges	90 miles	bike routes
479	stairways	800	traffic circles
561	retaining walls	80	traffic diverters
22	miles sea walls	30,000	street trees
1,000	signalized intersections and traffic controllers	1.6 million	lane markers
		1,100 miles	lane stripes
9,000	parking meters and pay stations	120,000	signs

Figure 17: Existing Connector Routes between Port Terminals and the Freeway Network

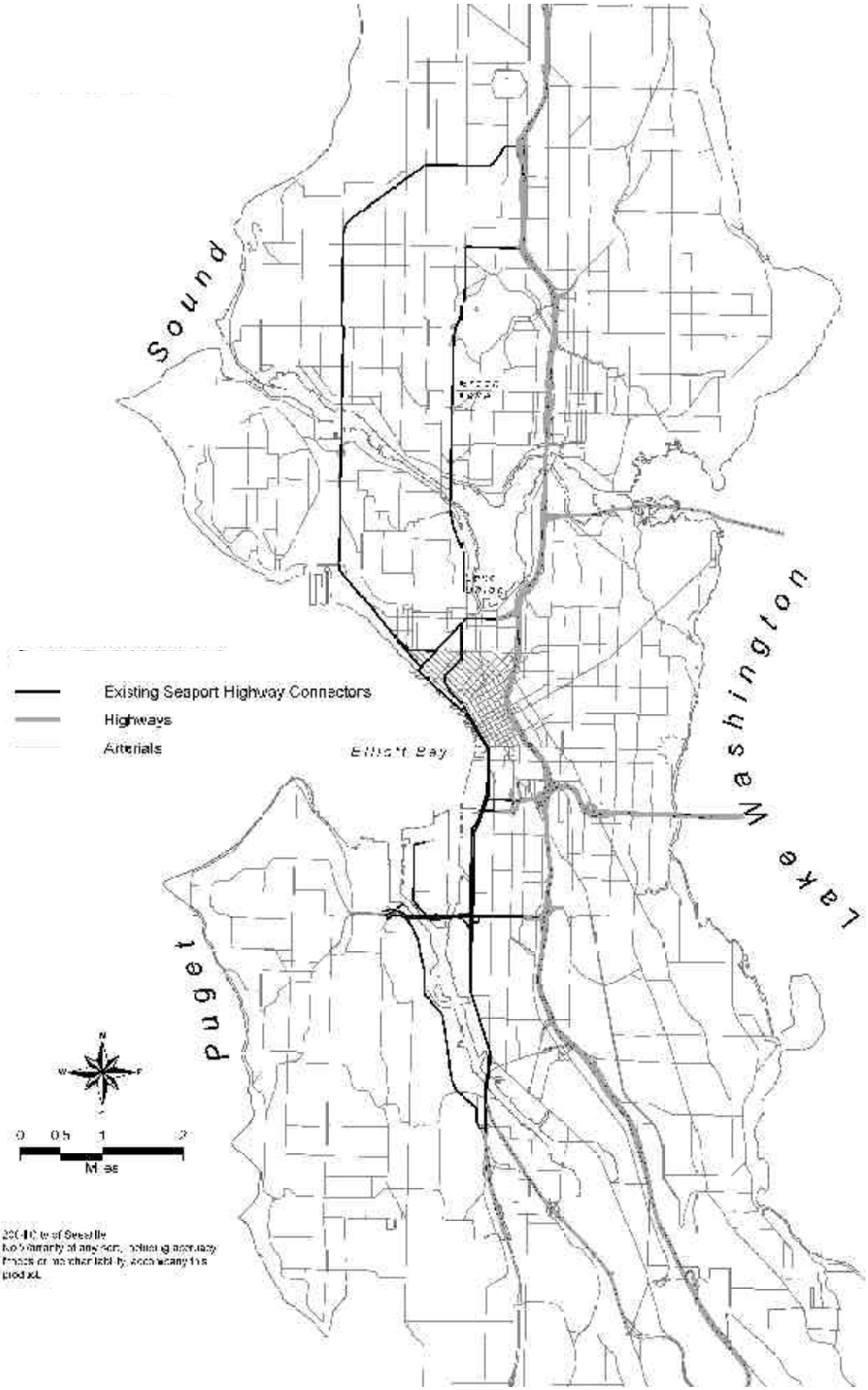
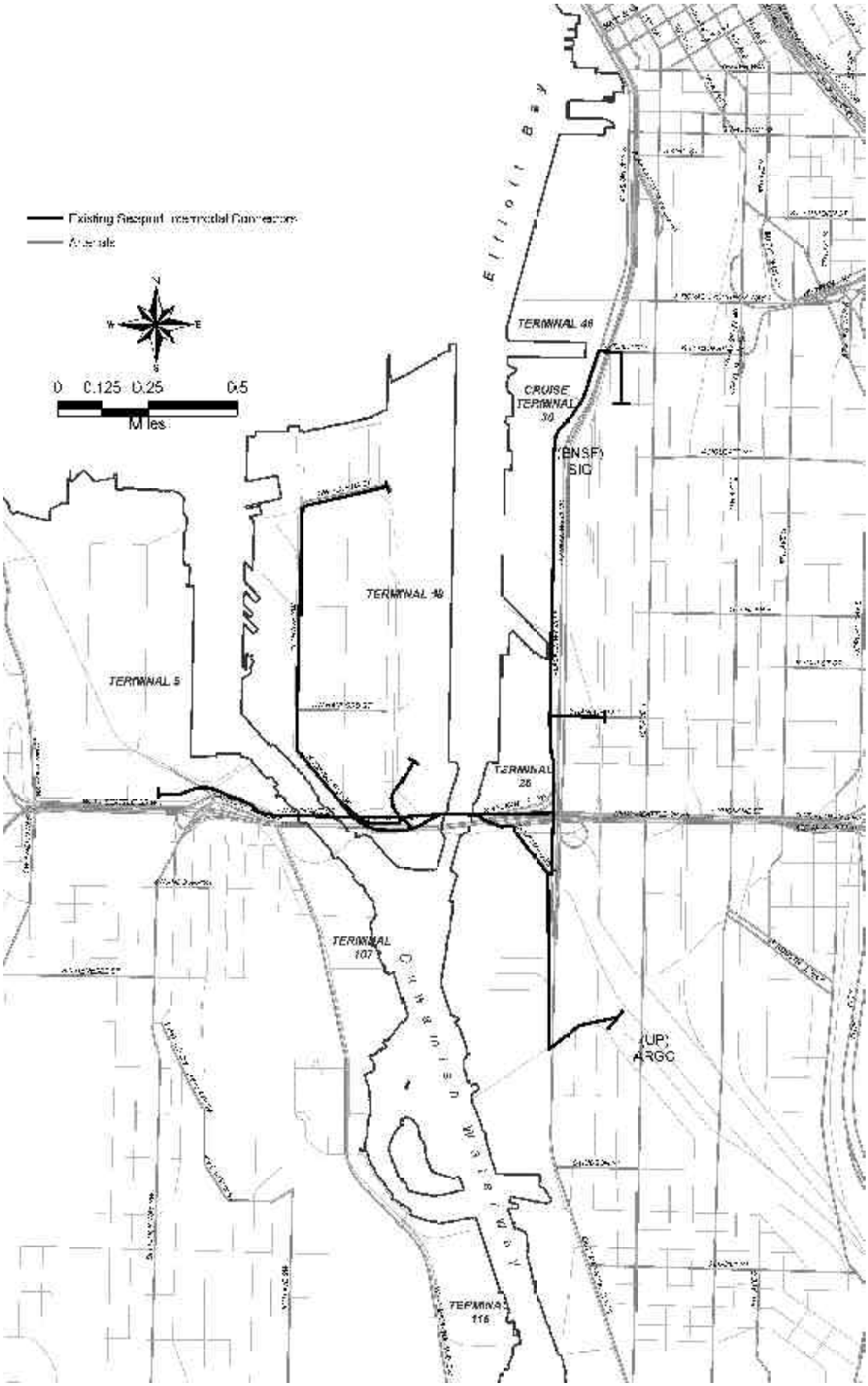


Figure 18: Existing Connector Routes between Port Terminals and Railroad Intermodal Facilities



projects. The Pavement Management System provides an accepted and generally employed technical basis for decision-making concerning the maintenance and rehabilitation of Seattle's 3,946 12'-wide lane-miles of streets.

The City relies on the pavement management system to make cost-effective decisions concerning street maintenance and rehabilitation. The system takes into account such factors as the type of street, the traffic, the physical condition of the pavement, the presence or absence of utility cuts and similar spot intrusions and repairs, the time that has elapsed since the last major maintenance, and other factors. Table 3 summarizes Seattle's pavement area by functional classficiation.

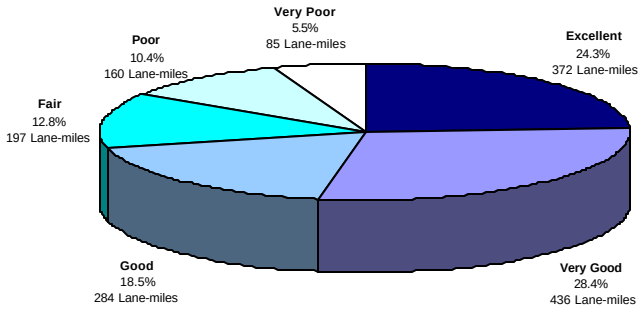
Table 3: Pavement Area by Functional Classification, 2004

Functional Classification	Pavement Area (12' Lane Miles)	Fraction of Network
Principal Arterial	620	15.7%
Minor Arterial	566	14.3%
Collector Arterial	348	8.8%
All arterial streets	**1,534**	**39.0%**
All non-arterial streets	**2,412**	**61.0%**
All Pavements	**3,946**	**100.0%**

An objective of pavement management is to maintain streets classified as fair or good so that they do not become poor or failed streets that are much more expensive to rehabilitate. Figure 19: Rating Seattle's Pavement Condition, describes the condition of Seattle's pavement. The data from Figure 19 and Table 3: Pavement Area by Functional Classification, are taken from the City of Seattle Pavement Condition Report published by SDOT in 2004.

Street Maintenance has an operational pavement management system including a high resolution video log of the entire arterial street system. This tool allows City staff to quickly evaluate existing pavement conditions throughout the arterial street system.

Figure 19: Rating Seattle's Pavement Condition, 2004



2.15 Seattle Tree Inventory

Since 1989, almost 15,000 street trees have been planted. Approximately 54% of the trees have been paid for by residents or volunteer organizations. The City of Seattle's General Fund, Capital Improvement Projects and Federal Grants have accounted for another 45%. The remaining number of trees have been installed by private developers. Today, approximately 98,000 trees exist along Seattle's streets. Less than 1,000 trees have been removed along Seattle's streets in the past five years.

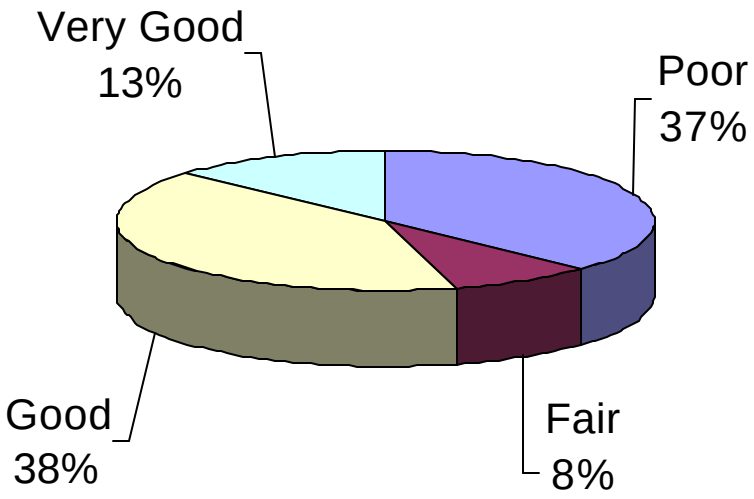
A Seattle resident plants a new street tree in her neighborhood. Over half of Seattle's street trees are planted and cared for by residents or volunteer organizations.

2.16 Structures

The Access Database for Structures and Bridge Inventory provides an accepted and generally employed technical basis for decision-making concerning the maintenance and rehabilitation of Seattle's 149 vehicle and pedestrian bridges, 561retaining walls, and 479 stairways.

The structures maintenance database system takes into account such factors as the load capacity (number and weight of vehicles that the structure can bear), the physical condition of the structure, the maintenance records of the structure, the time that has elapsed since the last major maintenance, and other factors. A rating of Seattle's bridges is summarized in Figure 20: Structures Rating. The structures rating is determined using factors including structural adequacy, volume of traffic, detour length and public safety.

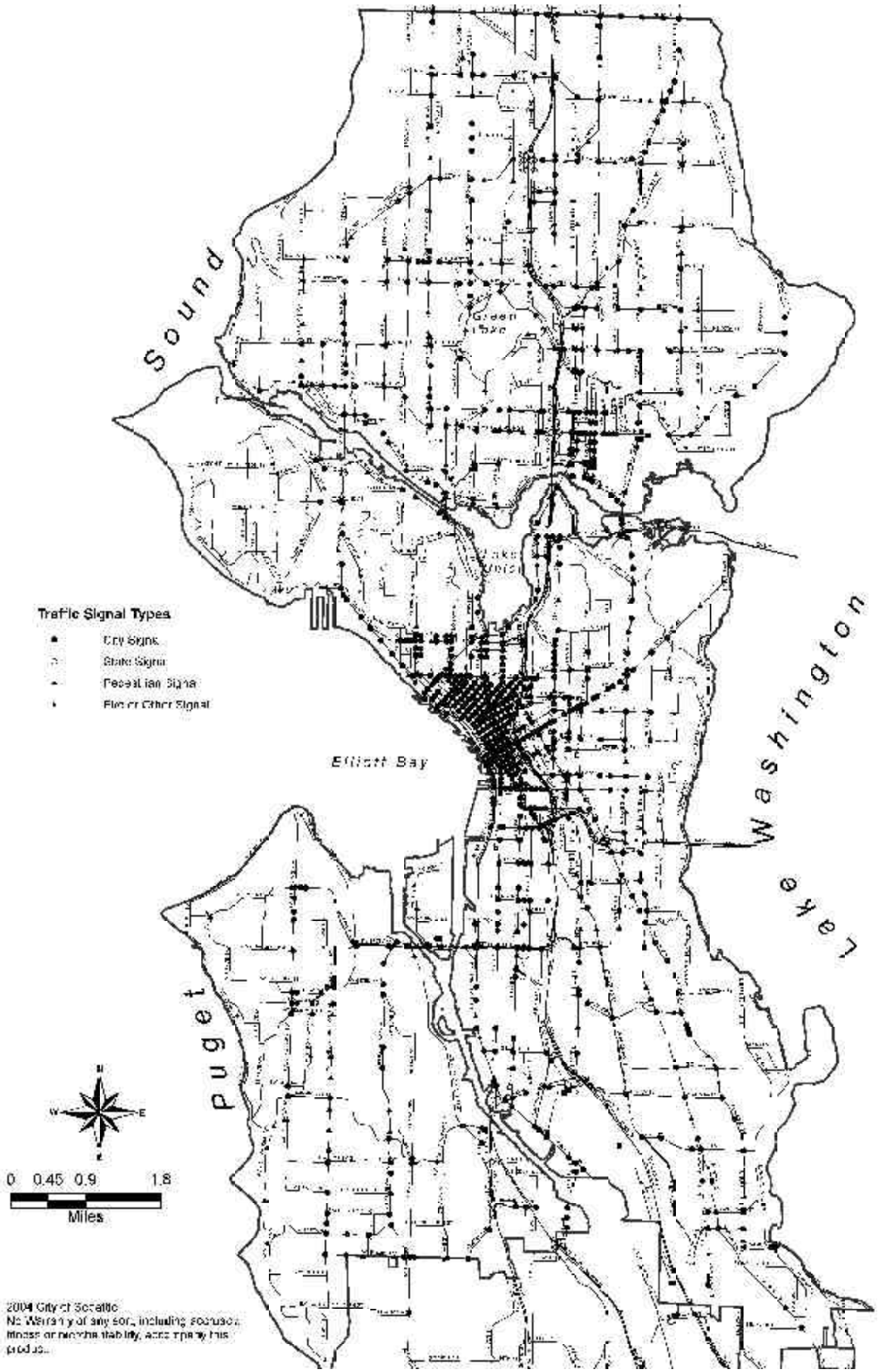
Figure 20: Structures Rating



2.17 Traffic Signals

SDOT has mapped existing traffic and pedestrian-only signals and proposed signal optimization projects. These are shown in Figure 21: Traffic Signals.

Figure 21: Traffic Signals



Chapter 3.0: Plan Elements

3.1 Building Urban Villages

The development pattern described in the Urban Village Element of the City of Seattle Comprehensive Plan will shape the city's transportation facilities. In particular, transportation facility design will reflect the intended pedestrian nature of the urban centers and villages and the desire to connect these places with transit service.

Ballard Ave. NW is in the Ballard Hub Urban Village

Because Seattle is a fully built city with a mature street system, the City uses a full range of non-single occupant vehicle transportation facilities to support the desired redevelopment pattern within urban villages. These facilities can help create the mixed-use, walkable, transit and bike-friendly centers that this Plan envisions. However, the City recognizes that auto and service access to property will remain important for accommodating growth in urban centers and villages.

Outside of urban centers and villages, the City will also look for appropriate transportation designs that align transportation facilities and services with adjacent land uses. The Transportation Element of the Comprehensive Plan contains references to the Transportation Strategic Plan, which is the functional plan developed to implement these policies.

Comprehensive Plan Goals and Policies

TG1 Ensure that transportation decisions, strategies and investments are coordinated with land use goals and support the urban village strategy.

T1 Design transportation infrastructure in urban villages to support land use goals for compact, accessible, walkable neighborhoods.

T2 Make the design and scale of transportation facilities compatible with planned land uses and with consideration for the character anticipated by this Plan for the surrounding neighborhood.

T3 Encourage and provide opportunities for public involvement in planning and designing of City transportation facilities, programs, and services, and encourage other agencies to do the same.

T4 Provide sufficient transportation facilities and services to promote and accommodate the growth this Plan anticipates in urban centers, urban villages, and manufacturing/industrial centers while reducing reliance on single occupancy vehicles.

T5 Establish multi-modal hubs providing transfer points between transit modes in urban centers and urban villages.

Strategies for improving transportation facilities in Seattle's urban centers and villages are located throughout the TSP elements. The SDOT project prioritization process described in Chapter 4: Funding the Plan also includes criteria to evaluate if a project supports the urban village land use strategies.

3.2 Make the Best Use of the Streets We Have to Move People, Goods and Services

There are about 366,000 passenger cars and trucks registered in Seattle, more than the amount of licensed drivers. Over the last twenty years, vehicle miles traveled in the region have grown over four times as fast as population. At the same time, Seattle has a limited amount of street space to accommodate these vehicles, leading to increased congestion. The Comprehensive Plan recognizes that, with very few exceptions, expanding streets and roads to accommodate cars is generally unproductive. New capacity is quickly filled by more driving. In addition, opportunities to widen or construct new streets in Seattle are extremely limited because of our built-out, urban environment. Therefore, we must make the best use of our existing rights-of-way to move people, goods and services.

The Comprehensive Plan sets forth a plan to increase the use of transit, walking, bicycling, carpooling, and other alternatives. Part of SDOT's role in the implementation of the Comprehensive Plan is to design and build transportation projects that support attractive, compact, walkable neighborhoods. To accomplish these goals, the Department manages traffic on all streets to balance making street improvements that enhance neighborhood character and promote livable communities as well as the need to manage property access for motor vehicles and freight.

Walking, driving and parking are just a few of the activities that must be accomodated in Seattle's street rights-of-way.

SDOT seeks to manage the carrying capacity of the City street system and on-street parking as efficiently and effectively as possible. At the same time, SDOT monitors increasing traffic congestion along transit, freight, bicycle and pedestrian routes. The City must allocate street space carefully among competing uses to further the City's growth management and transportation goals.

Comprehensive Plan Goals and Policies

TG2 Manage the street system safely and efficiently for all modes and users and seek to balance limited street capacity among competing uses.

TG3 Promote safe and convenient bicycle and pedestrian access throughout the transportation system.

TG4 Promote adequate capacity on the street system for transit and other designated uses.

TG5 Preserve and maintain the boulevard network as both a travel and open space system.

TG6 Promote efficient freight and goods movement.

TG7 Protect neighborhood streets from through traffic.

T6 Allocate street space among various uses (e.g., traffic, transit, trucks, carpools, bicycles, parking, and pedestrians) to enhance the key function(s) of a street as described in the Transportation Strategic Plan.

T7 Designate, in the Transportation Strategic Plan, a traffic network that defines Interstate Freeways, Regional, Principal, Minor and Collector Arterial streets, Commercial and Residential Access Streets and Alleys as follows:

Interstate Freeways: roadways that provide the highest capacity and least impeded traffic flow for longer vehicle trips.

Regional Arterials: roadways that provide for intra-regional travel and carry traffic through the city or serve important traffic generators, such as regional shopping centers, a major university, or sports stadia.

Principal Arterials: roadways that are intended to serve as the primary routes for moving traffic through the city connecting urban centers and urban villages to one another, or to the regional transportation network.

Minor Arterials: roadways that distribute traffic from principal arterials to collector arterials and access streets.

Collector Arterials: roadways that collect and distribute traffic from principal and minor arterials to local access streets or provide direct access to destinations.

Commercial Access Streets: roadways that directly serve commercial and industrial land uses and provide localized traffic circulation.

Residential Access Streets: roadways that provide access to neighborhood land uses and access to higher level traffic streets.

Alleys: travelways that provide access to the rear of residences and businesses that are not intended for the movement of through trips. Where a continuous alley network exists, it is the preferred corridor for utility facilities.

T8 Establish a street system that can accommodate the weight of heavy vehicles and reduce the damage such vehicles can cause.

T9 Designate, in the Transportation Strategic Plan, a transit network to maintain and improve transit mobility and access, compatible with the transportation infrastructure and surrounding land uses. Through the network, focus transit investments and indicate expected bus volumes and transit priority treatments appropriate for the type and condition of the street.

T10 Designate, in the Transportation Strategic Plan, a truck street classification network to accommodate trucks and to preserve and improve commercial transportation mobility and access. Designate as follows:

Major Truck Streets: an arterial street that accommodates significant freight movement through the city, and connects to major freight traffic generators.

T11 Designate, in the Transportation Strategic Plan, a bicycle classification network to accommodate bicycle trips through the City and to major destinations. Designate as follows:

Urban Trails: a network of on- and off-street trails that facilitate walking and bicycling as viable transportation choices, provide recreational opportunities, and link major parks and open spaces with Seattle neighborhoods, reprinted as Figure 22: Urban Trails Map.

Bicycle Streets: an on-street bicycle network that connects neighborhoods and urban centers and villages and serves major inter-modal connections.

T12 Designate, in the Transportation Strategic Plan, a network of boulevards that provides for circulation and access in a manner that enhances the appreciation or use of adjacent major parklands and vistas and preserves the historic character of the boulevards.

T13 Designate, in the Transportation Strategic Plan, a Street Type overlay to define street use and design features that support adjacent land uses, generally, as follows:

Main Street: Main activity center in urban villages for pedestrians and transit. This Street Type encourages and supports pedestrian and bicycle activity as well as transit. Streets in this type may include high capacity transit stops and are distinguished by compact, mixed land uses and high densities.

Mixed Use Street: Streets within neighborhood commercial areas of the city. This Street Type supports all modes with an emphasis on pedestrian access.

Regional Connector Street: Provide connections between regional centers along principal arterials. This Street Type supports all modes but is primarily designed to provide citywide and regional access for transit, cars and truck trips and may support high and intermediate capacity transit service.

Commercial Connector Street: Provide connections between commercial areas as well as local access within urban villages along minor arterials streets. This Street Type supports all modes with an emphasis on local access.

Local Connector Street: This Street Type supports pedestrian access along Collector Arterials to and from key pedestrian generators and destinations (e.g., schools, community centers, transit stops). May also be non-arterial streets that provide direct connection to high capacity transit stops.

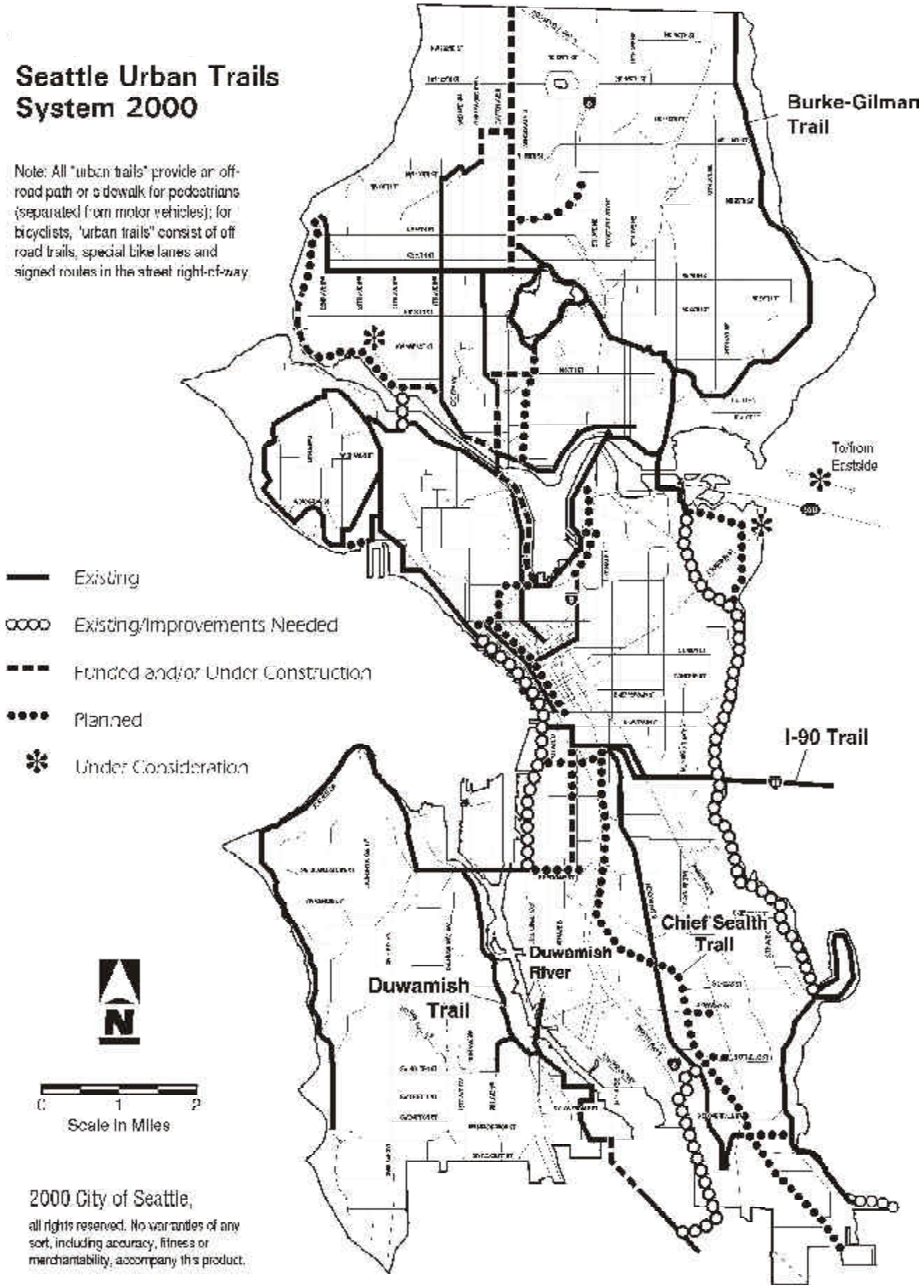
Industrial Access Street: This Street Type supports freight access to manufacturing and industrial land uses.

Green Street: This Street Type on certain downtown streets provides exceptional pedestrian environments and may include wider sidewalks, street trees, landscaping, and appropriate street furniture emphasizing pedestrian movement.

Neighborhood Green Street: May be on any non-arterial street adjacent to residential and commercial land uses. This Street Type supports all modes with an emphasis on pedestrian amenities, street trees and landscaping.

T14 Use neighborhood traffic control devices and strategies to protect local streets from through traffic, high volumes, high speeds, and pedestrian/vehicle conflicts. Use these devices and strategies on collector arterials where they are compatible with the basic function of collector arterials.

Figure 22: Urban Trails Map
(Reprinted from City of Seattle Comprehensive Plan, 2004, Transportation Figure 1)



T15 Increase capacity on roadways only if needed to improve safety, improve connectivity of the transportation network, improve isolated connections to regional roadways, or where other measures are impractical to achieve level-of-service standards. The City will manage capacity of principal arterials where and as appropriate and will not attempt to provide street space to meet latent demand for travel by car. The City will not support freeway expansion for the sole purpose of increasing general traffic capacity.

T16 Recognize the important function of alleys in the transportation network. Consider alleys, especially continuous alleys, a valuable resource for access to abutting properties to load/unload, locate utilities, and dispose of waste.

Strategies for Making the Best Use of Streets We Have to Move People, Goods and Services

This section includes strategies that offer direction so that SDOT can make the best use of the streets we have to move people, goods and services through planning for street networks and efficient management of our rights-of-way. Many of these strategies are under development currently in the Right-of-Way Management Initiative, a new program to more comprehensively manage Seattle's right-of-way in the future. Through the use of new processes and tools, SDOT will better plan, authorize, coordinate, analyze, and communicate the use of the right-of-way to get Seattle moving.

S1. Optimize the People-Moving Capacity of Existing Arterial Streets.

Arterial streets are designed to more safely handle higher volumes and speeds of traffic than non-arterial streets. There are a number of ways the City can increase the efficiency of arterial streets in a manner that fosters pedestrian-friendly streetscapes and protects neighborhoods from cut-through traffic. In addition, the Walking, Bicycling, Transit and Operations and Maintenance strategies later in this chapter are all critical to this effort.

S1.1 Optimize the Movement of People, Goods and Services on Arterial Streets through Operational Improvements.

Identify and implement operational improvements through adjustments of existing traffic facilities. Examples include adjusting signal timing, installing turn pockets, restricting turning movements and driveways, installing regulatory and informational signing, and adding parking restrictions to provide for turning movements and through-lane continuity.

S1.2 Optimize People-Moving Capacity through Major Capital Improvements.

