

Portland Pedestrian Master Plan

City of Portland
Office of Transportation
Engineering and Development
Pedestrian Transportation Program



June, 1998

To order copies of this document, write to

Pedestrian Master Plan Orders
Portland Office of Transportation
1120 SW Fifth Avenue, Room 802
Portland, OR 97204-1971

telephone: (503) 823-7004

facsimile: (503) 823-7371

e-mail: pedprogram@trans.ci.portland.or.us

web: [http://www.trans.ci.portland.or.us/pdot_services/
pedestrian_transportation_program.html](http://www.trans.ci.portland.or.us/pdot_services/pedestrian_transportation_program.html)

First printing, June 1998.

Second printing, October 1998

Third printing, February 1999.

Table of Contents

Chapter One: Introduction	1
Walking and the Community	1
Walking as Transportation	1
A New Paradigm	2
Oregon Initiatives	3
The City of Portland Transportation System Plan	4
The Pedestrian Master Plan	4
Chapter Two: Laying a Foundation – Policies for Pedestrian Travel	7
Goals, Policies and Objectives Relating to Pedestrian Transportation	7
Street Classifications Relating to Pedestrian Transportation	8
Recommended Pedestrian Action Plan	10
Chapter Three: Designing an Environment that Promotes Walking	13
The Purpose of the Pedestrian Design Guide	13
Developing the Guidelines	13
Regulations and Controls.....	14
Implementing the Guidelines.....	14
Chapter Four: Identifying Priorities for Pedestrian Improvements	17
Engaging the Community in the Pedestrian Master Plan	17
Assessing Pedestrian Network Needs.....	18
<i>Neighborhood Needs Requests and Other Outreach Efforts</i>	19
<i>Sidewalk and Curb Ramp Inventory</i>	19
<i>Automobile-Pedestrian Crash Locations Survey</i>	20
Developing and Selecting Projects for Pedestrian Improvements	20
<i>Identifying Priority Projects</i>	21
<i>The Pedestrian Potential Index</i>	21
<i>The Deficiency Index</i>	22
<i>Establishing Priority Projects</i>	23
Chapter Five: The Project List	29
Types of Projects	29
The Project Maps	30
Updating the Project List	30
Chapter Six: Funding the Plan	41
Sources of Capital Funding	41
Funding Strategies and Recommendations	46
<i>Historic Pattern of Funding</i>	46
<i>Recommended Funding Strategies</i>	48
<i>Applying the Funding Strategies</i>	50

Table of Contents, continued

Appendix A: Statutes and Codes Relating to Pedestrians	A-1
Appendix B: Goals and Policies Relating to Pedestrians	B-1
Appendix C: Pedestrian Street Classification Descriptions	C-1
Appendix D: Technical Appendix on Project Priorities	D-1
Appendix E: Project Descriptions and Priority Matrix	E-1
Appendix F: Estimated Costs of Pedestrian Facilities	F-1
Appendix G: Resolutions Adopting the Plan	G-1
Appendix H: Glossary	H-1
Index	i

Chapter One

Introduction

Walking and the Community

Walking is the oldest and most basic form of human transportation. It requires no fare, no fuel, no license, and no registration. With the exception of devices to enhance the mobility of the disabled, walking demands no special equipment. Thus, walking is the most affordable and accessible of modes.

Walking is clean, easy on the infrastructure, healthy for the individual and integral to community livability. People who walk know their neighbors and their neighborhood. A community that is designed to support walking is livable and attractive. Peter Calthorpe has written,

At the core...is the pedestrian. Pedestrians are the catalyst which makes the essential qualities of communities meaningful. They create the place and time for casual encounters and the practical integration of diverse places and people. Without the pedestrian, a community's common ground — its parks, sidewalks, squares and plazas, become useless obstructions to the car. Pedestrians are the lost measure of a community, they set the scale for both center and edge of our neighborhoods.¹

Portland has a history of creating a wonderful pedestrian scale, from the legacies of the original platting, with the Park Blocks and the 200-foot (61 m) block faces downtown, to the conscious decisions to reclaim areas from the automobile, with the Transit Mall and Waterfront Park. Neighborhoods that developed a century ago remain very walkable today. The history of civic planning in Portland is strong; the central city owes its vitality to the care and creativity that went into the Downtown Plan of 1972 and the Central City Plan of 1988.

Walking as Transportation

Although pedestrians have been valued for their contribution to urban vitality, walking has not, until recently, been considered a serious component of the modern transportation system. As Marcus Wigan has

"Community happens on the ground. Sidewalks... strengthen our social fabric."

- Jay Mower
April 22, 1998



People who walk know their neighbors and their neighborhood.



A bird's-eye view of Portland in the early 1870's shows the grid of small 200' blocks.

noted, walking generates no revenue and has “no dedicated major body with revenue streams and information flows to consider investments and regulatory measures.”²

A century ago, when a bold vision of the mechanical “modern” future began to emerge, it seemed inevitable that walking as transportation would be superseded by ever-faster machines. The subsequent evolution of urban form to accommodate the automobile’s speed and range fulfilled this forecast, creating new environments in which the pedestrian simply does not fit.



Portland has its share of edge communities developed around automobile transportation.

Like most North American cities, Portland has its share of edge communities developed around automobile transportation. In the last several decades, the City has annexed many neighborhoods where streets were not built to urban standards, principally in Southwest Portland and in mid-Multnomah County. The inventory of sidewalks and curb ramps conducted for the Pedestrian Master Plan shows that these areas are largely lacking pedestrian facilities, even on arterial streets (see Chapter 4).

Research on walking suggests that simply adding sidewalks in these areas will not create walkable communities. The LUTRAQ Project (Making the Land Use Transportation Air Quality Connection) established a correlation between pedestrian modal share and four Pedestrian Environmental Factors (PEFs): ease of street crossings, sidewalk continuity, street connectivity, and topography³.



Level ground and connected streets with sidewalks make walking easy in Portland's older neighborhoods.

The inner, older neighborhoods of Portland score well on the PEF scales. They lie on the most level ground, and they share a historic development pattern — a grid of connected streets with sidewalks on both sides and a dense mix of land uses. A travel behavior survey conducted by Metro in 1994 validates the LUTRAQ prediction: about 28% of all trips in these inner, mixed-use areas are made on foot, compared to 5% in suburban areas in the region⁴. Not surprisingly, a survey commissioned by the Portland Office of Transportation in 1994 showed that residents in inner areas were very satisfied with the safety and convenience of walking in their neighborhoods⁵. Clearly, walking has the potential to be a very important component of the transportation system.

A New Paradigm

As we near the millennium, a new “bold vision” has taken root, a complex and multidimensional vision that revives the most practical of the discarded patterns of the past, and tempers them with the technology

of the future. It is a vision of pedestrian pockets and urban villages linked by high-speed transit; of main streets and neo-traditional neighborhoods with corner stores. It is a vision that recognizes the importance of all modes, reconciles the disciplines of transportation and land-use planning, and respects the contributions of ordinary people to decisions about the public realm.

This new vision was reflected in the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. Under this innovative federal law, states and metropolitan areas were required to develop long-range plans that include pedestrian and bicycle elements. These plans must be constrained to a realistic estimate of future funding. The law also directed new flexibility to the use of most federal transportation funds. It appears these provisions and others favorable to pedestrian travel will be continued in the new transportation bill, the Transportation Equity Act for the 21st Century (TEA-21).

Oregon Initiatives

At the state level in Oregon, the new paradigm yielded the Transportation Planning Rule (TPR), adopted in 1991 by the Oregon State Land Conservation and Development Commission. The rule requires reduction in vehicle miles traveled per capita, changes to zoning and development codes to make them more pedestrian-friendly, and also requires metropolitan areas and cities to adopt a Transportation System Plan (TSP) which must include measurable goals to increase the modal share of pedestrian travel.

In 1994, Metro, the regional government of the Portland metropolitan area, adopted a 50-year regional growth and development concept that calls for “development of a true multimodal transportation system which serves land use patterns, densities and community designs that allow for and enhance transit, bike, pedestrian travel and freight movement.”⁶ The Region 2040 growth concept would increase land use densities in urban centers and along major corridors, concentrating most new population and employment growth within the existing urban growth boundary. The Regional Framework Plan, adopted at the end of 1997, will implement the Region 2040 growth concept through a set of policies and actions.

Metro currently is developing a Regional Transportation Plan (RTP) that will serve as the federal long-range plan, the state-mandated TSP for the metropolitan region, and the transportation element of the Regional Framework Plan. This regional plan is expected to be completed and

"It is the people that make our neighborhoods great – their interaction, their connection, their caring for each other. Without the pedestrian network there are no people, just cars and their caretakers. If all our references to each other are through two panes of safety glass, if all our interactions are through the pseudo-television screen of our windshields, our neighborhoods are in trouble. The Pedestrian Master Plan represents a bold and essential step in reversing that trend."

*- Keith Bartholomew
April 22, 1998*



Metro's Region 2040 Plan places priority on growth in town and regional centers, where transit service is in place.

"I commend Portland on the completion of an excellent plan, and look forward to continuing to work together on pedestrian issues in the future."

- Ed Washington,
Metro Councilor
April 22, 1998



Walking is the preferred mode for short trips.

adopted by ordinance in December, 1998. The RTP will include a Pedestrian Element. Currently adopted regional policy for pedestrian transportation promotes walking as the preferred mode for short trips. Metro places priority on improving the pedestrian environment in those parts of the region with existing or planned dense mix of uses and very frequent transit service.

These initiatives will require the pedestrian transportation system to serve a greater share of the travel needs of this vital and growing region.

The City of Portland Transportation System Plan

Under the Transportation Planning Rule, the cities within the metropolitan region have one year following the adoption of the Metro plan to complete and adopt a local 20-year Transportation System Plan, which must be consistent with the Metro plan. The City of Portland, recognizing the magnitude of this task, has undertaken to develop the TSP concurrently with Metro's RTP.

Phase One of the TSP, which included changes to transportation policies and street classifications, was adopted by City Council in May, 1996. Phase Two, including recommended projects, is expected to be completed by December, 1999.

The TSP will contain an element for each mode of travel, including a Pedestrian Element. The Pedestrian Master Plan represents the first step in developing the Pedestrian Element of the TSP.

The Pedestrian Master Plan

The purpose of the Pedestrian Master Plan is to establish a 20-year framework for improvements that will enhance the pedestrian environment and increase opportunities to choose walking as a mode of transportation.

The Pedestrian Master Plan is organized into five major elements: pedestrian policies, pedestrian street classifications, pedestrian design guidelines, a list of capital projects, and set of recommended funding strategies.

Chapter Two describes the City of Portland's adopted policies and street classifications relating to pedestrian travel. These two elements of the Pedestrian Master Plan were adopted by City Council by ordinance in May, 1996.



The Pedestrian Master Plan is organized into five main elements.

Chapter Three is a general discussion of the development of the design guidelines contained in the *Portland Pedestrian Design Guide*, a companion document issued by the City Engineer.

Chapter Four is a synopsis of the process by which the list of capital projects was developed, while Chapter Five describes the final list of projects.

Chapter Six explains the varied sources of funding for pedestrian projects and lays out a series of recommended funding strategies.

"Some of you will remember a land use case in Southwest Portland where City Council considered whether to require a sidewalk. The applicant said, 'No one walks here.' We countered with the requirement that maybe if we built a sidewalk they would walk. We required it, and now, lo and behold, any hour of the day, any day of the week you can see people walking on SW Vermont Street."

- Charlie Hales,
Commissioner
April 22, 1998

¹Peter Calthorpe, *The Next American Metropolis: Ecology, Community, and the American Dream*, p. 17. Princeton Architectural Press, 1993.

²Marcus Wigan, "Measurement and Evaluation of Non-Motorised Transport", p. 4. Working Paper ITS-WP-94-15, Institute of Transport Studies, October 1994.

³"The Pedestrian Environment," Volume 4A, p. 5. *Making the Land Use Transportation Air Quality Connection*, Parsons Brinckerhoff Quade and Douglas, Inc., with Cambridge Systematics, Inc. and Calthorpe Associates; December, 1993.

⁴Metro Household Activity Survey, 1994. (Excerpted from unpublished preliminary results. This modal share figure is for walk-only trips; it does not include walk-to-transit trips which are counted as part of the transit modal share.)

⁵Survey Results, Davis & Hibbits, Inc. August, 1994.

⁶Metro Resolution No. 94-2040-C, p. 2. December, 1994.

At the core...



...is the Pedestrian

Laying a Foundation: Policies for Pedestrian Travel

Chapter Two

Goals, Policies and Objectives Relating to Pedestrian Transportation

The City of Portland's Comprehensive Plan contains statements that guide the way the city plans and implements improvements. These statements are ordered from the general to the specific:

- Goals
- Policies
- Objectives
- Action Items

Goals, policies and objectives are formally adopted by City Council Ordinance. Action items are recommended steps to achieve the objectives, but are not formally adopted by City Council. This chapter outlines the adopted policies and street classifications in Portland's Comprehensive Plan that relate to pedestrian travel and lays out a series of action items recommended to achieve them. The referenced policies can be found in full in Appendix B.

The Comprehensive Plan addresses a broad range of goals for the City. Most policies relating to transportation are found in the Transportation Element of the Comprehensive Plan, which encompasses Goal 6, Transportation, and also contains the City's Arterial Streets Classifications and Policies. Other policies relating to pedestrians are found in Goals 11 and 12.

Among the City's goals are reducing reliance on the automobile, developing a balanced, affordable and efficient transportation system, preserving the quality of the City's capital investment in the transportation system, and enhancing and extending Portland's attractive identity.

The policy for pedestrian transportation calls for the City to complete a pedestrian network that serves short trips and transit, to improve the quality of the pedestrian environment, to increase pedestrian safety and convenience, to encourage walking, and to explore a range of funding options for pedestrian improvements.



Policies call for encouraging walking and completing the pedestrian network.

Street Classifications Relating to Pedestrian Transportation

The Transportation Element of the Comprehensive Plan contains the Arterial Street Classifications. Each street in Portland is classified for its appropriate use by pedestrians, bicycles, trucks, transit, and automobile traffic. All streets are intended for use by pedestrians, except for limited access facilities such as freeways. The pedestrian classifications indicate not only what types of pedestrian use should be accommodated, but also suggest where public funds for pedestrian improvements should be directed when they become available.

The Transportation Element of the Comprehensive Plan lists four classifications for pedestrian facilities: Pedestrian District, City Walkway, Local Service Walkway, and Off-Street Path. Additionally, the Pedestrian Master Plan includes a Main Street Pedestrian Design overlay to the City Walkway classification. In Appendix C, the functional purpose, the types of land use to be encouraged, and the design and general elements of the walkway are described for each classification.

Streets in the Central City are classified as part of the Central City Transportation Management Plan. The Central City classifications differ slightly from the TE classifications. All the pedestrian classifications are shown on the maps in Appendix C.

Pedestrian Districts

The concept of the Pedestrian District was introduced in Portland in 1977 as part of the original Arterial Streets Classification Policy. Pedestrian Districts are typically compact walkable areas of intense pedestrian use with a dense mix of land uses and good transit service, where walking is intended to be the primary mode for trips within the district. There are currently 16 areas classified as Pedestrian Districts in the Transportation Element (TE) of the Comprehensive Plan for the City of Portland.

Over time, new Pedestrian Districts may be added, or existing districts may be revised. For example, the Regional Transportation Plan will identify several areas in Portland as regional Pedestrian Districts that are not currently classified as Pedestrian Districts in Portland's TE. Community Planning efforts such as the Southwest Community Plan may also identify new or enlarged districts.



Northwest 23rd Avenue is the heart of the Northwest Pedestrian District.

New and revised Pedestrian Districts should meet certain essential criteria in order to ensure that they are consistent with the policy established in the Comprehensive Plan. The guidelines for new or expanded Pedestrian Districts are as follows:

Zoning: A Pedestrian District includes a mix of dense land uses generally limited to some combination of the following zones: Central Commercial CX; Storefront Commercial CS; Neighborhood Commercial CN1, General Commercial with design overlay, CGd; Mixed Commercial/Residential CM; Office Commercial CO1; Residential RX, RH, R1, R2 or R2.5a; Central Employment EX; or Institutional Residential IR.

Transit Service: A Pedestrian District has convenient and frequent transit service. This means service on multiple lines, light rail service, or service more frequently than every fifteen minutes.

Size and Configuration: A Pedestrian District is compact, and has breadth and depth rather than being a linear corridor. It should be generally no less than 600 feet and no more than one mile in any direction. It should be no less than 8 acres and no more than 400 acres in size.

An exception from the guidelines above may be made for areas with a historic development pattern that supports frequent pedestrian use.

Creating or revising Pedestrian Districts requires amending the TE. New or revised boundaries of Pedestrian Districts should be adopted after the zoning revisions that support them have been adopted.

Main Street Pedestrian Design Areas

The Metro Region 2040 concept lays out a network of corridors and identifies some as Main Streets. Main Streets are linear corridors of district-wide importance characterized by dense commercial and mixed-use development and transit-supportive residential uses, frequent transit service, and high pedestrian use. SE Hawthorne Boulevard and NW 23rd Avenue are often cited as examples of Main Streets.

For the Pedestrian Master Plan, a Main Street Pedestrian Design Area overlay has been developed as a refinement of the City Walkway street classification. The Main Street Pedestrian Design Area is applied in the Plan to those Region 2040 Main Streets that meet the land use and transit guidelines for Pedestrian Districts.



Northeast Fremont Street in the Beaumont area is one example of a Main Street in Portland.

Continued on p. 12

Pedestrian Action Plan

The following are action items to achieve the goals, policies and objectives relating to pedestrian travel in the City of Portland.

- Include Pedestrian Master Plan projects in the Transportation Capital Improvement Program.
- Develop needed connections that make direct routes for walking where they are missing.
- Identify and mitigate impediments and obstacles to walking to school.
- Implement sidewalks as part of all transportation improvements, including road construction, reconstruction, traffic calming, and intersection improvements, wherever feasible.
- Require direct on-site pedestrian connections between new development and transit stops.
- Work with regional authorities and Tri-Met to ensure that pedestrian concerns are addressed in the alignment choices and station-area planning for new light rail projects.
- Work with Tri-Met to ensure that pedestrian design concerns are addressed in the design concepts for all new transit initiatives, such as the Primary Transit Network or Bus Rapid Transit.
- Continue to work with Tri-Met to ensure that adequate facilities are available at transit stops.
- Work to change existing codes, standards and guidelines as needed to implement the Portland Pedestrian Design Guide, and ensure that all projects in the City of Portland conform to the guidelines in the Guide.
- Establish a Pedestrian Quality Index (PQI) as a measure of the comfort, attractiveness and interest of the pedestrian environment, and ensure that new projects rate highly on the scale.
- Consider traffic calming as a tool to increase pedestrian safety and access.
- Encourage the inclusion of amenities, plantings and art in pedestrian improvement projects.
- Establish a measure of pedestrian hours of delay and work to reduce pedestrian waiting times at crossings.
- Complete district plans and special district design guidelines for Pedestrian Districts and Main Street Pedestrian Design Areas.
- Continue the annual program to install curb ramps at crosswalks throughout the City.

Pedestrian Action Plan

- Continue to identify and improve pedestrian crossings in areas of high pedestrian use where safety is an issue.
- Analyze automobile-pedestrian crashes annually and work to reduce the incidences of automobile-pedestrian conflict.
- Experiment with and evaluate a variety of materials for pedestrian pathways, including materials that can reduce cost and pervious surface compared to conventional materials.
- Work with the Bureau of Buildings to ensure that vegetation in the right-of-way does not impede pedestrian travel.
- Develop a system of signing for pedestrian facilities such as connector pathways and stairs.
- Consider interim alternate routes where pedestrian improvements on arterial streets may be postponed due to significant constraints.
- Develop routes that reinforce connections between neighborhoods as well as connections to regional and town centers.
- Work to establish a process for maintaining pedestrian connections such as connector pathways that are not on streets.
- Support changes to Oregon Revised Statutes to strengthen pedestrian right-of-way in crosswalks.
- Produce brochures and other materials to be distributed at events in order to encourage walking and to provide information about Pedestrian Transportation Program services.
- Educate children about walking safely.
- Work with the Police Bureau to ensure that officers understand pedestrian issues.
- Work with the Forestry Division to ensure that trees are included in the pedestrian environment while maintaining pedestrian function.
- Develop a program to construct sidewalks through public/private partnerships on existing streets without sidewalks.
- Apply for available grant funding for pedestrian improvement projects.
- Continue to require property owners to maintain sidewalks on a regular basis.

Main Street Pedestrian Design Areas share many characteristics with Pedestrian Districts, and the design treatment would be similar for both. A Main Street Pedestrian Design Area differs from a Pedestrian District in being a linear corridor rather than a compact district, and in being an overlay rather than a TE classification. As the City implements new zoning supporting the Main Street Pedestrian Design Area criteria, additional City Walkways may be designated for the design area by amending the Pedestrian Master Plan.

Designing an Environment that Promotes Walking

Chapter Three

The *Portland Pedestrian Design Guide* is a companion document to the *Pedestrian Master Plan*.

The Purpose of the *Pedestrian Design Guide*

The public right-of-way houses many transportation activities, including walking, bicycling, transit, freight movement, and automobile travel. It harbors the hardware, such as traffic signals and street lights, that supports those activities. In many cases the right-of-way also contains public utilities.

Each of these functions has specific design needs and constraints. The variety of functions is administered by people in several agencies, both inside and outside the City of Portland. In the past, conflicts between the design needs of competing functions occasionally have produced conditions that discourage pedestrian travel.

The purpose of Portland's *Pedestrian Design Guide* is to integrate the wide range of design criteria and practices into a coherent set of new standards and guidelines that, over time, will promote an environment conducive to walking.

Developing the Guidelines

The guidelines in the *Pedestrian Design Guide* were developed through a consensus-building process involving participation by each of the programs and agencies responsible for the form and function of the right-of-way.

The initial task of assessing and documenting existing practices and organizing the first draft of the guidelines was undertaken in 1995 with the assistance of a consultant team. This was followed by a lengthy process of revision and refinement, advised by a Technical Advisory Committee and a dedicated citizens working group. The section on alternative pathways was developed through a parallel process with a different consultant. The final set of guidelines in this design guide represents a thorough analysis and integration of many practices.



The public right-of-way houses many activities, each with its own design needs and constraints.



Conflicts between the design needs of competing functions have occasionally produced conditions that discourage pedestrian travel.



Curb ramps are one element of an accessible pedestrian network.

Throughout, the guidelines attempt to balance pedestrian needs with the design needs and constraints of each of the other uses of the right-of-way. In a few cases this balance resulted in guidelines that maintain the quality of the overall system but may be less than the ideal for pedestrians.

Regulations and Controls

In many cases, the practices that are covered by these guidelines are also the subject of other regulations or codes. This document attempts to knit together these disparate requirements.

A prominent example is the Americans with Disabilities Act (ADA) of 1990, for which there are stringent guidelines. Passage of the ADA marked a new era of responsibility for both public and private agencies, who must ensure that all users have access to all services and facilities. The guidelines for the ADA include the minimum dimensions required to achieve that access. In many cases, the guidelines in the Pedestrian Design Guide go beyond the minimum requirements of ADA to promote the vision of a pedestrian network for Portland that is not only accessible but safe, convenient, and attractive.

The City Code, which includes the zoning code, the traffic code, and the public improvements code, contains language regulating some elements. State laws and rules regulate others. Some Standard Construction Specifications, issued by the City Engineer for Portland, apply to the pedestrian realm.

Finally, there are numerous guidelines issued by various national organizations that constitute the canon of standard engineering practice.

"...there has to be some way to soften the concrete so the environment around pedestrians...is much friendlier."

*- Mayor Vera Katz
April 22, 1998*

Implementing the Guidelines

The *Portland Pedestrian Design Guide* is issued by the City Engineer. Every project that is designed and built in the City of Portland should conform to these guidelines.

Site conditions and circumstances often make applying a specific solution difficult. The *Pedestrian Design Guide* should reduce the need for ad hoc decisions by providing a published set of guidelines that are applicable to most situations. Throughout the guidelines, however, care has been taken to provide flexibility to the designer so that she or he can tailor the standards to unique circumstances. Even when the specific guideline cannot be met, the designer should attempt to find the solution that best meets the pedestrian design principles described on the next page.

Principles for Pedestrian Design

The following design principles represent a set of ideals which should be incorporated, to some degree, into every pedestrian improvement. They are ordered roughly in terms of relative importance.

1. The pedestrian environment should be safe.

Sidewalks, pathways and crossings should be designed and built to be free of hazards and to minimize conflicts with external factors such as noise, vehicular traffic and protruding architectural elements.

2. The pedestrian network should be accessible to all.

Sidewalks, pathways and crosswalks should ensure the mobility of all users by accommodating the needs of people regardless of age or ability.

3. The pedestrian network should connect to places people want to go.

The pedestrian network should provide a continuous direct routes and convenient connections between destinations, including homes, schools, shopping areas, public services, recreational opportunities and transit.

4. The pedestrian environment should be easy to use.

Sidewalks, pathways and crossings should be designed so people can easily find a direct route to a destination and delays are minimized.

5. The pedestrian environment should provide good places.

Good design should enhance the look and feel of the pedestrian environment. The pedestrian environment includes open spaces such as plazas, courtyards, and squares, as well as the building facades that give shape to the space of the street. Amenities such as street furniture, banners, art, plantings and special paving, along with historical elements and cultural references, should promote a sense of place.

6. The pedestrian environment should be used for many things.

The pedestrian environment should be a place where public activities are encouraged. Commercial activities such as dining, vending and advertising may be permitted when they do not interfere with safety and accessibility.

7. Pedestrian improvements should be economical.

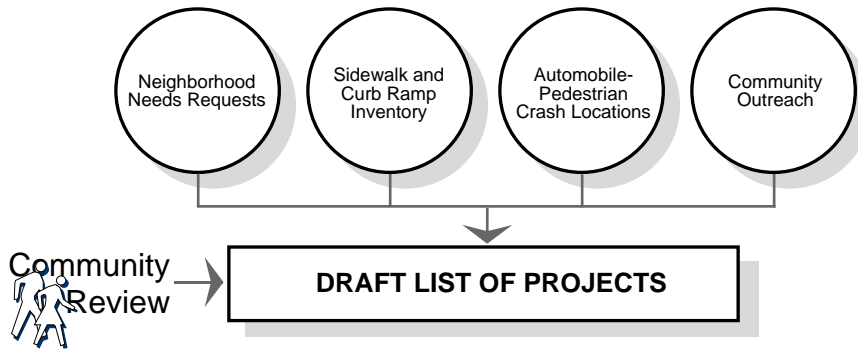
Pedestrian improvements should be designed to achieve the maximum benefit for their cost, including initial cost and maintenance cost as well as reduced reliance on more expensive modes of transportation. Where possible, improvements in the right-of-way should stimulate, reinforce and connect with adjacent private improvements.



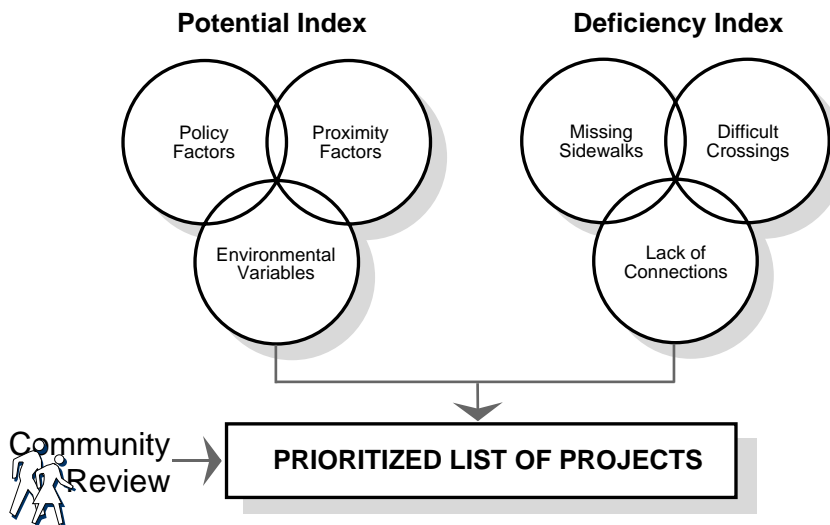
The pedestrian environment should provide good places.

Figure 4-1 Identifying Priorities

1 ♦ Assessing Pedestrian Network Needs



2 ♦ Developing and Selecting Projects



Chapter Four

Identifying Priorities for Pedestrian Improvements

Each year, the Portland Office of Transportation plans, designs, and constructs improvements to Portland's transportation system. Chapter Five recommends a list of capital projects that will increase opportunities for Portland's citizens to walk. This chapter explains the steps in the process of developing and selecting the projects on that list.

In the following sections we will show how pedestrian network needs were identified and documented, how projects were developed from the needs, how citizens and neighborhoods were involved in the process, and how the projects were analyzed and sorted to produce the project list in Chapter Five. The process is shown schematically in Figure 4-1.

ENGAGING THE COMMUNITY IN THE PEDESTRIAN MASTER PLAN

Given the great need for pedestrian improvements and the limited resources available, it is essential to plan and construct good pedestrian projects that also have strong public support. Accordingly, the Pedestrian Transportation Program has made use of Portland's tradition of active and engaged citizens to help identify, develop and select the projects recommended in this plan.

The Citizen Advisory Committee for the Pedestrian Transportation Program (Pedestrian CAC) is a committee of volunteers appointed by the Commissioner in charge of Transportation. The Pedestrian CAC has acted as the principle advisory body to the Pedestrian Master Plan project. In addition, a series of formal and informal opportunities for community input have been provided throughout the process.

