

# RENTON TRAILS AND BICYCLE MASTER PLAN

Adopted May 11, 2009

RENTON. AHEAD OF THE CURVE.

City of  
**Renton**





# RENTON TRAILS AND BICYCLE MASTER PLAN

**May 2009**

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## EXECUTIVE SUMMARY

The Renton Trails and Bicycle Master Plan and Map Project is a comprehensive update of the City of Renton Trails Master Plan, adopted in 1993, and the Draft Trails Plan, produced by the Citizen's Non-motorized Transportation Committee in 2004. It represents a collaborative effort between the Transportation and Parks Divisions, and reflects the desire to create an interconnected trails, water trails, and non-motorized transportation network to accommodate both recreational and commuting uses, from pedestrians to cyclists. The project was initiated in 2006 with the receipt of a federal grant.

The Master Plan provides a vision statement, goals and objectives, and a review of policy at the local, state, and federal levels. It reviews existing conditions of the non-motorized system through the City, identifies new destinations and their service areas, and from this seeks to identify new projects and routes that are incomplete. Facility design guidelines are reviewed and current standards are proposed. A final project list is included, as well as project sheets for most routes. Criteria are developed and used to create a list of prioritized improvements for each division.

The following paragraphs summarize the content of each section.

### INTRODUCTION AND OVERVIEW, PART 1

The first task of the project was to develop a vision statement, goals and objectives to define and guide the project and provide the foundation for the plan:

*The Bicycle and Trails Master Plan creates and fosters opportunity within Renton and neighboring communities for people to move through the city and to access multiple local and regional destinations including schools, parks, businesses and residential areas. The master plan supports a city where residents and visitors can enjoy recreation and exercise contributing to a healthy lifestyle, and where commuting by bicycle using an integrated trails/road network, becomes a realistic transportation alternative.*

Project objectives and goals help to further articulate the vision by providing more specific direction and guidance for actions implementing the vision.

### CURRENT CONDITIONS, PART 2

Inventory and analysis of existing conditions was gathered in a variety of ways. Base mapping was acquired from the City via the King County GIS Center, which had recently produced

a walking map for the Burien, SeaTac, Tukwila and Renton area. Field reconnaissance was performed across the City to confirm current non-motorized facilities, transit routes, routes that are currently used by bicyclists, and destinations. Additional research on destinations, general conditions, and facilities was done using the City's CAD data, resources provided on the City's website, and King County's Bicycling Guide Map and Regional Trails Map. In addition, public comment was invaluable, gathered from e-mails to City staff and discussion during the project's four public open houses.

The inventory was structured according the geographic planning areas used by the City's Open Space and Recreation plan: Central, West, Southwest, Southeast, and North and East. Inventory and analysis reveal that existing bicycle facilities in the City are limited and are not contiguous, and many of the routes proposed in the earlier plans remain incomplete. The Cedar River Trail is the longest non-motorized facility in the City, and because of its central location within the City, can therefore be seen as the spine of the City's trails and bicycle network. Pedestrian facilities, in the form of soft-surface trails, are more numerous, especially along other riparian corridors: the Black River, Springbrook Creek, Honey Creek, May Creek, Thunder Creek, and Soos Creek, though these trails are not all continuous or complete.

A number of significant barriers to bicycle and pedestrian travel were identified: the steep topography between downtown and the neighborhoods, the limited crossing points of the Cedar River, Interstate-405, Sunset Boulevard/SR 900 and some other busy arterials. In particular, the lack of connections between downtown in the river valley and the neighborhoods above, due to the steep topography, are seen as critical connections to make, especially with multiple employment centers in both downtown and the nearby Green River Valley. In addition, connections between the regional trails-- the Interurban/Green River Trail corridors, Lake Washington Loop and the Cedar River Trail—are seen as essential links to be made. Public comment echoed the importance of these connections.

### RECOMMENDATIONS, PART 3

The recommendations section describes how routes are identified, selected, and prioritized, as well as how cross-sections are determined for the routes. Primary, secondary, and minor routes are developed, based on previously proposed routes and the survey of existing conditions and opportunities, to ensure connections between all identified destinations and to serve the range of trips Rentonians make on foot or bike.

Identification of routes as primary, secondary, or minor does not necessarily target them as priority projects, but helps ensure a high level of connection between facilities and destinations.

A set of criteria for evaluating, selecting, and prioritizing routes for the final master plan were developed. The criteria are as follows:

- Safety
- Accommodation/Accessibility
- Continuity & Directness
- Connectivity/Linkage
- Regional Trail Connectivity
- Trail Experience
- Sensitivity
- Concurrency
- Funding/Construction Opportunities.

### **Design Guidelines and Cross-Sections**

The design guidelines are intended to direct the construction of trail and bicycle facilities presented in the plan, and still allow some flexibility in implementation. The design guidelines are based on recognized regional, state and national standards and/or guidelines and include dimensional recommendations for widths, separation of elements, and signage. The range of options includes bike lanes, signed shared roadways, paved shoulders, multi-use trails, and separated multi-use trails.

### **Recommended Improvements**

Existing trails and bicycle facilities in Renton, including regional trails, bike lanes, signed shared roadways, and multi-use trails comprise nearly 26 miles. Over 60 existing and proposed routes were identified, including critical connections to regional trails. Additions to the City's non-motorized network as proposed in the recommended improvements are as follows:

#### **Proposed trails and bicycle facilities and approximate mileage:**

Separated multi-use trails, for bikes and pedestrians (paved)	3.2 miles
Multi-use trails, for pedestrians only (unpaved)	12.2 miles
Mixed cross-sections on the same route (e.g. bike lanes + multi-use trail)	9.5 miles
Regional trails	9.7 miles
New bike lanes	26.0 miles
Extended bike lanes (including existing segments)	14.1 miles
Signed shared roadways	21.8 miles

#### **TOTAL MILES PROPOSED**

**TRAILS AND BICYCLE FACILITIES: 96.5 miles**

#### BACKGROUND/PLAN AND POLICY REVIEW, PART 4

This review of previous plans and policies includes local, regional, state and national levels. The previous trail plans are reviewed, as are local plans of relevance to the City's non-motorized network. Of most consequence are the documents at the regional level: possible improvements to several corridors passing over or under I-405 as part of the I-405 Corridor Improvement Project; possible rail to trail conversion of the BNSF rail line through Renton; and the King County Regional Trail Plan, which identifies several regional trails with connection into and through Renton.

#### PROJECT SHEETS, PART 5

A set of project sheets is included to provide more detail on proposed projects and selected existing routes.

## PART 1: INTRODUCTION AND OVERVIEW





# Renton Trails and Bicycle Master Plan

## VISION STATEMENT

The Bicycle and Trails Master Plan creates and fosters opportunity within Renton and neighboring communities for people to move through the city and to access multiple local and regional destinations including schools, parks, businesses and residential areas. The master plan supports a city where residents and visitors can enjoy recreation and exercise contributing to a healthy lifestyle, and where commuting by bicycle using an integrated trails/road network, becomes a realistic transportation alternative.





# PART 1: INTRODUCTION AND OVERVIEW

## OVERVIEW AND PURPOSE

In 2006 the City of Renton's Transportation Division received a federal grant to produce a bicycle route map and future bicycle route plan for the City and the potential annexation areas. Within the same time frame the City of Renton's Parks Division was in the process of hiring a consultant to update their trails planning document. Instead of having two documents, one for bike routes and one for trails, the City of Renton's Transportation and Parks Divisions have combined their resources to create this integrated and comprehensive planning document that ties together the Parks Division's recreation-oriented trails, paths, and sites and Transportation's bike route facilities.

The most recent Parks trails planning document was adopted by Council in 1993, and an updated draft completed in 2004 in conjunction with the Non-motorized Transportation Advisory Committee. While progress has been made on the implementation of the adopted plan, major new developments, particularly in the City's core, have made the need for an update evident. Furthermore, there are more cyclists on the road today, as people recognize the health benefits of cycling for both recreational and commuting purposes, as well as the potential relief from traffic congestion and rising energy costs.

## GROWTH MANAGEMENT ACT

The 2005 Amendments to Washington State's Growth Management Act (GMA) mandates the incorporation of bicycle and pedestrian planning into each jurisdiction's comprehensive plan, as well as the consideration of approaches that promote physical activity.

The recommendations of the Master Plan, when adopted, will be an implementation of the Comprehensive Plan.

Beyond compliance with state mandates, the value of non-motorized planning is evident to most communities in the Puget Sound region for the multiple benefits it provides: flexibility in transportation choice, congestion relief, health benefits, fun, and enhanced livability for communities.

The unique combination and configuration of Renton's geographic setting, land use patterns, transportation network, and recreational opportunities set the stage for the development of a well-connected network of trails and bikeways. Renton's central location within the Puget Sound region, interconnection with, and easy access to, the region's motor-



*Cedar River Trail*



*The Landing, under construction*



*Springbrook Trail*



*Pedestrian sign off Lake Washington Boulevard North*

## THE TRAILS AND BICYCLE

### MASTER PLAN

- Builds on previous non-motorized plans
- Goes beyond previously proposed routes to look at the big picture: policy, plans, and proposal at both the local and the regional scale

ized transportation system, and the presence/existence of major employment centers centrally located within the City, make it a readily accessible place to live, work, and play. Unique natural resources like the Cedar River, Lake Washington, and proximity to the Green River Valley and Cougar Mountain Regional Wildland Park also make it an excellent recreational destination. Perhaps most significantly, the City is the hub of three major regional trails: the Cedar River Trail, the Lake Washington Loop, and the Interurban Trail, providing Renton direct access to over 80 miles of regional trails.

Tying these resources together through a network of trails and bikeways, as this Master Plan outlines, will ensure that Renton remains “ahead of the curve” in terms of livability by creating an accessible, sustainable, and pleasant place to live, work, and play.

### PROJECT PROCESS

The Master Plan was developed through a process that comprised five main tasks:

#### 1. Information Review and Preliminary Documentation:

The first task entailed a planning and regulatory investigation of policies at federal, state, and local levels as well as relevant local and regional plans and proposals. A set of guiding principals for the development, design, and implementation of the trails and bicycle network was also developed during this task.

#### 2. Existing Conditions Evaluation:

The second task consisted of an inventory of existing conditions and opportunities; assessment of traffic or trip generators and destination service areas; and analysis of travel corridors, including soft-surface hiking and walking trails. This information was presented to the public at the project’s first open house.

#### 3. Routing Options & Evaluation Criteria

The third task involved transportation planning analysis and identification of route options; designation of proposed routes and cross-sections; and establishment of evaluation criteria for designating priorities. A second open house was conducted to get the public’s input at this stage of the process.

#### 4. Draft Master Plan & Bicycle-Friendly Routes Map

The Trails and Bicycle Master Plan document was drafted during this fourth task, incorporating information from the

two open houses and finalizing the recommendations. Two maps were created during this task; one showing existing trails and bicycle routes and a second map showing proposed routes. In addition a signage plan complementing the proposed routes and safety flyer were created. A third public meeting for the project was conducted, to share the Draft Master Plan and recommendations to the public and get their feedback.

### 5. Final Master Plan and Bicycle-Friendly Routes Map

Completion of the Master Plan included final evaluation of the recommended routes and the development of project sheets for selected routes. The signage elements were also finalized during this task, along with the bicycle-friendly routes map, which features safety information for cyclists.

### PUBLIC OUTREACH

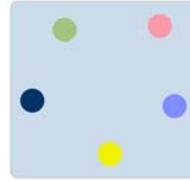
Public input and participation in the Master Plan process was a valuable resource for on-the-ground information and overall validation of the project. As described above, the project conducted three public meetings, described in greater detail below.

Public Open House #1: The purpose of this first public open house was to further develop the inventory of destinations, identify all potential trail and bikeway routes, confirm existing conditions and opportunities, refine the program, and listen to concerns. The project team solicited comments from the community to supplement other inventory and research, and aid the team in evaluating corridors and options. Presentation graphics included goal statements, existing conditions maps, aerial photographs, and site images.

Public Open House #2: The second open house included a presentation of the route options, evaluation criteria, cross sections, and other improvements. The goal of the meeting was to solicit comments from the public on the alternatives and seek consensus on a preferred network of routes. Comments from these meetings were incorporated into the Draft Trails and Bikeways Plan.

Public Open House #3: The draft plan recommendations were presented and public comment sought.

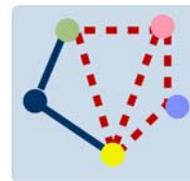
*destinations and connections*



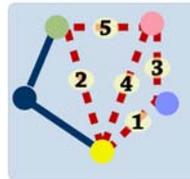
*evaluate existing network*



*identify preferred network*



*prioritize*



**Figure 1. Project Process**

## **PUBLIC INPUT**

Attendance at each of the open houses was between 20 and 40 attendees. Participants were able to offer their comments to the team during both presentations and working sessions, and comment forms and maps were available for those wishing to leave written comments. In addition, a brief project description and contact information for City staff were posted on the City's website, and a number of comments were received via e-mail to City staff.

The majority of comments were neighborhood-specific—routing recommendations and ideas for improvements, as well as trouble spots and missing links. A fair number of bicyclists who commute into and out of Renton, as well as recreational cyclists, made varied recommendations for regional-scale routes between Renton and its neighboring jurisdictions. On the whole, the public conveyed enthusiasm and support for the project and its recommendations.

In addition to the public outreach, presentations by City staff and the project team were made throughout the project to the Parks Commission, Non-motorized Transportation Advisory Committee, City Council, and the Mayor.