Evaluate and implement capital improvement projects on arterial streets to enhance traffic operations (e.g., large projects like installing signal interconnects, improving direct linkages with highways and freeways, and constructing grade separations where appropriate). Major investments in new lane capacity would be justified only in the rarest of circumstances, and such projects would require substantial analysis to determine the cost-effectiveness as well as the evaluation of impacts and potential for lower-cost alternatives.

S2. Continue Seattle's Neighborhood Traffic Control Program.

Consider requests from neighborhood organizations and citizens and consequently design and implement traffic circles and other neighborhood traffic control devices. These devices can be very effective to slow speeds and reduce collisions on neighborhood streets. In fact, to date, Seattle's traffic circles have resulted in a substantial reduction in accidents and speeds in neighborhoods. They can also

Figure 23: Seattle Arterial Classifications

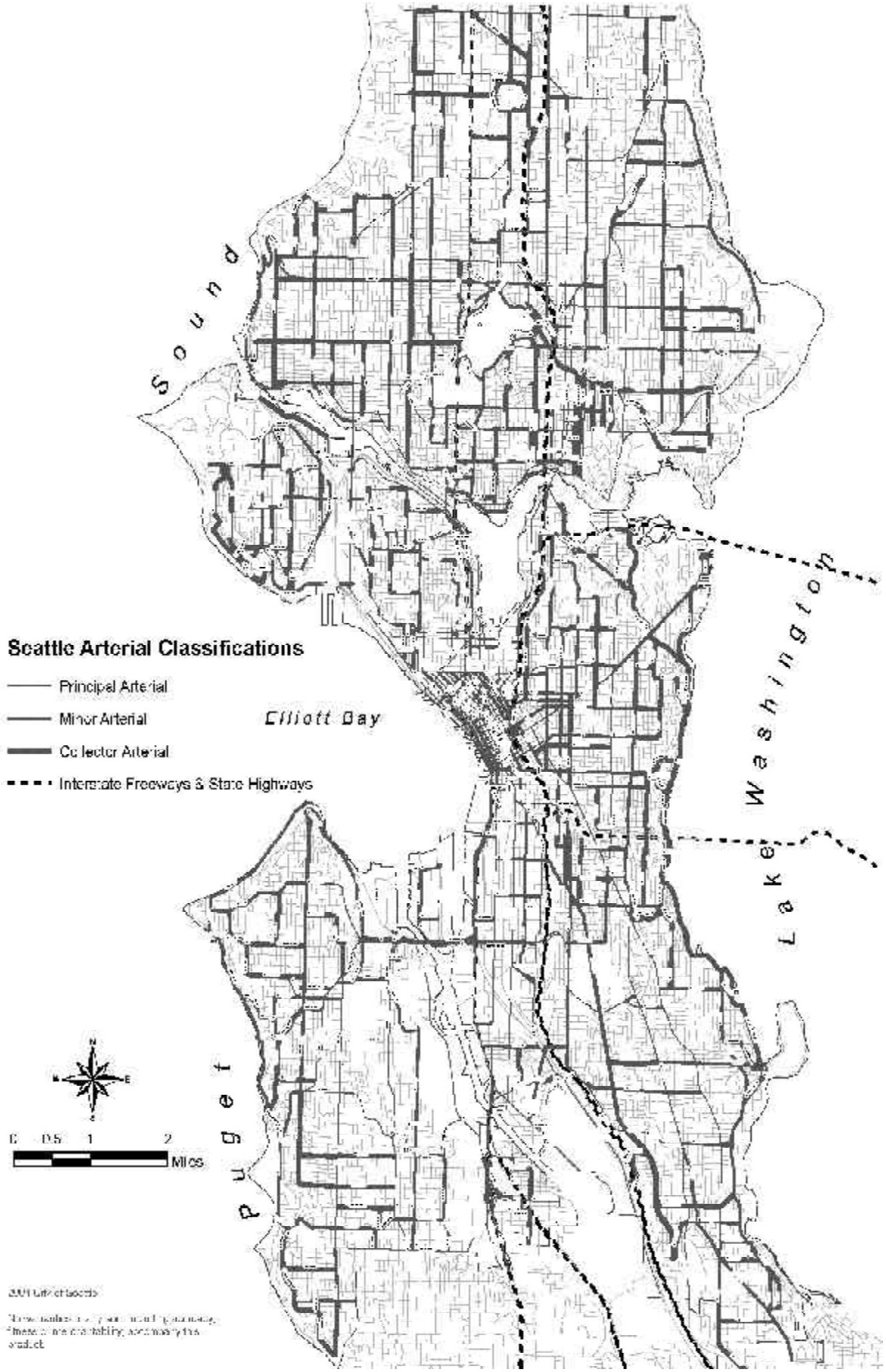
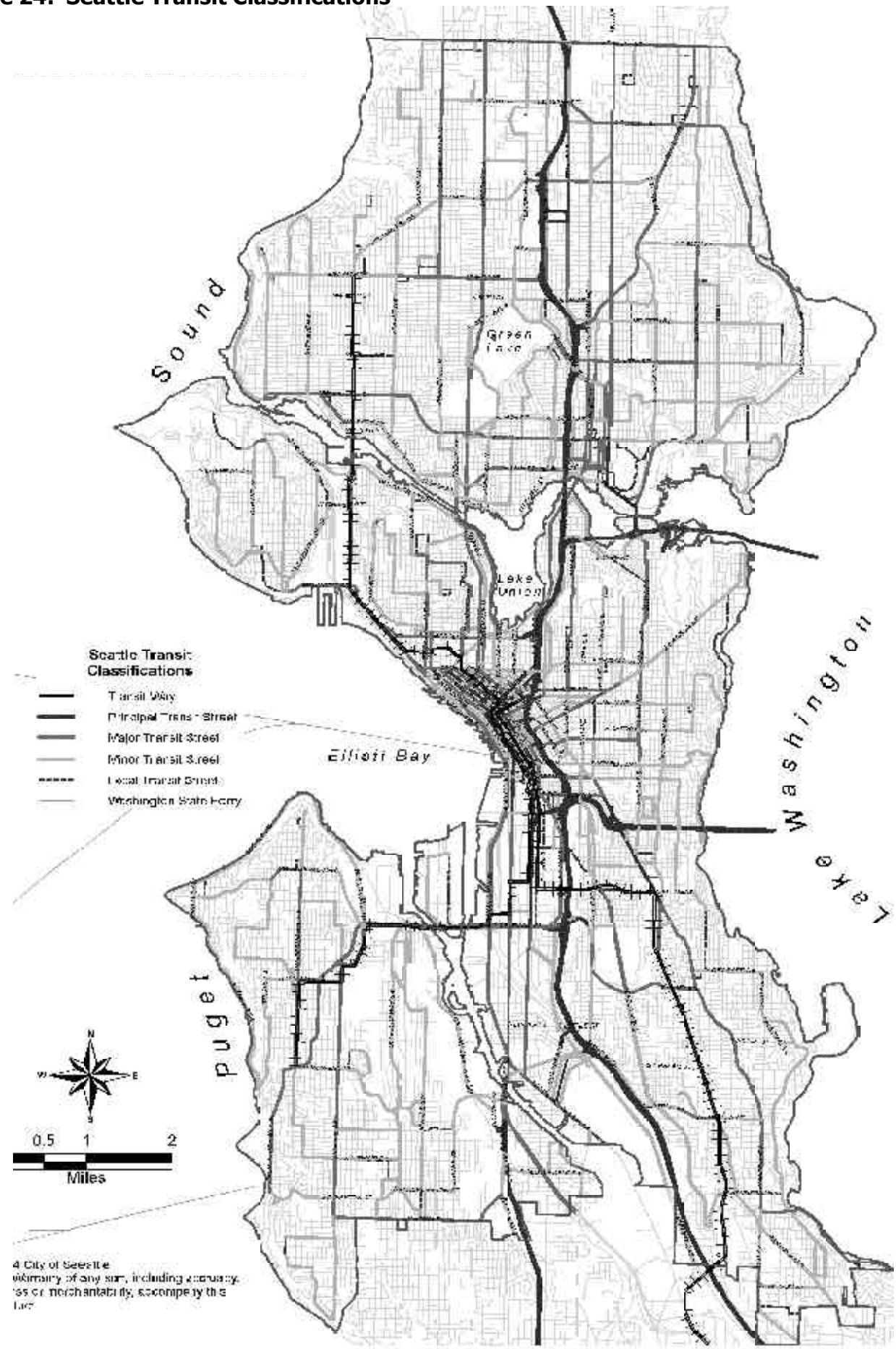


Figure 24: Seattle Transit Classifications



encourage through traffic to stay on the arterial streets, reducing the impacts of cut through traffic on neighborhoods.

S3. Define Seattle's Street Classification System to Guide the Design and Operation of the City's Street System.

The City of Seattle classifies streets according to different levels of emphasis on traffic movement versus direct access to property. The street classifications are based on the American Association of State Highway and Transportation Officials (AASHTO) standards that identify major functional classifications for all urbanized areas that have over 50,000 people.

At one end of the hierarchy, a freeway emphasizes traffic movement, while restricting access to adjacent land. At the other end of the hierarchy, a local street provides easy access to adjacent residential, commercial, and industrial land uses. Transportation improvements developed in accordance with the street classification system will help to discourage higher speed "through" traffic from using local neighborhood streets, and local traffic from congesting regional travel facilities. This will not only improve the efficiency of the transportation system, but will also maintain the livability of city neighborhoods.

Street classification descriptions and designations provide the basis for determining how individual streets should be used and operated as well as for evaluating any changes in the operation or physical features of city streets. They are used to guide future investments in transportation improvements. While the policies provide a framework, the design of improvements for specific locations will continue to be developed through the City's standard design process.

S3.1. Define and Map the Following Traffic Classifications (See Figure 23: Seattle Arterial Classifications):

INTERSTATE FREEWAYS:

Limited access roadways that provide the highest capacity and least impeded traffic flow for longer vehicle trips (five miles or more).

REGIONAL ARTERIALS:

Roadways that provide for intra-regional travel. As such, may carry traffic through the city or serve important traffic generators, such as regional shopping centers, a major university, or sports stadia (not pictured on the Figure 23: Seattle Arterial Classifications).

PRINCIPAL ARTERIALS:

Streets that are intended to serve as the principal route for the movement of traffic through the city. They connect urban centers and urban villages to one another, or to the regional transportation network.

MINOR ARTERIALS:

Streets that distribute traffic from principal arterials to collector arterials and commercial and residential access streets.

COLLECTOR ARTERIALS:

Streets that collect and distribute traffic from principal and minor arterials to non-arterial streets or provide direct access to destinations.

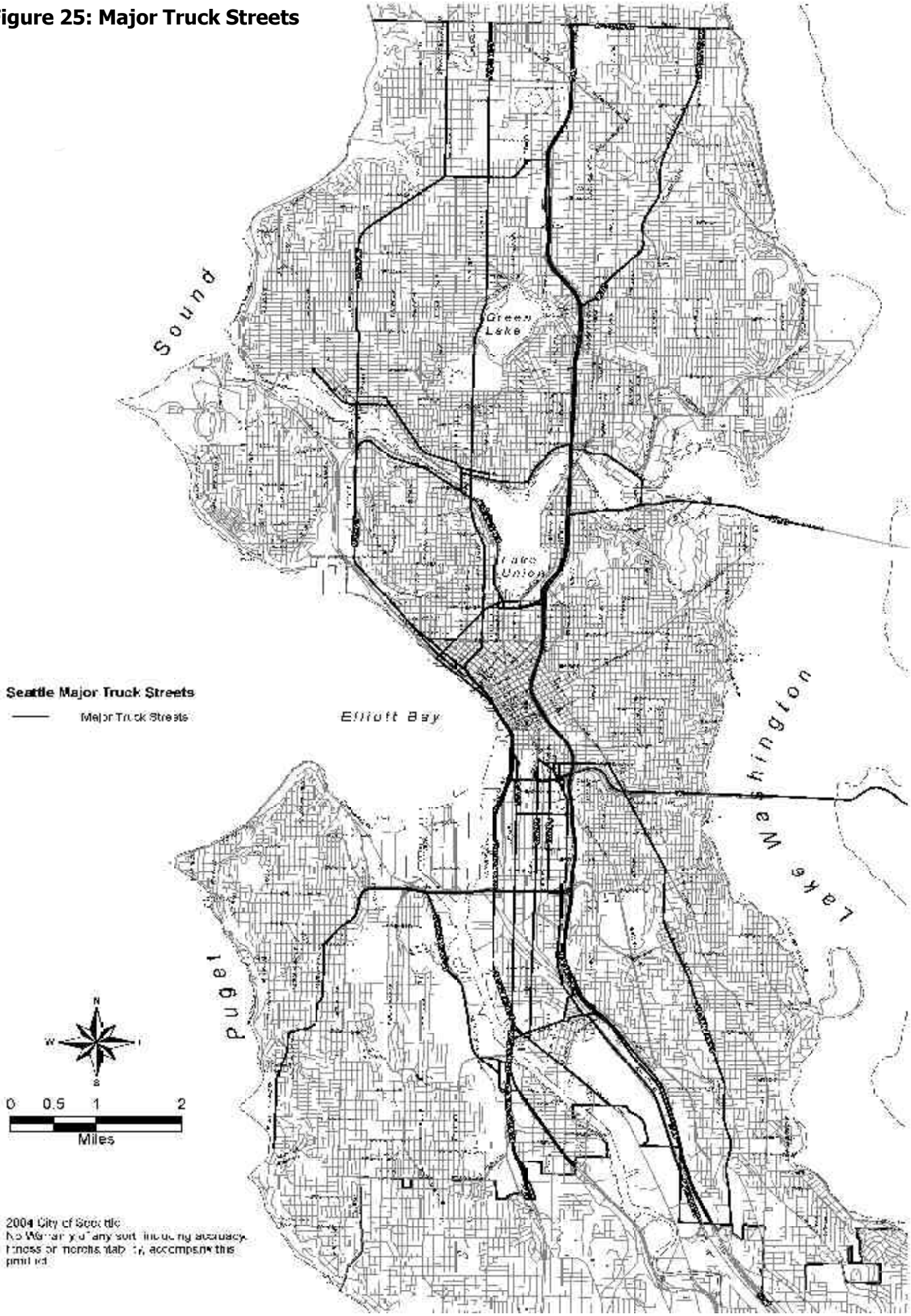
COMMERCIAL ACCESS STREETS (NON-ARTERIAL):

Streets that provide access to commercial and industrial land uses and provide localized traffic circulation.

RESIDENTIAL ACCESS STREETS (NON-ARTERIAL):

Streets that provide access to residential land uses and to higher level traffic streets and provide localized traffic circulation.

Figure 25: Major Truck Streets



ALLEYS:

Travel ways that provide access to the rear of residences and businesses and are not intended for the movement of through trips. Where a continuous alley network exists, it is the preferred corridor for utility facilities. Alleys are not included on Figure 23: Seattle Arterial Classifications.

S3.2. Define and Map the Following Transit Classifications (see Figure 24: Seattle Transit Classifications):

TRANSIT WAY:

Provides frequent, high speed, high capacity and intermediate capacity service. They are a component of the Urban Village Transit Network (UVTN).

PRINCIPAL TRANSIT STREET:

Provides for high-volume transit service, often for regional or city-wide trips. Some Principal Transit Streets may be part of the UVTN.

MAJOR TRANSIT STREET:

Provides concentrated transit service to connect and reinforce major activity centers and residential areas. Some Major Transit Streets may be part of the UVTN.

MINOR TRANSIT STREET:

Provides local and neighborhood transit service. Some Minor Transit Streets may be part of the UVTN.

LOCAL TRANSIT STREET:

Provides local and neighborhood transit service – sometimes on non-arterial streets. They allow for special transit service as provided by smaller than standard sized buses as well as infrequent transit service such as school bus service. Local Transit Streets also allow for bus turnarounds, no scheduled stops or loop ends, at the end of a route upon SDOT approval. Local Transit Streets are not part of the UVTN.

S3.3. Define and Map the Following Truck Classifications (see Figure 25: Major Truck Streets):

MAJOR TRUCK STREETS:

Arterial streets that accommodate significant freight movement through the city and to and from major freight traffic generators. Major Truck Streets generally carry heavier loads and higher truck volumes. SDOT uses the designation of Major Truck Street on an on-going basis as an important criteria for street design, traffic management decisions and pavement design and repair.

S3.4. Define and Map the Following Bicycle Classifications (see Figure 26: Bicycle Classifications):

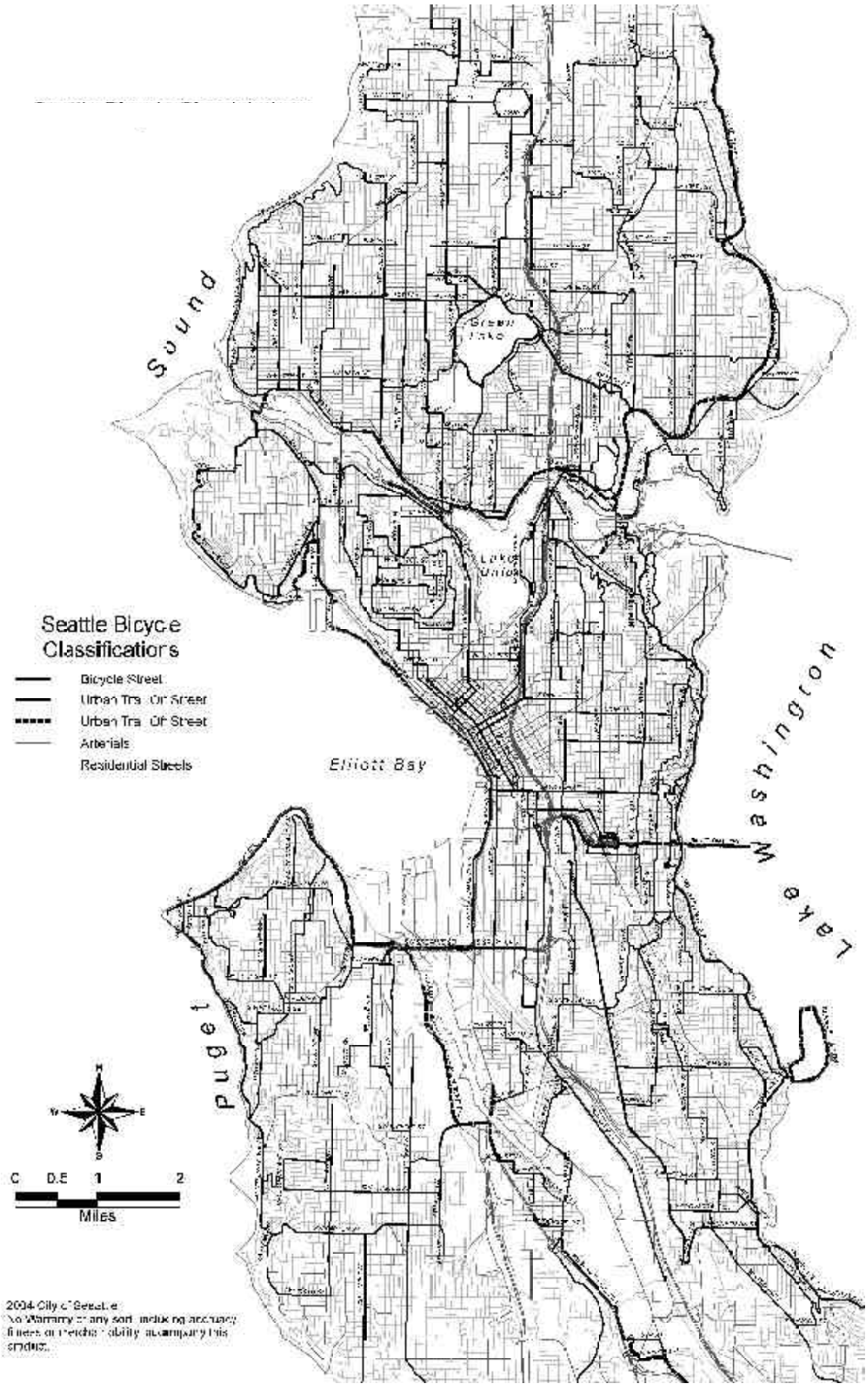
URBAN TRAILS:

A network of on- and off-street trails that facilitate bicycling as a viable transportation choice, provide recreational opportunities, and link urban centers, urban villages, major parks and open spaces with Seattle neighborhoods.

BICYCLE STREETS:

An on-street bicycle network that connects neighborhood and urban centers and serves major inter-modal connections and bicycle facility locations (ferry, bikestations, park-and-ride facilities with bicycle lockers). Bicycle streets are currently indicated as “streets commonly used by bicycles” on SDOT’s Seattle Bicycle Map.

Figure 26: Bicycle Classifications



S3.5. Define and Map the Following Boulevard Classifications (see Figure 27: Boulevard Classifications):

CLASS 1 BOULEVARD–NATURAL LANDSCAPING:

To provide for circulation and access in a manner that enhances the appreciation or use of adjacent major park lands (run along the street for one mile or more) and continuous vistas. The emphasis is typically on natural landscaping instead of formal landscaping.

CLASS 2 BOULEVARD—FORMAL LANDSCAPING:

To provide for special landscaping and geometric features access in a manner that provides a park-like atmosphere to a street otherwise intended to move traffic, and/or to provide access.

CLASS 1 OLMSTED BOULEVARD:

This classification would be applied to the existing, improved Olmsted Boulevards with *natural* landscaping.

CLASS 2 OLMSTED BOULEVARD:

This classification would be applied to the existing, improved Olmsted Boulevards with *formal* landscaping.

S4. Define and Map a Set of Street Types to Define Street Design Features that Support the Street's Function and Adjacent Land Use.

Seattle's street classifications (see Comprehensive Plan Policies T10-T15 and TSP strategies S3-3.5) define how a street should function to support movement of people, goods and services versus access to property. However, street classifications by themselves are not an adequate local planning and design tool. The design of a street--intersections, sidewalks, and transit stops should reflect the adjacent land uses because the type and intensity of the adjacent land use directly influences how the street is used. Seattle's Street Types are established in the Comprehensive Plan (Policy T16) as an overlay on the arterial network. They are not classifications, but provide a more specific definition of the design elements that support the street's function for pedestrians, bicyclists, transit and freight as well as the adjacent land use.

Street Types enhance the city-wide street classifications with a site-specific design tool. The design elements that are high priorities for each Street Type will be included in the Right-of-Way Improvement Manual that will be published in 2005. Where sufficient public right-of-way exists, all priority design elements may be accommodated. However, most of Seattle's public rights-of-way are constrained and trade-offs between priority design elements are required to balance the functions of the various travel modes. Street Types provide guidance for neighborhoods, City staff or partner agencies to design streets so that they support both their transportation function and adjacent land uses.

The following distinguish Street Types from Street Classifications:

- Street Types are an overlay on the arterial classification map. They do not replace, substitute or override the underlying arterial classification;
- Street Types are a site specific design tool. Unlike arterial classifications that define a city-wide network, a Street Type designation may only extend a few blocks, such as the Main Street and Mixed Use Street Types defined in S4.1 and S4.2.
- Seattle's arterial classifications are adopted by City Council ordinance and constitute a set of requirements for the function and operation of arterials. Street Types are defined in the Comprehensive Plan, TSP and Right-of-Way Improvements Manual. They define a set of design and operational features of a street that should be considered if the street design is to support the classification and the adjacent land use.

Figure 27: Boulevard Classifications

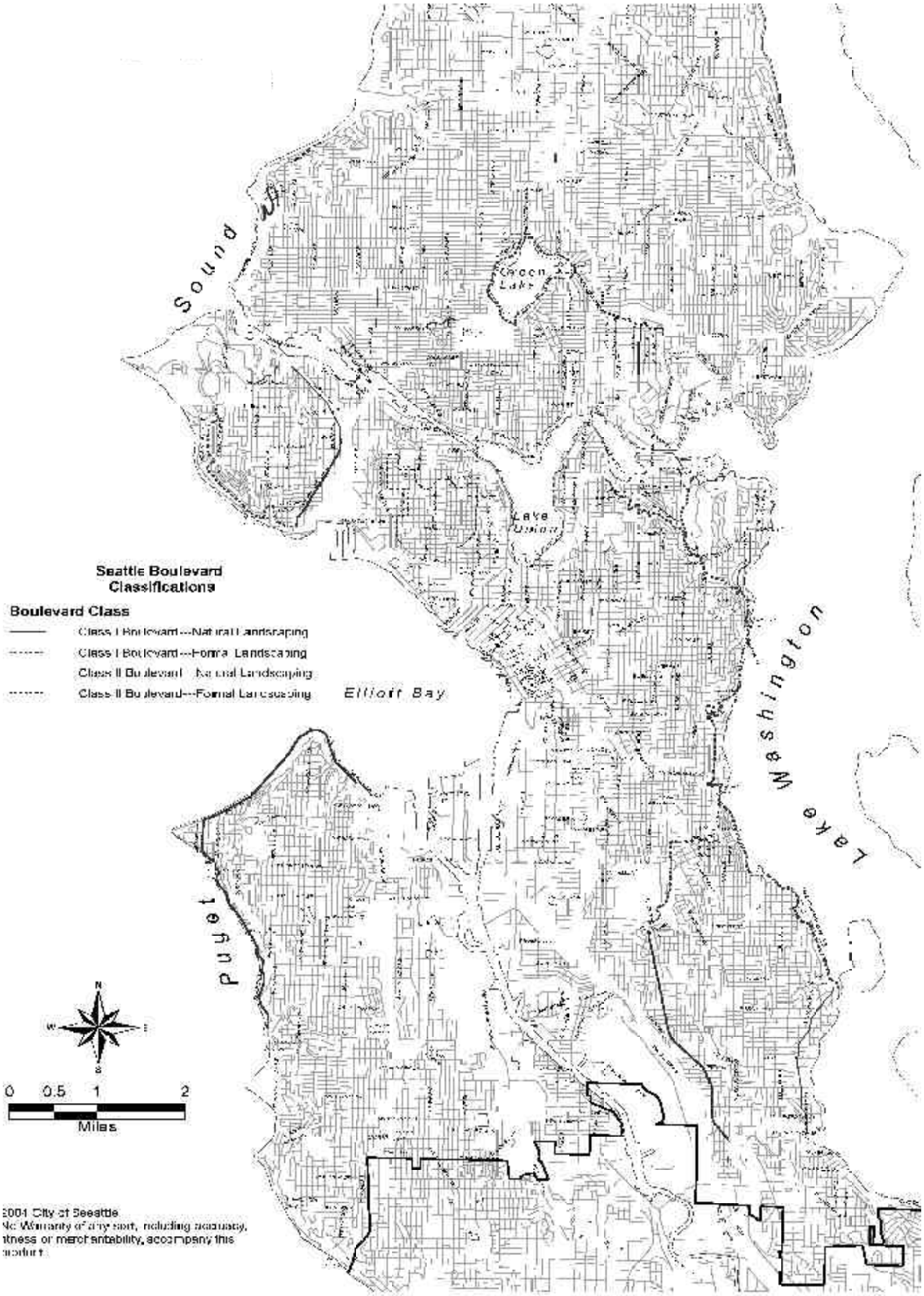


Table 4: Street Types Definitions, defines each street type according to its classification and adjacent land use.

Table 4: Street Types Definitions

Name of Street Type	Street Classification	Adjacent Land Use
Main Street	Arterial—all	Neighborhood commercial with a pedestrian designation
Mixed Use Street	Arterial—all	Neighborhood commercial
Regional Connector	Principal Arterial	Industrial, Commercial, Residential
Commercial Connector	Minor Arterial	Commercial, Residential
Local Connector	Collector Arterial	Residential, Institutional (community service)
Industrial Access Street	Arterial—all, non-arterials in commercial areas	Industrial, Maritime
Green Street	Non-arterial in Downtown Seattle	Residential
Neighborhood Green Street	Non-arterial outside of Downtown Seattle	Residential

S4.1. Designate a Main Street Type.

Main Streets are arterial streets located within the most pedestrian-oriented sections of neighborhood business districts. These arterial streets and adjacent properties have a "pedestrian designation" in the Seattle Land Use Code that requires new development to have pedestrian-friendly features.

Main Streets are designed to promote walking, bicycling, and transit within an attractive corridor that has pedestrian amenities such as landscaping, bicycle parking, decorative paving, pedestrian-scaled lighting, street furniture, and wide sidewalks. Actions that manage traffic to reduce speeds within these corridors are recommended to enhance pedestrian and bicycle safety and access. Design features that minimize the crossing distance for pedestrians such as curb bulbs or tight corner radii are encouraged.

Main Streets are typically not more than one-half mile in length but may extend further depending on the type of adjacent land uses and the area served. Main Streets generally consist of two to four travel lanes with an appropriate buffer between the walking area and moving traffic, such as a landscape/furniture zone or on-street parking to serve adjacent land uses. When on-street parking is allowed, short term on-street parking and loading zones is prioritized. To further create a pedestrian-friendly atmosphere, Main Streets have wide sidewalks with space for transit shelters, street furniture and outdoor cafes. Weather protection, especially near transit stops, is also important on Main Streets.

This Main Street shows bicycle parking, wide sidewalks, street trees and curb bulbs--all design features that support pedestrian and bicycle activity.

S4.2. Designate a Mixed Use Street Type.

Mixed Use Streets are arterials located in neighborhood commercial areas that do not have a pedestrian land use designation. They typically connect to Main Streets and have adjacent land uses that are fairly dense and mixed use. Mixed Use Streets accommodate all modes of travel with particular emphasis on supporting pedestrian, bicycle and transit activity. Mixed Use Streets should also be designed to accommodate service and delivery vehicles on routes leading to commercial businesses (e.g., grocery stores) as well as support transit activity. Mixed Use Streets typically consist of two to four travel lanes and they may include on-street parking and wide sidewalks, depending on the type and intensity of adjacent commercial land uses.When on-street parking is allowed, prioritize short-term on-street parking and loading zones.

S4.3. Designate a Regional Connector Street Type.

Regional Connector Streets are principal arterials that link urban villages to each other. Although they must be accessible and attractive to all modes, they are designed to provide city-wide and regional access for transit, cars and truck trips. Regional Connectors also connect designated manufacturing and industrial centers to the local and regional freight network. They move high volumes of traffic through the city and between urban villages. Regional Connector Streets typically have four to six travel lanes and emphasize mobility over land access. Traffic management measures may be needed, however, to slow traffic and ensure pedestrian safety and comfort at key locations, such as near transit stops.

Regional Connector Streets are designed to accomodate high volumes of traffic through the city and between urban villages.

S4.4. Designate a Commercial Connector Street Type.