In the spring of 1995, nine public open houses were held around the city to solicit comments and needs requests for the Pedestrian Master Plan. Among other activities, attendees were offered the opportunity to "pin the tail on the problem," by filling out a card to identify a need and marking the location on a map with a numbered sticker. A total of 189 people attended the open houses.

A Preliminary Discussion Draft of the Pedestrian Master Plan was issued in October, 1995. The draft was distributed to all the citizens who participated in the open houses, as well as to neighborhood association presidents and transportation and land use chairs, district coalition

"You should make a walking map that goes from bakery to bakery..."

*- Marilee Tilstrom
April 22, 1998*



Open Houses in 1996 provided opportunities to identify needs and deficiencies.

presidents and staff, and to city staff. In total, more than 350 copies of the draft plan were distributed.

In the winter and spring of 1996, project staff made visits to each of the neighborhood District Coalition Boards to update them on the progress of the Plan and to solicit comments on the draft list of projects.

In May, 1996, the Pedestrian Master Plan was presented to City Council for a resolution supporting the completion of the plan, and the policies and street classifications were adopted as part of the Transportation System Plan, Phase One.

During February and March, 1997, a second series of nine Pedestrian Master Plan Workshops were held around the city to present the projects proposed in the Plan. Neighbors were offered the opportunity to comment on projects, to suggest additions to the list, and to propose project priorities. The workshops were widely advertised in neighborhood newspapers and *The Oregonian*. Figure 4-6 shows a sample advertisement. 145 people attended the workshops.



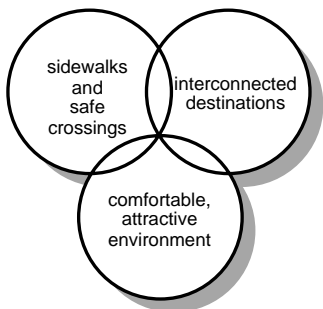
Workshops in 1997 brought the opportunity to comment on projects and priorities.

Throughout the project, presentations have been made on request to neighborhoods and other groups, including the Eliot Neighborhood Land Use Committee, the Southwest Neighborhood Information Transportation Committee, the Hollywood Transportation Committee, the Northwest District Association Transportation Committee, the Belmont Loaves and Fishes program, the Southwest Trails group, and the Willamette Pedestrian Coalition.

On April 22, 1998, the Pedestrian Master Plan was presented to City Council for adoption by resolution. Minor amendments were adopted on June 3, 1998.

ASSESSING PEDESTRIAN NETWORK NEEDS

For walking to be an equal partner in the multimodal transportation system, several elements must be present. First, the physical infrastructure for walking must be in place. When sidewalks are missing (or obstructed) or crossings are difficult these functional deficiencies become an impediment to walking. Secondly, the pedestrian network must be interconnected and there must be destinations within walking distance. Finally, the pedestrian environment must be comfortable and attractive.



Pedestrian Network Needs

Each of these types of need is addressed in a different way. Functional deficiencies can be easily addressed through capital projects. Some needs, such as destinations within walking distance, are beyond the scope of the Pedestrian Master Plan to address. The quality of the

pedestrian environment is addressed through the guidelines in the *Pedestrian Design Guide*, which should be incorporated into every project designed and built in Portland.

For the Pedestrian Master Plan, needs were assessed in several ways. An inventory of the entire street network was conducted, data on locations with high auto-pedestrian crashes were analyzed, and requests for improvements from neighborhoods and citizens were collected over the course of several years. Each of these efforts is detailed below.

Neighborhood Needs Requests and Other Outreach Efforts

For many years the Office of Transportation collected information annually from neighborhood associations and district coalitions regarding neighborhood transportation needs. In 1994 and 1995, the Pedestrian Transportation Program collected all neighborhood needs requests received between 1987 and 1994 pertaining to the pedestrian network, entered them into a data base, and mapped them electronically.

In addition, since its inception in July, 1991, the Pedestrian Transportation Program has received phone calls and letters with suggestions or complaints on an ongoing basis. Where applicable, these also have been entered in the data base.

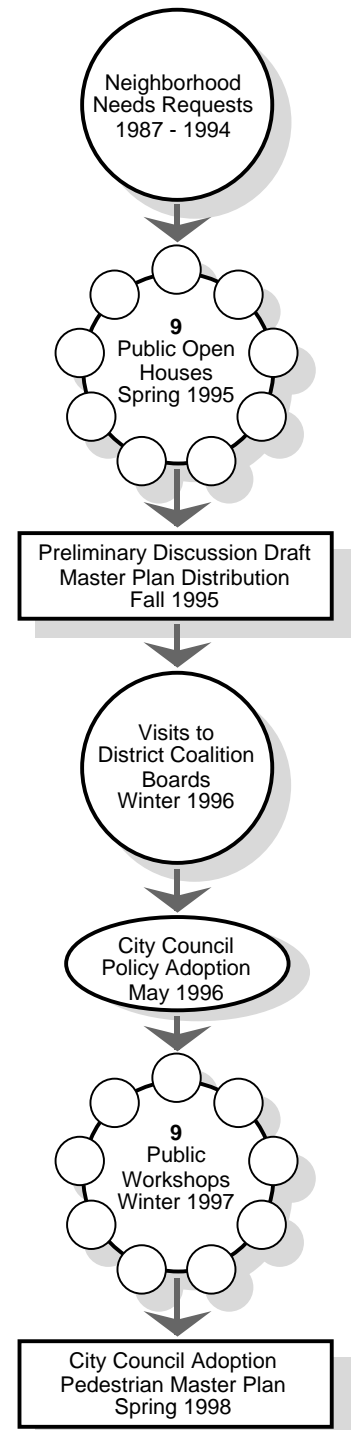
In 1993, the Pedestrian Transportation Program conducted an outreach effort to develop a preliminary capital improvement project list. Program staff visited each of the seven district coalitions and documented the pedestrian transportation needs in each district.

All the needs requests and project suggestions received during the open houses, district coalition presentations, and workshops for the Pedestrian Master Plan project were added to the data base and request maps.

A total of 847 entries have been recorded in the neighborhood needs data base. These requests form the basis of many of the projects included in this Plan.

Sidewalk and Curb Ramp Inventory

An inventory of all street segments within the city limits was conducted in the fall of 1994. Interns collected data on sidewalk and curb ramps. Data were limited to presence or absence of sidewalk and numbers of ramps. In this “snapshot” inventory, no attempt was made to assess the condition or ADA compliance of the facilities, nor the qualitative aspects of the pedestrian environment.



Engaging the community to help develop and select projects



An inventory of all sidewalks and curb ramps was conducted in 1994.

The map in Figure 4-2 shows the streets of Portland, highlighting the streets that are missing sidewalks. The map shows that the inner, older neighborhoods such as Southeast and Northeast are much more likely to have completed sidewalk systems than more recently annexed areas of the City such as the outer East neighborhoods or Southwest.

The pattern of sidewalk distribution is fairly similar between the local and arterial streets in each district. Citywide, a slightly greater percentage of local streets have sidewalks than do arterial streets.

The curb ramp inventory shows that Portland has ramps at approximately one-third of all corners. Ramps are more concentrated in business districts and along transit routes. There is a greater deficiency of ramps at “T” intersections than at other intersections.

Automobile-Pedestrian Crash Locations Survey

Crash data is collected by the State of Oregon and is made available to the City annually. Figure 4-3 shows a map of the automobile-pedestrian crash locations from 1991 to 1995. The distribution of automobile-pedestrian crashes tends to be along major arterial routes, particularly at the intersections of two arterial streets. Two intersections with high crash rates, N Lombard at Interstate Avenue and SE Foster Road at 82nd Avenue, have been recommended for crossing improvements as a result of this analysis.

DEVELOPING AND SELECTING PROJECTS FOR PEDESTRIAN IMPROVEMENTS

A draft list of projects was developed by analyzing needs requests and comparing them with the sidewalk inventory, the crash data maps, and the street classifications. Projects were developed for areas where transportation improvements could remedy identified deficiencies of the pedestrian network.

The project descriptions give a general idea of the types of improvements to be made. Some projects have been assessed in the field, but others have not. For most projects, costs were estimated roughly using general costs per unit for each type of improvement (see Appendix F), multiplied by the units in the project (that is, linear meters of new sidewalk, number of curb extensions, etc.). In some cases, there may be site conditions that could change the cost estimate significantly as the project is more fully developed.

The draft list of projects was presented at a series of public workshops as described above. A number of projects were added to the list and a few were deleted as a result of the comments received. The projects that received the greatest public support were noted.

Identifying Priority Projects

The resources available for all transportation projects, including pedestrian improvements, are limited. Therefore, it is crucial that funding decisions are made carefully to ensure the investment of public resources provides the greatest possible public benefit in the most efficient way.

Two tools were developed as part of the Pedestrian Master Plan project to analyze project priorities and sort the projects on the draft list. The purpose of these tools was to evaluate the potential for specific pedestrian projects to increase opportunities for walking.

The premise of the tools is that people are more likely to choose to walk for short trips when certain environmental factors are in place. This premise was based on work done as part of the LUTRAQ (Making the Land Use, Transportation, Air Quality Connection) Study commissioned by 1000 Friends of Oregon.

Based on this premise, the highest priority pedestrian improvements should be those where pedestrian facilities are lacking but other environmental factors that favor walking are in place. The first tool, the *Pedestrian Potential Index*, is intended to measure the strength of those other environmental factors that favor walking, while the second, the *Deficiency Index*, measures how critically improvements are needed.

In general, projects that have both a high pedestrian potential and a high deficiency should have the greatest priority.

The Pedestrian Potential Index

The Pedestrian Potential Index measures the strength of environmental factors that favor walking. Every street segment within the City of Portland was assigned an index value based on a number of factors. The factors contributing to Pedestrian Potential generally fall into three categories.

The first set of factors can be described as policy factors. Under the City of Portland's Transportation Element of the Comprehensive Plan (TE) and in the adopted concept of the Region 2040 plan, certain areas and corridors are designated as having greater importance for pedestrians. Street segments that fall within these areas or along these corridors were assigned points. The number of points varies according to the

Priorities



Being close to a school or park adds points to a project's Pedestrian Potential score.



Policy Factors

- Transportation Element Pedestrian Street Classifications
- Region 2040 Land Use Areas

Proximity Factors

- Schools
- Parks
- Transit
- Neighborhood Shopping

Factors of Pedestrian Potential

Pedestrian Environmental Variables:

Land Use Mix

People are most likely to walk in relatively dense neighborhoods where there is a good balance between housing and commerce.

Destinations

When there are many destinations, such as shopping and services, schools and parks, within walking distance, people are more likely to walk.

Connectivity

Walking is more likely where there is a well-connected pattern of streets.

Scale

People are more likely to walk where the buildings are close to the street and human-scaled.

Topography

Steeply sloping terrain can be a deterrent to walking.

importance of each element in the hierarchy. For example, a street segment within a Pedestrian District was assigned five points, while one classified as a City Walkway was assigned two points.

The second set of factors can be described as proximity factors. If a given street segment is within walking distance of destinations such as schools, parks, transit or neighborhood shopping, it was assigned points for each destination. The definition of “within walking distance” varied from a quarter mile to one mile, depending on the type of destination.

The third set of factors are quantitative pedestrian environmental variables developed with the assistance of Metro. In 1994, Metro conducted a household activity survey in the Portland region from which they extracted information about travel behavior. These data were compared with other environmental factors to discover which factors are most closely correlated with the choice to walk. The results show that people are most likely to walk in areas where there is a good balance between types of land uses, where there are many destinations within a one quarter mile radius, where the street network is well connected, and where the development pattern is scaled to people rather than automobiles. Values were generated for areas of the city based on the concentration of these favorable factors given expected land uses in the year 2020, and these values were incorporated into the Pedestrian Potential Index.

Finally, the points assigned to each street segment for each category are added together, resulting in a Pedestrian Potential Index value. Figure 4-4 shows a map of the Pedestrian Potential Index values for the streets of Portland. A more detailed description of the Pedestrian Potential Index and Metro’s work on pedestrian environmental variables can be found in Appendix D.

For every project on the draft list, a weighted average potential value was calculated based on the values of the street segments within the project boundaries.

The Deficiency Index

The Deficiency Index measures how critically pedestrian improvements are needed. As with the Pedestrian Potential Index, a value is assigned to each street segment based on several factors. Factors for the Deficiency Index were chosen to measure missing sidewalks, difficult and dangerous street crossings, and lack of a connected street network.

Information about missing sidewalks was based on the sidewalk inventory data. Difficult and dangerous street crossings were approximated by four factors: traffic speed, traffic volume, roadway

width, and locations with automobile-pedestrian crashes. The lack of a connected street network was approximated by giving points to street segments that are especially long.

Figure 4-5 shows a map of the Deficiency Index. Streets of highest deficiency tend to be toward the edges of the city. A notable exception is the area along inner West Burnside that has a high deficiency rating due to significant auto-pedestrian crash counts.

Establishing Priority Projects

Once an average potential value and an average deficiency value had been established for every project, the projects with the highest relative score on both indices were found by taking the geometric mean of the normalized values. This yielded a preliminary ranked list of projects.

Recognizing that the tools used to generate this ranked list are less than perfect, the preliminary list was then evaluated against a number of other, qualitative factors. Based on the priorities that were expressed in the 1997 public workshops, adjustments were made to the ranking to reflect community values. Adjustments were also made for projects related to pedestrian safety and for projects that take advantage of existing opportunities. The list was trimmed by deleting projects that had the lowest index values for potential and deficiency and little or no community support.

Based on the reevaluated list, the final project list was divided into three phases. Phase One represents the highest priority of projects to be completed, Phase Two those of moderate priority, and Phase Three the projects with the least priority for completion at this time.

It is important to realize that the list represents only part of the identified needs for pedestrian improvements in Portland. The final project list is not intended as an absolute ranking. Rather, the list gives a general sense of project priorities. Should the opportunity arise to undertake a project, it should not be excluded only because the project has been identified for a later phase.

Potential Index	High/Low	High/High
	Low/Low	Low/High
Deficiency Index		

Projects with high potential and high deficiency are high priority projects.

Figure 4-2 Sidewalk Inventory Map, 1994

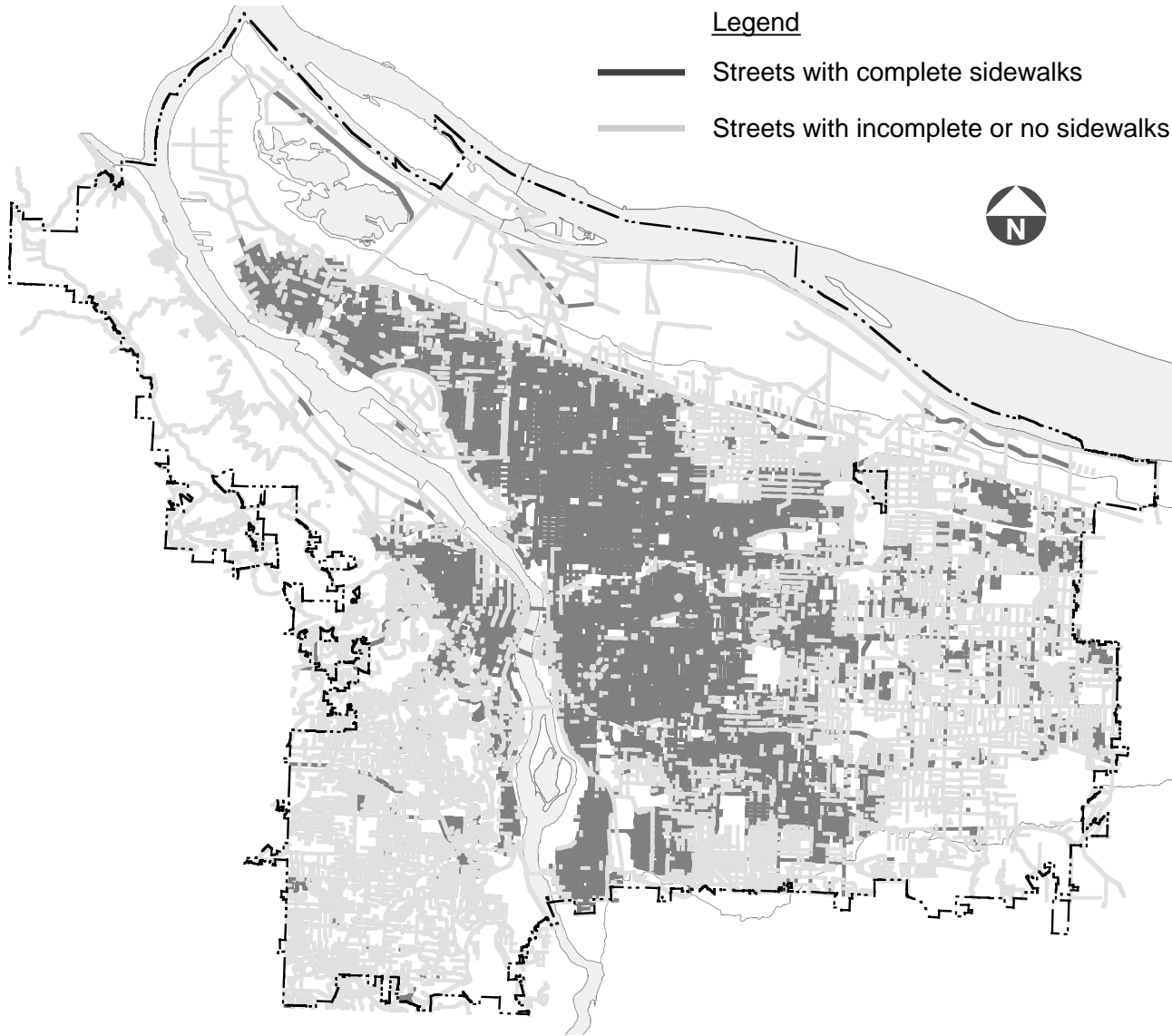


Figure 4-3 Automobile-Pedestrian Crash Map, 1991-1995

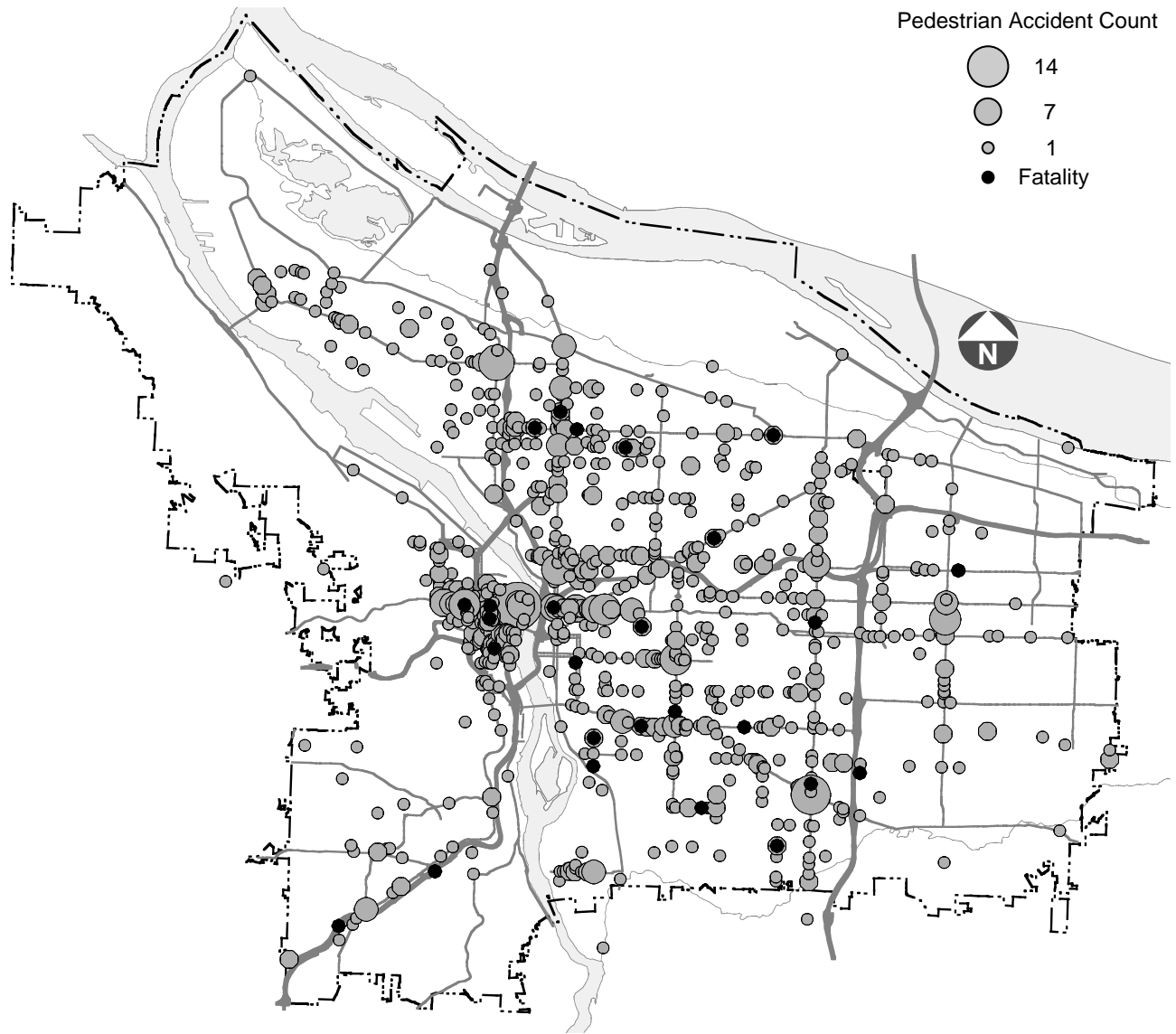


Figure 4-4 Map of the Pedestrian Potential Index

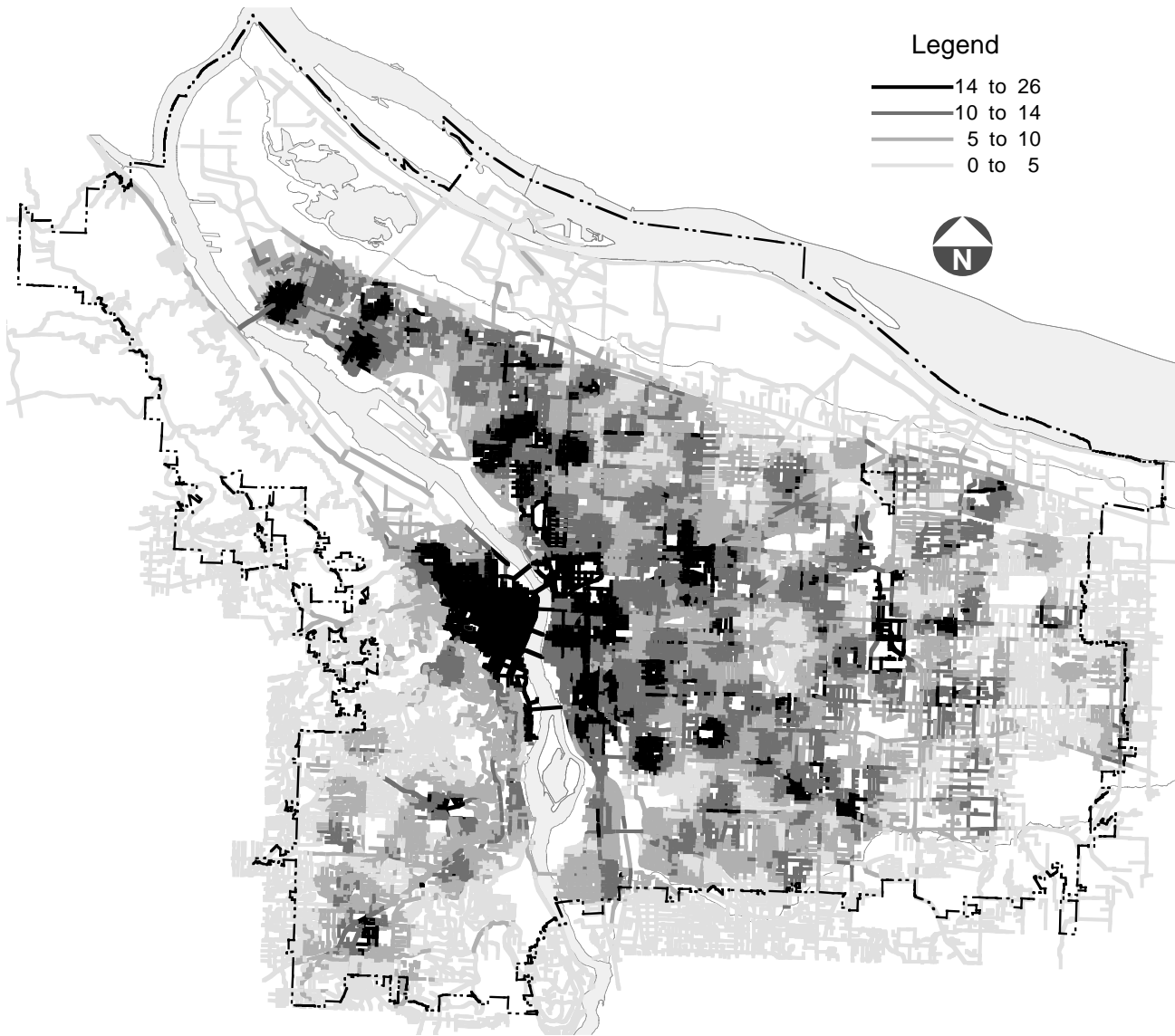


Figure 4-5 Map of the Deficiency Index

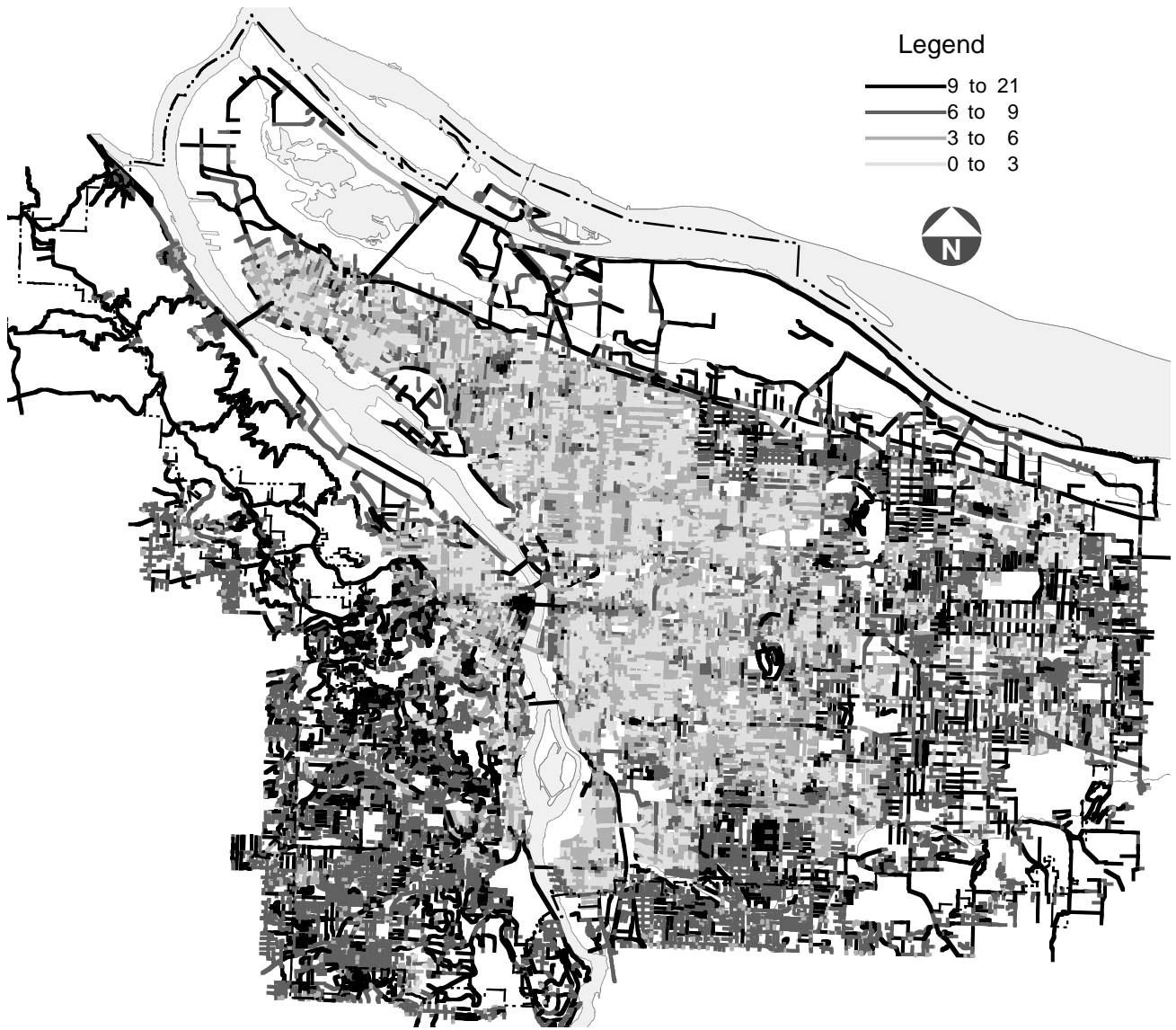


Figure 4-6 Ad from the Public Workshops

HELP CHOOSE IMPROVEMENTS TO MAKE WALKING EASIER IN YOUR NEIGHBORHOOD

YOU ARE INVITED TO A WORKSHOP ON THE PEDESTRIAN MASTER PLAN

The Pedestrian Master Plan identifies projects for sidewalks, walkways, and crossing improvements that will be constructed over the next 20 years, as funds become available.