## GOALS AND OBJECTIVES

The Master Plan was developed in collaboration with both Transportation and Parks staff, reflecting the desire to create an interconnected network to accommodate both recreational and commuting uses, from pedestrians to cyclists, and improve mobility for non-drivers. With these concerns in mind, project goals and objectives were developed to guide the project.



### Project Objectives

- *Enhance public awareness about the benefits of walking, cycling and recreating for the individual and community health.*
- *Create a safe and convenient trails and bikeways network to provide both local and regional connectivity in order to increase bicycling and trail use.*
- *Interconnect neighborhoods and local destinations: schools, parks, shopping, civic sites, and other local destinations, emphasizing route safety for less skilled riders/users.*
- *Develop commuting routes between neighborhoods, employment and business centers, and transit facilities that will accommodate more skilled riders/users.*
- *Capitalize on the convergence of the Lake Washington Loop, Cedar River Trail and Interurban Trail in Renton and enhance the connectivity of the regional trail network by creating connections to proximate regional trails: the Green River Trail, Soos Creek Trail, Lake Youngs Trail, and the East Lake Sammamish Trail, as well as neighboring communities.*
- *Increase use of hiking and water trails, parks and other recreational sites.*
- *Promote bicycle safety, especially on shared roadways, by increasing awareness among the driving public.*
- *Update policies, ordinances and procedures to make opportunities for walking and bicycling.*
- *Introduce cycling skills into school curriculum.*





## Project Goals

- *Identify local and regional destinations in a non-motorized network, for both commuting and recreational purposes.*
- *Inventory and evaluate existing non-motorized routes, hiking and water trails.*
- *Identify missing links in the existing network to connect important destinations and complete routes.*
- *Identify connections to regional trails.*
- *Identify and provide signage for a preferred network of routes.*
- *Identify safety issues on existing and proposed routes.*
- *Develop a methodology to prioritize improvements.*
- *Ensure accommodation of a wide variation in users and trip purposes: pedestrians and all types of bicyclists: long distance and “fast” cyclists, recreational, less-skilled riders, and children.*



## PART 2: CURRENT CONDITIONS





## PART 2: CURRENT CONDITIONS

### THE SETTING

Renton is located on the south shore of Lake Washington, where the Cedar River flows into the lake. The central part of the City and its older neighborhoods lie in the level area south of the lake, while the rest of the City is spread out on the slopes of Lake Washington, and hillsides above the Cedar and Green River Valleys, and Honey, May, and Panther Creeks. The river valleys and plateaus are generally fairly level, and the roadways leading between these two distinct topographical areas are steep. The population is roughly 80,000, and the city's footprint on the landscape is just over 20 square miles.

The City is centrally located within the Puget Sound environs, and is well connected to the rest of the region via Interstate 405, and State Routes 167 (Valley Freeway), 169 (Renton Maple Valley Road), 515 (Talbot Road/Benson Drive South), and 900 (Sunset Boulevard/SE Renton-Issaquah Road).

As is often the case with major limited-access transportation corridors, these routes divide the City into distinct areas and pose significant barriers to non-motorized travel due to the great traffic volumes and limited crossing opportunities. In particular, I-405, and SR 167, as well as the Cedar River, demarcate distinct neighborhood/planning areas and limit access to non-vehicular traffic

Several major local arterials, however, run north-south, and provide alternative access to Seattle, Bellevue, Kent and points beyond. Rainier Avenue North, Lake Washington Boulevard and Duvall Avenue are all popular bicycle routes for both commuters and recreational cyclists.

Renton is also well served by regional and local buses, through a hub-based transit system based at the downtown transit center. The RUSH (Renton Urban SHuttle) transports commuters from downtown Renton to the City's major employment sites. Sounder Commuter Rail and Amtrak service, via the current temporary and planned final Tukwila Station at the Renton/Tukwila City line, make easy connections to Seattle's King Street Station and other points north and south. This well-established transit network provides an excellent opportunity to create and enhance linkages with the non-motorized network, thereby increasing the efficiency and usage of both modes of travel.





*The Landing under construction*



*Cedar River Park and Trail*

## **DESTINATIONS AND TRIP GENERATORS**

The Trails and Bicycle Master Plan is about getting people where they want to go. A thorough analysis of where people are coming from and where they need and want to go, therefore, lays the framework to create a highly connective non-motorized and recreational network. The determination of important destinations, neighborhood conditions and character, topography, natural features, and existing travel patterns and recreational routes are all part of this analysis.

As a means of organization, the Master Plan uses the geographic planning areas designated in the 2003 Park, Recreation and Open Space Implementation Plan, updated to reflect current annexations. The areas are divided by the most salient natural and manmade boundaries and for the most part form distinctive and fairly cohesive units in terms of topography, land use, and transportation networks.

The City's 6 identified planning areas, as shown in Figure 2, are:

- Central Planning Area
- Southwest Planning Area
- Southeast Planning Area
- North Planning Area
- East Planning Area
- West Planning Area

The project limits for the Master Plan are Potential Areas of Annexation (PAAs), to accommodate potential future annexations.

## **Employment Centers**

Renton is unique in that it has many major employers centrally located in or not far from the central business district. Some of the major employers are:

- Central Planning Area (Urban Center Downtown, Urban Center North): Boeing, PACCAR, Fry's Electronics, The Landing, including Target, Lowe's, and other "big box" retail, Renton Municipal Airport, Renton City Hall.
- Southwest Planning Area (Valley): Green River Valley/Renton industrial area: Boeing Longacres, Valley Medical Center, IKEA, and various industrial, ranging from light to heavy.
- East Planning Area: Sunset, East Renton, The Highlands

The advantage of these centrally-located employers is the greater potential for residents to walk or bicycle to work, and these routes should be capitalized on.

### Parks and Recreation

The City of Renton has a variety of parks, recreation sites and open space resources, both natural and developed that are important destinations for its citizens. In addition to developed parks, recreation sites, and open space, the City has a number of open spaces that are linear in character, providing excellent opportunities for bicycling, walking, and hiking, and boating (water trails). Among these linear open spaces are: Lake Washington, the Cedar River, May, Honey, Springbrook and Panther Creeks, in addition to several utility corridors that are currently used or have potential use for walking, hiking, and bicycling.

Some highlights of the City’s parks, recreation and open space system:

- 12.5 miles of existing trails
- Two lake-front beaches along Lake Washington (Gene Coulon and Kennydale Beach)
- Many park/recreation/civic sites, including:
  - A community center (at Cedar River Park)
  - Two library branches (downtown and in the Highlands)
  - An historical museum (downtown)
  - A sports park complex (Ron Regis Park along SR 169 and the Cedar River Trail)
  - A skateboard park
  - An 18-hole public golf course
  - A central downtown park/Transit Center
  - A senior center (on the Cedar River).

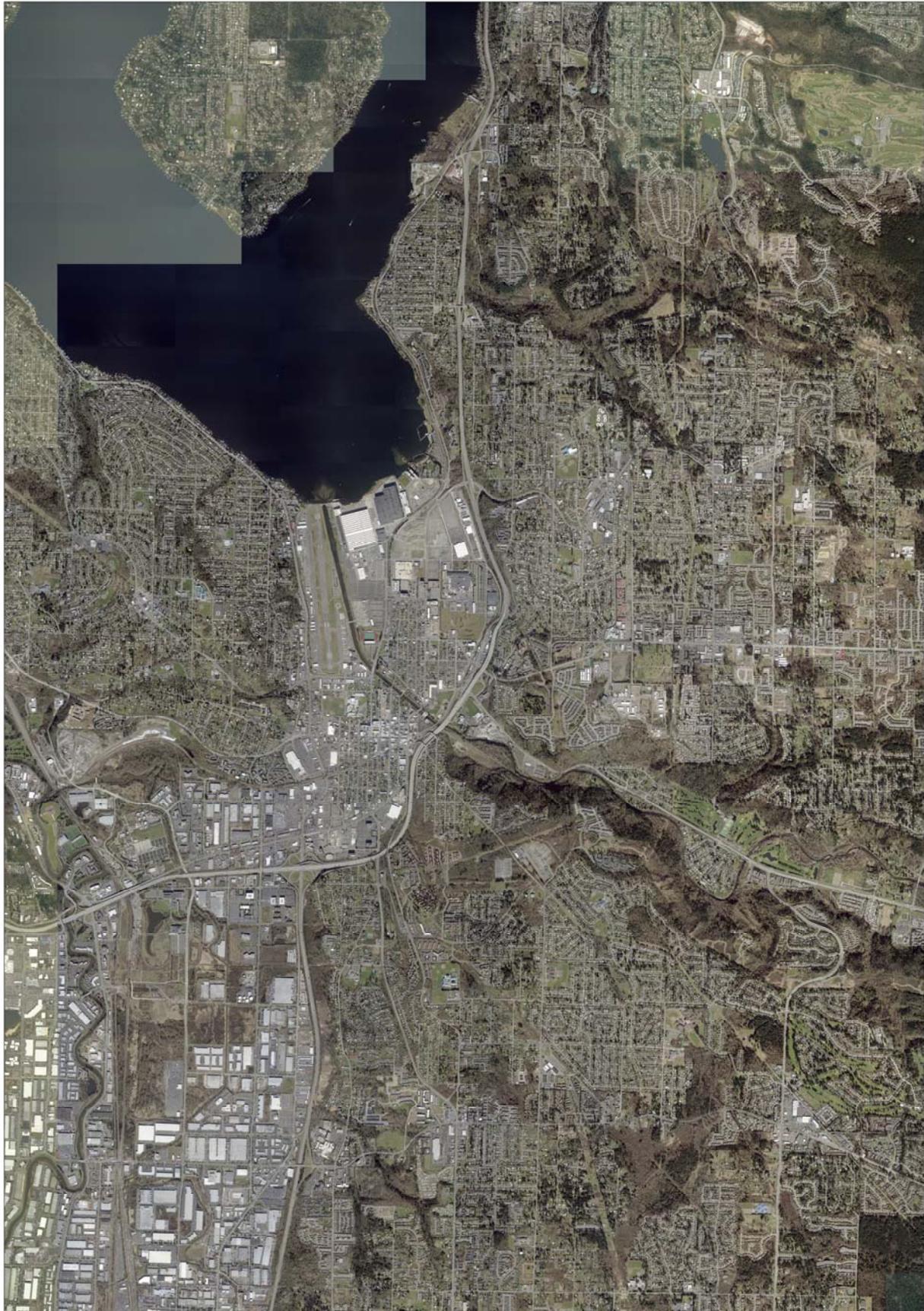
### Schools

Safe, convenient connections to schools are a primary building block of a non-motorized network. Aside from the fact that children and most older students are non-drivers, schools are the one destination that are very often close enough to homes to enable walking or biking. Renton has over 20 schools. With an area of about 20 square miles, that equates roughly to a school in every square mile of City. In terms of walkable catchment area (or “ped shed”), determined as the area encompassed in a 5-10 minute walk, (see Figure 4), that puts many schools in walkable or cycling range of many of Renton’s citizens.

### GEOGRAPHIC PLANNING AREAS



**Figure 2. Geographic Planning Areas (from 2003 Park, Recreation, and Open Space Implementation Plan)**



**Figure 3. 2006 Aerial Photo**

Organizations like the National Center for Safe Routes to School attest that safe non-motorized routes provide multiple benefits, from personal and public health to reducing vehicle miles traveled, providing traffic calming and enhanced neighborhood livability.

See Appendix K for map of Renton schools.

### Other destinations

Some other notable destinations in Renton, both for its citizen's and for the larger regional community include:

- Black River Riparian Forest
- Henry Moses Aquatic Center
- IKEA
- Renton Civic Theater
- Renton History Museum
- Renton IKEA Performing Arts Center
- Renton Technical College
- CARCO Theater
- Farmer's Market
- Gene Coulon Memorial Beach Park

See Figure 5. Destinations and Existing Non-motorized Facilities.

### EXISTING TRAILS AND BICYCLE FACILITIES

The Cedar River Trail, the keystone of the City's non-motorized network, runs through the heart of the City and offers both a rural and urban experience for both pedestrians and bicyclists. Across the City, existing trails, mostly soft-surface or rough (undeveloped) along the City's numerous creeks and utility corridors, provide ample walking trails for pedestrians.

The situation for bicyclists is different. Bike lanes are few and nearly always discontinuous (not linking to other bike lanes or non-motorized facilities), as are separated multi-use trails. Some signed shared-use roadways exist, but often are not contiguous with other bicycle facilities.

Below is an inventory of existing non-motorized facilities in and around Renton.

### "PED SHED"

- \* Defined as the walkable area around an origin or destination
- \* Walkable area is considered to be ¼ to ½ mile, the distance most people are willing to walk in 5-10 minutes
- \* It takes the average able-bodied person about 15-20 minutes to walk one mile

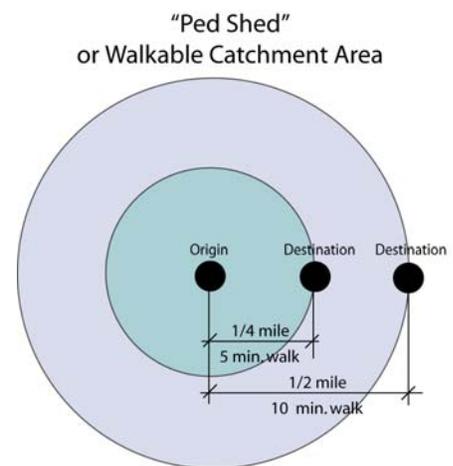


Figure 4.

