

2001

Kirkland Nonmotorized Transportation Plan

*Presented to
City of Kirkland*



Prepared by Otak, Inc.



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Prepared for:
City of Kirkland

Prepared by:
Otak, Inc.

September 13, 2001

*Prepared by Otak, Inc. as an update to the 1995 Kirkland Nonmotorized
Transportation Plan prepared by Worthy and Associates.*

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TABLE OF CONTENTS

1.	INTRODUCTION TO THE PLAN	1
1.1	Plan Overview: How to Review and Use the Plan	
1.2	Summary of New Facilities Recommendations	
2.	NONMOTORIZED TRANSPORTATION (NMT) IN KIRKLAND	5
2.1	NMT The Past and Present	
2.2	Pedestrian Travel	
2.3	Bicycle Travel	
3.	EXISTING FACILITIES INVENTORY AND SUITABILITY	7
3.1	Existing Pedestrian Facilities	
3.2	Existing Bicycle Facilities	
4.	PLANNING GUIDELINES	9
4.1	Measurement of Level of Service and Progress	
4.2	Public and Private Development of the NMT Systems	
4.3	Americans With Disabilities Act	
4.4	School Walk Routes	
4.5	Equestrian Facility Planning	
4.6	Water Trails	
4.7	Larger Transportation and Land Use Planning Initiatives	
5.	NMT GOALS AND POLICY PLANNING	13
	Goal 1 - Ensure NMT Plan is Current and Relevant	
	Goal 2 - Develop the NMT Network Strategically	
	Goal 3 - Provide for All Users	
	Goal 4 - Promote Nonmotorized Travel and Safety	
	Goal 5 - Maintain High Standards for the Design of Pedestrian Facilities	
	Goal 6 - Maintain High Standards for the Design of Bicycle Facilities	
	Goal 7 - Coordinate Nonmotorized Transportation with Transit	
	Goal 8 - Uphold High Safety and Maintenance Standards	
	Goal 9 - Use Progress Measures to Ensure Timely NMT System Development	
6.	NMT FACILITY DESIGN STANDARDS	25
6.1	Pedestrian Facilities	
6.2	Bicycle Facilities	



7.	NMT FACILITIES RECOMMENDATIONS	29
7.1	System Maps/Completion Status	
7.2	Proposed Capital Facilities List	
7.3	Completed Projects	
8.	FUNDING AND IMPLEMENTATION	31
8.1	Federal Funding Sources	
8.2	State Funding Sources	
8.3	Regional Funding Sources	
8.4	Local Funding Sources - Public	
8.5	Local Funding Sources - Private	
8.6	Plan Administration - Roles of City Departments	
	GLOSSARY	37
	REFERENCES	41
	APPENDICES	
A.	Comments Received Through Public Involvement	
B.	Report Card: Progress Toward 1995 Goals	
C.	Transportation Project Evaluation Form	
D.	Completed Projects 1995 - 2001	
	LIST OF FIGURES	
1-1	Relationship of Documents	
4-1	Priority Corridor Network for Pedestrian Planning	
4-2	Priority Corridor Network for Bicycle Planning	
4-3	Safe Routes to School	
4-4	Equestrian Routes Near Bridle Trails State Park	
4-5	Water Trails	
5-1	Progress Toward System Mileage Goals	
6-1	Shared Use Path	
6-2	Bike Lane	
6-3	Sidewalk	
6-4	Paved Trail	
6-5	Unpaved Trails	
7-1	Proposed Pedestrian System (Completion Status Overlay)	
7-2	Proposed Bicycle System (Completion Status Overlay)	
7-3	Nonmotorized Facility Projects	



1. INTRODUCTION TO THE PLAN

*“The sum of the whole of life is this:
Walk and be happy;
Walk and be healthy—
The best way to lengthen out
Our days is to walk steadily
And with a purpose.”*
-Charles Dickens

The 2001 Nonmotorized Transportation Plan for the City of Kirkland provides a plan of action for substantially improving the City’s pedestrian and bicycle systems. The overall Plan Objective is stated below.

PLAN OBJECTIVE

Increase the number of individuals who can safely travel by nonmotorized transportation through integration of nonmotorized transportation as an essential element of the transportation system, recreation system and the community.

Nonmotorized transportation includes the primary modes of walking and bicycling but also includes other modes such as skateboards, scooters and in-line skates. People choose to live and work in Kirkland because of its overall quality of life. The Nonmotorized Transportation (NMT) Plan strives to continue efforts to maintain and enhance these attributes. Surveys and community outreach repeatedly confirm that nonmotorized transportation systems have a strong relationship to people’s sense of quality of life. Providing for and improving recreational and commuter forms of nonmotorized transportation will make Kirkland an even better place to live, work and visit. Some of the benefits of implementing the Plan include:

- Improves safety
- Improves community livability and health
- Reduces traffic congestion
- Reduces parking demand
- Creates incentives for development

- Maintains eligibility for grant funding of NMT projects

Kirkland’s citizens have asked for and, through the implementation of this Plan, will receive a safe and complete travel network with a wide range of options. Being implementation-oriented, this Plan includes policies and strategies for designing, financing and managing the NMT system.

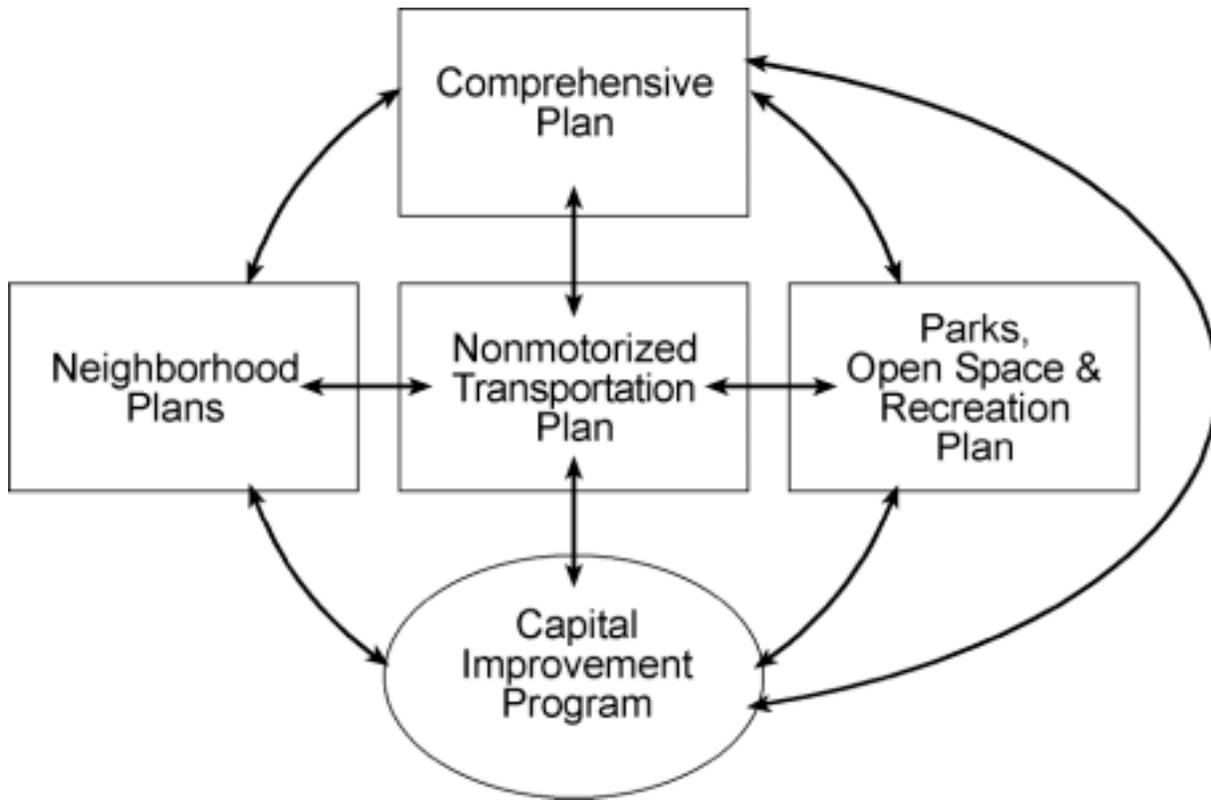
Implementation of the Plan involves actions by City of Kirkland staff in a wide range of positions in the overall City organization. This Plan attempts to outline each of these individual efforts and tie them to the central goals. Figure 1-1 on the following page depicts the relationship of this document to other City documents. On the long-range planning side, the NMT Plan incorporates and elaborates on some of the goals contained in the Kirkland Comprehensive Plan and the Comprehensive Parks Open Space and Recreation Plan. At the institutional level, the NMT Plan provides a vision that is the basis for the regulations contained in documents such as the Zoning Code and Pre-Approved Plans (roadway standards).

The 2001 NMT Plan updates and replaces the 1995 NMT Plan. The 1995 plan was Kirkland’s first NMT plan. It was created through an 18-month process led by three City of Kirkland departments – Parks and Community Services, Public Works, and Planning and Community Development. That process incorporated a tremendous amount of input from community members in addition to Park Board, Planning Commission and City Council. The development of the 2001 update of the NMT Plan has also solicited input from these groups. The update does not change the 1995 plan’s basic policy.



RELATIONSHIP TO OTHER DOCUMENTS

FIGURE 1-1



1.1 PLAN OVERVIEW: HOW TO REVIEW AND USE THE PLAN

The Plan is divided into eight chapters, plus appendices. The organization of chapters reflects the planning process in developing the Plan. The NMT Plan begins with general background information, an overview, and executive summary recommendations. Next, supporting historical data, a summary inventory of existing systems, descriptions of planning principles, design standards, and goals and policies are provided. Finally, the NMT system maps show projects for implementation. Individual chapters include:

Chapter 1: Introduction to the Plan

Chapter 1 assists the reader in understanding the content of the Plan by

providing a summary of background information. Key features of the planning, review and adoption process are listed, as well as a summary of the NMT system and its relationship to potential regional connections.

Chapter 2: Nonmotorized Transportation (NMT) in Kirkland

Kirkland’s citizens and City staff have been active in planning for nonmotorized transportation for many years; Chapter 2 traces the history and future of NMT planning in the City.

Chapter 3: Existing Facilities Inventory and Suitability

Chapter 3 provides a description of the existing nonmotorized transportation



system in Kirkland based on a citywide inventory of facilities conducted in late 2000. Suitability of the system internally within the city and connectivity regionally, is also covered.

Chapter 4: Planning Guidelines

Building upon the last chapter, Chapter 4 outlines several NMT planning principles and introduces the Priority Corridors and progress measures. Also, several special nonmotorized transportation planning topics are discussed including; private versus public development of the system, Americans with Disabilities Act (ADA), school walk routes, equestrian planning, and larger planning initiatives.

Chapter 5: NMT Goals and Policy Planning

Chapter 5 reiterates the Plan Objective and outlines the nine goals of the Plan and policies associated with each goal. Developed parallel to the City Comprehensive Plan's framework goals, these policies guide the planning, development and maintenance of the NMT system. They also suggest a number of possible methods for achieving the goals and policies.

Chapter 6: NMT Facility Design Standards

Chapter 6 describes the classifications and design standards for pedestrian, bicycle and shared facilities in the City of Kirkland. The relationship of these to some regional and nationwide models is also covered.

Chapter 7: NMT System Recommendations

Chapter 7 describes the complete proposed network of NMT projects through the use of separate graphic plans, for both pedestrian and bicycle facilities.

Chapter 8: Funding and Implementation

Chapter 8 describes opportunities for project development, and the commitment of resources to implement the NMT system.

1.2 SUMMARY OF NEW FACILITIES RECOMMENDATIONS

The Kirkland NMT Plan provides a framework for enhancing Kirkland's transportation system. The bicycle and pedestrian plans show generalized corridors providing linkages within Kirkland and to regional NMT routes. Circumstances and opportunities will change over time and require adjustments and modifications to the plans. Realistically, the NMT Plan has not attempted to suggest that the completed NMT system can or should be developed immediately, but instead describes a comprehensive system to be implemented and completed over the next twenty years.

This Plan identifies pedestrian projects totaling over 150 miles of pedestrian facilities. The NMT Plan further describes over a dozen bicycle facility improvement projects to be completed within the next twenty years, the most significant of which is the Cross-Kirkland Trail shared right-of-way project. This is a project of regional importance that would involve working closely with Burlington Northern Santa Fe Railroad, Metropolitan King County, and the cities of Bellevue, Redmond, Woodinville and Renton. This project would provide a nearly uninterrupted north-south facility through Kirkland and potential for connections with regional trails throughout King County, like the Sammamish River and Burke-Gilman Trails.



2. NONMOTORIZED TRANSPORTATION IN KIRKLAND

“Lowly, unpurposeful and random as they may appear, sidewalk contacts are the small change from which a city’s wealth of public life may grow.”

*-Jane Jacobs,
The Death and Life of Great American Cities*

2.1 NONMOTORIZED TRANSPORTATION IN KIRKLAND ... THE PAST AND PRESENT

The Past

Kirkland’s citizens, elected officials, and staff have been interested in nonmotorized transportation for many years. In recent years, citizens of Kirkland have reaffirmed through public meetings, workshops and surveys their desire to expand alternatives to motorized transportation. The desire is not to return to the roadless days of early settlers, but to have more opportunities for walking or biking rather than driving. The community wants this within the City and also connecting to the region’s ever-expanding network of trails and nonmotorized transportation facilities.

The Present

Refer to Figures 6-1 through 6-5 for graphic depictions of typical nonmotorized facilities in Kirkland. Currently Kirkland’s Nonmotorized Transportation System includes the following components:

The pedestrian system is a collection of neighborhood and school connectors, public and shoreline access trails (public trails on private property required as a condition of development), City park paths and primitive trails, and sidewalks (see Figure 7-1).

The City’s formal bikeway system includes on-street bike lanes which exist as a part of the City’s public street system and are

maintained and developed by the City’s Public Works Department. Bicycle lanes are identified by pavement markings that provide lanes for the exclusive use of bicycles. Including other less formal bikeways, Kirkland provides approximately 44 miles of designated bikeways (see Figure 7-2).

2.2 PEDESTRIAN TRAVEL

The NMT Plan will build upon a vision of pedestrian travel described in the City’s Downtown Design Guidelines (DDG). The DDG define a vision for the City’s future that include fostering and enhancing the downtown area’s existing pedestrian-friendly environment. The NMT Plan will continue building upon the vision of the DDG. Two stated goals in the DDG include:

- Promote a sense of community identity by emphasizing Kirkland’s natural assets, maintaining it’s human scale, and encouraging activities that make downtown the cultural, civic and commercial heart of the community.
- Orient to the pedestrian by providing weather protection, amenities, human scale elements, and activities that attract people to downtown.

Pedestrian-oriented elements are key in the DDG including selected pedestrian-oriented streets, sidewalk design standards, storefront activity zones and pedestrian-friendly building fronts.

The community’s interest in improved pedestrian connections also extends outside of the downtown area. Some examples include connections to schools, parks and retail areas, such as the Juanita Business District, the potential NE 85th



Street commercial district, proposed Totem Lake Activity area as well as the Houghton area and Bridle Trails shopping centers.

Off-street trails exist in nearly all City parks, including Juanita Bay, Crestwoods, Everest, and Watershed. Together with the Lake Washington shoreline trail, they form part of an emerging system that serves pedestrians and bicyclists.

2.3 BICYCLE TRAVEL

With increased concerns over air pollution, traffic congestion, urban sprawl and physical health, many people are turning away from cars and toward alternatives such as public transit, vanpools, and bicycles for commuting, recreation and other trips.

Public policies related to coping with continued regional growth and emphasizing alternatives to the single occupant vehicle are reflected in the Transportation Policy Plan for Washington State from the State Transportation Commission and the 1990 Growth Management Act. In many policies, nonmotorized options are reflected as the least expensive to build and maintain. They are also the most effective in maintaining the environment and enhancing health and quality of life.



3. EXISTING FACILITIES INVENTORY AND SUITABILITY

In November 2000, the City of Kirkland Public Works Department updated the City inventory of pedestrian and bicycle facilities. All of these facilities were inventoried by the actual length of the facility whether bike lane, sidewalk, or trail. A roadway with sidewalks or bike lanes on both sides was inventoried as twice the length of the roadway. A summary of this inventory is listed below.

3.1 EXISTING PEDESTRIAN FACILITIES

By system mileage, the predominate type of pedestrian facility presently found in Kirkland is the sidewalk. The varied circumstances found within parks and open spaces has led to the use of several other types of walkways:

- **Paved Trail** – to connect pedestrian use areas, designed for high traffic and good accessibility
- **Multi-purpose Unpaved Trail** – for medium-traffic, compacted crushed rock (gravel) surface
- **Limited Purpose Unpaved Trail** – for low traffic path, surfaced with compacted crushed rock (gravel), soil or boardwalk as appropriate

Design standards for each of these types of facilities are contained in Chapter 6.

The translucent overlay of Figure 7-1 in this document is a map reflecting the 2000 inventory of existing pedestrian facilities. Since a great deal of recent sidewalk construction has occurred as part of new subdivisions, the citywide distribution of facilities is scattered. This leads to ironic situations where a sidewalk exists on a new cul-de-sac, but not on a nearby street serving an elementary school. Within the Pedestrian Priority Corridors, the total mileage of pedestrian facilities is as follows

(see designation of Priority Corridors in Section 4.1):

Sidewalks:	82.8 miles
<u>Trails:</u>	<u>19.3 miles</u>
Total Existing	
Pedestrian Facilities:	102.1 miles

3.2 EXISTING BICYCLE FACILITIES

There are three types of bicycle facilities that have been developed in Kirkland.

- **Shared Use Path** – a facility that is separated from a roadway and intended for shared use by pedestrians and cyclists
- **Bike Lane** – a portion of a roadway designated for the exclusive use of cyclists by signs and pavement markings
- **Shared Roadway** – lower traffic volume and slower speed residential street designated for NMT use that does not have pavement markings or signage.

Design standards for each of these types of facilities are contained in Chapter 6.

The translucent overlay of Figure 7-2 in this document is a map reflecting the 2000 inventory of existing bicycle facilities. Within the Bicycle Priority Corridors the total mileage of each type of bike facility is as follows (see designation of Priority Corridors in Section 4.1):

Shared Use Path:	0.4 miles
Bike Lane:	24.2 miles
<u>Shared Roadway:</u>	<u>16.4 miles</u>
Total Existing	
Bicycle Facilities:	41.0 miles



“There is something about riding down the street on a prancing horse that makes you feel like something, even when you ain’t a thing.”
-Will Rogers

This Plan contains recommendations to construct hundreds of miles of bicycle and pedestrian facilities. Recognizing that this will not occur overnight, this chapter suggests a planning approach that will ensure that the improvements are planned strategically in the interim.