AT THIS WORKSHOP YOU WILL:

- learn about the projects proposed for your neighborhood
- tell us if there are projects that should be added to the list
- identify which projects are most important to you and your neighbors



The workshops in your area will be held:

**Monday, February 24, 1997
6:30 to 9:00 PM
Mt. Scott Community Center
5530 SE 72nd (Tri-Met #14)**

**Wednesday, March 12, 1997
6:30 to 9:00 PM
Warner Pacific College
Theatre-in-the-Round
2219 SE 68th (Tri-Met #4)**

QUESTIONS?

For more information, call the City of Portland Pedestrian Transportation Program at **823-4326/TDD 823-6868**.

If you are disabled and would like accommodations, please call **823-7211/TDD 823-6868** at least two business days prior to the workshop.

Pedestrian Transportation Program
City of Portland Office of Transportation
Charlie Hales, Commissioner



"Think Globally, Walk Locally"

Chapter Five

The Project List

Types of Projects

The following types of capital projects have been identified in the development of the Pedestrian Master Plan:

Pedestrian District Projects and ***Main Street Pedestrian Design Projects*** are projects to plan and develop specific districts or areas that have, or are expected to have, intense pedestrian use. Projects include a wide range of improvements, such as widened sidewalks, curb extensions, street lighting and signing. The unique identity of each district will be emphasized through a coherent design and incorporated art. These projects typically involve a high level of urban design.

Pedestrian Corridor Projects are projects to plan and construct improvements along a street corridor. In many cases, these corridors are streets where sidewalks are missing. In other cases, corridor projects will focus on crossing improvements along the corridor. A project may include both sidewalk and crossing improvements. Where there are other transportation issues, Pedestrian Corridor Projects may also include improvements for transit and for bicycle and motorized traffic.

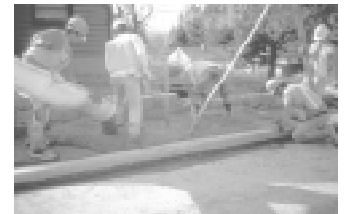
Pedestrian Access to Transit Projects are projects to plan and construct improvements that enhance access to transit. Examples of these improvements include sidewalks, crossing improvements, and curb extensions with enhanced amenities at transit stops.

Crossing Improvement Projects will make major changes to an intersection or intersections to improve crossing conditions for pedestrians. Examples of such improvements include elements such as curb extensions, raised crosswalks, or median refuges, as well as the installation, replacement or modification of traffic signals. Only a small number of high-profile crossing projects have been included on the project maps, but the plan also includes a large citywide project to improve pedestrian crossings over twenty years.

Pedestrian Connection Projects will make new connections where they are needed for access to schools, transit and shopping, with particular emphasis on areas where street connectivity is low. Examples of these projects include public stairways, pedestrian overcrossings at major impediments, and pathways linking cul-de-sacs.



Ventura Park is a small Pedestrian District with very high potential and good opportunities to improve the pedestrian environment.



Sidewalks were added to SW 49th Avenue as part of a Pedestrian Corridor improvement.



This location on SE Division will be the site of a crossing improvement in 1999.

"When you don't balance the needs of both cars and walkers you end up with a debacle."

- Robert L. Jones
April 22, 1998

Greenstreet Projects are projects to plan and construct improvements to a local street corridor that can serve as a through route for trips by walking and bicycling. Typical improvements include signing, street lighting, and crossing improvements at arterial cross streets. The unique identity of each Greenstreet corridor will be emphasized through a coherent design and incorporated art. Neighborhood participation will be sought to expand each project with amenities such as pocket parks and community gardens. Greenstreet Projects are a special opportunity for synergy between neighborhoods and alternative transportation modes.

The Project Maps

The Project Maps are arranged by transportation district. All three phases of projects are shown on the maps. Each project is identified by a key number. A key listing the project title appears near each map, arranged in order of the three phases. Some projects included in the Pedestrian Master Plan are expected to be completed by others. These projects are not included in the phase lists but are listed separately.

A more complete description of each project can be found in Appendix E, Project Descriptions and Priority Matrix. Appendix E also indicates how each project rated on four scales: Pedestrian Potential, Deficiency, Community Support and Safety Concerns.

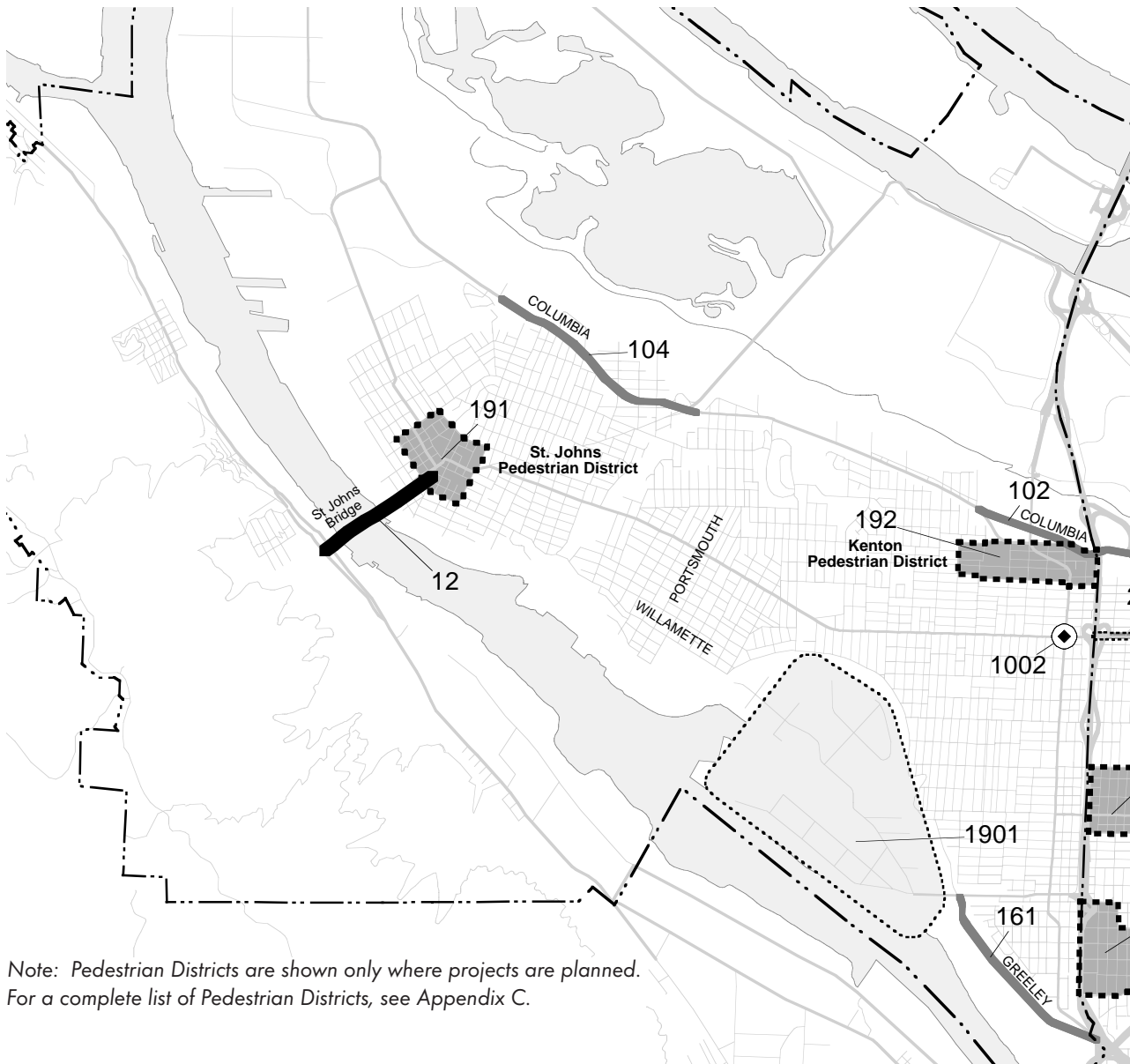
Updating the Project List

The list of projects in the Pedestrian Master Plan are the result of a detailed planning process that involved significant input from the community. Nevertheless, a list of this sort is necessarily constrained to some extent by the points of view that were current at the time the list was assembled. This plan is intended to be a living document, and over its life the projects on the list will need to be reevaluated. In some cases, new projects may be added to the list in order to meet the community's needs.



Curb extensions planned for SE Hawthorne Blvd, a Main Street project, are drawn in chalk during the Hawthorne Street Fair in August, 1997.

Figure 5-1 Projects for North Portland



Note: Pedestrian Districts are shown only where projects are planned. For a complete list of Pedestrian Districts, see Appendix C.

Phase 1

- 104 N Columbia Blv - Swift Ct to Portland Rd
- 1002 N Lombard at Interstate

Phase 2

- 102 N Columbia Blv - Argyle Way to Albina Ave
- 161 N Greeley - Going to Interstate
- 191 St Johns Pedestrian District
- 192 Kenton Pedestrian District

Projects by others

- 12 St Johns Bridge Accessibility Project
- 1901 Swan Island Pedestrian Plan

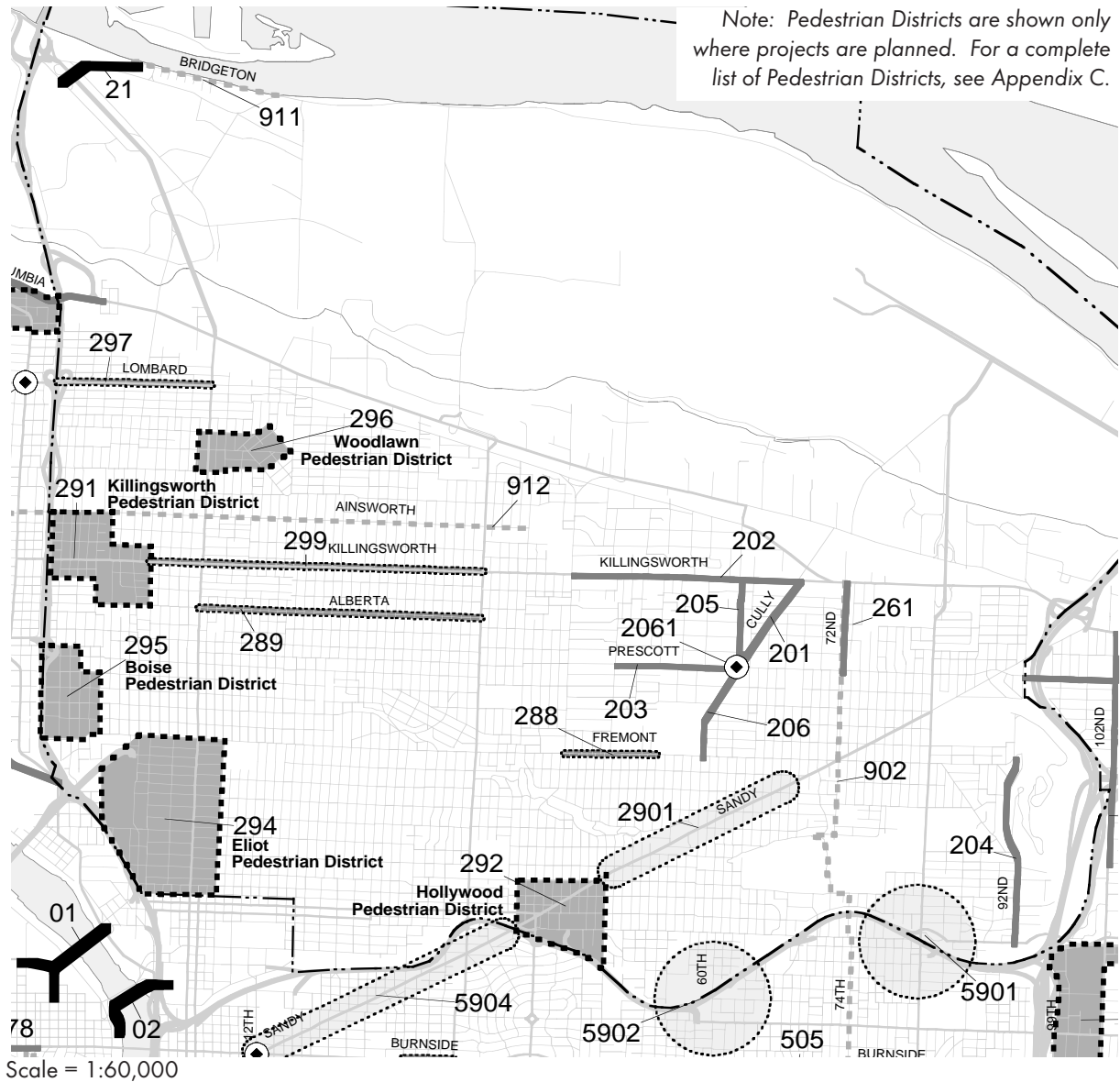
LEGEND

- Pedestrian District Plan Area
- Main Street Pedestrian Design Area
- Pedestrian Corridor Project
- Pedestrian Access to Transit Project
- Major Crossing Improvement Project
- Pedestrian Connection Project
- Greenstreet Project
- Transportation District Boundary

Scale = 1:60,000



Figure 5-2 Projects for Northeast Portland



Phase 1

- 201 NE Cully Blvd - Killingsworth to Prescott
- 206 NE 57th/Cully - Fremont to Prescott
- 292 Hollywood Pedestrian District
- 289 NE Alberta - Martin Luther King to 33rd
- 297 N Lombard Ave - I-5 to MLK Blvd
- 2061 NE Prescott at Cully

Phase 2

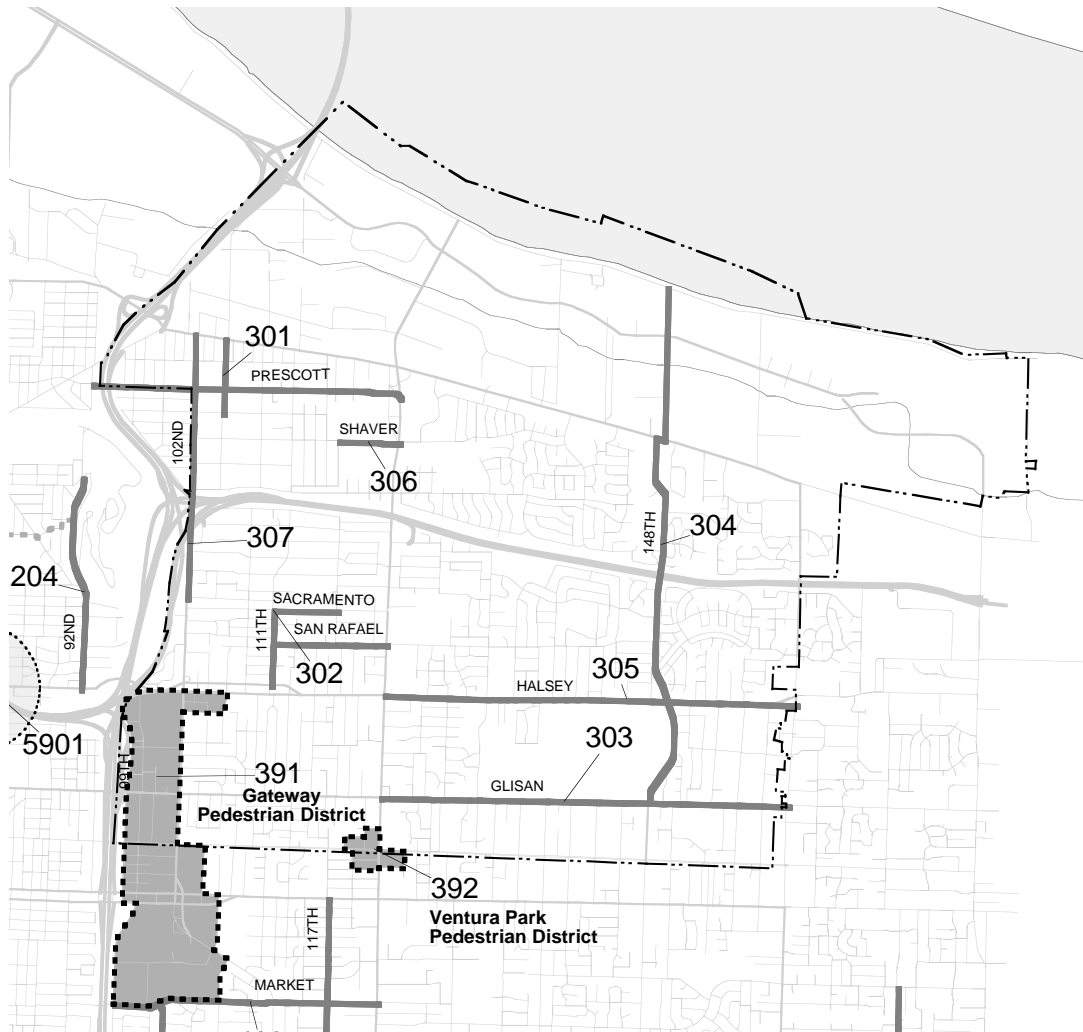
- 202 NE Killingsworth - 42nd to Cully Blvd
- 203 NE Prescott - 47th to Cully
- 291 Killingsworth Pedestrian District
- 294 Eliot Pedestrian District

- 288 NE Fremont - 42nd to 52nd
- 299 NE Killingsworth - Williams to 33rd

Phase 3

- 21 Bridgeton Access to Delta Park
- 204 NE 92nd Ave - Halsey to Fremont
- 205 NE 60th - Killingsworth to Going/Cully
- 261 NE 72nd Ave - Prescott to Killingsworth
- 295 Boise Pedestrian District
- 296 Woodlawn Pedestrian District
- 911 NE Bridgeton Rd Green Street
- 912 NE Ainsworth Green Street
- 2901 Pedestrian Access to Transit: NE Sandy Blvd, 47th Ave to 67th Ave

Figure 5-3 Projects for Far Northeast Portland



Phase 1

- 302 Woodland Park Pedestrian Enhancements
- 303 NE Glisan - 122nd to 162nd
- 391 Gateway Pedestrian District
- 392 Ventura Park Pedestrian District

Phase 2

- 301 Parkrose Pedestrian Enhancements Project
- 307 NE 102nd - Brazee to Sandy

Phase 3

- 304 NE 148th - Glisan to Airport Way
- 305 NE Halsey - 122nd to 162nd
- 306 NE Shaver - 116th to 122nd

LEGEND

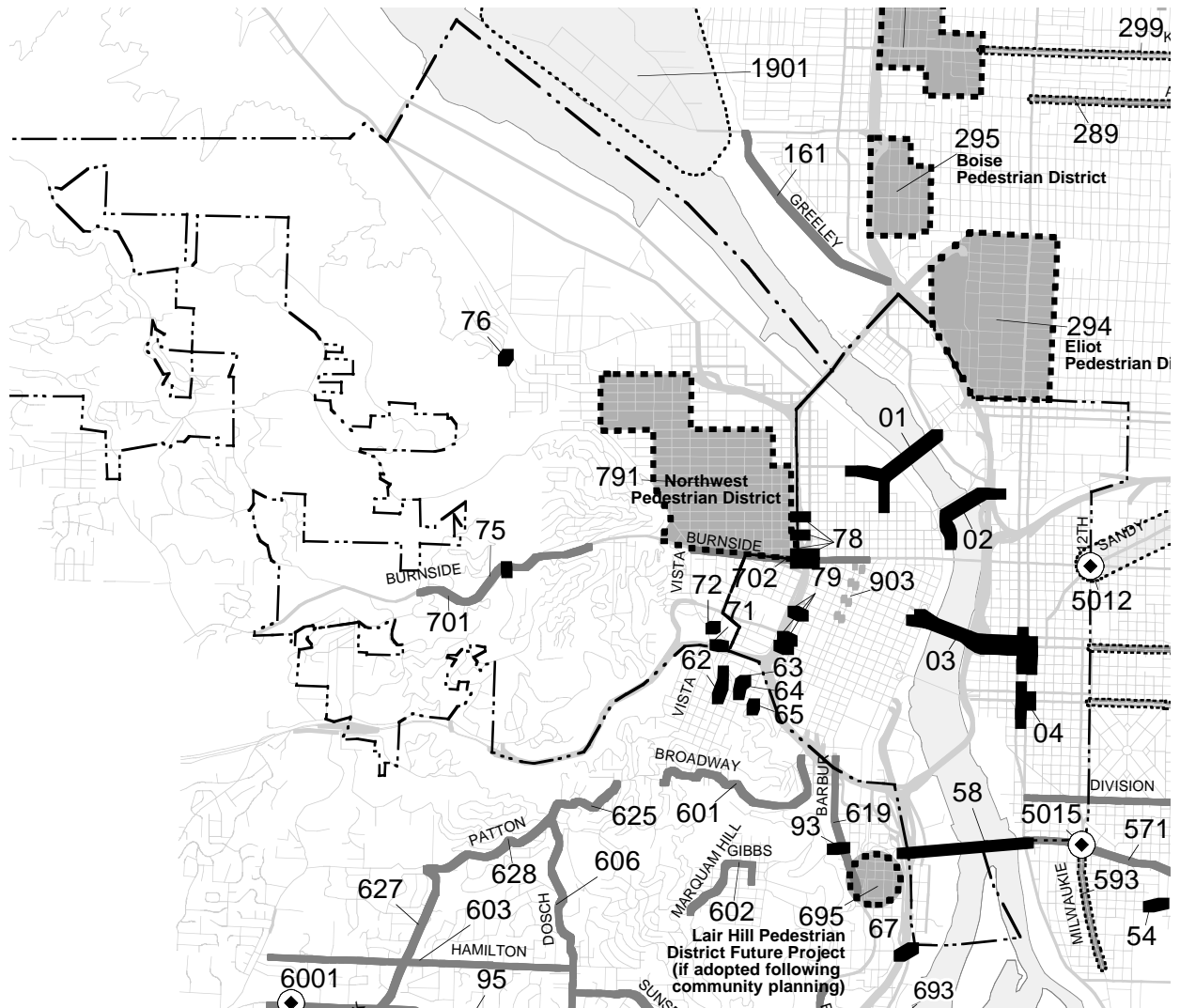
- Pedestrian District Plan Area
- Main Street Pedestrian Design Area
- Pedestrian Corridor Project
- Pedestrian Access to Transit Project
- Major Crossing Improvement Project
- Pedestrian Connection Project
- Greenstreet Project
- Transportation District Boundary

Scale = 1:60,000



Note: Pedestrian Districts are shown only where projects are planned.
For a complete list of Pedestrian Districts, see Appendix C.

Figure 5-4 Projects for Northwest Portland and Central City



Northwest

Phase 1

- 76 Stairs from NW Thurman at Gordon to Aspen
- 702 W Burnside - Park to 23rd

Phase 3

- 71 Vista Ridge Stairs, from SW Vista Ave to SW Mill St Terrace between SW 19th and 20th
- 72 Stair in SW Spiral Way R.O.W.
- 75 Pedestrian Overcrossing, W Burnside at Wildwood Trail
- 701 W Burnside - Tichner to Skyline
- 791 Northwest Pedestrian District

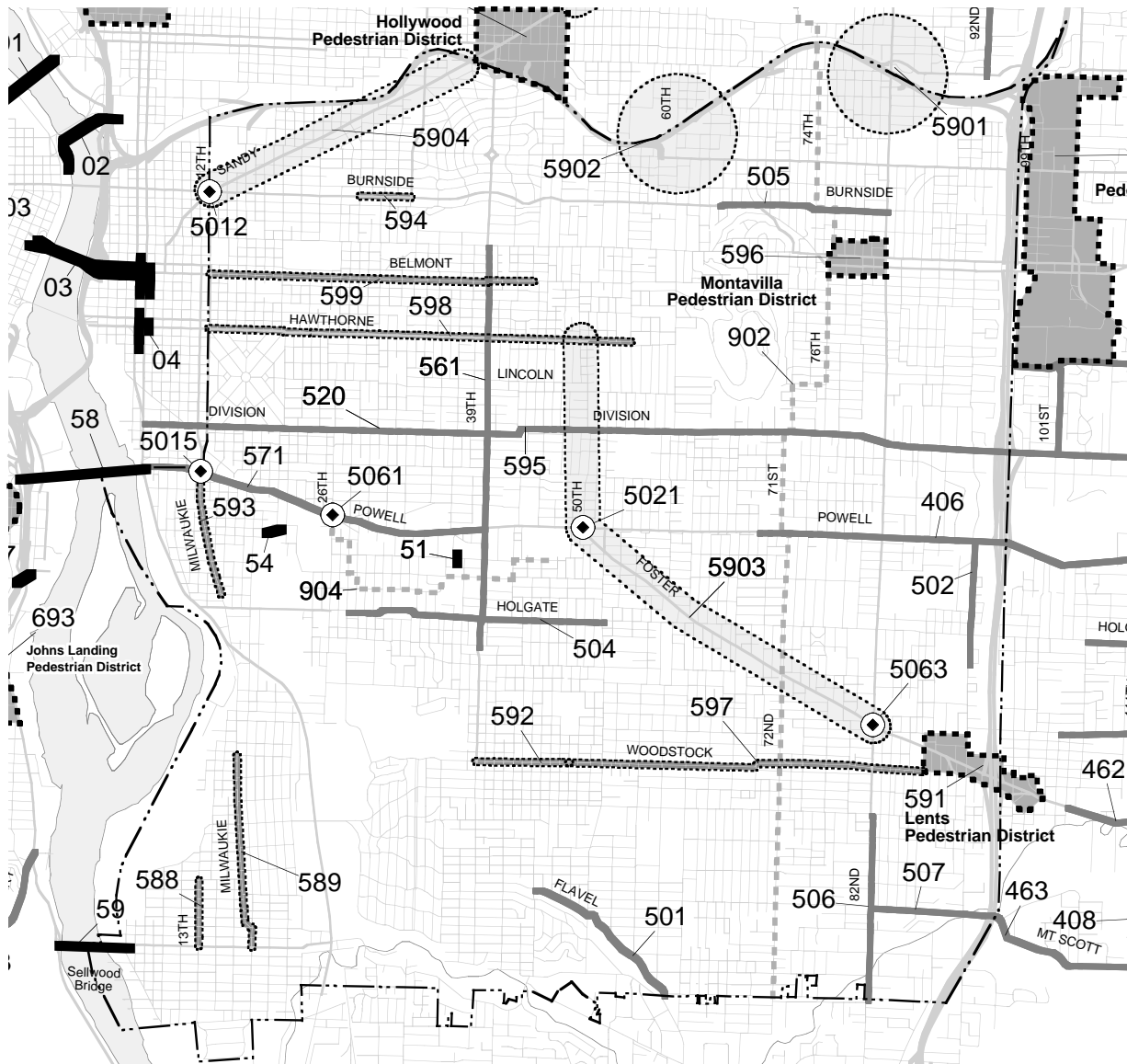
Northwest – Projects by others

- 78 NW I-405 Bridges project; Burnside, Couch, Everett, Glisan
- 79 SW I-405 Bridges Project; Salmon, Columbia, Jefferson Sts

Central City – Projects by others

- 01 Broadway Bridge Accessibility Project
- 02 Steel Bridge Pedestrian Access Project
- 03 Morrison Bridge Accessibility Project
- 04 Central City Bridgeheads Pedestrian Access Project
- 903 SW Park Blocks Greenstreet

Figure 5-5 Projects for Southeast Portland



Phase 1

- 520 SE Division - Grand to 136th
- 591 Lents Pedestrian District
- 592 SE Woodstock - 39th to 49th
- 598 SE Hawthorne Blvd - 12th to 55th
- 5012 E Burnside at Sandy/12th
- 5021 SE Powell at Foster Rd
- 5063 SE Foster Rd at 82nd Ave

Phase 2

- 502 SE 92nd - Powell to Schiller
- 599 SE Belmont - 12th to 43rd
- 904 SE Creston Kenilworth Green Street
- 5015 SE Powell at Milwaukie
- 5901 NE 82nd MAX Station Pedestrian Access to Transit

- 5902 NE 60th MAX Station Pedestrian Access to Transit
- 5903 SE Foster Rd Pedestrian Access to Transit/Fastlink