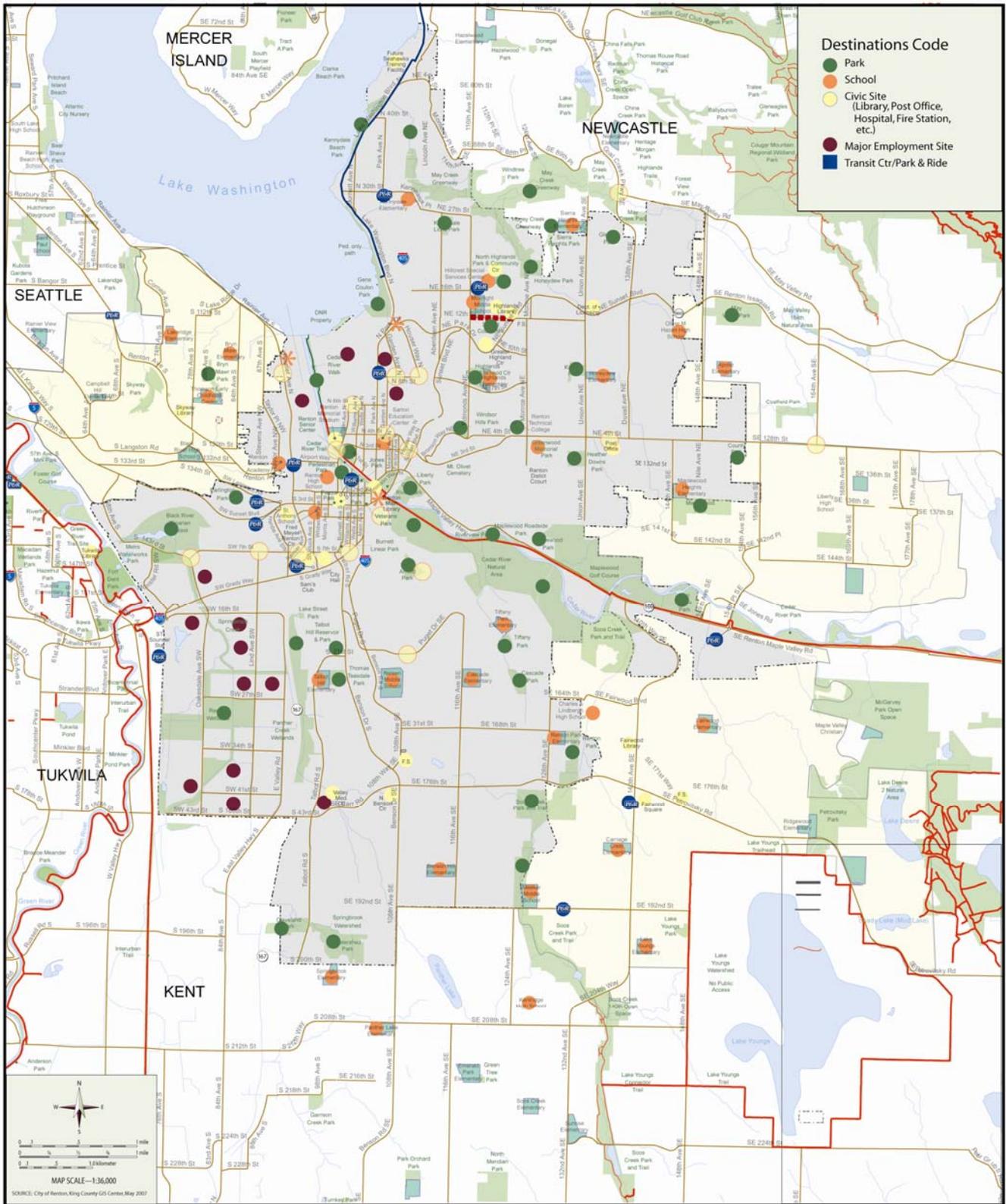


Figure 5. Destinations and Existing Non-motorized Facilities

#### SEPARATED MULTI-USE TRAILS:

- Cedar River Trail also listed below under “Creeks and Greenway Corridors,” (pedestrian-only section between North 6<sup>th</sup> Street and the Lake Washington Shoreline)
- Burnett Avenue South, Burnett Place South (Burnett Linear Park)
- Garden Avenue North and North 8<sup>th</sup> Street Trail (along PACCAR property)
- Ripley Lane
- Strander Boulevard
- Springbrook and Soos Creek Trails, also listed below under “Creeks and Greenway Corridors”
- SW 27th Street



*Burnett Avenue South*

#### BIKE LANES:

- SW 16<sup>th</sup> Street west of Oakesdale Ave SW
- Oakesdale Avenue SW
- Monster Road SW
- Duvall Avenue NE
- Rainier Avenue North (alongside Renton Municipal Airport)
- Lake Washington Boulevard North, north of Gene Coulon Memorial Park
- Logan Avenue North
- 140<sup>th</sup> Ave SE (King County)
- NE 4th/SE 128<sup>th</sup> Street (Renton and King County)
- Talbot Road South (south of 43<sup>rd</sup> Street)



*SW 27th Street*

#### DESIGNATED SHARED USE ROADWAYS:

- Airport Perimeter Road
- Taylor Avenue NW and Hardie Avenue SW

#### CREEK AND GREENWAY CORRIDORS:

- Cedar River Trail
- Honey Creek Trail
- Black River Trail
- Springbrook Trail (multi-use)
- May Creek Greenway
- Soos Creek Trail (multi-use)

#### WATER TRAILS—LAUNCH AND LANDING SITES (Lake to Locks Water Trail)

- Cedar River Boathouse
- Gene Coulon Park
- Cedar River Trail Park
- Riverview Park



*"PACCAR Trail" along Garden Avenue  
North and North 8th St.*

#### UTILITY CORRIDORS:

- PSE right-of-way through SE Renton, the "Tower of Power" trail system (informal walking and mountain biking trails)
- Seattle-Mercer Island Waterline Right-of-Way



*Black River Riparian Forest trailhead,  
Naches Avenue SW*

## PLANNING AREA EVALUATIONS

- **Area character and Issues**
- **Transit Routes**
- **Existing Bicycle and Walking Routes**
- **Opportunities**

### Central Planning Area

Renton's Central Planning area is a diverse area that includes the central business district (downtown), an industrial area, and a residential neighborhood. The area is bounded by I-405 to the south and east, Lake Washington to the north, and Rainier Avenue North (SR 167) to the West, and is transected by the Cedar River.

The street pattern of the industrial area, home to major employers The Boeing Company and PACCAR, is an elongated grid, with some large industrial parcels. Burlington Northern Santa Fe (BNSF) Railway tracks run along the east and west edges of the area, serving the industrial areas. The topography is flat. Some of the area is transitioning to commercial use, with big-box retail and mixed-use development through The Landing and Southport developments. The evolution of the area from industrial to a mix of retail, commercial, and residential land uses will bring more bicyclists and pedestrians to the area.

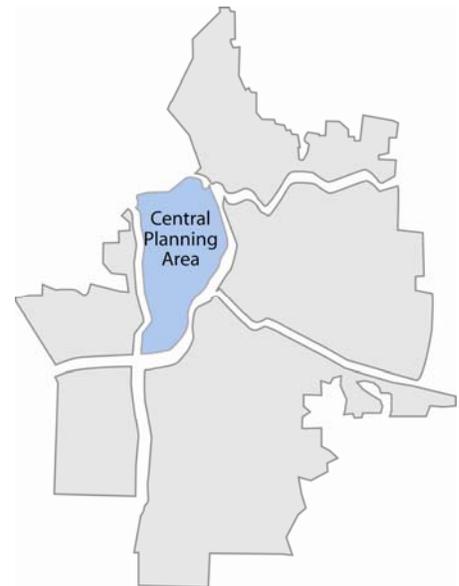
Downtown Renton has a gridded street pattern with walkable block sizes, and has an economic vitality with small shops, businesses, and restaurants. Two pairs of one-way couplets provide through access through downtown, South 2<sup>nd</sup> and South 3<sup>rd</sup> Streets (SR 900 through downtown), running east-west, and Williams and Wells Avenues South, running north-south. Two distinctive features of the area: the BNSF rail corridor which passes through downtown in southwesterly-northeasterly direction, and Burnett Avenue South (also a former rail corridor) which runs north-south and forms a divided boulevard with park blocks in between. Also notable are the centrally located Piazza Park and Renton Transit Center.

At the northern-most part of downtown lays the Renton Municipal Airport, Renton High School and the IKEA Center for the Performing Arts, forming larger blocks.

The single-family residential neighborhoods are south of downtown and between the Cedar River and the industrial area to the north. The street network is a continuation of the downtown street grid, and there are four streets that bridge the river (Logan, Williams and Wells Avenues North and Bronson Way North).



*Boeing and The Landing under construction*





*Cedar River Trail at Logan Avenue North Bridge*

**Waterfront**

Safe, convenient north-south non-motorized access around Lake Washington is lacking despite the fact that this makes up part of the Lake Washington Loop, an important and heavily-used regional bicycle route. The area between the intersection of the Airport Perimeter Road/Logan Avenue North and Gene Coulon Park is a missing link in the regional trail network.

A separated multi-use trail linking the east and west shores of Lake Washington would provide the most benefit to bicyclists and pedestrians. However, large industrial parcels and their access needs (by roadway and rail), existing river crossings, substantial north-south traffic volumes, and the basic physical constriction of space make this a challenging area for non-motorized improvements.

In terms of river crossings, the Boeing Bridges, the northern at the mouth of the river and the southern near North 6<sup>th</sup> Street are permitted through State Department of Natural Resources to Boeing, and the permit restricts use by others. The bridges' purpose is to allow airplanes to be hauled between the Boeing Renton Plant and the Municipal Airport. The Logan Avenue Bridge has a narrow separated lane for pedestrians, but its width, approaches, and grade separation from the Cedar River Trail below make it a poor choice for bicyclists.



*South 3rd Street, downtown*

**Downtown**

As mentioned above, connections between regional trails are best accomplished with separated multi-use trails. Given that downtown Renton is probably the most fully built-out area of the city, flexibility and creativity will be required to achieve this aim.

In addition, as the center of the City's commerce, parking is obviously a critical need, and something that is hugely valued by merchants. Squeezing non-motorized improvements into the existing urban fabric of downtown will also require creativity, and likely some trade-offs.

Downtown improvements in the bicycle and pedestrian network have the potential to bring great benefit to the City, including increased transit use; possible reductions in vehicle trips and demand for vehicular parking; and significantly, increased commerce. Such enhancements would likely boost the City's visibility, reputation and allure throughout the region.

EXISTING ROUTES CURRENTLY USED BY BICYCLES AND PEDESTRIANS:

- Cedar River Trail (bicycle access ends north of North 6<sup>th</sup> Street)
- Houser Way North (southbound and northbound)
- Garden and Park Avenues North
- Lake Washington Loop Trail (parallel to I-405 west of Ripley Lane)
- Burnett Avenue North (Burnett Linear Park)
- SW Grady Way
- various other low volume streets



*Ped/Bike Lane, Logan Avenue North Bridge*

TRANSIT ROUTES:

- South 2<sup>nd</sup> and South 3<sup>rd</sup>
- Rainier Avenue South
- South/SW Grady Way
- South/SW 7<sup>th</sup> Street
- Park Avenue North
- Bronson Way North
- Park Avenue North/NE Park Drive



*Piazza Park, downtown*

OPPORTUNITIES:

- Lower-volume streets (some one-way) such as Williams, Wells, Garden, parallel the main north-south routes, Logan and Park Avenues, and could provide good non-motorized access and connections.
- North 3<sup>rd</sup>, 4<sup>th</sup>, 6<sup>th</sup> Streets as east-west routes.
- Possibility of grade separation between pedestrians and bicycles via street right-of-way that parallels the Cedar River Trail and the bank above the river (North Riverside Drive).
- Potential availability of Renton High School property adjacent to Logan for a segment of separated trail.
- The eventual need to upgrade the Logan Avenue Bridge and include a dedicated bike-pedestrian trail.
- Possible redevelopment of the BNSF rail corridor.
- Long-term redevelopment of Liberty Park, as identified in the Tri-Park Master Plan, providing a potential opportunity to install new pathways around the perimeter of the park.
- A route for the Two Rivers Trail, utilizing SW 7<sup>th</sup>/South 7<sup>th</sup> Street (see West Planning Area, below), Shattuck Avenue South, and Houser Way South, with the following additional opportunities:
  - Potential near-term and/or long-term redevelopment of Houser Way and the BNSF corridor.
  - Low-volume Shattuck Avenue South as another direct thoroughfare through downtown.



*South 2nd Street & Renton High School*



Renton Transit Center

- Burnett Avenue South as a core pedestrian route.
- Connection with transit via the Renton Transit Center.
- The Williams and Wells Avenues South one-way couplet as a direct thoroughfare through downtown.
- Downtown bicycle and pedestrian amenities: wayfinding signage, information kiosks, benches, access to restrooms, etc.



Black River Riparian Forest trailhead, Naches Avenue SW

### Southwest Planning Area

The Green River Valley makes up most of Southwest Renton. It is bounded by the Valley Freeway (SR 167) on the east, Renton/Tukwila City limits on west (also the Interurban Trail and Green River), Martin Luther King, Jr. Way/SW Sunset Boulevard (SR 900) to the north, and SW 43<sup>rd</sup> and the Renton City limits to the south.

The area has flat topography and consists mostly of large industrial-zoned parcels, with a rectilinear street pattern. The area also features a network of wetlands, along Springbrook Creek and the Springbrook Trail.

The Southwest Planning area, with its recently redeveloped streets; proximity to existing passenger rail and future light rail (via Tukwila Station), regional trails in neighboring Tukwila, and the Springbrook Trail is one area where non-motorized transportation is gaining a foothold.