4.1 MEASUREMENT OF LEVEL OF SERVICE AND PROGRESS

Background

Many communities have attempted to develop level of service (LOS) measurements to apply to NMT systems. Most of the methods that have been developed for NMT systems are oriented towards evaluation of a specific roadway/trail segment. In an effort to find a LOS measure that reflects the quality of the *citywide system*, several noted bicycle-friendly communities were surveyed on how they monitor the quality of their bicycle systems. These cities included Boulder, Colorado; Davis, California; and Portland, Oregon. It was discovered that none of these cities apply a system-wide nonmotorized level of service evaluation that is analogous to highway LOS. While they all monitor the mileage of their expanding systems (with Portland also identifying a build-out mileage target), their overall planning methods are more concerned with the types of facilities that are to be developed. In Boulder, bike routes and bike lanes are built within a grid-based system of priority corridors, while recreation-oriented off-street trails are aggressively pursued along an extensive network of rivers and creeks.

Davis also has a dual approach; they are developing a system of bike lanes on destination-streets and complementing it with off-street trails that extend through parks and connect cul-de-sacs. Portland has limited opportunities for new off-street trails and focuses on construction of bike lanes and bike routes, particularly in areas where density and demographics ensure good utilization of the facilities.

1995 NMT System Mileage Level of Service

To arrive at a LOS for the pedestrian and bicycle systems, Kirkland’s 1995 NMT plan borrowed from a national practice for measuring a community’s parks and recreation LOS. With this method, level of service was measured by dividing the total number of miles of each type of NMT facility (i.e. bicycle facilities, sidewalks or walkways) falling in priority corridors by the population of the city. As the population increased, NMT facilities would have to increase proportionately to maintain the same level of service. The difficulty with the 1995 plan’s LOS method was that while it provided a measure of built nonmotorized facilities relative to population, it did not address system connectivity or completeness very well. It was also problematic with regards to population growth because it potentially limited opportunities for nonmotorized facility improvement when population growth is low and assumed the need for continued development even if the system is complete.

2001 NMT Plan Progress Measures

While the 2001 NMT Plan replaces the 1995 Plan’s LOS measures with two new measures, the Priority Corridor System is still used. The Pedestrian and Bicycle Priority Corridor networks are depicted in Figures 4-1 and 4-2 respectively. The corridors designate the locations that should be given preference



when developing new NMT facilities. The individual corridors were identified as key connections between residential areas, schools, transit routes, the library, parks, shopping areas, and other centers of activity.

Priority One Corridors represent significant north-south and east-west routes, both existing and potential. The spacing between Priority One Corridors is approximately 1/2-mile in the pedestrian system and approximately one mile in the bicycle system. The Priority One Corridors for each system are intended to form the basic framework upon which the systems will be developed. As such, these corridors should be given priority when selecting projects to construct.

Priority Two Corridors represent the next level of importance in nonmotorized transportation connectivity. These corridors are approximately 1/4-mile apart in the pedestrian system and 1/2-mile apart in the bicycle system. Priority Two Corridors include connections from cul-de-sacs and connections between Priority One Corridors. Priority Two Corridors should be given priority during project selection, but to a lesser degree than Priority One Corridors.

Based on comments received during preparation of the 2001 update, the 1995 Plan's LOS measurement system is replaced by a new simplified method of assessing progress consisting of two measures: *System Mileage* and *Complete Corridors*.

System Mileage Measure

First, a System Mileage Measure is to be monitored for both the pedestrian and bicycle systems. System Mileage is defined as the number of miles of facilities that are constructed *within the pedestrian*

or bicycle Priority Corridor system. For example, the 2000 system inventory revealed that there are 102.1 miles of pedestrian facilities in Pedestrian Priority Corridors and 41.0 miles of bicycle facilities within the Bicycle Priority Corridors. Future goal values for the System Mileage measure are contained in Chapter 5 under the discussion of Goal 9. It should be noted that calculation of System Mileage involves the grouping of various types of facilities such as sidewalks and paths and, therefore, does not reflect the aspect of system quality resulting from the proportion of various types of facilities. This has been addressed by the establishment of Policy 1.1 in Chapter 5, which states that off-street trails and walkways provide a more pleasant experience and should be pursued as much as possible.

Complete Corridors Measure

The second measure that is adopted with the 2001 NMT Plan is the Complete Corridors Measure. This is applied to the pedestrian and bicycle systems separately and it consists of the number of Priority Corridors that are continuously served by facilities throughout their length. This measure is important to achieving connectivity in the NMT systems as soon as possible. With the 2000 system inventory, there were two complete east-west Pedestrian Priority Corridors (NE 60th St. and NE 70th St.) and two complete north-south corridors (Market/ Lake Washington Blvd. and 132nd Ave. NE). The inventory also revealed that there was only one complete Bicycle Priority Corridor – the east-west corridor of NE 132nd St (King County). Future goal values for the Complete Corridors measure are contained in Chapter 5 under the discussion of Goal 9.

4.2 PUBLIC AND PRIVATE DEVELOPMENT OF THE NMT SYSTEMS

This Plan calls for completion of the NMT systems through two very different means: publicly sponsored projects and conditions set on private development. The public projects



are the traditional capital improvement construction projects over which the City has total control. There are now several means to require construction of NMT facilities as a condition of private development, but the City has much less control of where these improvements will go with respect to the priorities of NMT Plan. As mentioned in Chapter 3, this also leads to awkward situations such as sidewalks constructed on cul-de-sacs, but not on nearby streets that serve an elementary school. The City has improved this system with techniques like the concomitant agreement. This process advances NMT Plan goals because it limits the occurrence of short, disconnected sidewalk segments. The City should continue to seek ways to better match privately driven NMT facility development to Plan goals.

4.3 AMERICANS WITH DISABILITIES ACT

The Americans With Disabilities Act (ADA) is a federal law that was enacted in 1990 for the purpose of ensuring that all Americans have the same basic rights of access to services and facilities. To oversee implementation of this principle the Architectural and Transportation Barriers Compliance Board (also called the Access Board) was created. This group has prepared the definitive manual of accessible design and construction standards, the *Americans with Disabilities Act Accessibility Guidelines* (ADAAG). These standards are, however, continually being updated and refined. Washington State has based its regulations on the ADAAG although there is variation. Several attempts to paraphrase the ADAAG have been made, sometimes resulting in confusion and conflicts. To address this ambiguity, while also incorporating Washington State Regulations, the Washington Pedestrian Facilities Guidebook was prepared in 1997. These guidelines and standards should be consulted in the development of all nonmotorized projects in Kirkland.

4.4 SCHOOL WALK ROUTES

At the time of this writing, a School Walk Route Advisory Committee is examining the issue of suggested walk routes to elementary schools in Kirkland. The committee is comprised of representatives from local elementary schools, the Lake Washington School District, Neighborhood Associations, and City staff. It is in the process of evaluating current walk routes and issues associated with these routes and prioritizing improvements utilizing current funding. The Committee will be making recommendations to the Kirkland City Council that should be considered in future nonmotorized planning.

4.5 EQUESTRIAN FACILITY PLANNING

In the Kirkland neighborhoods north and west of Bridle Trails State Park, residents with horses ride to the park and to areas within the larger region. There is a zoning code requirement of a minimum lot size for keeping horses and a few of the subdivisions in this area have been designed to meet this minimum size with all lots. The new development trend is for smaller lots, but the existing equestrian activity should be encouraged and conditions enhanced. Figure 4-4 designates a system of major and minor equestrian routes in the areas surrounding Bridle Trails State Park. Every effort to accommodate these needs with other projects should be pursued. Chapter 5 contains policies related to planning, design and maintenance issues for equestrians.

4.6 WATER TRAILS

The Washington Water Trails Association (WWTA) is a volunteer, non-profit organization that promotes the use of small, human- and wind-powered, beachable watercraft. The WWTA has established what is referred to as the Washington State Water Trails Recreation Program. This program includes a number of marine and



inland water trails, or blueways, in Western Washington. The water trails consist of secure access points and rest stops and also often include natural and cultural waterside attractions. The Lakes-to-Locks Water Trail, shown in Figure 4-5, is a series of lakes and rivers extending from Issaquah to Elliot Bay with nearly a dozen launch, landing, and rest sites along Kirkland's shoreline. Kirkland's Parks and Community Services Department was one of many public agencies that cooperated with the WWTa in creating the Lakes-to-Locks Water Trail. This partnership should be continued so that this unique nonmotorized transportation facility is preserved.

4.7 LARGER TRANSPORTATION AND LAND USE PLANNING INITIATIVES

There are a few larger planning initiatives in Kirkland that are working in concert with this NMT Plan, focused on improving the City's quality of life. One of the key elements of making Kirkland a more livable community is creating places that are pedestrian-oriented. This is achieved not only through the processes described in this NMT Plan, but also through urban design and the management of density, parking, and connective street patterns.

Urban Design

One of these initiatives is the greater emphasis on urban design in private development regulations. Particularly in the downtown area, the City is committed to ensuring that the design of new buildings is compatible with the overall community character. Part of this involves protecting and improving the pedestrian experience with features such as storefront windows, awnings, benches and pedestrian lighting. Other streetscape amenities such as street trees, special paving and public art are also important urban design treatments used to enhance the pedestrian environment. Urban design principals also could be used to create special public amenities such as major multi-

use trails or a new Lake Washington promenade in the downtown.

Increased Density

Another planning initiative is an effort to increase density in the City. Consistent with the Washington State Growth Management Act, Kirkland and other developed communities are to accommodate growth through added density in order to reduce the amount of undeveloped land that is consumed at the edges of metropolitan areas. Added density, along with mixed-use development relate to NMT planning because it increases the number of residences that are within walking or riding distance of schools, transit facilities, parks, retail establishments and other destinations. This, in turn, can reduce reliance on vehicular transportation and create lively nonmotorized transportation-oriented districts.

Parking Management

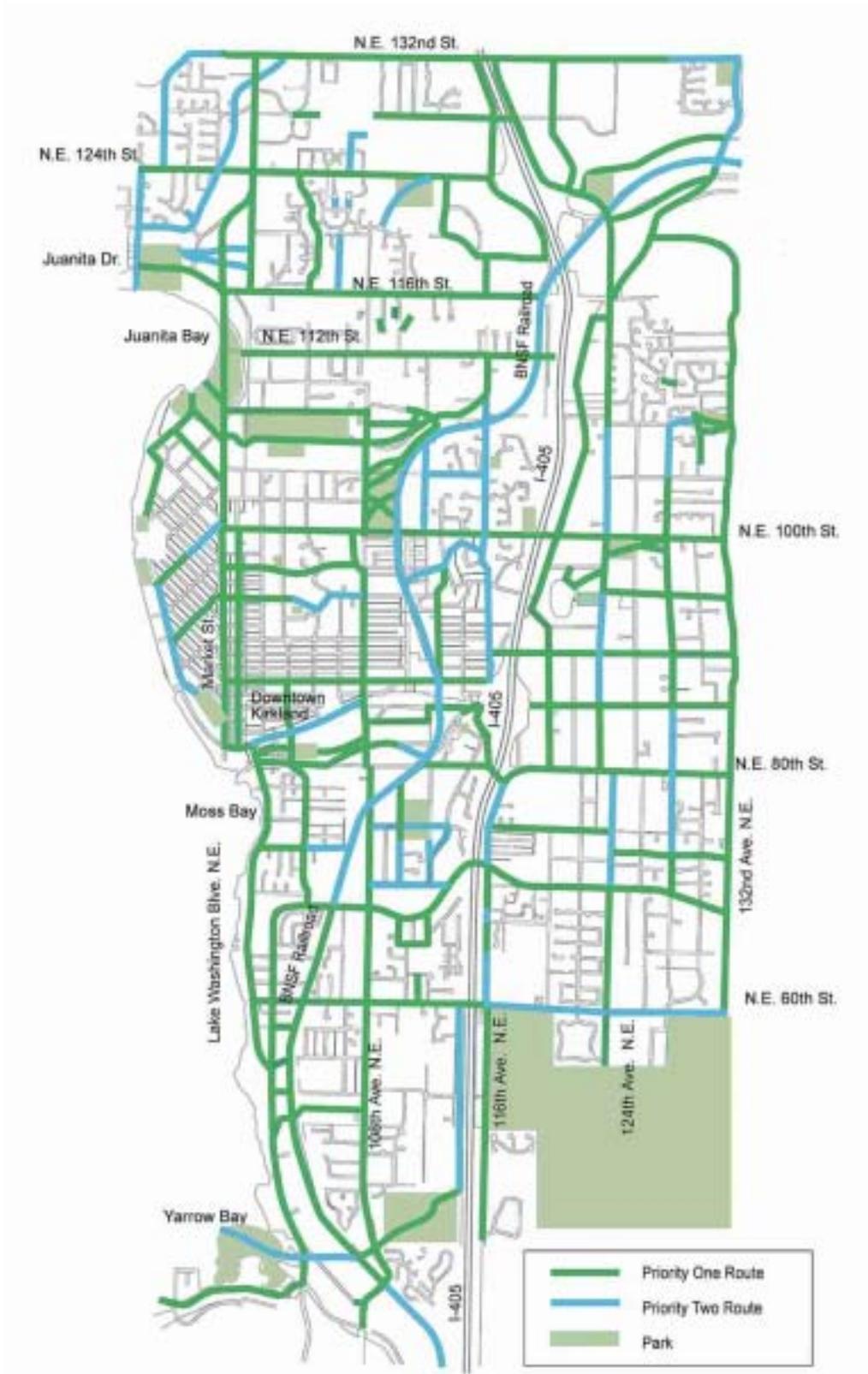
The pedestrian-friendly environment that the community is creating in downtown Kirkland may be negatively impacted with excessive traffic and unmanaged parking. The City should monitor and enforce strategies to maintain the pedestrian character of downtown.

Connective Street Patterns

Another planning trend is to discourage a predominance of cul-de-sacs in new subdivisions. Street systems based on the cul-de-sac lengthen trips, minimize connections and channel all traffic onto a limited number of arterial streets. Because of this, the massive traffic levels created on the arterial streets can have impacts on nonmotorized transportation that are far worse than any associated with a traditional connective (grid) street system.



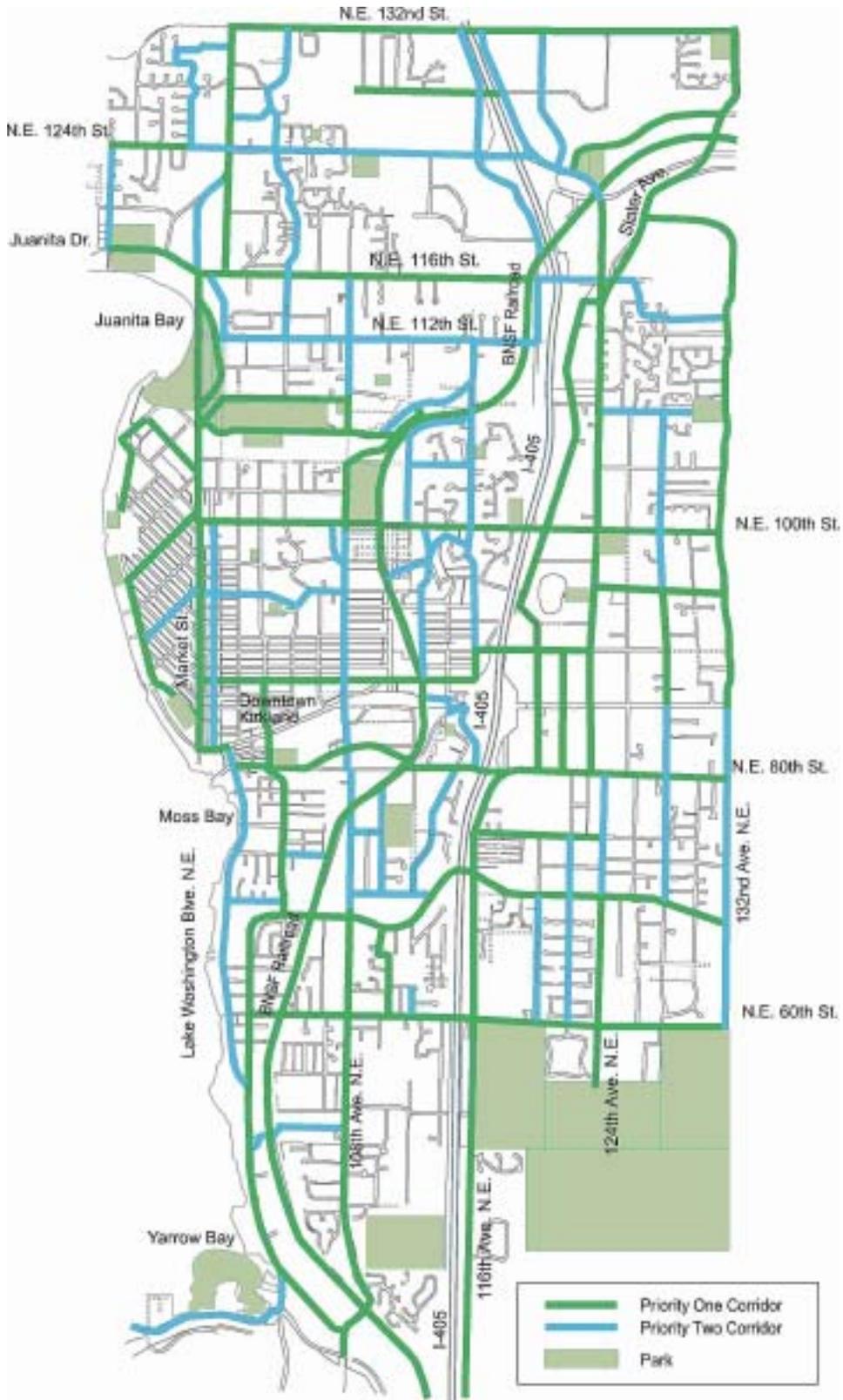
PRIORITY CORRIDOR NETWORK FOR PEDESTRIAN PLANNING
 Figure 4-1