Commercial Connector Streets are minor arterials that provide connections between commercial areas of the city, such as neighborhood business districts. They also provide local access within urban villages. As minor arterials, Commercial Connector Streets serve both long-haul vehicle trips through the city and provide access to local residential, commercial, and institutional land uses. Commercial Connector Streets must accommodate all modes including cars, trucks, buses, bicycles and pedestrians and are designed to balance traffic mobility with land access.

S4.5 Designate a Local Connector Street Type.

Local Connector Streets are collector arterials that provide direct connections between pedestrian generators (e.g., residences, transit stops) and destinations (e.g., community centers, schools, neighborhood main streets). They are designed to emphasize walking, bicycling, and land access over mobility and tend to be more pedestrian oriented than Commercial Connector Streets. School walk routes, main routes to transit stops and to community centers are typically located along Local Connector Streets. In some cases, non-arterial streets that provide direct connections to High-Capacity Transit stops, such as S. Edmunds St. in Columbia City, can be Local Connector Streets if they are located within a Station Area Overlay Zone.

S4.6. Designate an Industrial Access Street Type.

Industrial Access Streets are arterials and non-arterials that are adjacent to industrial, manufacturing, and commercial land uses (not neighborhood commercial land uses). They are designed to accommodate significant volumes of large vehicles such as trucks, trailers, and other delivery vehicles. Because these areas are relatively low-density, bicycle and

pedestrian travel is more infrequent than in other types of neighborhoods. Industrial Access Streets typically consist of two to four travel lanes, which are generally wider—15 to 20 feet wide—to accommodate movement of larger vehicles. Bike lanes and on-street parking are rare on Industrial Access Streets. Sidewalks are provided but are generally narrower than in higher-density commercial and retail areas.

Landscaping, public art and sidewalk enhancements are all components of this Green Street in Seattle's Belltown neighborhood.

S4.7. Designate a Green Street Type.

Green Streets are designated on a number of non-arterial streets within Downtown Seattle. Landscaping, historic character elements, traffic calming, and other unique features distinguish Green Streets from other Street Types. Green Streets are designed to emphasize pedestrian amenities and landscaping in areas that have dense, residential land uses. Each Green Street has its own unique character and design. The right-of-way dimensions can vary significantly from street to street and from segment to segment.

S4.8. Designate a Neighborhood Green Street Type.

Neighborhood Green Streets may be any non-arterial street outside of Downtown Seattle. Similar to Green Streets, Neighborhood Green Streets emphasize pedestrian amenities, landscaping, historic character elements, traffic calming, and other unique features. Neighborhood Green Streets were designated in Seattle's neighborhood plans.

S5. Implement the Right-of-Way Management (ROWM) Initiative.

Comprehensively manage Seattle's rights-of-way through new processes and tools such as the Right-of-Way Improvement Manual (formerly the Street Improvement Manual). The Right of Way Management (ROWM) Initiative includes a number of integrated projects that are focused on improvements to planning, coordinating, permitting, analyzing, and communicating work in the City's right-of-way. Together, these projects will improve mobility, while allowing for maintenance of the City's infrastructure.

S6. Plan, Permit and Inspect Work in Seattle's Transportation Rights-of-Way.

The City of Seattle strives to keep public rights-of-way in a state of good repair and free from unnecessary encumbrances in order to provide for the health, safety, and well being of its citizens, to ensure the integrity of its streets and the appropriate use of the rights-of-way. SDOT's Street Use division endeavors to accomplish these goals by managing activities and construction occurring in the right-of-way through issuance of permits, inspection, project coordination, public outreach, utility record keeping and plan review.

S7. Encourage the Retention of Alleys for Service and Access to Property.

Improved alleys are an important part of Seattle's street network. The primary purpose of alleys is to provide for access to adjacent properties, utilies, and service functions. Wherever possible, it is important that service and utility functions be located in alleys to protect the character of the adjacent streets that serve a broader purpose, such as access to property by pedestrians, bicyclists, transit patrons as well as for street trees and landscaping and other amenities. In neighborhood business districts, SDOT may allow adjacent property owners to provide pedestrian-oriented design features in the alley. SDOT makes these decisions on a case by case basis and requires that the alley's primary purpose is met, public safety issues are addressed, and the property owner agrees to maintain the improvements. SDOT will continue to work with City Council, the Seattle Design Commission, property owners and community groups to retain alleys for their primary purpose through project review for alley vacations and improvements.

There are over 130 car-share vehicles in 20 Seattle neighborhoods in 2005.

3.3 Increase Transportation Choices

The following sections describes the primary activities SDOT engages in to manage the demand on the transportation network. SDOT is working to encourage a shift in travel modes away from single occupancy vehicles (SOV) trips and towards alternative modes that are better able to move more people while at the same time being more environmentally desirable. In addition, there are sections following this one that provide details on transit, biking, walking, and managing parking, all of which support the goal of increasing the use of transportation choices.

3.3 TDM Increase Transportation Choices: Demand Management

Cars will continue to be an important part of our transportation system. While recognizing that the car will continue to be the best choice of travel mode for some trips, SDOT is committed to increasing the viability of the many transportation modes available while reducing dependence on the automobile for all trips. Transportation choices and public education are necessary to increasing awareness of the viability of, and informed decisions of the desirability of, modes of travel beyond the car. Alternatives to the single-occupancy-vehicle (SOV) need to address cost, convenience and time issues. SDOT recognizes that transportation needs and travel choices will change over time as alternatives to automobile travel become more viable.

Transportation pricing has a major influence on people's travel decisions. One of the reasons pricing contributes to people frequently choosing to drive their car for a particular trip is that the direct costs of driving a car are perceived as extremely low when compared to other modes of travel. On the one hand, there is significant public funding spent to make driving automobiles convenient and less expensive. According to a 1997 study from the Puget Sound Regional Council (PSRC), citizens of the four central Puget Sound counties spent $21 billion on surface transportation in 1995, including all private and public costs. On the other hand, the main costs paid out of pocket directly by individual drivers tend to occur monthly or several times per year, which results in a tendency for drivers to underestimate their actual cost of owning and operating a car.

However, even though there are significant public funds spent on making driving convenient and less expensive and the costs of driving a car are perceived as low, the cost of owning and operating a car is considerable. In the PSRC study mentioned above, the single largest expense was the cost individuals paid to own and operate private cars (which was 60% or around $12.6 billion). Current estimates show that it costs the typical household around $6,500 per year to own and operate a car driven an average of 10,000 miles per year. Transportation costs, especially owning and operating one or more cars, is a large monthly expense - sometimes the second largest expense - for many households, with housing (mortgage or rent) being the largest. Therefore, SDOT is committed to raising public awareness about the true costs of car ownership as part of a selection of strategies to increase the use of transportation choices.

Comprehensive Plan Goals and Policies

TG8 Meet the current and future mobility needs of residents, businesses, and visitors with a balanced transportation system.

TG9 Provide programs and services to promote transit, bicycling, walking, and carpooling to help reduce car use and SOV trips.

TG10 Accommodate all new trips in downtown with non-SOV modes.

TG11 Strive to achieve the following mode choice goals for use of travel modes through the City's land use strategies and transportation programs:

Table 5: Mode Choice Goals for Work Trips to Seattle and its Urban Centers

	Proportion of work trips made using Non-SOV Modes		
Urban Center	**2000***	**2010 Goal**	**2020 Goal**
Downtown	56%	62%	70%
1st Hill/Capitol Hill	31%	37%	50%
Uptown/Queen Anne	33%	37%	50%
South Lake Union	30%	37%	50%
University District	56%	62%	70%
Northgate	26%	30%	40%
Seattle	**39%**	**42%**	**45%**

* 2000 mode choice numbers are from the U.S. Census for the year 2000 journey to work data by place of employment.

Table 6: Mode Choice Goals for Residents of Seattle and its Urban Centers (All Trips)

	Proportion of all trips made using non-sov modes		
Urban Center	**2000***	**2010 Goal**	**2020 Goal**
Downtown	77%	80%	85%
1st Hill/Capitol Hill	69%	75%	80%
Uptown/Queen Anne	64%	70%	75%
South Lake Union	65%	70%	75%
University District	60%	65%	70%
Northgate	50%	55%	60%
Seattle	**53%**	**55%**	**60%**

*2000 mode choice numbers are preliminary estimates from the Puget Sound Regional Council Regional Travel Demand Model (2004 preliminary model update) for Home-Based Work and Home-Based Non-Work Trips.

T17 Provide, support, and promote programs and strategies aimed at reducing the number of car trips and miles driven (for work and non-work purposes) to increase the efficiency of the transportation system.

T18 Promote public awareness of the impact travel choices have on household finances, personal quality of life, society, and the environment, and

increase awareness of the range of travel choices available.

T19 Pursue transportation demand management (TDM) strategies at the regional level, and strengthen regional partnerships working on TDM measures. Coordinate with regional and state partners so customers see their travel choices and the various TDM promotions as a coordinated, integrated system that makes a difference in the community.

Strategies for Demand Management

This section contains strategies that offer direction so that SDOT can strive to provide increasingly viable alternatives to driving alone including transit, bicycling and walking. SDOT's Transportation Demand Management (TDM) programs work to maximize the movement of people and goods using the existing transportation system.

Much of the TDM strategies listed in this Plan continue the work first outlined in the 1998 TSP as well as more recent City efforts such as *Way to Go, Seattle!*, which is a family of programs intended to better manage the demand placed on the transportation network. *Way to Go, Seattle!* includes programs such as the One Less Car Challenge, Car Smart Community Grants, "Way to Go for High School" program, and TDM Tools for Business Districts.

TDM1. Educate the Public About Transportation Demand Management.

Educate the public, including youth and lower income individuals, about the individual and societal benefits of alternatives to cars. A broad-based city-wide education campaign focused on the availability and advantage of transportation options and the cost of the private automobile would follow in the tradition of Seattle creating a market transformation about how people think about recycling, water conservation and energy conservation. Such programs would inform those who now commute by single-occupant vehicle about the economic, societal, and environmental costs of their choices and the costs savings and benefits available by choosing walking, bicycling, and transit. It would also encourage incentives and support efforts to induce future generations to become regular users of transit and non-motorized modes. This strategy includes both program development and seeking the necessary funding.

TDM2. Pursue Regional Partnerships and Branding.

Coordinate regionally on TDM programs with King County Metro, Sound Transit, the Washington State Department of Transportation TDM Resource Center, and the Puget Sound Regional Council. While these agencies provide very useful TDM programs, the programs are not always presented to the public as a comprehensive set of solutions that support one another. Encourage branding of the TDM programs to show that governments are working together to provide these services. More importantly, if all these TDM programs are identified with a recognizable brand, they will reinforce each other and TDM will be seen as something embraced by many people.

TDM3. Advocate for Incorporating TDM in Major Transportation Projects.

Advocate for a comprehensive TDM programs within the major regional highway and transit projects in Puget Sound, including the Alaskan Way Viaduct, the SR 520 Study, the I-405 Study, Sound Transit, and the Monorail. Agencies undertaking major corridor studies should incorporate a Transportation System Management alternative that includes a strong TDM component. TDM should also be incorporated into all alternatives and TDM programs provided by all agencies involved should be presented as a comprehensive set of solutions that support each other. Demand management

can be the most effective method to making the most effcient use of new transportation infrastructure.

TDM4. Strengthen and Expand Programs to Reduce Auto Ownership.

Strengthen and expand the City's family of TDM programs for the public known as, "Way to Go, Seattle." The main program to encourage reduction in auto ownership is the One-Less-Car Challenge that uses proven methods to increase mode split in favor of non-SOV modes. From 2000-2002, the City of Seattle sponsored the One-Less-Car Demonstration Study, a precursor to the One-Less-Car Challenge. Of the 90 households participating in the Demonstration Study, 1 in 5 (or 20%) sold one or more cars at the conclusion of the study because they realized they didn't need their second car to be able to get where they need to go. The Demonstration Study, and the follow-up One-Less- Car Challenge are programs that educate car owners about the costs of car ownership, provide educational materials on choices available and incentives to sell a car. These programs reduce both commute trips as well as shopping, recreational and other non-work related trips (which make up 75% of all trips).

TDM5. Support Efforts to Evaluate and Reform Transportation Pricing.

Explore and use a variety of transportation pricing strategies to seek to make drivers pay more of the true costs of single occupant vehicle use and to shift the costs they do pay from regular monthly payments to trip-based or mileage-based costs. Strategies include:

- parking pricing – make parking costs transparent, by unbundling parking costs from building leases, and cashing-out employer paid parking
- mileage based insurance premiums
- mileage base vehicle license fees
- road use and parking fees
- taxes on fuel and tires

A number of transportation pricing strategies could generate significant transportation revenues and also have a substantial impact on people's travel decisions, thereby reducing congestion and pollution.

TDM6. Encourage Car Sharing.

Continue to support Seattle's car sharing organizations. Car sharing helps extend the public transportation network, increase transportation choices, reduces the land devoted to parking spaces, and reduce the overall number of car trips and vehicle miles traveled (VMT). Seattle has the nation's oldest and largest car-sharing program called Flexcar, developed as a public-private partnership with King County Metro and a private firm. In previous years, the City of Seattle has provided funds for off-street parking incurred by the program and the City modified the Land Use Code to provide incentives for new development to offer car-sharing spaces in new buildings. SDOT continues to sign on-street parking spaces for car-sharing parking where consistent with SDOT policies, and promotes and increases the awareness of car-sharing. SDOT should continue to investigate, evaluate and explore methods of supporting car-sharing organizations.

TDM7. Provide a Carpool Program Using On-Street Spaces.

Continue to issue carpool permits that allow registered carpools to qualify for on- and off-street parking in designated areas throughout the city. The City offers the carpool parking permits at rates set by City Ordinance.

Wedgewood residents created a map showing bus routes that go through their neighborhood, as well as destinations along these bus routes such as hospitals, schools, shopping centers, and the zoo. Over 3,500 maps were distributed. This was funded by the City of Seattle Car Smart Grant program.

Examples of implementation activities area as follows:

- Continue to install carpooling spaces and review existing locations for changes in adjacent property and area parking needs. Review installation guidelines relative to other competing curbspace uses. Consider not allowing (or | removing) carpool parking on streets where more than 50% of block is occupied by ground-level retail.
- Continue to review and where feasible gradually increase rates for carpools to match market rate for monthly parking in the neighborhood. (Note: Any change in the increase in these rates would require adoption of a new City Ordinance).

TDM8. Promote Proximate Commuting.

Proximate commuting is a TDM strategy that reduces trip lengths. Proximate commuting programs assign employees to branch offices or sites closer to the employee's home. The City is pursuing a pilot program for City employees.

TDM9. Promote Telecommuting.

Promote telecommuting as a TDM tool to provide benefits to employers and employees, while reducing automobile trips. As communications technology continues to evolve, telecommuting is becoming more popular and easier to implement. This can take the form of employees working at home, or traveling to an employer's satellite site, that is closer to their home than a central office. Telecommuting reduces trips and/or the length of trips, and it may generate more transit, walking and biking trips because of the shorter commute distance when traveling to a satellite site. Developing satellite offices would be an effective TDM tool for companies outside Seattle that have a significant number of employees living in Seattle.

TDM10. Extend TDM Programs to Small Businesses and Small Business Organizations.

Continue and build on voluntary efforts in targeted areas to provide TDM programs to small businesses and neighborhood business organizations. Such programs would help increase the viability of alternative travel modes, while decreasing SOV trips, increase the short-term parking supply available for customers, and reduce the impacts of parking spillover into surrounding neighborhoods. The Washington State Commute Trip Reduction Law requirements apply only to employers with over 100 employees within certain conditions, yet small businesses account for a large share of the city and region's employees.

TDM11. Encourage Parking Cash-Out Programs.

Develop and encourage parking cash-out programs where appropriate. Parking cash-out programs offer employees a cash transportation allowance, similar to the cost the employer would otherwise pay to provide a parking space. Employees may use the allowance to purchase parking or transit passes. Those who walk, bicycle, or otherwise get to work not using a single-occupant vehicle can keep the cash. Where implemented, parking cash-out programs have generated significant reductions in drive alone commuting. Cash-out programs improve employees' transportation choices and help employers meet the state's Commute Trip Reduction Law goals.

TDM12. Strengthen Transportation Management Program Regulations.

Strengthen, through additional program management and funding resources, the City's Transportation Management Program (TMPs) regulations that are aimed at reducing

impacts on the transportation system from traffic generators such as universities, hospitals and other major institutions. The Department of Planning and Development and SDOT updated the Director's Rule for TMPs in 2002. TMPs can be as small as one small employer's bus pass program, or as large as the University of Washington's U-Pass program. The number of TMPs has grown, while resources to manage and monitor them have remained flat. Given future population and employment growth by the year 2020, the City should develop more resource-efficient methods for implementing and managing TMPs. Options include partnerships with transportation management associations.

TDM13. Educate the Property Development and Management Community About Unbundling Parking from Building Leases.

Educate the owners or managers of commercial and residential buildings as well as tenants about the economic value of separating, i.e., "unbundling," the cost of parking from the remaining elements of a building lease. Unbundling parking costs creates an incentive for those who choose to own fewer vehicles because they have to pay parking costs instead of having the cost of parking wrapped into a lease. The City already encourages unbundling as part of Transportation Management Programs (TMPs). At the same time, SDOT should support allowing property owners to rent parking spaces not used by tenants to non-tenants, especially in higher density mixed-use neighborhoods. This helps mitigate the unintended consequence of unbundling where building tenants forego the cost of parking on-site and instead choose to park on-street, thus increasing the demand on the limited on-street parking supply while off-street spaces in buildings are unused.

TDM14. Encourage Convertible Uses for Structured Parking.

Explore education and incentive programs to encourage developers and property owners to convert unused structured parking to other more productive uses. Seattle is currently maturing into a more urban city evidenced by increasing density in urban centers and villages and the construction of rapid transit systems. Many households, however, still feel the need to own at least one car, or own a parking space to maintain resale value of their home. One interim strategy has been to build expensive structured parking. As Seattle matures, the demand for parking per capita should decrease, and there is likely to be a need to create parking structures that can be converted to other uses that better support urban living. Building structured parking with these future uses in mind will increase the versatility and value of the building.

TDM 15. Promote Non-SOV Trips in the Center City.

Actively cultivate and participate in inter-agency partnerships and public-private partnerships with the intent of increasing the non-SOV mode split in the Center City neighborhoods. Implement activities that accomplish the following:

- create convenient and attractive products that support the shift towards non-SOV modes and emphasize responsive customer service;
- expand transit service and develop innovative transit funding programs;
- raise awareness about the range of travel mode choices available and the impacts and costs of each mode;
- create incentives for the public to shift their means of travel to non-SOV modes;
- make transit service easier to understand and use; and,
- develop and promote parking management strategies that favor short-term customer parking over long-term commuter parking.

3.3T Increase Transportation Choices: Make Transit a Real Choice

Providing convenient and accessible transit service can help reduce reliance on single-occupant vehicles, slow the increase in environmental degradation associated with their use, and increase mobility without building new streets and highways. Street rights-of-way are limited and as streets get more congested, transit provides an efficient way to move large numbers of people around the city as well as the region and support growth in urban centers and villages.

In 2005, SDOT will complete the Seattle Transit Plan. The purpose of the Seattle Transit Plan is:

- To enable the City to be more proactive on the future of transit in Seattle and know how various transit services and programs work together in an integrated transit network. The plan timeframe is 2005 to 2030.
- To help the City work better with partner transit agencies by identifying Seattle's key transit corridors and needs. Each of these agencies are doing transit planning for Seattle, e.g., King County's Six-Year Transit Development Plan, and Sound Transit's Phase 2 planning.
- To get Seattle moving again and support economic growth. Seattle needs a transit plan that clearly shows how the City's urban village strategy will be supported.
- To link City transit strategies to specific connections or corridors.
- To estimate transit funding needs by more clearly identifying the City's transit priorities and corridor needs.
- To support updates of the Comprehensive Plan, Transportation Strategic Plan, neighborhood plans.

Developed by SDOT with the input and assistance of partner transit agencies including King County Metro, Sound Transit and the Seattle Monorail Project, the Seattle Transit Plan is consistent with the Comprehensive Plan goals and policies for transit (see below). This chapter summarizes key policies and strategies from the Seattle Transit Plan. A full version of the Seattle Transit Plan can be viewed online at www.seattle.gov/transportation/transitnetwork.htm

Every King County Metro bus has a bicycle rack that provides passengers with more choices for their commute.

Comprehensive Plan Goals and Policies

TG12 Create a transit-oriented transportation system that builds strong neighborhoods and supports economic development.

TG13 Provide mobility and access by public transportation for the greatest number of people to the greatest number of services, jobs, educational opportunities, and other destinations.

TG14 Increase transit ridership, and thereby reduce use of single-occupant vehicles to reduce environmental degradation and the societal costs associated with their use.

T20 Work with transit providers to provide transit service that is fast, frequent, and reliable between urban centers and urban villages and that is accessible

to most of the city's residences and businesses. Pursue strategies that make transit safe, secure, comfortable, and affordable.

T21 Support development of an integrated, regional high capacity transit system that links urban centers within the city and the region.

T22 Pursue a citywide intermediate capacity transit system that connects urban centers, urban villages and manufacturing/industrial centers.

T23 Pursue a citywide local transit system that connects homes and businesses with neighborhood transit facilities.

T24 Work with transit providers to design and operate transit facilities and services to make connections within the transit system and other modes safe and convenient. Integrate transit stops, stations, and hubs into existing communities and business districts to make it easy for people to ride transit and reach local businesses. Minimize negative environmental and economic impacts of transit service and facilities on surrounding areas.

T25 Work with transit providers to ensure that the design of stations and alignments will improve how people move through and perceive the city, contribute positively to Seattle's civic identity and reflect the cultural identity of the communities in which they are located.

T26 Discourage the development of major, stand-alone park-and-ride facilities within Seattle. Situations where additions to park-and-ride capacity could be considered include:

- At the terminus for a major, regional transit system;
- Opportunities exist for "shared parking" (e.g., where transit commuter parking can be leased from another development, such as a shopping center, movie theater, or church); and
- Areas where alternatives to automobile use are particularly inadequate (e.g., lack of direct transit service, or pedestrian and bicycle access) or cannot be provided in a cost-effective manner.

T27 Encourage transit services that address the needs of persons with disabilities, the elderly, other people with special needs, and people who depend on public transit for their mobility.

T28 Support efficient use of ferries to move passengers and goods to and from Seattle. Encourage the Washington State Ferry System to expand its practice of giving loading and/or fare priority to certain vehicles, such as transit, carpools, vanpools, bicycles, and/or commercial vehicles, on particular routes, on certain days of the week, and/or at certain times of day. Encourage the Ferry System to integrate transit loading and unloading areas into ferry terminals, and to provide adequate bicycle capacity on ferries and adequate and secure bicycle parking at terminals.

T29 For waterborne travel across Puget Sound, encourage the expansion of passenger-only ferry service and land-side facilities and terminals that encourage walk-on (by foot, bicycle and transit) trips rather than ferry travel with automobiles.

Strategies for Making Transit a Real Choice

This section includes strategies that offers direction so that SDOT can work with transit agencies operating in Seattle to make transit a fast, reliable, safe and convenient choice that will connect and support urban villages. The TSP Transit Strategies have been developed over time through the Seattle Transit Initiative and more recently within the development of the Seattle Transit Plan. Generally, the TSP strategies are city-wide in scale and not specific to a transit technology. More detailed transit planning in Seattle is completed in a variety of sub-area and corridor planning efforts.

In 2001, as part of the Seattle Transit Initiative identified in the 1998 TSP, the City completed the Seattle Transit Study for Intermediate Capacity Transit (ICT). For the first time, the City identified transit corridors in Seattle that warranted enhanced-capacity transit service operating faster and more reliably than existing bus service. Intermediate capacity transit is recognized as an important component of the City's overall transit system, which also includes regional high capacity transit and local transit.

Over the last year, the City has evaluated the overall transit system to determine which corridors will be needed to carry the highest concentration of the city's transit trips in support of the urban village strategy. These corridors make up the new "Seattle Connections" or Urban Village Transit Network" (UVTN), and will consist of all transit lines (regardless of mode or operating agency) that operate at least every 15 minutes all day for at least 18 hours every day in two directions. The 15-minute headway represents the point at which a person no longer needs to consult a schedule to use the service. It also permits transfers to be made rapidly even without timing of connections. For these reasons, the threshold frequency of 15 minutes is a point at which the benefits of transit tend to grow exponentially. More information about Seattle Connections, or the UVTN, is located in the Seattle Transit Plan.

Another key feature of the UVTN is performance, and SDOT will begin monitoring and reporting on the performance of UVTN corridors. UVTN performance standards are described in Chapter 5: SDOT Performance Reporting. They will also play an important role in the City's new Right-of-Way Improvements Manual.

Funding remains a challenge in implementing the full UVTN. In order for the City and its partners to meet the 2030 transit service demand, approximately 38% additional service hours are needed. This includes the UVTN and the Secondary Transit Network (STN--see Strategy TR1.5. for more details). The Sound Transit Link light rail and Seattle Monorail Project's Green Line will provide needed rapid transit connections, but they will also accelerate the urgency of the City achieving its ultimate service levels to support those systems. A number of the strategies below provide an outline of steps to help fill this service funding gap. More detailed resource strategies can be found in Chapter 5: Transit Funding of the Seattle Transit Plan.

TR1. Develop and Implement Seattle's Future Transit Network.

Develop, map, and implement Seattle's future network; the transit system needed to connect neighborhoods and support growth. The transit network is called the Urban Village Transit Network (UVTN), or Seattle Connections. It represents the backbone of the City's transit system, carrying its highest concentrations of transit trips. It means managing Seattle's streets so that the combination of King County Metro buses, the monorail, light rail, and streetcars provides frequent and reliable service at least every 15 minutes, 18 hours a day, seven days a week in both directions. Seattle Connections (or UVTN) service will be fast and reliable. It is important to establish this network to support the City's land use plans, i.e., urban village strategy. SDOT will play a major role in helping the UVTN achieve desired speed and reliability levels (see Chapter 5: Performance Reporting). The Seattle Connections map is included as Figure 8: Seattle's Future Transit Network.

TR1.1. Maintain a Vision of Seattle's Future Transit System that Integrates Planned and Potential High, Intermediate, and Local Capacity Transit Investments.

Maintain a map of Seattle's high and intermediate capacity transit systems showing important transit corridors and transfer points. The current version of this map is included as Figure 7: Planned and Potential High and Intermediate Capacity Transit Network.

TR1.2. Consider Rapid Transit Investments, i.e., High and Intermediate Capacity Transit, for the Urban Village Transit Network, Consistent with the City's Transit Vision.

Build the UVTN through regional high and intermediate capacity transit improvements. The UVTN recognizes that the Green Line monorail, and Central and North Link corridors need high or intermediate capacity transit investments. It will be appropriate for future expansions of these investments to be in other connecting UVTN corridors that are desired for higher capacity transit. This will help free up bus service hours for reallocation to other parts of the UVTN that are not funded for high and intermediate transit capacity improvements, or in the Secondary Transit Network, including candidate UVTN corridors.

TR1.3. Evaluate Transit Service Investments With Clear Performance Measures for Ridership and Cost-effectiveness and Progress Towards Completion of the Urban Village Transit Network.

Establish UVTN performance measures for service frequency, span of service, and transit speed. Performance measures for reliability and passenger loading will also be added. SDOT will report annually on UVTN corridor performance. See Chapter 5: Performance Reporting.

TR1.4. Develop a Transit Priority Treatment Toolbox for Improving Transit Speed and Reliability.

Continue to use a transit priority treatment toolbox to maintain service quality in Seattle's transit corridors. Since many of Seattle's rail investments are being provided in exclusive right-of-way with limited at-grade crossings, the toolbox will be mainly applied to bus corridors. There will be special focus placed on UVTN corridors because of the City's commitment to achieve good transit performance standards, e.g., transit speed and reliability.

Toolbox items include, but are not limited to: Exclusive Bus Lanes, Signal Priority, Queue Bypass, Curb Extensions, Boarding Islands, Parking Restrictions, Turn Restriction Exemption, Bus Stop Relocation, Bus Stop Consolidation, Skip-Stops, Platooning and Design Standards.

TR1.5. Develop and Implement the Secondary Transit Network (STN).

Develop and map the STN to represent transit service in Seattle other than the UVTN. It includes service that is needed to provide coverage and service to commuters. The STN will typically have the levels of service and amenities that are common in lower-density parts of Seattle today. With limited resources, these travel markets do not warrant the high service levels of the UVTN. For example, STN service will:

- Operate at least every 30 minutes during peak and midday, with some skeletal weekend and evening service. Some lines, as mentioned earlier, will be more frequent to meet peak period demand, e.g., express routes.
- Connect to the nearest point on the rapid transit system, but not run through to downtown.
- Extend far enough so that over 95% of city residents, jobs, and activity centers are within a ¼ mile walk of service.

TR1.6. Select Preferred Rapid Transit Technologies and Alignments Following Corridor Studies That Consider All Feasible Alternatives.

Make new rapid transit investment decisions after an evaluation of feasible alternatives using criteria similar to those used in the Seattle Transit Study for Intermediate Capacity Transit and the August 2004 high capacity transit corridor assessment prepared by the Puget Sound Regional Council.

TR1.7. Develop Funding Options for Implementation of the Urban Village Transit Network and Secondary Transit Network.

Work with transit partners to develop funding options for the high capacity, intermediate capacity, and local transit elements of the UVTN. STN funding will also be needed.

SDOT has estimated an additional $57 to $73 million of annual transit service will be needed (about a 32% to 40% increase over existing (2002) north King County subarea service resources) to fund the minimum service levels needed to fully implement the UVTN (in addition to Central Link and Green Line services). A major determinant of the service cost will be UVTN corridor transit travel speed performance.

TR2. Prioritize Transit Service Investment to Achieve Basic Mobility and Ridership Goals.

The City's transit service goal is to provide a basic level of transit service throughout the city that ensures a minimum level of mobility for city residents and reinforces walking, bicycling, and transit as the preferred modes for in-city trips. It will achieve this goal by:

- Implementing the Urban Village Transit Network to maximize ridership and support growth by improving transit service in the areas of the city with the highest densities and in areas where housing density is increasing
- Implementing the Secondary Transit Network to maintain a basic level of service coverage for Seattle neighborhoods.

Implementation of the networks will be achieved by first focusing service resource investment (both new service resources and re-investment of existing resources) on the implementation of the UVTN, especially those corridors that have a commitment for speed and reliability; then additional investment in the STN. These investments would be timed in a way to achieve the greatest benefit from the implementation of scheduled service and capital investments, such as Link and the Green Line.