Phase 3

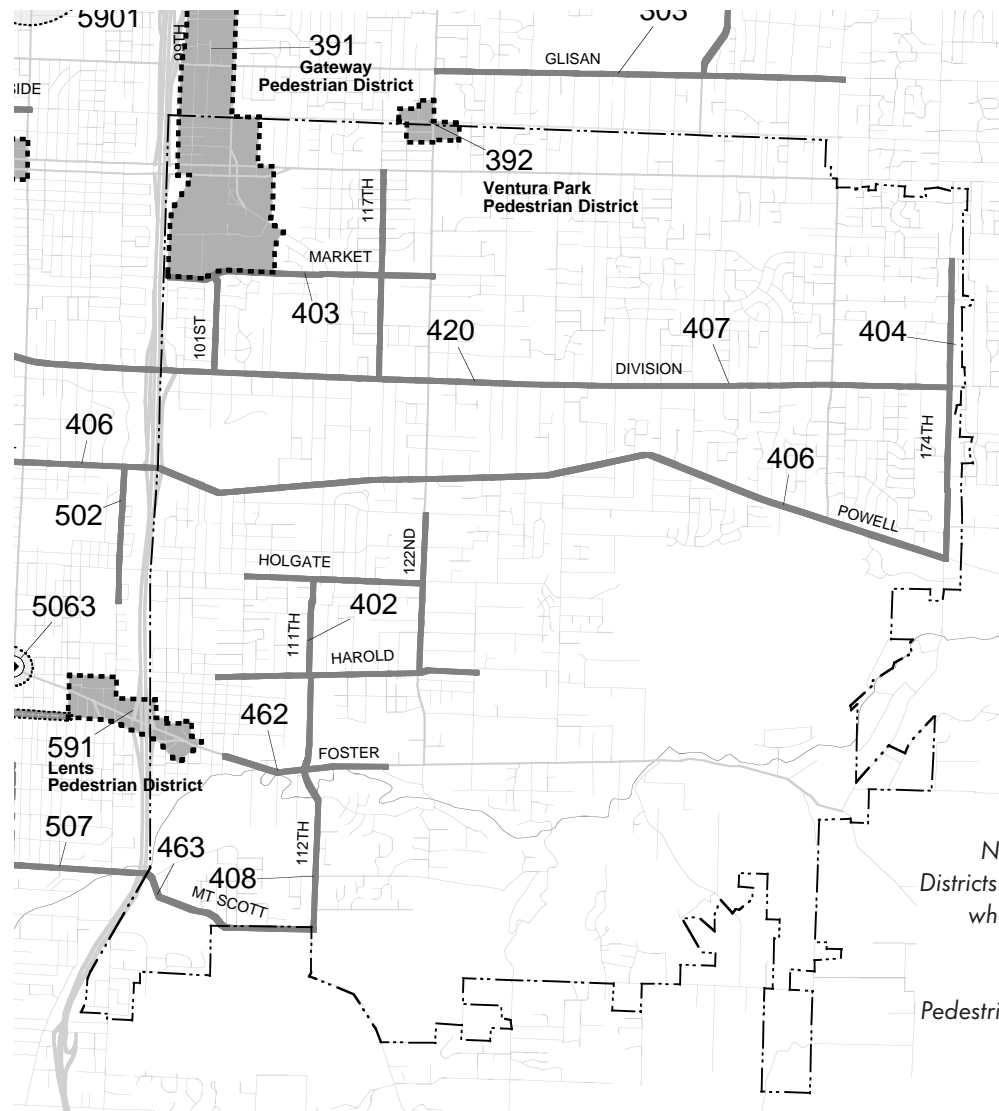
- 51 Path, SE 36th Pl R.O.W. from Francis St to 36th Pl
- 54 Pedestrian Overpass, SE Lafayette - 18th to 20th
- 501 SE Flavel - 45th to Clatsop
- 504 SE Holgate - 39th to 52nd
- 505 E Burnside - 60th to 82nd
- 507 SE Flavel - 82nd to 92nd
- 561 SE 39th Ave - Stark to Schiller
- 596 Montavilla Pedestrian District

- 588 SE 13th - Malden to Tacoma
- 589 SE Milwaukie - Yukon to Tacoma
- 593 SE Milwaukie - Powell to Mall
- 594 E Burnside - 28th to 33rd
- 597 SE Woodstock - 49th to 87th
- 902 NE/SE 70's Green Street
- 5061 SE Powell at 26th
- 5904 Pedestrian Access to Transit: NE Sandy, 12th to 37th

Projects by others

- 58 Ross Island Bridge Accessibility Project
- 59 Sellwood Bridge Accessibility Project
- 506 SE 82nd - Duke to Clatsop
- 571 SE Powell Blvd - Ross Island Bridge to 39th

Figure 5-6 Projects for Far Southeast Portland



LEGEND

- Pedestrian District Plan Area
- Main Street Pedestrian Design Area
- Pedestrian Corridor Project
- Pedestrian Access to Transit Project
- Major Crossing Improvement Project
- Pedestrian Connection Project
- Greenstreet Project
- Transportation District Boundary

Scale = 1:60,000



Phase 1

- 403 Mill Park Pedestrian Improvements
- 461 SE Holgate - 104th to 122nd
- 462 SE Foster - 103rd Ave to Foster Pl
- 391 Gateway Pedestrian District
- 591 Lents Pedestrian District

Phase 2

- 402 Powellhurst/Gilbert Pedestrian Enhancements Project
- 408 SE 112th - Foster to Mt. Scott
- 463 SE Mt Scott Blvd - 92nd to 112th

Phase 3

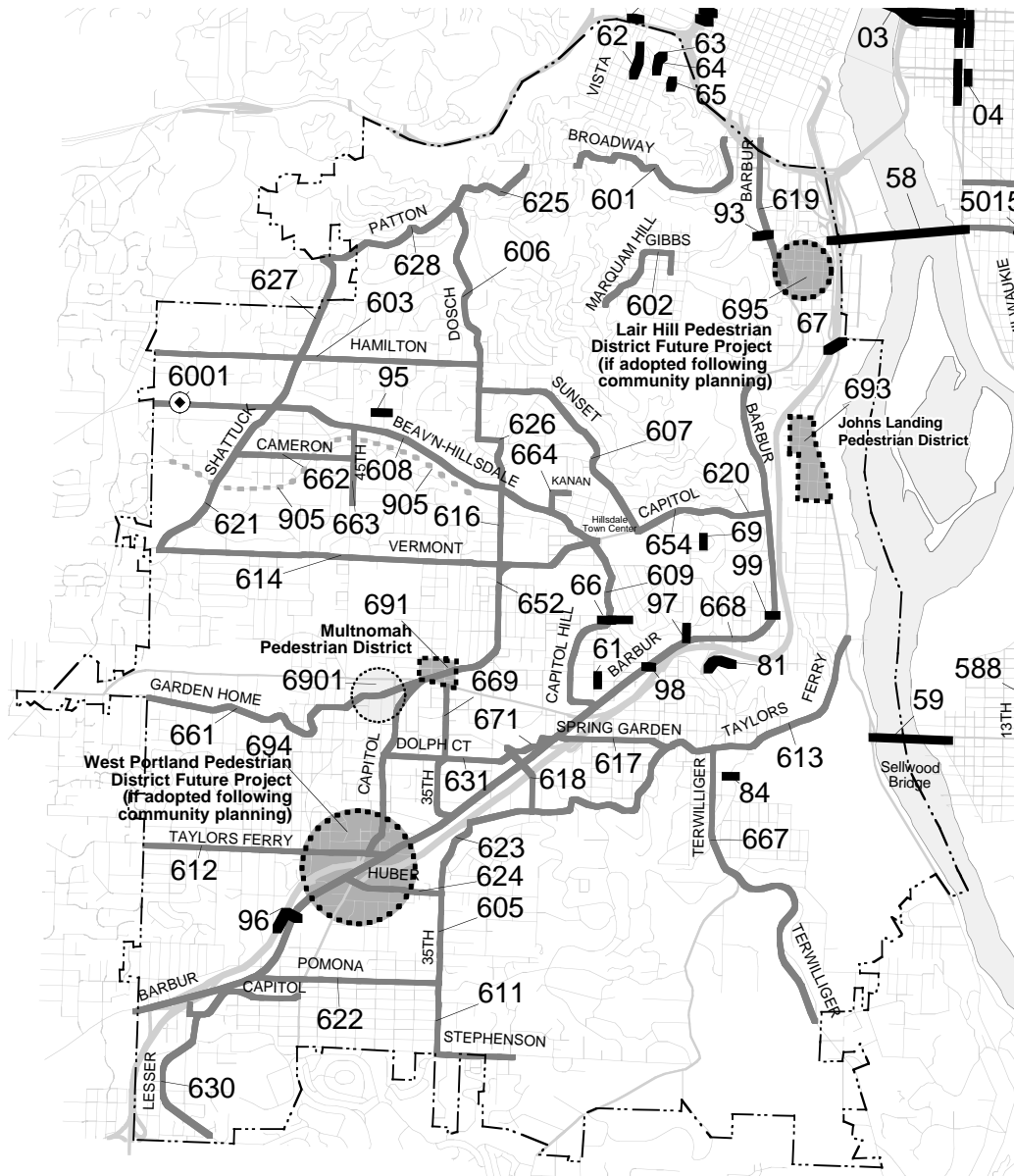
- 404 SE 174th - Main to Powell
- 407 SE Division - 136th to 174th

Projects by others

- 406 SE Powell Blvd - 69th to 174th

Note: Pedestrian Districts are shown only where projects are planned. For a complete list of Pedestrian Districts, see Appendix C.

Figure 5-7 Projects for Southwest Portland



LEGEND

-  Pedestrian District Plan Area
-  Main Street Pedestrian Design Area
-  Pedestrian Corridor Project
-  Pedestrian Access to Transit Project
-  Major Crossing Improvement Project
-  Pedestrian Connection Project
-  Greenstreet Project
-  Transportation District Boundary

Scale = 1:60,000



Note: Pedestrian Districts are shown only where projects are planned. For a complete list of Pedestrian Districts, see Appendix C.

Project Key for Southwest Portland**Phase 1**

- 81 Path along I-5 from SW Fifth Ave to Custer St
- 85 Southwest Pedestrian Connections Project (not mapped)
- 96 Pedestrian Overpass near Markham School
- 605 SW 35th - Luradel to Dickenson
- 611 SW 35th/Stephenson Project
- 614 SW Vermont - Shattuck to 30th
- 651 SW Capitol Highway - 35th to Miles
- 652 SW Capitol Hwy, Beaverton Hillsdale to 31st
- 653 SW Capitol Hwy, Multnomah Viaduct to Taylors Ferry
- 654 SW Capitol Hwy, Terwilliger to Sunset

Phase 2

- 66 Path and bridge over Stevens Creek, SW Nevada Ct.
- 93 Path and stair - SW Woods to SW Sam Jackson Pk Rd
- 99 Path and stair from SW Nevada St to Barbur
- 602 SW Marquam Hill Corridor - 13th and Gibbs to 11th and Curry
- 607 SW Sunset - Capitol to Dosch
- 617 SW Spring Garden Road - Taylors Ferry to Barbur
- 619 SW Barbur - Sheridan to Front
- 621 SW Shattuck Rd - Beaverton-Hillsdale Hwy to Vermont
- 671 SW Spring Garden Road - Barbur to 26th
- 691 Multnomah Pedestrian District
- 6901 Pedestrian Access to Transit: SW Garden Home, Capitol to 45th

Phase 3

- 61 Stair in SW 19th Avenue R.O.W. from Troy to Moss
- 62 Path and Stair, SW Cable to SW Jackson St.
- 63 Stairs, End of SW Harrison St at SW 16th
- 64 Stairs, SW 16th from SW Hall to SW Upper Hall
- 65 Stairs in SW 14th Ave R.O.W. from SW College St to Cardinell Dr.
- 67 Path and stair to connect SW Bancroft St below I-5
- 69 Stair from SW Terwilliger Pl to Burlingame Pl

- 84 Path in SW Lobelia St R.O.W., 5th Ave to Boones Ferry Rd
- 95 Bridge and path to connect SW Lee to SW 43rd in existing right-of-way
- 97 Stair in SW 10th R.O.W. from SW Burlingame Ave to Bertha Blvd
- 98 Stair from SW Canby St to Barbur at 13th
- 601 SW Broadway Drive - Grant to Sherwood
- 603 SW Hamilton - Scholls Ferry to Dosch
- 606 SW Dosch Road - Sunset to Patton
- 608 SW Beaverton-Hillsdale Hwy - Capitol to 65th
- 609 SW Bertha/Capitol Hill - Barbur to Beaverton-Hillsdale
- 612 SW Taylors Ferry - 40th to 60th
- 613 SW Taylors Ferry - Macadam to 35th
- 616 SW 30th Ave - Vermont to Beaverton-Hillsdale
- 618 SW 26th Ave - Spring Garden to Taylors Ferry
- 620 SW Capitol Hwy, Terwilliger to Barbur (North)
- 622 SW Pomona St - 35th to Barbur Blvd
- 623 SW 35th Ave - Taylors Ferry to Luradel
- 624 SW Huber St - 35th to Barbur
- 625 SW Patton Rd - Homar to Dosch
- 626 SW Dosch Rd, Sunset to Beaverton-Hillsdale Hwy
- 627 SW Shattuck Rd, Beaverton Hillsdale Hwy to Patton
- 628 SW Patton Rd from Dosch to Shattuck
- 630 SW Capitol Hwy, 49th to Kruse Ridge Dr
- 631 SW Dolph Ct, 26th to Capitol Hwy
- 661 SW Garden Home - Capitol Hwy to 65th
- 662 SW Cameron Rd - 45th to Shattuck
- 663 SW 45th Ave - B-H Hwy to Iowa
- 664 SW 25th Ave/SW Kanan - 23rd Ave to B-H Hwy
- 667 SW Terwilliger, Troy to South Ridge
- 669 SW 35th Ave - Multnomah to Barbur
- 693 Johns Landing Pedestrian District
- 694 Proposed West Portland Pedestrian District
- 695 Proposed Lair Hill Pedestrian District
- 905 Pedestrian Path in former Red Electric Right-of-Way
- 6001 SW 62nd Ave at Beaverton Hillsdale Hwy

Projects by others

- 668 SW Barbur Blvd - Seymour to 65th

Construction of the sidewalk is the responsibility of the adjacent property owner. At the turn of the last century, concrete sidewalks were often in place long before the roadway was paved.



Chapter Six

Funding the Plan

The Pedestrian Master Plan identifies a list of projects that are estimated to cost just over \$120 million. This chapter examines the range of potential funding sources and recommends several funding strategies.

SOURCES OF CAPITAL FUNDING

A variety of funding sources are potentially available for projects in the Pedestrian Master Plan. Some are currently being used, while others would require new initiatives to become available. A brief description of each funding source follows.

General Transportation Revenue

General Transportation Revenue (GTR) funds are derived from transportation-related sources, including gasoline taxes, parking fees and fines, and interest. Currently, GTR is the primary funding source for the City of Portland's Office of Transportation, and is used for transportation planning and engineering, construction, and street maintenance. The majority of funding for the Pedestrian Transportation Program comes from GTR.

Federal Transportation Funds

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) directed a new flexibility for federal transportation funds. Funding from the Surface Transportation Program (STP) was no longer constrained to highway use and could be used for alternative transportation projects, with 10% of this program set aside for transportation enhancements. ISTEA enabled communities throughout the US to focus resources on alternatives to automobile travel.

In Portland, ISTEA funds are distributed through Metro, the regional government, and the Oregon Department of Transportation (ODOT). Approximately \$114 million in ISTEA funding was allocated directly to the Portland region over the six years 1991 - 1997. Of this, \$66 million was from STP, \$24 million from the Congestion Mitigation Air Quality program (CMAQ) and \$24 million from the Enhancements set-aside of STP. The amount of funding made available to projects throughout the

"...I think this is excellent work and we need as a Council to discuss the funding and the beginning of a strategy to fund this. Otherwise this may end up on the shelf, and it's not the policy of this Council to keep these wonderful plans on shelves and shelves alone."

- Mayor Vera Katz
April 22, 1998

"(The Willamette Pedestrian Coalition) strongly urges council to create a dedicated and increased source of funding that ensures a walkable city in the near future. A slightly funded pedestrian system is a slightly functional pedestrian system."

- Pamela Alegria
April 22, 1998

region is based on priorities set by Metro's Joint Policy Advisory Committee on Transportation (JPACT).

Many of the pedestrian-friendly provisions of ISTEA have been retained, and in some cases, enhanced, in the Transportation Equity Act for the 21st Century (TEA-21). Availability of TEA-21 funds for pedestrian transportation projects depends on a commitment at a regional level to directing funding to pedestrian transportation projects.

Grants

Grants are funds provided by an outside agency, typically the federal or state government. They are required to be used for a specific purpose in a specified amount of time. Each grant is different and usually has an underlying purpose. Grants often require the City to compete with other agencies or cities in order to obtain funding. Since grants usually require a local "match," additional funding is allocated by the City as a condition of the grant award.

Two programs managed by the State of Oregon, the Transportation and Growth Management Program and the ODOT Bicycle and Pedestrian Program, currently award grants to local jurisdictions. These programs are described below.

Transportation and Growth Management Grants

The State of Oregon Transportation and Growth Management (TGM) Program awards grants to local jurisdictions for projects that promote compact development and increased choices in transportation modes. The program is managed through the Oregon Department of Transportation (ODOT) and the Department of Land Conservation and Development (DLCD) and is supported with funding from the Federal ISTEA program and the State of Oregon. The program requires legislative reauthorization every biennium to allocate the necessary funding.

Grants are awarded every biennium in three categories. Transportation Planning Rule Implementation Grants are awarded to local governments to help implement the state's Transportation Planning Rule. Land Use Alternative Grants are given to local governments to plan for compact communities that support pedestrian and bicycle transportation and transit. Urban Growth Management Grants help local governments project, analyze, plan for and accommodate compact urban growth.

TGM grants are for planning and project development only, and may not be used to construct projects.

Oregon Department of Transportation Grants

The State of Oregon Department of Transportation (ODOT) issues grants to local jurisdictions to design and construct pedestrian and bicycle improvements on local roadways. This program is managed through the ODOT Bicycle and Pedestrian Program. This program limits grant awards to one pedestrian project and one bicycle project per year for Portland, with a maximum award of \$100,000 of ODOT funds which requires at least a 20% local match.

ODOT also accepts recommendations each year from local jurisdictions for pedestrian and bicycle projects on state Highways within the jurisdiction. The Pedestrian Master Plan identifies several desired improvements along state highway corridors. The costs for these projects are not included in the summary of project costs, however.

Block Grants

Federal block grants from Housing and Urban Development (HUD) are granted to the City of Portland Bureau of Housing and Community Development (BHCD) to assist in meeting various needs of city residents. One use of block grants by BHCD is targeted to low and moderate-income neighborhoods for street improvements. These are neighborhoods that meet the federal test for income levels; that is, 51% of the residents are below 80% of the median income for the City. On substandard local streets in targeted areas, BHCD has used block grants to underwrite 70% of street improvement costs. The remaining 30% of project costs are paid by property owners through a local improvement district. Improvements bring all existing infrastructures to City standards, including sidewalks, stormwater drainage and street trees.

System Development Charges

Transportation System Development Charges (SDCs) are onetime fees assessed to new development and changes in use. The fee is intended to help pay for transportation facilities that are needed to serve new development and the people who use it. Portland's transportation SDC was adopted by the City Council in July 1997.

Included in the adoption of the SDC was a city-wide list of 36 capital improvement projects eligible to receive this funding. Twelve of these projects are also listed in the Pedestrian Master Plan. Only part of the project costs is eligible for SDC funding, and matching funds are required to pay for the remainder of the cost. The percentage of the project costs eligible for SDC funding varies with each project, depending on the percentage of the project that can be attributed to growth.

The total amount of eligible costs identified in the adopted SDC report is more than \$65 million, based on an estimated revenue of \$6 million per year over the ten years of the program. Current projections are that the program will actually bring in between \$2 and \$3 million each year. The 12 projects that are both Pedestrian Master Plan projects and SDC projects are eligible for \$11 million in SDC revenues.

Adjacent Property Owners

Under Portland's City Charter and Code, property owners are responsible for constructing and maintaining the sidewalk adjacent to their property. Most of the existing sidewalks within the City of Portland were paid for by the property owner or developer when other site improvements were built. In Portland's inner neighborhoods, sidewalks dating back to the end of the last century are still in place.

Adjacent property owners may be required to construct sidewalks in three ways, each of which is described in more detail below.

New Development

When new projects are developed, sidewalks are routinely required as part of the development. The sidewalk must be built to City standards, and the cost is passed on by the developer to the property owners.

Local Improvement Districts

A Local Improvement District (LID) is a method that allows a group of property owners to share the cost of large common projects such as street improvements and sanitary and storm sewers.

The LID process usually begins when a property owner makes a request to the City for an eligible capital improvement. The City then defines an area for the LID and polls the property owners within the area. The property owners within the area vote on whether or not to make the improvement. If a majority of the property votes for the LID, the LID is implemented. All owners within the district pay, whether they voted for or against the district. Costs are apportioned to each property owner in an equitable fashion, as determined by the City Auditor.

As a strategy for funding future pedestrian projects, LIDs are best suited to defined areas where there is a large infrastructure need. One approach to enhancing the LID process might be the formation of neighborhood-wide LIDs to make general neighborhood improvements, including sidewalks, crossing improvements and traffic calming.

Transportation LIDs have traditionally been formed to build full street improvements on local neighborhood streets. However, LIDs have also



A separated sidewalk was one element of this Local Improvement District in Southwest Portland.

been used to pay for improvements in business districts, as in the area surrounding the Convention Center and on the Broadway/Weidler reconstruction project.

Code Authority

Adjacent property owners are responsible for the construction and maintenance of sidewalks. The City Charter and Code grants the City the authority to require either the construction or the maintenance of sidewalks and curbs. Historically, this authority has been referred to as "posting," because a notice requiring the improvement is to be posted on the property.

Posting has typically been used to ensure the repair and maintenance of sidewalks. The Bureau of Maintenance (BOM) employs a team of sidewalk inspectors to monitor the condition of existing sidewalks in the City of Portland on a regular basis. When an inspector finds a safety hazard, the owner of the adjacent property is notified and is required to repair it "in a good and substantial manner in accordance with City ordinances."

When the City posts a property, owners have the option of doing the work themselves, hiring a contractor, or requesting the City to do the work. In the latter case, the owner may finance the construction with a low-interest loan from the City. Sidewalk inspectors identify approximately 6000 properties a year where sidewalk repairs are needed, resulting in \$2.7 million annually in repairs. The average cost of sidewalk repair is \$450.

The City can require the construction of new sidewalks, if "in the opinion of the City Engineer a sidewalk or curb or both are needed."¹ In the past, the City has not used this authority to require construction of sidewalks where they are missing in existing development. However, requiring adjacent property owners to construct sidewalks would make a significant contribution to the pedestrian network.

Urban Renewal Districts

The purpose of urban renewal is to improve specific areas of the City that are poorly developed or underdeveloped. Urban renewal agencies and plans are authorized by the state. In Portland, the Portland Development Commission is the urban renewal agency.

There are five existing urban renewal districts in Portland. Within each district, urban renewal taxes can be used to pay for improvements to the street and pedestrian environment, provided the improvements are listed

"I think that all the funding mechanisms should be looked at, including some City participation, but we also need to make sure that property owners participate to an equal share."

- Doug Klotz
April 22, 1998

in the five-year urban renewal plan for the district. Urban renewal taxes are generated by the increase in total property values in the urban renewal area from the time it is first established.

Creation of new urban renewal districts is possible, but there is an extensive process involving citizens, property owners and businesses at every stage. An urban renewal plan is presented to the Planning Commission for its recommendations, and then to City Council for adoption.

General Obligation Bond Issue

A General Obligation Bond Issue (GOBI) is a form of long-term debt used to buy or build capital improvements. GOBIs have been used historically to fund large-scale capital investments in urban infrastructure. For example, in 1994, Portland Parks and Recreation passed a \$58.8 million GOBI for the improvement of park facilities.

A GOBI requires a vote by the citizens in a general election. The City then imposes additional property taxes to pay the annual interest and principal payments, typically over 20 years. Debt instruments such as bond issues are sometimes called a “pay as you use” form of capital financing, because people pay for a long-lived capital asset over its useful life.

FUNDING STRATEGIES AND RECOMMENDATIONS

This section examines the historic pattern of funding for pedestrian improvements, recommends new funding strategies and examines the impact of those strategies on completing the projects in the Pedestrian Master Plan.

Historic Pattern of Funding

The Transportation Capital Improvement Program (CIP) is the mechanism through which transportation projects are selected for planning, design, and construction. Projects are prioritized according to specific criteria. Some of the projects in the Pedestrian Master plan are already included in the CIP. The plan will guide the inclusion of additional projects in the CIP in the future.

Most major transportation capital improvements in the City of Portland include pedestrian improvements, where they are needed. In 1992, the City recognized the need for a capital program directed specifically to pedestrian improvements with the formation of the Pedestrian Transportation Program.

The Pedestrian Transportation Program

Funding for the Pedestrian Transportation Program over its six-year history has included operating funds and capital funds from GTR as well as some grants and funding from other sources. Figure 6-1 shows the program's funding history, projected into the 1998-1999 fiscal year. For purposes of comparison, this graph shows the operating funds for the Pedestrian Transportation program; however, since capital funds will pay for the planning, design and construction of the projects in the Pedestrian Master Plan, further discussion in this chapter is limited to capital funding sources.



Projects such as this sidewalk on SW Capitol Highway have been constructed with capital funding directed through the Pedestrian Transportation Program.

The graph shows that the City's GTR investment in pedestrian improvements grew rapidly in the early years of the program and has remained more or less steady at around \$7-800,000 each year since the July, 1994. In addition, the Pedestrian Transportation Program has received some funding through ISTEA for capital projects. Averaged over six years, this ISTEA funding accounts for approximately \$315,000 per year. Funding from other grant sources has averaged about \$45,000 per year.

Some portion of the projects listed in the Pedestrian Master Plan is likely to be completed through other capital transportation projects, in addition to the funding that is directed to the Pedestrian Transportation Program. However, for purposes of illustration only, it is calculated that, without any other funding sources, if the project list were undertaken at the

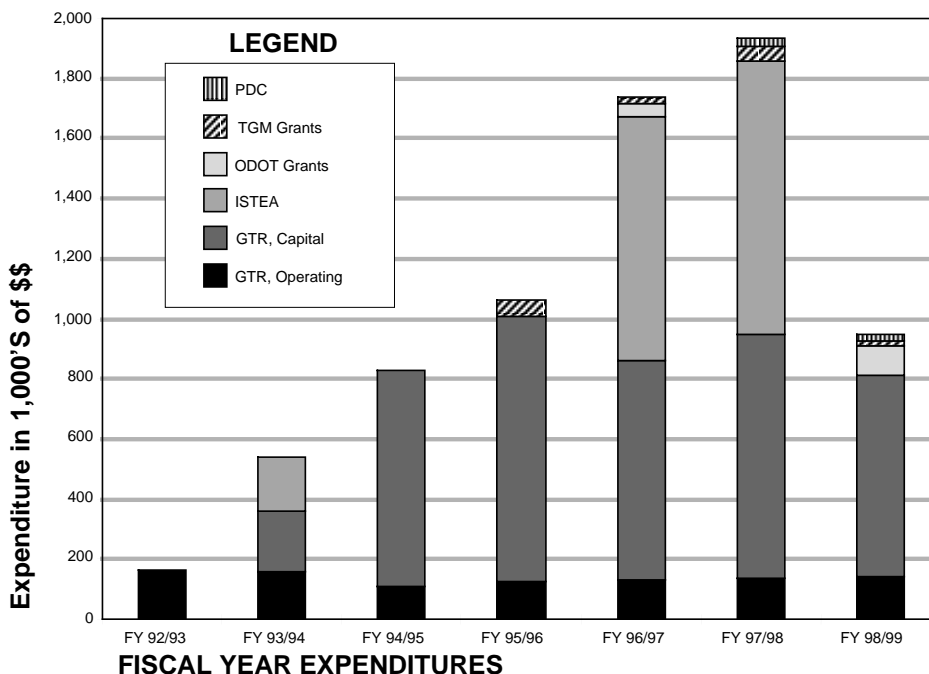


Figure 6-1
Funding History for the Pedestrian Transportation Program

"What really impressed me today was the testimony by Southwest citizens and also testimony of Northeast citizens. I'm very impressed by (hearing from) people of mixed incomes, we don't see that enough. We're going to need to work together in educating the legislature and our citizens to move the plan forward."

*- Jim Francesconi,
Commissioner
April 22, 1998*

average rate of funding for the program over the past six years, it would take 110 years to complete. Phase 1 alone would take 43 years. These projections do not take into account the effect of inflation on the cost of projects and also do not include likely future sources such as SDC funding.

In the section that follows, a number of strategies for increasing funding for pedestrian improvements are discussed and recommended.

Recommended Funding Strategies

- **Work with the 1999 state legislature to successfully increase state funding for transportation; and, as funds become available, increase funding for pedestrian improvements.**

The State Legislature has the authority to establish the gasoline tax rate and to decide how transportation funding is distributed. For the past four sessions, the Legislature has declined to raise the gasoline tax. Consequently, funding available through GTR has declined relative to needs.

The City should continue its efforts at the legislative level to lobby for an increase in state funding for transportation. As GTR funds increase, so should the funding directed to pedestrian improvement projects. These funds could be used to leverage funding from other sources. For example, GTR might be used to fund the City's share of partnerships with other funding sources, or to match funds from a grant.

- **Encourage regional decision-makers to use the full flexibility of federal transportation funding.**

Although the next federal transportation act is still being debated, it is likely that funding in the Surface Transportation Program will continue to have great flexibility. The City should work with regional decision-makers to take advantage of the flexibility by ensuring that the criteria for awarding funds favor pedestrian transportation projects and that the selection of projects adheres to the criteria.

- **Provide greater support for partnerships with business districts, urban renewal districts, and property owners.**

Under the City Charter and Municipal Code, property owners have the responsibility to construct the sidewalk, and most sidewalks have been built by the adjacent owner. This Plan recommends using the City's authority to require these improvements where they are missing.

Business District Partnerships

A partnership program should be established for business districts within Pedestrian Districts and Main Streets. Total estimated project costs for all the Pedestrian District and Main Street projects on the project list are approximately \$26 million. Business owners have recognized that increased accessibility will contribute to business vitality with a corresponding increase in property values. Surrounding neighborhoods recognize that improvements to these centers contribute to their quality of life by making walking a viable choice. The City Council and PDOT should work together to develop a base level of ongoing financial support for the formation of partnerships to support the construction of pedestrian improvements in designated Pedestrian Districts and Main Street design areas.

Infill Sidewalks in Existing Development

Sidewalk improvements account for approximately \$24 million, or 20%, of the \$119 million in estimated costs for all projects on the project list. Council has been clear in its direction that sidewalks should be required of all new development. However, there are many streets in the City where sidewalks are missing and redevelopment is unlikely to occur in the near future. These include many arterial streets with abutting commercial and high-density residential uses that attract pedestrian traffic. Requiring adjacent property owners to make improvements could make a significant contribution to the sidewalk network. Since this strategy would be a departure from past practice, it might generate resistance from property owners who don't see the need in the same way the City does.