4. PLANNING GUIDELINES



PRIORITY CORRIDOR NETWORK FOR BICYCLE PLANNING
 PRIORITY CORRIDOR NETWORK FOR BICYCLE PLANNING
 Figure 4-2
 Figure 4-2



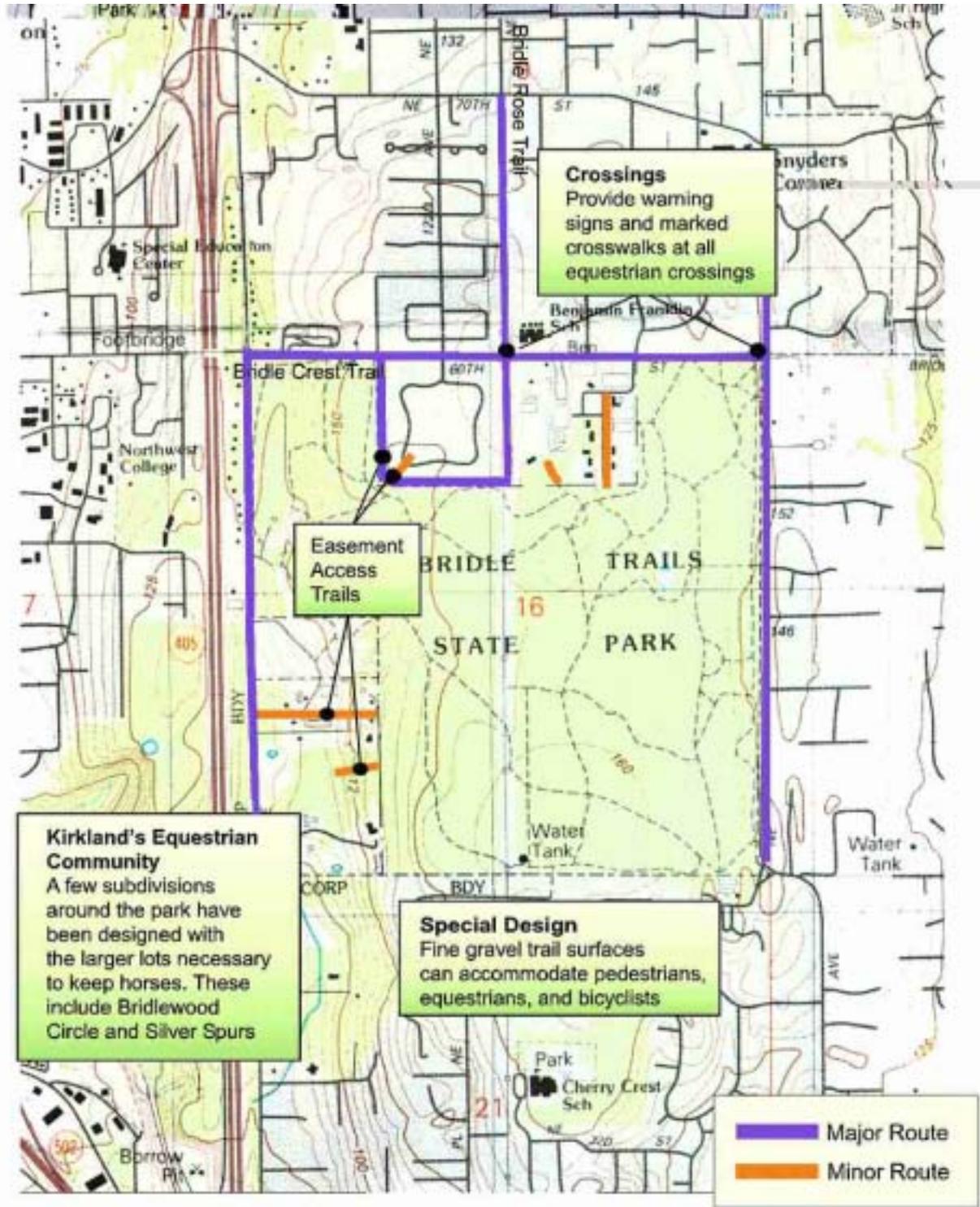
4. PLANNING GUIDELINES



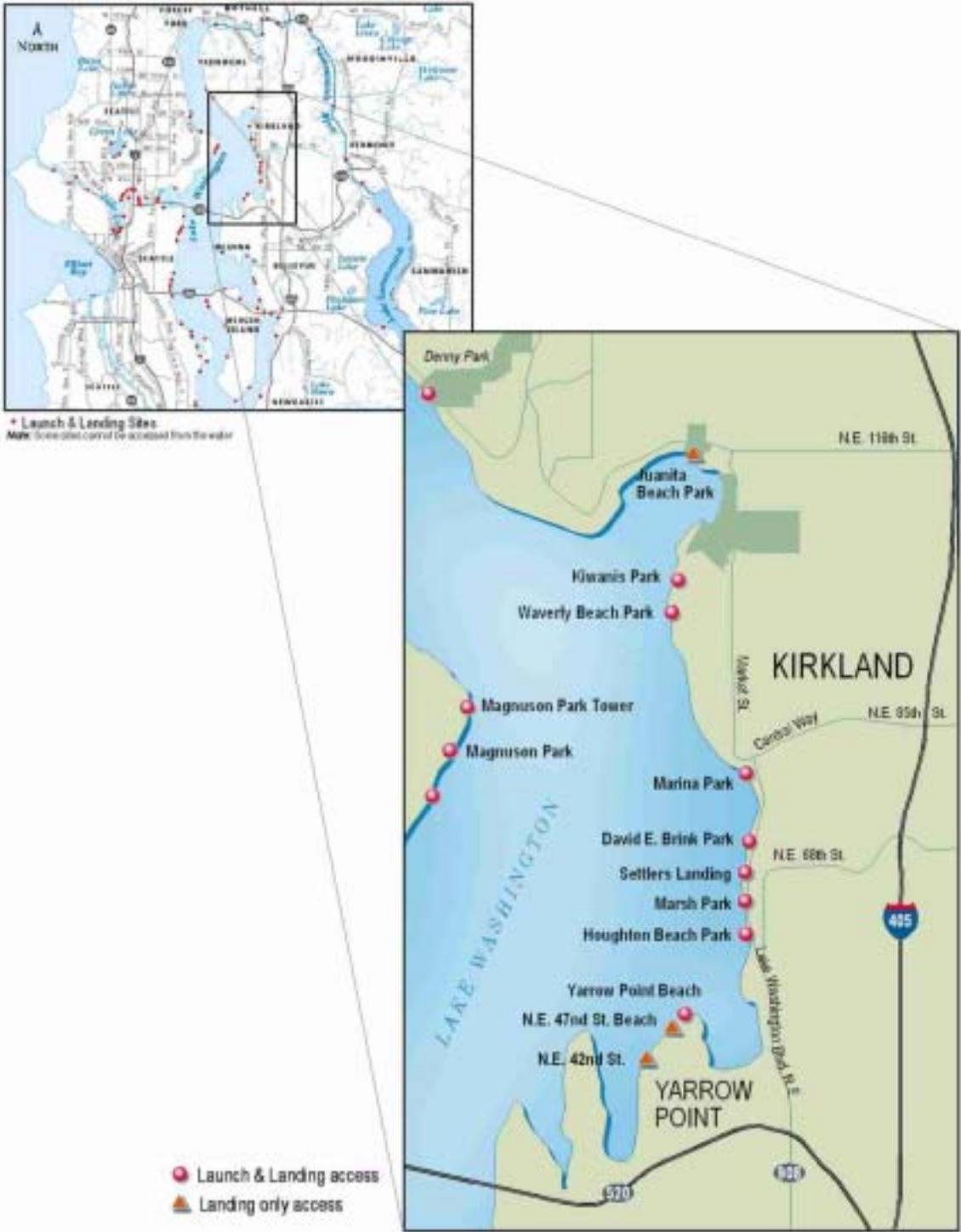
Equestrian Routes Near Bridle TRAILS State Park

Figure 4-4

4. PLANNING GUIDELINES



4. PLANNING GUIDELINES



5. NMT GOALS AND POLICY PLANNING

A complete itemization of all the goals and policies of Kirkland's Nonmotorized Transportation program is included in this chapter. There are nine fundamental goals:

- Goal 1: Ensure NMT Plan is Current and Relevant
- Goal 2: Develop the NMT Network Strategically
- Goal 3: Provide for All Users
- Goal 4: Promote Nonmotorized Travel and Safety
- Goal 5: Maintain High Standards for the Design of Pedestrian Facilities
- Goal 6: Maintain High Standards for the Design of Bicycle Facilities
- Goal 7: Coordinate Nonmotorized Transportation with Transit
- Goal 8: Uphold High Safety and Maintenance Standards.
- Goal 9: Use Progress Measures To Ensure Timely NMT System Development

All policies, grouped by corresponding Plan goals, are listed after a reiteration of the overall Plan objective.

PLAN OBJECTIVE

Increase the number of individuals who can safely travel by nonmotorized transportation through integration of nonmotorized transportation as an essential element of the transportation system, recreation system and the community.

GOAL 1: ENSURE NMT PLAN IS CURRENT AND RELEVANT

Since there is an extensive set of proposed nonmotorized projects, sound planning techniques should be used and the Plan should be periodically updated to reflect projects that have been completed and reprioritized. This will involve drawing on all planning resources available to Kirkland staff.

Policy 1.1 - Update the NMT Plan Regularly

Conduct a biannual review of the nonmotorized transportation portion of the Capital Improvements Program (CIP) and update appropriately. The entire NMT Plan should be rewritten every six years accompanied by an assessment of progress towards goals.

Policy 1.2 - Address New Issues

Bring important new nonmotorized issues to the appropriate board, commission or other body for discussion when they arise between Plan updates.

Policy 1.3 - Prioritize Pedestrian Construction Projects

Continue to use the Kirkland Transportation Project Evaluation Form to prioritize pedestrian projects. It has been developed to score candidate projects based on factors such as cost, plan consistency, mode shift from single-occupant vehicle (SOV) and connectivity achieved. The form is a useful tool for ranking of pedestrian projects.

Policy 1.4 - Prioritize Bicycle Construction Projects

Use a formal and consistent method for prioritizing construction of the bicycle



projects that are identified in this Plan. Presently, the City of Kirkland Transportation Project Evaluation Form (see Policy 1.3) is used. Another tool for prioritization that Kirkland may wish to use is the Bicycle Compatibility Index (BCI). The Federal Highway Administration developed this method for the evaluation and scoring of the suitability of existing streets based on factors such as lane widths, on-street parking, traffic volumes and speeds, and the percentage of large trucks in the traffic stream. The BCI could be used to prioritize future projects by identifying corridors or subareas that are presently deficient. The BCI value could be incorporated into the existing Project Evaluation Form to further refine the current prioritization process.

Policy 1.5 - Manage Existing and Potential Rights-of-Way

Manage existing and potential NMT rights-of-way. Kirkland should take the following measures to maintain information about rights-of-way and ensure that private obligations are being met:

- Continue entering existing facilities into the Kirkland AutoCAD and/ or Geographic Information System.
- Inventory facilities that are the maintenance responsibility of the City as a part of the City's Pavement Management System.
- Research past development conditions, perform title searches as necessary to confirm past easements and seek enforcement of unmet conditions.
- Inspect public access easements and condition access regularly to ensure that access requirements are being fulfilled.
- Acquire and/or condition public easements for nonmotorized transportation improvements

through the development review and rezone processes when the need is supported by policies adopted in this NMT Plan.

- Establish uniform processes to acquire public trail or path land via donation, tax deduction/exemption programs, development condition or purchase. The City should also consider using the assistance of organizations such as land trusts in obtaining property.
- Develop a checklist for granted easements that identifies the key components relative to public NMT access. The checklist should include width, description, recording date, surface type, type of improvement, management/maintenance responsibility, surveying, staking and signing.

Policy 1.6 - Manage an Information Base

Routinely gather data to create a base of information useful in prioritizing, programming and justifying the need and benefit of nonmotorized facilities. Include statistics on usage, accidents and statistics gathered before and after improvements are made.

Policy 1.7 - Encourage Citizen Participation

Continue to encourage active citizen participation during the planning and design of NMT facilities, particularly in affected neighborhoods, communities and business areas. In instances where facilities are being constructed or furnished by agencies other than the City, the City should seek opportunities for active citizen involvement in the planning and design of such transportation facilities.

Policy 1.8 - Coordinate With Other Jurisdictions

Coordinate with adjacent jurisdictions to develop a regional network of facilities for nonmotorized transportation. The Puget Sound Regional Council is supportive of Kirkland's approach to NMT planning as embodied by this Plan and seeks to be a resource for Kirkland. Kirkland should continue to pursue inter-jurisdictional coordination activities including:

- Review all WSDOT and City projects located in Kirkland for the inclusion of appropriate nonmotorized facilities and mitigation, per the adopted policies and procedures of each agency.
- Work with Bellevue, Redmond, Bothell and Woodinville to coordinate intercity pedestrian and bicycle facilities.
- Work with the Puget Sound Regional Council and other agencies to identify funds to assist with implementation of this Plan.

Policy 1.9 - Improve Processes of Private-Driven NMT System Expansion

Kirkland has greatly improved the process by which sidewalks are constructed through redevelopment with the use of concomitant agreements. With this system, redeveloping property owners contribute to a fund for eventual improvement of a larger section of the fronting street when more properties have redeveloped. This prevents the occurrence of short and scattered sidewalk segments, which can contribute to pedestrian safety hazards. The City should continue with this system and seek other ways to better match private-driven NMT system expansion to Plan goals.

Policy 1.10 - Requirements for New Development: Incentive Program

Develop an incentive program to encourage

the private sector to develop nonmotorized facilities beyond those that are required as dedicated improvements.

GOAL 2: DEVELOP THE NMT NETWORK STRATEGICALLY

While the ultimate goal for nonmotorized planning is for all streets in the City to accommodate nonmotorized travel, the projects that are constructed in the interim should be selected according to a strategy that seeks maximum utility for users. This involves looking closely at destinations, barriers, and the quality of the nonmotorized travel experience.

Policy 2.1 - Develop Off-Street Trails and Walkways

Through various forums of public involvement, City staff continues to receive feedback regarding the community's desire to have more off-street trails and walkways in the City. Many people feel that the most pleasant nonmotorized transportation experiences occur on trails that are separated from traffic and set in a natural environment. While the development of new off-street trails is limited by the shortage of available undeveloped land along suitable routes, opportunities exist along the utility easement corridors in the Rose Hill and Juanita neighborhoods. The City should examine the appropriateness and feasibility of developing NMT facilities in these easements. This effort will require cooperation with utilities and adjacent property owners.

Another excellent opportunity for a new off-street trail in Kirkland is the proposed Cross-Kirkland Trail. The City should work with Burlington Northern Railroad to develop a trail within this right-of-way while maintaining active rail use. Kirkland should coordinate this effort with local, county and regional government agencies.



Policy 2.2 - Develop Greenways

Since opportunities for the creation of new off-street trails is limited, the City should pursue projects that convert city streets into greenways. Treatments could include addition of planted medians, planter strips and traffic calming. Rather than closing the street to traffic, the goal is to reorient the street to the pedestrian experience. The Parks and Community Services and Public Works departments should work together to find streets appropriate for greenway conversion/ development.

Policy 2.3 - Connect NMT Facilities to Destinations within the Region

Promote pedestrian and bicycle facilities that connect to adjacent communities as well as regional destinations and facilities.

Policy 2.4 - Connect Destinations within Kirkland - Priority Corridors

Focus construction of new pedestrian and bicycle facilities in the Priority Corridors. The pedestrian and bicycle priority corridor networks are defined in Figures 4-1 and 4-2 of this Plan. These corridors have been selected to connect neighborhoods and safely access commercial areas, schools, transit routes, parks and other destinations within Kirkland.

Policy 2.5 - Make Localized System Improvements

There are many instances in Kirkland where small improvements can be made to enhance local safety and remove obstacles within an existing pedestrian or bicycle route. Kirkland should investigate the possibility of adding a Capital Improvements Program line item with a budget for making improvements in these areas.

Policy 2.6 - Provide Connections Within and Between Developments

Connect existing cul-de-sacs with pedestrian and bike paths wherever possible. Use the subdivision ordinance to require such connections in all new subdivisions that contain cul-de-sacs. (New cul-de-sac development is discouraged, see Section 4.6.) Use the new connections ordinance to require pedestrian walkways between abutting parcels for new development.

GOAL 3: PROVIDE FOR ALL USERS

Nonmotorized planning must be responsive to the needs of several different special user groups.

Policy 3.1 - Development With Human Service Facilities

Integrate NMT Planning with health and human services planning to promote provision of service near transit hubs, which can be easily accessed by pedestrians, bicyclists and other forms of NMT.

Policy 3.2 - Plan For Seniors

Ensure that pedestrian planning is consistent with the needs of senior citizens. Kirkland Senior Center's downtown location combined with the downtown's pedestrian scale suggests that every effort should be made to protect and improve the accommodation of senior citizens in the downtown area. Also, as new senior housing facilities are planned, appropriate pedestrian planning should be undertaken in the surrounding area.

Policy 3.3 - Plan For Children

It is well established that children are involved in collisions with vehicles disproportionately in comparison to the general population. Children are at a disadvantage as pedestrians because their depth perception and sense of speed is not fully developed and they can be inattentive. Particularly near schools and parks, the design of walkways should take these factors

into consideration by keeping sight lines open and alerting motorists to the presence of children.

Policy 3.4 - Plan For The Physically Challenged

Kirkland should address the needs of the physically challenged in accordance with the Americans with Disabilities Act (ADA) and the Washington State Building Code regulations when designing and implementing nonmotorized transportation Capital Improvement Projects. Specific measures should include:

- Train appropriate City staff in barrier-free design standards and issues. Utilize this expertise in designing projects and establishing Development Standards. Training should include the State Architectural Standards, Americans with Disabilities Act, and other federal or state guidelines or requirements.
- Survey and identify intersections in the City that need curb ramps and develop and fund a program to install them. Prioritize curb cuts in accordance with this Plan. Kirkland should construct curb ramps in compliance with the Americans with Disabilities Act.
- Establish a program to survey and eliminate driveway and curb cut defects so that they are negotiable by disabled persons.
- Consider establishing a funding program so that the City can respond to the needs and requests of the sight-impaired for crossing streets by installing audible signal mechanisms.
- Represent the needs of Kirkland's physically challenged citizens to transit agencies in routing, bus stop location, and improved access to bus stops. Seek transit agency assistance in improving the access to transit

when relocation of bus stops is not feasible.

Policy 3.5 - Encourage Existing Equestrian Activity and Enhance Conditions

In the Kirkland neighborhoods north and west of Bridle Trails State Park, there are residents with horses who ride to the park and regionally. The only zoning code requirement for keeping horses is a minimum lot size. A few of the subdivisions in this area have been designed to meet this minimum size with all lots. The new development trend is for smaller lots, but the existing equestrian activity should be encouraged and conditions enhanced.

Measures include:

- Develop roadside equestrian trails according to the major and minor route map depicted in Figure 4-4 in this document.
- Review transportation projects in Bridle Trails Neighborhood for compatibility with equestrian use.
- Consider a sign treatment similar to the signs in Bellevue reading "Entering An Equestrian Community."
- Where appropriate, create surface trails with stabilizer or a fine crushed material that compacts well and accommodates equestrians, cyclists and pedestrians.