Within these investment priorities of implementing the UVTN, comprised of corridors or segments, and the STN, the City will need to work with its partner transit agencies to prioritize the specific routes that should receive investment. To phase UVTN development, the City will use the following criteria to allocate route specific transit service improvements:

a. Ridership Potential – the more passengers being carried per hour of bus service, the more people being served by the transportation network.
b. Support growth in Urban Centers – higher transit frequency on bus routes connecting urban centers will help the city achieve the Seattle Comprehensive Plan's urban center mode split goals for non-single-occupant vehicle modes.
c. Corridor Completion – the more a specific route investment falls within the UVTN the better. This criterion should also promote route simplification if routes are changed to match corridors.
d. Center City Mitigation – Center City bus capacity constraints and major project construction impact mitigation will require route investments that will shift trips to transit through construction areas and will increase seat utilization of existing Center City transit services.

e. Route Development - Some funds can be allocated to investments in developing new transit markets as well as testing new, innovative services and technologies. This type of service investment is more attractive when implementing the UVTN and when it attracts private sector contributions or new partnership opportunities.

TR3. Work with Partner Transit Agencies to Make the Best Possible Rapid Transit Investments.

Play a strong role in the development of Seattle rapid transit plans. Advocate with Sound Transit, Seattle Monorail Project, King County Metro, and the Puget Sound Regional Council for the best possible rapid transit investments that are consistent with the City's Comprehensive Plan and the transit vision described in the Seattle Transit Plan.

TR4. Maximize the Direct Economic Benefits of Rapid Transit Construction and Operation.

Provide resources to neighborhoods and small businesses, in partnership with transit agencies, to address impacts of major transit construction activities, including information programs, mitigation plans, and temporary business support and relocation assistance. Labor, materials, and other business expenditures of rapid transit projects offer a tremendous opportunity for job development and training initiatives. Simultaneously, communities and businesses will be affected by construction and staging activities.

Transit-only lanes like this southbound lane on Second Avenue in Downtown Seattle contribute to fast, reliable transit service for both local and regional transit routes.

TR5. Advocate for Effective and Fair Redeployment of Existing and New Transit Resource Investments.

Advocate for Seattle's transit resources to be used effectively and allocated fairly. Service hours freed up in Seattle by consolidation, efficiency improvements, and reductions of unproductive service need to be reallocated to other service in Seattle.

TR6. Encourage Testing of New, Innovative Transit Services and Technologies.

Support efforts to develop and test new, innovative transit services that could help achieve the City's transit goals. Transit services will need to change and improve to achieve the increased ridership envisioned by the Comprehensive Plan, as well as to respond to changing demographics and urban development patterns.

TR7. Consider Expanding or Adding New Ride Free Areas.

Investigate, with King County Metro, Sound Transit and the Seattle Monorail Project, opportunities for expanding the downtown Seattle ride free area or starting new ride free areas in other major Seattle activity centers. The ride free area affects travel demand because it encourages high levels of transit usage downtown for short trips, reducing auto travel downtown during the day. Additionally, the ride free area eases loading and unloading of passengers in the downtown, speeding bus travel. Coordinate any study efforts with Neighborhood Plan recommendations to expand existing ride free areas. SDOT currently subsidizes the downtown Seattle ride free area and supports Strategy S-13 (Activity Center Mobility) of the King County Six-Year Transit Development Plan for 2002 to 2007.

TR8. Ensure Access to Transit.

Recognize that people use the full range of transportation options to get to the rapid rail transit and bus stops; they walk, bicycle, take feeder bus service, and drive. The City does not want to encourage people to drive to the rail station or bus stop if other options are available. These short driving trips negate much of the air quality benefits of the transit trip, because more than half of a car's emissions occur at the beginning and end of a vehicle trip.

TR8.1. Encourage Access to Transit in Seattle by Walking or Bicycling.

Identify and implement a set of transit, walking, bicycling, and parking management strategies around rapid rail transit and major bus stops to facilitate access.

TR8.2. Discourage the Development of Park-and-Ride Lots in Seattle.

Discourage the development of major, stand-along park-and-ride facilities because of their negative impacts to neighborhood business districts. Park-and-ride lots are a major investment designed to serve people who drive to the bus or rail. Because park-and-ride parking spaces are extremely expensive, they consume funds that could finance investments that encourage people to get to the bus or rail station other ways: improved transit shelters, better transfer points, enhanced feeder services, sidewalk and lighting improvements, and bicycle lockers. They also consume valuable land that could be more appropriately dedicated to other uses. Although the general intent is to minimize park-and-ride spaces in Seattle's neighborhood business districts, there are situations where park-and-ride lots can make sense. These include:

- "The end of the line" for a major regional transit system.
- Opportunities for shared parking (using the same spaces as another development, like a shopping center, movie theater, or church).
- Areas where the alternatives—feeder service, pedestrian and bicycle access—are particularly inadequate.

TR9. Support and Promote Public Involvement in the Decision-making Processes of Transit Partners.

Effective public involvement is essential to implementing well-used transit service. Seattle's citizens, as transit riders and potential transit riders, can contribute expertise and experience to help King County Metro, Sound Transit, Washington State Ferries, and the Seattle Monorail Project in their decision-making.

TR10. Expand Options for Waterborne Transit Service

Explore route, funding, and governance options for waterborne transit service. The City of Seattle Department of Transportation will also coordinate with other communities, like Kitsap County, planning waterborne transit service to Seattle.

Since its creation in June of 1951, Washington State Ferries has become the largest ferry system in the United States and the third largest in the world.

TR11. Work to Focus the Washington State Ferry System Growth on Moving People Rather than Cars.

The areas served by the ferry system on the west side of Puget Sound are growing rapidly. Demand for ferry service will increase as Kitsap County grows. How that demand is managed has major implications for Seattle. Increasing walk-on passenger traffic will contribute to a vibrant multi-modal transit hub on Seattle's Central Waterfront. Increasing vehicle traffic, however, has a host of negative impacts

ranging from large expanses of waterfront areas being used to store vehicles waiting to board boats, increased pollution from idling vehicles, and congestion at the terminals and throughout the city from cars queuing to access terminal facilities. Work with the Washington State Ferries to focus on an expansion of fast passenger-only ferries, growth of walk-on passengers on large vessels, and limit the expansion of vehicle ferry service. Ferry pricing, boarding policies, and terminal planning should be adjusted to make travel by single-occupant vehicles less attractive and encourage travel by other modes (walk-on passengers, bicycles, carpools, vanpools, transit).

TR12. Make Transit Convenient, Understandable, and Easy to Use.

More people ride transit when:

- Transfers are easy and quick.
- The system is visible, comprehensible, and easy to use.
- They feel safe walking to and from a transit stop, at the transit stop, and on the transit vehicle.

The following strategies can help achieve these goals:

TR12.1 Develop Designated Multimodal Hubs in Urban Centers.

Develop Multimodal Hubs as the focal points of terminating transit lines (bus or rail) and transit staging activities that generate significant economic and travel opportunities. Located in urban centers, Multimodal Hubs are designed for the highest passenger volumes, with many of the passenger trips being long distance. In addition, they can become great locations for transit oriented development to further increase transit demand and reduce single-occupant vehicle use. It is critical that the Multimodal Hubs have adequate facilities so that they work effectively for the services and people that use them. Current examples are Westlake Center and King Street Station.

TR12.2. Use Station Area Planning to Maximize Ridership and Further Growth Management, Neighborhood Plan, Economic Development, and Revitalization Objectives.

Conduct station area planning around rapid rail stations to create substantial economic development and revitalization opportunities for the surrounding neighborhoods. Station Area Planning helps achieve the Comprehensive Plan's goal of concentrating Seattle's growth in walkable, transit-oriented, and mixed-use neighborhoods to maximize transit ridership and reduce reliance on single-occupant vehicles.

TR12.3. Integrate Ferry Terminals with Surrounding Neighborhoods.

Work with Washington State Ferries, waterborne transit operators, and adjacent property owners to integrate ferry terminals with surrounding neighborhoods and their land use context. Ferry terminals can, and do, have significant impacts on street systems and communities adjacent to ferry terminals.

TR12.4. Improve Transit Connections for Walk-on Ferry Passengers.

Explore options for improving the transit choices available to walk-on ferry passengers using the Washington State Ferry system or other waterborne transit providers. Many ferry commuters drive onto the ferry and then through Seattle streets because there are no convenient transit connections to their ultimate destinations. The success of new passenger-only service will be partially based on proximity to destinations and connecting transit services farther from the dock. Particular attention will be needed at Seattle's Central Waterfront to make sure needed transit services are coordinated between waterborne transit operators.

TR12.5. Develop Designated Transportation Centers in Urban Villages.

Develop Transportation Center facilities in urban villages where multiple transit lines converge, creating significant transfer activity, but not like the high passenger activity of the Multimodal Hubs. They are also places where other transit services and transportation linkages or facilities exist, such as bike routes, car-sharing stations, bike stations, and taxis.

TR13. Improve Transit Service Information to Make Transit Stops and Transfer Points More Visible and Comfortable.

Work with transit agencies to use kiosks, printed maps and schedules, telephone information, and real-time displays at transit stops to improve transit service information. Continue exploring the development of real-time information systems for transit riders at central stops/major transfer points and support the testing of available technology in demonstration projects.

Make waiting for transit a more attractive experience by developing transit stops that are enhanced with wider sidewalks, better lighting, more shelters, seating, telephones, and clocks. They can be paired with commercial services such as coffee stands, newspaper kiosks, dry cleaners, and other development.

TR14. Use Transit Street Classifications with Performance Measures to Manage a System That Guides Seattle Transit Investments.

Revise the Transit Street Classifications to reflect the UVTN (see Figure 24: Seattle Transit Classifications). Include the "Transit Way" classification and transit terminal loops as part of a new "Local Transit Street" classification. The "Major Transit Street" and "Minor Transit Street" classifications will have their peak hour volume limits slightly increased to reflect current volume levels. Streets that SDOT is committed to monitoring for UVTN performance will be identified.

TR15. Work with Transit Partners on Bus Layover and Route Terminal Planning.

Provide layover space and route terminal planning for efficient transit system operations (e.g., reliable schedules and maintenance of cost-effective operating costs), so that layover space is provided as close as possible to the beginning and the end of the service portion of a route. Higher operating costs due to longer routes, possibly on congested streets, result in fewer hours for new service elsewhere in the system. It will become increasingly difficult to maintain existing and/or accommodate new, on-street layover space on an interim and/or long-term basis. There could be pressure to use neighborhood streets to address other community needs, such as open space, and bicycle, pedestrian, and freight mobility.

TR16. Support Equitable and Ridership-oriented Fare Policies.

The amount and structure of fares have major impacts on transit ridership and help determine transit affordability. The following strategies are designed to promote equitable and ridership-oriented transit fare policies.

TR16.1. Participate in Efforts to Reduce Fares, Especially for Those Least Able to Pay.

Explore options and test demonstration projects for reducing fares with King County Metro and the Puget Sound Regional Council, as well as strategies for generating revenues to cover the lost income. Target fare reductions to special populations (e.g., students, senior citizens, low wage workers) as a less costly option that could increase ridership while addressing other needs.

TR16.2 Support Development of the Regional Fare Integration Project.

Ease customer payment and speed bus loading/unloading through the development of the regional Smart Card.

3.3W Increase Transportation Choices: Encourage walking—it's an easy, healthy way to get around.

Everyone in Seattle is a pedestrian at some point during the day, whether walking to school, to the bus stop, to a parked car, to work, or for exercise. The City recognizes the value of walking for promoting environmental sustainability and the commercial vitality of downtown Seattle and neighborhood business districts. In short, walking is good for the environment, public health, and the economy.

First, walkable cities reduce environmental impacts by promoting walking as a zero emissions form of transportation. Good walking routes to transit complement the role of public transit in providing an environmentally sustainable alternative to the private automobile. Walking is also the most inexpensive and broadly accessible form of transportation and recreation. For young people, walking affords a sense of independence that is not possible with other modes. For older people, walking is an effective means to stay active, both physically and socially.

Second, walkable cities promote healthy citizens. Health professionals recommend walking as a form of physical activity to help prevent a host of diseases including obesity, heart disease, and some forms of cancer. According to the US Surgeon General, encouraging at least 30 minutes of walking per day and creating walkable environments are recommended methods for reducing overweight and obesity problems.

Showing children the benefits of walking helps them avoid the epidemic of obesity that is now affecting the country's younger population.

Third, walkable cities make for vital and active streets by promoting commercial and social exchange. Sidewalks ideally function as positive places to meet, play, live, work, and shop. In residential areas, motor vehicle traffic can negatively impact residential property values. In commercial areas, the most congested streets are often the most economically vital.

Comprehensive Plan Goals and Policies

Walking can be practical alternatives to driving, especially for short trips. It can also contribute greatly to neighborhood quality and vitality, and help achieve City transportation, environmental, open space, and public health goals. Pedestrian improvements to streets, intersections, sidewalks, and other facilities can improve access and safety. Such facilities are particularly important for children, senior citizens, and people with disabilities. [Please note that the Comprehensive Plan combines Walking and Bicycling into one section, although they are treated in separate sections here in the TSP.]

TG15 Increase walking and bicycling to help achieve City transportation, environmental, community and public health goals.

TG16 Create and enhance safe, accessible, attractive and convenient street and trail networks that are desirable for walking and bicycling.

T30 Improve mobility and safe access for walking and bicycling, and create incentives to promote non-motorized travel to employment centers, commercial districts, transit stations, schools and major institutions, and recreational destinations.

T31 Integrate pedestrian and bicycle facilities, services, and programs into City and regional transportation and transit systems. Encourage transit providers, the Washington State Ferry System, and others to provide safe and convenient pedestrian and bicycle access to and onto transit systems, covered and secure bicycle storage at stations, and especially for persons with disabilities and special needs.

T32 Recognize that stairways located within Seattle's public rights-of-way serve as a unique and valuable pedestrian resource in some areas of the City. Discourage the vacation of public rights-of-way occupied by stairways, and protect publicly-owned stairways from private encroachment.

T33 Accelerate the maintenance, development, and improvement of existing pedestrian facilities, including public stairways. Give special consideration to access to recommended school walking routes; access to transit, public facilities, social services and community centers; and access within and between urban villages for people with disabilities and special needs.

T34 Provide and maintain a direct and comprehensive bicycle network connecting urban centers, urban villages and other key locations. Provide continuous bicycle facilities and work to eliminate system gaps.

T35 Develop, apply and report on walking and bicycling transportation performance measures in the Transportation Strategic Plan to evaluate the functioning of the non-motorized transportation system; to ensure consistency with current industry standards; to identify strengths, deficiencies and potential improvements; and to support development of new and innovative facilities and programs.

T36 Promote safe walking, bicycling, and driving behavior so as to provide public health benefits and to reinforce pedestrian, bicycle and motorists' rights and responsibilities.

Strategies to Encourage Walking

This section includes strategies that offer direction so that SDOT can encourage walking as an easy, healthy way to get around. SDOT's Pedestrian Program works to improve pedestrian safety and to encourage more walking by providing the facilities needed to walk comfortably. To accomplish this work, the department builds accessible sidewalk curb ramps; installs and maintains school-crossing signs, marks crosswalks and pedestrian-crossing signs; and constructs curb bulbs and crossing islands at pedestrian-crossing locations.

W1. Make Street Crossings Safer and Easier.

Identify and install a full range of engineering design measures to create high-quality pedestrian crossings, depending on site conditions. Follow guidelines and procedures set forth in Resolution 30537 for responding to requests for safety improvements related to marked pedestrian crosswalks, general traffic control signals, pedestrian traffic signals, disabled or senior citizen traffic signals and school crossing traffic signals. Resolution 30537 was based in part on pedestrian research conducted by the University of North Carolina. This strategy has several sub-strategies for improving pedestrian safety and access at intersections. Traffic signals are listed as a separate strategy, although they are closely related to this strategy. Examples of efforts include:

- Reducing effective street crossing distance for pedestrians by providing curb extensions, raised pedestrian islands or reducing four-lane undivided road sections to two through lanes with left-turn pockets with sidewalks; Providing raised medians on

multi-lane roads;

- Installing traffic calming measures on neighborhood streets to slow vehicle speeds or reduce cut-through traffic;
- Providing adequate nighttime lighting for pedestrians;
- Redesigning intersections with crossing islands and tighter turn radii;
- Using innovative signs, signals and markings.

This ongoing city-wide program responds to citizen and neighborhood recommendations for projects that enhance pedestrian mobility by making improvements and promoting safe and convenient access to pedestrian facilities. The program, which is coordinated with the Neighborhood Bike Improvements Program, constructs pedestrian walkways, curb bulbs, and other types of pedestrian improvements.

A nationwide transportation survey found that about 25% of all trips are less than one mile--perfect for walking. (Source: City of Olympia)

W1.1. Install Marked Crosswalks at Signalized and Unsignalized Intersections Where Appropriate.

Continue to mark crosswalks at signalized intersections. Install new and improve existing marked crosswalks at unsignalized intersections based on SDOT guidelines (Director's Rule 2004-01). Continue to address those marked crosswalks found to be non-compliant with new marking guidelines. Create guidelines for whether to mark crosswalks at four-way stops. These guidelines are in turn based on new information from Federal Highways Administration (FHWA) about where marked crosswalks at uncontrolled locations may be useful. SDOT's Pedestrian Program staff monitors existing marked crosswalks and makes changes when necessary. They also respond to community requests.

W1.2. Use Caution in Installing Pedestrian Pushbuttons at Traffic Signals.

Per Resolution 30241, evaluate locations using the SDOT pedestrian pushbutton criteria before installing new pedestrian pushbuttons, and along transportation corridors with existing pushbuttons. While areas with limited pedestrian activity may merit pushbuttons, pushbuttons are not appropriate in areas with continuous pedestrian activity. Pushbuttons should not be installed along corridors designated as Main Streets. Existing pedestrian pushbuttons should be evaluated and removed where they do not meet the criteria, focusing those evaluation efforts on pedestrian pushbutton locations within the City and neighborhood transportation planning projects, Capitol Improvement Projects, and through citizen and community complaints. Consider posting information about the times when a pushbutton is in "pedestrian recall" (where the "walk" indication for pedestrians is given without need to push the button) during the active period of the day.

W1.3. Consider Overpasses Over Major Pedestrian Barriers.

Identify locations suitable for pedestrian overpasses to allow safe and convenient crossing over barriers such as state highways and Interstate 5. Identify funding sources to design and construct these facilities. Recent examples of locations where pedestrian overpasses are built include the Aurora Pedestrian overpass to Queen Anne and the Thomas Street Overpass over Elliott Ave. Overpasses should be ADA compliant, exhibit high-quality design and be used to knit together a fragmented street network, not specifically to improve vehicular traffic flow.

W2. Improve Pedestrian Safety and Access to Bus Transit.

Implement projects to construct and install pedestrian crossing improvements in conjunction with bus transit stops throughout Seattle. This will improve connectivity between neighborhoods and urban villages by increasing safe and direct access to transit. Measures include curb bulbs, crossing islands, curb ramps, re-channelization, pedestrian-scale lighting, and pedestrian crossing signals. Bus stop relocation may be included at locations to provide the best visibility and to prevent the buses from blocking existing marked crosswalks.

W3. Improve Pedestrian Access to Monorail and Sound Transit Rail Systems.

Continue to work with the Seattle Monorail Project and Sound Transit and the various Green Line and Link station area communities on addressing pedestrian access to rail stations. Work during planning, design and construction phases, of Central Link (Downtown – Rainier Valley), North Link (Downtown-Northgate) and the Monorail Green Line (Ballard – West Seattle). Consider appropriate pedestrian capacity needs along these transit corridors, including:

- how pedestrians access the stations;
- queuing at station ticket areas and entrances;
- allowing for reasonable time so that pedestrians can cross streets to access intermodal bus transit connections; and,
- the design of station plazas so that transit riders are directed to desired pedestrian crossings.

The entrance to the Pioneer Square Transit Tunnel station in downtown Seattle is a well marked and accessible station entrance with a large plaza to accommodate passenger queuing as needed.

Both rail systems assume that most rail passengers will walk, take the bus, or bicycle to their closest rail station. Pedestrian improvements within one-quarter mile of the stations (typical walking distance for pedestrians accessing transit) may be necessary to ensure safe and convenient access.

W4. Use Traffic Signals and Their Associated Features to Improve Pedestrian Safety.

Continue to evaluate and adjust existing signal timing mechanisms to ensure pedestrian safety and convenience, and to install new signals for pedestrian mobility. In heavy pedestrian areas, consider adjusting signal timing to shorten pedestrian wait time and provide adequate time for the average “slow pedestrian” to cross the street while considering vehicle flows through the intersection. Evaluate intersections identified as problems by neighborhood groups or community complaints (e.g., review crossing times, pedestrian delays, competing needs, and other connected intersections). Consider tools such as pedestrian lead time and countdown signals where appropriate to address specific problems.

W5. Provide for Routine Accommodation of Pedestrian Facilities.

Make pedestrian accommodations a routine part of transportation planning, design, construction, operations and maintenance activities. Follow the new AASHTO pedestrian guidelines. A properly designed roadway should safely and efficiently accommodate all modes of travel, from pedestrians to bicyclists, transit and motorists. Many operations and maintenance decisions for Seattle’s roadway design have an impact on the safety and mobility of pedestrians. Fully institutionalize pedestrian (along with bicycle) facilities into

these decisions. Provide sidewalks that meet minimum width standards or greater along all streets; provide safe pedestrian crossings at all intersections (incorporate safety considerations, good visibility and tight turning radii); and provide adequate space for pedestrians on bridges. When planning new streets or re-designed streets, take into account the effect of travel volumes and the number of travel lanes on safer pedestrian access and mobility.

Routine accommodation for pedestrian and bicycle facilities affects the following projects and programs: Capitol Improvement Projects; corridor and sub-area planning; transit speed and reliability projects; utilities pole placement; signal optimization projects; high-hazard accident location projects; arterial parking restrictions projects; construction management plans; and, Master Use and Street Use Permits.

W6. Make Safe Routes to Schools.

Implement an annual set of programs and projects to enable and encourage primary and secondary school children to walk and bicycle to school safely. Encourage a healthy and active lifestyle by making walking and bicycling to school safer. Safe Walking Routes to Schools Pedestrian Program could involve the following kinds of activities:

- Support for School District development of School walking maps
- Provide staff support for School Traffic Safety Committee, where SDOT staff and other agencies identify and implement, when funds are available, low cost-pedestrian safety improvements around schools
- Identify, install and repair sidewalks, curb ramps, curb bulbs, and other pedestrian improvements on School Walking Routes
- Seek funding for expanded programmatic efforts from federal and state transportation sources

W7. Complete and Maintain Sidewalk Network.

Identify funding for new concrete sidewalks on arterial streets and lower-cost design options for sidewalks on residential streets as a comprehensive program to complete Seattle's sidewalk network over time. Nearly every neighborhood plan developed in the 1990s articulated a need for sidewalks and other pedestrian improvements. The following should be given highest priority for sidewalk improvements: school walking routes; routes that provide direct access to transit facilities or other public facilities (e.g social services, community centers, and parks); and, within and between urban villages.

W8. Provide for Visibility and Accessibility for All Pedestrians.

Develop a consistent approach for providing clear and accessible pathways and crossings, especially for people with disabilities and senior citizens. Both visibility and accessibility are key components of this strategy. Visibility issues are typically caused by on-street parking that blocks a motorist's view of pedestrians in the crosswalk, and vegetation that encroaches into the right-of-way, blocking or obscuring the pedestrian path. Restricting on-street parking at all pedestrian crossings can help to provide good sight distance for the pedestrians and approaching motorists. City and private property owner actions can reduce or eliminate vegetation encroachment.

SDOT's exising curb ramp installation program is a key component of improving accessibility for all pedestrians. Currently, SDOT installs curb ramps (wheelchair ramps) and other pedestrian improvements to make crossings more accessible for everyone. The following should be given the highest priority for curb ramp installation: intersections with existing concrete sidewalks that are direct connections to social service agencies, schools, and neighborhood business areas. Priority is also given to upgrading curb ramps when the adjacent street is resurfaced.

SDOT wants to remain on the leading edge of technology that makes additional sensory information available at crossings. Audio and vibra-tactile traffic signals with tactile surface wayfinding can provide directional information and have been installed in a number of locations throughout Seattle. Additional installations of audible signals will be considered, especially in proximity to social service agencies, schools, transit stations, community centers and neighborhood business areas. Pedestrian volumes, vehicle traffic volumes, related noise level, and neighborhood acceptance are also important considerations.

W9. Continue Installing "Road Diets."

Continue to look for opportunities to rechannelize and make other improvements to overly wide streets in order to support pedestrian and bicycle safety, transit access and business development. Typically a street cross-section is changed from four travel lanes (two each way) to three travel lanes (two through and a two-way center left-turn lane). Recent examples include Dexter Ave. N. and Beacon Ave. S. For pedestrians, the benefits include reducing the number of travel lanes a pedestrian must cross and thus providing better access to bus stops. For bicyclists, benefits include additional space available to install bicycle lanes or other right-of-way improvements. Transit can benefit from road diets with improved pedestrian access to the transit system, but in some cases transit speed and reliability may be negatively impacted because buses can be delayed when re-entering traffic.

W10. Develop Pedestrian Transportation Performance Measures.

Develop measures that allow the City and the public to evaluate the current and future pedestrian transportation system; to identify strengths, deficiencies and potential improvements; and to support development of new and innovative facilities and programs. More information on existing SDOT performance measures can be found in Chapter 5: Performance Reporting.

W11. Enhance the City's Project and Program Review by Using Seattle Pedestrian Advisory Board.

Maintain the Seattle Pedestrian Advisory Board (SPAB), created to advise all City of Seattle departments and agencies on concerns and needs of the pedestrian community. Encourage City departments to consult with SPAB through all stages of a project. Resolution 29532 lays out Board roles and responsibilities. SPAB has been chartered with four tasks: Advise the Mayor, City Council and all departments and offices of the City on matters related to pedestrians: including the impact which actions by the City may have upon the pedestrian environment; Contribute to all aspects of the City's planning and project development processes insofar as they may relate to pedestrian safety and access; Promote improved pedestrian safety and access by evaluating and recommending changes in City design guidelines and policies; and Prepare an annual report on the status of its work program and achievement of its goals to the Mayor and City Council.

W12. Review Right-of-Way Improvement Manual to Ensure Design Criteria Support Pedestrian Safety and Access Concerns.

Ensure that the Right-of-Way Improvements Manual, to be released in 2005, the Land Use Code, and the "Standard Plans and Standard Specifications for Road, Bridge, and Municipal Construction" provide street improvement designs that support the full range of pedestrian needs and facilities, including appropriate standards. Involve the Seattle Pedestrian Advisory Board in these project updates. See Strategy S5 for more information on the Right of Way Management (ROWM) Initiative and the Right-of-Way Improvements Manual.

W13. Support Pedestrian Safety Education and Promotion Programs.

Provide support for private non-profit organizations and others to promote walking in Seattle and educate motor vehicle drivers, pedestrians and others about pedestrian rights. Such support could come in a number of forms—elected official recognition, City promotion through regular communications and the City's Public Access Network web site and staff involvement, funding, etc. An example from 2003 would be Pedestrian Summer, a pedestrian safety program to educate motorists and walkers about pedestrian safety and to promote walking.

W14. Explore Alternative Design Treatments.

Continue to monitor national pedestrian engineering and planning research to identify best practices for SDOT. Provide training opportunities for SDOT staff to learn about alternative design treatments and strategies. Explore and implement projects and programs that provide innovative ways to promote walking and increase pedestrian safety.

W15. Support Enforcement of Traffic Laws That Protect the Rights of Pedestrians.

Work with the Seattle Police Department (SPD) to develop and support enforcement programs for pedestrian safety laws. Identify locations for enforcement emphasis that help to meet the Comprehensive Plan goals and policies.

W16. Support Signage and Wayfinding Projects.

Develop schematic designs, locations and necessary funding for vehicular and pedestrian directional signs, transit signage, information kiosks, neighborhood orientation maps, and street identification signs. One project already underway is the City of Seattle Center City Wayfinding Project. This project develops schematic designs and locations for vehicular and pedestrian directional signs, transit signage, information kiosks, neighborhood orientation maps, and street identification signs in downtown Seattle.

W17. Accommodate Pedestrians During Project Construction in Public Rights-of-Way.

Ensure that safe pedestrian access is maintained during construction of transportation facilities and new development, including City of Seattle projects. Multiple street crossings due to multiple sidewalk closures not only are an inconvenience to pedestrians, but increase the risk of pedestrian/vehicle conflicts. Sidewalks should generally remain open during construction unless sidewalk repair or access to other utilities is necessary. Under no circumstance, should the sidewalk be closed on both sides of the same block or more than one corner of an intersection be blocked. Construction projects should make special effort to maintain access in cases where crossing distances are long and other conditions make crossing the street especially onerous (for example, multi-lane arterials) as well as where the projects take up less than the length of a block.

3.3B Increase Transportation Choices: Encourage Bicycling—it's an easy, healthy way to get around.

The City of Seattle has a long history of supporting bicycling. Seattle has bicycle lanes and shared multi-use paths such as the Burke-Gilman Trail. Bicycle parking and other end-of-trip facilities are required or given incentives through the Land Use Code. The City also supports bicycling through the Bicycle Spot Improvement Program, which installs bike racks in public rights- of-way in business districts and develops small projects that address emerging needs to facilitate bicycling. Although these efforts are important to serve our existing bicycling community, the City must work to expand the use of bicycling for everyday transportation in order to meet Comprehensive Plan mode split goals.

Bicycling is healthful, flexible, convenient, inexpensive, and fun. It also helps meet Seattle's growing transportation demands. As urban growth continues, bicycling can reduce pressure on roads and transit systems. About 6,000 people currently bicycle to work in Seattle. Although this is a healthy number of cyclists, it represents only 1.3% of commuters going to work on average. Experience in other cities, both within the United States and abroad, demonstrates that bicycling has much greater potential, and that Seattle can increase bicycling by making a broad concerted effort as part of our overall transportation plan. This section includes strategies that continue and expand Seattle's commitment to bicycling for transportation and recreational purposes.

Comprehensive Plan Goals and Policies

TG15 Increase walking and bicycling to help achieve City transportation, environmental, community and public health goals.

TG16 Create and enhance safe, accessible, attractive and convenient street and trail networks that are desirable for walking and bicycling.