Existing bike lanes in the area connect together, as well as to the Black River and Springbrook Trail, providing access to recreational resources, walking trails, and Tukwila Station, and regional bike commuting routes.



#### EXISTING ROUTES CURRENTLY USED BY BICYCLES AND PEDESTRIANS:

- SW 16<sup>th</sup> (bike lanes and signed shared roadway)
- SW 27<sup>th</sup> (separated shared use trail, west end)
- Oakesdale Avenue SW (bike lanes)
- Springbrook Trail
- The Interurban Trail

#### TRANSIT ROUTES:

- Lind Avenue SW
- SW 16<sup>th</sup> Street
- SW 43<sup>rd</sup> Street

**OPPORTUNITIES:**

- Extension of SW 16<sup>th</sup> signed shared roadway to connect with transit route on Lind Avenue SW.
- Extension north and south of Oakesdale Avenue SW bike lanes to connect with the Springbrook Trail.
- Planned Strander Boulevard/SW 27<sup>th</sup> Street connection between Renton and Tukwila.
- Connections with Tukwila’s non-motorized routes.
- Missing links within the Springbrook Trail System.



*Houser Way South, west of Burnett Avenue South*

**West Planning Area**

The West Planning area is bounded by the Renton City Limits to the north and west (bisected by Martin Luther King, Jr. Way/SW Sunset Boulevard/SR 900), I-405 to the south and Rainier Avenue/SR 167 to the east. It is the smallest planning area, and its most notable feature is the Black River Riparian Forest, a remnant riparian forest with walking trails and a heron rookery, surrounded by industrial parcels. The industrial area is south of SW Sunset Blvd/SR 900, and is criss-crossed by railroad corridors and spurs. North of SW Sunset Blvd/SR 900, a residential neighborhood rises above the city on the hillsides of the Green River Valley.



*SW 7th Street*

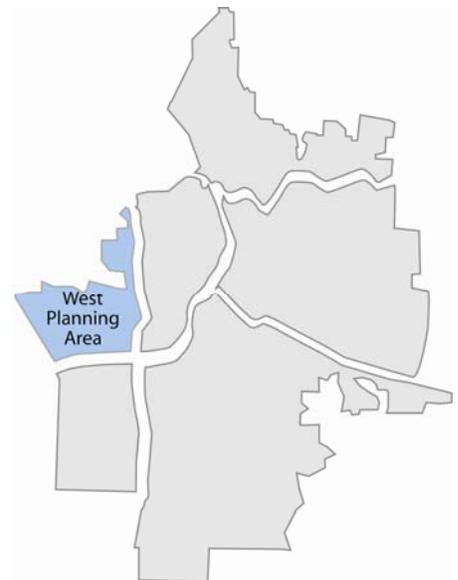
The hilly terrain of this area poses access challenges: both getting to and from downtown and points north as well as getting around the neighborhood. Unlike other areas of the City, the existing street network does not have a regular and extensive system of collectors and arterials providing through-access.

**Industrial area**

The industrial area south of SW Sunset Boulevard/SR 900 has excellent potential to provide connections between the Green River, Interurban and Cedar River regional trails, between Tukwila and Renton, and to make connections with downtown Renton, particularly through the railroad corridors.

The trail in Black River Riparian Forest and the Springbrook Trail and bikes lanes on Monster Road already provide some connectivity. Extending the east-west connection would be ideal.

In terms of the connection of existing regional trails; there is an excellent opportunity to close the missing link between the Green River Trail and Renton via railroad right-of-way and Fort Dent Park. The “Fort Dent Connector,” which would link the Green River Trail to Renton, has been identified in several regional non-motorized planning documents as a high priority connection. Linkages between regional trails, and this





Monster Road SW near Waterworks Park



Green River at Fort Dent Park



Taylor Avenue Northwest

connection in particular, were also identified through public comment at project open houses.

A multi-use trail to the Black River Riparian Forest, adjacent to the existing railroad and connected to SW 7<sup>th</sup> via Naches would make connections to the east. The SW 7<sup>th</sup> corridor has a lot of potential, preferably as a separated multi-use trail and could become an excellent connection to downtown.

### **Neighborhoods**

This area is hilly, making it challenging for bicycle access, even on the designated shared use routes, Hardie and Taylor. The major arterial in the area is Renton Avenue South, which is considered moderately bicycle friendly along some of its length.

### EXISTING ROUTES CURRENTLY USED BY BICYCLES AND PEDESTRIANS:

- Monster Rd SW (bike lanes)
- SW 7<sup>th</sup> Street
- Black River Trail (walking trail)
- Springbrook Trail (multi-use trail)
- Taylor and Hardie Avenues SW (shared use)

### TRANSIT ROUTES:

- MLK Jr. Way South/SW Sunset Blvd (SR 900)
- SW 7<sup>th</sup> Street
- SW Grady Way

### OPPORTUNITIES:

- Two Rivers Trail (see Central Planning Area, above).
- Fort Dent Connector to connect the Green River Trail and Renton.
- Conversion of undeveloped path alongside railroad corridor in Black River Riparian area.
- Continuation of separated multi-use trail from Black River Riparian area down Naches to SW 7<sup>th</sup>.
- Possibility for a separated multi-use trail along SW 7<sup>th</sup> Street to connect to downtown.
- Extension north and south of Oakesdale Avenue SW bike lanes to connect with the Springbrook Trail.
- Renton Avenue South as a connection to Seattle.
- Future extension of Chief Sealth trail through the utility corridor.

**Southeast Planning Area** (Talbot/Benson/Fairwood/ Soos Creek)

Steep hillsides rise up from the Green River Valley and Cedar River corridor. The southeast planning area sits above these two rivers, and borders on downtown. It is bounded by the Valley Freeway (SR 167) on the west, I-405 to the north, the Cedar River to the northeast, and Renton City limits to the south and east.

The terrain is hilly and is transected by utility corridors: Puget Sound Energy transmission lines and the Seattle-Mercer Island Waterline. The area is predominantly residential, with some commercial/retail nodes along the arterials. Arterials curve, sometimes in response to topography, and are somewhat discontinuous; local streets form inwardly-focused neighborhood units. On the northeast side, The Cedar River Natural Area forms a sloped, wooded boundary between these neighborhoods and the Cedar River. Panther Creek and its wetland complex run parallel to SR 167 at the bottom of the west slope. Thunder Hills Creek flows toward I-405 and downtown from the southeast to the northwest. The area has several pockets of multi-family housing that would surely benefit from improved connections.

The primary east-west route, SW 43<sup>rd</sup> Street/SE Carr Road/ SE 176<sup>th</sup>/Petrovitsky Road, though long, is steep in places and has a cross section that changes several times along its approximately 6-mile length.

At the same time, multiple utility corridors in the area have the potential to provide miles of trails across the area. Providing a balance of destination-oriented non-motorized facilities as well as recreational ones will be the challenge in Southeast Renton.

There are several major north-south routes connecting to Kent and beyond: Talbot Road, Benson Road/108<sup>th</sup> Ave SE (SR 515), 116<sup>th</sup> Avenue SE, and 140<sup>th</sup> Avenue SE.

**EXISTING ROUTES CURRENTLY USED BY BICYCLES AND PEDESTRIANS:**

- Cedar River Trail (on north side of the river east of the Cedar River Natural Zone)
- 140<sup>th</sup> Ave SE (existing bike lanes)
- Benson Road South
- Puget Drive SE
- SE 164<sup>th</sup>
- Talbot Road South (existing bike lanes south of SW 43<sup>rd</sup>/179<sup>th</sup>/Carr Road SE)
- Hiking/walking trails in Cedar River Natural Zone



*Benson Road South*



*"Tower of Power" Trail near Philip Arnold Park*



Separated trail along 116th Avenue Southeast



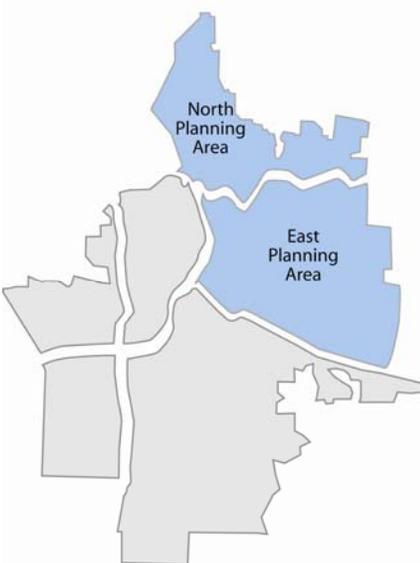
Bike lanes on Talbot Road South

**TRANSIT ROUTES:**

- 108<sup>th</sup> Ave SE
- 116<sup>th</sup> Ave SE
- Puget Drive SE
- SE 168<sup>th</sup> Street
- SE Carr Road
- SE Fairwood Boulevard
- SR 169 Renton-Maple Valley Road
- Talbot Road South

**OPPORTUNITIES:**

- Expansion of existing soft-surface or rough path / trails in utility corridors.
- Connections with Cedar River Natural Area.
- Safe walk-to-school routes (Renton Park Elementary, Talbot Hill Elementary, Nelson Middle School, Cascade Elementary, Tiffany Park Elementary).
- Regional trail connections: Interurban and Green River Trails and Soos Creek Trail, Soos Creek and the Cedar River Trail, Lake Youngs Watershed Trail.
- Connections with Kent and points south via 116<sup>th</sup> Ave SE and 132<sup>nd</sup>/140<sup>th</sup> Ave SE.
- Panther Creek wetlands.
- Trail along Thunder Hills Creek.
- Trail along Panther Creek wetlands, connecting to the Edlund Property and onto the Springbrook Trail.
- Pedestrian trails from multi-family areas to shopping areas.
- Good overlap between transit and proposed non-motorized transit routes.



**North and East Planning Area** (Kennydale/Sunset/East Plateau/Cedar River)

Though two separate planning areas, divided by Sunset Boulevard NE/SR 900, the North and East planning areas are grouped together for the purposes of this Master Plan because they are more contiguous and interconnected than other planning areas. The East Planning area is bounded by Maple Valley Road (SR 169) to south, I-405 and Lake Washington on the west, and Sunset Boulevard NE/SR 900 to the north. The North Planning area is bounded by Lake Washington to the west, Sunset Boulevard NE/SR 900 to the south, the May Creek corridor/May Creek urban separator and Renton City Limits to the north, and the Renton City Limits to the east.

The terrain is hilly and slopes steeply to Lake Washington on the west and the Cedar River to south. It is primarily residential, with commercial retail nodes and along the arterials, es-

pecially NE 3<sup>rd</sup>/NE 4<sup>th</sup> Street and NE Sunset Boulevard/SR 900.

Like the South Planning Area, topography presents a challenge to non-motorized travel in the North Planning Area, and currently limits connections between this area, downtown and Interstate 405 and its impact on nearby arterials and collectors also limit east-west access.

The east-west routes, Sunset Boulevard NE and NE 3<sup>rd</sup> and 4<sup>th</sup> Streets, are busy commercial streets, with higher traffic volumes, higher speeds, and many access points into the strip-type commercial development lining the streets. However, there are some routes parallel to these thoroughfares that can provide alternative access, even if these tend to be short, discontinuous segments.

Multiple parallel north-south routes (Edmonds, Monroe, Union and Duvall Avenues NE) could make for a highly connective non-motorized network, and provide opportunities to connect with the area's many civic resources.

#### EXISTING ROUTES CURRENTLY USED BY BICYCLES AND PEDESTRIANS:

- Lake Washington Loop Trail and Lake Washington Boulevard North bike/pedestrian facilities
- Cedar River Trail
- May Creek Trail
- Honey Creek Trail
- Edmonds, Monroe, Union, Duvall Avenues NE
- Sunset Boulevard NE (SR 900)
- NE 3<sup>rd</sup>/4<sup>th</sup> Streets/SE 128<sup>th</sup> Street
- NE 12th Street
- 148<sup>th</sup> SE (connects to May Valley Road, May Valley Park, Hazen High School and Apollo Elementary)

#### TRANSIT ROUTES:

- Renton-Maple Valley Road (SR 169)
- NE 3<sup>rd</sup>/4<sup>th</sup>/SE 128<sup>th</sup> Street
- NE Sunset Boulevard (SR 900)
- NE 27<sup>th</sup> Street
- Edmonds Ave NE
- Union Ave NE
- Duvall Ave NE/Coal Creek Parkway
- NE 7<sup>th</sup> Street
- NE 12<sup>th</sup> Street



*Busy corner on Sunset Boulevard NE*



*Devil's Elbow, along Honey Creek Trail*



*Pedestrian path along NE 12th Street*



*Union Avenue NE*



*Burlington Northern Santa Fe Railroad line along the shoreline of Lake Washington*



*SE May Valley Road*

#### OPPORTUNITIES:

- NE 10<sup>th</sup> and NE 12<sup>th</sup> Streets as bypass routes to Sunset Boulevard.
- Connections to good distribution of neighborhood parks.
- Connections to May and Honey Creek Trails, Cedar River Trail.
- Safe walk-to-school routes (Maplewood Heights, Hazen High School, McKnight Middle School).
- Existing trails and planned development of the Honey Creek, May Creek, and Kennydale Creek corridors.
- Good overlap between transit and possible non-motorized transit routes.
- Possible redevelopment of the areas as a result of the Highlands Subarea Plan.
- Connections to Bellevue, Newcastle and Issaquah.
- Several scenic longer rural routes: SE May Valley Road, SE Jones Road.
- Long term redevelopment of the BNSF railroad corridor.