Policy 3.6 - Support Development of Facilities for Other Nonmotorized Travel Modes

Recognize that nonmotorized transportation is not limited to walking or bicycling. Other modes include wheelchairs, horses, skateboards, scooters, skates, and nonmotorized watercraft. When appropriate, Kirkland should accommodate these modes on existing facilities or explore the feasibility of developing new facilities for these modes.



GOAL 4: PROMOTE NONMOTORIZED TRAVEL AND SAFETY

Policy 4.1 - Conduct NMT Education and Promotion Efforts for the General Public

Educate the public about the health, recreational, financial, environmental, energy, and transportation benefits of nonmotorized transportation. Kirkland should consider developing a comprehensive and integrated public informational education program highlighting issues and available programs that describe the potential benefits of nonmotorized transportation. The program should be developed in conjunction with local and regional government agencies, including the Lake Washington School District, and consider integration with public transit education and promotion efforts. Other efforts should include:

- Promote the physical and mental health benefits of physical activity.
- Maintain the Kirkland Park Facilities and Trail Guide with up-to-date information.
- Maintain the Kirkland Bicycling Guide with up-to-date information.
- Provide technical assistance to employers, employee transportation coordinators and building managers in installing high-quality secure and convenient bicycle parking, shower and locker facilities.
- Participate in regional transit transportation fairs and forums.
- Promote established bike-to-work and walk-to-work days.
- Include promotional articles about bicycling and walking in City publications.
- Include directions for nonmotorized travel to public meetings.
- Identify employee incentives that affect transportation choices. Make revisions so that travel by bike and foot is encouraged.

- Issue regular press releases about Kirkland’s nonmotorized transportation program.
- Develop and implement a program to make bicycles available to City employees conducting City business. This bicycle pool should be similar to the City’s car pool.
- Provide drivers, bicyclists and pedestrians with information on how to share the road. This would help motorists treat bicyclists as legal users of the public roads.

Policy 4.2 - Provide NMT Education and Promotion Through the Commute Trip Reduction Program

Through adoption of an ordinance, the City enacted the State Commute Trip Reduction (CTR) Act. The intent of this law is to improve air quality, reduce traffic congestion and reduce the consumption of petroleum fuels through employer-based programs that encourage the use of alternatives to single-occupancy vehicles or vehicle use for commute trips.

The CTR law mandates that each affected jurisdiction review local parking policies and ordinances to insure compliance with commute trip reduction goals and guidelines. This NMT Plan recognizes the mandate and incorporates the Growth Management Planning Council’s work. Kirkland should pursue the following efforts associated with the program:

- Produce public NMT information materials tailored specifically to commuters.
- Require new multifamily, office and industrial development to implement Transportation Management Programs, which include NMT options.
- Continue the partnership with the business community through



coordination of employer networking groups.

- Develop incentives for employers whose employees use NMT to exceed the basic requirements of the CTR law.
- Support the development of new ideas and programs for changing commuter behavior.

Policy 4.3 - Provide Public Education/Awareness of NMT Program

As part of nonmotorized transportation educational policies, Kirkland should utilize a strategic program aimed at reminding pedestrians, motorists, bicyclists, and equestrians how to safely coexist. This program should include working with the City Manager’s Office to include NMT educational information in the City Update as well as installing informational signing where appropriate.

Policy 4.4 - Provide Public Awareness of the Health Benefits of NMT

The City should assist agencies such as the Seattle & King County Public Health Department and Centers for Disease Control and Prevention (CDC) in educating the residents of Kirkland of the health risks that arise from physical inactivity and the health benefits of walking, cycling, and other exercise. Research from these groups shows a strong link between physical activity and health. The Surgeon General has reported that the benefits of regular physical activity may include decreased risk of heart disease, weight control, and relief of symptoms associated with depression and anxiety.

The CDC has also been very active in promoting regular physical activity for children. The “KidsWalk-to-School” program, developed by the CDC, encourages children to walk or bicycle to and from school. The City should work with the Lake

Washington School District to promote this program in Kirkland.

GOAL 5: MAINTAIN HIGH STANDARDS FOR THE DESIGN OF PEDESTRIAN FACILITIES

Policy 5.1 - Adhere to Pedestrian Facility Design Standards of NMT Plan

Chapter 6 of this Plan contains standards for the primary aspects of walkway design. These standards are based upon accepted national standards. They should be adhered to for all City and developer walkway construction projects.

Policy 5.2 - Adhere to Zoning Code Provisions on Sidewalk Design

In the design of Capital Improvements Projects, Kirkland should adhere to the Zoning Code provisions for landscape requirements. Meandering sidewalks should be considered when necessary to preserve or avoid topographical features, existing trees, and to minimize property disruption. Conformance to these provisions should be reviewed when sidewalks are constructed by parties other than the City.

Policy 5.3 - Construct Appropriate Street Crossing Treatments

Continue to implement appropriate treatments for unprotected (unsignalized) crossings.

Factors that should be considered in choosing a crossing treatment:

- Characteristics of pedestrian population (children, seniors, etc.)
- Roadway geometry/ sight distance
- Pedestrian volume
- Vehicle speeds
- Vehicle volume
- Distance to nearest protected crossing



Kirkland should continue to implement the following crossing treatments with positive results:

- Marked/signed crosswalks
- Median refuge islands
- Curb bump-outs (neckdowns)
- Pedestrian flags (highly visible flags on each side of street to be carried by crossing pedestrians)
- Pedestrian signals
- Flashing in-pavement lights
- Raised crosswalks

Kirkland should strive for the following goals regarding crosswalks:

- Provide safe and efficient travel for pedestrians of all ages and abilities
- Provide appropriate and consistent installation of crossing treatments
- Provide a balance between pedestrian needs and the impact on other modes of transportation
- Continue to implement innovative techniques and new technologies as appropriate in the design of crossing treatments to maximize NMT safety, accessibility and mobility.

GOAL 6: MAINTAIN HIGH STANDARDS FOR THE DESIGN OF BICYCLE FACILITIES

Policy 6.1 - Adhere to Bicycle Facility Design Standards of NMT Plan

Chapter 6 of this Plan contains design standards for the two primary types of bikeways: shared use paths and bike lanes. These standards should be adhered to for all City and developer bike facility construction projects.

Policy 6.2 - Mitigate Severe Topography

Special consideration should be given to bicycle projects which can address

topographic constraints to bicycle access either through routing that minimizes grades or by providing additional bike lane width to accommodate slower bicycle speeds. Additional bike lane width in the uphill direction compensates for the larger difference in bike and vehicle speeds.

GOAL 7: COORDINATE NONMOTORIZED TRANSPORTATION WITH TRANSIT

Develop a transit system that is fully accessible to all pedestrians, which integrates as thoroughly as possible the access, safety and parking requirements of bicyclists.

Policy 7.1 - Ensure Good NMT Access to Transit Stations

Consider nonmotorized access in the selection of potential transit system station locations.

Policy 7.2 - Match Pedestrian Crossings with Bus Stops

Continue to look for opportunities to coordinate with King County Metro Transit, Sound Transit, and the Lake Washington School District to construct street crossing treatments at bus stops or, if more appropriate, move bus stops to existing nearby crossings.

Policy 7.3 - Ensure Convenient Access to High Capacity Transit

Ensure that the High Capacity Transit System provides for convenient pedestrian and bicyclist access. Specifically:

- Work with King County Metro Transit and WSDOT to identify and fund improvements for bicycle access to park-and-ride facilities, park-and-pool facilities and major transit stations and bus routes.
- Work with King County Metro Transit, WSDOT, and Sound Transit to identify and fund a list of specific bicycle parking improvements at Park and Ride lots, Park and Pool



lots and major transfer stations. Bicycle parking spaces should equal a minimum of 15% of the number of car spaces.

- Work with Sound Transit to build nonmotorized transportation connections to high capacity stations.

GOAL 8: UPHOLD HIGH SAFETY AND MAINTENANCE STANDARDS

Policy 8.1 - Adhere to National Safety Standards

Adhere to the federal design standards for bicycle facilities summarized in Chapter 6 with all new facilities to maintain a high degree of safety within the pedestrian and bicycle system. The bicycle standards all meet or exceed the standards set forth in the *Guide for the Development of Bicycle Facilities* by the American Association of State Highway and Transportation Officials. This guide was created with the input from bicycle planners across the country and reflects their experiences with the safety and operational aspects of bicycle facilities.

Policy 8.2 - Provide Adequate Maintenance Resources

Expansion of the number of the City's trail and walkway systems will require additional maintenance resources from the City. Ensure that these resources are increased to match the increased amount of facilities.

Policy 8.3 - Prioritize Pedestrian Facilities in School Walk Routes

Continue to coordinate with the Lake Washington School District and neighborhood groups in identifying potential sidewalk projects on established school walk routes.

Act on committee recommendations: at the time of this writing, a School Walk Route Advisory Committee is examining this issue. The committee is comprised of

representatives from local elementary schools, the Lake Washington School District, Neighborhood Associations, and City staff. It is in the process of evaluating current walk routes, identifying issues associated with walk routes, identifying potential funding resources to improve walk routes, and prioritizing improvements utilizing current funding.

Policy 8.4 - Improve the Safety of Railroad Crossings

Work with the railroads to identify all at-grade railroad crossings, which do not cross roadways at 90-degree angles. Safety improvements that permit safe passage by bicycles without requiring severe turning movements into adjacent traffic lanes should be made wherever possible.

Policy 8.5 - Enforce Safety Laws

Through the Kirkland Police Department, the City should emphasize enforcement of the "Rules of the Road" for travelers whose actions endanger pedestrians or bicyclists. This enforcement should be conducted in a manner to reinforce pedestrian and bicycling safety education programs.

Policy 8.6 - Budget Interim Improvements

Consider constructing lower cost interim sidewalks, paved walkways or trails as a means to provide pedestrian facilities when there is considerable demand, but the funding for the ideal facility is not yet programmed.

Policy 8.7 - Improve Equestrian/Vehicle Safety

Educate motorists on how to safely pass an equestrian, possibly by using the City Update newsletter.



Policy 8.8 - Match Traffic Control with Equestrian Crossings

Within traffic operations constraints, Kirkland should install crossing signs and markers at all locations where equestrians cross the street near Bridle Trails State Park.

Policy 8.9 - Encourage Property Owners to Meet Maintenance Obligations

Take the following measures to improve the conditions of sidewalks and easements:

- Enforce the requirement of property owners to keep sidewalks clear of vegetation.
- Develop a system that allows staff to identify which NMT easements have maintenance requirements that the City can enforce.
- Educate the public on these property owner maintenance obligations and enforce them.
- Identify gravel driveways that cause shoulder debris problems and work with property owners to pave the trouble spots.

Policy 8.10 - Maintain Bikeways

Maintain bikeways so that they are conducive to bicycle travel. Bicycle lanes need more maintenance than the adjacent traffic lanes since the “sweeping” action of automobile traffic causes accumulation of debris at the edge of the road.

Policy 8.11 - Minimize Construction Activity Impacts on Nonmotorized Facilities

Minimize the duration and extent that construction activities impact nonmotorized transportation facilities. The City should develop permit conditions and other means to minimize the

disruption of NMT facilities, provide for safe travel of all users during this disruption, and to eliminate unnecessary staging of equipment, materials, or signs.

GOAL 9: USE PROGRESS MEASURES TO ENSURE TIMELY NMT SYSTEM DEVELOPMENT

Recognizing that it will take multiple decades to complete all of the projects identified in this Plan, progress measures are needed for the interim. Progress measures are necessary to ensure that facilities are being constructed at a steady rate and that key connections are being made. The two measures that have been adopted are known as System Mileage and Complete Corridors. The System Mileage measure refers to the total number of miles of facilities within the pedestrian or bicycle Priority Corridors. Existing and projected system mileages are shown in Figure 5-1. The Complete Corridors measure is the number of Priority Corridors that are continuously served by facilities throughout their length. Section 4.1 of this Plan provides more information on the measures and their development.

Policy 9.1 - Attain a Pedestrian System Mileage value of 105.2 in 2007 and 131.3 in 2012.

With the 2000 system inventory the Pedestrian System (sidewalks and trails) Mileage was found to be 102.1 miles. This goal reflects a rate of completion that is consistent with the level of service goals in the 1995 NMT Plan.

Policy 9.2 - Attain a Bicycle System Mileage value of 41.5 in 2007 and 50.7 in 2012.

With the 2000 system inventory, the Bicycle System Mileage was found to be 41.0 miles. This goal reflects a rate of completion that is consistent with the level of service goals in the 1995 NMT plan.



Policy 9.3 - Attain Six East-West and Four North-South Complete Corridors for the Pedestrian System by 2007.

With the 2000 system inventory, there were two complete east-west Pedestrian Priority Corridors (NE 60th St. and NE 70th St.) and two complete north-south corridors (Market St./ Lake Washington Blvd. and 132nd Ave. NE).

Policy 9.4 - Attain Four East-West and Two North-South Complete Corridors for the Bicycle System by 2007.

With the 2000 inventory, there was only one complete Bicycle Priority Corridor – the east-west corridor of NE 132nd St. (King County) and no complete north-south corridors.

Policy 9.5 - Establish a Concurrency Management System

Establish a concurrency management system that integrates the programming and administration of transportation improvement, services and programs with the Comprehensive Plan. The Growth Management Act (GMA) requires that transportation improvements and programs needed to accommodate planned growth be provided concurrently as new development occurs.

Policy 9.6 - Increase the Percentage of Nonmotorized Trips

Strive to attain the US Department of Transportation goal of 15% biking or walking trips by 2010. Furthermore, the Puget Sound Regional Council has set a goal that by 2030, 20% of all trips taken will be made by bicycling or walking.

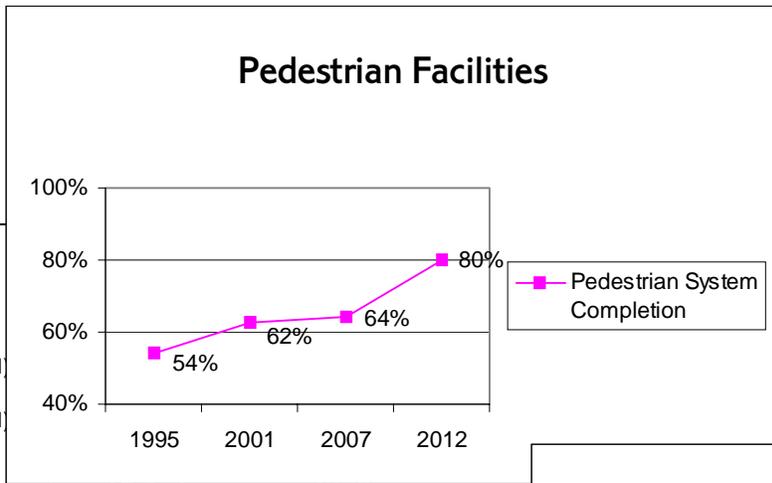


PROGRESS TOWARD SYSTEM MILEAGE GOALS

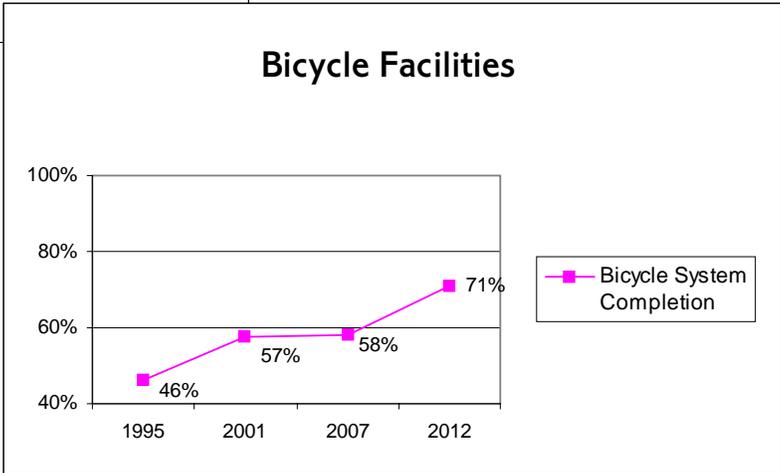
FIGURE 5-1

Plan Policies 9-1 and 9-2 set goals for the rate of completion of the pedestrian and bicycle systems. The table and graphs below present the facility mileage and percent completion for 1995 and 2001 with projections for the years 2007 and 2012. The completed pedestrian and bicycle system mileages are based on Figures 7-1 and 7-2, respectively.

1995 (actual)
 2001 (actual)
 2007 (projected)
 2012 (projected)
 Completed System



103.7 71.4



6. NMT FACILITY DESIGN STANDARDS

“When streets are engineered for fewer purposes, focused on moving traffic and little else, they fail the greater need of a city.”
-Dan Burden, Director of Walkable Communities

In order to provide safe facilities for bicyclists and pedestrians, specific design guidelines need to be observed. The following pedestrian and bicycle facility standards used by the Washington State Department of Transportation (WSDOT) and the American Association of State Highway and Transportation Officials (AASHTO) should be referenced in the design of bikeways and walkways.

Refer to City of Kirkland Public Works Department Pre-Approved Plans for a complete listing of the revisions to State and Federal Nonmotorized Transportation Design Standards.

Classifications

The various classifications for Bikeways and Walkways utilized in this document include:

- **Pedestrian Walkway**, including:
 1. Sidewalk
 2. Paved Trail
 3. Limited Purpose Unpaved Trail
 4. Multi-Purpose Unpaved Trail

(See Section 6.1 for walkway definitions)

- **Shared Use Path** (formerly Class I Bikeway)
- **Bike Lane** (formerly Class II Bikeway)
- **Signed Shared Roadway** (formerly Class III Bikeway)
- **Shared Roadway** (formerly Class IV Bikeway)
(See Section 6.2 for bikeway definitions)

Design Standards

Designing for bikeways or walkways requires consideration of the following elements:

- Facility geometry: alignment, width, grades, and cross slopes
- Clearance from obstructions (horizontal and vertical)
- Intersections (i.e., crossings)
- Sight distances
- Signing and marking
- Lighting
- Surfacing (e.g., paved, compacted crushed rock – gravel)
- Structures (e.g., bridges, underpasses)
- Drainage
- Railroad crossings
- Shoulders
- Design speed

6.1 PEDESTRIAN FACILITIES

Figures 6-3 through 6-5 demonstrate the design standards for the various walkway classifications utilized in Kirkland and are described on the following page.