T30 Improve mobility and safe access for walking and bicycling, and create incentives to promote non-motorized travel to employment centers, commercial districts, transit stations, schools and major institutions, and recreational destinations.

T31 Integrate pedestrian and bicycle facilities, services, and programs into City and regional transportation and transit systems. Encourage transit providers, the Washington State Ferry System, and others to provide safe and convenient pedestrian and bicycle access to and onto transit systems, covered and secure bicycle storage at stations, and especially for persons with disabilities and special needs.

T32 Recognize that stairways located within Seattle's public rights-of-way serve as a unique and valuable pedestrian resource in some areas of the City. Discourage the vacation of public rights-of-way occupied by stairways, and protect publicly-owned stairways from private encroachment.

T33 Accelerate the maintenance, development, and improvement of existing pedestrian facilities, including public stairways. Give special consideration to access to recommended school walking routes; access to transit, public facilities, social services and community centers; and access within and between urban villages for people with disabilities and special needs.

T34 Provide and maintain a direct and comprehensive bicycle network connecting urban centers, urban villages and other key locations. Provide continuous bicycle facilities and work to eliminate system gaps.

T35 Develop, apply and report on walking and bicycling transportation performance measures in the Transportation Strategic Plan to evaluate the functioning of the non-motorized transportation system; to ensure consistency with current industry standards; to identify strengths, deficiencies and potential improvements; and to support development of new and innovative facilities and programs.

T36 Promote safe walking, bicycling, and driving behavior so as to provide public health benefits and to reinforce pedestrian, bicycle and motorists' rights and responsibilities.

Strategies to Encourage Bicycling

This section includes strategies that offer direction so that SDOT can more fully integrate bicycling into Seattle's transportation system in ways that reduce reliance on the automobile and make the entire system more convenient and attractive for all users. These strategies will lead more bicycle use for trips to work and to shop as well as providing opportunities for recreation and physical activity. Implementing these strategies supports and reinforces the urban village strategy, promotes active healthy lifestyles, and supports economic growth by expanding the range of transportation options and reducing the cost of providing mobility.

B1. Complete and Preserve the Urban Trails Network.

Seattle's Urban Trails network provides a set of trunk routes within the city and provides connections to regional trails and significant bicycle routes outside the city. It consists of shared multi-use paths, such as the Burke-Gilman and Duwamish Trails; on-street bicycle lanes like those on Dexter Avenue North; and on-street bicycle routes like the one that follows Lake Washington Boulevard. The bike classification map is included as Figure 26: Bicycle Classifications and shows the existing on- and off-street system of bicycle facilities and prospective elements of the Urban Trails network (see Figure 22: Urban Trails Planning Map, Seattle Comprehensive Plan). The Urban Trails Planning map, describes existing segments of the Urban Trails network including segments where improvements are needed. It also shows segments that are funded or under construction, planned elements and prospective segments under consideration.

The Burke-Gilman Trail is part of Seattle's Urban Trails network. The Urban Trails network is a key piece of Seattle's bicycle and pedestrian network that makes bicycling a viable transportation choice and links major parks and open spaces with Seattle neighborhoods.

In order to create an environment that is conducive to bicycling throughout Seattle, the City must complete those elements of the Urban Trails network that are planned but not yet built including:

- Burke-Gilman Trail – 11th Ave NW to Golden Gardens Park
- I-90 Trail (Mountains to Sound Greenway) Alaskan Way to 12th Ave/Golf Dr.
- Chief Sealth Trail through southeast Seattle
- Lake to Bay Trail
- Ship Canal Trail – 6th Avenue to Fishermen's Terminal
- Duwamish Trail though south Seattle
- Interurban North—N. 110th St. to N 128th St.

In addition, the Urban Trails strategy includes:

- Identification of improvements needed for all network sections;
- Enhancements to the navigability and attractiveness of the system and identification of opportunities to extend the connections to all of the urban centers, urban villages and major recreation centers;
- Advocacy for the development of Urban Trails network elements in projects constructed by the Washington State Department of Transportation and the Port of Seattle; and,
- Maintenance and preservation of the Urban Trails network.

B2. Enhance Bicycle Network by Improving Safety and Access to Urban Villages, Schools, and the Urban Trails Network.

Improve bicycle connectivity by filling gaps and making improvements to bicycle routes, especially within and between urban villages, schools and the Urban Trails network. Although the Urban Trails network provides connections to most of the urban centers, it does not serve all of Seattle's urban villages and residential neighborhoods. The off-street trail portion of the Urban Trails network does not meet needs for all bicycle trips and serves only a segment of most of the trips it accommodates. For this reason, additional strategies are necessary to provide safe, convenient connections between urban villages, and between urban villages and the Urban Trails network. Updating the bicycle street classification system (see Figure 26 Bicycle Classifications) is an important companion strategy because it defines a more extensive network where the potential exists to expand connections.

An effective urban villages and schools bicycle strategy incorporates the following elements:

- Establish bicycle connectivity elements as part of large-scale capitol projects that make significant connections to Urban Trails and urban villages.
- Assess Neighborhood Plan recommendations related to bicycles and incorporate them into transportation projects as practicable.
- Identify corridors and improvements that facilitate bicycle access to elementary and middle schools as part of the state and national *Safe Routes to Schools* program.
- Identify corridors to connect urban villages not served by existing or planned Urban Trails Network segments.
- Continue the Bicycle Spot Improvement Program, which removes barriers to bicycling by making improvements in the right-of way such as: surface improvements (pothole patching, drain grate replacement, etc.); signing and striping (motor vehicle warning signs at trail crossings, bicycle wayfinding, bicycle lane striping and stenciling, etc.); and access improvements (short connecting trail sections, adjusting of electronic detection for bicyclists at traffic signals and traffic island modification).

B3. Establish Stronger Links between Seattle Bicycle Advisory Board and City Departments

Take greater advantage of the Seattle Bicycle Advisory Board as a resource by establishing stronger links between the Seattle Bicycle Advisory Board and project

planning and management functions within the Department of Transportation and other departments. The Seattle Bicycle Advisory Board was created to advise the City on the concerns and needs of the growing bicycling community. The Board represents broad interests and contains expertise that can be a benefit to planning, design, and implementation of projects. It can also aid in establishing policies and practices that help meet the City's transportation goals of balancing the access needs of various modes.

B4. Improve Bicycle Access to and Through the Center City.

Recognize the special importance of improving bicycle access to and within the Center City (See Figure 28: Center City Neighborhoods). Thousands of commuters bicycle to and through Center City neighborhoods each day, many more would be regular bicycle commuters in a more accommodating environment. Center City neighborhoods are poised to see rapid growth in residential development. Many more residents living near downtown jobs and attractions present an opportunity to shift many more trips to bicycling. However, a shift to bicycling requires that the Center City environment be inviting to a broad range of bicyclist skills and comfort levels.

Maximizing the use of bicycles in the Center City reduces traffic demands in congested areas and frees capacity on transit systems. At a minimum, facilities should be established linking all major corridors and points by which bicyclists enter and leave the Center City. The following facilities have been identified as elements of a Center City bicycle network:

- Establish continuous north-south bicycle lanes through downtown
- Extend bicycle lanes through the Pike/Pine Corridor from 12th Ave to 1st Ave; Add bike lanes to Melrose Ave from Roy St. to Pine St.;
- Create bicycle climbing lanes on Spring St and Cherry St.
- Connect the Dexter Ave. N. bicycle lanes to downtown Seattle
- Establish bicycle connections to South Lake Union, Queen Anne, Seattle Center and Belltown
- Establish waterfront bicycle access as part of Alaskan Way Viaduct project
- Provide signage and wayfinding for bicycle routes

Pavement markings such as the lane strip, bicycle legend and arrow delineate space for bicyclists within the street right-of-way.

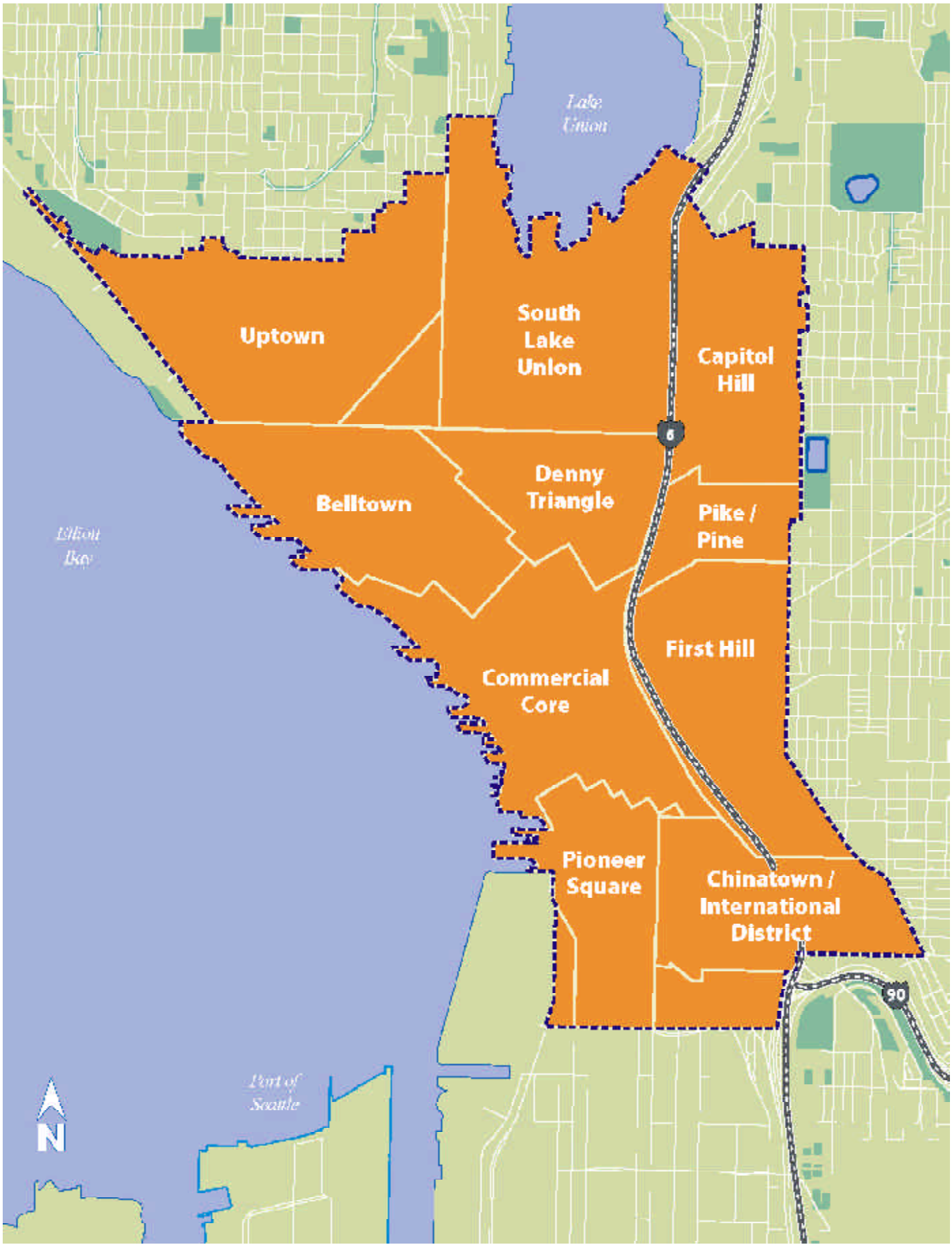
B5. Provide Regular Maintenance for Urban Trails Network and Bicycle Streets.

Maintain bicycle routes to improve bicyclist safety. Bicyclists are more susceptible to road hazards than other road users. Typical hazards include holes and cracks in pavement, rough pavement, misaligned concrete panels and pavement heaves, road debris, poor drainage, and overhanging vegetation. Other maintenance problems, such as traffic light timing malfunction and signal loop detector calibration errors, can present obstacles and delay for bicycle travel. Urban Trails and bicycle streets that see especially high use must be prioritized for regular maintenance.

Establish standards for maintenance of bicycle facilities including but not limited to:

- Regular sweeping of urban trails and high-use bicycle streets that experience significant accumulation of debris.
- Priority clearing and sweeping of such routes after severe weather events
- Trim vegetation to at least 24 inches from the edge of shared use paths
- Establish bicycle streets and urban trails segments as priority elements in the pavement management system.

Figure 28: Center City Neighborhoods



- Assess pavement conditions on entire Urban Trails Network and make recommendations for improvements or repairs where warranted
- Work with the Seattle Parks and Recreation to implement standard maintenance practices where applicable, including with adequate bicycle parking at City parks.
- Work through the Street Maintenance program to provide timely pothole repair, an important safety benefit for bicyclists.

B6. Routinely Coordinate and Institutionalize Bicycle Facility Planning, Design and Construction into all Programs and Projects That Impact Public Rights-Of-Way.

Establish a practice of routine bicycle accommodation. Federal Highway Administration Guidelines and Puget Sound Regional Council's Non-motorized Plan call for accommodation of bicycles in all transportation projects. By establishing a similar practice of "routine accommodation," Seattle will minimize the cost of building bicycle facilities, establish facilities on streets with the best possible pavement and drainage (which adds to cyclist safety), and increase cyclists' access to destinations along the arterial street system.

Routine accommodation incorporates bicycle facilities as a component of all reconstruction, channelization, resurfacing and paving projects in the City of Seattle. In addition, routine accommodation should, where appropriate, establish or improve bicycle facilities in conjunction with projects being carried out by other City Departments, especially Seattle Public Utilities, Seattle City Light, and the Seattle Department of Parks and Recreation.

- Provide adequate space for bicycles in design of streets – marked bicycle lanes or wide curb lanes (14') with bicycle-marked stencils
- Establish bicycle accommodation review as a project requirement for CIP projects.
- Ensure that all new traffic signal detection systems are bicycle-sensitive. Ensure that all inspections and maintenance of signals with detection systems includes bicycle actuation functionality.
- Establish bicycle traffic flow as a criterion for signal timing in corridors with high bicycle traffic volumes, especially where multi-use paths cross arterial streets.
- Ensure that all bridge reconstruction or replacement projects are designed with adequate roadway to accommodate bicycles. When bridges are replaced or rehabilitated, providing safe, direct, and convenient pedestrian and bicycle access across the bridge and the bridge approaches is critical. Such facilities should also be directly connected to the City's Urban Trails network if within ¼ mile of existing or planned segments of the network.

B7. Maximize Opportunities to Fund Bicycle Facilities and Programs.

Ensure that the City qualifies and applies for the maximum available amount of state, federal, and private funding for design, construction, and maintenance of bicycle network and bicycle programs.

- Identify funding opportunities in federal transportation legislation.
- Partner with non-profit organizations to secure private funds for bicycle programs.
- Identify and support funding for bicycle elements of Washington State Department of Transportation (WSDOT) projects within Seattle city limits.

B8. Accommodate Bicycles During Project Construction.

Ensure that safe bicycle access is maintained during public and private construction projects, including utility work.

- Establish a bicycle accommodation requirement in street use permit applications and review processes.
- Establish bicycle accommodation as a requirement for all major project plans.

B9. Make Bicycling and Transit Work Seamlessly.

Coordinate efforts and investments with transit agencies to ensure bicycle access to transit and ferry systems, as well as accommodation at transit facilities and on transit vehicles and ferries. Convenient bicycle access to and onto the Puget Sound's regional and local transit and ferry systems promotes bicycling and helps to maximize transit use, especially in denser urban villages where park and ride facilities are not appropriate. Coordinate with transit agencies and public and private ferry service providers serving Seattle to:

- Develop bicycle lanes, trails, and other appropriate measures and design elements to make it easy to bicycle to rail stations and major transit stops.
- Provide adequate, covered, and secure bicycle parking at transit centers and stations, and at ferry terminals, including space for anticipated future expansion of bicycle parking as demand grows.
- Ensure bicycle accommodations in trains, buses, ferries, or other transit vehicles in a safe and convenient manner, with barrier-free interior station design.
- Explore methods to expand the number of bicycles that can be accommodated on transit vehicles.
- Establish bike stations as a means of accommodating cyclists and attracting new users to multi-modal travel.

B10. Provide Adequate Bicycle Parking for Current and Future Users.

Provide secure bicycle parking. Every bicycle trip begins and ends with the need for a safe and secure place to park one's bike. Fear of having a bicycle stolen or vandalized, and concern about finding a convenient place to park a bicycle, deter people from bicycling to shopping, entertainment, and other desirable destinations. Secure and adequate bicycle parking assures people that they and their bikes are welcome. The SDOT Bike Program has installed almost 3,000 bicycle racks in public rights-of-way since 1993.

This strategy encompasses several projects and programs to ensure adequate bicycle parking in Seattle's residential and neighborhood business districts.

- Include bicycle parking in City-owned facilities (government offices, parks, and libraries)
- Develop bicycle parking regulations as well as design, equipment, and installation guidelines for developers and property owners
- Ensure adequate parking at transit stations
- Prevent misuse and abuse of bicycle parking
- Explore new parking facility designs and approaches, including conversion of parking meter posts to bicycle parking; shared-use of private bicycle parking facilities (e.g., office buildings) and centrally locating bicycle parking/service facilities
- Continue the Bicycle Spot Improvement Program, which installs bicycle racks in public rights-of-way (typically on sidewalks) in neighborhood business districts to encourage bicycling for short trips and errands.

B11. Support Bicycle Education and Promotion Efforts.

Work cooperatively with other Puget Sound government agencies and private non-profit organizations to provide information and support efforts to teach bicycle safety skills and safe bicycling practices.

- Continue to produce update and distribute Seattle bicycle map. SDOT offers the Seattle Bicycling Guide Map free of charge to the public.
- Maintain bicycle information on SDOT web site with current projects, information about how to request bicycle parking rack installation and bicycle maps, bicycle safety regulations, and other relevant information
- Support Bike to Work day, including with City employee participation and other programs in the Seattle area.
- Support initiatives similar to Bicycle Summer (2004) and other promotion programs
- Support efforts to train juvenile and adult cyclists in safe urban cycling

B12. Develop Bicycling Transportation Performance Measures.

Develop performance measures that allow the City and the public to evaluate the current and future bicycle transportation system; to ensure consistency with current industry standards; to identify strengths, deficiencies and potential improvements; and to support development of new and innovative bicycle facilities and programs. These measures should consider:

- minimizing delay and discomfort;
- directness of routes;
- continuity of the non-motorized network;
- attractiveness of environment;
- current and anticipated demand;
- barriers to bicycle transportation, such as terrain, insufficient right-of-way, conflicts with other street uses, and difficult intersections and crossings, and bicycle safety.

B13. Explore Alternative Design Treatments.

Employ alternatives to standard design treatments as pilot projects or in cases where conventional treatments are impracticable or ineffective. Professional transportation organizations and research departments often develop new guidelines, programs and practices to support bicycle safety and access.

B14. Support Enforcement of Traffic-related Violations of Motorists and Bicyclists.

Establish priorities for enforcement of traffic violations by bicyclists based on their relationship to the safety of bicyclists and other road users. Prioritize enforcement of motorist traffic violations that most endanger cyclists.

3.3P Increasing Transportation Choices: Price and Manage Parking Wisely

Long- or short-term parking is part of every car trip, and parking, especially when free, is a key factor in the mode choice for a trip. The availability and price of parking influences people's housing and transportation choices about where to live and how to travel to work, shop, and conduct personal business. The City's challenge is to provide enough parking to meet mobility and economic needs, while limiting supply to encourage people to use non-auto modes.

The City of Seattle strives to manage on- and off-street parking to maintain vitality of urban centers and villages, reduce single occupant vehicle trips, and to improve air quality. The City develops and seeks to implement parking policies, programs, and regulations that consider neighborhood district parking needs as a whole, instead of solely relying on decisions made on a building-by-building or business-by-business basis. Additionally, strong parking management helps to allocate limited curb space to priority users needs. The City prioritizes transit loading and layover, passenger and commercial loading, and short-term on- and off-street parking for business customers in commercial districts. In residential districts, the City prioritizes transit stops and layover, passenger and commercial vehicle and loading and car storage for local residents. Providing unrestricted all-day commuter parking is not a City priority, as it would undermine achievement of downtown Seattle and neighborhood livability, economic development, and environmental goals.

Paid, on-street parking in Belltown provides customer short-term access during the daytime.

Comprehensive Plan Goals and Policies

TG17 Manage the parking supply to achieve vitality of urban centers and villages, auto trip reduction, and improved air quality.

TG18 Recognize that the primary transportation purpose of the arterial street system is to move people and goods, when making on-street parking decisions.

T37 Consider establishing parking districts that allow for neighborhood based on- and off-street parking management regulations to help meet urban center mode split goals.

T38 Use low-cost parking management strategies such as curb space management, shared parking, pricing, parking information and marketing and similar tools to encourage more efficient use of existing parking supply before pursuing more expensive off-street parking facility options.

T39 Restrict on-street parking when necessary to address safety, operational or mobility problems. In urban centers and urban villages

where such restriction is being considered, the pedestrian environment and transit operations are of primary concern, but decisions should also balance the use of the street by high-occupancy vehicles, bicycles and motor vehicles; access to local businesses; control of parking spillover into residential areas; and truck access and loading.

T40 In commercial districts prioritize curb space in the following order: 1) transit stops and layover, 2) passenger and commercial vehicle loading, 3) short-term parking (time limit signs and paid parking); 4) parking for shared vehicles; and 5) vehicular capacity.

T41 In residential districts, prioritize curb space in the following order: 1) transit stops and layover; 2) passenger and commercial vehicle loading; 3) parking for local residents and for shared vehicles; and 4) vehicular capacity.

T42 During construction or implementation of new transportation projects, consider replacing short-term parking only when the project results in a concentrated and substantial amount of on-street parking loss.

T43 Use paid on-street parking to encourage parking turnover, customer access, and efficient allocation of parking among diverse users.

T44 Consider installing longer-term paid on-street parking along edges of commercial districts or in office and institutional zones to regulate curb space where short-term parking demand is low.

T45 Strive to allocate adequate parking enforcement resources to encour age voluntary compliance with on-street parking regulations.

T46 Coordinate Seattle's parking policies with regional parking policies to preserve Seattle's competitive position in the region.

Strategies for Pricing and Managing Parking Wisely

This section includes strategies that offer direction so that SDOT can price and manage parking to support healthy business districts, access and transit use. The department also manages curb space to recognize the importance of principle arterials in moving people, goods and services. Many of the parking strategies in this section come from the City of Seattle's Seattle Parking Management Study (2002) and the Comprehensive Neighborhood Parking Study (1999). SDOT works closely with six other city departments that have a role in regulating, managing, enforcing on- and off-street parking decisions. City staff from each of these departments meet regularly for coordination purposes. Each of the department is involved as follows:

- SDOT manages on-street parking
- Department of Executive Administration-Treasury Office collects parking meter revenue
- Department of Planning and Development regulates off-street parking
- Fleets and Facilities Department manages City-owned off-street public parking (e.g., SeaPark Garage and Pacific Place Garage)
- Seattle Police Department provides on-street parking enforcement
- Municipal Court adjudicates parking tickets
- Seattle Department of Parks and Recreation manages over 10,000 parking spaces at their facilities

In 2005-2006, SDOT will continue installing parking pay stations in Center City and other neighborhood business districts.

P1. Increase Parking Management Capabilities Through New Technology Applications.

P1.1 Install Pay Station Technology.

As recommended by the Seattle Parking Management Study (2002), continue with the pay station program to convert most parking meters to new parking pay station technology. Program benefits include increased customer service enhancements and improved management capabilities. The program is expected to replace the majority of the 9,000 aging single-space meters by installing up to 1,600 pay stations in 2004 through 2006. The program will also convert up to 3,000 free spaces to paid parking.

In 2004, SDOT completed installation of pay stations in the metered areas of Pioneer Square, the central Waterfront, Chandler's Cove (new paid parking), Downtown Seattle, Capitol Hill, Pike/Pine, and First Hill. In 2005-2006, SDOT is expected to pursue installation in remaining metered areas such as University District, Ballard, Uptown, Belltown, Chinatown-International District, Denny Triangle, Roosevelt, Green Lake, as well as new areas, including along Westlake Ave N, Fremont, and other neighborhood business districts as appropriate. [Note that the neighborhood areas listed here are not given in priority order.]

As part of the pay station project, SDOT is replacing mechanical meters with electronic meters in areas with remaining single-space meters so that a meter rate increase at $1.50 or $1.00 per hour can be made consistent throughout metered areas.

P1.2 Evaluate "Smart Card" Technology to Pay for Parking.

Investigate the feasibility of using Smart Cards to pay for parking at pay stations. Seven area transit agencies are developing a smart card payment application as part of the Regional Fare Integration Project. The City could participate in the effort to create a "Transportation" card or develop a separate pay station smart card application to expand customer payment options.

P2. Work with Neighborhoods on Area-Wide Comprehensive Parking Management.

As listed in the 1998 TSP, continue to collaborate with neighborhood business and community organizations through the "Making the Parking System Work" program to identify and implement low-cost, common-sense local parking management and access strategies. This program is grant funded through the U.S. Department of Transportation through 2005.

P3. Ensure a Reasonable Supply of Short-Term On-Street Parking in Downtown Seattle and Neighborhood Business Districts.

As stated in Resolution 30585, identify and implement an annual set of programs and projects to install new paid parking in Seattle neighborhood business districts. Resolution 30585 reaffirmed a paid parking installation policy that identified conditions where paid on-street parking devices, such as pay stations and parking meters, make sense. These conditions include:

- Businesses or services needing good turnover in parking
- A relatively dense business base
- Heavily used on-street parking
- Areas with curbs and sidewalks
- Little likelihood of customers choosing neighborhood parking over metered parking
- Community support

Examples of implementation activities for this strategy are the following:

- As an on-going effort, continue installing short-term time-limit signs (1- and 2-hour) where customer access is needed but paid on-street parking is not yet appropriate.
- In 2005, consider extending meter hours (currently Monday through Saturday from 8 am to 6 pm) into evenings and/or Sundays to improve customer access to entertainment and retail districts.
- In 2005, assess motorcycle parking policies and procedures, particularly with respect to areas with pay stations.
- Refine sign verification and temporary "No Park" program, recognizing impacts and opportunities in both SDOT and the Seattle Police Department's Parking Enforcement Unit.

P4. Pursue Installing Longer-Term On-Street Paid Parking.

As recommended by the Seattle Parking Management Study (2002), identify appropriate areas and install longer-term on-street paid parking (3-hour, 5-hour, 8-hour, etc.). Longer-term meters would support economic vitality and transit by providing paid on-street parking for commuter, tourist or other trips that extend beyond Seattle's traditional 2-hour metered time-limit. The following considerations would be used in selecting areas:

- Office development or other land uses, such as parks, needing longer-term parking
- Heavily used on-street parking not needed for short-term customer parking
- Little likelihood of spillover into nearby areas
- Community support

In 2005-2006, as pay stations are installed, determine locations and the appropriate hours and rate structures for longer-term pay stations. Address any parking enforcement implications with longer time limits.

This "Pay to Park" sign for parking pay stations is a new addition to Center City and many of Seattle's neighborhood business districts.

P5. Use Residential Parking Zones (RPZ) to Address Resident Parking Needs.

The Residential or restricted Parking Zone (RPZ) program was created in 1979 to help ease parking congestion in residential neighborhoods. An RPZ is established on blocks with adjacent residential use to discourage long-term parking by non-residents. An RPZ may be appropriate where the parking congestion is caused by proximity to a business district with limited parking, as well as constraints caused by parking generated by visitors or employees of a hospital, school and other institutions, or rail transit system.

P5.1 Address Residential Parking Concerns Through Residential Parking Zones.

Continue to evaluate and install RPZ, as described above.

P5.2 Evaluate the Residential Parking Zone Program.

As recommended by the Seattle Parking Management Study (2002), evaluate SDOT's RPZ program, to ensure that these policies match with city-wide goals, serve the citizens who are most affected by the zones, and incorporate best-known technology, information and resources into Seattle's RPZ practices. The recommendations to be reviewed include modifying the RPZ program purpose to address the competing demands for parking in Seattle's mixed-use neighborhoods, RPZ establishment procedures, and RPZ program administration. Incorporate findings and recommendations from SDOT's "Making the Parking System Work" program into the review.

P6. Respond to Individual Business and Resident Parking Requests.

In on-going effort, install or adjust on-street parking as requested. SDOT routinely receives requests from individual businesses and residents, as well as from neighborhood plans and other community planning efforts, and implements curb space changes when technical and policy considerations are met. Consider developing integrated customer service system to facilitate request-making and response.

P7. Install Additional Arterial Parking Restrictions to Improve Safety, Mobility and Access.

Use established evaluation factors to develop and implement new arterial parking restrictions to improve safety, mobility, and access along Seattle's arterial street network. The City Traffic Engineer has the authority to remove or restrict on-street parking when safety or operational problems are identified. The City is not required to replace on-street parking removed from the City's right-of-way. This strategy entails developing a list of potential arterial parking restrictions based on factors below and the proposed Urban Village Transit Network. The following evaluation factors were developed in 2002 in conjunction with the Aurora Bus Rapid Transit project to provide a process for deliberating whether to install new or remove existing corridor-length arterial parking restrictions:

- Transit: degree to which transit speed and reliability are impacted by arterial congestion, how frequently transit uses the corridor, and whether the arterial is designated as a major transit route.
- Traffic: whether arterial is approaching carrying capacity without use of the capacity provided by a curb lane.
- Parking: degree of utilization of parking lane
- Pedestrians: extent of necessary buffer provided by on-street parking
- Businesses: availability of alternatives for customer access and loading
- Adjacent land uses: current and future market potential for transit and vehicle traffic along arterial

P8. Increase Parking Enforcement Resources.

Increase parking enforcement resources, as recommended by the Seattle Parking Management Study (2002), to provide citywide enforcement of all on-street parking regulations to encourage voluntary compliance. Seattle Police Department's Parking Enforcement Unit is responsible for enforcing all parking regulations within the Seattle city limits and on City property. The Parking Enforcement Unit also cites abandoned cars and supports police officers in identifying stolen vehicles. During special events or incidents, such as parades, sporting events, accident scenes, and emergencies, parking enforcement officers provide traffic control to maintain mobility and access. As on-street parking regulations are expanded throughout the city, additional enforcement resources are necessary to ensure parking turnover in business districts and to monitor residential parking zoned areas.