Consideration should be given to funding a program that would assist property owners in constructing the sidewalks adjacent to their property. The City should consider dedicating funds to address the extraordinary costs associated with constructing facilities in an existing built environment. A program that combined low-interest loans and public sector participation could serve to encourage property owners to make the needed improvements.

- **Dedicate resources to actively pursuing grants and other funding sources for pedestrian projects.**

Based on the potential of grant funds to leverage other funding, the City should actively pursue these sources, dedicate funds through existing funding resources to meet local "match" requirements, and strongly support grant applications for pedestrian improvements.

*"Why does it cost so much?
Most of the cost is mitigating
for the effects of
automobiles."*

- Rex Burkholder
April 22, 1998

- **Investigate the possibility of seeking a General Obligation Bond Initiative for pedestrian improvements.**

A General Obligation Bond Issue (GOBI) has the potential to fund a significant portion of the Pedestrian Master Plan. To develop a General Obligation Bond Initiative, significant staff resources would be required for public involvement and community outreach. An initiative will be most likely to succeed if the projects chosen for funding are highly visible and popular, with good geographic distribution. Pedestrian improvements might be combined with other neighborhood livability projects such as traffic calming, transit access, and bicycle lanes.

- **Give priority to projects on the System Development Charge list that are also in the Pedestrian Master Plan.**

The criteria for scheduling SDC-eligible projects were still being set at the time of printing, and the rate at which SDC funds will accumulate is unknown. Twelve projects from the Pedestrian Master Plan are on the SDC list, and approximately \$11 million of the project costs for these twelve projects has been identified as eligible for SDC funding. However, a total of \$65 million in eligible costs has been identified for 36 SDC projects, while it is projected that the total SDC revenues over ten years will be \$20 to \$30 million. Given that projection, not every SDC project can receive the full amount of SDC funding for which it is eligible. Adoption in the Pedestrian Master Plan should ensure that these twelve projects receive favorable consideration as SDC funds are allocated.

Applying the Funding Strategies

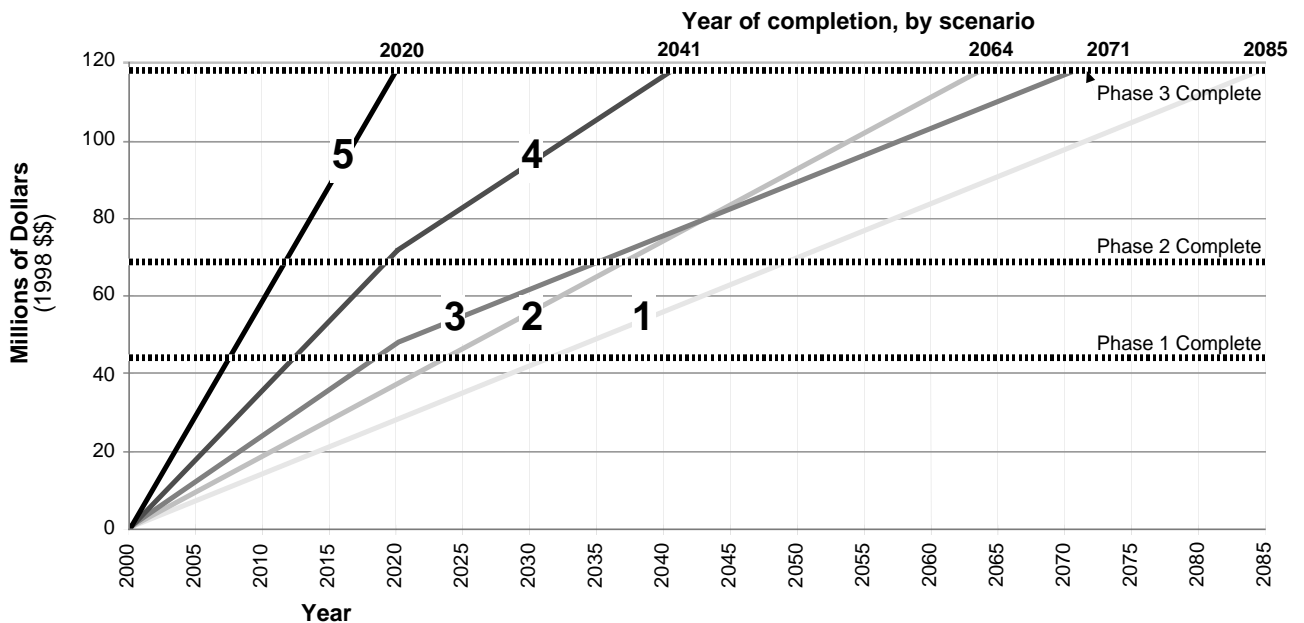
How would each of the above funding strategies affect the implementation of the Pedestrian Master Plan project list? Answering that question requires making some assumptions about how much funding each recommendation will generate if it is followed.

To explore the potential outcomes, the funding strategies were combined into five scenarios, with sub-options in the first three. Each scenario is described below. To simplify the projections, the effects of inflation on both revenues and projected costs is ignored in all the scenarios, which are presented in 1998 dollars.

Figure 6-2 shows the projection for the scenarios across a common timeline, and highlights the expected completion date for the plan for each variation.

Scenarios 1 – The Base Case

Scenario 1 assumes that GTR funding for pedestrian improvements continues at the historical rate of approximately \$700,000 per year, and that an additional average of about \$360,000 each year is available from federal funding and grants. In addition, Scenario 1 includes an assumption that SDC funding becomes available for eligible Pedestrian Master Plan projects at the rate of about \$340,000 per year. This number is based on 17% (the pedestrian project percentage of total SDC-eligible costs) multiplied by a relatively conservative estimate of \$2 million in total SDC revenues per year. It is also assumed that SDC funding will be continued at a similar rate beyond the current ten-year program. The total annual capital funding for Scenario 1 is \$1.4 million per year. Under this funding scenario, and again, without accounting for inflation, completion of the Pedestrian Master Plan project list will take approximately 85 years. Phase 1 would be completed in about 32 years.



KEY

- Scenario 1 – Base Case
- Scenario 2 – Partnerships
- Scenario 3 – \$20 mil. GOBI
- Scenario 4 – Partnerships + GOBI + other enhanced funding
- Scenario 5 – Twenty-year Scenario

Figure 6-2
Timelines for Completing the Pedestrian Master Plan, Based on Funding Scenarios

Scenario 2 – Partnerships

Scenario 2 explores the potential of establishing a partnership program that will enable the City to effectively use the authority to require property owners to construct sidewalk. Such a program could result in the construction of sidewalks that would account for approximately \$24 million of the \$119 million in estimated project costs for the Pedestrian Master Plan. The rate at which this construction could be accomplished depends on the rate at which the City could meet its partnership obligations. In Scenario 2, it is assumed that the base case funding from Scenario 1 is in place. In this scenario, Phase 1 could be completed in 24 years and the entire plan in 64 years.

Scenario 3 – General Obligation Bond Issue for \$20 million

Scenario 3 explores the potential of seeking a General Obligation Bond Issue (GOBI) to fund pedestrian and other livability improvements. It is assumed that a \$20 million GOBI for 20 years has been passed. Once again, Scenario 3 assumes the base case funding from Scenario 1.

In this scenario, expenditures are greater during the twenty-year life of the bond, so the completion graph rises more steeply at first, and then more gradually once the GOBI has been exhausted. In Scenario 3, Phase 1 is completed in 19 years, and the entire plan in 71 years.

Scenario 4 – Partnerships plus GOBI

Scenario 4 explores the result of combining partnerships with a \$20 million GOBI. Scenario 4 makes the additional assumption that some of the current funding sources could be enhanced. \$300,000 per year is added in Scenario 4 to represent possible increases in support from SDC, GTR or General Fund revenues plus additional grants and increased federal funding. The result is that Phase 1 would be completed in 12 years and the entire plan in 41 years.

Scenario 5 – The Twenty-Year Scenario

Given the best case for enhanced funding from existing sources and a successful partnership program, how large would a GOBI need to be in order to complete the entire plan within 20 years? Scenario 5 shows that the answer is a GOBI of \$56 million over 20 years. In this case, Phase 1 is completed in seven and a half years.

¹Title 17.28.030 of the Municipal Code of Portland.

Statutes and Codes Relating to Pedestrians

OREGON REVISED STATUTES

Duties to Pedestrians and Bicycles

811.005 Duty to exercise due care. None of the provisions of the vehicle code relieve a pedestrian from the duty to exercise due care or relieve a driver from the duty to exercise due care concerning pedestrians. [1983 c. 338 543]

811.010 Failure to yield to pedestrian in crosswalk; penalty. (1)
The driver of a vehicle commits the offense of failure to yield to a pedestrian in a crosswalk if:

(a) A pedestrian is crossing a roadway within a marked or unmarked crosswalk where there are no traffic control devices in place or in operation; and

(b) The driver does not stop before entering the crosswalk and yield the right-of-way to the pedestrian when the pedestrian is:

(A) Approaching so closely to the half of the roadway along which the driver is proceeding so as to be in a position of danger by closely approaching or reaching the center of the roadway; or

(B) On the half of the roadway on and along which the driver is proceeding.

(2) This section does not require a driver to stop and yield the right-of-way to a pedestrian under any of the following circumstances:

(a) Upon a roadway with a safety island, if the driver is proceeding along the half of the roadway on the far side of the safety island from the pedestrian; or

(b) Where a pedestrian tunnel or overhead crossing has been provided at or near a crosswalk.

(3) The offense described in this section, failure to yield to a pedestrian in a crosswalk, is a Class B traffic infraction. [1983 c.338 544; 1985 c.16 279]

811.015 Failure to obey traffic patrol member; penalty. (1) The driver of a vehicle commits the offense of failure to obey a traffic patrol member if:

(a) A traffic patrol member makes a cautionary sign or signal to indicate that students have entered or are about to enter the crosswalk under the traffic patrol member's direction; and

(b) The driver does not stop and yield the right-of-way to students who are in or entering the crosswalk from either direction on the street on which the driver is operating.

(2) Traffic patrol members described in this section are those provided under ORS 336.450 to 336.480.

(3) The offense described in this section, failure to obey a traffic patrol member, is a Class B traffic infraction. [1983 c.338 545]

811.020 Passing stopped vehicle at crosswalk; penalty. (1) The driver of a vehicle commits the offense of passing a stopped vehicle at a crosswalk if the driver:

(a) Approaches from the rear another vehicle that is stopped at a marked or unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway; and

(b) Overtake and passes the stopped vehicle.

(2) The offense described in this section, passing a stopped vehicle at a crosswalk, is a Class B traffic infraction. [1983 c.338 546]

811.025 Failure to yield to pedestrian on sidewalk; penalty. (1) The driver of a vehicle commits the offense of failure to yield to a pedestrian on a sidewalk if the driver does not yield the right-of-way to any pedestrian on a sidewalk.

(2) The offense described in this section, failure to yield to a pedestrian on a sidewalk, is a Class C traffic infraction. [1983 c.338 547]

811.030 Driving through a safety zone; penalty. (1) The driver of a vehicle commits the offense of driving through a safety zone if the driver

at any time drives through or within any area or space officially set apart within a roadway for the exclusive use of pedestrians and which is protected or is so marked or indicated by adequate signs as to be plainly viable at all times while set apart as a safety zone.

(2) The offense described in this section, driving through a safety zone, is a Class C traffic infraction. [1983 c.338 548]

811.035 Failure to yield to blind pedestrian; penalty. (1) The driver of a vehicle commits the offense of failure to yield the right-of-way to a blind pedestrian if the driver violates any of the following:

(a) A driver approaching a blind or blind and deaf pedestrian carrying a white cane or accompanied by a dog guide, who is crossing or about to cross a roadway, shall yield the right-of-way to the blind or blind and deaf pedestrian and shall continue to yield the right-of-way to the blind or blind and deaf pedestrian.

(b) Where the movement of vehicular traffic is regulated by traffic control devices, a driver approaching a blind or blind and deaf pedestrian shall yield the right-of-way to the pedestrian and stop or remaining stationary until the pedestrian has vacated the roadway if the blind or blind and deaf pedestrian has entered the roadway and is carrying a white cane or is accompanied by a dog guide. This paragraph applies notwithstanding any other provisions of the vehicle code relating to traffic control devices.

(2) This section is subject to the provisions and definitions relating to the rights of pedestrians who are blind or blind and deaf under ORS 814.110.

(3) The offense described in this section, failure to yield to a blind pedestrian, is a Class B traffic infraction. [1983 c.338 549; 1985 c.16 280]

811.040 Failure to yield to pedestrian proceeding under traffic control devices; penalty. (1) The driver of a vehicle commits the offense of failure to yield to a pedestrian proceeding under traffic control devices if the driver does not yield the right-of-way to a pedestrian who is:

(a) Proceeding under a pedestrian control signal under ORS 814.010.

(b) Lawfully within an intersection or crosswalk in accordance with any traffic control device in a manner that complies with ORS 814.010.

(2) The offense described in this section, failure to yield to a pedestrian proceeding under traffic control devices, is a Class B traffic infraction. [1983 c.338 550; 1985 c.16 281]

811.045 Failure to yield to pedestrian when making turn at stop light; penalty. (1) A person commits the offense of failure to yield to a pedestrian when making a turn at a stop light if the person is driving a vehicle that is making a turn at a red light permitted under ORS 811.335 and the person does not yield the right-of-way to pedestrians lawfully within an adjacent crosswalk.

(2) The offense described in this section, failure to yield to a pedestrian when making a turn at a stop light, is a Class B traffic infraction. [1983 c.338 551]

801.220 “Crosswalk”. “Crosswalk” means any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing by lines or other markings on the surface of the roadway that conform in design to the standards established for crosswalks under ORS 810.220. Whenever marked crosswalks have been indicated, such crosswalks and no other shall be deemed lawful across such roadway at that intersection. Where no marked crosswalk exists, a crosswalk is that portion of the roadway described in the following:

(1) Where sidewalks, shoulders or a combination thereof exists, a crosswalk is that portion of a roadway at an intersection, not more than 20 feet in width as measured from the prolongation of the lateral line of the roadway toward the prolongation of the adjacent property line, that is included within:

(a) The connection of the lateral lines of the sidewalks, shoulders or a combination thereof on opposite sides of the street or highway measured from the curbs or, in the absence of curbs, from the edges of the traveled roadway; or

(b) The prolongation of the lateral lines of a sidewalk, shoulder or both, to the sidewalk or shoulder on the opposite side of the street, if the prolongation would meet such sidewalk or shoulder.

(2) If there is neither sidewalk nor shoulder, a crosswalk is the portion of the roadway at an intersection, measuring not less than six feet in width, that would be included within the prolongation of the lateral lines of the sidewalk, shoulder or both on the opposite side of the street or highway if there were a sidewalk. [1983 c.338 36]

(Pedestrian Yield)

814.040 Failure to yield to vehicle; penalty. (1) A pedestrian commits the offense of pedestrian failure to yield to a vehicle if the pedestrian does any of the following:

(a) Suddenly leaves a curb or other place of safety and moves into the path of a vehicle that is so close as to constitute an immediate hazard.

(b) Fails to yield the right-of-way to a vehicle upon a roadway when the pedestrian is crossing the roadway at any point other than within a marked crosswalk or an unmarked crosswalk at an intersection.

(c) Except as otherwise provided under the vehicle code, fails to yield the right-of-way to all vehicles upon the roadway.

(2) The offense described in this section, pedestrian failure to yield to a vehicle, is a Class C traffic infraction. [1983 c.338 555]

366.514 Use of highway fund for footpaths and bicycle trails.

(1) Out of the funds received by the department or by any county or city from the State Highway Fund reasonable amounts shall be expended as necessary to provide footpaths and bicycle trails, including curb cuts or ramps as part of the project. Footpaths and bicycle trails, including curb cuts or ramps as part of the project, shall be provided wherever a highway, road or street is being constructed, reconstructed or relocated. Funds received from the State Highway Fund may also be expended to maintain footpaths and trails and to provide footpaths and trails along other highways, roads and streets and in parks and recreation areas.

(2) Footpaths and trails are not required to be established under subsection (1) of this section:

- (a) Where the establishment of such paths and trails would be contrary to public safety;
- (b) If the cost of establishing such paths and trails would be excessively disproportionate to the need or probable use; or
- (c) Where sparsity of population, other available ways or other factors indicate an absence of any need for such paths and trails.

(3) The amount expended by the department or by a city or county as required or permitted by this section shall never in any one fiscal year be less than one percent of the total amount of the funds received from the highway fund. However:

- (a) This subsection does not apply to a city in any year in which the one percent equals \$250 or less, or to a county in any year in which the one percent equals \$1,500 or less.
- (b) A city or county in lieu of expending the funds each year may credit the funds to a financial reserve or special fund in accordance with ORS 280.100, to be held for not more than 10 years, and to be expended for the purposes required or permitted by this section.
- (c) For purposes of computing amounts expended during a fiscal year under this subsection, the department, a city or county may record the money as expended:
 - (A) On the date actual construction of the facility is commenced if the facility is constructed by the city, county or department itself; or
 - (B) On the date a contract for the construction of the facilities is entered with a private contractor or with any other governmental body.

(4) For the purposes of this chapter, the establishment of paths, trails and curb cuts or ramps and the expenditure of funds as authorized by this section are for highway, road and street purposes. The department shall, when requested, provide technical assistance and advice to cities and counties in carrying out the purpose of this section. The department shall recommend construction standards for footpaths and bicycle trails. Curb cuts or ramps shall comply with the requirements of ORS 447.310

and rules adopted under ORS 447.231. The department shall, in the manner prescribed for marking highways under ORS 810.200, provide a uniform system of signing footpaths and bicycle trails which shall apply to paths and trails under the jurisdiction of the department and cities and counties. The department and cities and counties may restrict the use of footpaths and bicycle trails under their respective jurisdictions to pedestrians and nonmotorized vehicles, except that motorized wheelchairs shall be allowed to use footpaths and bicycle trails.

(5) As used in the section, "bicycle trail" means a publicly owned and maintained lane or way designated and signed for use as a bicycle route.

PORTLAND TRAFFIC CODE**16.70.200 Pedestrians**

16.70.210 Must Use Crosswalks. No pedestrian may cross a street other than within a crosswalk if within 150 feet of a crosswalk.

16.70.220 Must Cross at Right Angles. A pedestrian must cross a street at right angles unless crossing within a crosswalk.

16.70.230 To Obey Directions of School Traffic Patrol and Crossing Guard. At intersections where a member of the school traffic patrol or crossing guard is stationed for the safety of school children, all pedestrian must obey the directions of such school traffic patrol member or crossing guard. It is unlawful for any pedestrian to cross at any intersection where such patrol member or crossing guard is stationed contrary to the direction of such school traffic patrol member or crossing guard.

16.70.240 Bridge Railings. No pedestrians may sit, stand on, or lean their torso over a Willamette River bridge railing unless engaged in bridge maintenance work or otherwise authorized by an appropriate government agency.

Goals and Policies Relating to Pedestrians

Appendix B

Comprehensive Plan Goal 6: Transportation

Provide for and protect the public's interest and investment in the public right-of-way and transportation system by encouraging the development of a balanced, affordable and efficient transportation system consistent with the Arterial Streets Classifications and Policies by:

- Providing adequate accessibility to all planned land uses;
- Providing for the safe and efficient movement of people and goods while preserving, enhancing, or reclaiming neighborhood livability;
- Minimizing the impact of interregional and longer distance intraregional trips on City neighborhoods, commercial areas, and the City street system by maximizing the use of regional trafficways and transitways for such trips;
- Reducing reliance on the automobile and per capita vehicle miles traveled;
- Guiding the use of the City street system to control air pollution, traffic, and livability problems;
- Maintaining the infrastructure in a good condition.

Policy 6.30 Street Vacations

Allow street vacations only when there is no existing or future need for the right-of-way, the established City street pattern will not be significantly interrupted, and the functional purpose of nearby streets will be maintained. Evaluate opportunities and the need for a bikeway, walkway or other transportation use. Where pedestrian and bicycle facilities are needed, the first preference is to retain public right-of-way for these uses. If retaining right-of-way is not feasible, a public easement can be required along with public improvements where they will preserve or enhance circulation needs.



The City of Portland is committed to reducing reliance on the automobile.



The City will promote walking as the mode of choice for short trips.



Walking is a critical element of the transit system.

Policy 6.11 Pedestrian Transportation

Plan and complete a pedestrian network that increases the opportunities for walking to shopping and services, institutional and recreational destinations, employment, and transit.

Objectives:

- A. Promote walking as the mode of choice for short trips by giving priority to the completion of the pedestrian network that serves Pedestrian Districts, neighborhood shopping, schools, and parks.
- B. Support walking to transit by giving priority to the completion of the pedestrian network that serves transit centers, stations, and stops; by providing adequate crossing opportunities at transit stops; and by planning and designing pedestrian improvements that allow adequate space for transit stop facilities.
- C. Improve the quality of the pedestrian environment by implementing pedestrian design guidelines to ensure that new public and private development meets a pedestrian quality standard and by developing special design districts for Pedestrian Districts and main streets.
- D. Increase pedestrian safety and convenience by identifying and analyzing high pedestrian collision locations; by making physical improvements, such as traffic calming, signal improvements, and crossing improvements, in areas of high pedestrian use; and by supporting changes to adopted statutes and codes that would enhance pedestrian safety.
- E. Encourage walking by developing educational programs for both motorists and walkers and by supporting and participating in encouragement events for walkers.
- F. Explore a range of funding options for pedestrian improvements to supplement reliance on general transportation revenues.

Comprehensive Plan Goal 11B: Public Rights-of-Way

Preserve the quality of Portland's land transportation system; protect the City's capital investment in public rights-of-way through continuing high quality maintenance and improvement programs; and carry out street improvements in accordance with identified needs, balancing limited resources among neighborhoods, commerce and industry.

Policies**Policy 11.11 Local Service Street Improvements**

Construct local service streets in accordance with existing and planned neighborhood land use patterns and accepted engineering standards, including the provision of sidewalks on most streets. Sidewalks should be on both sides of the street except where physical or topographic conditions render it impracticable. Construct local residential streets to minimize pavement width and total right-of-way width consistent with the operational needs of the facility and taking into account the needs of both pedestrians and vehicles.

Policy 11.15 Pedestrian Improvements on Arterials

Provide for safe pedestrian movement along all new or reconstructed streets classified as Neighborhood Collectors or above (other than controlled access roadways). Develop additional pedestrian walkways where needed for safe, direct access to schools, parks and other community facilities.

Policy 11.16 Local Improvement Districts

Encourage the formation of local improvement districts (LIDs) in currently developed areas to construct street improvements including sidewalks, drainage, and street trees, where feasible.



Sidewalks should be on both sides of the street.



Portland's attractive identity should be enhanced.



Urban linear features like the greenway should be extended.

Comprehensive Plan Goal 12: Urban Design

Enhance Portland as a livable city, attractive in its setting and dynamic in its urban character by preserving its history and building a substantial legacy of quality private developments and public improvements for future generations.

Policies

Policy 12.1 Portland's Character

Enhance and extend Portland's attractive identity. Build on design elements, features and themes identified with the City. Recognize and extend the use of City themes that establish a basis of a shared identity reinforcing the individual's sense of participation in a larger community.

Objectives (only those specifically relating to the pedestrian realm are included here)

- D. Expand the use of street furniture. As new street furniture is needed, incorporate Portland design themes into its design. Examples include the City's ornamental drinking fountains, street lighting standards and other features that are designed specifically for this City. Opportunities for the employment of such motifs include utility hole covers, water meter covers, bus shelters and street signs.
- G. Extend urban linear features such as linear parks, park blocks and transit malls. Celebrate and enhance naturally occurring linear features such as rivers, creeks, sloughs and ridge-lines. Tie public attractions, destinations and open spaces together by locating them in proximity to these linear features. Integrate the growing system of linear features into the City's transportation system, including routes and facilities for pedestrians, bicyclists and boaters.
- I. Encourage the use of materials and a quality of finish work which reinforce the sense of this City as one that is built for beauty and to last. Reflect this desire in both public and private development projects.

Policy 12.4 Provide for Pedestrians

Portland is experienced most intimately by pedestrians. Recognize that auto, transit and bicycle users are pedestrians at either end of every trip and that Portland's citizens and visitors experience the City as pedestrians. Provide for a pleasant, rich and diverse experience for pedestrians. Ensure that those traveling on foot have comfortable, safe and attractive pathways that connect Portland's neighborhoods, parks, water features, transit facilities, commercial districts, employment centers and attractions.

Objectives:

- A. Providing for pedestrians should be a primary mode of transportation throughout the City. Ensure that the safety and convenience of pedestrians are not compromised by transportation improvements aimed at motor vehicle traffic. Movement patterns for pedestrians should contribute to Portland's sense of community and provide for connections between areas of the City.
- B. Enhance the environment occupied by Portland's pedestrians. Seek to enrich these places with designs that express the pleasure and hold the pleasant surprises of urban living.
- C. Provide Portland's sidewalks with buffering from auto traffic and auto parking areas; provide trees that will shade sidewalks on hot days; provide sidewalks of adequate width to accommodate the pedestrians that future development is expected to generate; provide convenient connections from sidewalks to parks, developments, and attractions; and ensure that the pedestrian circulation system is safe and accessible to children, seniors and the disabled (including the blind).
- D. Reinforce commercial areas that include a storefront character and/or are on transit streets by requiring development to be oriented to pedestrians.
- E. Complete the 40-Mile Loop and Willamette Greenway trails and establish links between these trails and Portland's residential neighborhoods and parks.
- F. Link Portland's trails and parks to the system of greenspaces being created for the metropolitan region.



Storefront commercial areas should be reinforced by requiring development to be oriented to pedestrians.

G. Retain rights for pedestrian access and circulation when considering requests for street vacations. Preserve existing pedestrian routes and protect routes needed by pedestrians in the future. Ensure that street vacations do not reduce access to light and air or the intimate scale that is so much a part of Portland's character.

Portland's Pedestrian Street Classifications

Appendix C

Classification Descriptions

PEDESTRIAN DISTRICT

Functional Purpose:

Pedestrian Districts are areas where frequent pedestrian use exists or is intended and where priority is given to pedestrian access and activities in order to make walking the mode of choice for trips within the Pedestrian District.

All streets within Pedestrian Districts are equal in importance in serving pedestrian trips. A Pedestrian District includes both sides of the streets along its boundaries.

Land Use and Development:

Pedestrian Districts are characterized by dense, mixed-use development and transit-supportive residential areas of district-wide or neighborhood importance.

Pedestrian Districts may also include institutional campuses that generate high levels of pedestrian activity.

In some cases, Pedestrian Districts may reflect historic development patterns that support frequent pedestrian use.

A Pedestrian District should have, or be planned to have, frequent transit service.

Pedestrian Districts should be zoned, both residentially and commercially, to support lively and intense pedestrian activity. Auto-oriented uses should be discouraged from locating in Pedestrian Districts.

The size and configuration of a Pedestrian District should be consistent with the scale of walking trips.

Design Treatment and Traffic Operations:

Specific guidance on the design treatment of Pedestrian Districts can be found in the Pedestrian Design Guide.

Arterial streets within Pedestrian Districts should be designed to buffer pedestrians from traffic. Vehicular use of streets in Pedestrian Districts may be controlled to enhance the pedestrian environment.

In Pedestrian Districts, design treatments, such as wide planting strips or street furniture zones, street trees, curb extensions, and on-street parking shall be considered.

Where two arterial streets cross within Pedestrian Districts, design treatment such as curb extensions, median pedestrian refuges, marked crosswalks and traffic signals should be considered to minimize the crossing distance, direct pedestrians across the safest route, and provide safe gaps in the traffic stream.

All streets in Pedestrian Districts should have sidewalks on both sides. Consider protected crossings at every corner or at 400' intervals, whichever is less.

Pedestrian Districts should include convenient access to transit stops.

Where there are auto-oriented uses in a Pedestrian District, there is a need for enhanced pedestrian design treatments.

**Classification
Descriptions****CITY WALKWAY*****Functional Purpose:***

City Walkways are intended to provide safe, convenient and attractive pedestrian access to activities along major streets, to provide connections between neighborhoods, and to provide access to transit and recreational and institutional destinations. City Walkways should provide safe and convenient crossing opportunities for pedestrians.

Land Use and Development:

City Walkways are usually located where there is denser zoning along streets, on streets with commercial zoning, and in and between major activity centers.

Where auto-oriented land uses are allowed, site development must address the needs of pedestrians for access.

Design Treatment and Traffic Operations:

Specific guidance on the design treatment of City Walkways can be found in the Pedestrian Design Guide.

City Walkways have sidewalks on both sides of the street. City Walkways should be designed to buffer pedestrians from traffic. Design treatments such as landscape strips, street trees and on-street parking shall be considered, consistent with the street's other classifications.

City Walkways should have signalized crossings, marked crosswalks, curb extensions and pedestrian refuges, where needed.

Where two City Walkways cross, crossing design should minimize the crossing distance and direct pedestrians across the safest route. Pedestrian crossing should not be prohibited for distances greater than 400 feet.

Special design treatments may be considered for City Walkways that have a Main Street design treatment designation.

Classification Descriptions

LOCAL SERVICE WALKWAY

Functional Purpose:

Local Service Walkways are intended to provide safe and convenient access to local destinations such as residential neighborhoods.

All streets and rights-of-way not classified as City Walkways, with the exception of limited access highways, are classified as Local Service Walkways.

Land Use and Development:

Local Service Walkways are usually located in residential, commercial, or industrial areas on Local Service Traffic Streets.

Design Treatment and Traffic Operations:

Specific guidance on the design treatment of Local Service Walkways can be found in the Pedestrian Design Guide.