## PART 3: RECOMMENDATIONS





## PART 3: RECOMMENDATIONS

### ROUTING

In developing Renton's proposed non-motorized network, it was helpful to think about different categories of routes in order to ensure coverage to all kinds of destinations, as well as to determine which trail cross-section is most appropriate.

#### Primary Routes

Primary facilities provide regional connections through and within Renton. Because of the longer distances these facilities traverse, they will constitute the highest mileage of facilities in the system. Examples include the Lake Washington Loop and the Cedar River Trail, both of which are designated regional trails by King County.

Primary facilities were selected based on the following criteria. The facility should:

- Provide continuous connection between major portals to the CBD/downtown/City Center when completed
- Serve and connect with the public transportation system
- Avoid high traffic arterials and state highways unless no other feasible direct connection exists
- Avoid roadways posted at speeds over 40 miles per hour unless no other feasible direct connection exists
- Avoid major hills whenever possible.

#### Secondary Routes

Secondary facilities provide subarea/neighborhood connections meant to augment the primary trail system. Typically, they serve smaller commercial, residential, or employment centers, or locations that are not connected by primary facilities. As with primary facilities, these facilities may also cover longer distances. An example would be a trail in a utility corridor. Secondary facilities should:

- Connect the CBD to neighborhoods, major parks, and recreation centers
- Provide alternative connections to areas served by the primary trail system if either of the following criteria apply:
- Provide a connection between two primary facilities that otherwise would not be connected

### TYPES OF ROUTES

\* **PRIMARY:**

through routes, connecting city to city

\* **SECONDARY:**

connecting neighborhood to neighborhood

\* **MINOR:**

connections within the neighborhoods

- Provide access to points of interest and scenic features/destinations that otherwise would not be served by the primary trail system.

### **Minor Routes**

Minor routes connect residential neighborhoods, commercial centers, employment centers, parks, and specific activity center to the primary and secondary trail system, provide local connections within these areas, or connect these areas with other nearby locations such as schools. These facilities typically cover shorter distances than either of the other types of facilities. Within this category there is the greatest opportunity for expansion, based on development patterns in the City.

### **Encourage More Walking, Hiking and Biking**

According to a study by the Puget Sound Regional Council, about 5 percent of all trips made in the Central Puget Sound region are bicycle or walking trips, which is comparable to the national average. In Renton, 2.6 percent of commuting trips are made on foot or by bike. In order for Renton to meet the regional average of commuting trips made without cars, as well as to encourage healthier, more active lifestyles and boost recreation, the City must make primary, secondary, and local routes more accessible, and make them safer and more attractive to use on foot or on bike.

### **Boost from Regional Connections**

On the regional scale, the completion of missing links, extensions, and new trail development would add approximately 30 more miles of trail in and around Renton, for a total of approximately 112 miles of regional trail linkage in the City, which is about 63% of King County's total system.

Connection to the Green River Trail is possible through the completion of a half-mile missing link between Renton and Tukwila. A planned extension of the Soos Creek Trail to the Cedar River Trail and the development of the Cedar-Sammamish Trail from the Cedar River Trail to Sammamish will provide many additional miles of regional trail through Renton.

## EVALUATION CRITERIA

Evaluation criteria were developed to use as the basis for evaluating routes, determining the final selection of routes, the design and cross sections of the routes, and ultimately, as tools for prioritizing the trails for funding and construction. While all the criteria bear significant weight on planning decisions, first and foremost, trails and routes need to provide a safe experience for all user groups.

The evaluation criteria are based on community needs, safe and efficient bicycle travel. The criteria are listed in proposed order of priority.

**Safety:** The proposed facility should provide a safe trail experience.

**Accommodation/Accessibility:** The proposed facility should serve the needs of the maximum number of user groups possible; both commuters and recreational users, young and old, pedestrians and cyclists. Some advocate accommodating differing travel modes, user abilities, and trip purposes through separate facilities--separating faster cyclists or equestrians from a primary trail meant to accommodate pedestrians and less-skilled or slower cyclists.

**Continuity & Directness:** The proposed facility should be continuous, clear and easy to follow, proceeding in the most efficient, and direct pathway possible. Cyclists tend to favor routes that require the least expenditure of their energy. In addition, navigability and ease of wayfinding are extremely important to bicycles and pedestrians.

**Connectivity/Linkage:** The proposed facility should link destinations of all levels: neighborhoods, employment centers, schools, parks, shopping, recreation and entertainment facilities, public services, and destinations beyond the city limits. In addition the facility should synchronize with transportation nodes and modes through the City, to facilitate multi-modal connections.

**Regional Trail Connectivity:** The proposed facility should take advantage of the nexus of several regional trails in the area, connecting to and between these systems to create an even larger network.

**Trail Experience:** The proposed facility should provide a comfortable and appealing trail experience, and should take advantage of opportunities to follow scenic corridors and connect with scenic resources. In order of most desirable to least desirable, the following cross-sections are

## FACTORS AFFECTING SAFETY

- \* Potential for conflict with other trail users and vehicles, especially at crossings
- \* Traffic volume, speed, and type: smaller, passenger vehicles vs. larger vehicles (e.g. trucks and busses)
- \* Cross section or geometry of facility: proximity to vehicular travel lanes, separation from vehicle lanes, width of facility, grade, sight distances, surfacing, etc.
- \* Perceived safety: overall sense of comfort with the facility

## FACTORS AFFECTING TRAIL EXPERIENCE

- \* Safety and comfort
- \* Perceived safety
- \* Trail volumes and types of users
- \* Noise, air pollution, traffic speeds and volume
- \* Scenery and scenic resources

recommended: separated trail bicycle lanes, paved shoulders, signed shared roadway, and shared sidewalk.

**Sensitivity:** The proposed facility should be designed to respect and avoid harm to wildlife corridors, critical areas, and other sensitive landscapes.

**Concurrency:** The proposed facility should be concurrent with other City, County and regional non-motorized planning efforts.

**Funding/Construction Opportunities:** Identify opportunities to construct the proposed facility as part of other projects, such as the Transportation Improvement Program (TIP).

### METHODOLOGY

The evaluation criteria above are listed in order of priority. The sample matrix in Figure 6 illustrates the evaluation methodology. The routes are evaluated by each criterion, using a simple to use scoring system. This methodology is designed to allow some flexibility and judgment.

The final evaluation matrix (Table 1), which identifies projects and their ranking, is located at the end of Recommendations Section (Part 3).

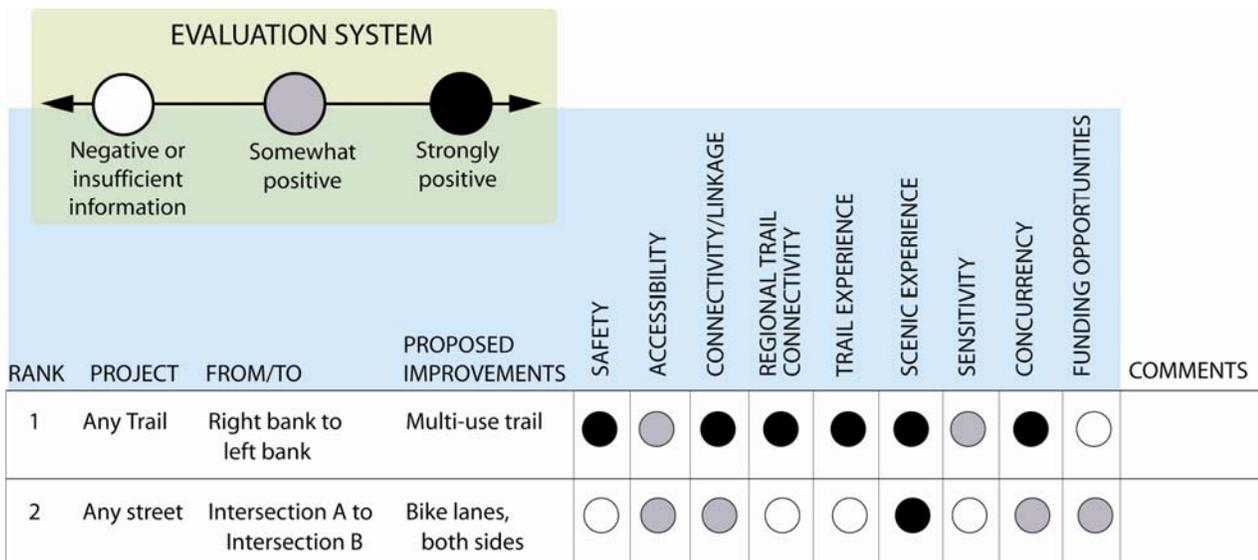


Figure 6. Sample Evaluation Matrix

## CROSS SECTIONS

The safety of the users of Renton’s trails and bicycle network can be enhanced by building facilities to a consistent standard and maintaining all facilities adequately. The Master Plan includes a set of guidelines for cross sections as a companion to the recommended routes. The design guidelines provide a reference to the minimum acceptable construction criteria which will satisfy commonly accepted guidelines for safety.

The cross-section guidelines are based on recognized state and national standards, described in the Design Standards section (page 55). Recognized state and national standards include dimensional recommendations for widths, cross-slopes, grades, surface treatments, separation of elements, signage and other elements that make up a new facility or system. They are intended to define minimum dimensional criteria for development of safe facilities functioning under normal conditions.

Figure 7, adapted from Washington State Department of Transportation guidelines, recommends cross sections based on roadway classification, traffic speed and volume.

In addition to safety and roadway factors, the assignment of cross sections is based on other factors, such as the constraints of existing conditions and the desired trail experience (see sidebar).

### FACTORS FOR DETERMINING CROSS SECTIONS

- \* Safety of trail/facility users
- \* Availability of right-of-way, on road vs. off road
- \* Location of destination, most direct route
- \* Type of trail experience desired
- \* Accommodation of different kinds of trail/facility users
- \* Character of roadway (traffic speeds and volumes, etc.)
- \* Constraints of existing conditions

GENERAL GUIDELINES FOR SELECTING CROSS-SECTIONS ON ROADWAYS Adapted from WSDOT		
ROADWAY CLASSIFICATION	TRAFFIC VOLUME AND SPEED (ADT = average daily traffic)	RECOMMENDED ON-ROAD CROSS-SECTION
Highways and other high-volume streets with limited access	Speeds > 25 mph ADT > 2000	1st choice: <i>Shared use trail</i> 2nd choice: <i>4' min. shoulders, each side</i>
Arterials in residential, commercial, industrial areas with higher access needs		1st choice: <i>Shared use trail</i> 2nd choice: <i>Bike lanes, each side</i>
Local streets, rural highways, Collector or minor arterials	Speeds < 25 mph ADT less than 2000	Shared roadway

Figure 7. Guidelines for Selecting Cross-Sections

TYPES OF CROSS SECTIONS	
OFF-ROAD FACILITIES	ON-ROAD FACILITIES
Multi-use Trail	Bicycle lanes
Separated Multi-use/ Shared Use Trail	Paved shoulder
	Signed shared roadway

**Figure 8. Types of Cross Sections**

Figure 8, indicates that cross sections are categorized off-road or on-road. The individual cross sections are described below.

**Off-road Facilities**

Off-road facilities can offer a multitude of benefits: reduced potential for conflicts with motor vehicles, more spacious facilities, scenic settings, direct access to open space and recreational facilities. There are two types of off-road facilities considered in this master plan: trails associated with road rights-of-way, and trails on other kinds of public or private lands.

**On-Street Facilities**

The beauty of the Renton’s street network is that it takes people where they want to go. And yet for bicyclists and pedestrians, skill-level, physical ability, level of comfort, and available time determine what route is best. The most direct route may not be the best for every user. While some bicyclists feel comfortable riding on streets without dedicated bicycle facilities, many cyclists do not.

According to Bike Plan Source:

“Experienced bicyclists often prefer arterials for their traffic controls and directness. Other riders tend to avoid them, if possible, because of the traffic. . . Arterials . . . may be the only streets that break certain barriers like railroad yards, freeways, and rivers. But arterials increasingly provide other benefits to cyclists as well. In suburban areas, for example, many popular destinations--schools, worksites, shops--can only be found along arterials. For destination-oriented bicyclists, therefore, using arterials may be the only alternative.”

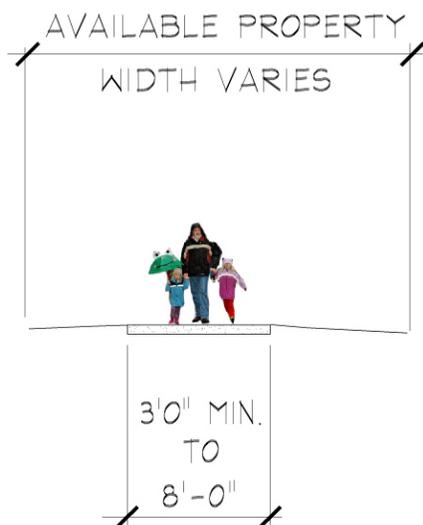
A combination of the facilities described below will be employed on busier roadways like arterials, as well as local and collector streets to create a trail and bicycle network in Renton that will accommodate a wide range of users' comfort and skill levels.

### MULTI-USE TRAIL

This cross-section applies to corridors that are not associated with road rights-of-way. The design of the trail is wide enough to accommodate two-way shared usage by bicyclists and/or pedestrians. Surfacing options include asphalt concrete, Portland cement, gravel or soft-surface. The latter is preferred if hiking of the trail is expected. Examples of off-road trails would be stream, utility, or railroad corridors.