Examples of programmatic work to be accomplished are as follows:

- Complete replacement of the Parking Enforcement Unit's hand-held technology (ticket-generating machines)
- Review parking enforcement staffing allocations and distribution across the city, including evaluating service territories and impacts of pay stations, additional paid parking areas, and the other parking recommendations of this chapter
- Consider new vehicle license plate recognition technology
- Evaluate potential improvements to customer service efforts for abandoned vehicles
- Consider a bicycle patrol for the Parking Enforcement Unit

- Consider various scofflaw tools, as discussed in the Seattle Parking Management Study

P9. Address Parking Impacts of Major Transportation Capital Projects.

Address on-street parking impacts and potential mitigation as major transportation capital projects —the Alaskan Way Viaduct (AWV) project, Sound Transit, Monorail and others— continue to be developed. In 2008-2010 or within the year before rail transit systems open, work with rail transit agencies and station area stakeholders to develop hide-and-ride parking mitigation programs, including parking studies and analysis around light rail and monorail stations. In an on-going effort, with Alaskan Way Viaduct partner agencies, determine how to address short-term parking supply in Pioneer Square and Central Waterfront during and after the project construction.

P10. Regularly Review Off-Street Parking Regulations.

Monitor off-street parking regulations to ensure that an appropriate amount of parking supply is provided to strengthen urban villages. The Land Use Code and the State Environmental Policy Act (SEPA) parking policies are the City's principal tools for management of off-street parking. Overall, the City's parking requirements were found to be higher than parking demand, based on parking analysis completed in the Comprehensive Neighborhood Parking Study (2000) and other parking analysis. In 2004, the Department of Planning and Development has undertaken a comprehensive review of the commercial code, including the appropriate parking requirements and related regulations.

P11. Develop and Maintain an On- and Off-Street Parking Inventory.

Develop a scope, schedule, and budget and start implementing a GIS parking inventory project. As recommended by the Seattle Parking Management Study (2002), create a public on- and off-street parking database system designed to:

- answer routine operational parking questions
- provide existing baseline conditions and future parking plans for SDOT and other planning efforts
- support internal decisions and external communications for pay station and other parking projects
- help allocate parking enforcement resources

P12. Coordinate or Consolidate On-Street Parking Management, Enforcement and Other Parking Functions.

As recommended by the Seattle Parking Management Study (2002), define and implement efforts to better coordinate or consolidate the many on- and off-street parking functions within City government. The Seattle Parking Management Study looked at strategies for how the City of Seattle might improve communication, decision-making and efficiencies of parking management.

P13. Evaluate Neighborhood Parking Facility Proposals.

Consider, within available resources, new funding proposals for neighborhood public parking facilities that support short-term visitor and customer parking and/or residential car storage. This strategy reiterates Resolution 30369 that the City will not consider funding proposals for long-term commuter parking or park-and-ride facilities. Additionally, the City generally will not consider funding requests that involve the City making a monetary contribution toward ongoing operating and maintenance costs. The City will give higher attention to proposed facilities that incorporate or support pedestrian, multimodal, and urban design components, such as: mixed use; increased density; supportive land use regulations; connections to other elements of the City's transportation system; bicycle parking; shared auto parking; and/or carsharing and carpool parking spaces.

P14. Publicize the City's Parking Programs, Rules and Regulations.

Continue to provide information, through the SDOT web page and published materials, about Seattle's parking rules. The purposes of the public information are to help people know how to park legally, thus avoiding getting a ticket or towed, and to keep the public informed of parking initiatives.

Examples of implementation activities area as follows:

- Create an educational program to highlight existing City laws about on-street parking, including not allowing meter-feeding. Add signage or other information on the street informing parkers about the no-meter feeding and having to move one's vehicle after time has expired.
- Regularly update the City's web site for parking rules, regulations and projects, programs, services. An example could include a Seattle version of "10 ways to avoid getting a parking ticket by parking legally."
- In 2005, update the Department's "Green Guide" about parking in Seattle.
- Help neighborhood organizations produce parking/transportation information tools tailored to their area.
- Prepare public service announcements (PSAs) to air on television, radio and print media on Seattle's parking regulations. Consider advertisements on Seattle bus transit routes.

P15. Ensure Effective Reservation System for On-Street Parking.

Use meter hoods and other related reservation systems so that paid parking spaces can be reserved or temporary "no parking" areas can be installed. On a daily basis, certain metered spaces are made unavailable to the general public due to the use of those spaces as service parking by private utilities and other building service providers. Other temporary "no parking" areas are installed for construction activities and special events (e.g., a parade). The pay station program has required changes to the City's meter hood reservation system because meter heads are no longer always available at each space. Based on information about the City's existing practices and research into other jurisdictions, the following changes to the City of Seattle's service parking policies and practices are recommended:

- Continue to evaluate the system for parking space reservations with the pay station project
- Maintain the annual fee for blue service hoods at a full recovery rate of potential lost meter revenue to reduce abuse.
- Review the hood allocation process to ensure fair access by service companies.
- Maintain charges related to red/yellow hoods to account for inflation and the potential lost meter revenue.
- Increase the penalties for misuse of meter hoods. Consider revoking the hood after three infractions for misuse.
- Increase the number of commercial vehicle enforcement officers who enforce meter hoods, or involve PEOs in the enforcement of meter hoods.

P16. Document and Refine Curbspace Designation Policies and Procedures.

Document the current installation practices for curbspace use by taxi, valet, car-sharing, carpool, vanpool, and vanshare activities. Develop guidelines for assigning curbspace for these uses that assist the department in determining the best use of curbspace in areas where there is high demand, competing uses, and in light of other department goals and policies. This action was recommended by the Seattle Parking Management Study (2002).

3.4 Promoting the Economy: Moving Goods and Services

The transport of goods and services is critical to Seattle's and the region's economic development. As the state's largest metropolitan area and as a major port and trade gateway, Seattle's businesses and industries rely on truck, rail, marine, and air transport. Goals and policies in the Transportation, Economic Development and the Neighborhood Planning Elements of the Comprehensive Plan support existing businesses and industries and promote Seattle as a place for economic expansion.

Truck, rail and marine freight mobility are all critical to Seattle's and the region's economy.

Comprehensive Plan Goals and Policies

The following goals and policies in the Transportation Element, and those in the Economic Development Element of the Comprehensive Plan, support existing businesses and industries and freight mobility.

TG19 Preserve and improve mobility and access for the transport of goods and services.

TG20 Maintain Seattle as the hub for regional goods movement and as a gateway to national and international suppliers and markets.

T47 Maintain a forum for the freight community to advise the City and other entities on an ongoing basis on topics of land-based freight transportation facility modifications and enhancements. Coordinate the review of potential operational changes, capital projects and regulations that may impact freight movement. Participate and advocate Seattle's interests in regional and state forums.

T48 Recognize the importance of the freight network to the city's economic health when making decisions that affect Major Truck streets as well as other parts of the region's roadway system.

T49 Support efficient and safe movement of goods by rail where appropriate. Promote continued operation of freight rail lines and intermodal yards that serve industrial properties and the transport of goods. Improve the safety and operational conditions for freight rail transport at the rail track crossings within city streets.

T50 Promote an intermodal freight transportation strategy, including rail, truck, air and water transport and advocate for improved freight and goods movement. Work toward improved multi-modal connections among rail yards, industrial areas, airports, and regional roadways

T51 Consider the needs for local delivery and collection of goods at businesses by truck when making street operational decisions and when developing and implementing projects and programs for highways, streets, and bridges.

In addition to broad City-wide goals and polices, some of the Neighborhood Planning Element goals and policies for Seattle's two designated manufacturing/ industrial centers, the Ballard Interbay Northend Manufacturing/Industrial Center (BINMIC) and the Greater Duwamish Manufacturing/Industrial Center, provide area-specific statements regarding freight mobility.

BINMIC Goals and Policies

BI-G4 Strive to maintain and enhance intermodal (barge, ship, rail and truck) connections.

BI-P14 Where practical and appropriate, separate mainline rail traffic from surface street traffic by designing and constructing bridges to improve safety for motorized and non-motorized transportation.

BI-P17 Support separation of mainline rail traffic from surface street traffic by designing and constructing bridges, where feasible, to improve safety for motorized and non-motorized transportation.

Greater Duwamish Goals and Policies

GD-P14 Maintain shore-side freight access to and from the waterway.

GD-P29 Strive to maintain waterborne and roadway access to seaport facilities.

GD-P30 Strive to maintain access for air cargo to the King County International Airport.

GD-P34 Recognize the importance of intermodal connections for the movement of freight between the state highway system, rail yards, barge terminals, Port terminals, airports and warehouse/ distribution centers.

GD-P37 Consider setting speed limits for trains high enough to limit the length of time trains block streets at grade crossings.

GD-P38 Encourage railroad operations in which switching and signals enhance the speed and reliability for passenger and freight trains.

This wayfinding sign provides guidance to truckers making deliveries in the Duwamish Industrial Area, one of Seattle's Manufacturing and Industrial Centers.

Strategies for Moving Goods and Services

This section includes strategies that offer direction so that SDOT can support the efficient movement of goods and services. In November 2002, SDOT prepared the City's first Freight Mobility Strategic Action Plan. That plan presented a list of actions to be implemented by the various SDOT divisions, including railroad grade separations, truck guide signing, street improvements for the benefit of trucks and other modes, and ongoing communication with the Seattle freight community via the Seattle Freight Mobility Advisory Committee and other outreach. SDOT staff updated the Action Plan in 2004 to reflect changes in the freight program; new

actions to be done in 2004 in coordination with the freight community; and 2003 accomplishments. Future annual updates to the Freight Mobility Action Plan will be organized by the six overall Transportation Strategy Plan strategies and sub-strategies listed below.

GS1. Maintain a Street and Highway Network for Trucks.

GS1.1. Define and Map a Street Classification to Accommodate Significant Freight Movement within Seattle.

The TSP "Making the Best Use of the Streets We Have to Move People, Goods and Services" section defines a street classification system to guide the design and operation of the City's street system, including for significant freight movement. Monitor these streets and other arterials and make operating, design, access and/or service changes, as well as capital investments, to accommodate trucks and to preserve and improve commercial transportation mobility.

GS1.2. Address Site-Specific Obstacles to Truck Movement.

Institutionalize an annual truck spot improvement program to address restrictive conditions that may exist on major freight corridors to enhance the ability of trucks to operate on the existing streets. Improvements that support truck movement include:

- increasing curb radii on critical corners
- removing on-street parking in key locations
- relocating utility poles that are too close to the curb
- installing signage (street name designation and truck directional signing)
- providing truck queue lanes/holding lanes at major terminal access points
- revising intersection signal control to assist truck turning movements that now typically require a long wait for an adequate traffic gap

SDOT maintains and augments an inventory of known site-specific obstacles to truck movement on major truck streets to help with prioritization as funding becomes available or for consideration in design of already funded projects.

GS1.3. Design Standards for Oversized Vehicles.

As is characteristic of the historic development of Seattle, many City streets were not designed to current standards. Aging infrastructure has also taken its toll on street conditions. Implementing street changes for freight will be an incremental process of improving the physical environment as opportunities and funding permit. Trucking operators have expressed concern that the City's existing street design standards are not adequate for the larger and heavier trucks that are prevalent today. The City will continue to review current standards and modify them to ensure that when arterials—especially Major Truck Streets (see Figure 25: Major Truck Streets)—are redesigned and rebuilt, they are better able to accommodate truck movements, in coordination with other street use needs.

However, there will continue to be many locations on the Seattle street system where large trucks will not be able to travel. Where space is extremely constrained, other options will need to be considered. For example, in neighborhood business districts with limited street space, consideration will be given to encourage smaller truck usage to allow local access to constrained curbside loading areas.

In addition to identifying a street classification for major freight movement, the City of Seattle has a program to accommodate the movement of overlegal vehicles within and through the city. Overlegal vehicles are those that are over length, over width, over height or over weight. Examples are the shipment of Boeing airplane tail assemblies, large cranes, and houses. On a regular basis, the SDOT Commercial Vehicle

Enforcement officers issue permits to identify and specify identify appropriate routes and to assist individual trips with accomplishing their journey. The standards for oversized and overlegal vehicles are being revised as part of the Right-of-Way Improvements Manual update.

GS1.4. Improve Pavement Conditions on All Routes Used for Truck Access.

Use the street classification designation for freight movement as one of the criteria for determining paving priorities. Roadway surface conditions are also an important factor for truck mobility and access. Truck access routes tend to deteriorate more quickly than other streets because they carry heavier loads and higher volumes.

Some of Seattle's most important local industrial streets were never formally designed or constructed to city standards. Streets that were never designed for heavy industrial traffic are providing important lifelines for freight and commerce. SDOT makes spot repairs to these streets as necessary to keep commerce moving, but it never has had the funds to reconstruct, improve, or even to perform preventive maintenance on its local industrial streets. The problem of local industrial street maintenance is especially severe in the industrial areas of South Downtown, Georgetown and South Park, where the number and weight of industrial vehicles greatly exceeds the capacity of the local industrial streets.

To help address this need, since 2000, SDOT has set aside a portion of its maintenance funds as a match for small, local paving projects that are suggested and supported by local businesses and property owners. In several instances, the local businesses have coordinated their efforts through a non-governmental, community-based organization, which has applied for additional city matching funds from the Department of Neighborhoods. The addition of the Department of Neighborhoods to the partnerships has increased the amount of public money available for the projects, and correspondingly reduced the sum that the businesses have had to contribute. SDOT strongly encourages community participation in the Paving Partnership Program.

GS1.5. Pursue Grade Separation of Key Truck Streets at Heavily Used Railroad Crossings.

Rail crossings on heavily used truck routes are difficult obstacles for truck movement, especially in the South Downtown area and at Broad Street along the North Waterfront where the BNSF mainline railroad, Amtrak and Sounder commuter rail traverse the area. Grade separations are the most effective way to eliminate these conflicts and implementing a program of grade separations is one of the City's highest freight mobility priorities. Railroad operations also greatly benefit by having a grade separation. These overcrossings or undercrossings are extremely expensive and are justifiable only where there is significant traffic on both the truck route and the rail line.

Grade separations could significantly reduce the typical 8-11 minute delays encountered at current at-grade rail/street crossings of the rail mainline tracks. There are approximately 70 train movements per day across the east/west arterial streets in the Duwamish area. These train volumes and associated traffic delay are expected to increase in the future. The City has developed a list of potential grade separation projects based on the

Greater Duwamish Manufacturing and Industrial Center Plan and the *Access Duwamish Freight Mobility Implementation Plan*. The most recent completed grade separation projects are at Atlantic Street (SR 519, Phase I where the elevated intersection connects to Interstate 90) which was opened in November 2003 in the Duwamish, and the 2001 completion of the Galer Street Flyover in Interbay. Five other projects are currently in various phases of planning and implementation. Project implementation is dependent on obtaining full project funding from the partners and the associated City fund sources.

GS1.6. Minimize Conflicts Between Trucks and Other Transportation Modes.

There are a number of basic conflicts between medium to heavy truck traffic and other motorized, non-motorized, and pedestrian modes of transportation that the City continually needs to evaluate and address. Possible solutions might include identifying alternative routes, developing separate facilities, and clarifying priorities for specific locations.

GS2. Support Rail Enhancements That Improve Mainline Operations and Critical Non-mainline Connections that Serve Industrial Properties and Goods Transport.

Efficiently moving containerized cargo shipments is critical to maintaining a healthy, vital economy in the Puget Sound Region. Container freight movement is increasing, especially by rail, for destinations in the Midwest and beyond. Rail is an essential and efficient option for moving freight and goods and provides an alternative to trucks for many industrial and manufacturing businesses. The increasing use of shipping containers on rail is straining the throughput capacity of the region's railroads. Seattle provides an operating environment for three railroads: both the BNSF and Union Pacific railroad have mainline tracks in the city. A third short line railroad, the Ballard Terminal Railroad, provides connections between the BNSF mainline and the Ballard Industrial area north of the Ship Canal. The Duwamish Industrial Center contains several intermodal rail yards, including the BNSF Seattle International Gateway (SIG) Yard and the Union Pacific Argo Yard. BNSF operates a major maintenance locomotive facility in the Interbay industrial. Both freight and passenger train volumes are projected to increase through the city.

Beyond freight mobility, rail is also an increasingly attractive option for commuters, evidenced by the early success of Sound Transit's Sounder line between Tacoma and Seattle. Extension of service to Everett began in late 2003 with increased service planned in the future. All of this activity strains the operational efficiency of mainline rail/street crossings in the Duwamish and in the north-end of the central waterfront.

Some railroad crossing locations are adjacent to signalized arterial intersections and present potential conflicts between modes. Improved signal interconnects (communications between control equipment) which coordinate rail and street traffic can reduce safety problems (stopping or redirecting traffic before it reaches the rail crossing). Interactive traffic signs can provide information about waiting times and redirect roadway traffic from closed rail crossings.

Technology improvements will be applied on an ongoing basis to the City's inventory of traffic signals, signage, and other devices. Such Intelligent Transportation System (ITS) efforts can often be implemented on a quicker timeframe than more capital-intensive projects, providing interim freight mobility relief until the larger, longer-term projects come to fruition.

GS3. Improve Freight Access to Manufacturing and Industrial Areas.

A healthy transportation infrastructure is essential to Seattle's manufacturing and industrial areas. Reliable, direct connections to water, rail, airport and truck facilities are important to an array of existing businesses, and our region's ability to attract new businesses. Due to the nature of these businesses, truck volumes and frequencies are

higher here than in other areas of the City, and truck access is of paramount importance.

To protect and improve freight access to manufacturing and industrial areas, the City should develop strategies that address the following themes:

- Preserve good ground transportation access to manufacturing and industrial sites served by freight carriers and their supportive facilities (rail, airport and marine).
- Improve directional signage between manufacturing and industrial areas and the regional highway system.
- Improve and protect the utility of Major Truck Streets to and from manufacturing and industrial areas.
- Facilitate efficient movement of goods within the manufacturing and industrial areas.
- Include local business access during construction planning in the major capital project plan process in the industrial areas.
- Where safe and appropriate, allow loading and maneuvering of trucks on non-arterial access streets in industrial areas.
- Improve pavement conditions on industrial arterial access streets within manufacturing and industrial areas.

GS3.1 Define and Map a Street Type to Support Freight Access to Manufacuturing and Industrial Areas.

The "Making the Best Use of the Streets We Have to Move People, Goods and Services" section defines a street overlay network to guide street use and design features that support adjacent land uses. This overlay network includes a street type for manufacturing and industrial areas to address freight access.

GS4. Support Access to Container and Cargo Terminals.

Continue to work with the Port of Seattle and other marine interests to implement transportation and access projects that support continued growth at container and cargo terminals. This includes joint City and Port efforts to implement the Port's Container Terminal Access Study recommendations.

The Port of Seattle is one of the largest West Coast cargo centers, serving as the entry and exit point for marine cargo to and from the Pacific Rim and Alaska. The Port of Seattle's seaport is made up of 1,414 acres of waterfront land and nearby properties. Nearly 800 acres of the Port's seaport is dedicated to container terminal operations and cargo handling. Future container volumes are forecasted to increase. Most of the freight is shipped through the Port by intermodal containers that are transferred to or from railcars or trucks on the dock. Terminals 5 and 18 include on-dock rail facilities. Some of the containers are shuttled by truck (called "drayed") between BNSF and UPRR intermodal yards. At the intermodal yards, containers are transferred to and from railcars. Therefore, both truck and rail transport are an important part of moving cargo to and from Port terminal.

GS5. Facilitate Efficient Retail and Office Goods Delivery.

GS5.1. Improve Freight-Dependent Business Site Access Through Management of Curbspace and Alleys.

Continue to work with business district representatives and individual businesses to install commercial and passenger load zones where appropriate.

GS5.2. Develop and Implement Goods Delivery Strategies.

The everyday delivery of goods and services purchased by the general public, businesses and government is critical to our economy's success. Explore strategies that

address issues of goods delivery and managing operational impacts on adjacent land uses, including:

- Allow after-hour truck access on certain streets.
- Balance the needs for loading zones with other curb use needs.
- Ensure workable truck access and adequate loading berths in the design of new buildings in conjunction with the Department of Planning and Development review practices.
- Retain alleys and ensure they work efficiently for goods delivery.
- Provide and encourage the provision of suitable truck layover areas during those periods of time when trucks are restricted from entering certain urban centers.
- Ensure that loading zones are reserved for freight loading and unloading as intended with appropriate levels of enforcement.

Given the historic development of Seattle's street network and land use pattern, limited right-of-way and competing uses, it is difficult and sometimes impossible to accommodate all sizes of delivery and service trucks in some established areas of the city. In such cases, the operating environment will require use of smaller trucks to make those deliveries of goods and services. To better manage the negative impacts that goods delivery may have in adjacent residential areas, the City should consider the following:

- Support use of smaller trucks within neighborhood commercial districts.
- Restrict hours of operation for large trucks in neighborhood commercial and residential areas, similar to the current practice with the Seattle Central Business District.

GS6. Freight Mobility Coordination and Implementation.

Long-term freight mobility solutions such as railroad grade separations at track and street crossings are expensive and often involve complex funding partnerships with public and private parties including the Federal government, State, Port of Seattle, King County, and Burlington Northern Santa Fe, and Union Pacific Railroads. These challenges are currently exacerbated by struggling national and regional economies. In an environment of significant local, regional, and state budget reductions, finding funding for projects that would provide the greatest relief is a challenge.

Important forums for creating these funding partnerships for freight include the FAST Corridor program, the state's Freight Mobility Strategic Investment Board, and the Regional Freight Mobility Roundtable. The FAST Program (Freight Action Strategy for Everett-Seattle-Tacoma) is a nationally recognized leader in delivering transportation improvements for freight mobility. Since 1996, the FAST partnership has studied freight movement via rails, roads and shipping ports to develop projects that move freight more efficiently and increase safety for cars, trucks and trains. FAST identified 15 top priority projects from Everett to Tacoma for phase I: seven projects are complete. More FAST phase I and II projects are in the pipeline for 2004 and 2005.

The Freight Mobility Strategic Investment Board (FMSIB) was created in 1998 when the State Legislature created RCW Chapter 47.06A, Freight Mobility and the Board, for the purpose of reviewing, prioritizing, and recommending freight mobility transportation projects that are of strategic importance to the State of Washington. Their recommendations are presented to the Governor and the Legislature to provide a basis for project prioritization and funding allocations. SDOT will continue to work with FMSIB, and the Washington State Department of Transportation through the update to the State Transportation Plan, and will work with other local partners to articulate Seattle's freight mobility priorities.

SDOT reports annually on progress made towards implementing the Freight Mobility Strategic Action Plan.

The Regional Freight Mobility Roundtable is a public-private forum sponsored by the Puget Sound Regional Council to define and recommend actions serving freight mobility needs in and through central Puget Sound. Private sector participants include rail, marine, air cargo and trucking carriers, and shippers such as Boeing and Weyerhaeuser. Public sector participants include local governments, the ports of Seattle, Tacoma and Everett, state agencies, and federal agencies within the U.S. Department of Transportation (including rail, highway, maritime), and the Department of Defense. The Roundtable is consulted by the FAST Program and provides input into regional and state transportation plans.

SDOT regularly participates in these forums to elevate support and advocate timely funding for Seattle area freight mobility needs. State and federal funding processes assign greater priority to project applications which offer private funding participation. SDOT encourages private funding partnerships where projects benefit the freight community.

Despite funding uncertainty, SDOT has been able to identify a number of actions that can be accomplished either within existing resources or at a relatively low cost. It is important that SDOT lose neither the vision of Seattle's long-term infrastructure needs nor the urgency to make near-term progress on efforts to more efficiently move freight and goods through our transportation system.

GS6.1. Build Arterial Street Projects to Benefit Freight.

The City's Capital Improvement Program (CIP) has programmed projects to benefit freight. Project schedules and budgets occasionally change due to design changes and funding availability. These changes are reflected in the subsequent year's CIP. The annual Freight Mobility Strategic Action Plan identifies current CIP projects that benefit freight.

GS6.2. Make Traffic Engineering and Technology Improvements for Freight.

Better management of streets through traffic engineering and the application of technology advances can make more efficient use of our street and signal system resources. These technology solutions are called Intelligent Transportation Systems (ITS). ITS is the application of state-of-the-art traffic management, communications and data technologies to provide a sophisticated set of tools to address the transportation mobility and safety needs faced by the driving public. Seattle has a very proactive traffic technology program. Traffic control computers are being upgraded annually. There currently are 19 traffic surveillance cameras providing traffic information to the public via web images. The new Traffic Management Center was put on line in 2003. Traffic data and camera images are collected; traffic control changes are made to the system; the traffic information is provide to the State and general public via web images. SDOT is planning on implementing more improvements as funding is available.

GS6.3. Maintain the Freight Mobility Advisory Committee.

In October 2002, the Seattle Freight Mobility Advisory Committee, co-sponsored by SDOT and the Seattle Manufacturing Industrial Council (MIC), was formed to provide a regular forum for communication with City staff and other agencies. This Committee was established to provide a forum for giving input on projects and programs of interest to the freight community and to exchange information. SDOT looks to the citywide freight committee to represent the interest of various freight transportation providers and operators (including the modes of truck, rail and marine transport), and to reflect the interests of constituents both in the north and south industrial areas of the City. The Committee meets on a monthly basis at the MIC

offices located in Georgetown to encourage freight community attendance and participation.

GS6.4. Develop Funding Partnerships to Promote Projects that Benefit Freight.

SDOT regularly participates in several regional forums to elevate support and advocate for timely funding for the Seattle area's freight mobility needs.

GS6.5. Improve Communication Tools for Construction-Related Traffic Impacts for Freight Mobility and Access.

Construction activity and major events can present an obstacle to accessing businesses and freight destinations. Given the multiple private and public parties doing construction Seattle's right-of-way, effective, ongoing coordination is a necessity. To better manage congestion, SDOT coordinates with the WSDOT on major maintenance and roadway improvement projects scheduled each year in and adjacent to Seattle.

Parallel to this activity, SDOT is continuously refining departmental business practices to coordinate street work and potential disruption via the Street Use permit process and coordination with the Department of Planning and Development. This requires cooperation on construction decisions, and subsequently, effective sharing of construction schedule and traffic information to affected parties.

Timely notification of these activities can assist freight operators in planning for alternative routes. Currently, SDOT participates in several programs to notify the freight community of construction-related traffic changes. This includes South Downtown (SODO) email alerts using the SODO Association's electronic mailing list. SDOT also provides project input to the Port of Seattle's "Truckers Guide" – a handy template for route planning. Finally, information of the status of major projects is maintained on the SDOT web site.

This truck is transporting a container from one of the Port of Seattle terminals. Freight being shipped through Seattle will typically make one or more intermodal connections between the Port's terminals, the regional and statewide highway network and intermodal railroad yards.

3.5 Improving the Environment

The compact, walkable land uses encouraged by the urban village strategy contribute to healthy, urban environments and neighborhood livability. Increased transit use, walking, and bicycling are transportation actions that support urban village land use patterns. Well-designed and maintained streets that support travel by all modes are also part of a healthy urban environment. Conversely, increased trips by motor vehicles, increased travel time, congestion, and longer trips all contribute to deteriorating environmental quality. Environmental degradation resulting from over reliance on the car includes deterioration of air quality, increased water pollution through street and stormwater runoff, and higher levels of noise pollution. Policies and strategies in the Comprehensive Plan Transportation Element and elsewhere in the TSP that reduce car use, support transit, and encourage walking and bicycling are all key to reducing transportation-related environmental impacts.

Comprehensive Plan Goals and Policies

TG21 Promote healthy neighborhoods with a transportation system that protects and improves environmental quality.

Seattle's tree canopy is a significant investment that provides tremendous environmental and aesthetic benefits.

TG22 Reduce or mitigate air, water, and noise pollution from motor vehicles.

TG23 Promote energy-efficient transportation.

T52 Design and operate streets to promote healthy urban environments while keeping safety, accessibility and aesthetics in balance.

T53 Implement an environmental management system to develop, operate and maintain a safe and reliable transportation system in a manner that reduces the environmental impacts of City operations and services.

T54 Identify, evaluate, and mitigate environmental impacts of transportation investments and operating decisions (including impacts on air and water quality, noise, environmentally critical areas and endangered species). Pursue transportation projects, programs, and investment strategies consistent with noise reduction, air quality improvement, protection of critical areas and endangered species, and water quality improvement objectives.

T55 Coordinate with other city, county, regional, state, and federal agencies to pursue opportunities for air and water quality improvement, street and stormwater runoff prevention, and noise reduction.

T56 Continue to work to reduce fuel use and promote the use of alternative fuels.

Strategies for Improving the Environment

This section includes strategies that offer direction so that SDOT can help manage and improve the Puget Sound environment. To do this, the Department must incorporate environmental considerations into every decision to effect a dramatic change in our environment, our neighborhoods and public health. SDOT is currently working on many programs and projects to implement this principle.

SDOT staff recognizes that although environmental excellence and sustainability are the ultimate objective, competing priorities and budget constraints often result in solutions that focus on ensuring compliance with environmental regulations. The strategies below are grouped into two themes: 1) Sustainable Design; 2) Accomplishing Our Environmental Mission.

The following strategies provide a framework for the activities they are currently involved in as well as those that they hope to accomplish in the future.

E1. Incorporate Elements of Sustainable Design into Major and Capital Projects.

SDOT leads or participates in a number of transportation projects, many of which are considered major projects that deliver both local and regional benefits. In order to ensure that these projects include elements of sustainable design, SDOT staff participate in project teams and provide direction on environmental issues as well as support sustainable design features that may be appropriate.

E1.1. Participate on City or Regional Major and Capital Project Teams.

In implementing the Mayor's Environmental Action Agenda in incorporating sustainable design in major projects, SDOT's environmental team represents the Department and the City to ensure that transportation projects and planning initiatives incorporate sustainable design elements. Staff from SDOT's environmental team currently participate in the following project teams:

- Alaska Way Viaduct/Seawall Repair Project
- Waterfront Planning
- South Lake Union
- Fremont Bridge Approaches (Working towards LEED's Certification for the bridge maintenance building)
- Magnolia Bridge
- Northgate Coordinated Transportation Investment Plan (CTIP)
- Monorail
- Streetcar
- Mercer Corridor
- SR-520
- Washington State Ferries Colman Dock Project
- Sound Transit Light Rail

E1.2. Participate in and Contribute to the City's Sustainability.

The Sustainable Infrastructure Initiative is part of the Green Building Initiative developed to incorporate the concepts of sustainable design for public infrastructures, including roads, drainage, street lighting, and other services. The Initiative is targeting work in the following priority areas:

- Coordinate: Use existing interdepartmental processes to link and coordinate relevant infrastructure projects and processes.