Pedestrian Walkway

A pedestrian walkway is a continuous way designated for pedestrians and separated from motor vehicle traffic by a physical barrier or space. Types of pedestrian walkways include:

- Sidewalks
- Paved Trails
- Limited Purpose Unpaved Trails
- Multi-Purpose Unpaved Trails

Sidewalks

Sidewalks are immediately adjacent to roadways and, in urban areas, are usually raised to the level of the curb (6 inches). Kirkland has adopted a minimum sidewalk width of 5 feet and a maximum of 12 feet. The preferred design calls for a 4.5-foot (min.) planting strip and a 5-foot (min.) sidewalk (Figure 6-3). When no planting strip is provided, and the sidewalk is a major link in the pedestrian network, the minimum desirable width for sidewalks is 7 feet. Vertical clearance should be at least 8 feet.

Paved Trails

These trails act as connectors between pedestrian use areas that are not traversed by roadways and their associated sidewalks. Paved trails are necessary where high use is expected and accessibility is desired. The trail should be a minimum of 6 feet wide with at least 1 foot graded shoulders on both sides (Figure 6-4). The clear area around walking trails should be 3 feet on each side of the trail and 8 feet vertically.

Multi-Purpose Unpaved Trails

As shown in Figure 6-5, Multi-Purpose Unpaved Trails should be between 6 and 10 feet wide and surfaced with compacted crushed rock (gravel) suited to the existing soils and uses.

Limited Purpose Unpaved Trails

Limited Purpose Unpaved Trails may be 4 to 6 feet wide. They are used by a range of hikers and/or equestrians. Surfacing options suited to environmental conditions and user groups include compacted crushed rock (gravel), boardwalk, wood chips, or soil. See Figure 6-5 for an illustration of this type of facility.

Grade Separations

In some instances, it may be necessary to accommodate pedestrians and bicyclists with bridges or tunnels in order to separate the nonmotorized travelers from heavy vehicular traffic. Grade separation bridges or tunnels are designed on a project by project basis, but general guidelines and design criteria are provided in the WSDOT Design Manual.

Curb Ramps

Design standards for curb ramps in Kirkland are included in the Pre-Approved Plans. These plans specify curb ramp locations, widths, slopes, and cross slopes that comply with current ADA requirements.

For additional guidance on the design of facilities that comply with the Americans with Disabilities Act, the reader is advised to contact the U.S. Access Board 1331 F Street, NW, Suite 1000 Washington, DC 20004-1111; or visit their web site at: www.access-board.gov.

Walkways on Roadway Structures

Provisions for walkways are to be considered on all roadway structures (i.e., bridges, and overpasses) and should be incorporated where significant pedestrian traffic volume is anticipated. See WSDOT standards for design requirements. A traffic barrier or raised sidewalk portion will separate pedestrians from vehicles. Motor vehicle speeds and volumes will be

considered when determining the appropriate type and width of the pedestrian facility.

Examples of traffic barriers in Kirkland include the 98th Avenue NE bridge over Forbes Creek and the NE 116th Street bridge over the BNSF railroad tracks near 120th Avenue NE.

6.2 BICYCLE FACILITIES

Figures 6-1 and 6-2 illustrate the design standards for the various bikeway classifications utilized in Kirkland and are described below. The bicycle facility classifications correspond to the categories used in the AASHTO guide and are listed below with examples in or near Kirkland. These criteria are described in greater detail in the latest edition of the *Guide for the Development of Bicycle Facilities* published by the American Association of State Highway and Transportation Officials (AASHTO) and the Washington State Department of Transportation (WSDOT) Design Manual Section 1020 *Facilities for Nonmotorized Transportation*.

Shared Use Paths

A Shared Use Path (formerly Class I Bikeway) is a trail physically separated from motorized vehicular traffic for the principal use of bicycles; it also can accommodate pedestrians (Figure 6-1). The minimum width when exclusively used by bicycles should be 6 feet for one-way traffic and 10 feet for two-way. When shared with pedestrians, the minimum width is 12 feet. The shoulders should be a minimum of 2 feet and graded as close to 2 percent as possible.

Separation between Shared Use Paths and adjacent highways should be a minimum of five feet. If this separation cannot be achieved, the path must include a physical

divider such as a concrete barrier, fence, or a hedge. Specific dimensions for such barriers are described in the AASHTO guide. The maximum longitudinal path grade recommended is five percent. Steeper grades of 5 to 10 percent can be tolerated for short segments up to approximately 500 feet. A cross slope of 2 percent is recommended for proper drainage. Centerline striping is optional but is recommended on corners if sight distance is inadequate, in areas where night riding is expected, and where there is congestion. Additional design guidelines including design speed, horizontal alignment and super elevation lateral clearance on horizontal curves, and length of crest vertical curves can be found in the above referenced AASHTO and WSDOT materials.

Examples of regional Shared Use Paths are the Burke-Gilman Trail and the Sammamish River Trail. The only existing Shared Use Path in Kirkland is Juanita Bay Park. Proposed Shared Use Paths include the Cross-Kirkland Trail and the Forbes Valley Trail.

Bike Lanes

A Bike Lane (formerly Class II Bikeway) is a portion of a roadway that is designated with signs and/or pavement markings for the preferential use of cyclist. Bike Lanes are one-way facilities only and are designed with or without adjacent parking along the road (Figure 6-2). The more desirable configuration is to have the Bike Lane without parking, eliminating potential conflicts (e.g., opening car doors). In either case, the bike lane width should be 5 feet at a minimum. Four-inch wide solid white foglines should be used along the traffic and parking sides of the lane and Bike Lane symbols should be stenciled on the pavement every 200 to 300 feet (see Figure 6-2).



Most auto/bicycle accidents occur at intersections. The WSDOT Design Manual illustrates various intersection and ramp configurations that allow both motorists and bicyclists to operate in accordance with the normal rules of the road.

There are several existing and planned bike lanes in Kirkland. Examples of bike lanes include Market Street, Lake Washington Boulevard south of NE 60th Street, and NE 116th Street.

Signed Shared Roadways

A Signed Shared Roadway (formerly Class III Bikeway and sometimes referred to as *bicycle route*) is a roadway shared by bicycles and motor vehicles with a wide shared curb lane or paved shoulder and signage designating the roadway as an appropriate route for comfortable bicycling. Signed Shared Roadways serve either to provide continuity to other bicycle facilities or to designate preferred routes through high bicycle-demand corridors. As with bike lanes, designation of these routes is an indication to cyclists that there are particular advantages to using these routes as compared with alternative routes. This type of facility has not been used in Kirkland, but a potential route is Lake Washington Blvd/Lake Street between NE 60th Street and Central Way.

Shared Roadways

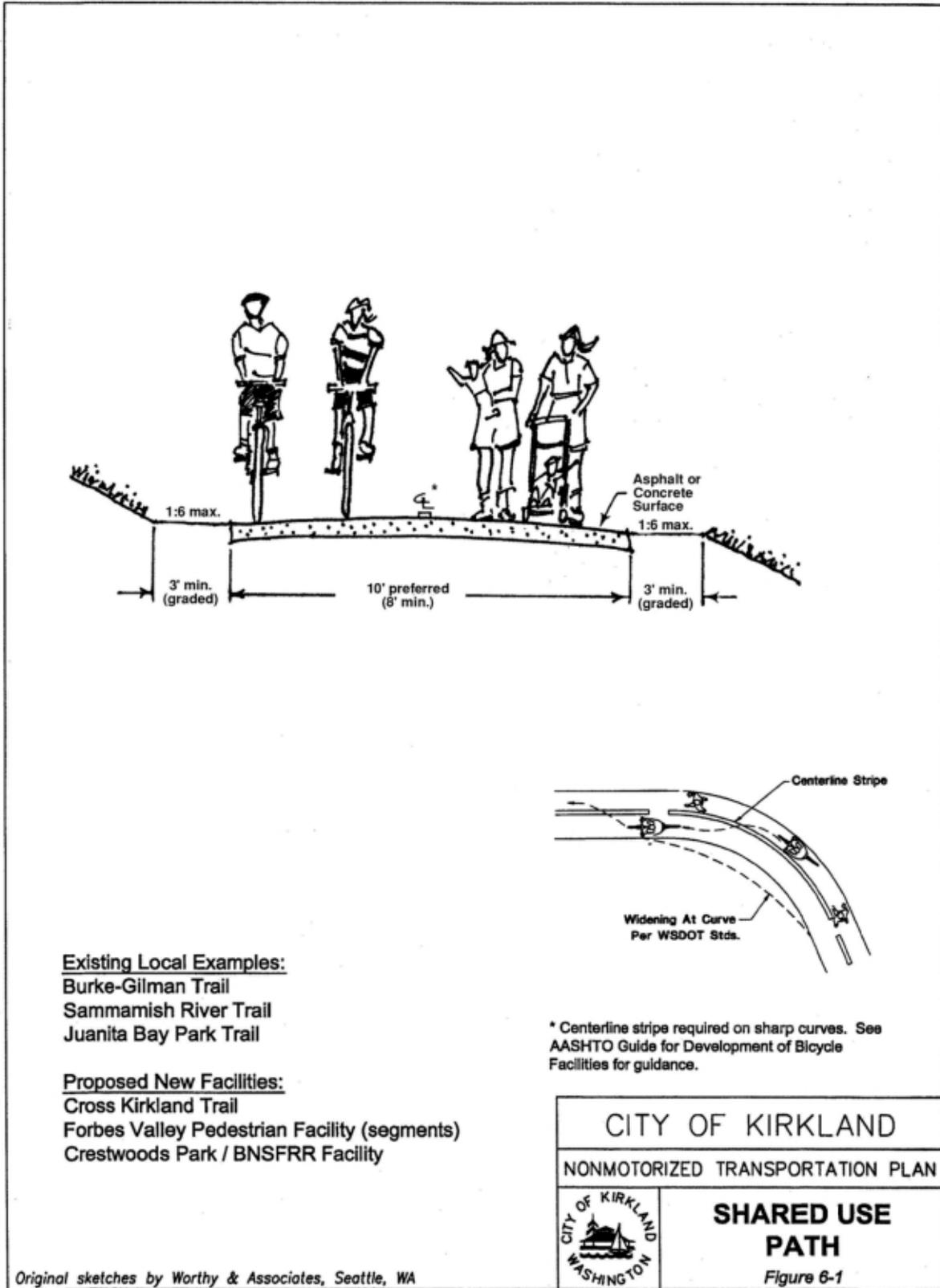
A Shared Roadway (formerly Class IV Bikeway) is an unmarked, unsigned street that is fully adequate for safe and efficient bicycle travel. Signing and striping on these bikeways are considered unnecessary due to low traffic volumes and speeds, good sight distance, and adequate roadway width.

Many of Kirkland's streets are considered Shared Roadways, including 1st Street in the Norkirk neighborhood.



SHARED USE PATH

FIGURE 6-1

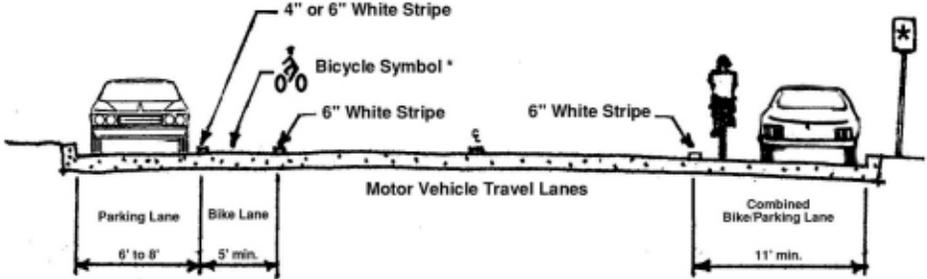


BIKE LANE

FIGURE 6-2

ON-STREET PARKING

Existing Local Examples:
Market Street
State Street

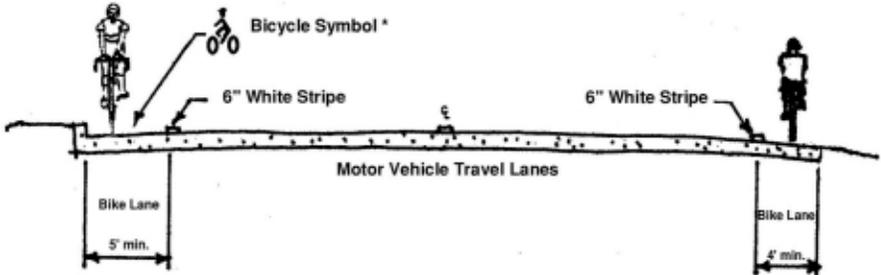


* Refer to AASHTO bicycle guide and the current Manual on Uniform Traffic Control Devices (MUTCD) for placement of signs & pavement markings.

PARKING PROHIBITED

(WITH CURB & GUTTER)

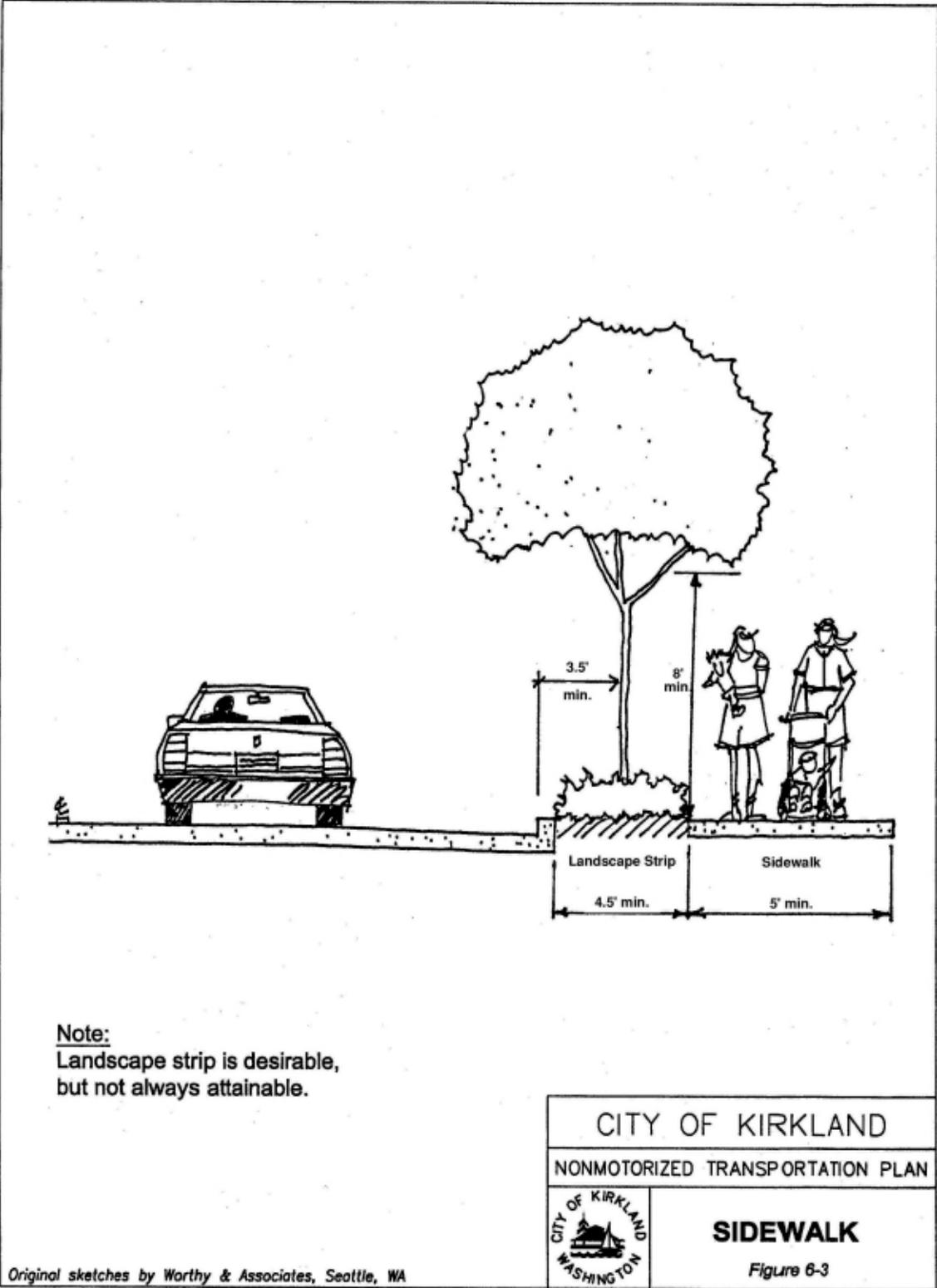
(NO CURB)



Existing Local Examples:
NE 70th Street
NE 116th Street
Lakeview Drive

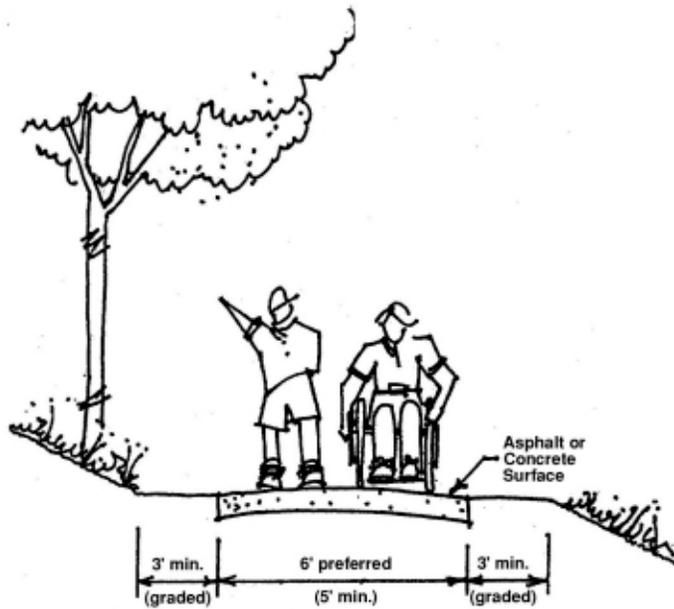
CITY OF KIRKLAND	
NONMOTORIZED TRANSPORTATION PLAN	
	<p>BIKE LANE</p> <p>Figure 6-2</p>

**SIDEWALK
FIGURE 6-3**



PAVED TRAIL

FIGURE 6-4



Existing Local Examples:
Everest Park
Crestwoods Park

Refer to the following for specific design guidance:
WSDOT Design Manual, Chapter 1020
WSDOT Pedestrian Facilities Guidebook
City of Kirkland Pre-Approved Plans

CITY OF KIRKLAND

NONMOTORIZED TRANSPORTATION PLAN



PAVED TRAIL

Figure 6-4

Original sketches by Worthy & Associates, Seattle, WA

UNPAVED TRAILS

FIGURE 6-5

LIMITED PURPOSE

Refer to the following for specific design guidance:
 WSDOT Design Manual, Chapter 1020
 WSDOT Pedestrian Facilities Guidebook
 City of Kirkland Pre-Approved Plans

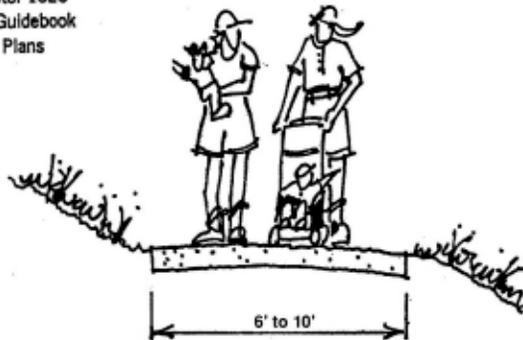
Existing Local Examples:
 Boardwalk - Juanita Bay Park
 Soil Surface - Watershed Park



Surfacing materials include gravel, wood chips, timbers, soil, or similar materials.