Most Local Service Walkways should have sidewalks on both sides of the street. Design treatments such as street trees and on-street parking are appropriate.

Local Service Walkways in rights-of-way or easements without street facilities should be designed for both pedestrian and bicycle use with hard surfaced materials and adequate width, and should be signed.

OFF-STREET PATHS

Functional Purpose:

Off-Street Paths are intended to serve both recreational uses and other walking trips.

Land Use and Development:

Off-Street Paths may be appropriate in corridors not well served by the street system, to create shortcuts that link urban destinations and origins along continuous greenbelts such as rivers, park and forest areas, and other scenic corridors; and as elements of a community or city-wide recreational trail plan.

Design Treatment and Traffic Operations:

Specific guidance on the design treatment of Off-Street Paths can be found in the Pedestrian Design Guide.

Off-Street Paths may be designed and built to accommodate pedestrians and other non-motorized travel modes.

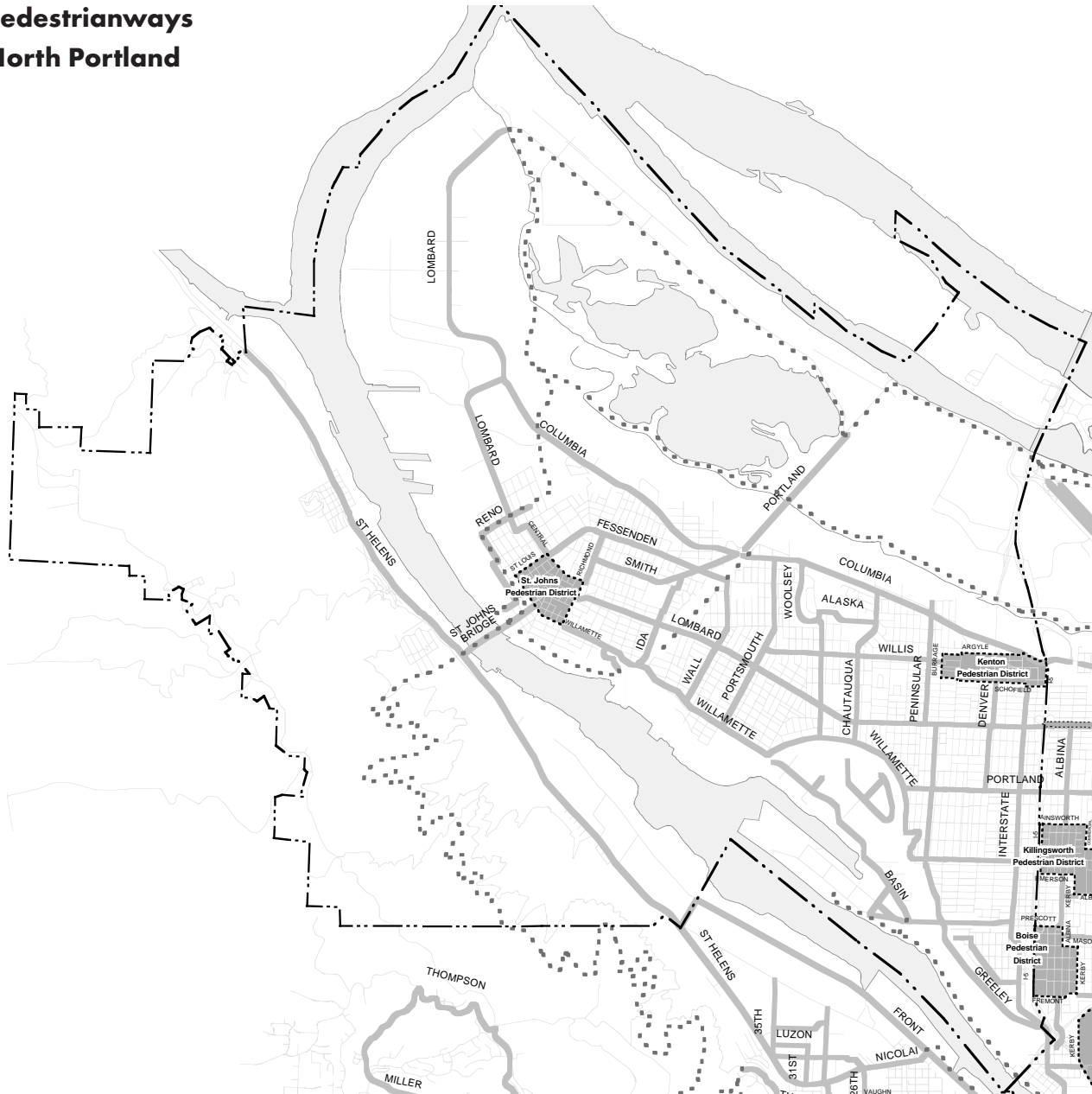
Landscaping and trail design for Off-Street Paths in the Greenway should conform with the Zoning Code specifications for the Greenway Trail.






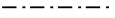
Landscaping and trail design for Off-Street Paths in the Forty-Mile Loop should conform with the design guidelines for the Forty-Mile Loop.

Railings, barriers, and wide sidewalks should be provided on both sides of vehicular bridges which also serve Off-Street Paths.

Off-Street Paths should be identified through signing.

Pedestrianways North Portland



- LEGEND**
-  Pedestrian District
 -  Main Street Pedestrian Design Area (not a TE classification)
 -  City Walkway
 -  Local Service Walkway
 -  Off-Street Path
 -  Transportation District Boundary



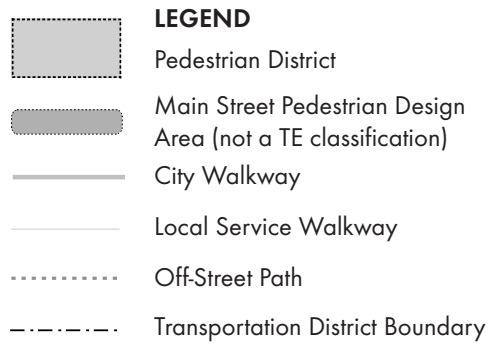
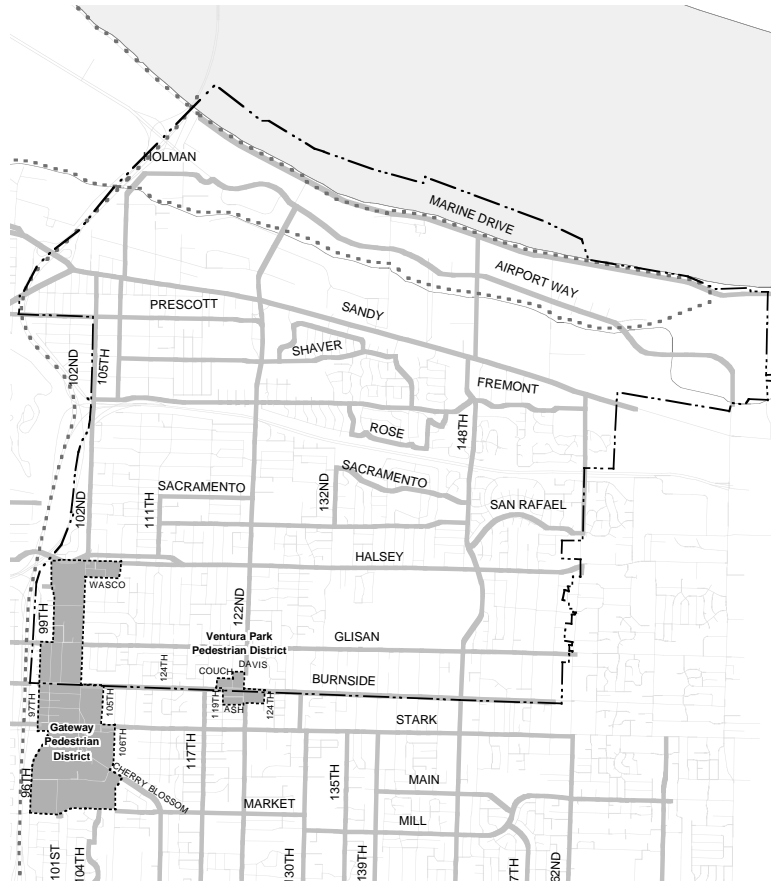
Scale = 1:80,000

Pedestrianways
Northeast Portland

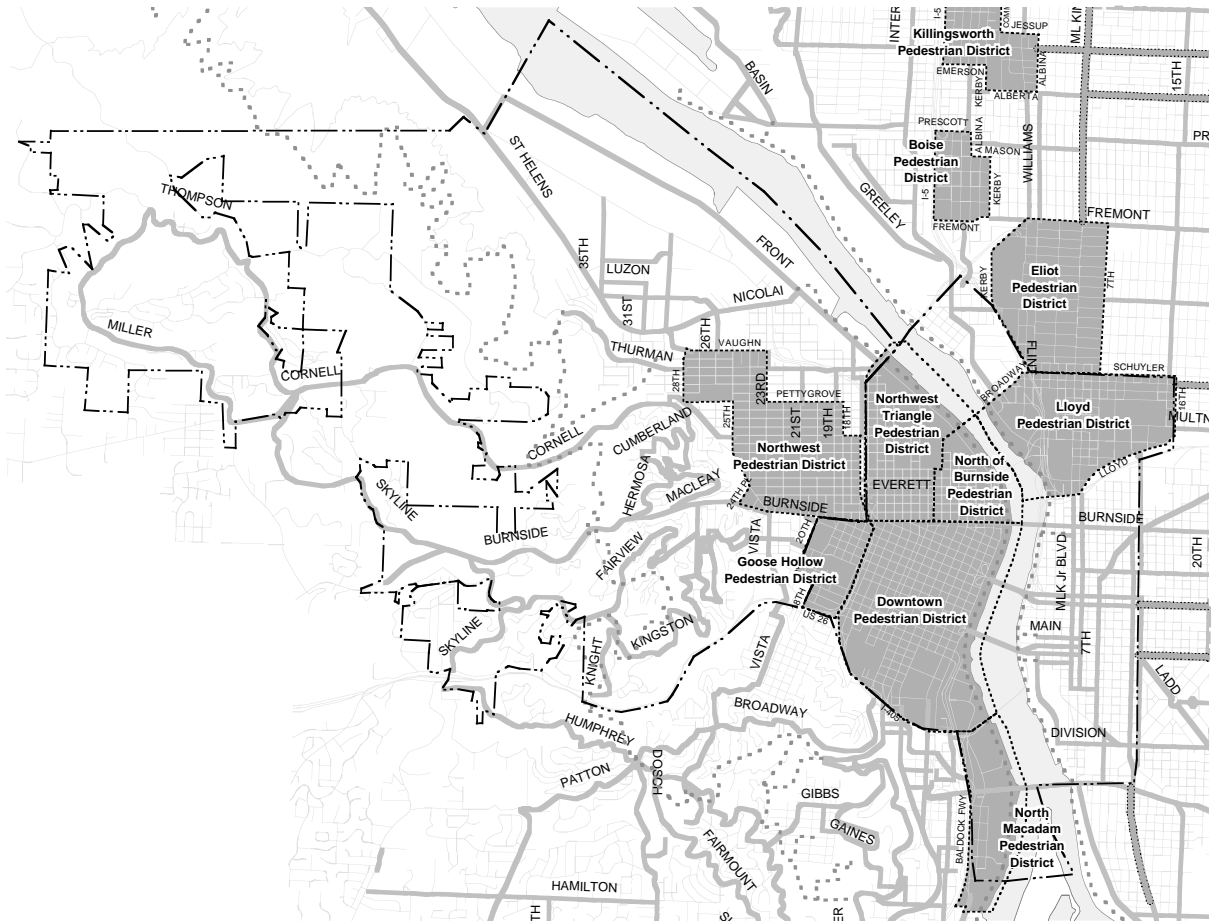


Scale = 1:70,000

**Pedestrianways
Far Northeast**









**Pedestrianways
Northwest Portland and Central City**



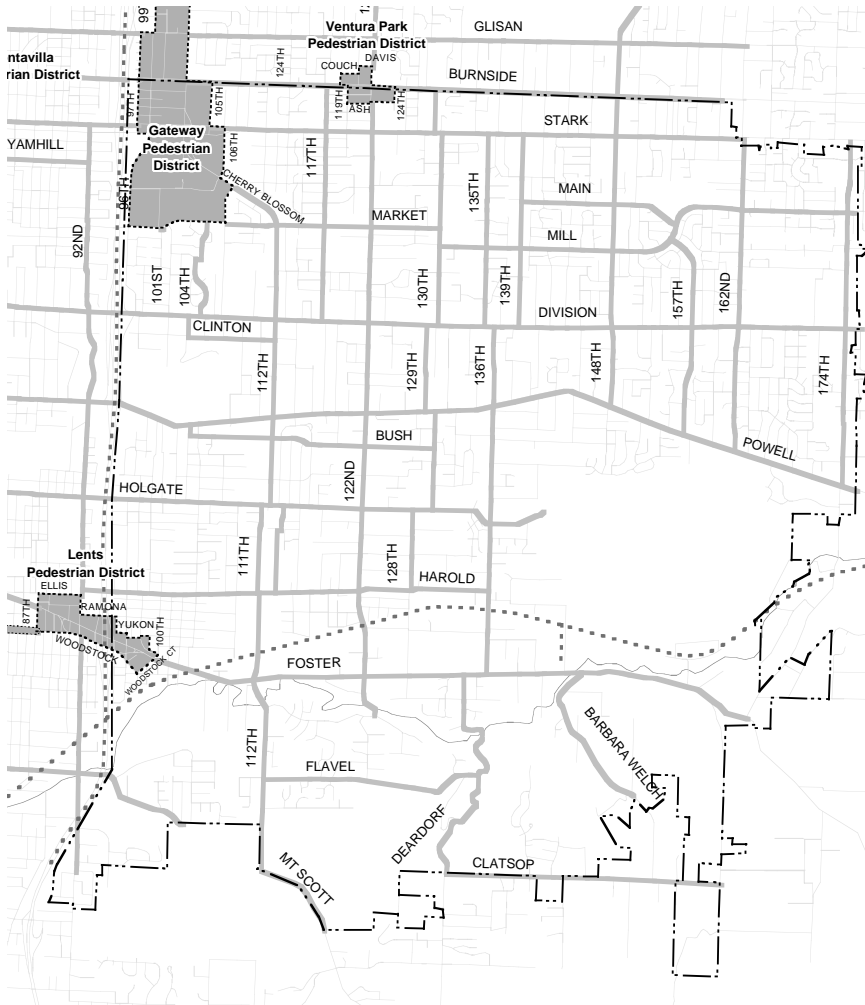
Scale = 1:70,000

Pedestrianways Southeast Portland



- LEGEND**
-  Pedestrian District
 -  Main Street Pedestrian Design Area (not a TE classification)
 -  City Walkway
 -  Local Service Walkway
 -  Off-Street Path
 -  Transportation District Boundary

Pedestrianways
Far Southeast



Scale = 1:70,000

Technical Appendix on Project Priorities

*Two tools used in setting project priorities for the Pedestrian Master Plan were the **Pedestrian Potential Index** and the **Deficiency Index**. This appendix describes these tools in detail. The indices were developed as part of a grant project partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. TGM grants rely on federal Intermodal Surface Transportation Efficiency Act and Oregon Lottery Funds. The contents of this Appendix do not necessarily reflect views or policies of the State of Oregon.*

The purpose the tools described in this appendix was to evaluate the potential of specific pedestrian projects for increasing opportunities for walking. These tools could then become part of a sound, defensible process for establishing the priority of the projects identified in the Pedestrian Master Plan.

Travel Behavior

At the start of the grant project, the Portland region had already developed a fairly high level of information and insight regarding environmental influences on travel mode choices.

In January, 1994, a report released by 1000 Friends of Oregon¹ identified four Pedestrian Environmental Factors (PEFs) which can be correlated with pedestrian mode share. The four factors are ease of street crossing, sidewalk continuity, street connectivity, and topography.

After assessing PEF values for each travel analysis zone in the Metro region and comparing them with travel survey data, the report concludes that households in areas with high PEF scores walk and bicycle four times as much, and ride transit three times as much, as households in areas with low PEF scores.

Since travel analysis zones are relatively large areas, however, PEF values are not useful at the scale of an individual project for determining its potential to increase pedestrian mode share.

In 1994 and 1995, Metro² conducted a new survey of travel behavior, termed a Household Activity Survey. On the premise that past surveys had been biased against the reporting of short trips and walking trips, the new survey asked participants to report all activities, along with their location, and the mode of travel. Preliminary results show that indeed, there are more short trips and more trips made by walking than previously estimated.

The work undertaken in the grant project built on the existing base of knowledge, using the travel data collected and analyzed by Metro to identify new and refined environmental factors that have been incorporated into the tools developed for evaluating pedestrian projects.

Identifying Priorities for Pedestrian Transportation Improvements

The grant project identified two indices that can be used in assessing the priority of a pedestrian transportation improvement. The first is the Pedestrian Potential Index, which is intended to identify those places where physical improvements would be likely to increase walking trips significantly, because other environmental factors that favor walking are in place. The second is the Deficiency Index, which is intended to identify places where physical improvements might remedy the insufficiencies of the pedestrian environment.

The pedestrian improvements to be given the highest priority are those projects with both high Pedestrian Potential and high Deficiency. One interesting result from the work completed was that there is relatively little overlap between the areas of highest potential and the areas of highest deficiency. This is explained by the fact that the areas that have very high potential, such as Pedestrian Districts, have already, for the most part, been developed with a functioning pedestrian environment. However, it was possible to rank projects using a factor that combined the potential and deficiency.

Some data that came out of the Metro analysis has interesting implications. For example, the information that trip distance is highly correlated with the decision to walk for a given trip very much reinforces the emphasis of the Pedestrian Master Plan policies on serving short trip purposes. The data also show that the number of cars per worker in the household is strongly correlated with the choice to walk. If, as we might suppose, the same households with few cars per worker are those least likely to participate in the public process, this suggests the continued value of developing analytical tools for identifying projects, rather than relying on neighborhood complaints alone.

Pedestrian Potential

The Pedestrian Potential Index is intended as a tool for identifying places where implementing needed physical improvements would be likely to increase the opportunities for walking trips, because other environmental factors that favor walking are already in place.

Choosing the Factors of Pedestrian Potential

Several factors were identified as contributing to Pedestrian Potential, and they generally fall into three categories.

The first set of factors can be described as policy factors. Under the City of Portland's Transportation Element of the Comprehensive Plan (TE) and in the adopted concept of the Region 2040 plan, certain areas and corridors are identified as having greater importance for pedestrians.

The second set of factors can be described as proximity factors; that is, the given street segment is close to such pedestrian generators as schools, parks, transit or neighborhood shopping.

The third set are quantitative pedestrian environmental factors developed with the assistance of Metro through the analysis of their 1994 travel data in relation to other environmental factors. This work is discussed in detail below under the heading "Assessing Pedestrian Potential by Analyzing Travel Data."

For a complete list of factors of the Pedestrian Potential Index, see Figure D-2.

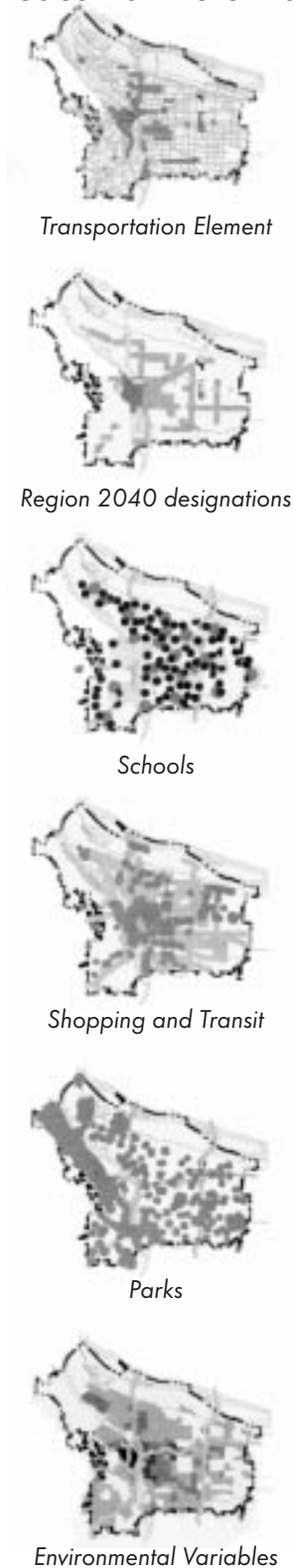
Mapping and Weighting the Pedestrian Potential Factors

The Pedestrian Potential Index was developed using the data visualization application MapInfo. The index was built on a street centerline file of 31,857 street segments that included a separate field for each factor of pedestrian potential.

Each of the factors was mapped as elements on a separate map layer. The extent of the elements of each of the contributing factors is indicated on the small maps in Figure D-1. The street segments lying within or coinciding with the elements of that layer were assigned the point values shown in Figure D-2. The maximum points possible in each category are based on some designations being mutually exclusive.

The point values for all the factors were then added to produce a summed index value. The highest score achieved by any street segment

Figure D-1 Elements of Pedestrian Potential



is 26 out of the maximum 33 possible points. The resulting map (see Figure 4-4, p. 26) of the Pedestrian Potential Index shows a fairly clear pattern emerging in which the concept of priority centers of pedestrian activity is reflected.

In the first iteration of the Pedestrian Potential Index, point values that give the greatest weight to the policy factors were assigned. This choice reflected a bias that improvements in places where many walking trips are likely may be more important than improvements in places where the deficiency may be greatest. This bias was subsequently questioned when the results of the Pedestrian Potential were made available to the public during the 1997 winter workshops for the Pedestrian Master Plan. Subsequently, the point values for the proximity and environmental factors were increased relative to those for the policy factors.

Given the limits of the data available in the mapping application, it was necessary to use surrogates for some of the factors. One effect of this is to build a certain level of error into the model. For example, using pedestrian-friendly zoning as a surrogate for neighborhood shopping means that many neighborhood stores and grocery stores that may generate pedestrian trips are not represented, because they occur in general commercial zones. Other pedestrian generators, such as churches and day care centers, are not represented at all.

Assessing Pedestrian Potential by Analyzing Travel Data

Kyung-Hwa Kim of Metro assessed pedestrian potential factors by analyzing the travel behavior data from Metro's 1994 Household Activity Survey. Ms. Kim analyzed a data set that included all trips of one and a half miles or less within the Portland city boundary on one of the two survey days. She evaluated the correlation between mode choice (whether the trip was a walk trip or not) and a number of other factors available in the Metro Regional Land Information System (RLIS) model.

The 1994 Survey data provided activity locations geocoded by address, making it possible to estimate a disaggregate model instead of measuring the variables by travel analysis zone. From RLIS, variables were constructed describing intersection density per acre, average parcel size, slope, and number of households and employment within one-half mile from each activity location. These variables were then used with the results of the 1994 Household Activity Survey to construct a binomial logit equation describing the likelihood of walking for a given trip.

Figure D-2. Table of Pedestrian Potential Factors

For each of these general categories, the attributes listed below were mapped as layers. Figure D-1 shows the layers that were used to generate the Pedestrian Potential Index. For each layer, the street segments lying within or coinciding with the elements of that layer were assigned the point values shown below.

Transportation Element Pedestrian Classifications factor

Pedestrian District	5 points
Main Street Design Area	4 points
City Walkway	2 points
<i>Maximum points possible</i>	<i>5 points</i>

Region 2040 designations factor

2040 Regional Center	4 points
2040 Town Center	3 points
2040 Main Street	1 point
2040 Station Area	2 points
<i>Maximum points possible</i>	<i>6 points</i>

School proximity factor

Elementary School Radius (1/3 mi)	4 points
Mid School Radius (1/2 mi)	2 points
High School Radius (1 mi)	2 points
<i>Maximum points possible</i>	<i>8 points</i>

Other destination proximity factor

Pedestrian friendly commercial	2 points
Frequent transit stop	2 points
Public parks	2 points
<i>Maximum points possible</i>	<i>6 points</i>

Combined Metro Environmental Variables factor

Ranges from 0 to 8 points	
<i>Maximum points possible</i>	<i>8 points</i>

Total points possible **33 points**

The Pedestrian Potential Map shows that the highest score achieved by any street segment is 26 out of the 33 possible.

Initial results demonstrated that some of the factors that are the most highly correlated with the choice to walk (for example, trip distance and number of cars per household) are not likely to be affected by the projects in the Pedestrian Master Plan.

Based on the results of the evaluation and analysis as well as the suggestions of the steering group, Ms. Kim developed five environmental variables that seem to be well correlated with the choice to walk. Ms. Kim's final results are shown in Figure D-3. The strength of the correlation of the variables is shown by the value of "z".

For each trip in the data set, the environmental factors were analyzed within a one-half mile radius of the production³ end of the trip. The factors were analyzed based on 1994 data for population and employment (although a comparison with 2015 values will be forthcoming). The five PEF variables are explained below.

"Mix" is a combination variable intended to capture the qualities of mixed uses and density of a given area. Specifically, it is represented by the geometric mean equation $(ED*HD)/(ED+HD)$, where ED represents the normalized employment density within the radius and HD represents the same for household density. Areas where the both employment and household density are high and where there is a balance between them will score relatively higher than areas which may have high density but are primarily employment districts or primarily housing areas. Areas where densities are lower get lower scores, and lower still where the two uses are not balanced. This variable shows a strong correlation with the choice to walk.

"Reach" is an index variable intended to capture proximity to possible walking destinations. Here, employment is used as a surrogate for destinations. The value of the variable is assigned as follows: a value of one is given where total employment within a one-quarter mile radius of the production site is greater than 500; a value of two is given where total employment is less than 500 within a quarter mile but greater than 500 within a half-mile radius; and a value of three is given to any production site where total employment within a half-mile radius is less than 500. This variable also shows a strong correlation with the choice to walk.

"Localint" is a variable intended to capture street connectivity and continuity characteristics, represented by the total number of local intersections within a half-mile radius of the activity location. This variable is moderately correlated with the choice to walk.

“Avgps” represents the average parcel size within the radius. This variable is intended to capture the notion of pedestrian scale and is somewhat correlated with the choice to walk.

“Slope” represents the slope within the half-mile radius area. This seems to have a slight influence on the choice to walk.

Ms. Kim generated an aggregated pedestrian potential value for each Travel Analysis Zone within the City of Portland, using these five variables weighted by their relative importance.⁴ The resulting values have been mapped in five ranges in Figure D-4 and were also incorporated into the Pedestrian Potential Index.

Model - PEF Estimation using Bi-nomial Logit Model

```
mlogit mode2 mix reach localint avgps slope if tdist<1.5
```

Iteration 0: Log Likelihood =-5150.6676
 Iteration 1: Log Likelihood = -4722.174
 Iteration 2: Log Likelihood =-4716.9978
 Iteration 3: Log Likelihood =-4716.8415
 Iteration 4: Log Likelihood =-4716.8408

Multinomial regression Number of obs = 7783
chi2(5) = 867.65
Prob > chi2 = 0.0000
Pseudo R2 = 0.0842

Log Likelihood = -4716.8408

mode2	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
1						
mix	.0008589	.0000861	9.974	0.000	.0006901	.0010276
reach	-.3932677	.0408291	-9.632	0.000	-.4732913	-.3132441
localint	.00228	.0007524	3.030	0.002	.0008053	.0037547
avgps	-.1907763	.0572674	-3.331	0.001	-.3030183	-.0785343
slope	-.0219456	.0073918	-2.969	0.003	-.0364334	-.0074579
_cons	-.4016033	.1554535	-2.583	0.010	-.7062866	-.09692

(Outcome mode2==2 is the comparison group)

Figure D-3
Metro Pedestrian
Environmental
Variable Analysis

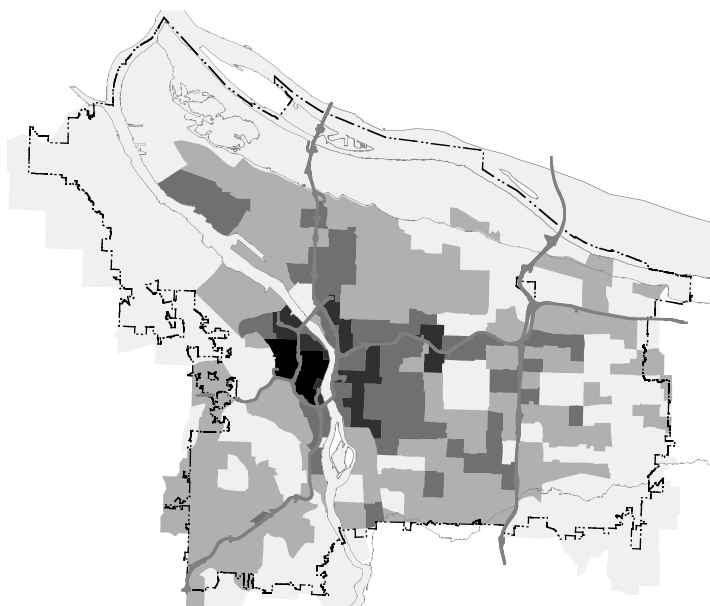
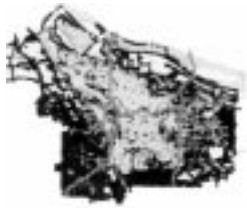


Figure D-4
Map of the Metro
Pedestrian
Environmental
Variables

Darkest areas have the highest combined values of environmental variables that are conducive to walking.

Figure D-5
Elements of
Deficiency



Missing sidewalks



Crash locations



Traffic speed



Traffic volumes



Roadway width



Block length

Deficiency Index

Like the Pedestrian Potential Index, the Deficiency Index is attached to a street centerline file, with each factor represented in a separate field and added into a summary field.