- Map and inventory: Summarize existing CIP and infrastructure enhancement needs and the scheduled and proposed infrastructure projects.
- Life-cycle cost assessment: Standardize methods for determining total cost of ownership.
- Executive direction: Create an Executive Policy that provides a context for and guidance to these efforts.
- LEED-like system for sustainable infrastructure: Convene key jurisdictions to partner in developing a shared regional benchmarking tool.

SDOT staff are coordinating the Sustainable Infrastructure Initiative throughout the department and also provide an department liaison to the Office of Sustainability and Environment, who leads this initiative.

E1.3. Add Environmental Procedures and Design Criteria to the Right-of-Way Improvement Manual.

SDOT is responsible for permitting work done within Seattle's street rights-of-way. The procedures and design requirements that apply to work in the right-of-way are defined in the Street Improvement Manual which is currently being updated and will be renamed the Right-of-Way Improvement Manual. Staff are active participants in this effort to define environmental requirements, procedures, and design criteria that apply to construction in the right-of-way. They are updating existing chapters on environmental procedures for work in Seattle's rights-of-way and identifying permit requirements for all projects requiring environmental review.

E1.4. Recognize Context Sensitive Solutions.

Context Sensitive Solutions is a model for transportation project development that recognizes that a proposed transportation project must be planned not only for its physical aspects as a facility serving specific transportation objectives, but also for its effects on the aesthetic, social, economic and environmental values, needs, constraints and opportunities within the community. The Federal and State Departments of Transportation endorse the Context Sensitive Solutions approach for all projects, large and small, from early planning through construction and eventual operation.

SDOT has approached project development from a context sensitive approach for many years, especially with the City's emphasis on neighborhood planning. SDOT staff conduct context analysis during pre-design stage of transportation projects and use as input to the design process. There is a high value placed on seeking consensus for transportation projects in order to support neighborhood goals, and improve project delivery to make the best use of public dollars.

SDOT strives to protect, and where possible, enhance Seattle's natural areas.

E.2. Accomplishing Our Environmental Mission.

One of SDOT's goals is to be a leader in all of the following areas of environmental protection and enhancement.

E2.1. Develop and Implement an Environmental Management System (EMS).

Continue to manage the development and implementation of SDOT's EMS as part of

the Mayor's Environmental Action Agenda . The EMS enables SDOT to take a systematic approach to accomplishing the department's environmental mission. This program assists the department more effectively manage the environmental "aspects and impacts" of the City's transportation work. Through the EMS process, SDOT regularly reports on environmental performance to fulfill the intent of the Mayor's Environmental Action Agenda. The EMS also sets forth a set of issue specific policies and procedures that will provide minimum standards for City operations and that will clarify roles and responsibilities for all departments.

E2.2. Achieve Regulatory Compliance.

Provide a resource for the entire department and the City to ensure compliance with all applicable environmental regulations (e.g., State Environmental Policy Act, environmental critical areas regulations, air quality, stormwater management, and Endangered Species Act). Specific staff actions are as follows:

- Ensure all SDOT capital projects for compliance with regulations.
- Ensure all regional major transportation projects comply with regulations.
- Coordinate SEPA review of SDOT projects and private development projects.
- Coordinate Department Due Diligence procedures for capital projects and work within the ROW.
- Prepare procedures manuals for SDOT staff on the steps projects need to take in order to comply with environmental regulations.
- Facilitate discussion on stormwater management issues.
- Coordinate the Department's response to the Mayor's Environmental Action Agenda, and Restore Our Waters Initiative.

E2.3. Cooperative Efforts with Other City Departments.

Work cooperatively with other City departments to achieve environmental excellence. Current activities include developing policy with other City staff as part of the following teams: the Environmental Coordinating Committee; Critical Areas Evaluation Team; City Salmon Team; City Science Team; Erosion and Sediment Control. Specific projects include natural drainage systems with SPU and DPD, managing contamination in the right of way, implementation of the City's Comprehensive Drainage Plan, and efforts to improve air quality such as fleet emissions monitoring and procurement of hybrid/electric vehicles.

SDOT staff are leading the City in coordination of construction erosion and sediment control training and procedures in the Stormwater Cooperative.

E2.4 Cooperative Efforts with Partner Agencies.

Work with other agencies and jurisdictions to identify and implement actions that achieve environmental excellence beyond typical compliance measures.

Seattle's Central Waterfront is at the heart of the Central Puget Sound region. The transportation network supports, business, industry, and tourism.

3.6 Connecting to the Region

Seattle is the major urban center in the Central Puget Sound Region, accounting for seventeen percent of the four-county population, and thirty percent of total employment. Businesses, industry and maritime trade located here all create demands on the transportation network as they contribute to economic vitality.

The safe and efficient operation of the local transportation network strongly connects with the regional transportation system. Both I-5 and SR-99 serve regional traffic moving through Seattle and as major arterials for traffic within the city. Congestion on both of these routes often overflows onto local streets. The Port of Seattle, along with industrial and manufacturing centers, generates significant demands on the transportation system. Rail and transit systems are needed to serve commuters from the region working in Seattle. The state ferry system is a unique part of the transportation network needed to move both people and freight.

Because the City and the regional transportation systems are interdependent, policies affecting the demand for transportation services also must be developed and coordinated on a broad, regional basis.

Comprehensive Plan Goals and Policies

TG24 Actively engage other agencies to assure that regional projects and programs affecting the city are consistent with City plans, policies and priorities.

T57 Support regional pricing and parking strategies that contribute to transportation demand management objectives and to economic development.

T58 Coordinate with regional, state and federal agencies, local governments, and transit providers when planning and operating transportation facilities and services in order to promote regional mobility for people and goods and the urban center approach to growth management.

T59 Support completion of the freeway high-occupancy-vehicle (HOV) lane system throughout the central Puget Sound region. Maintain the HOV system for its intended purpose of promoting non-SOV travel.

T60 Expansion of freeway capacity should be limited primarily to accommodate non-SOV users. Spot expansion of capacity to improve safety or remove operational constraints may be appropriate in specific locations.

T61 Support a strong regional ferry system that maximizes the movement of people, freight, and goods.

Strategies for Connecting to the Region

This section includes strategies that offer direction so that SDOT can build a multi-modal transportation system to serve Seattle and connect to the region. SDOT works with partner agencies to ensure that Seattle's regional interests are met, regional projects are consistent with City policies, and that our transportation system supports smart growth. Strategies for establishing and implementing regional policies must include action at all levels of government, including federal, state, regional and local. One overriding objective that runs through all of these strategies is to assure that transportation projects and servies implemented within the City are consistent with the Seattle Comprehensive Plan.

R1. Coordinate with Federal Government to Implement Transportation Policy and Projects.

Implementation of major regional transportation projects will depend on significant federal funding. Federal transportation policy will also set the direction on how available funding may be used. The SDOT Director, working through the Mayor's Office, establishes a federal agenda that includes key policy objectives and project priorities to be implemented through the federal transportation reauthorization bill and annual appropriations. The City's Federal Liaison in the Office of Intergovernmental Relations works with the members of Congress from Washington State to advocate for these objectives. The Mayor and SDOT Department Director meet with congressional members and key federal Department of Transportation officials to advocate for these objectives. Other channels are used, such as the US Conference of Mayors, Association of Washington Cities (AWC) and the Puget Sound Regional Council Executive Committee.

R2. Coordinate with State Government to Implement Transportation Policy and Projects.

SDOT works through several different channels to coordinate policy and project issues with the State. The Mayor and the SDOT Director work directly with the Governor, state legislative leaders, Washington State Secretary of Transportation and the Washington State Transportation Commission on high level policy and project issues.

SDOT staff actively serves on special statewide committees and tasks forces to help coordinate policies and projects. These include the Commute Trip Reduction Board, State Bridge Replacement Advisory Committee, and the FAST Partnership. SDOT staff also work directly with the staff of key state agencies, such as the Transportation Improvement Board, Freight Mobility Strategic Investment Board and the Public Works Trust Fund. SDOT staff also works through the AWC to influence state transportation policies having broad impact on cities across the state.

Much of this activity is conducted through working groups convened to coordinate specific projects, such as the Alaskan Way Viaduct, SR520 Bridge Replacement and transit service improvements on SR 99 and SR 522 (Lake City Way). SDOT staff works with WSDOT to help assure that state highway projects built within the City are consistent with the TSP and Comprehensive Plan.

State ferries are an important element of the state transportation system serving Seattle. SDOT staff works closely with Washington State Department of Transporation Ferries Service on their ferry system plan and terminal improvement plans to assure that these projects and services are consistent TSP and

The Galer Street flyover provides regional connections between the Port terminals and railroad intermodal yards.

Comprehensive Plan. State funding will also be a major part of the financing plan for major regional transportation projects and ferry services. Changes to TDM policies and implementation of specific TDM projects will require State Legislative action.

A state strategy should focus on several different levels*:* State Legislature, Governor's Office, Washington State Transportation Commission, Washington State Department of Transportation, Transportation Improvement Board, Freight Mobility Strategic Investment Board, FAST Partnership and the Public Works Trust Fund.

R3. Coordinate with Regional Government to Implement Transportation Policy and Projects.

Regional agencies serve several purposes: developing regional plans that set the context for transportation policies; allocating federal funding; implementing taxes and allocating funds; and providing transit, light rail, and commuter rail services. Regional agencies can also be important in developing and advocating for transportation policy initiatives at both the Federal and State levels. The Puget Sound Regional Council is the pivotal regional organization with the authority to adopt regional transportation plans and provide the framework for making decisions on how federal transportation funds are allocated. The Mayor and City Council members influence regional transportation policies through their membership on the Puget Sound Regional Council Executive Committee and Transportation Policy Board.

SDOT staff help shape policy implementation through service on special committees, such as the Regional Policy Evaluation Committee and the Seattle-Tacoma-Everett Federal Transit Administration (FTA) Caucus. Sound Transit is also an important agency shaping and implementing regional transportation facilities and service. The Mayor and one City Council member serve on the Sound Transit board. SDOT staff work directly with Sound Transit staff on special working groups to shape policy implementation.

Efforts have been underway for the last three years to create a regional structure to select and finance major transportation projects. City elected officials, SDOT executives and staff are actively engaged at the policy and staff levels helping shape this structure in a way that will support City transportation objectives.

R4. Coordinate with County Government to Implement Transportation Policy and Projects.

King County provides transit services and also plays a major role in developing agreements on changes in transportation policies. The King County Regional Transit Committee is the major forum for making policy recommendations to the King County Council on transit issues. Two City Council members serve on this committee. SDOT staff support these two members with background information and policy alternatives and maintain working relationships with King County staff supporting the committee. The City also participates in the Seashore Transportation Forum, which discusses transportation policy issues affecting the North King County area and makes recommendations for action by the King County Council. One City council member serves on this committee.

R5. Coordination with Other Organizations to Implement Transportation Policy and Projects.

City objectives may also be pursued with the support from other organizations. The City actively works with many non-governmental organizations to help cultivate support for various transportation policy objectives. These organizations include such groups as the Greater Seattle Chamber of Commerce, Downtown Seattle Association, and the Discovery Institute. Special ad-hoc groups, such as the Transportation Partnership, are often formed to bring together business, labor, environmental and government representatives to support transportation improvement objectives. City elected officials, executives and staffs attend meetings, make presentations and develop working relationships through these organizations.

In 2004, SDOT completed a major renovation of University Way (aka, 'The Ave") in the Universitiy District.

3.7 Protect our Infrastructure—Operations and Maintenance

Seattle Department of Transportation operates and maintains the City's transportation system in a safe, efficient and cost-effective manner. Operations refer to the active management of the system's performance. Ordinary maintenance consists of those routine and regular maintenance activities whose primary function is to allow the system to operate safely and efficiently. Major maintenance consists of substantial restoration that significantly extends the useful life of the infrastructure. The following divisions in SDOT play a critical role in protecting Seattle's infrastructure:

The **Traffic Management Division** is responsible for traffic control on the City's arterial streets, pedestrian and bicycle programs, curbspace management, traffic signals, detours for special occasions and construction projects, parking meters/pay stations, and management of traffic data and accident records. It also issues Residential Parking Zone permits, special parking arrangements and over-legal truck permits, as well as handling commercial vehicle enforcement.

The **Street Maintenance Division** is responsible for keeping street pavement clean and in good repair. Staff sweep and flush streets, clear away snow and ice, fill potholes, and take care of small to medium size asphalt and concrete paving projects. They monitor the condition of City streets and establish repaving priorities. They also work on landslide cleanup in conjunction with Seattle Public Utilities.

The **Bridges and Roadway Structures Divison** is responsible for the safe and efficient operation and maintenance of the City's bridge structures, staircases, sea walls, retaining walls and other roadway structures.

Comprehensive Plan Goals and Policies

TG25 Promote the safe and efficient operation of Seattle's transportation system.

TG26 Preserve and renew Seattle's transportation system.

T62 In operating the transportation system, balance the following priorities: safety, mobility, accessibility, infrastructure
preservation and citizen satisfaction.

T63 Maintain the transportation system to keep it operating safely and to maximize its useful life.

T64 Repair transportation facilities before replacement is warranted. Replace failed facilities when replacement is more cost-effective than continuing to repair.

Strategies for Protecting our Infrastructure—Operations and Maintenance

This section includes strategies that provide direction for protecting Seattle's infrastructure. SDOT strives to get the best return on the

money taxpayers have invested in the transportation system by maintaining infrastructure so that it can operate safely, smoothly and be in good repair. Successful operation of the transportation system helps to implement the urban village strategy by supporting mobility and access for all travel modes.

OM1. Plan and Respond to Emergencies in the Street Rights-of-Way.

Plan for, and respond to, emergencies that impact street rights-of-way. These incidents include, but are not limited to, winter storms, landslides and windstorms, collisions, roadway spills, damage to roadway structures or mechanical/electrical failure of movable bridges.

OM2. Develop and Maintain Roadway Conditions Database.

Develop and keep current a database on the condition of Seattle streets. Use the database to estimate budget needs and develop and recommend strategies for pavement preservation, rehabilitation and renewal.

SDOT's Pavement Engineering and Management Section develops and maintains the pavement management database system. This system categorizes and tracks nearly 14,000 street segments. For each segment, the system includes descriptive information, assessment of pavement conditions, and information about the segment's construction and maintenance history.

OM3. Clean and Maintain Transportation Rights-of-Way.

Clean and maintain streets, alleys, stairways, walkways and un-landscaped vegetated areas by sweeping, mowing, washing or otherwise maintaining on a regular schedule, using the criteria of preservation of public safety and health, mobility enhancement and promotion of economic and social vitality. SDOT also sweeps 30,000 curb-miles of arterial streets each year, including periodic sweeping of designated bike lanes. The City of Seattle Bicycle Advisory Board provides periodic guidance concerning where to sweep for bicycle safety.

In recent years, available funding for roadway maintenance activities has been shrinking. In 2003, SDOT issued the first Pavement Conditions Report. The report describes a rating system for pavement, assesses Seattle's paving needs, as well as the impact of the increasing backlog of deferred maintenance needs. The report also defines pavement performance measures (see Chapter 5: Performance Reporting). An update of the Pavement Conditions Report is anticipated in 2005.

OM4. Maintain and Preserve Green Infrastructure.

Mow or otherwise maintain landscaped areas, including weeding, mulching, watering and pruning trees, on a regular schedule to preserve the City's multi-billion dollar investment in "green" infrastructure. Landscape Services of the Urban Forestry Section performs these operations on a regular schedule, according to established criteria and within budget constraints. In 2003, Urban Forestry planted over 500 new trees and pruned almost 1,600 other trees.

The Fremont Bridge is part of the City's bridge inventory. It is undergoing a major renovation beginning in 2005.

OM5. Perform Maintenance on Bridges and Other Roadway Structures.

Perform efficient, preventative maintenance and repair of concrete, steel, and timber

bridges, retaining walls, seawalls, stairways and other roadway structures on a regular schedule to preserve the City's multi-billion dollar inventory of bridges and other roadway structures.

SDOT's Roadway Structures section implements this strategy through annual programs in stairway rehabilitation, retaining wall repair and replacement, bridge painting and bridge load rating. In 2003, Structures repainted one bridge, completed over 500 separate maintenance operations, and restored three retaining walls.

In recent years, available funding for roadway maintenance and new construction activities has been shrinking.

OM6. Develop an Annual Maintenance and Preservation Program.

Develop an annual maintenance and preservation program with the objectives of addressing site-specific safety issues as they arrive, respond to other current needs within one year, and eliminate all existing deferred surface maintenance within 20 years. SDOT's Pavement Engineering and Management Program maintains and updates City priorities for maintenance paving and participates in the development execution and acceptance of paving projects.

OM7. Improve Street Tree Pruning.

Reduce the street tree pruning cycle from the current 19-year cycle to a six- to seven-year cycle, consistent with International Society of Arboricultural Standards in order to protect the public from overgrown trees and limit tree root damage to sidewalks. The Office of the City Arborist prunes city-owned trees in the rights-of-way.

OM8. Preserve and Maintain Traffic Control Devices.

Replace and rehabilitate traffic control devices. SDOT's Traffic Operations section replaces worn or damaged signs and pavement markings. In 2003, the section replaced or maintained over 22,000 signs. In addition, 108 traffic signals were optimized. All lane lines and school crosswalks are remarked annually, as are 70% of other markings.

OM9. Address Structures Maintenance Backlog.

Develop and implement plans to address the backlog of structures maintenance requests and keep structures in good condition. SDOT's Roadway Structures section implements this strategy through annual programs in stairway rehabilitation, retaining wall repair and replacement, bridge painting and bridge load rating.

OM10. Implement ITS Strategic Plan.

Through the use of new technologies in the areas of information processing, communications, control, and electronics, Intelligent Transportation Systems (ITS) can provide better transportation system management tools for all modes of travel, plus improved safety and better information to help travelers make more-informed transportation decisions. SDOT developed an ITS plan in 2002 that is managed by the Traffic Management Division (Traffic Signal Operations). SDOT implements the following ITS Strategies:

OM10.1. Connect Every Traffic Signal to the Traffic Management Center.

Construct an "Enhanced" TMC (ETMC) at SDOT to fully integrate the most innovative aspects of Seattle's evolving ITS network. From the ETMC, staff will be able to control everything from signalized corridors to variable message signs, and will eventually be able to produce real-time traffic information that travelers can use to make the best travel decisions. The Washington State Department of Transportation already has an effective system set up for the major highways to and from Seattle. Combining this existing information with information from the City's ETMC will be essential in managing Seattle's future transportation system.

OM10.2. Operate All Signals at Peak Efficiency Through the Traffic Management Center.

Identify and implement a set of signal timing plans and procedures such that motor vehicles, pedestrians, transit, and bicyclists notice reductions in delay and travel time. Includes the following efforts:

- Provide the appropriate number of timing plans for conditions (e.g., AM peak, PM peak, off-peak, weekend, and other peaking characteristics)
- Provide the most efficient signal phasing
- Provide for regular signal re-timing
- Implement interconnect and coordination as appropriate
- Move to a traffic-responsive operations system
- Implement Transit Signal Priority on important transit corridors (see Transit section)

OM10.3. Provide Accurate and Timely Information to Motorists.

Provide real-time traffic information through live webcams though the City's web site, and by using other technologies focused on arterials streets and intersections to help motorists make better travel decisions.

OM10.4. Implement Cost Effective Technologies that Reduce Maintenance.

Reduce City transportation maintenance and operations costs with investments in new technologies. These programs and projects also have environmental benefits, with reduced energy costs. Includes:

- LED Traffic signals lamps that have ten times more lamp light than old incandescent lights (which has already reduced SDOT field visits to replace burned-out lamps by 30 percent)
- Central signal software and Closed Circuit Television cameras to reduce the need for staff to go out in the field to perform certain operational activities
- Automated traffic data collection to reduce costly field studies

OM10.5. Ensure Maintenance of ITS Components.

Conduct regular maintenance on traffic signal systems to extend their life and ensure proper and safe functioning. Proper maintenance results in reduced long-term costs as components are repaired rather than replaced. It also reduces the risk and liability caused by signal outages and malfunctions.

OM11. Implement a Load-Testing Program.

Implement a load-testing program on selected bridges where structure degradation has been observed.

Chapter 4: Funding the Plan

The TSP highlights a tremendous set of transportation challenges. These include repairing a large backlog of maintenance for streets, bridges and traffic control systems; making transit, bicycling, and walking dramatically more attractive; protecting and improving neighborhood livability; and maintaining and improving the movement of freight and goods. We cannot afford to ignore these needs. A healthy, efficient transportation system is absolutely essential to achieving our vision for the future of Seattle. However, funding these transportation needs into the future will be an even greater challenge than in the past.

Comprehensive Plan Goals and Policies

The Funding chapter responds to the goals and policies adopted in the Investing in the Transportation System chapter of the City's 2004 Comprehensive Plan Transportation Element. The goals and policies provide guidance and strategic direction for the more specific strategies, projects, programs and services that make up SDOT's implementation plan. This approach will insure consistency with the Comprehensive Plan in developing funding strategies over the next 20 years.

TG28 Recognize and promote the urban village strategy when making transportation investments.

TG29 Work towards transportation funding levels adequate to maintain and improve the transportation system.

T68 Make strategic transportation investment decisions that are consistent with other policies in this Plan, with the Transportation Strategic Plan, and with funding opportunities that promote the city's transportation investment priorities. These investment decisions will also be made with consideration to future operating and maintenance costs associated with improvements.

T69 Support regional and local transit resource allocations, as well as efforts to increase overall transit funding that are consistent with the City's urban village strategy and the regions' urban center policies.

T70 Pursue strategies to finance repair of road damage from heavy vehicles in a way that is equitable for Seattle's taxpayers.

T71 Fund projects, programs and services with a combination of local and non-local funds, including:

- Contributions from other entities that benefit from an investment, such as property owners nearby an investment;
- Grants and other investments from local, regional, state, and federal funding sources;
- Contributions from the region for investments that serve regionally-designated urban centers and regional facilities.

T72 Consider new funding sources that are flexible, equitable and sustainable, including:

- Growth- and development-related revenues, including impact fees, where appropriate and where consistent with economic development policies;

- User-based taxes and fees, including a commercial parking tax; and
- Other locally generated revenues.

T73 Support regional, state and federal initiatives to increase transportation funding. Work to encourage new and existing funding sources that recognize Seattle's needs and priorities.

T74 Consistent with the other policies in this Plan and the Transportation Strategic Plan:

- Prepare a six-year CIP that includes projects that are fully or partially funded;
- As part of the Transportation Strategic Plan, prepare an intermediate-range list of projects for which the City plans to actively pursue funds over the next approximately 8 to 10 years, and
- Maintain a long-range working list of potential projects and known needs.

T75 If the level of transportation funding anticipated in the six-year financial analysis, below (Figure 4), falls short, the Department of Finance and the Seattle Department of Transportation will:

- Identify and evaluate possible additional funding resources; and/or
- Identify and evaluate alternative land use and transportation scenarios, including assumptions about levels and distribution of population and employment, densities, types and mixes of land use, and transportation facilities and services, and assess their affects on transportation funding needs.

The City may then revise the Comprehensive Plan as warranted to ensure that level-of-service standards will be met.

4.1 Funding Context

4.1a The Funding Problem.

The City of Seattle has a major transportation funding problem. Excluding special funds for "mega-projects", the City's current annual transportation revenues are $69 million. Of this amount, local revenues comprise $52 million, consisting of $34 million from the General Fund, $6 million from the Cumulative Reserve Fund, and $12 million from gas taxes. The remaining $17 million comes from grants, loans and other sources. The current resources are only adequate to fund operations and maintenance plus a small amount of major maintenance — a few miles of arterial paving each year, one bridge replacement every 3 - 5 years and a few traffic control system projects. The current level of funding is not adequate even to prevent progressive deterioration in the transportation infrastructure. In fact, at current levels of funding, the $500 million backlog of deferred maintenance will double within the next ten to fifteen years.

Achieving appropriate levels of maintenance (preventing additional deterioration and gradually retiring the maintenance backlog) is estimated to require an additional $40 to $50 million per year. Improvements for meeting the transportation needs identified in the neighborhood plans would add several million dollars per year to that amount. Investments in much-needed mobility improvements would require still more funding. For example, SDOT also encourages funding for transit capital and operations projects. While most of this funding must come from transit agency sources; Seattle must partner with the region to identify ways to fund the $56 million annual service gap that would enable Seattle's transit network to accommodate projected growth. In summary, the Seattle transportation system would require over $100 million *more* per year in order to reduce maintenance backlog, accommodate growth, and meet the mobility needs of neighborhoods and developing areas.

Several factors have eroded Seattle's transportation funding over the years. The City lost over $10 million per year when the State Supreme Court declared the Residential Street Utility Fee unconstitutional in 1995. In 2003, the State Supreme Court upheld the provisions of Initiative 776 and eliminated the Vehicle License Fee that was providing about $5 million per year for transportation. Gas tax revenues have declined about 4% each year (adjusted for inflation) due to two factors: (1) since gas taxes are on a per-gallon basis, the revenues can increase only with consumption, not price inflation, and (2) the State has not updated the gas tax distribution formula to account for the creation of new cities and towns. In short, SDOT continues to lose transportation revenues.

The Mayor and City Council have filled a major part of the funding gap by increasing the amount of revenues from the General Fund (GF) and Cumulative Reserve Fund (CRF) that are allocated for transportation. From 1995 to 2002, the amount of revenues from these sources for transportation was increased from $13.4 million to $45.3 million. In 2004, this amount is $40.3 million. Unfortunately, revenues from these sources are not sustainable at current levels. A major source of GF revenues is the property tax. However, Initiative 747 has constrained property tax growth (except for new development) to 1% or less per year. A major source of CRF revenues is the Real Estate Excise Tax (REET). The recent surge in real estate transactions will likely subside as interest rates rise in coming years. Moreover, there are many other city programs besides transportation that are dependent on these sources. Competition for these revenues will intensify as the growth in revenues fails to keep up with program needs.

Efforts to secure help from the State Legislature in the form of local option revenue sources for transportation have not been successful.

Currently, the City of Seattle does not have the funds to provide and maintain a healthy, efficient transportation system. We need to find new funding sources and cannot afford to continue neglecting this problem, because if neglected, it will become progressively more expensive. The City's livability and vitality are at stake. This section will briefly examine the current revenues, then recommend options for raising additional funding.

4.1b Current Funding Sources.

The City's transportation funding comes from four main sources: tax and fee revenues, grants, partnerships and reimbursable services.

Tax and Fee Revenues. SDOT's transportation tax and fee revenues include the local allocation of the state fuel tax, general fund sources, and cumulative reserve fund sources.

Fuel tax revenues provide about $12.2 million of SDOT's 2004 budget.

General Fund revenues (sales tax, property tax, B&O tax, utility taxes, street use permit fees, parking meter fees, and other smaller taxes and fees) contribute $34.4 million to the 2004 Transportation budget.

Cumulative Reserve Fund revenues (the real estate excise tax and other sources) provide $5.9 million of the 2004 transportation budget.

Grants. SDOT typically secures between $10 and $20 million per year in federal and state grants. To secure these grants, the City must allocate between $5 to $10 million for local match. From time to time, the City is also able to secure special grant funding for major capital projects.

Partnerships. SDOT works with both public and private partners to fund projects, including the State, King County/Metro, the Port of Seattle, the Regional Transportation

Investment District, and private businesses. The Department sometimes partners with individual citizens and businesses to fund small improvements like sidewalk repairs.

Reimbursable Services. SDOT provides services to public and private agencies on a reimbursable basis, such as street use permitting and repairing utility cuts.

Cost Avoidance Opportunities.

Savings generated by efficiency improvements—getting more for our existing spending—are SDOT's first target for reducing the need for additional revenues. In fact, SDOT has implemented a number of recent improvements that are having a substantial impact on efficiency and cost effectiveness. Examples include:

- Re-timing and synchronizing traffic signals in 17 corridors throughout the City.
- Procuring new equipment (paving machines and dump trucks) with greater capacity.
- Use of improved materials (concrete and asphalt) with greater durability.
- Implementation of a pavement management system to determine the most cost effective application of limited paving resources (to date implemented only for the arterial street system, not yet the local street system).
- Computerized mapping of land parcels, streets, utilities, structures, landscaping and traffic control systems to facilitate design and management of City resources.
- Partial implementation of an Intelligent Transportation System program to improve traffic management and safety.

As important as efficiency improvements are, they are not enough to offset Seattle's transportation funding shortfall. Ironically, a shortage of funds can actually result in increases of cost *inefficiencies*. Following are some examples:

Inability to fund routine paving, such as "chip seal", on roads in good condition allows the road surface to deteriorate to a condition requiring reconstruction, which is several times more expensive than the chip seal resurfacing.

Funding might be available for one project, such as road reconstruction, but not available for utility replacement on the same road section. When the utility replacement is later done, part of the road will have to be reconstructed again. Having funding available for both projects simultaneously would avoid the second road reconstruction.

Strategies for Funding the Transportation System

This plan offers direction so that SDOT can make the most of new transportation investments. The Funding Chapter identifies strategies so that SDOT can leverage investments, both public and private, for use in new transportation projects to get the best return on taxpayer transportation dollars. The following strategies are proposed:

F1. Prioritize Transportation Programs and Projects to Maximize Benefits from Limited Revenues.

Prioritization of transportation programs and projects occurs annually during the process of development and approval of the annual budget. In setting priorities, SDOT will seek to balance projects and programs from all categories to maximum the public benefit from limited transportation revenues.

Over the next several years, it is likely that SDOT will be faced with declining funding sources. That means painful decisions deciding what programs and projects to reduce or cut as well as determining how to spread limited resources over those that will receive funding. In this austere environment, careful prioritization becomes even more critical (and difficult) than in times when funding is more plentiful.

The four-step process used to evaluate and prioritize SDOT activities is described in more detail in Section 4 below.

F2. Maximize Available Funding Resources.

Historically, SDOT has aggressively pursued state and federal grants. In these times of fiscal austerity, these funding sources become especially important as a means to leverage local funds. However, it is important to recognize that outside funds usually require local match. Just because grant funding may be potentially available for certain projects does not always mean that those projects are the best use of the local funds.

F3. Continue to Look for Means to Improve Efficiencies and Cost Effectiveness.

Making improvements to efficiencies and cost effectiveness save money and help SDOT stretch transportation dollars further. SDOT always makes an effort to identify means to improve efficiencies and cost effectiveness and will continue these efforts in the future (e.g., extending the pavement management system to local streets, re-time and synchronize traffic signals, implementing the ITS, protective coating bridges).