MULTI-PURPOSE

Refer to the following for specific design guidance:
 WSDOT Design Manual, Chapter 1020
 WSDOT Pedestrian Facilities Guidebook
 City of Kirkland Pre-Approved Plans



Surfacing materials include gravel, wood chips, timbers, soil, or similar materials.

Existing Local Examples:
 NE 100th Street Trail
 at Crestwoods Park

CITY OF KIRKLAND	
NONMOTORIZED TRANSPORTATION PLAN	
	UNPAVED TRAILS Figure 6-5

Original sketches by Worthy & Associates, Seattle, WA



7. NMT FACILITIES RECOMMENDATIONS

This chapter includes Pedestrian and Bicycle System Maps as well as the Nonmotorized Facility Project Map. Also in this section is a detailed list of identified NMT projects.

7.1 SYSTEM MAPS/ COMPLETION STATUS

Based on the Priority Corridor concept introduced in Section 4-1, Figures 7-1 and 7-2 depict the proposed bicycle and pedestrian systems, respectively. While the color maps show the systems as they would appear when completed, the translucent overlays for these maps indicate the completed portions of these systems in black ink. (Note that sidewalks constructed through development activity do not necessarily follow the Priority Corridors, thus some existing sidewalks shown on the overlay sheet do not correspond to the planned system.)

Two NMT system plans (one for bicyclists and one for pedestrians) have been developed and are included as text and maps (Refer to Figures 7-1 and 7-2). They do not show every sidewalk/roadway accessible to pedestrians and bicyclists within the City of Kirkland. The NMT system plan highlights the most important facilities in Priority One and Two Corridors that will serve to connect with regional bicycle and pedestrian networks in King County, Bellevue, Redmond, Bothell and Woodinville. The ultimate goal is to make all roadways, easements, parks and recreation areas accessible to Kirkland's citizens for nonmotorized transportation by foot and/or bicycle as most appropriate.

Within Kirkland, connections are also planned to fully serve citizens with options to motorized transportation. Whether commuting to work or traveling to parks, schools, libraries, commercial shopping or other activity centers, the attached NMT

System Plan, when implemented, will provide a complete interconnected nonmotorized transportation network.

7.2 PROPOSED CAPITAL FACILITIES LIST

Tables 7-1 and 7-2 list the projects currently identified in the Capital Improvement Program (CIP) and those considered key elements of the NMT systems. The tables are not intended to be a thorough listing of all projects necessary to complete the NMT systems as depicted in Figures 7-1 and 7-2.

Funded projects listed in Tables 7-1 and 7-2 are illustrated in Figure 7-3.

Projects that are identified in the 1999–2005 CIP are indicated by a project number (e.g., NM-0035). Projects that are identified in the CIP, but lack funding are indicated by “UNF”. The remaining projects in Tables 7-1 and 7-2 have been ranked through the “Ad-Hoc” Transportation Project Evaluation process, but are not part of the current 6-year CIP and are not funded. The evaluation form used for prioritizing nonmotorized projects is included as Appendix C.

At the time of this writing, the City is developing its 2002–2007 CIP. As a result, the scheduling and funding of some of the projects listed in Tables 7-1 and 7-2 is expected to change.

7.3 COMPLETED PROJECTS

A summary of the nonmotorized facility projects completed since the adoption of the 1995 Nonmotorized Transportation Plan is included as Appendix D.

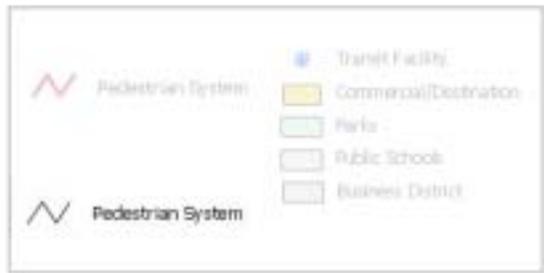


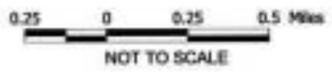


All City of San Diego employees and all general public are invited to attend the public hearing on the proposed San Diego Pedestrian System. The proposed San Diego Pedestrian System is a key component of the City of San Diego's 2015-2020 Strategic Plan. The City of San Diego is committed to providing a safe and accessible pedestrian system for all.

The City of San Diego is committed to providing a safe and accessible pedestrian system for all. The City of San Diego is committed to providing a safe and accessible pedestrian system for all.

Proposed Pedestrian System
Pedestrian System - Completion Status
Figure 7-1





NOTE: This map is not intended to depict all potential bicycle facilities. The Proposed Bicycle System shows priority one and two corridors as identified in the 1995 H&T Plan to provide a framework for building a complete bicycle network.

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 Pedestrian System	 Transit Facility
 Commercial/Destination	 Parks
 Public Schools	 Business District

Proposed Pedestrian System



0.25 0 0.25 0.5 Miles
NOT TO SCALE

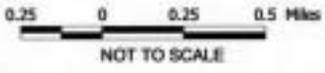
NOTE: This map is not intended to assist in potential design funding. The proposed Bicycle System shows priority one and two corridors as outlined in the 2002-2007 Plan to provide a framework for building a complete bicycle network.

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Proposed Bicycle System
Bicycle System - Completion Status
Figure 7-2

BICYCLE SYSTEM

Priority One Corridor Routes	Transit Facility
Shared Use Paths	Commercial/Destination
Bike Lanes/Shared Roadways	Parks
Priority Two Corridor Routes	Public Schools
Bike Lanes	Business District
Existing Bike Lanes and Shared Use Paths	
Bike Lanes Scheduled for Construction in 2001/2002	

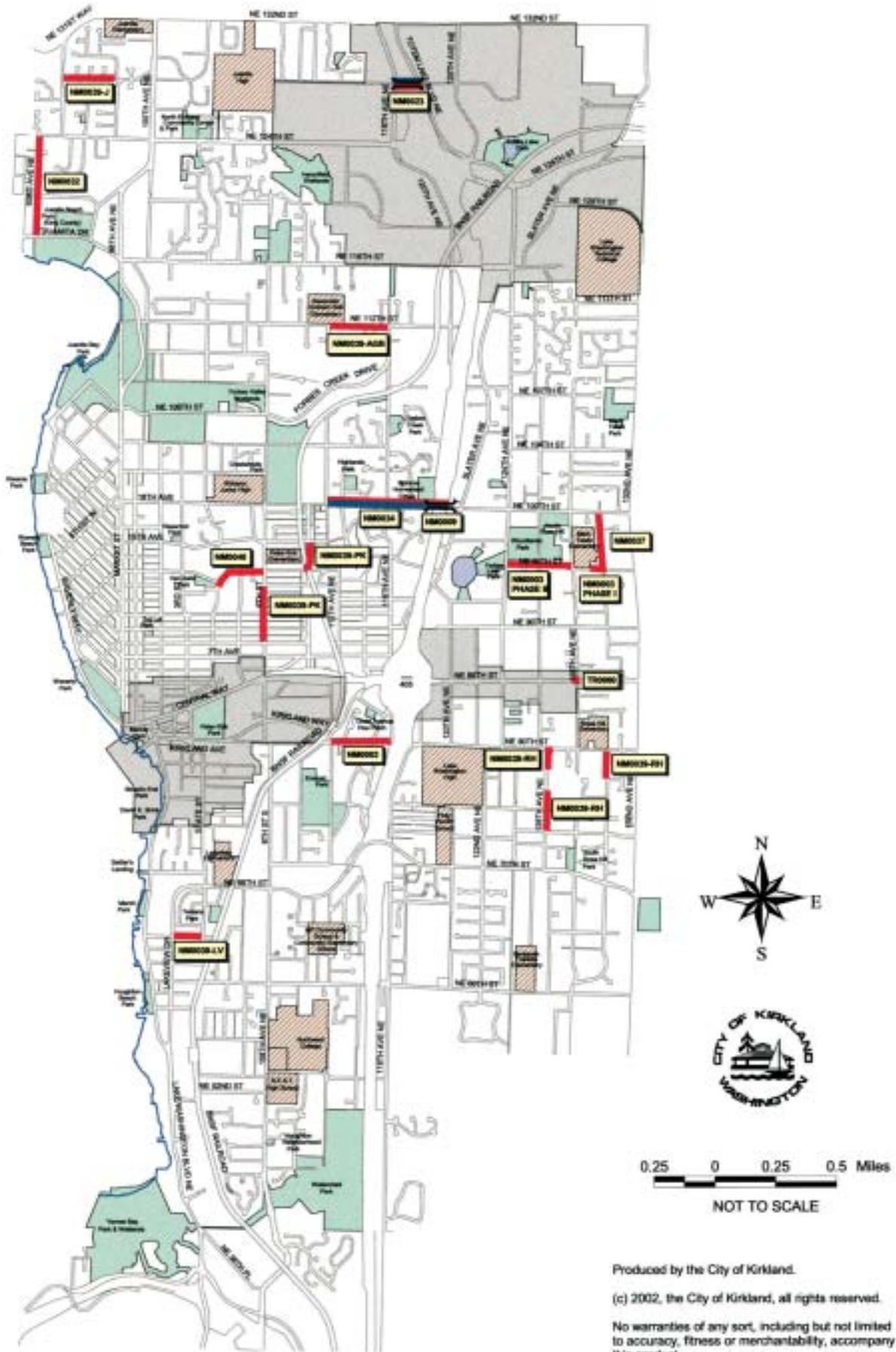


NOTE: This map is not intended to depict all potential bicycle facilities. The Proposed Bicycle System shows priority one and two corridors as identified in the 2005 MHT Plan to provide a framework for building a complete bicycle network.

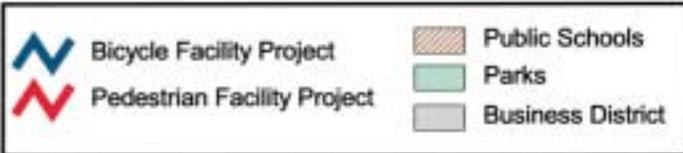
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Proposed Bicycle System

BICYCLE SYSTEM	
Priority One Corridor Routes	Transit Facility
Shared Use Paths	Commercial/Destination
Bike Lanes/Shared Roadways	Parks
Priority Two Corridor Routes	Public Schools
Bike Lanes	Business District



**Nonmotorized Facility Projects
2002-2007**
Figure 7-3



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8. FUNDING AND IMPLEMENTATION

Funding for the construction of the NMT facilities recommended in this plan may come from a variety of federal, state, regional and local sources. Obtaining non-local funds can be competitive. It is recommended that individual cities coordinate with neighboring cities to show continuity in trails and bikeways or submit inter-jurisdictional applications for a more favorable chance of receiving funding. A list of potential funding sources that can be used for bicycle and pedestrian projects follows.

8.1 FEDERAL FUNDING SOURCES

Transportation Equity Act for the 21st Century (TEA-21)

Essentially a continuation of the Intermodal Surface Transportation Efficiency Act (ISTEA-1993), TEA-21 was passed in 1998. It contains a number of transportation programs that are administered in Washington by the Washington State Department of Transportation (WSDOT) and regionally by the Puget Sound Regional Council (PSRC). The Enhancements Program provides significant opportunities for funding non-traditional projects. TEA-21 requires that each state receiving federal transportation funds spend a portion of those funds on facilities and enhancements, which go beyond traditional road improvements. This six-year program is the principal funding source for nonmotorized transportation in Washington State.

At this writing, all of the TEA-21 funds have been allocated to Washington projects for the remainder of the program. The program will be reauthorized by Congress for the year 2003. The following paragraphs describe the structure of the TEA-21 program as it relates to Kirkland's candidate NMT projects. This structure can be expected to remain in the next federal transportation program authorized by Congress.

The Surface Transportation Program (STP)

The most important source of federal funding for nonmotorized transportation facilities, the STP was created to fund a broad range of transportation needs including "transportation enhancements." Transportation Enhancements must be at least 10% of the state's annual STP spending and include "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists," and the "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)." TEA-21 added Americans With Disabilities Act sidewalk upgrading to funding eligibility under Transportation Enhancements. From 1992 to 1997, the funding from the Enhancements Program (under ISTEA) set aside has been used by local agencies to fund 94 pedestrian projects costing \$10 million. Local agencies have used the Enhancement funding to build NMT facilities such as sidewalks and walkways, trails, and bike lanes.

Another 10% of annual state STP spending must be devoted to the Hazard Elimination and Railway-Highway Crossing programs, which address bicycle and pedestrian safety issues. Each state is required to implement a Hazard Elimination Program to identify and correct locations that may constitute a danger to motorists, bicyclists, and pedestrians. Funds may be used for projects on any publicly owned bicycle or pedestrian pathway or trail, or for any safety-related traffic calming measure. The program also stipulates that improvements to railway-highway crossings must take bicycle safety into account.



Congestion Mitigation Air Quality Program (CMAQ)

The CMAQ program, related to the Clean Air Act, funds transportation projects designed to meet federal clean air standards by reducing transportation-related emissions. Washington will receive funds for three nonattainment areas: the Puget Sound region, Spokane and Vancouver. Bicycle and pedestrian facilities are eligible for CMAQ funding. Eligible projects must be able to quantify the amount of air pollution reduced by the proposed project.

Recreational Trails Program

This program funds a variety of trail projects. Of the funds apportioned to a state, 30 percent must be used for motorized trail uses, 30 percent for nonmotorized trail uses, and 40 percent for diverse trail uses (any combination).

Job Access and Reverse Commute Grants

This program has been created to support transportation projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from suburban employment centers.

National Highway System

Through this program, funds may be used to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway in the National Highway System, including interstate highways.

Land & Water Conservation Fund (LWCF)

This fund provides funding for land acquisition and trail development administered in Washington State by the Inter-Agency Committee for Outdoor Recreation (IAC).

National Highway Traffic Safety Administration

The Washington Traffic Safety Commission uses federal money to provide grants to local communities for pedestrian safety programs.

Federal Aid Bridge Placement Program

This is a competitive program administered by WSDOT that provides 80% federal funding for replacing deficient or obsolete road bridges.

Direct Appropriations

Congress occasionally appropriates money directly for certain projects, such as the *Centennial Trail* in Spokane, Washington.

8.2 STATE FUNDING SOURCES

Path and Trails Required Reserve Fund

A significant portion of state-allocated transportation funding for local governments originates from the 1-1/2 cent motor vehicle fuel tax. The state requires, under RCW 47.30, that local jurisdictions reserve at least 0.42% of this funding for transportation related bicycle, pedestrian and equestrian facilities. Many jurisdictions have opted to increase that amount to 2% or more to aid in providing matching funds for grant applications. The fuel tax revenue is allocated through several programs; the four listed below can include nonmotorized transportation projects.

- ***Transportation Partnership Program (TPP)*** — For urban projects that reduce congestion caused by economic development or growth.
- ***Arterial Improvement Program (AIP)*** — Portions of the fund are set aside for sidewalk projects (not bikeways). Cities may apply for arterial road and street projects to improve congestion, alignment, structural conditions, and improve safety.

- ***Pedestrian Safety & Mobility Program (PSMP)*** — Purpose of the program is to enhance and promote pedestrian mobility and safety by providing funding for pedestrian projects that provide access and address system continuity and connectivity of facilities. Selection criteria include safety, pedestrian generators, convenience, public acceptance and project cost.
- ***Public Transportation System Program (PTSP)*** — For specific public transportation programs and projects. The account includes a non motorized transportation element.

Washington Wildlife and Recreation Program (WWRP)

The Washington Wildlife and Recreation Program was established by the State Legislature in response to the efforts of a coalition of groups, individuals, and businesses interested in preserving open space. The WWRP, administered by the Interagency Committee for Outdoor Recreation (IAC), funds parks, outdoor recreation and conservation lands including trail acquisition and development.

Direct Appropriations

Occasionally the State Legislature will appropriate funds directly to a specific project with regional significance. Centennial Trail in Snohomish County is one example.

8.3 REGIONAL FUNDING SOURCES

Regional Transit Act (Sound Transit)

Sound Move is a ten-year regional transit system plan approved by Puget Sound area voters in 1996. Sound Transit is the agency responsible for implementing the plan, which calls for development of light rail, commuter

rail and express bus systems throughout the metropolitan area. The express bus system will serve Kirkland with routes that operate along I-405. Bike and pedestrian improvements located near transit stops or along the route of the express bus system will be eligible for funding.

Conservation Futures Tax Levy

King County has the Conservation Futures Program, which dedicates a portion of county property taxes for acquisition of open space including trails (preferably with green space around them). One third of the levy funds are allotted to the suburban cities of King County. The entire annual fund is approximately \$1,000,000.

8.4 LOCAL FUNDING SOURCES — PUBLIC General Funds

General funds are those monies set aside by local government for the variety of public works and government programs. Sources of general funds include property taxes, utility taxes, local sales taxes, and special purpose district revenues. Although highly competitive, general funds may be used for NMT purposes.

1990 Local Option Taxes

In 1990, transportation financing legislation authorized cities and counties the option to use six new financing prerogatives to meet local transportation needs. These new options gave local governments sources other than taxes traditionally dedicated to general fund uses to meet local transportation priorities. One of the six tax options that may be used (by a municipality like Kirkland for NMT project funding) is the Commercial Parking Tax. With this tax, cities and counties are authorized to impose a parking tax in connection with commercial parking businesses. This tax may be used as a transportation demand management tool as



well as a revenue generator and can be used for nearly all transportation-related purposes. SeaTac is one of the only jurisdictions that have implemented this tax (23,000 people and 20,000 commercial parking spaces). SeaTac implemented the levy as a \$50 tax per transaction rather than a tax on the number of stalls or a tax on gross revenue. Short-term parking is exempted.

User Fees

There have been proposals to fund trail construction through collection of tolls on the trail. This is probably not a practical idea in Kirkland because of administrative and enforcement issues.

Bicycle Tax

State authority exists for cities to tax bicyclists, however the costs of administering a program would exceed the expected revenue. Washington State has been looking at some ideas that might include a fee on the sale of bicycles.