#### MULTI-USE TRAIL at a glance

- Not necessarily associated with road right-of-way: could be stream, utility, railroad corridor, park or open space
- 1 and 2-way travel
- Width: 3' minimum, 6-8' preferred, shoulder on each side where trail abuts steep slope
- Surfacing varies



### MULTI-USE TRAIL *soft surface*

### **HIKING ONLY TRAILS**

Certain trails are designated for pedestrian and hiking only. These soft-surface trails vary in width, but are primarily two to four feet wide. Examples of hiking only trails are May and Honey Creeks, and an example of pedestrian only is the boardwalk on Springbrook Creek.

### **WATER TRAILS**

The Lake-to-Locks Water Trail is a day-use trail with over 100 public places to launch and land small non-motorized boats in the midst of vibrant Pacific Northwest communities.

The lakes of the Lake-to-Locks are Sammamish, Washington, and Union. The locks of the Lake-To-Locks Trail are the Hiram M. Chittenden Locks where fresh water meets salt water. This is one way to reach the Cascadia Marine Trail on Puget Sound.

Water launches from Renton can take place from the Cedar River and numerous locations along the shoreline of Lake Washington.

## SEPARATED MULTI-USE (OR SHARED USE) TRAIL

In areas where the road right-of-way is wide enough, a two-way separated trail for shared usage is possible. As with the off-road trail cross-section, surfacing options include asphalt, concrete, Portland cement, gravel, or soft-surface. Separated trails provide greater separation from noise, traffic fumes, and are typically preferred by less-skilled cyclists who do not feel comfortable maneuvering along traffic or who want to travel at lower speeds. According to The Pedestrians and Bicycling Information Center,

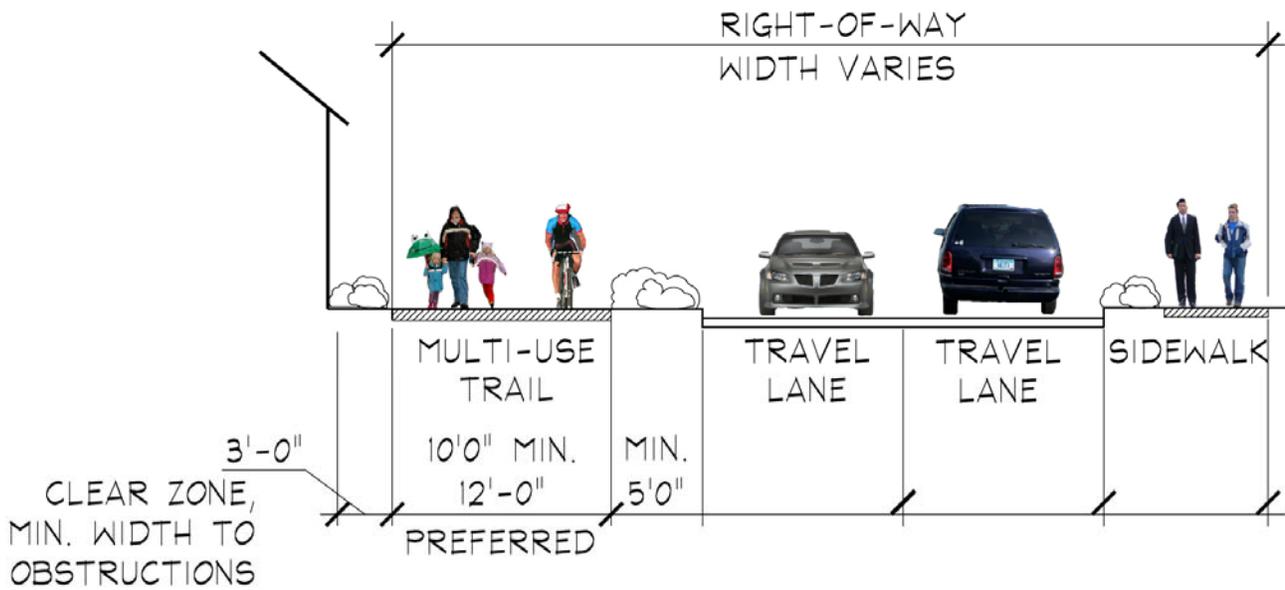
Shared use paths are an addition, and complimentary, to the roadway network: they are not a substitute for providing access to streets and highways. In the past, some communities have treated the development of a shared use path as the only thing they needed to do to "provide for bicyclists" and give them somewhere to ride. However, even the most extensive trail network cannot provide access to all the origins and destinations in a community, and trail users have to be able to get to and from the trail on the regular street network.

### SEPARATED MULTI-USE/SHARED USE TRAIL

#### at a glance

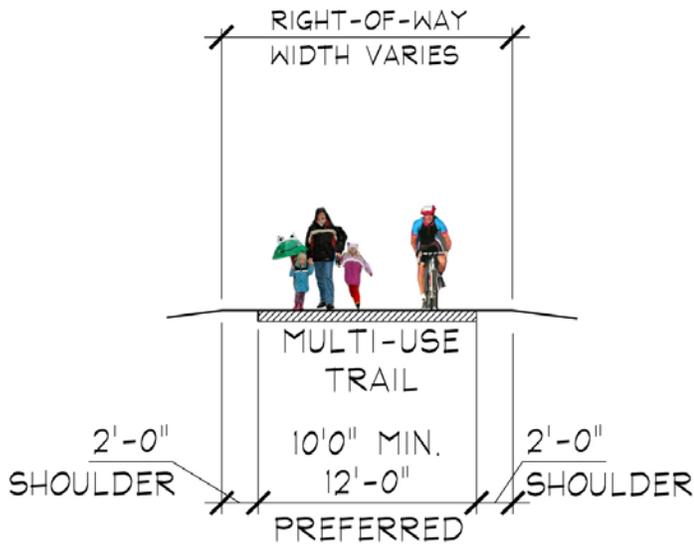
- Facility in the right-of-way yet physically separated from traffic by open space or a barrier
- 2-way travel
- Width: 10' minimum, 12' preferred + 2' shoulder on each side = 14' or 16' total
- 5' minimum separated from roadway
- Surfacing varies
- Not always preferred by more skilled cyclists, commuters





**SEPARATED MULTI-USE TRAIL**

*5' minimum separation between trail and roadway*



**SEPARATED MULTI-USE TRAIL**

*rural conditions, with shoulder*

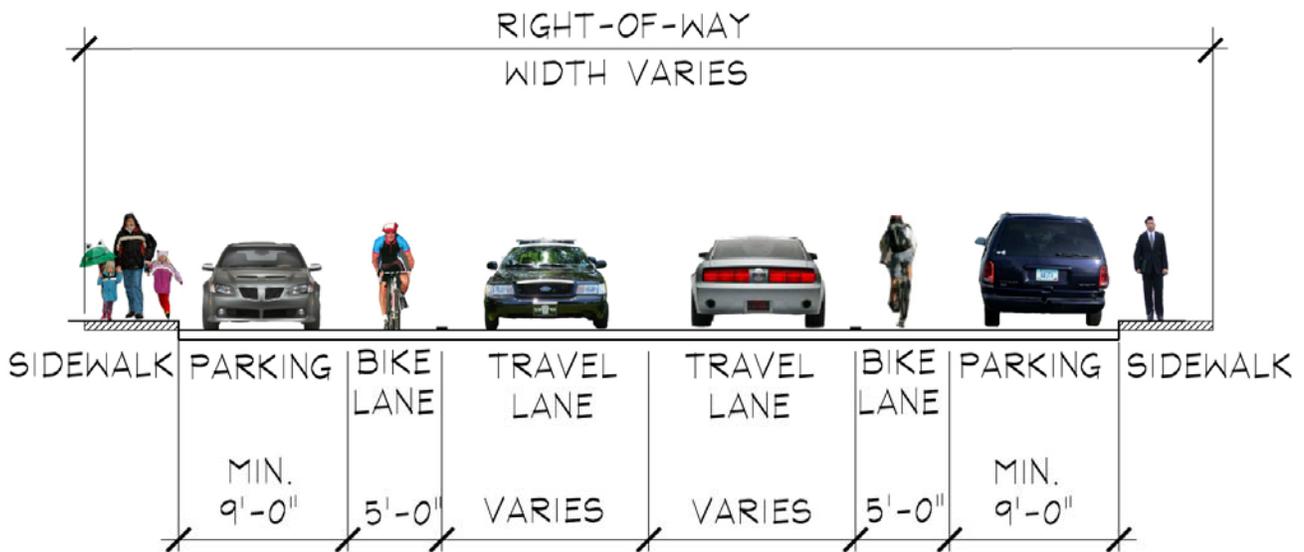
## BICYCLE LANES

The bicycle lane cross section accommodates cyclists in a designated striped lane and pedestrians either in the shoulder or on a sidewalk in the case of a curbed roadway. For reasons of safety, bicycle lanes are always one-way facilities traveling in the direction of traffic designated for the exclusive use by bicyclists.

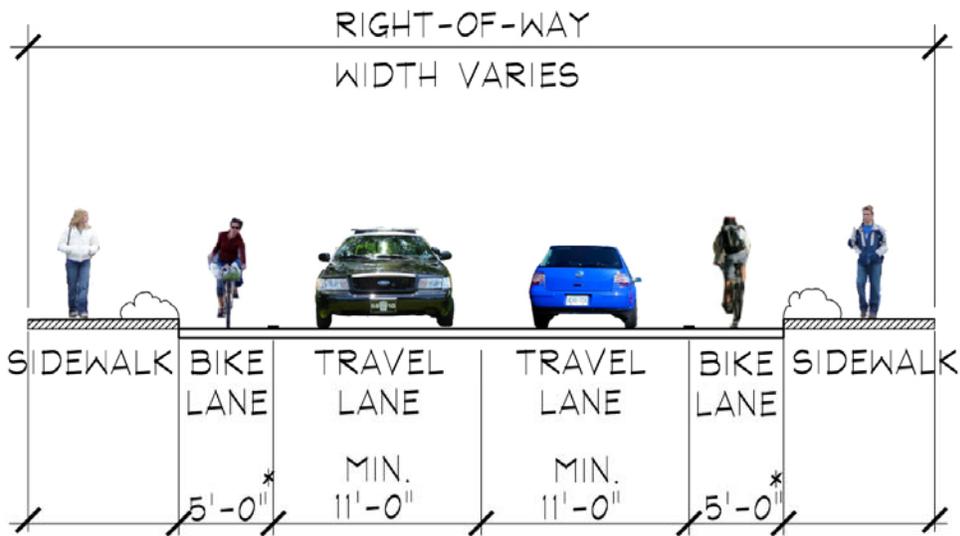
### BICYCLE LANES at a glance

- 1-way facilities traveling in the direction of traffic, usually on both sides of roadway
- Exclusive use by bicyclists
- Width: 5' minimum to curb face or guardrail, 4' minimum without curb and gutter
- 13 feet: shared bike lane and parking area, without curb face
- 14 feet: shared bike lane and parking area with a curb face
- Paved surface denoted with pavement markings:
  - 4" or 6" solid white line demarcating bike lane, bicycle lane symbol (see Signage plans)
  - 4" solid white line demarcating parking area
  - Bike lane symbol (6' high) and directional arrows should be painted on the far side of each intersection

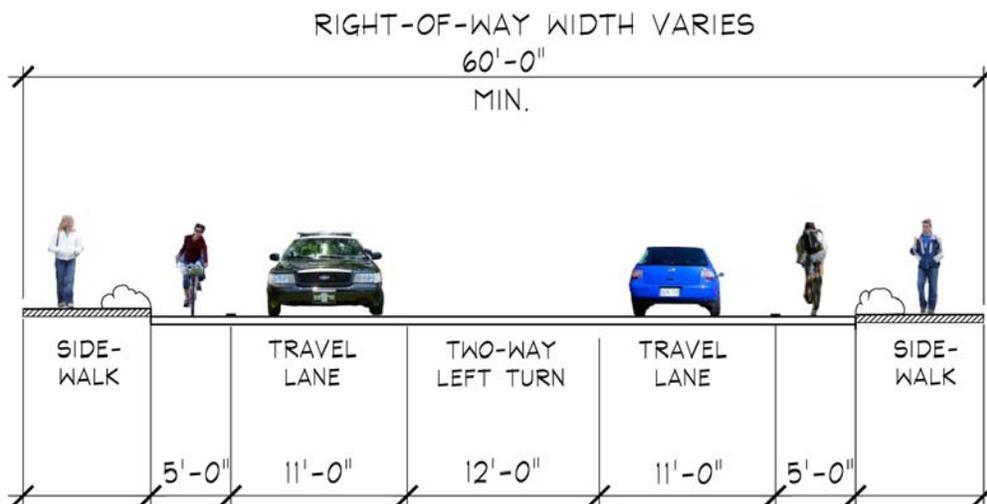




**BIKE LANES: TWO-WAY ROAD, with PARKING**  
*2 travel lanes, 2 parking lanes, 2 bikes lanes*



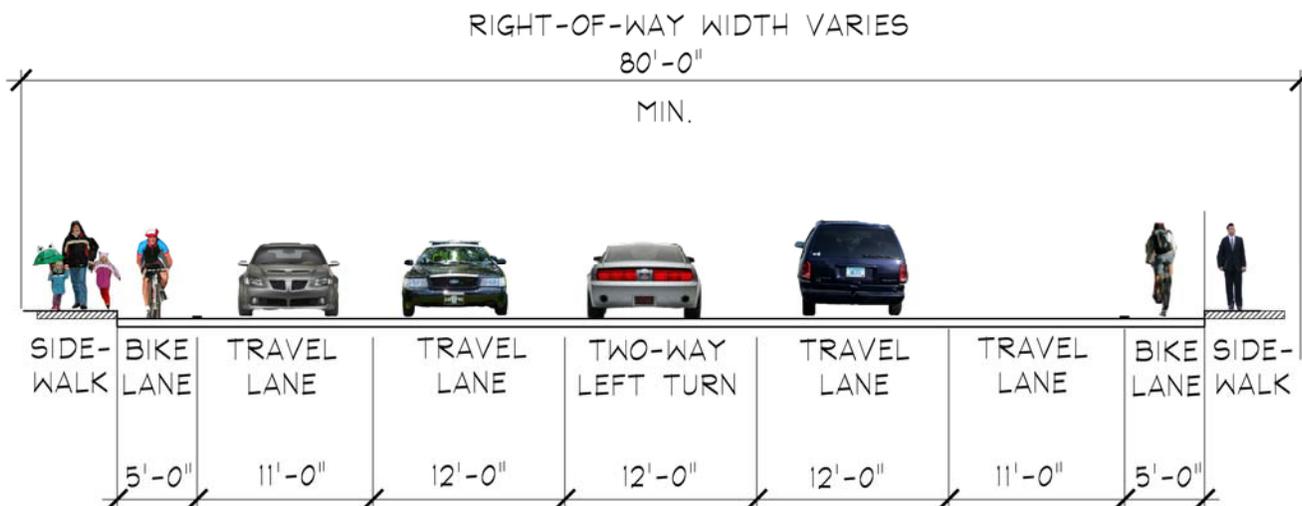
**BIKE LANES: TWO-WAY ROAD, no PARKING**  
*2 travel lanes, 2 bikes lanes*