The choice of factors for the Deficiency Index was based in part on the original PEF analysis in the 1000 Friends study. Factors were chosen from information available within the mapping application as surrogates for ease of street crossing, sidewalk continuity, and street connectivity. In each case, there are some limits to the way these factors was implemented, and future refinement of this tool is probably warranted.

Sidewalk continuity is based on sidewalk inventory data collected by the City of Portland in the fall of 1994. Sidewalk information was collected for each side of the street for every block. Data collectors estimated the level of completeness of the sidewalk on any given block based on 25% increments. The sidewalk continuity factor for any block is calculated by converting the estimated sidewalk completeness on the two sides into a value between 0 (for complete sidewalk on both sides) and 5 (for no sidewalk on either side), as shown in Figure D-6.

Ease of street crossing is approximated by four factors: traffic speed, traffic volume, roadway width and automobile-pedestrian crash data. Some limitations in these factors was found due to the nature of the data collection. Because speed and volume data is collected in certain spots, the data do not represent all instances of high volumes or high speeds.

Finally, *street connectivity* is approximated by length of street segments. This is not a perfect approximation, especially since the street segments in the street centerline file are not broken where pedestrian-only facilities intersect them. In addition, while it can generally be supposed that long blocks lack connectivity, the reverse is not necessarily true. Short blocks that are cul-de-sacs may also lack connectivity.

A detailed breakdown of the deficiency factors can be found in Figure D-6 and are mapped in Figure D-5.

Figure 4-5 (p. 27), the Map of the Deficiency Index, shows a pattern that is roughly the reverse of Figure 4-4. Streets of highest deficiency tend to be toward the edges of the city. A notable exception is the area along inner West Burnside that has a high deficiency rating due to significant pedestrian-automobile crash counts.

Figure D-6. Deficiency Index Factors

Sidewalk Continuity Factor: A value ranging from zero to five was assigned to the street segment based on the following formula:

$$S = [(1 / [(swL + swR) / 2]) * 1000] - 5$$

where S = the sidewalk factor value, between 0 and 5, with 5 representing no sidewalk and 0 representing full sidewalk on both sides

swL = the percentage of sidewalk complete on the left side of the block

swR = the percentage of sidewalk complete on the right side of the block

Automobile-Pedestrian Crash Factor: Using pedestrian crash locations from the period 1991-1995, values were:

2 points for segments within 500' radius of location with 1 - 3 crashes

3 points for segments within 750' radius of locations with 4-6 crashes

5 points for segments within 1000' radius of locations with more than 6 crashes

Traffic Speed Factor: Using available speed count locations, values were based on 85th percentile speeds:

1 point for ≥ 33 mph

2 points for ≥ 38 mph

3 points for ≥ 43 mph

4 points for ≥ 47 mph

5 points for ≥ 52 mph

Traffic Volume Factor: Using available volume count locations, values were:

1 point for volume ≥ 2500 and < 7500

2 points for volume ≥ 7500 and < 12500

3 points for volume ≥ 12500 and < 17500

4 points for volume ≥ 17500 and < 25000

5 points for volume ≥ 25000

Roadway Width Factor: Using the known roadway (curb to curb) width, values were:

1 point for > 40'

2 points for > 50'

3 points for > 60'

4 points for > 70'

5 points for > 80'

6 points for > 90'

Street Segment Length Factor: Using the known segment length, values were:

1 point for > 200'

2 points for > 400'

3 points for > 600'

4 points for > 800'

5 points for > 1000'

Prioritizing the Draft Project List

The Pedestrian Master Plan includes a draft project list of 152 projects. An overall Pedestrian Potential score and an overall Deficiency score were calculated for each project. Project ratings were a weighted average of the individual index ratings for the street segments contained within the project boundaries. The numerical score for projects can be represented by the following formula:

$$P = \frac{\sum (p_{\text{seg}} * l_{\text{seg}})}{\sum (l_{\text{seg}})}$$

where P = the combined index score for the project area
 p_{seg} = the index score for each street segment
 l_{seg} = the length of each street segment

Projects with the highest relative score on both indices were found by taking the geometric mean of the normalized values, which yielded a preliminary ranked list of projects. The list was then evaluated against and adjusted to reflect a number of qualitative factors, as described in Chapter 4, p. 23, to produce the final project list.

¹*The Pedestrian Environment*, 1000 Friends of Oregon; Portland, Oregon; December, 1993.

²Metro is the regional government of the Portland metropolitan area.

³The trips in the Metro model are coded by “production/attraction” trip ends and “origin/destination” trip ends. Analysis based on the production end was found to produce the most consistent results.

⁴The decision to once again aggregate the results into zones was based in part on the technical difficulties of transferring the data from the Metro RLIS model to the MapInfo model used for the Pedestrian Master Plan. However, the disaggregate model is available through Metro for possible future analysis.

Project Descriptions and Priority Matrix

In this appendix, projects are listed with their complete project description. They are listed in order of the three phases, and then within that, by transportation district. The list also shows how each project scored on four scales: pedestrian potential, deficiency, community support and safety concerns. For each scale, a score of high, medium or low is shown. For each scale, the range of scores that were assigned high, medium or low value was based on finding natural break points in the scoring such that approximately one third of the projects fell into each category, with the mean value of the scores falling into the "medium" category.

Pedestrian potential refers to the Pedestrian Potential Index values as described in Chapter 4. Project scores on the pedestrian potential scale ranged from 2.61 to 23.58 with a mean of 10.03. Projects with a score of less than 7.5 were rated low, 7.5 to 11 was medium, and greater than 11 was rated high.

Deficiency refers to the Deficiency Index values, also described in Chapter 4. Project scores on the deficiency scale ranged from 1.73 to 14 with a mean of 7.00. Projects scoring below 5.75 were rated low, 5.75 to 8.3 was medium, and above 8.3 is high.

The scale for community support reflects the priorities expressed through the 1997 workshops as well as other indications of community support for projects. At the workshops, attendees placed dots next to project names to signify their support. Since the number of attendees varied from workshop to workshop, as did the number of projects and the number of dots distributed, the scale is not based directly on the number of dots that projects received, but rather on the trend of the results for each workshop.

Safety concerns include high automobile-pedestrian crash locations as well as safety concerns expressed by the community.

● = high ◐ = medium ○ = low

Phase One

District: North							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	104	N Columbia Blv - Swift Ct to Portland Rd <i>Construct a walkway and crossing improvements for pedestrian travel and access to schools; add pedestrian signal indications at existing traffic signals.</i>	\$1,300,000	◐	●	○	◐
Crossing	1002	N Lombard at Interstate	\$250,000	●	●	○	●
District: Northeast							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	201	NE Cully Blvd - Killingsworth to Prescott <i>Reconstruct the roadway and add separated sidewalks, bike lanes and crossing improvements.</i>	\$1,600,000 *	○	◐	●	◐
Corridor	206	NE 57th/Cully - Fremont to Prescott <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit and schools.</i>	\$1,000,000	○	◐	●	◐
Pedestrian District	292	Hollywood Pedestrian District <i>Plan and develop improvements to the pedestrian environment within this Pedestrian District, which is also a Region 2040 Town Center, to emphasize district identity and make walking the mode of choice for trips within the district. Seek regional funding and partnerships within the district for implementation.</i>	\$700,000	●	○	●	◐
Main Street	289	NE Alberta - Martin Luther King to 33rd <i>Construct streetscape and transportation improvements as developed in the Alberta Street Plan.</i>	\$2,600,000	●	○	●	◐
Crossing	2061	NE Prescott at Cully <i>Replace beacon with new traffic signal to increase pedestrian safety and convenience at this intersection.</i>	\$230,000	◐	◐	●	●
District: Far Northeast							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	302	Woodland Park Pedestrian Enhancements <i>Construct sidewalks and crossing improvements on San Rafael from 111th - 122nd; Sacramento from 111th - 117th; and 111th Ave from San Rafael - Sacramento, to improve pedestrian travel and access to Tri-Met line 23 and 24 and Sacramento Elementary School.</i>	\$500,000	●	◐	●	○
Corridor	303	NE Glisan - 122nd to 162nd <i>Construct sidewalks and crossing improvements to improve pedestrian travel and access to Tri-Met Line 25.</i>	\$2,000,000	◐	●	●	○
Pedestrian District	391	Gateway Pedestrian District <i>Plan and develop improvements to the pedestrian environment within this Pedestrian District, which is also a Region 2040 Regional Center, to emphasize district identity and make walking the mode of choice for trips within the district. Seek regional funding and partnerships within the district for implementation.</i>	\$3,700,000 *	●	○	◐	◐
Pedestrian District	392	Ventura Park Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$520,000	●	●	◐	◐
District: Northwest							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	76	Stairs from NW Thurman at Gordon to Aspen <i>Construct stairs and path to replace lost historic stairs in this existing 6-meter-wide right-of-way, in order to improve pedestrian travel and access to transit.</i>	\$50,000	◐	◐	●	○
Corridor	702	W Burnside - Park to 23rd <i>Improve pedestrian crossings in corridor.</i>	\$1,000,000	●	○	●	●

● = high ◐ = medium ○ = low

District: Southeast							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	506	SE 82nd - Duke to Clatsop <i>Construct a sidewalk to provide access to transit and schools.</i>	ODOT	○	◐	◐	●
Corridor	520	SE Division - Grand to 136th <i>Plan, develop and construct transportation and streetscape improvements, crossing improvements, and improvements to transit operations and facilities.</i>	\$4,400,000 *	●	○	○	●
Pedestrian District	591	Lents Pedestrian District <i>Plan and develop improvements to the pedestrian environment within this Pedestrian District, which is also a Region 2040 Town Center, to emphasize district identity and make walking the mode of choice for trips within the district. Seek regional funding and partnerships within the district for implementation.</i>	\$720,000 *	●	○	◐	◐
Main Street	592	SE Woodstock - 39th to 49th <i>Construct streetscape and crossing improvements as shown in the Woodstock Boulevard Transportation Plan.</i>	\$250,000	●	○	●	●
Main Street	598	SE Hawthorne Blvd - 12th to 55th <i>Construct crossing improvements and streetscape improvements as shown in the Hawthorne Boulevard Transportation Plan.</i>	\$750,000 *	●	○	◐	●
Crossing	5012	E Burnside at Sandy/12th <i>Relocate north-south crosswalk on east side of NE/SE 12th to eliminate the safety hazard of stranding pedestrians with no refuge between signal phases.</i>	\$150,000	●	◐	●	●
Crossing	5021	SE Powell at Foster Rd <i>Safety improvements to signalized intersection.</i>	\$250,000	●	◐	●	●
Crossing	5063	SE Foster Rd at 82nd Ave	\$300,000	●	●	○	●
District: Far Southeast							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	403	Mill Park Pedestrian Improvements <i>Construct sidewalks and crossing improvements to improve pedestrian travel and access to transit and schools on Market St from 96th - 112nd; 101st Ave from Market - Division and 117th Ave from Stark - Division.</i>	\$2,400,000	●	◐	●	○
Corridor	406	SE Powell Blvd - 69th to 174th <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	ODOT	○	◐	○	●
Corridor	461	SE Holgate - 104th to 122nd <i>Construct sidewalks where missing and crossing improvements to facilitate pedestrian travel and access to transit.</i>	\$1,200,000	○	◐	●	○
Corridor	462	SE Foster - 103rd Ave to Foster Pl <i>Construct walkway and crossing improvements to facilitate pedestrian travel and access to transit.</i>	\$670,000	○	◐	●	◐
District: Southwest							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	81	Path along I-5 from SW Fifth Ave to Custer St <i>Construct path between the end of SW Fifth Ave, under the Terwilliger Bridge, to Custer St, to improve pedestrian access between neighborhoods.</i>	\$60,000	◐	●	○	○
Connection	85	Southwest Pedestrian Connections Project <i>Plan, design and construct pedestrian connections in Southwest Portland to facilitate pedestrian access to schools, parks, shopping, employment and transit.</i>	\$750,000	◐	●	●	○
Connection	96	Pedestrian Overpass near Markham School <i>Construct a path and pedestrian overpass over SW Barbur Blvd and I-5 to connect SW Alfred St. and SW 52nd to the rear of Markham School.</i>	\$4,200,000	●	●	●	◐
Corridor	605	SW 35th - Luradel to Dickenson <i>Construct a walkway and crossing improvements.</i>	\$250,000	◐	◐	◐	◐
Corridor	611	SW 35th/Stephenson Project <i>Construct a walkway for pedestrian travel and access to schools on 35th Ave from Stephenson to Dickenson and on Stephenson from 27th to 35th.</i>	\$850,000	○	◐	◐	◐

● = high ◐ = medium ○ = low

Corridor	614	SW Vermont - Shattuck to 30th <i>Construct a walkway for pedestrian travel and access to transit, parks and schools.</i>	\$3,600,000 *	○	◐	◐	◐
Corridor	651	SW Capitol Highway - 35th to Miles <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$410,000 *	◐	○	◐	◐
Corridor	652	SW Capitol Hwy, Beaverton Hillsdale to 31st <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$1,200,000 *	◐	○	◐	●
Corridor	653	SW Capitol Hwy, Multnomah Viaduct to Taylors Ferry <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$1,200,000 *	◐	◐	◐	◐
Corridor	654	SW Capitol Hwy, Terwilliger to Sunset <i>Construct a sidewalk on the south side for pedestrian travel and access to schools and transit.</i>	\$200,000 *	●	◐	◐	◐

District: Citywide

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Crossing	9000	Pedestrian Crossing Improvements, CW <i>Citywide project to select sites annually to improve crossing conditions for pedestrians.</i>	\$8,000,000	●	●	●	●

Total estimated cost for Phase One: \$47,260,000 **Amount eligible for SDC:** \$9,070,211

Phase Two

District: North

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	102	N Columbia Blv - Argyle Way to Albina Ave <i>Construct a walkway and crossing improvements.</i>	\$1,300,000	○	●	○	◐
Corridor	161	N Greeley - Going to Interstate <i>Construct a walkway on the east side and transit stop improvements.</i>	\$840,000	◐	●	●	◐
Pedestrian District	191	St Johns Pedestrian District <i>Plan and develop improvements to the pedestrian environment within this Pedestrian District, which is also a Region 2040 Town Center, to emphasize district identity and make walking the mode of choice for trips within the district. Seek regional funding and partnerships within the district for implementation.</i>	\$500,000	●	○	○	◐
Pedestrian District	192	Kenton Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$500,000	●	○	○	◐

District: Northeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	202	NE Killingsworth - 42nd to Cully Blvd <i>Construct sidewalks and crossing improvements for pedestrian travel and access to Tri-Met Line 72.</i>	\$420,000	○	●	●	●
Corridor	203	NE Prescott - 47th to Cully <i>Construct sidewalks for school access.</i>	\$100,000	◐	○	●	○
Pedestrian District	291	Killingsworth Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$670,000	●	○	●	◐
Pedestrian District	294	Eliot Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$1,700,000	●	○	◐	◐

				● = high	◐ = medium	○ = low
Main Street	288	NE Fremont - 42nd to 52nd <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$250,000	◐	○	●
Main Street	299	NE Killingsworth - Williams to 33rd <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$900,000	●	○	◐
District: Far Northeast						
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support
Corridor	301	Parkrose Pedestrian Enhancements Project <i>Construct a sidewalk and crossing improvements to provide access to Tri-Met Line 71 and Prescott Elementary School (Project includes improvements on NE Prescott from 92 - 122 and NE 105th from Sandy - Skidmore.</i>	\$1,200,000	◐	◐	◐
Corridor	307	NE 102nd - Brazee to Sandy <i>Construct a sidewalk to provide access to transit and schools.</i>	\$720,000	◐	◐	◐
District: Southeast						
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support
Corridor	502	SE 92nd - Powell to Schiller <i>Construct a walkway and crossing improvements.</i>	\$450,000	◐	◐	●
Corridor	571	SE Powell Blvd - Ross Island Br to 39th <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the pedestrian character of this corridor.</i>	ODOT	◐	●	●
Main Street	599	SE Belmont - 12th to 43rd <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$2,000,000	●	○	◐
Greenstreet	904	SE Creston Kenilworth Greenstreet <i>Develop a unique identity for the streets connecting Powell Park, Kenilworth Park, and Creston Park along the route defined in the Creston Kenilworth Neighborhood Plan as a Pedestrian Parkway. Seek community partnerships for implementation.</i>	\$10,000	●	○	●
Crossing	5015	SE Powell at Milwaukie <i>Reconfigure signal phasing to add pedestrian crosswalk on the east leg of the intersection.</i>	\$250,000	●	◐	●
Ped to Transit	5901	NE 82nd MAX Station Pedestrian Access to Transit <i>Plan and develop transportation improvements to enhance pedestrian access to light rail and implement the Region 2040 Plan.</i>	\$750,000	◐	◐	○
Ped to Transit	5902	NE 60th MAX Station Pedestrian Access to Transit <i>Plan and develop transportation improvements to enhance pedestrian access to light rail and implement the Region 2040 Plan.</i>	\$500,000	◐	◐	○
Ped to Transit	5903	SE Foster Rd Pedestrian Access to Transit/Fastlink <i>Improve sidewalk access in vicinity, improve ease of crossing and install curb extensions at transit stops with enhanced stop amenities. Project includes transit priority signal improvements.</i>	\$2,000,000 *	●	○	○
District: Far Southeast						
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support
Corridor	402	Powellhurst/Gilbert Pedestrian Enhancements Project <i>Construct sidewalks and crossing improvements to improve pedestrian travel and access to transit and schools on Harold from 102th - 128th; on 122nd from Bush - Harold; on 111th from Holgate - Howard; and on 110th from Harold - Foster.</i>	\$1,200,000	○	◐	●
Corridor	408	SE 112th - Foster to Mt. Scott <i>Construct a walkway.</i>	\$300,000	○	●	●
Corridor	463	SE Mt Scott Blvd - 92nd to 112th <i>Build a continuous walkway for pedestrian travel and access to transit, with crossing improvements at transit stop locations.</i>	\$1,900,000	○	●	●

● = high ◐ = medium ○ = low

District: Southwest

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	66	Path and bridge over Stevens Creek, SW Nevada Ct. <i>Construct a path and a pedestrian bridge over Stevens Creek to connect SW Nevada Ct. to Capitol Hill Rd and Bertha Blvd at Chestnut.</i>	\$350,000	◐	◐	◐	○
Connection	93	Path and stair - SW Woods to SW Sam Jackson Pk Rd <i>Acquire an easement and construct path and stairs to connect SW Woods at SW 4th Ave to Terwilliger Blvd and up to SW Sam Jackson Park Rd.</i>	\$30,000	◐	◐	◐	○
Connection	99	Path and stair from SW Nevada St to Barbur <i>Construct a path and short stair to connect SW Nevada St to existing stairs that lead to Barbur near Brier Pl.</i>	\$50,000	◐	◐	○	○
Corridor	602	SW Marquam Hill Corridor - 13th and Gibbs to 11th and Curry <i>Construct a walkway and crossing improvements.</i>	\$400,000	○	◐	◐	◐
Corridor	607	SW Sunset - Capitol to Dosch <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$1,200,000	◐	◐	◐	◐
Corridor	617	SW Spring Garden Road - Taylors Ferry to Barbur Blvd <i>Construct a walkway to provide access to transit and schools.</i>	\$800,000	◐	◐	◐	◐
Corridor	619	SW Barbur - Sheridan to Front <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$800,000	●	○	○	◐
Corridor	621	SW Shattuck Rd - Beaverton-Hillsdale Hwy to Vermont <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$930,000	○	●	◐	◐
Corridor	671	SW Spring Garden Road - Barbur Blvd to 26th Ave <i>Construct a walkway to provide access to transit and schools.</i>	\$30,000	◐	◐	◐	◐
Pedestrian District	691	Multnomah Pedestrian District <i>Plan and develop improvements to the pedestrian environment within this Pedestrian District, which is also a Region 2040 Main Street, to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$500,000	◐	○	●	◐
Ped to Transit	6901	Pedestrian Access to Transit: SW Garden Home, Capitol to 45th <i>Pedestrian access to transit project: Improve sidewalk access in vicinity, improve ease of crossing and install curb extensions at transit stops with enhanced stop amenities, on SW Garden Home from Capitol to 45th; on Multnomah from 35th to 45th; and on SW 40th from Capitol to Multnomah; for access to lines 5, 45 and 1.</i>	\$1,600,000	○	◐	○	◐

Total estimated cost for Phase Two: \$25,150,000 **Amount eligible for SDC:** \$1,655,786

Phase Three

District: Northeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	21	Bridgeton Access to Delta Park <i>Plan, design and construct a pedestrian connection from the Bridgeton Neighborhood to Delta Park.</i>	\$10,000	○	◐	◐	○
Corridor	204	NE 92nd Ave - Halsey to Fremont <i>Construct a sidewalk to provide access to Tri-Met Line 33 and Jason Lee Elementary School.</i>	\$110,000	●	◐	○	○
Corridor	205	NE 60th - Killingsworth to Going/Cully <i>Construct a walkway.</i>	\$400,000	○	●	●	◐
Corridor	261	NE 72nd Ave - Prescott to Killingsworth <i>Construct sidewalk, curb and storm drainage improvements along 72nd. Construct crossing improvements at 72nd and Prescott and 72nd and Killingsworth.</i>	\$750,000	◐	◐	◐	○
Pedestrian District	295	Boise Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$600,000	●	○	○	◐

● = high ◐ = medium ○ = low

Pedestrian District	296	Woodlawn Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$200,000	●	○	○	◐
Greenstreet	911	NE Bridgeton Rd Greenstreet <i>Develop a unique identity for NE Bridgeton St. Seek community partnerships for implementation.</i>	Not identified	◐	◐	◐	◐
Greenstreet	912	NE Ainsworth Greenstreet <i>Partner with Bicycle Program to develop a combined pedestrian greenway and bike boulevard along the corridor. Project will include crossing improvements at arterials, streetlighting and art.</i>	\$50,000	○	○	○	○
Ped to Transit	2901	Pedestrian Access to Transit: NE Sandy Blvd, 47th Ave to 67th <i>Pedestrian access to transit project: Improve sidewalk access in vicinity, improve ease of crossing and install curb extensions at transit stops with enhanced stop amenities.</i>	\$800,000	◐	○	○	●

District: Far Northeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	304	NE 148th - Glisan to Airport Way <i>Construct a sidewalk for pedestrian travel and access to schools.</i>	\$1,800,000	○	●	◐	○
Corridor	305	NE Halsey - 122nd to 162nd <i>Construct sidewalks and crossing improvements for pedestrian travel and access to Tri-Met Line 24 and Margaret Scott Elementary School.</i>	\$1,100,000	○	●	○	○
Corridor	306	NE Shaver - 116th to 122nd <i>Construct sidewalks and crossing improvements for pedestrian travel and access to Tri-Met Line 22 and to Parkrose Middle School and Parkrose High School.</i>	\$210,000	◐	●	○	○

District: Northwest

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	71	Vista Ridge Stairs, from SW Vista Ave to SW Mill St Terrace <i>Acquire public walkway easement and construct stairs between existing path and SW Mill Street Terrace, to connect existing off-street pedestrian network and improve access to light rail.</i>	\$60,000	●	◐	○	○
Connection	72	Stair in SW Spiral Way R.O.W. <i>Construct a concrete stairway in existing 16' right-of-way between SW Vista and SW Montgomery.</i>	\$60,000	●	◐	○	○
Connection	75	Pedestrian Overcrossing, W Burnside at Wildwood Tr <i>Construct a pedestrian overcrossing over W. Burnside that connects the Wildwood Trail to eliminate the at-grade crossing.</i>	\$700,000	○	●	○	●
Corridor	701	W Burnside - Tichner to Skyline <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$995,000	○	◐	○	◐
Pedestrian District	791	Northwest Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$500,000	●	○	●	◐

District: Southeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	51	Path, SE 36th Pl R.O.W. from Francis St to 36th Pl <i>Construct a 70-meter long path in existing 6' wide right-of-way to enhance the pedestrian network.</i>	\$22,000	◐	●	○	○
Connection	54	Pedestrian Overpass, SE Lafayette - 18th to 20th <i>Construct a new pedestrian overpass to replace existing decrepit structure.</i>	\$580,000	●	●	○	◐
Corridor	501	SE Flavel - 45th to Clatsop <i>Construct a walkway.</i>	\$630,000	○	◐	○	◐
Corridor	504	SE Holgate - 39th to 52nd <i>Construct crossing improvements to provide access to transit and schools.</i>	\$450,000	○	○	◐	○

				● = high	◐ = medium	○ = low
Corridor	505	E Burnside - 60th to 82nd <i>Construct crossing improvements in this corridor to provide access to transit and schools.</i>	\$610,000	○	○	◐
Corridor	507	SE Flavel - 82nd to 92nd <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$340,000	◐	○	○
Corridor	561	SE 39th Ave - Stark to Schiller <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$1,500,000	●	○	○
Pedestrian District	596	Montavilla Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$360,000	◐	○	◐
Main Street	588	SE 13th - Malden to Tacoma <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$180,000	◐	○	◐
Main Street	589	SE Milwaukie - Yukon to Tacoma <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$520,000	●	○	◐
Main Street	593	SE Milwaukie - Powell to Mall <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$340,000	●	○	◐
Main Street	594	E Burnside - 28th to 33rd <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$150,000	●	○	◐
Main Street	597	SE Woodstock - 49th to 87th <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	\$800,000	◐	○	◐
Greenstreet	902	NE/SE 70's Greenstreet <i>Partner with Bicycle Program to develop a combined pedestrian greenway and bike boulevard along the corridor. Project will include crossing improvements at arterials, streetlighting and art.</i>	\$50,000	◐	○	○
Crossing	5061	SE Powell at 26th <i>Improve signalized intersection safety for access to schools.</i>	\$250,000	●	◐	○
Ped to Transit	5904	Pedestrian Access to Transit: NE Sandy Blvd, 12th Ave to 37th <i>Pedestrian access to transit project: Improve sidewalk access in vicinity, improve ease of crossing and install curb extensions at transit stops with enhanced stop amenities.</i>	\$750,000	●	◐	◐

District: Far Southeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	404	SE 174th - Main to Powell <i>Construct a sidewalk for pedestrian travel and access to schools.</i>	\$980,000	◐	◐	○	○
Corridor	407	SE Division - 136th to 174th <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$1,100,000	○	○	◐	◐

District: Southwest

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	61	Stair in SW 19th Avenue R.O.W. from Troy to Moss <i>Construct path and stair in unimproved right-of-way of SW 19th between Troy and Moss to allow better pedestrian access to Barbur Blvd.</i>	\$13,000	○	◐	○	○
Connection	62	Path and stair, SW Cable to SW Jackson <i>Improve existing trail and construct stairs to link SW Cable to SW Jackson Street in order to enhance the pedestrian network and improve access to transit and schools.</i>	\$100,000	◐	◐	○	○
Connection	63	Stairs, End of SW Harrison St at SW 16th <i>Construct new public stairway within the right-of-way to link SW Harrison and SW 16th.</i>	\$10,000	○	◐	○	○

			● = high	◐ = medium	○ = low
Connection	64 Stairs, SW 16th from SW Hall to SW Upper Hall <i>Construct a series of linked stairways in the SW 16th Ave. right-of-way between SW Hall and SW Upper Hall at College St. The design should feature the outstanding viewpoints that would be created and should include references to the squatter colony that existed in this area in the 1930s.</i>	\$80,000	○	◐	○
Connection	65 Stairs in SW 14th Ave R.O.W. from SW College St to Cardinell <i>Construct new stairs within the 15' right-of-way of SW 14th Ave between SW College St and SW Cardinell Dr.</i>	\$50,000	○	◐	○
Connection	67 Path and stair to connect SW Bancroft St below I-5 <i>Construct a stair down the steep slope below SW Kelly and pedestrian crossing improvements at the intersection of SW Bancroft and Macadam to improve pedestrian access between Homestead and Corbett/Lair Hill/Terwilliger neighborhoods.</i>	\$120,000	○	●	○
Connection	69 Stair from SW Terwilliger Pl to Burlingame Pl <i>Build a stair in existing ten-foot wide right-of-way between Burlingame Pl and Terwilliger Pl for pedestrian travel and access to Wilson HS.</i>	\$210,000	◐	◐	○
Connection	84 Path in SW Lobelia St R.O.W., 5th Ave to Boones Ferry Rd <i>Construct a path in the existing right-of-way of SW Lobelia St to link Terwilliger and Boones Ferry Rd.</i>	\$55,000	○	◐	○
Connection	95 Bridge and path to connect SW Lee to SW 43rd in existing <i>Construct a bridge and path to connect SW Lee to SW 43rd Ave within the existing right-of-way.</i>	\$90,000	◐	◐	○
Connection	97 Stair in SW 10th R.O.W. from SW Burlingame Ave to Bertha Blvd <i>Construct path and stairs to connect SW 10th and SW 13th Dr. at SW Burlingame Ave to Bertha Blvd, to improve pedestrian travel and access to transit and shopping.</i>	\$200,000	◐	◐	○
Connection	98 Stair from SW Canby St to Barbur at 13th <i>Acquire a public walkway easement and construct path and stair to connect SW Canby St to Barbur Blvd at 13th Ave.</i>	\$40,000	◐	◐	○
Corridor	601 SW Broadway Drive - Grant to Sherwood <i>Construct a walkway.</i>	\$1,100,000	◐	●	◐
Corridor	603 SW Hamilton - Scholls Ferry to Dosch <i>Construct a walkway to provide access to transit and schools.</i>	\$1,500,000	○	●	◐
Corridor	606 SW Dosch Road - Sunset to Patton <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$980,000	○	●	◐
Corridor	608 SW Beaverton-Hillsdale Hwy - Capitol to 65th	\$2,200,000	◐	○	◐
Corridor	609 SW Bertha/Capitol Hill - Barbur to Beaverton-Hillsdale <i>Construct a walkway for pedestrian travel and access to schools.</i>	\$1,100,000	◐	◐	◐
Corridor	612 SW Taylors Ferry - 40th to 60th <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$1,200,000	◐	◐	◐
Corridor	613 SW Taylors Ferry - Macadam to 35th <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$2,500,000	○	◐	◐
Corridor	616 SW 30th Ave - Vermont to Beaverton-Hillsdale <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$380,000	◐	○	◐
Corridor	618 SW 26th Ave - Spring Garden to Taylors Ferry <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$350,000	○	◐	◐
Corridor	620 SW Capitol Hwy, Terwilliger to Barbur (North) <i>Construct sidewalks and crossing improvements for pedestrian travel and access to transit.</i>	\$270,000	○	●	○
Corridor	622 SW Pomona St - 35th to Barbur Blvd <i>Construct a walkway.</i>	\$900,000	◐	◐	◐
Corridor	623 SW 35th Ave - Taylors Ferry to Luradel <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$480,000	○	◐	◐
Corridor	624 SW Huber St - 35th to Barbur <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$480,000	●	◐	◐
Corridor	625 SW Patton Rd - Homar to Dosch <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$480,000	○	◐	◐
Corridor	626 SW Dosch Rd, Sunset to Beaverton-Hillsdale Hwy <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$600,000	○	◐	◐