F4. Develop New Funding Resources.

Opportunities for new local funding sources for transportation are very limited. In keeping with City Council Resolution 30683, SDOT has been directed to work with other cities in Washington and with elected State representatives to develop legislation for new local option funding sources for transportation. Transportation user fees, whereby users of the transportation system pay in proportion to their amount of use, should be the primary component of any new long-term funding package for SDOT. In addition, SDOT will continue to look for transportation funding sources that provide an ongoing, flexible and growing source of funds in order to keep up with ever-increasing costs of operating and maintaining the transportation system.

In recent years, SDOT staff has worked with various groups to identify potential funding sources for transportation. These groups include the Blue Ribbon Transportation Commission, the Association of Washington Cities, the Citizens' Transportation Advisory Committee, and the King County Department of Transportation. Potential funding sources that have been identified are listed below:

- Fuel Tax. The fuel tax is well understood and has a fairly good nexus to transportation use. The collection and administration process is well established. Implementation under current statutory authority would require a joint agreement with King County and a 50% voter approval. Unfortunately, the current distribution formula for tax proceeds is weighted against cities and the fuel tax revenues have poor (negative) growth potential. With these considerations, if the Legislature is favorably disposed to an additional "cents-per-gallon" fuel tax with a major portion of proceeds allocated to cities, the City will support and encourage Legislative action.
- Sales Tax on Fuel. The sales tax on fuel would require new legislation and probably voter approval. It has good nexus and better growth potential than the (per gallon) fuel tax. This revenue source should be considered in concert with a revised allocation formula that more fairly distributes tax proceeds according to the amount and usage of transportation infrastructure within jurisdictional boundaries of cities, counties and the state.
- Mileage-Based User Fees. Technology is now emerging that would accommodate a mileage-base fee system whereby vehicle travel could be monitored electronically and fees charged based on mileage driven times a rate per mile. It is even technically possible to determine the mileage driven by geographic jurisdiction and/or by day/time period. The state of Oregon is now engaged in a test program for mileage-based fees as an eventual replacement for the per-gallon fuel tax. This type of fee has a good nexus to use of the transportation system. Implementation would require new state legislation and the program would probably need to be implemented on a regional or statewide basis. This is recommended as a long-term funding source to be pursued as

the technology and political climate mature.

- Vehicle Weight Fee. Currently, the cities in Washington State receive none of the weight fees from heavy-duty vehicles. There is no weight fee for light-duty vehicles. This fee would have a fair nexus to transportation and would require new legislation. The Vehicle Weight Fee could be combined with the Mileage-Based User Fees (scale the per-mile rate according to vehicle weight). This funding source should be pursued only if the city share of receipts is proportional to fees collected from users of local transportation facilities.
- Street Utility Fee. From 1992 - 1995, the City had implemented a Street Utility Fee that provided over $10 million per year revenues. However, the State Supreme Court disallowed the Street Utility Fee for residential application in 1995. But with new legislation and careful restructuring of the fees to strengthen the nexus between the fee charged and the use of the transportation system, this could be a good ongoing funding source for the City. Also, unlike fuel taxes or vehicle weight fees, this revenue source could be readily implemented and administered within city boundaries. To be successful, implementation would require extensive outreach to both commercial and residential communities in Seattle as well as coordination of support from other cities in the state (to encourage legislative action). It is essential that the fee structure be understandable and perceived as fair to those who will pay the fees.

4.2: SDOT Program/Project Evaluation Process

Following is a description of a four-step process that SDOT uses to prioritize the programs and projects in preparing recommendations to the Mayor and City Council for inclusion in the budget, the CIP, and the grant development process.

Step 1: Identification of Transportation Needs.

This step is really an ongoing process during which projects and programs for future funding are identified. These needs are developed from a number of sources:

- **Transportation Strategic Plan**. The TSP describes transportation strategies that are supported by projects and programs. In the pursuit of each strategy, specific action items will emerge that will require programming and commitment of resources.
- **Ongoing operations and maintenance programs**. SDOT departments have established periodic activities that are essential to operating and maintaining the transportation infrastructure.
- **Backlog of projects**. SDOT has a $500M backlog of projects for major maintenance and replacement of transportation infrastructure. This backlog is updated as projects are funded and built and as existing facilities age and require maintenance.
- **Projects in current CIP**. The Capital Improvement Program is a revolving six-year list of transportation projects. Some projects in the CIP are not fully funded or have additional phases that require new funding sources.
- **Projects from SDOT planning**. SDOT conducts transportation studies that identify projects and programs desired for a specific area or mode.
- **Neighborhood plans and citizen requests**. SDOT incorporates needs identified in neighborhood plans into this process, as well as input from neighborhood and stakeholder groups.
- **Coordination with partner agencies**. SDOT staff works in partnership with other agencies in the Puget Sound region to develop and fund transportation projects.

Step 2: Identification of non-discretionary programs and projects.

This step identifies non-discretionary programs and projects that must be budgeted for completion. Criteria for these items are as follows:

- Mandated, with serious consequences for failing to met the mandate (e.g. debt service,

judgment and claims payments, Metro "Ride-Free Zone" payment, City Commute Trip Reductions payment, federal or state law mandates)

- Essential for the Department to function on a daily basis (e.g. accounting, payroll, human resources, facility rental, vehicles and equipment)
- ·Reimbursable services to other City departments or outside agencies (e.g. street use permitting, repairing utility cuts)
- Restricted funding services (e.g. support for Sound Transit, Monorail, Metro, Alaskan Way Viaduct)
- Services that generate revenue for General Fund (e.g. parking)
- Currently in construction (stopping these projects would be more costly than completing them)
- Urgent safety or emergency need (e.g. landslide, sinkhole)

Step 3: Prioritization of Discretionary Programs and Projects.

The programs and projects remaining after Step 2 are then grouped into priority categories (high, medium, low). This prioritization process evaluates each program or project on its merits. Following are the criteria applied to this evaluation:

- **Safety**. To what extent does the program/project reduce or eliminate a risk to public safety?
- **Preserving and maintaining infrastructure**. To what extent does the program/project maintain and preserve the City's transportation infrastructure?
- **Cost effectiveness or cost avoidance**. Will the program/project save City significant amounts of money in the future by using special funds now available or by avoiding much higher costs if infrastructure is allowed to deteriorate further?
- **Mobility improvement**. Will the program/project improve mobility or prevent deterioration of mobility?
- **Economic development**. Does the program/project support economic development?
- **Comprehensive Plan/Urban Village land use strategy**. Does the program/project address Comprehensive Plan goals or policies? Does it build, improve or repair transportation facilities to promote and accommodate movement within and between urban centers, urban villages, and/or manufacturing and industrial centers?
- **Improving the Environment.** Does the project promote healthy neighborhoods, protect and/or improve environmental quality, reduce or mitigate pollution and promote energy-efficient transportation?

Step 4: Ordering Projects and Programs for Implementation.

Once programs and projects have been grouped into priority categories, they are evaluated to determine their readiness for implementation. For example, even though a project may be a high priority, other circumstances may determine that the project is not ready for implementation. Four criteria are used to make this determination:

- **Funding availability**. How much funding is available for the project from external sources (grants, partnerships or other contributions)?
- **Interagency coordination**. Is project/program related to other projects in a way that affects project timing?
- **Geographic balance**. Does the project improve the balance of transportation funding to be spent among geographic sectors of the City?
- **Constituent balance**. Does the project improve the balance of transportation funding to be spent among constituent sectors of the City? Examples include: (1) Freight mobility, (2) Transit and ride-sharing, (3) Bicycle and pedestrian, and (4) Business.

The evaluation process considers the results of steps 3 and 4 together in order identify projects for which funding will be sought.

Chapter 5: Performance Reporting

The TSP charts a course for SDOT to take in order to develop and maintain a 21st Century transportation network. It defines strategies to preserve, maintain, grow and enhance Seattle's transportation network. Many of the TSP strategies can be accomplished with a one-time action, such as publishing the Right-of-Way Improvements Manual, or installing a bicycle rack. Others are activities where SDOT is in a coordination role, such as working with other government entities to implement transportation projects. This chapter focuses on SDOT activities that are on-going and contribute to the long-term performance of the transportation network.

Reporting on Performance—Current Tools

SDOT reports on performance in a number of ways:

SDOT Quarterly and Annual Reports give an overview of the projects and activities of the Department such as project management and financial management monitoring. Since 2003, SDOT has augmented the Annual Report with quarterly reporting that includes an overview of facilities built, activities complete and project status.

The Environmental Action Agenda (EAA) and SDOT Environmental Management System (EMS): SDOT reports on progress towards meeting environmental goals through both the EAA (monitored by the Office of Sustainability and the Environment) and a departmental EMS. The EAA presents citywide goals for protecting environmental quality, promoting environmental justice, and improving quality-of-life in Seattle. The EMS provides SDOT with a set of tools to identify and solve environmental problem. Both the EAA and the EMS have regular reporting cycles and report on a number of internal measures such as: reduce use of hazardous materials and waste generation for operations activities, decrease use of pesticide to maintain trees and landscaping, encourage city employees to commute to work without driving alone, and promote fuel efficiency and reduced emissions with a fleet of hybrid and natural gas vehicles.

Program specific reporting such as infrastructure asset condition reporting such as pavement condition and bridge load rating every two years.

SDOT Performance Measures

A growing number of municipalities are establishing performance measures as a means of defining goals, measurable objectives and targets, and then reporting on progress towards completion over time. Along with financial information, performance reports are used to initiate discussion on ways to improve efficiency and effectiveness over time. Meaningful performance measures can be challenging to track because they rely on resource intensive data gathering and analysis in order to report consistently over a period of time. However, SDOT management and staff recognize the need to have, and report on, meaningful performance measures in order to communicate more effectively to the public, elected officials and agency partners.

Many of the SDOT's current reporting measures are output measures—they indicate production, but do not chart progress towards an established goal. Others, such as program specific reporting, do establish goals and work towards accomplishing targets. The tables on the following pages summarize the goals, objectives and five-year targets to measure performance in the following areas:

- Improve safety
- Preserve and maintain transportation infrastructure
- Provide mobility and access through transportation choices

Improving the environment and supporting the urban village land use strategy are two main considerations that are addressed in many of the measures in each category.

Some of the measures listed on the following pages are currently tracked and reported on, many are still in development. In these cases, objectives include defining a system or network by a certain date (e.g. complete the Bicycle Master Plan by 2006). Once the system is defined and a baseline established, SDOT will report on progress made towards meeting the targets.

Improve Safety

Goal: Continually strive to improve safety by reducing vehicular, pedestrian and bicycle collisions citywide.

Objective	2005 Baseline	Target	Comments
Implement treatments at identified high-collision locations to reduce the frequency of collisions.	• 249 vehicular collisions at the top 15 signalized intersection locations in 2003 • 106 vehicular collisions at the top 15 non-signalized intersection locations in 2003 • 176 vehicular collisions at the top 15 mid-block locations in 2003	• 5% reduction in number of collisions at top 15 signalized, non-signalized, and mid-block locations identified in 2003 by 2010.	Collision frequencies at specific locations can change due to a wide variety of factors, including new development, major construction, and land use changes. The City is currently working to integrate its collision information with the State's, but does not yet have a fully functioning system. In the near future, we would be interested in reporting in more detail on the type and severity of collisions, but at this time are not prepared to do so. In addition, our system is not yet set up to report on bicycle collisions in an accurate, meaningful manner.
	• 16,046 citywide vehicular collisions in 2003 • 446 citywide pedestrian collisions in 2003	• 3% reduction in number of citywide collisions by 2010. • 3% reduction in number of citywide pedestrian collisions by 2010.	
Make improvements to uncontrolled pedestrian crossing locations consistent with federal crosswalk guidelines.	93% of marked crosswalks at uncontrolled locations are consistent with federal guidelines and city policy. (based on 2001 numbers)	100% of marked crosswalks at uncontrolled locations will be consistent with federal guidelines and city policy by 2010.	

Provide Mobility and Access through Transportation Choices

Goal: Create more livable urban centers that support housing and employment growth by encouraging a shift in mode choice towards walking, bicycling and transit use and accommodate growth.

Objective	2005 Baseline	Target	Comments
Make progress towards achieving established mode choice goals in the City's Comprehensive Plan.	Baseline is from 2000 and included in Chapter 3.3TDM, Tables 5 and 6.	Achieve 2010 mode choice targets for each urban center in the following categories: • work trips using non-SOV modes • all trips using non-SOV modes by residents of Seattle and its Urban Centers	Explore the possibility of doing a 5-year check in using CTR data.
Improve transit ridership by maintaining transit travel times above 30% of posted arterial speed limits on UVTN corridors.	Corridors for 2007 implementation have been identified. Monitoring of 2007 corridors will establish speed baseline to track progress against.	Baseline established and strategies developed to address UVTN performance issues. Proposed target is to report on the percentage of UVTN corridors with transit travels times above 30% of posted arterial speed limit by 2010.	The UVTN corridors have frequent service and high ridership. The next phase monitoring of UVTN corridors will enable SDOT to assess any modifications need to the monitoring system and then apply it to all UVTN corridors.
Complete the urban trails network of shared bicycle and pedestrian paths.	75% urban trails currently complete	83% urban trails system complete by 2010.	The remaining 17% of the urban trails network includes approximately 5% that is unfunded and 12% that is existing but needs improvements or significant maintenance.

Provide Mobility and Access through Transportation Choices, continued

Goal: Create more livable urban centers that support housing and employment growth by encouraging a shift in mode choice towards walking, bicycling and transit use and accommodate growth.

Objective	2005 Baseline	Target	Comments
Implement the transportation neighborhood plan recommendations that have been designated as a high priority by the neighborhood and are technically feasible.	Completed action on 10 technically feasible projects that are considered high priority recommendations.	Complete action on 15 additional (25 total) projects that are technically feasible and considered high priority recommendations by 2010.	
Define the elements of Seattle's bicycle network through a Bicycle Master Plan by 2006. As part of this effort, identify bicycle facility needs specific to urban centers and urban villages (including connections between urban centers and villages) so that future improvements can help improve bicycle mobility and access in and around these areas.	Define baseline through Master Plan.	Once defined, report on % of system complete by 2010 and then in 5-year increments thereafter.	Define measures for on- and off-street bicycle network, bicycle parking and other features.
Define Seattle's pedestrian network through a Pedestrian Master Plan by 2008. As part of this effort, identify pedestrian facility needs specific to urban centers and urban villages so that future improvements can help improve walkability and livability in these areas.	Define baseline through Master Plan.	Once defined, report on % of system complete by 2010 and then in 5-year increments thereafter.	Define measures for sidewalk network, curb ramps and other features (e.g. % of sidewalk network within urban villages complete)

Goal: Improve the movement of goods and services within Seattle, and between the Manufacturing and Industrial Centers, the regional highway system, and intermodal rail and marine facilities.

Objective	2005 Baseline	Target	Comments
Optimize signal timing to reduce delays for freight on arterials.	Define baseline as signal optimization projects on major truck streets and other principal arterials.	Limit increase in travel times for freight, transit and vehicles on corridors with optimization by 2010.	One emerging technology to track travel times is the use of GPS devices in trucks on key Port routes. Better speed and delay data will soon be available to track this measure.
Increase speed limits for rail freight south of King Street station by 20 mph to decrease overall rail travel times.	20 mph speed limit for rail south of King Street Station.	Increase to 40 mph the speed limit for rail south of King Street Station by 2010.	SDOT is leading this effort per Ordinance on the Burlington Northern Santa Fe (BNSF) mainline, south of King Street Station, including oversight of crossing safety improvements by BSNF at key locations.

Goal: Promote healthy neighborhoods with a transportation system that protects and improves environmental quality.

Objective	2005 Baseline	Target	Comments
Reduce or mitigate air, water and noise pollution by: reducing miles traveled through community based programs; and,	145,000 pounds of carbon dioxide emissions reduced since 2004 from the One Less Car challenge.	725,000 pounds of carbon dioxide emissions reduced by 2010.	The One less car Challenge calculates the reduction in vehicle miles traveled by participants in the program.
reducing vehicle idling on key corridors through transit signal optimization.	5% reduced emissions due to signal optimization on key corridors since 1998.	3% reduced emission from 2005 levels due to signal optimization projects on key corridors by 2010.	

Goal: Improve mobility by reducing congestion for transit, trucks and vehicles through construction zones along arterials streets.

Objective	2005 Baseline	5 Year Target	Comments
Reduce travel times for transit, vehicles and freight through construction corridors (arterials only) by .2 minutes per mile or 1 mph by the end of 2007 through permitting and utility coordination efforts.	Average speed of 16 mph through construction corridors.	Average speed of 17 mph through construction corridors by 2007.	Based on data from the US Census Bureau; Utility Coordination summary plans for City of Seattle, 1999-2003; travel times derived from King County Transit, 2002 and validated by actual drive times, and Light-Duty Automotive Technology and Fuel Economy Trends 1975 Through 2001.

Preserve and Maintain Transportation Infrastructure

Goal: Preserve and maintain arterial pavement in good or better condition to optimize safety, mobility and return on investment.

Objective	2005 Baseline	5 Year Target	Comments
Maintain or increase the percentage of the arterial street pavement reported in good or better condition.	71% of arterial pavement condition at good or better.	71% of arterial pavement condition at good or better by 2010.	Street maintenance—2005 pavement conditions report is updated every 2 years. Given funding constraints, SDOT will work to maintain current levels over the next 5 years.

Goal: Preserve and maintain bridges in fair or better condition to optimize safety, mobility and return on investment.

Objective	2005 Baseline	5 Year Target	Comments
Maintain or increase the percentage of bridges reported in fair or better condition.	63% of bridges and roadway structures condition as fair or better.	63% of bridges and roadway structures condition as fair or better by 2010.	Given funding constraints, SDOT will work to maintain current levels over the next 5 years.
	21% of necessary seismic bridge upgrades completed.	35% of necessary seismic bridge upgrades completed by 2010.	Seismic upgrades will be completed through replacement of structures, repairs to existing structures or establishment of a program to address seismic deficiencies.

Preserve and Maintain Transportation Infrastructure. continued

Goal: Preserve and maintain traffic control devices (e.g. signs, signals and roadway markings) to optimize safety and mobility.

Objective	2005 Baseline	Target	Comments
Achieve industry standard condition of all signs, signals and roadway markings. Create a baseline and reporting system by the end of 2005 that will include: a baseline and targets for Intelligent Transportation Systems (ITS—cameras and bus priority signals), Signal structures (poles, mastarms, spanarms), signal hardware, regulatory and safety signs, parking signs, roadway markings, and crash cushions/barriers.	Baseline defined in 2005. Once defined, report on baseline.	Once baseline defined, report on % of system complete by 2010 and then in 5 year increments thereafter.	Traffic staff will complete assessment of industry and government standards, as well as best management practices, and develop an appropriate application for Seattle conditions in 2005. Traffic staff will also develop a baseline and reporting system.

Goal: Improve the environment by protecting and enhancing the quality of the urban forest.

Objective	2005 Baseline	Target	Comments
Increase the level of maintenance and preservation of City owned street trees (based on an annual pruning cycle) and landscaping (based on percentage of inventory in excellent, good, fair or poor condition)	City-owned street trees currently on 19 year pruning cycle. 30% of City owned landscaping (approx. 5 million square feet) maintained at good condition; 70% in fair or poor condition.	City owned street trees on a 19 year pruning cycle. 30% of City owned landscaping maintained at good condition; 70% in fair or poor condition.	Urban forestry's goal is a 6 year pruning cycle, contingent on available funding for this program. Urban forestry's goal is a 100% of City owned landscaping in excellent condition, contingent on available funding for this program.

Appendix A: Projects and Programs that Support TSP Strategies

This chapter includes lists that identify the projects and programs SDOT is implementing to support the TSP principles. Many projects and programs support more than one TSP principle; the matrices are not meant to exhaustively catalog each project element, but rather to identify the main principles supported by each project or program.

In the Capital Improvement Program (CIP) Matrix, the "TCxxxxxx" numbers that follow each project title is its CIP number, and can be used to find the project in the department's adopted CIP. The CIP includes a project description, schedule, and funding information for each project. For each program in the Program Matrix, the Budget Control Level (BCL) category is identified; budget amounts by BCL can be found in the departments adopted budget. Both of these documents are available on the **City's web site at:** www.seattle.gov/financedepartment/.

Project Name	CIP ID	Make best use of the streets we have	Increasing Transportation Choices	Make transit a real choice	Encourage Walking	Encourage Biking	Price and Manage Parking Wisely	Moving Goods and Services	Improving the Environment.	Operations and Maintenance	Connecting to the Region	Leveraging resources
12th Ave. Development Project	TC366030	X										
12th Ave. S. - Jose Rizal Bridge Deck Repair	TC365980							X		X		
14th Ave. S. Street Improvements	TC366220	X						X				
1st Av S. Boat Ramp	TC366190											
Pedestrian and Bike Improvements	TC323150				X	X						
	TC323120											
	TC322280											
35th Ave. NE Street Improvements	TC365730	X						X		X		
35th Ave. SW Signal and Street Improvements	TC365540	X						X		X		
5th Ave. NE Improvements	TC366230	X		X	X					X		
Airport Way over Argo Bridge Rehabilitation	TC365800							X		X		
Alaskan Way Seawall Repair	TC365280							X		X		
Alaskan Way Viaduct and Seawall Study	TC366050							X		X	X	
Arterial Asphalt and Concrete Program	TC365440	X								X		
Arterial Major Maintenance	TC365940	X								X		
Aurora Transit, Pedestrian and Safety Improvements	TC366250	X		X	X							
Ballard Municipal Center Streetscape Project	TC366080				X							
Belltown/Queen Anne Waterfront Connections (ped bridge)	TC366210				X	X						
Bike Spot Safety Improvements	TC322290					X						
Bridge Load Rating	TC365060							X		X		
Bridge Painting Program	TC324900									X		
Bridge Seismic Retrofit Phase II	TC365810							X		X		
Bridge Way North and Fremont Circulation	TC366370	X						X				
Burke-Gilman Trail Extension	TC364830				X	X						
Center City ITS	TC365870							X				

Project Name	CIP ID	Make best use of the streets we have	Increasing Transportation Choices	Make transit a real choice	Encourage Walking	Encourage Biking	Price and Manage Parking Wisely	Moving Goods and Services	Improving the Environment.	Operations and Maintenance	Connecting to the Region	Leveraging resources
Chief Sealth Trail	TC365690			X	X							
Collision Evaluation Program	TC323860	X							X			
Critical Bridge Security	TC366390								X			
Denny Triangle Improvements	TC365760		X	X			X					
Downtown Seattle Bus Layover	TC366270		X									
Downtown Seattle Transit Tunnel Closure Mitigation	TC366200	X	X									
Duwamish Bikeway	TC327010				X							
Duwamish Intelligent Transportation Systems (ITS)	TC365700	X					X					
Earthquake Repair	TC366010								X			
Elliott Ave. W/15th Ave W and NW	TC365680	X	X				X					
FAST Corridor Phase II - Truck Mobility Improvement Program	TC365850						X					
Fremont Bridge Approaches and Electrical Major Maintenance	TC365790						X		X			
Grant Match Reserve Opportunity Fund	TC365910						X			X		
Greenwood Avenue North	TC366380	X		X					X			
Hazard Mitigation Program - Areaways	TC365480								X			
Hazard Mitigation Program - Landslides	TC365510								X			
Intelligent Transportation System (ITS) Plan Implementation	TC365870	X	X				X					
Interurban Trail North	TC364980			X	X							
Lake City Way NE Multimodal	TC365380	X	X	X			X			X		
Lake Union Ship Canal Trail	TC327000			X	X							
Leary Way NW Signal Improvement	TC365720	X					X		X			
Left Turn Signals	TC323130	X							X			
Magnolia Bridge Replacement Project	TC366060						X		X			
Mercer Corridor Project	TC365500	X		X	X					X		
Miscellaneous, Unforeseen and Emergencies	TC320030								X			

Project Name	CIP ID	Make best use of the streets we have	Increasing Transportation Choices	Make transit a real choice	Encourage Walking	Encourage Biking	Price and Manage Parking Wisely	Moving Goods and Services	Improving the Environment.	Operations and Maintenance	Connecting to the Region	Leveraging resources
MLK Undergrounding Agreement	TC366430											X
Mountains to Sound Greenway Trail	TC365750				X	X						
Neighborhood Bike Improvements	TC322280					X						
Neighborhood Pedestrian Improvements	TC323120				X							
New Sidewalk Program	TC365900				X							
New Traffic Signals	TC323610	X						X				
Non-Arterial Asphalt Street Resurfacing	TC323920			X					X			
Non-Arterial Concrete Rehabilitation	TC323160			X					X			
North Queen Anne Drive Bridge Seismic Improvements	TC366170								X			
Neighborhood Program (NSF/CRF)	TC365770	X			X							
Pay Stations	TC366350					X						
Pedestrian and Elderly Handicapped Accessibility	TC323140				X							
Phinney, Fremont and 50th Street Improvement	TC366120	X							X			
Princeton Ave. NE Bridge Replacement	TC365240								X			
Retaining Wall Repair and Replacement	TC365890								X			
Broadway and Roy St. ROW Improvements	TC366090	X										
S Henderson Street Improvements	TC366300	X		X	X							
S. Holgate St. Railroad Crossing	TC366280	X		X				X				
S. Jackson St. Improvements	TC366000	X		X					X			
S Lander St Grade Crossing	TC366150	X						X				
Sidewalk Repair	TC365120				X				X			
Sound Transit Construction Services	TC366310			X							X	X
South Lake Union Streetcar	TC366260			X								X
South Park Bridge	TC365780							X				X
Spokane Street Viaduct	TC364800	X						X				X

Project Name	CIP ID	Make best use of the streets we have	Increasing Transportation Choices	Make transit a real choice	Encourage Walking	Encourage Biking	Price and Manage Parking Wisely	Moving Goods and Services	Improving the Environment.	Operations and Maintenance	Connecting to the Region	Leveraging resources
SR-519 (Phase I surface improvements)	TC365020	X						X				X
Traffic Control Program	TC323250	X										
Traffic Management Application - UASI II	TC366410	X										
Traffic Management Center Security Improvement - UASI II	TC366400	X										
Trans-Lake Washington Project	TC365880										X	
Urban Center Wayfinding	TC365710			X	X							
Water Taxi Dock	TC365430			X								X
West Lake Union Trail	TC364840			X	X	X						

Program Name	BCL	Make best use of the streets we have	Increasing Transportation Choices	Make transit a real choice	Encourage Walking	Encourage Biking	Price and Manage Parking Wisely	Moving Goods and Services	Improving the Environment.	Operations and Maintenance	Connecting to the Region	Leveraging resources
Street Vacation Activities	CPRS	X										
Street & Alley Cleaning, Leaf Pick-up	St. Maint.									X		
Street Surface Maint.: Paving repairs, Potholes, Prevent. Maint.	St. Maint.							X		X		
Street Maint. Support: Dispatch/response, Yard Op. & Supervision	St. Maint.									X		
Emer. Response Svcs.: Snow/Ice/Wind, Slide Control, Security	St. Maint.									X		
Non-Forestry Street Vegetation Control	St. Maint.				X					X		
Bike Lane Maintenance	St. Maint.					X						
Bridge/Structures Maintenance & Operations	CPRS									X		
Urban Forestry	NTS								X			
Car Smart Grant Program	PPMP		X									
Bridges and Structures Engineering	CPRS							X		X		
Parking Meter Maintenance & Operations	St. Maint.						X					
Curb/Pavement Marking Activities	Traffic	X					X	X				
Traffic Parking Signs	Traffic	X					X					
Downtown Cleanup, Crash Cushion Repair, Guardrail Maint.	Traffic									X		
Comm. Load Zone, Truck Control, & Constr. Site Enforcement	Traffic	X					X	X				
Bikeways, Pedestrian Safety, Traffic Control Activities	Traffic				X	X						
Special Events -Traffic Planning Operations	Traffic	X		X								
N'hood Plans,Comm. Requests,Speed Watch,Bus. Dist. Outreach	NTS	X			X	X				X		
Special Events - Traffic Control Activities	Traffic	X										
Traffic Signals Operations & Maintenance	Traffic	X						X		X		
Mandated Traffic Data Collection Activities	Traffic	X										
Traffic Operations Support Services	Traffic	X										
Engineering Support Services: Endangered Species Act	CPRS								X			
Pavement Management—Arterial Streets	St. Maint.							X		X		
Neighborhood Plans Project Scoping	PPMP											
Metro Ride Free Zone Payment—City Pass Thru	PPMP		X	X								

Program Name	BCL	Make best use of the streets we have	Increasing Transportation Choices	Make transit a real choice	Encourage Walking	Encourage Biking	Price and Manage Parking Wisely	Moving Goods and Services	Improving the Environment.	Operations and Maintenance	Connecting to the Region	Leveraging resources
Commute Trip Red. Subsidy for City Employees—City Pass Thru	PPMP		X	X								
Stairway Rehabilitation	CPRS				X					X		
Non-Arterial Street Chip-Seal Program	St. Maint.									X		
Asphalt Walkway Maintenance	St. Maint.				X					X		
Pedestrian Way Restoration	St. Maint.				X					X		
Sidewalk Repair Assistance Program	NTS				X					X		
Crosswalk/Lane Line Marker Replacement Program	Traffic				X					X		
Destination/Information Sign Replacement Program	Traffic							X		X		
Regulatory Sign Rehabilitation	Traffic									X		
Signal Loop Detector Maintenance & Operations	Traffic									X		
Traffic Control Regulatory Devices	Traffic	X								X		
Traffic Control Spot Imp.—Arterial (Electric Signals)	Traffic	X								X		
Traffic Control Spot Imp.—Arterial (Non-Electric)	Traffic	X								X		
Traffic Control Spot Imp.—Non-Arterial Neighborhood Streets	Traffic	X										
Right-of-Way Management Initiative	PPMP	X										
Parking Pay Stations	PPMP						X					
Northgate Coordinated Transportation Study	PPMP	X		X								
Citywide Parking Services Coordination	PPMP						X					
Transportation Mode Planning & Management	PPMP	X		X								
Parking Management Policy and Coordination	PPMP			X			X					
Local Improvement District [LID] Management	PPMP			X						X		X
Government Relations	PPMP			X								X
Downtown Street Bus Layover Planning	PPMP			X			X					
Rideshare Tax Credit	PPMP			X								
Freight Mobility Program	PPMP							X				
Monorail Coordination	PPMP			X								