Bond Measures

Bond measures are voter-approved or passed by the local legislative body. Although bonds may be perceived as shifting the burden of payment to future generations, they do have positive attributes, which make them a possible source of funding for bicycle and pedestrian ways. Benefits include: taking advantage of low interest rates, responding to immediate needs, and meeting a match required by another source of income thus increasing jurisdictions' capacity to leverage funds.

Special Levies

Special levies, dependent upon voter approval, can be assessed. These usually involve property taxes.

Local Improvement Districts (LID) or Road Improvement Districts (RID)

A special assessment debt frequently used for defined residential or commercial business districts where benefit assessments are used to provide equitable sharing of public improvement costs.

Development Impact Fees

Impact fees may be assessed upon development projects for improvements that are related to the proposed project and reflect the impact the development has upon public facilities and infrastructure.

Development Permits/ Impact Mitigation

Related to Development Impact Fees, conditions of approval for development permits may require improvements to NMT facilities.

8.5 LOCAL FUNDING SOURCES — PRIVATE

Private Donations

Private contributions of money, property, materials, and time from local businesses, organizations, individuals, and citizen groups may be a possible implementation resource. This may be especially true for trail projects where volunteer organizations can assist with clearing vegetation, planting trees, etc. An Adopt-A-Trail program, similar to King County's or Seattle's Adopt-A-Park programs, could help organize citizens around volunteer efforts. Volunteer time can be used to help matching grant requirements.

Public/Private Partnerships

A state program, administered through WSDOT, was established by the state legislature in 1993, creating the legal framework for public/private partnerships in the development of capital transportation projects. Washington State is the national leader in the exploration of this possibility. Project types include planning, design,

finance, construction and operation for any transportation capital-related improvement including, but not limited to, highways, bridges, transit, marine, rail and air facilities, traffic management systems, and transportation communications.

8.6 PLAN ADMINISTRATION—ROLES OF CITY DEPARTMENTS

The process of planning for Nonmotorized Transportation (NMT) is a closely coordinated effort between three City of Kirkland Departments – Planning and Community Development, Public Works, and Parks and Community Services. The following is a summary of how these three departments will utilize the NMT Plan in future planning and implementation of land use, transportation, and parks and recreation projects.

Planning and Community Development

The Planning and Community Development Department is responsible maintaining the Comprehensive Plan in compliance with the Growth Management Act. One of the chapters in the Comprehensive Plan is the Transportation Element. This element defines the City's policies for all modes of transportation, including NMT.

The NMT policies in the Comprehensive Plan describe the broad policy direction for the NMT Plan. However, since NMT constitutes only two modes discussed in the Comprehensive Plan, the plan is not as detailed as the NMT Plan, but it does include goals, policies and general implementation measures.

Public Works

The Public Works Department is responsible for the street design in public rights-of-way for both motorized and nonmotorized transportation. This includes sidewalks, landscaping, bicycle facilities, storm drainage, vehicle lanes, and, at times, special uses such

as equestrian usage. The Public Works Department ensures that roadways include the necessary facilities to allow the safe use of rights-of-way for nonmotorized transportation purposes.

Public Works will utilize the NMT Plan to ensure that every city street, public right-of-way and private sector project includes the agreed-upon nonmotorized elements. The NMT Plan informs Capital Improvements Program (CIP) planning by Public Works staff. The Public Works Department will apply for grants for nonmotorized projects, utilizing the Comprehensive Plan and the NMT Plan to demonstrate the City's planning process and commitment to NMT.

Parks and Community Services

NMT planning has been integrated with park and recreation planning for many years. The 2000-adopted Comprehensive Park, Open Space and Recreation Plan includes elements for trails and off-street nonmotorized facilities. These facilities will interconnect the City's park system and other destinations with residential neighborhoods, and a planned regional nonmotorized transportation network.



AASHTO

American Association of State Highway and Transportation Officials

Accessible

Approachable and usable by all persons, including those with disabilities

Activity Centers

Includes schools, parks and playfields, libraries, transit centers/park-and-ride lots, business districts/shopping malls, hospitals, government offices, community service facilities (Senior Center, Boys & Girls Club, etc.), trail heads, waterfront access areas, and other traffic generators

Americans With Disabilities Act (ADA)

The ADA, signed into law on July 26, 1990, mandates that the approximately 43 million Americans who are disabled, will have full access to all public facilities in the United States; The ADA recognizes three major categories of disabilities: sensory, mobility, and cognitive

Bicycle Facilities

See “Bikeways”

Bike Lane

“A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists” (AASHTO)

Bikeways

A general term for improvements and provisions made to accommodate or encourage bicycling; Includes bike lanes, paved shoulders, wide curb lanes, and all other

roads where bicycle use is allowed

Class I Bikeway

See “Shared Use Path”

Class II Bikeway

See “Bike Lane”

Class III Bikeway

See “Signed Shared Roadway”

Class IV Bikeway

See “Shared Roadway”

Commute Trip Reduction (CTR)

Legislation requiring major employers in the eight most populous counties in the state to take measures to reduce the number of single-occupant vehicle (SOV) trips and the number of vehicle miles traveled by their employees

Crosswalk

A marked or unmarked pedestrian crossing across a roadway, typically the natural extension of the shoulder or sidewalk at an intersection; A *mid-block crosswalk* is a crossing not installed at an intersection

Cul-de-sac

A street with only one way in or out; The closed end of the street is typically an enlarged circular area to allow space for vehicles to turn around

Curb Ramp

A short ramp providing a vertical transition between the sidewalk (or path) and street that allows easy access for wheelchairs,



strollers, and other wheeled equipment

Geometry

The horizontal and vertical characteristics of a transportation facility, typically defined in terms of alignment, grade, and superelevation.

Limited Purpose Unpaved Trail

A type of trail primarily used for recreation, designed with a relatively narrow width (2 to 6 feet) and surfaced with wood chips, wooden boardwalk, gravel, or dirt; not typically accessible by wheelchair users

Multi-Purpose Unpaved Trail

A type of trail that may allow for the simultaneous use by pedestrians, equestrians, and bicycles, designed with a medium width (6 to 10 feet) and surfaced with wooden boardwalk, compacted gravel, or dirt; wider facilities are required if bicycle traffic is expected; signs may be required to limit some users if adequate width is not available; typically used for recreational purposes; accessible by wheelchairs except where grades prohibit

Nonmotorized Transportation

Any mode of transport that utilizes a power source other than a motor; primary nonmotorized modes addressed in this plan include walking (pedestrian), bicycling, horseback riding (equestrian), but may also include jogging, skating, skateboarding, or scooters

Path

Alternately referred to as "*Trail*"; a public way constructed primarily for and open to pedestrians, equestrians, or bicyclists; the term path or trail also includes a widened shoulder of a highway, street, or road when

the extra shoulder width is constructed to accommodate nonmotorized modes of transportation

Paved Shoulder

A paved shoulder is used in this plan to mean the same thing as a bike lane marked with striping but without signing or special pavement markings

Paved Trail

A type of trail used by pedestrians travel for transportation and/or recreational purposes, designed with a medium width (6 to 10 feet), and surfaced with concrete or asphalt pavement. Wheelchair accessible except where grades prohibit

Pedestrian

A person on foot, in a wheelchair, or walking a bicycle

Pedestrian Facilities

A general term for improvements and provisions made to accommodate or encourage pedestrian travel. Includes sidewalks, crosswalks, curb ramps, traffic-control devices, paths, grade separations (such as underpasses and overpasses), and other facilities that provide for pedestrian travel

Priority Corridors

Key north-south and east-west routes based roughly on a ½-mile square grid and chosen to maximize connectivity between residential and business areas, schools, transit, parks, and other facilities; location along a Priority Corridor is one factor used in prioritizing the construction of new nonmotorized facilities

Priority One Corridor

Priority One Corridors form the basic framework upon which the nonmotorized

transportation network is developed. These corridors consist of major north-south and east-west routes and are based approximately on a 1/2-mile grid for pedestrians and a 1-mile grid for bicycles.

Priority Two Corridor

Priority Two Corridors are the second level of connectivity in the nonmotorized transportation network. These corridors include links from cul-de-sacs and connections between Priority One Corridors. Priority Two Corridors are based approximately on a 1/4-mile grid for pedestrians and a 1/2-mile grid for bicycles.

Right-of-Way

Land, or interest therein, acquired for or dedicated to transportation and/or utility purposes; or the right of a pedestrian or vehicle to proceed in a lawful manner in advance of another pedestrian or vehicle

School Walk Route

Walking routes established by the Lake Washington School District Transportation Office for elementary school students; these routes are designated in order to provide recommended walking routes for children as they walk to and from school

Shared Roadway

An unmarked, unsigned street that, due to favorable traffic characteristics and geometry, provides for safe and efficient bicycle travel

Shared Use Path

Facility on exclusive right-of-way (no motorized vehicles); users include bicyclists, pedestrians, wheelchair users, in-line skaters, scooters (non-motorized), roller skaters, etc

Sidewalk

Property between the curb lines in the lateral line of a roadway and adjacent property set aside and intended for the use of pedestrians or such portion of private property parallel and in proximity to a public highway and dedicated to use by pedestrians (RCW 46.04.540)

Signed Shared Roadways

A roadway that is identified by signing as a preferred bicycle route (currently no such facilities in Kirkland)

Traffic-Control Devices

Roadway signs, traffic signals, paint striping, and other pavement markings

Trail

see "Path"

Wide Curb Lane or Widened Shoulder

"A right lane wider than 12 feet can better accommodate both bicycles and motor vehicles in the same lane....A lane width of 14 feet of usable width is desired; Usable width would normally be from curb face to lane stripe, or from edge line to lane stripe, but adjustments need to be made for drainage grates, parking, and longitudinal ridges between pavement and gutter sections" (AASHTO)



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Pedestrian and Bicycle Transportation Plan Update, City of Bellevue Transportation Department, Bellevue, WA, October 1999.



Appendix A:

Comments Received Through Public Input

Key Comments in the Development of the 1995 NMT Plan

- Wider sidewalks in high pedestrian traffic areas.
- A complete and safe network of marked on-street bike lanes.
- Sidewalk planting strips, especially with trees.
- A variety of natural trails are desired-marked for appropriate use i.e. mountain bikes etc..
- Kirkland to be a pedestrian friendly model for other cities. Sidewalks and trails to curve meander and fit in to the landscape.
- To develop safety and design standards to improve crossings to the BNRR, in cooperation with Lake Washington School District.
- Highest priority of all - pursue planning cooperatively with King County, Redmond and Bellevue for a BNRR trail coexisting with rail uses.
- Slater Avenue should be improved and connected as a bike path/walking route.
- Expand our lake shore pathway whenever, wherever possible.
- More benches everywhere downtown-to make it a social destination.
- Powerline trail connecting to Bridle Trails State Park should be a good multi-use bike/hiker/horse rider trail with control of fast bike traffic.
- Use turtle bumps or curbs to separate bikes from cars.
- Connect as many of our parks together with trails as possible.
- Lake Washington Boulevard is the regional designated route around Lake Washington, take one lane of parking off Lake Washington Blvd. to make it safer.
- Overpass at NE 100th Street.
- Take bike routes south through Juanita Bay Park and connects into Waverly Way. This would be great for recreational /family cyclists. Keep Market Street for high speed and commuting cyclists.
- Need 520 bike path over floating bridge.
- Pedestrian activated stoplight by Houghton Park to make it easier to cross Lake Washington Blvd. Even by Marsh Park it will be useful.
- Make Downtown Juanita more pedestrian friendly any way possible.
- Concentrate efforts on regional bike paths and local pedestrian paths.
- Over 180 individual comments on specific pedestrian and bicycle routes have been reviewed and where feasible incorporated into the NMT Plan (see attached).

Key Comments in the Development of the 2001 NMT Plan

- Don't rely too much on developer-driven system completion will have bad results.
- Creating one continuous major cross-city east-west and north-south bicycle route is just as important as meeting level of service goals.

- There are too many instances where a new on-street bike facility stops suddenly. This should be avoided.
- Development of the Cross-Kirkland Trail is critical to the success of the entire Kirkland bicycle program.
- Keep public informed of progress with new plan
- Alternative methods of calculating level of services should be pursued. It should reflect connectivity of the bike and pedestrian systems.
- If we stay with present with present level of service measure, the goal values should be changed to correspond to some tangible level of system completion.
- Plan update should address use of newer "wheeled" recreation modes: scooters, in-line skates, etc.
- System maps should be updated with respect to school names, park names, and district names.
- Update should look at present practice of providing mid-block crossings; some are good and respond to need for directness (i.e. bus stop access) but others have bad visibility. This should involve coordination with Metro.
- An exact nonmotorized project list for 1995-2001 was listed in the 1995 plan. We should look at the list and figure out what the problems were with those that have not been constructed.
- Addition of a fog line would be an inexpensive quick-fix for streets without sidewalks.
- There are some instances where a sidewalk dead-end's just short of a bus stop, particularly in Totem Lake. This type of missing link should receive top priority in the capital improvements program.
- There is a product known as stabilizer that, when added to gravel, can create trail surface that works for pedestrians, equestrians and bicyclists. Construction is involved; an existing example can be found along the east side of 116th Ave NE south of 40th St. in Bellevue.
- Pavement can be injurious to horses hooves; when wet a safety hazard.
- Area streets with deep ditches do not accommodate equestrians since horses cannot handle the steep cross-slope very well.
- There are several private and public easements and the unimproved public right-of-way of 124th Ave NE that provide equestrian access to the Bridle Trails that are not being maintained. Fences are encroaching and yard waste is being dumped. Complaints to City result in inconsistent messages.
- Similar obstructions are occurring in public improved 127th Ave NE ROW at the edge of the street; large boulders and garbage cans left permanently.
- A partnership with the City and the equestrian community should be established to maintain the existing trails.
- Education about safety passing a horse in a car; could be addressed with an article in "City Update" newsletter.
- Equestrian crossing signs and, in some cases, crosswalks, should be located at all crossings.
- The south side of NE 60th Street has been designated as an equestrian route – Bridle Crest Trail
- The unimproved 124th Ave NE power line corridor between the Bridle Trails State Park and NE 70th Street should be developed as an equestrian/ pedestrian path and named.

- A plan for equestrian routes in the Bridle Trails neighborhood should be developed with designation of major and minor routes.
- 116th Ave NE should be a major route; in the past the city has proposed construction of a equestrian/ pedestrian/ bicycle trail on this street. That project is presently on hold due to environmental issues and new regulations for storm water management.
- NE 60th St. on the south should be a major equestrian route
- 132nd Ave NE on the east side should be a major equestrian route
- ROWs within Cor-Sun Ranch development and across the driveways of the equestrian facilities along the east side of 116th Ave NE; ROWs within Bridlewood Circle and Silver Spurs developments and along the east, west and south borders of Bridlewood Circle along NE 60th Street; and 127th Ave NE south of NE 60th Street should all be developed and maintained as minor equestrian routes.
- Signage should be developed to denote all of the equestrian routes. On 116th NE, Bellevue has a sign on the road stating "entering a equestrian community." Kirkland should install more following this model.

Report Card: Progress Toward 1995 Goals

Introduction

In 1995, the City of Kirkland prepared the Kirkland Nonmotorized Transportation Plan as the first such document to guide the efforts of the Public Works, Parks and Recreation, and Planning and Community Development departments in developing bicycle and pedestrian facilities. The plan sought to achieve a major expansion in the existing bicycle and pedestrian systems and to phase this expansion over a period of over 20 years. Recognizing that community needs and other planning conditions change over time, the City is presently preparing a year 2001 update to the 1995 plan. To allow for a complete perspective in preparing the 2001 update, this report provides an assessment of the progress that has been made towards the goals identified in the 1995 plan – a “report card.”

The organization of this report mirrors that of Chapter 5 of the 1995 Nonmotorized Transportation Plan – “Goals and Policy Planning.” The assessment of progress is organized around each of the seven goals that are described in detail in Chapter 5 of the 1995 plan. While one of the goals, Goal #7, concerns the rate at which the bicycle and pedestrian systems are being expanded (i.e. system mileage), the remaining goals concern the quality of the proposed facilities and the prioritization and implementation of projects.