			● = high	◐ = medium	○ = low
Corridor	627 SW Shattuck Rd, Beaverton Hillsdale Hwy to Patton <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$820,000	○	●	○
Corridor	628 SW Patton Rd from Dosch to Shattuck <i>Construct a walkway.</i>	\$740,000	○	●	○
Corridor	630 SW Capitol Hwy, 49th to Kruse Ridge Dr <i>Construct a walkway.</i>	\$1,400,000	○	○	●
Corridor	631 SW Dolph Ct, 26th to Capitol Hwy <i>Construct a walkway.</i>	\$640,000	○	◐	○
Corridor	661 SW Garden Home - Capitol Hwy to 65th <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$1,600,000	○	◐	○
Corridor	662 SW Cameron Rd - 45th to Shattuck <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$1,500,000	◐	◐	○
Corridor	663 SW 45th Ave - B-H Hwy to Iowā <i>Construct walkway and crossing improvements on east side of SW 45th Ave between SW Cullen and SW Iowā, and a stair and path from SW Cullen to B-H Hwy in existing twenty-foot wide right-of-way to facilitate pedestrian travel and access to transit.</i>	\$450,000	○	◐	○
Corridor	664 SW 25th Ave/SW Kanan - 23rd Ave to B-H Hwy <i>Construct sidewalk and crossing improvements for access to school and transit.</i>	\$450,000	●	○	○
Corridor	667 SW Terwilliger, Troy to South Ridge <i>Construct a walkway for pedestrian travel and access to transit.</i>	\$810,000	○	●	○
Corridor	669 SW 35th Ave - Multnomah to Barbur <i>Construct walkways and crossing improvements on SW 35th from Multnomah to Barbur.</i>	\$690,000	○	◐	◐
Pedestrian District	693 Johns Landing Pedestrian District <i>Plan and develop improvements to the pedestrian environment within the Pedestrian District to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation.</i>	\$360,000	●	○	○
Pedestrian District	694 West Portland Pedestrian District Future Project <i>Plan and develop improvements to the pedestrian environment within this proposed Pedestrian District, which is also a Region 2040 Town Center, if it is adopted following the Community Planning process. Emphasize district identity and make walking the mode of choice for trips within the district. Seek regional funding and partnerships within the district for implementation. Specific boundaries for this proposed district have not yet been adopted.</i>	\$5,000,000	●	◐	○
Pedestrian District	695 Lair Hill Pedestrian District Future Project <i>Plan and develop improvements to the pedestrian environment within this proposed Pedestrian District, if it is adopted, to emphasize district identity and make walking the mode of choice for trips within the district. Seek partnerships within the district for implementation. Specific boundaries for this proposed district have not yet been adopted.</i>	\$400,000	●	○	○
Greenstreet	905 Pedestrian Pathway and Greenstreet in former Red Electric <i>Acquire historic right-of-way and construct a walkway between Bertha Blvd and Shattuck Rd for pedestrian travel and access to schools.</i>	\$1,700,000	○	●	◐
Crossing	6001 SW 62nd Ave at Beaverton Hillsdale Hwy <i>Install median refuge to improve pedestrian crossing.</i>	\$100,000	◐	◐	○
Total estimated cost for Phase Three:		\$50,105,000	Amount eligible for SDC:		

Projects by Others

District: Central City							
Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	01	Broadway Bridge Accessibility Project <i>Design and construct improvements as shown in the Willamette River Bridge Accessibility Project Final Report.</i>	Other	●	●	○	◐
Connection	02	Steel Bridge Pedestrian Access Project <i>Construct a pedestrian bridge structure at the lower (rail) level of the span.</i>	Other *	●	◐	○	◐

● = high ◐ = medium ○ = low

Connection	03	Morrison Bridge Accessibility Project <i>Design and construct improvements as shown in the Willamette River Bridge Accessibility Project Final Report, excluding the separated bike-only path in the center.</i>	Other	●	●	○	●
Connection	04	Central City Bridgeheads Pedestrian Access Project <i>Reconfigure ramp intersections to provide continuous sidewalks on both sides of SE Grand and SE Martin Luther King Jr. Blvd at the bridge ramps for the Morrison and Hawthorne bridges.</i>	Other	●	●	○	●
Greenstreet	903	SW Park Blocks Greenstreet <i>Develop the SW Park/SW 8th Avenue corridor between Ankeny and Salmon Streets with transportation and streetscape improvements that emphasize the unique identity and historic character of these streets.</i>	Other	●	○	○	○

District: North

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	12	St Johns Bridge Accessibility Project <i>Design and construct improvements as shown in the Willamette River Bridge Accessibility Project Final Report.</i>	Other	◐	●	○	○
Ped to Transit	1901	Swan Island Pedestrian Plan <i>The Portland Office of Transportation, the Port of Portland, Swan Island property owners, the Swan Island Business Association and nearby neighborhood associations will work together to develop a Swan Island Pedestrian Plan.</i>	Other	◐	●	◐	◐

District: Northeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Main Street	297	N Lombard Ave - I-5 to MLK Blvd <i>Plan and develop streetscape and transportation improvements to increase opportunities to walk and enhance the Main Street character of this corridor.</i>	ODOT	●	○	○	◐

District: Northwest

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	78	NW I-405 Bridges project; Burnside, Couch, Everett, Glisan <i>Reconfigure freeway ramp entrances and exits, add sidewalks where missing, and make the bridges accessible in order to improve pedestrian access to the Central City.</i>	ODOT	●	◐	●	●
Connection	79	SW I-405 Bridges Project; Salmon, Columbia, Jefferson Sts <i>Reconfigure freeway ramp entrances and exits, add sidewalks where missing, and make the bridges accessible in order to improve pedestrian access to the Central City.</i>	ODOT	●	◐	●	●

District: Southeast

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Connection	58	Ross Island Bridge Accessibility Project <i>Design and construct improvements as shown in the Willamette River Bridge Accessibility Project Final Report.</i>	Other	◐	●	○	◐
Connection	59	Sellwood Bridge Accessibility Project <i>Design and construct improvements as shown in the Willamette River Bridge Accessibility Project Final Report.</i>	Other	◐	●	○	●

District: Southwest

Type	Key No.	Proj Title	Cost Estimate	Pedestrian Potential	Deficiency	Community Support	Safety Concerns
Corridor	668	SW Barbur Blvd - Seymour to 65th <i>Construct sidewalks and crossing improvements to improve pedestrian access to schools, transit and neighborhood shopping.</i>	ODOT	◐	●	○	●

Total estimated cost for Projects by Others: not estimated **Amount eligible for SDC:** \$0

GRAND TOTAL ESTIMATED COST: \$122,515,000



Estimated Costs of Pedestrian Facilities

The following unit costs for pedestrian facilities have been used to estimate project costs.

Item	Cost	Unit
Sidewalk only (1.9 m; curb existing)	\$136	per linear meter
Sidewalk and new curb (1.9 m wide)	\$280	per linear meter
Sidewalk with paving bricks (1.9 m)	\$432	per linear meter
Small Retain. Wall (2m - Modular)	\$332	per square meter
Large Retain. Wall (4m - Concrete)	\$673	per square meter
Curb ramp	\$3,000	each
Short curb extension	\$19,000	each
Long curb extension	\$32,000	each
Long curb extension w/sewer work	\$37,000	each
Install parallel type crosswalk	\$11	per linear meter
Install ladder type crosswalk (3 m wide)	\$44	per linear meter *
Brick paving @ crosswalk (3 m wide)	\$858	per linear meter *
Small median refuge	\$920	each
Large median refuge w/landscape	\$33,000	each
Add ped head, post and phase to signal	\$7,020	each
Add ped call button	\$935	each
New signal	\$224,400	each
Stairway on grade (1.8 m wide)	\$834	per linear meter **

* linear meter of crosswalk

** linear meter of stairway

Resolutions Adopting the Pedestrian Master Plan

3 5 6 8 9

RESOLUTION No.

Adopt the Pedestrian Master Plan to create a twenty-year vision for increasing opportunities to walk in the City of Portland. (Resolution)

WHEREAS, in 1991, the Oregon State Land Conservation and Development Commission adopted the Statewide Transportation Planning Rule (Goal 12), which requires Portland to prepare a Transportation System Plan that evaluates alternatives to meet transportation needs, adopts targets to reduce vehicle miles traveled per capita over thirty years, and develops measurable goals to increase the modal share of walking; and

WHEREAS, the Pedestrian Master Plan has been developed as the basis for the pedestrian element of Portland's Transportation System Plan; and

WHEREAS, in October, 1992, the City Council adopted Comprehensive Plan Goal 6, Transportation, which calls for encouraging a balanced, affordable and efficient transportation system that reduces reliance on the automobile; and

WHEREAS, in July, 1993, and September, 1994, the City Council adopted Comprehensive Plan Goal 12, Urban Design, which calls for providing for pedestrians as a primary mode of transportation; and

WHEREAS, the City Council in November, 1994, adopted a set of Sustainable City Principles to promote a sustainable future that calls for ensuring the environmental quality of transportation decisions; and

WHEREAS, the City Council in May, 1996, adopted a resolution supporting the continued development of the Pedestrian Master Plan; and

WHEREAS, the City Council in May, 1996, adopted amendments to the Transportation Element of the Comprehensive Plan that implemented the policies, objectives, and street classifications of the Pedestrian Master Plan; and

WHEREAS, walking is the most affordable and sustainable of transportation modes, as well as an integral part of the public transit system; and

WHEREAS, increased walking in Portland will enhance neighborhood livability, improve public health, promote a balanced transportation system, and reinforce economic activity centers;

NOW THEREFORE, BE IT RESOLVED that the Mayor and the City Council adopt the Pedestrian Master Plan, substantially in conformance with the final draft attached as Exhibit A, as amended by Exhibit B; and be it

FURTHER RESOLVED, that staff is directed to engage in activities aimed at implementing the projects and programs described in the Pedestrian Master Plan.

Adopted by the Council, APR 22 1998
Commissioner Charlie Hales
Ellen Vanderslice:slg
April 10, 1998
ped/ellen/counc98/evresolu

BARBARA CLARK
AUDITOR OF THE CITY OF PORTLAND
BY
Bretta Olson
DEPUTY

RESOLUTION No. 35699

Amend the Pedestrian Master Plan to address concerns enumerated in testimony at the adoption hearing. (Resolution)

WHEREAS, on April 22, 1998, the City Council adopted the Pedestrian Master Plan to create a twenty-year vision for increasing opportunities to walk in the City of Portland; and

WHEREAS, on April 22, 1998, the City Council requested staff to analyze the requests for amendments as enumerated during public testimony and to return with amendments to the plan to address said requests; and

WHEREAS, the proposed amendments are in the spirit of the adopted Pedestrian Master Plan and do not have a significant impact thereon;

NOW THEREFORE, BE IT RESOLVED that the Mayor and the City Council amend the adopted Pedestrian Master Plan, substantially in conformance with the list of amendments attached as Exhibit A.

Adopted by the Council, JUN 03 1998

Commissioner Charlie Hales
Ellen Vanderslice:slg
May 21, 1998
PED:ATSP\Counc98\EVresol2

BARBARA CLARK
AUDITOR OF THE CITY OF PORTLAND

BY

Britta Olson DEPUTY

35699

EXHIBIT A**Amendments to the adopted Pedestrian Master Plan, June, 1998.**

The Pedestrian Master Plan was adopted on April 22, 1998, with a recommendation from City Council that staff return within 60 days with amendments based on the testimony. Based on analysis of the testimony and letters received by Council, the following amendments are recommended :

- 1) Add to the Project List a Pedestrian Access to Transit Project to be entitled "Swan Island Pedestrian Plan," whereby PDOT, the Port of Portland, Swan Island property owners, the Swan Island Business Association and nearby neighborhood associations will work together to develop a Swan Island Pedestrian Plan, with funding identified as "other."
- 2) Revise "Project No. 571, SE Powell Blvd - Ross Island Br to 26th", to "Project No. 571, SE Powell Blvd - Ross Island Br to 39th," and revise the project description to include consideration of an at-grade pedestrian route at the underpass at SE 17th.
- 3) Add to the Project List a Green Street Project, No. 911, NE Bridgeton Rd Green Street, no funding identified.
- 4) Add to the Project List in Phase 3 a Pedestrian Connector Project to be entitled "Bridgeton Access to Delta Park"
- 5) Replace Project No. 901, NE Klickitat Green Street, with Project No. 912, NE Ainsworth Green Street.
- 6) Revise Chapter 6 to include information on tax increment financing and to include partnering with PDC as a recommended strategy for pedestrian improvements.

RESOLUTION No. **35517**

Support the continued development of the Pedestrian Master Plan to create a twenty-year vision for making Portland a world-class walkable city. (Resolution)

WHEREAS, in 1991, the Oregon State Land Conservation and Development Commission adopted the Statewide Transportation Planning Rule (Goal 12), which requires Portland to prepare a Transportation System Plan that evaluates alternatives to meet transportation needs, adopts targets to reduce vehicle miles traveled per capita over the next thirty years, and develops measurable goals to increase the modal share of walking; and

WHEREAS, the Pedestrian Master Plan is being developed as the Pedestrian Element of Portland's Transportation System Plan; and

WHEREAS, in October, 1992, the City Council adopted Comprehensive Plan Goal 6, Transportation, which calls for encouraging a balanced, affordable and efficient transportation system that reduces reliance on the automobile; and

WHEREAS, in July, 1993, and September, 1994, the City Council adopted Comprehensive Plan Goal 12, Urban Design, which calls for providing for pedestrians as a primary mode of transportation; and

WHEREAS, the City Council in November, 1994, adopted a set of Sustainable City Principles to promote a sustainable future; and

WHEREAS, walking is the most affordable and sustainable of transportation modes; and

WHEREAS, increased walking in Portland will enhance neighborhood livability, improve public health, and reinforce economic activity centers;

NOW, THEREFORE, BE IT RESOLVED, that the Mayor and the City Council support the continued development of the Pedestrian Master Plan, the preliminary draft of which is attached as Exhibit A; and be it further

RESOLVED, that staff is directed to consider the draft Pedestrian Master Plan Project List in proposing projects for the Capital Improvement Program or for regional funding, and in preparing public review drafts of Community Plans.

Adopted by the Council,

MAY 08 1996

Mayor Vera Katz
Vanderslice:cab
April 29, 1996
\\ordinanc\ped-res1.wpd

BARBARA CLARK
AUDITOR OF THE CITY OF PORTLAND
BY *Britta Olson*
DEPUTY

Glossary

Appendix H

ADA - Americans with Disabilities Act of 1990; broad legislation mandating provision of access to employment, services, and the built environment to those with disabilities.

A

Arterial Street - any street with the ASCP Traffic Classification of Neighborhood Collector or higher.

ASCP - Arterial Streets Classifications and Policies; the City of Portland's policies for appropriate use of the right-of-way for each mode on every street as embodied in the Transportation Element of the Comprehensive Plan.

Attached sidewalk - a sidewalk with one edge adjacent to the back of the street curb. An attached sidewalk may or may not have intermittent planting of street trees in wells along its length.

BHCD - City of Portland Bureau of Housing and Community Development.

B

BOM - City of Portland Bureau of Maintenance.

BTED - City of Portland Bureau of Transportation Engineering and Development.

BTM - City of Portland Bureau of Traffic Management.

City Walkway - pedestrian classification for the Transportation Element of the Comprehensive Plan. In 1996 this classification replaced the classifications "Pedestrian Path" and "Pedestrian Path with Crossings." City Walkways are intended to provide safe, convenient and attractive pedestrian access to activities along major streets, to provide connections between neighborhoods, and to provide access to transit and recreational and institutional destinations.

C

Comprehensive Plan - a broad collection of goals, policies, and objectives adopted by the Planning Commission and City Council of Portland that is intended to inspire, guide, and direct growth in the City.

Crossing Improvement Projects - projects to make major changes to an intersection or intersections to improve crossing conditions for

pedestrians. Examples of such improvements include elements such as curb extensions, raised crosswalks, or median refuges, as well as the installation, replacement or modification of traffic signals, . Only a small number of high-profile crossing projects have been included on the project maps, but the plan also includes a large citywide project to improve pedestrian crossings over twenty years.

Crossing treatment - a physical treatment of a crosswalk to make it safer and more convenient for pedestrian travel; may include such elements as crosswalk markings, median refuges, or curb extensions.

Crosswalk - any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing. Where there are no pavement markings, there is a crosswalk at each leg of every intersection, defined by law as the prolongation or connection of the lateral lines of the sidewalks.

Cul-de-sac - a street closed at one end.

Curb extension - an area where the sidewalk and curb are extended into the parking lane, usually in order to shorten pedestrian crossing distance. Also called “bulb-out” or “curb bulb”.

Curb ramp - a combined ramp and landing to accomplish a change of level at a curb in order to provide access to pedestrians using wheelchairs.

Curb Zone - the portion of the Sidewalk Corridor that physically separates the sidewalk from the roadway.

D

Deficiency Index - a tool for measuring how critically pedestrian improvements are needed.

Detached sidewalk - a sidewalk that is separated from the curb by a linear planting strip. (see Separated sidewalk.)

F

Frontage Zone - a linear portion of the Sidewalk Corridor, adjacent to the edge of the right-of-way (or property line).

Furnishings Zone - a linear portion of the Sidewalk Corridor, adjacent to the curb that contains elements such as street trees, signal poles, utility poles, street lights, controller boxes, hydrants, traffic signs, street signs, parking signs, parking meters, driveway aprons, planting strip, or street furniture.

G

GOBI - General obligation bond issue.

Greenstreet Projects - projects to plan and construct improvements to a local street corridor that can serve as a through route for trips by walking and bicycling. Typical improvements include signing, street lighting, and crossing improvements at arterial cross streets. The unique identity of each Greenstreet corridor will be emphasized through a coherent design and incorporated art. Neighborhood participation will be sought to expand each project with amenities such as pocket parks and community gardens. Greenstreet Projects are a special opportunity for synergy between neighborhoods and alternative transportation modes.

HUD - Housing and Urban Development.

ISTEA - the Intermodal Surface Transportation Efficiency Act of 1991, an innovative six-year transportation funding bill.

Local Service Walkway - pedestrian classification in the Transportation Element of the Comprehensive Plan. Local Service Walkways are intended to provide safe and convenient access to local destinations such as residential neighborhoods. All streets and rights-of-way not classified as City Walkways or Pedestrian Districts, with the exception of limited access highways, would be classified as Local Service Walkways.

Local Streets - streets with the ASCP Traffic Classification of Local Service Street.

LUTRAQ - A study commissioned by 1000 Friends of Oregon known as *Making the Land Use Transportation Air Quality Connection*.

Main Street Pedestrian Design Area - a design overlay on a City Walkway applied where pedestrian use and desired design treatment are similar to a Pedestrian District.

Median refuge island - a refuge island located between vehicle travel lanes.

Metro - the popularly elected regional government of the Portland metropolitan region, which serves as its Metropolitan Planning Organization

MPO - Metropolitan Planning Organization, a regional body that makes transportation funding decisions as mandated in federal transportation legislation.

ODOT - the Oregon Department of Transportation

I

L

M

O

Off-Street Path - pedestrian classification in the Transportation Element of the Comprehensive Plan. In 1996, this classification replaced the classification “Recreational Trail.” It applies to paths and trails in areas not served by the street system, such as parks and greenbelt corridors. Off-street paths are intended to serve both recreational uses and other trips, and may accommodate other non-motorized travel modes in addition to walking.

P

Pathway - a pedestrian walkway that is not a concrete sidewalk.

PDOT - City of Portland Office of Transportation.

Pedestrian - according to Portland’s City Code, “a person afoot; a person operating a pushcart; a person riding on, or pulling a coaster wagon, sled, scooter, tricycle, bicycle with wheels less than 14 inches in diameter, or a similar conveyance, or on roller skates, skateboard, wheelchair or a baby in a carriage.”

Pedestrian Access to Transit Projects - projects to plan and construct improvements that enhance access to transit. Examples of these improvements include sidewalks, crossing improvements, and curb extensions with enhanced amenities at transit stops.

Pedestrian CAC - the Citizen Advisory Committee for the Pedestrian Transportation Program.

Pedestrian connection - a sidewalk, pathway, trail, or other pedestrian facility not situated along a street. This may occur as a walkway within a public right-of-way where no street has been built, in a public walkway easement on private property, or as a trail in a park or other open space.

Pedestrian Connection Projects - projects that make new connections where they are needed for access to schools, transit and shopping, with particular emphasis on areas where street connectivity is low. Examples of these projects include public stairways, pedestrian overcrossings at major impediments, and pathways linking cul-de-sacs.

Pedestrian Corridor Projects - projects to plan and construct improvements along a street corridor. In many cases, these corridors are streets where sidewalks are missing. In other cases, corridor projects will focus on crossing improvements along the corridor. A project may include both sidewalk and crossing improvements. Where there are other transportation issues, Pedestrian Corridor Projects may also include improvements for transit and for bicycle and motorized traffic.

Pedestrian District - districts characterized by dense mixed-use development with a concentration of pedestrian generating activities. These districts are identified and classified in the Transportation Element to insure that improvements in the right-of-way provide for the ease of pedestrian movement through the use of appropriate design treatments.

Pedestrian environmental factors - the aspects of a given environment that are conducive to choosing walking as a travel mode.

Pedestrian potential index - a tool for measuring the strength of the environmental factors that favor walking.

Right-of-way - an easement held by the City over land owned by the adjacent property owners that allows the City to exercise control over the surface and above and below the ground of the right-of-way. Property owners are typically responsible for the construction of transportation improvements adjacent to their property. The City maintains the street, while the property owner is responsible for maintaining the sidewalk.

ROW or R.O.W. - see “Right-of-way.”

RTP - Regional Transportation Plan.

Separated Sidewalk - a sidewalk separated from the curb by linear planting strip which may include lawn or groundcover and street trees. (see “Detached sidewalk.”)

Sidewalk - an improved facility intended to provide for pedestrian movement; usually, but not always, located in the public right-of-way adjacent to a roadway. Typically constructed of concrete (see Standard Construction Specifications Section 308).

Sidewalk Corridor - the area located within the public right-of-way between the curb line of a street or roadway edge and the property line at the edge of right-of-way.

Street vacation - the process of vacating the public right-of-way, the control of which reverts to the underlying property owners unless the City retains a Public Walkway Easement.

“T” intersection - an intersection where one street ends at a through street, forming an intersection shaped like the letter “T”.

TE - Transportation Element of the Comprehensive Plan for the City of Portland. (See “ASCP.”)

R

S

T

TEA21 - the Transportation Equity Act for the 21st Century; federal transportation legislation, 1998.

Through Pedestrian Zone - a linear portion of the Sidewalk Corridor which contains no obstructions, openings, or other impediments that would prevent or discourage movement by pedestrians.

TPR - the state Transportation Planning Rule.

TSP - Transportation System Plan.

Vacation - see “Street Vacation.”

Walkway - a pedestrian facility, whether in the public right-of-way or on private property, which is provided for the benefit and use of the public.

V

W

Index

A

accessibility 15
ADA 14, H-1
adoption of plan 18, G-1
alternative materials 11
art in pedestrian improvements 10, 30
arterial street H-1
arterial street improvements B-3
ASCP 7, 8, H-1
assessing pedestrian needs 18
at the core... 1
attached sidewalk H-1
attraction. *See* trip analysis
automobile-pedestrian crash 25
automobile-pedestrian crash factor D-9

B

blind pedestrian A-3
block grants 43
buffering C-2

C

Calthorpe, Peter 1, 5
capital improvement program 10, 46
CCTMP 8
citizen advisory committee 17
City Code of Portland 14
City Walkway C-2, H-1
community support 23, E-1
Comprehensive Plan 7, B-1
connectivity 15, 22, D-8
connector pathways 11
corner store 3
cost 15, 41, F-1
crash data 20
Crossing Improvement Projects 29, H-1
crossing treatment H-2
crosswalk 11, 29, A-4, C-1, C-2, H-2
curb extension 29, C-1, H-2
curb ramp 14, A-6, H-2
Curb Zone H-2

D

Deficiency Index 22, 27, D-1, D-2, D-8, E-1, H-2
destination. *See* trip analysis
destinations within walking distance 22
detached sidewalk H-2
development 44
duties to pedestrians A-1

E

ease of street crossing D-8
ease of use 15
edge city 2
education 11

F

failure to yield to pedestrian A-2
40-mile Loop B-5
Frontage Zone H-2
funding options 46, B-2
Furnishings Zone C-1, H-2

G

General Obligation Bond Issue 46
General Transportation Revenue 41
Goal 6, Transportation B-1
GOBI. *See* General Obligation Bond Issue
good places 15
grants 11, 42
Greenstreet Projects 30, H-3

H

highway funds, use of for sidewalks A-6
historic development patterns 1, C-1
human scale 22

I

implementing the guidelines 14
ISTEA 3, 41, D-1, H-3

L

land use mix 22
Local Improvement District 44
Local Improvement Districts B-3
Local Service Walkway C-3, H-3
local street improvements B-3
LUTRAQ 2, 5, D-10, H-3

M

Main Street Pedestrian Design Areas 9, 10, 29, H-3
median refuge island 29, C-1, H-3
Metro 22, H-3
Metro Household Activity Survey D-2
Metro Main Streets 9
Metro Regional Land Information System D-4, D-10
multiple use 15

N

neighborhood shopping 22
neo-traditional neighborhoods 3

O

ODOT H-3
ODOT grants 43
Off-Street Path C-3, H-4
oldest form of transportation 1
1000 Friends of Oregon D-1, D-10, H-3
on-street parking C-1
open houses 17

Index, continued

origin. *See* trip analysis

P

Park Blocks 1
partnerships 11
passing stopped vehicle at crosswalk A-2
PDOT. *See* Portland Office of Transportation
pedestrian H-4
Pedestrian Access to Transit Projects 29, H-4
Pedestrian Connection Projects 29, H-4
Pedestrian Corridor Projects 29, H-4
Pedestrian Design Guide C-1, C-3
pedestrian design guide 10, 13
pedestrian design guidelines B-2
Pedestrian District 8, 10, 29, C-1, H-5
pedestrian environmental factors 2, 22, D-7
pedestrian hours of delay 10
pedestrian mode share 3
pedestrian pockets 3
Pedestrian Potential Index 21, 22, 26, D-1, D-2, D-3, E-1, H-5
Pedestrian Quality Index 10
pedestrian scale 1
pedestrian yield A-5
pedestrians A-8
pedestrians must use crosswalks A-8
PEFs D-1, H-5
Portland Office of Transportation H-4
Portland's character B-4
posting 44
principles for pedestrian design 15
production. *See* trip analysis
project priority ratings D-10
proximity 22
public involvement 17
purpose of the Pedestrian Master Plan, the 4

R

reclaiming neighborhood livability B-1
recreational use C-3
reducing reliance on the automobile B-1
Region 2040 Concept Plan 3
Regional Framework Plan 3
Regional Transportation Plan 3
right-of-way 13, H-5
RLIS. *See* Metro Regional Land Information System
roadway width factor D-9

S

safety 11, 15, 23, A-6, E-1
scenic corridors C-3
SDCs 43
short trips 7
shoulder A-4
sidewalk H-5
sidewalk continuity D-8, D-9
Sidewalk Corridor H-5

sidewalk inventory 19, 24
sidewalk maintenance 11
sidewalks on both sides of street C-1, C-2
size of Pedestrian Districts 9
slope of terrain 22
Southwest Portland 2
stairs 11
standard construction specifications 14
street classifications 4, C-1
street connectivity. *See* connectivity
street lighting 30
street segment length factor D-9
street trees 11, C-1
street vacation B-1, B-6, H-5

T

"T" intersection H-5
TE 8, 21, H-5
TEA21 3, 42
TGM grants 42, D-1
traffic calming 10
traffic control device A-3
traffic speed D-9
traffic volume D-9
Transit Mall 1
transit service in Pedestrian Districts 9
Transportation Planning Rule 3, 4
transportation policies 4, 21, B-1
Transportation System Plan 4
Travel Analysis Zones D-7
trip analysis D-10

U

urban design B-4
urban form 2
urban renewal 45

W

walking and the community 1
walking as mode of choice B-2
walking as transportation 1
walking distance 22
walking to school 10, 22
walking to transit 7, 10, 22, B-2
Waterfront Park 1
wheelchairs, use of bicycle lanes A-7
widened sidewalks 29
Willamette Greenway B-5
workshops 18

Z

zoning and Pedestrian Districts 9