**BIKE LANES: ROAD, with TURN LANE**

*2 travel lanes, 1 two-way left turn lane, 2 bikes lanes*

*Existing examples: Talbot Road South, south of South 43rd Street;  
SW 16th Street, west of Oakesdale Avenue SW*



**BIKE LANES: 4-LANE ROAD, with TURN LANE**

*4 travel lanes, 1 two-way left turn lane, 2 bikes lanes*

*Existing example: Duvall Avenue NE, north of NE 4th Street*



## SIGNED SHARED ROADWAY

When right-of-way widths and existing roadway conditions prohibit the addition of dedicated bicycle facilities, a roadway can be designated for shared use by motorists and bicyclists. Typically, this design solution is used on roadways with low traffic speeds and low levels of traffic or with wide curb lanes (i.e. 14 feet minimum). Signed shared roadways may provide a safer alternative to travel on busier parallel routes; direct cyclists toward particular destinations, such as parks, schools, shopping areas; or may serve as a link between discontinuous segments of dedicated bicycle facilities. Because signed shared roadways are often local streets, they may not necessarily be the most direct route. Ideally, signed shared roadways give bicyclists more priority in traffic maneuvers.

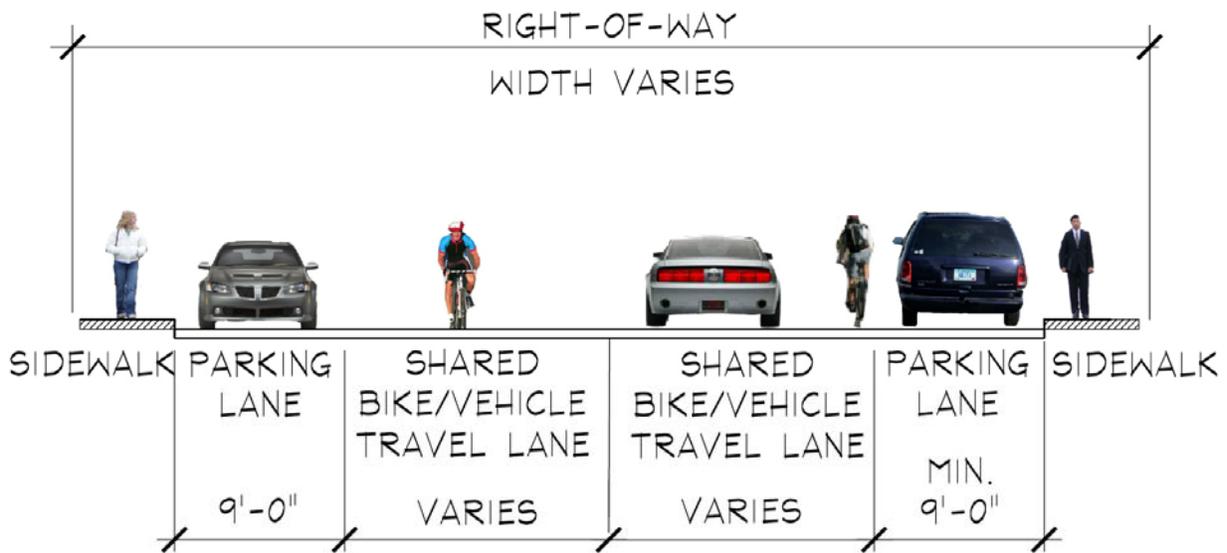
The WSDOT Design Manual recommends the following criteria be used in determining whether to sign a bike route/ shared roadway:

- The route offers a higher degree of service than alternative streets
- The route provides for through and direct travel in bicycle corridors
- The route connects bicycle facilities
- Traffic control devices have been adjusted to accommodate bicyclists
- Street parking is prohibited for improved safety where lane width is critical
- Surface hazards to bicyclists have been corrected
- Maintenance of the route is at a higher level than comparable streets, such as more frequent street sweeping and repair.

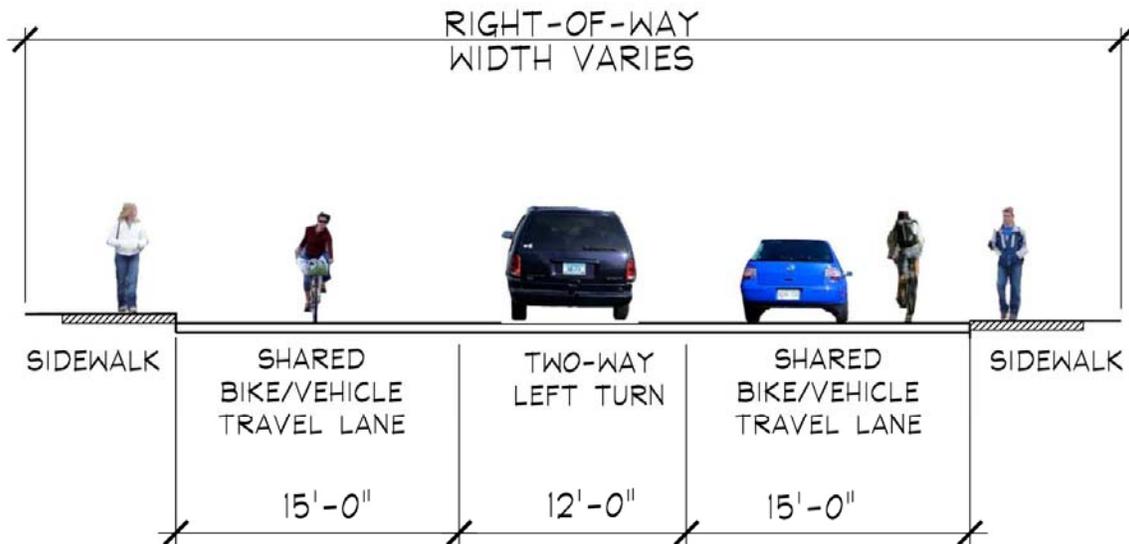


### SIGNED SHARED ROADWAY at a glance

- Bicyclists share roadway with motorists for safety, wayfinding, or other purposes
- No change to roadway configuration required, though routes are often designated with signage and other measures to give bicyclists priority or enhance their safety and comfort
- Usually on lower volume, speed roadways/local streets.
- Signage: every ¼ mile, or at every turn



**TWO-WAY SHARED USE ROADWAY, with PARKING**  
*2 shared bike/vehicle travel lanes, 2 parking lanes*



**TWO-WAY SHARED USE ROADWAY, with TURN LANE**  
*2 shared bike/travel lanes, 1 two-way left turn lane*

*Existing example: SW 16th Street, east of Oakesdale Avenue SW*

## PAVED SHOULDERS

Paved shoulders are for shared use by bicyclists and pedestrians. In traffic situations shoulders are often used by stopped vehicles and for emergency uses. Even so, a paved shoulder goes a long way to enhancing the corridor for use by bicyclists and pedestrians. In addition to minimum width, paved shoulders should be free from obstructions and have a reliably smooth surface, without rumble strips.



### PAVED SHOULDERS at a glance

- For use by bicyclists and pedestrians + stopped vehicles, emergencies
- Width: 5' minimum with curb and gutter, 4' minimum without curb and gutter
- Widths should be increased with higher bicycle use, motor vehicle speeds above 50 mph, higher percentage of truck and bus traffic.



## SHARED SIDEWALK

A shared sidewalk cross-section allows cyclists to share the sidewalk with a pedestrian. This cross-section is considered a last resort solution in isolated situations such as across bridges and along high speed and high-traffic roadways, which lack adequate right-of-way for the provision of bicycle lanes, but have existing sidewalks. On sidewalks, bicyclists are expected to yield to pedestrians and walk their bicycles if sidewalks are particularly narrow.

Both the shared roadways and shared sidewalk cross-sections are included among the alternatives as a means to fill in gaps at difficult locations. Neither is considered an optimum solution and both are avoided where possible.



### SHARED SIDEWALK at a glance

- Generally not advised, except for special circumstances: bridges, high speed/high-traffic roadways
- Bicyclists must yield to pedestrians

## COMBINED CROSS-SECTIONS

Certain conditions, such as right-of-way limitations, traffic volumes, environmental conditions, etc. may preclude the consistent use of a single cross-section along a route or street. While consistency is generally the preference, it is preferable to have a facility that uses a combination of cross-sections rather than no facility at all, or one that ends abruptly.

## **IMPLEMENTATION OF CROSS SECTIONS**

It is recommended that, at the project design level, each project be reassessed to determine the appropriateness of the suggested improvements, and to determine the available right-of-way, etc.

Moreover, it is also critical for the Master Plan to have some flexibility in the designation of cross-section. In the evolution of the planning process, certain assumptions were made about existing conditions, road locations in the right-of-way, condition and location of utilities, etc. When the project is finally in the development phase, a topographic and right-of-way survey will provide the first clear picture of the actual conditions of the route, and it may be necessary to implement a different design solution or combination of design solutions than are shown in the Master Plan. In addition, there may be development of other capital projects or changes in funding strategies that dictate a different cross section or facility classification than the one currently identified.



## **DESIGN STANDARDS**

### **AASHTO GUIDELINES FOR THE DEVELOPMENT OF BICYCLE FACILITIES**

This manual of design standards is recognized nationally as the “industry standard for development of bicycle facilities.” All of the design guidelines included in the recommendations section of this plan will meet the minimum standards articulated in the AASHTO document.

### **WSDOT Local Agency Guidelines**

This manual identifies specific design standards related to bicycle and pedestrian facility installations. These standards are referenced in the design guidelines.

### **KC Regional Trails Inventory & Guidelines**

According to the King County Trails website, “the King County Regional Trail System is one of the nation’s most extensive multi-use off-road systems with over 175 miles of trails for bicycling, hiking, walking, and horseback riding.” King County Regional trail guidelines are closely aligned with the AASHTO guidelines but are intended to create and unify the regional network by standardizing regional trail design elements, based on the concerns of safety, convenience, aesthetic experience, and economical maintenance.

The quality and connectivity of local non-motorized networks varies, but the King County system is the backbone of recrea-

tional and commuting use across the region. Some King County regional trails see as many as 2,000 users a day. As such, the regional trail standards are designed to accommodate a large number and variety of users in a safe, efficient and enjoyable manner.

## **FUNDING**

The City of Renton includes a Bicycle Route Development Program in the annual Six-Year Transportation Improvement Program (TIP). The TIP is adopted annually by the City Council. The 2009-2014 TIP (Appendix I) has programmed \$448,000 to implement projects identified in the Trail and Bicycle Master Plan. The funding can be used for planning, design and construction phases of the projects as well as for local matches for state and federal grants, as identified in Appendix J. Although it may not be the primary purpose of a particular project or program, many TIP projects have the potential to assist in implementing projects within the Trails and Bicycle Master Plan.

The Washington State Recreation and Conservation Office (RCO) provides matching grants for trail acquisition and development, and is open to local and state agencies. Under the Washington Wildlife and Recreation Program (WWRP), eligible projects range from long-distance, cross-state rail-trail conversions to small paths connecting neighborhoods or to other trail systems. Grant applications are received on even calendar years.

In 2007, King County voters approved Proposition 2, which includes expanding the regional trail system over a six year period, with the last distribution to cities ending in 2013.

## **RECOMMENDED IMPROVEMENTS & PROJECT PRIORITIZATION**

The recommended trails and bikeways improvements are shown in Figure 9 (city-wide) and Figure 10 (downtown area detail).

Tables 1 and 2, following the recommended improvements maps, is the prioritization matrix for the recommended improvements evaluated on the criteria described earlier in this chapter, and described in the sample evaluation matrix (figure 6).

These projects are organized from highest to lowest priority on the basis of their ranking among the criteria. The table identifies each project by location and cross-section. Following the prioritized matrix is a listing of recommended improvements broken down by Parks and Transportation divisions.

The complete inventory of proposed recommendations and existing facilities can be found in Appendix B, organized alphabetically. The inventory identifies each route by location, length, proposed cross section, etc.