Goal 1: Plan An Interconnected Nonmotorized Transportation Network

This is the most comprehensive of the seven goals from the 1995 plan with over four pages of elaboration on what is encompassed. The fundamental aspects include creation of pedestrian and bicycle systems that will make these modes more desirable alternatives to driving in Kirkland. These systems should consist of a network of routes that provides good coverage and connectivity across the city as well as concentrating on major destinations. Other aspects of Goal #1 include finding and preserving rights-of-way that could be developed with nonmotorized facilities, and upholding Americans with Disabilities Act (ADA) and other design standards for facilities. The following summarizes the findings on the progress toward Goal #1:

Achievements	Yet To Be Achieved
<ol style="list-style-type: none">1. As recommended in the 1995 plan, the present year 2001 update will provide any appropriate adjustments to the plan based on new conditions and issues.2. The 1995 plan established a basic grid network of priority routes for both the pedestrian and	<ol style="list-style-type: none">1. One aspect of Goal #1 is developing regional routes to serve nonmotorized travel to destinations in other cities. Both 116th Avenue NE and 132nd Avenue NE, where they enter the city from Bellevue, have short segments that are very constrained for joint use of vehicles and cars. Otherwise these streets are

Report Card: Progress Toward 1995 Goals

Continued

<p>bicycle systems. These routes responded to the locations of commercial areas, schools, parks and transit stops. To a large degree, bicycle system projects since 1995 have occurred within these priority routes. This has been true to a smaller degree for pedestrian projects.</p> <p>3. Since 1995, a new ordinance was passed which adds a provision to the Zoning Code to require new developments to provide pedestrian walkways to all adjacent properties with multifamily housing, office, retail, restaurants, institutional or industrial uses. This has started to dramatically improve the quality and directness of many pedestrian trips and encourage combining errands by foot.</p> <p>4. While not a new ordinance, the City continues to use the subdivision ordinance to require pedestrian cul-de-sac connectors and other pedestrian access improvements for new subdivisions.</p> <p>5. The 1995 plan stated that the City would pursue opportunities to use abandoned right-of-ways for nonmotorized facilities. The City has been steadily pursuing perhaps the best new right-of-way opportunity: joint trail and railroad use of the BNSF right-of-way – the “Cross Kirkland Trail” proposal.</p>	<p>bicycle-friendly connections between the two cities.</p> <p>Improvement of these Bellevue connections could complement two 2001 regional projects on the north side of the city: bicycle lanes on Juanita Drive and Slater Avenue. These bike lane projects will improve bicycle access to the Burke-Gilman and Sammamish River trails.</p> <p>2. The construction of isolated sidewalks has the obvious disadvantage of leaving pedestrians with less protection at the end of the sidewalk. In addition, the location of the end of such a sidewalk can lead to an unsafe pattern of street crossing. In a public meeting, a citizen pointed out that the arrangement of two sidewalk segments in her neighborhood encourages crossing the street in a blind corner. The two segments are end-to-end but on opposite sides of the street – 4th Street near 15th Avenue. (See discussion under Goal #6 on the use of concomitant agreements to reduce construction of isolated sidewalks.)</p>
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Goal 2: Promote Nonmotorized Transportation Use Through Education

This goal encompasses all efforts to educate the public on the recreational, financial, environmental, health and transportation benefits of nonmotorized transportation. The following summarizes the findings on the progress toward Goal #2:

Achievements	Yet To Be Achieved
<p>1. The City has partnered with community groups on several programs aimed at encouraging students to walk safely. The City and King county, with the support of several schools have followed the national model in organizing a Walk Your Child to School Day each fall. To reinforce the message, each spring neighborhood groups and elementary schools have organized the Mother’s Day Walk event. These events included a number of different strategies to send the pedestrian safety message. This has included unique means such as distributing wristbands with</p>	<p>1. The City could provide more assistance to the Lake Washington School District in distributing maps that depict safe walking routes to elementary schools.</p> <p>2. Kirkland should develop free bicycle system maps, like those available from the City of Bellevue, City of Redmond, and King County. When filled with colorful maps and useful information, these have become very popular in the other communities, particularly with people who are just starting to become cyclists.</p>

Report Card: Progress Toward 1995 Goals

Continued

<p>safety reminders and asking parents to inventory and report back safety hazards along school routes.</p> <ol style="list-style-type: none"> 2. Along with several Kirkland employers, the City has regularly supported the Cascade Bicycle Club by participating in the annual Bike to Work Day sponsored by the club. 3. The Kirkland Fire Department has organized several bicycle rodeos – events that teach bicycle safety in ways that are fun for children. 4. Consistent with Washington State guidelines, the City has worked with elementary schools to develop maps that identify safe walking routes to each school. The City has prioritized projects directly serving these routes. 5. Consistent with the Commute Trip Reduction Act, the City has worked with large employers to develop programs that promote alternatives to driving alone. The City has provided educational resources to those employers interested in meeting these goals through the use of nonmotorized transportation. 6. The City has created a new part-time position of Pedestrian/ Bicycle/ Transit Coordinator, which will provide a point-person for City efforts to implement the Nonmotorized Transportation Plan. 7. The City regularly uses a variable message sign trailer to promote pedestrian safety and ridesharing. 	
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Goal 3: Coordinate Nonmotorized Transportation with Transit

This goal is concerned with all efforts that allow for convenient and safe bicycle and pedestrian access to transit service. King County Metro and Sound Transit assume a significant amount of this responsibility. The following summarizes the findings on the progress made by the City of Kirkland toward Goal #3:

Achievements	Yet To Be Achieved
<ol style="list-style-type: none"> 1. Efforts by a City-initiated ad hoc committee in 1996 and 1998 resulted in a transportation project prioritization method that weights improved nonmotorized access to transit. 2. The City has completed many projects since 1995 that have consolidated bus stops and better matched their locations to crosswalk locations. 	None noted.

Report Card: Progress Toward 1995 Goals

Continued

<ol style="list-style-type: none"> 3. King County Metro Transit has targeted bus stop vicinities for ADA improvements. 4. The City has partnered with King County Metro for installing flashing crosswalks at bus stops. 5. King County Metro Transit has installed bicycle racks at several bus stops in the city. 	
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Goal 4: Improve Pedestrian Environment

This goal is concerned strictly with the quality of the pedestrian experience in Kirkland and how the design details of sidewalks and walkways can contribute. The following summarizes the findings on the progress toward Goal #4:

Achievements	Yet To Be Achieved
<ol style="list-style-type: none"> 1. As mentioned under Goal #1, the newly adopted walkway connections ordinance will require new developments to provide pedestrian walkways to all adjacent properties with multifamily housing, office, retail, restaurants, institutional or industrial uses. This will dramatically add to the quality of the pedestrian experience. Without this requirement, many developments can and have created significant barriers to property-to-property access. 2. Also mentioned under Goal #1 is the subdivision ordinance that the City continues to use to create cul-de-sac connectors and other walkways that increase connectivity and directness. 3. Where allowed by topography and right-of-way the City encourages inclusion of a planter strip between new sidewalks and the street. This provides aesthetic enhancement as well as a sense of being buffered from traffic. 4. In recognizing the unique pedestrian nature of streets in Downtown and the Juanita Business District, the City has adopted special pedestrian environment design standards for these areas. These standards cover such elements as street trees, street furniture, and requirements for windows facing the sidewalk. Also, the City has initiated the Downtown Strategic Planning Project, which will take an even broader look at the pedestrian environment in Downtown. The project is also 	<ol style="list-style-type: none"> 1. As mentioned in the fourth finding to the left, special pedestrian design standards have been created for Downtown and the Juanita Business District. While policy documents have stated that certain areas in these districts have activity that warrants a 15 foot-wide sidewalk requirement, the code has a maximum requirement of 10 feet.

Report Card: Progress Toward 1995 Goals

Continued

<p>expected to make recommendations on development of a continuous pedestrian-oriented linkage from the waterfront to the Park Place development.</p>	
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Goal 5: Improve Bicycling Environment

This goal is concerned strictly with the quality of the bicycling experience in Kirkland and how the design details of bike lanes and paths can contribute. The following summarizes the findings on the progress toward Goal #5:

Achievements	Yet To Be Achieved
<ol style="list-style-type: none"> 1. The City continues to include full-standard bike lanes on all arterial reconstruction projects. 2. The City continues to require provision of bicycle amenities such as a covered bike parking through development review. At a certain development size threshold (relatively small) Transportation Mitigation Plans and the Commute Trip Reduction program are used to require additional bicycle amenities. 	<ol style="list-style-type: none"> 1. It has been found that monitoring is necessary for compliance with bicycle amenity requirements from development review. When the Commute Trip Reduction program was employed, King County Metro took responsibility for such monitoring. As a result of recent budget cuts, however, there has been a lapse in monitoring.

Goal 6: Implement and Safely Maintain The Nonmotorized System

This goal is concerned with implementation of the nonmotorized transportation facilities and amenities. The focus of the goal is on prudent and efficient implementation schemes. The following summarizes the findings on the progress toward Goal #6:

Achievements	Yet To Be Achieved
<ol style="list-style-type: none"> 1. The City is relying more on concomitant agreements for the construction of sidewalks with redevelopment assessments. Rather than requiring construction of isolated sidewalks when homes redevelop. This allows an agreement for a property owner to pay an assessment at some time after redevelopment when the entire block is constructed at once. 2. In 1999, the City adopted a Road Impact Fee Ordinance. This is an assessment on new development toward the cost of roadway capacity projects. Most of these projects have 	<ol style="list-style-type: none"> 1. Bicycle lanes tend to accumulate debris and broken glass since they are set back from the "sweeping" action of the large vehicles at higher speeds in the traffic lanes. The City should consider increasing maintenance of at least the major trouble spots.

Report Card: Progress Toward 1995 Goals

Continued

<p>nonmotorized transportation components.</p> <p>3. The City continues to try new techniques to improve pedestrian safety; recent projects include the crossing hand-held flags, and the flashing crosswalks.</p> <p>4. When the ideal nonmotorized facilities for a priority route cannot be implemented in the near-term, the City has investigated interim solutions. As an example, two miles of asphalt path have been added to 132nd Avenue from 85th Street to Slater to serve pedestrians and cyclists until the street is reconstructed with sidewalks and bike lanes.</p>	
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Goal 7: Level of Service

This goal is strictly concerned with the expansion to the mileage of the bicycle and pedestrian systems. The “level of service” measure has been developed; it involves dividing the total system mileage by the city population in thousands. This system is based on the principle that as population grows, the mileage of the system must grow at the same rate just to provide a constant level of service. In the development of the 1995 plan, current level of service was calculated (in the case of bike facilities 33 miles divided by 41.9 thousands of people equals 0.79) and a desired/ system build-out value was calculated based on a twenty-year projected population. These values as well as the values resulting from a year 2000 system inventory are shown below. Figures 1 and 2 graphically represent the amount of the priority route networks that has been completed since 1995 for the pedestrian and bicycle systems.

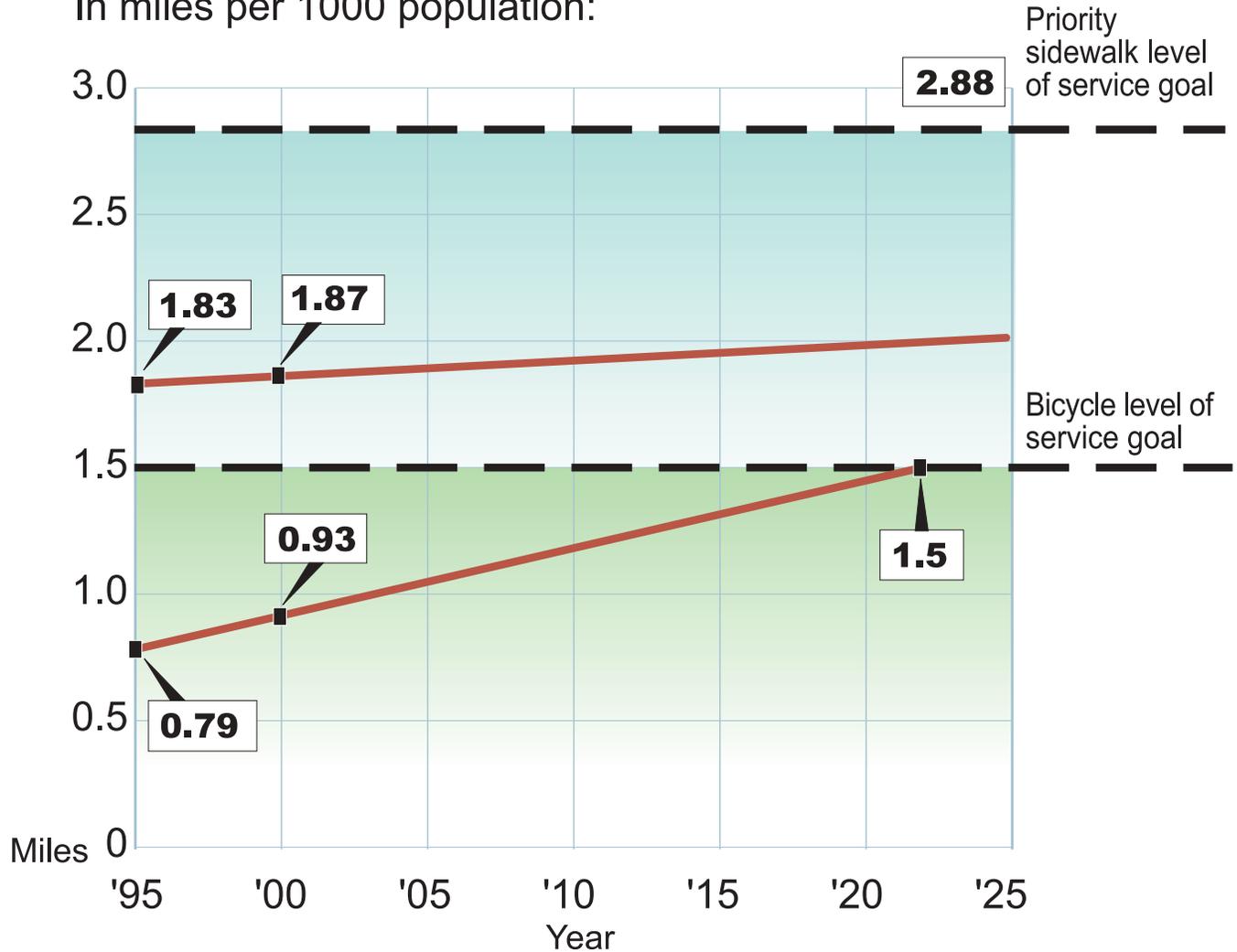
	Level of Service (miles of facility per 1000 residents)		
	<u>1995</u>	<u>2000</u>	<u>Desired</u>
Bicycle Facilities	0.79	0.93	1.5
Priority Sidewalk	1.83	1.87	2.88
Pedestrian Trails	0.29	0.33	0.3

While the level of service has been met for pedestrian trails, bicycle facility expansion will take 20 years to reach the desired level of service based on the current rate. Sidewalk expansion will take 70 years to reach the desired level of service based on the current rate. Figure 3 is a chart that illustrates these rates of expansion.

Figure No. 3

Level of Service Progress

In miles per 1000 population:



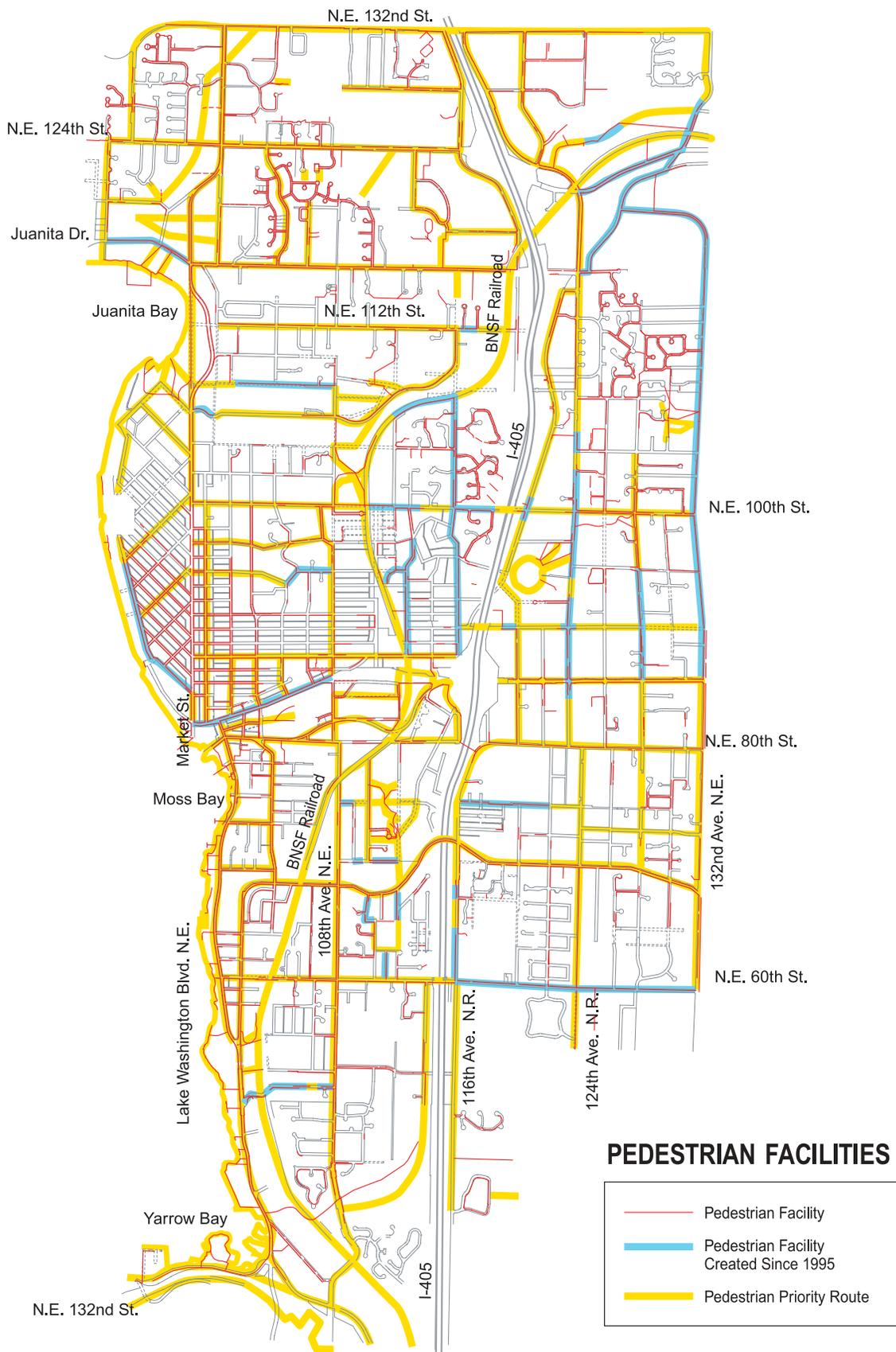
$$\text{LOS} = \frac{\text{System Mileage}}{\text{Population}}$$



Figure No. 1



Figure No. 2



Appendix D: Completed Projects 1995 – 2001

The following table lists all projects that were identified in the 1995 Nonmotorized Transportation Plan and have been completed¹ in the period from 1995 to 2001.

<i>Project Name/Description</i>	<i>Lineal Feet of Pedestrian Facility Added/Improved</i>	<i>Lineal Feet of Bicycle Facility Added/Improved</i>
NE 124 th St Sidewalk – 93 rd Ave NE to 110 th St	1,700	
NE 124 th St Sidewalk – 124 th Ave NE to Slater Ave	2,400	
132 nd Ave Path – NE 85 th St to NE 120 th St	11,000	
NE 60 th Street Path – 116 th Ave NE to 132 nd Ave NE	5,200	
116 th Ave NE Path – NE 87 th St to NE 100 th St	3,200	
128 th Ave NE Sidewalk – NE 85 th St to NE 94 th St	3,400	
112 th Ave NE Sidewalk – NE 87 th St to NE 97 th St		2,000
Market St Bike Lanes – Central Wy to Forbes Creek Dr		13,600
State St Bike Lanes – NE 68 th St to Kirkland Ave		6,400
NE 100 th St – 124 th Ave NE to Slater Ave	1,100	1,100
NE 75 th St – 116 th Ave NE to 122 nd Ave NE	2,000	
111 th Place NE – NE 60 th St to NE 62 nd St	620	
Juanita Drive Roadway Improvements	4,800	4,800
Slater Ave NE Roadway Improvements	7,200	7,200
Misc. Private Development Projects ² 1995 - 2001	8,750	
Misc. Paths/Trails	19,400	
Misc. Bike Facility Improvements ³ 1995 - 2001		6,500
Total Added/Improved (feet)	70,770	41,500
Total Added/Improved (miles)	13.4	7.9

Notes:

1. Includes projects due to be completed by March 31, 2002.
2. Private development added nearly 8 miles of sidewalk throughout the City between 1995 and 2001. However, only those facilities added on Priority Corridors (approx. 1.7 miles) are included in this report.
3. Miscellaneous bike lane improvements constructed by re-channelizing existing roadways (e.g., 98th Ave NE between Forbes Creek Dr and NE 116th St)