### **IMPLEMENTATION OF PRIORITIZED PROJECTS**

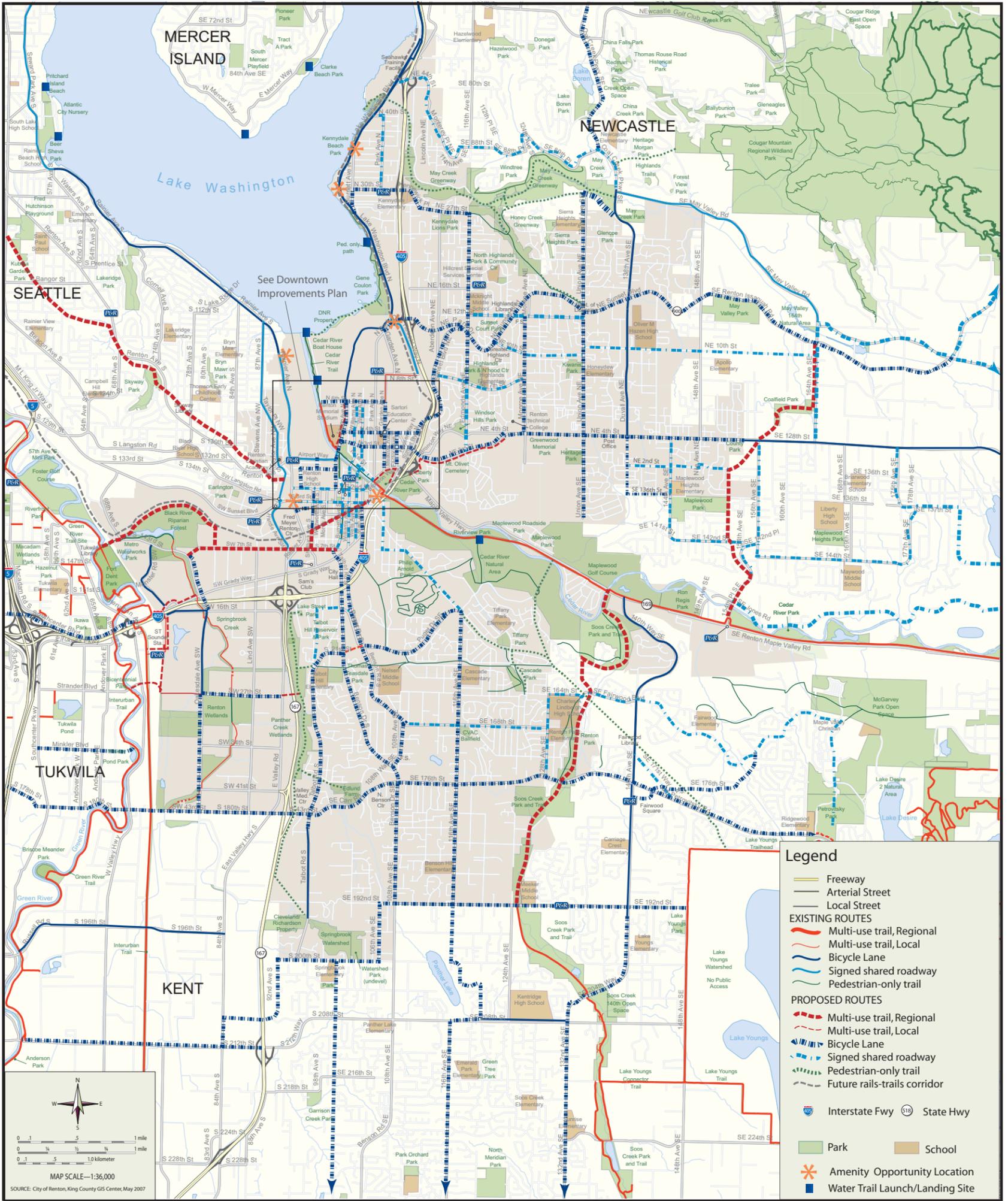
Conditions and priorities in all communities change over time. Therefore the entire project list should be periodically re-evaluated. This review should be completed by a group including residents, committee members, City staff, and others to assure it reflects the needs and desires of the community at large. Reevaluation may involve changes as significant as redefining routes or as minor as shifting project priorities. Maintaining flexibility and responsiveness to the community's concerns and desires will assure long-term success and continued growth of the system.

Finally, opportunities for trails and bikeways development may arise (through property acquisition, grant approval, concurrence with other projects, public support, etc.) that could shift project priorities. This list should be reviewed and updated periodically as project implementation progresses.

### **PROJECT SHEETS**

A selection of proposed improvements have been detailed as project sheets, which can be found at the end of the Master Plan.





City of **Renton**



Trails and Bicycle Master Plan

# Trails and Bicycle Improvements Plan

MAY 2009

MACLE  
OD-RE  
CKORD





**Legend**

**EXISTING ROUTES**

- Paved trail, regional
- Paved trail, local
- Bicycle Lane
- Signed shared roadway
- Pedestrian only trail

**PROPOSED ROUTES**

- Multi-use trail, regional
- Multi-use trail, local
- Bicycle Lane
- Signed shared roadway
- Pedestrian only trail
- Future rails-trails corridor



RENTON TRAILS & BICYCLE MASTER PLAN

TABLE 1. PRIORITIZATION MATRIX FOR RECOMMENDED IMPROVEMENTS

				Evaluation Key									NOTES, Possible Funding Sources
				Negative or Insufficient Info.			Somewhat Positive			Strongly Positive			
				○	○	○	●	●	●	●	●	●	
				1			2		3				
TRAIL/ROUTE NAME <i>Proposed routes only</i>	FROM	TO	PROP. CROSS SECTION	SAFETY	ACCOMMODATION / ACCESSIBILITY	CONTINUITY/DIRECTNESS	CONNECTIVITY/LINKAGE	REGIONAL TRAIL CONNECTIVITY	TRAIL EXPERIENCE	SENSITIVITY	CONCURRENCY	FUNDING OPPORTUNITIES	
<b>HIGHEST PRIORITY IMPROVEMENTS</b>													
1a-1g	<b>TWO RIVERS TRAIL:</b> Fort Dent Connector, Black River Riparian Forest, Naches Ave SW, SW 7th Street, Shattuck Ave South, Houser Way South	Green River Trail	Cedar River Trail	SEPARATED MULTI-USE TRAIL, PAVED	●	●	●	●	●	●	○	●	KC, TIP 1, 2, 12, 14
2	<b>SPRINGBROOK TRAIL</b>	Black River Trail/Monster Road SW	SW 43rd Street	SEPARATED MULTI-USE TRAIL, SOFT SURFACE (COMPLETE)	●	●	○	○	●	●	○	○	
3	<b>MAY CREEK TRAIL</b>	Lake Washington Blvd North	Cougar Mountain County Park	SEPARATED MULTI-USE TRAIL, SOFT SURFACE	●	○	○	○	●	●	○	○	
4	<b>PANTHER CREEK TRAIL</b>	Cleveland Richardson Property	Lake Street Park	SEPARATED MULTI-USE TRAIL, SOFT SURFACE	●	○	○	○	○	○	○	○	I-405 Congestion Relief, TIP 5
5	<b>HONEY CREEK TRAIL</b>	Honey Creek/May Creek confluence	Union Avenue NE	SEPARATED MULTI-USE TRAIL, SOFT SURFACE	●	○	○	○	○	○	○	○	
6	<b>DEVIL'S ELBOW</b>	Edmonds Avenue NE	Duvall Avenue NE/Coal Creek Parkway	MIXED CROSS-SECTION: SEPARATED MULTI-USE TRAIL, PAVED (EXISTING) + BICYCLE LANES	○	●	●	●	●	○	○	○	
7	<b>DUVALL AVENUE NE BICYCLE LANES</b>	SE 136th Street/Maplewood Hts Elem.	Coal Creek Parkway/Northern City Limits	BICYCLE LANES (EXTEND EXISTING)	○	○	○	○	○	○	○	○	TIP 3, 4, 5
8	<b>LIBERTY PARK CONNECTOR</b>	Cedar River Trail	Bronson Way North/Factory Avenue North	SEPARATED MULTI-USE TRAIL, PAVED	●	●	○	●	●	●	○	○	TIP 12, 14
9	<b>SAM CHASTAIN WATERFRONT TRAIL</b>	Cedar River Trail	Gene Coulon Park	MULTI-USE TRAIL, BOARDWALK	●	○	●	●	●	○	●	●	TIP 11
10	<b>NE 3rd AND 4th STREET BICYCLE LANES</b>	Logan Avenue North	Eastern City Limits	SEPARATED MULTI-USE TRAIL + BICYCLE LANES (EXTEND EXISTING)	○	○	●	●	○	○	○	○	TIP 9, 18, 19, WS PBP
11	<b>TUKWILA STATION/LONGACRES WAY CONNECTOR</b> (South Grady Way and Longacres Way SW)	Oakdale Avenue SW	Tukwila Station	SEPARATED MULTI-USE TRAIL + BICYCLE LANES	●	●	●	●	○	●	○	○	TIP 12, 14
12a-12b	<b>LAKE WASHINGTON LOOP: AIRPORT PERIMETER ROAD &amp; LOGAN AVENUE NORTH</b>	West entrance to Airport	Park Avenue North	BICYCLE LANES (EXTEND EXIST. SOUTH OF NORTH 6TH STREET) + MULTI-USE TRAIL BETWEEN 6TH AND CEDAR RIVER.	○	○	○	○	○	○	○	○	TIP 11
13	<b>SE PETROVITSKY ROAD BICYCLE LANES</b>	Tukwila/Green River Trail and Interurban Trail	Petrovitsky Park	BICYCLE LANES	○	○	○	○	○	○	○	○	TIP 1, 2; WS PBP
14	<b>GARDEN AVENUE NORTH &amp; NORTH 6th STREET BICYCLE LANES</b>	Cedar River/Cedar River Trail	North 3rd Street	BICYCLE LANES	○	○	○	○	○	○	○	○	TIP 1, 2, 18, 19; STP MPO Alloc.
15	<b>CASCADE TRAIL AND SW 27th STREET CONNECTOR</b>	Oakdale Avenue SW & SW 27th Street	Puget Drive SE	SEPARATED MULTI-USE TRAIL + BICYCLE LANES	○	○	○	○	○	○	○	○	Tukwila/Renton Project

**Evaluation Key**

Negative or Insufficient Info.	Somewhat Positive	Strongly Positive
 1	 2	 3

TRAIL/ROUTE NAME <i>Proposed routes only</i>	FROM	TO	PROP. CROSS SECTION	Evaluation Key									NOTES, Possible Funding Sources	
				SAFETY	ACCOMMODATION / ACCESSIBILITY	CONTINUITY / DIRECTNESS	CONNECTIVITY / LINKAGE	REGIONAL TRAIL CONNECTIVITY	TRAIL EXPERIENCE	SENSITIVITY	CONCURRENCY	FUNDING OPPORTUNITIES		
16 NE 7th STREET BIKEWAY	NE Sunset Blvd	Monroe Avenue NE	SIGNED SHARED ROADWAY											
17 NE 10th STREET BIKEWAY	NE Sunset Blvd	164th Ave SE	SIGNED SHARED ROADWAY											I-405 Congestion Relief; STP MPO
18 OAKESDALE AVENUE SW BICYCLE LANES	SW 7th Street	SW 43rd Street	BICYCLE LANES (EXTEND EXISTING)											TIP 1, 2
19 BURNETT AVENUE SOUTH LINEAR AND PEDESTRIAN PARK	South 7th Street	Cedar River Trail	SIGNED SHARED ROADWAY											STP Enhancements
20 TALBOT ROAD SOUTH BICYCLE LANES	SW 7th Street	Renton City Limits (southwest)	BICYCLE LANES (EXTEND EXISTING)											TIP 1, 2
21 EDMONDS AVENUE NE BIKEWAY	NE 4th Street	NE 27th Street	SIGNED SHARED ROADWAY											
22 BENSON DRIVE SOUTH/ SR 515 BICYCLE LANES	South Grady Way	SE 192nd Street	BICYCLE LANES											
23 NORTH RIVERSIDE DRIVE BIKEWAY	Williams Avenue North	Bronson Way North	SIGNED SHARED ROADWAY											
24 BENSON ROAD SOUTH/MAIN AVENUE SOUTH BIKEWAY	South 2nd Street	SE Carr Road/SE Petrovitsky Rd	BICYCLE LANES											I-405 Congestion Relief

**MEDIUM PRIORITY IMPROVEMENTS**

25 SOUTH 2nd AND 3rd STREET BIKEWAY	Rainier Avenue South	Bronson Way	SIGNED SHARED ROADWAY											
26 FACTORY AVENUE NORTH BICYCLE LANES	Bronson Way South	North 4th Street	BICYCLE LANES											
27 116th AVENUE SE BICYCLE LANES	Puget Drive SE	City Limits (south)	SEPARATED MULTI-USE TRAIL, PAVED (EXISTING) + BICYCLE LANES											Safe Routes to Schools
28 LAKE - TOBIN - SHATTUCK STREET BIKEWAY	Airport Perimeter Road	Houser Way South	SIGNED SHARED ROADWAY											TIP 1, 2, 11
29 WILLIAMS & WELLS AVENUE BIKEWAY	South Grady Way	N. 6th St	SIGNED SHARED ROADWAY											
30 LAKE TO CREEK CONNECTOR	Lake Washington Blvd North	Edmonds Avenue NE/ Honey Creek	BICYCLE LANES											TIP 1,2
31 SEATTLE WATERLINE TRAIL	Cedar River/ Riverview Park	Lake Youngs Watershed	SEPARATED MULTI-USE TRAIL, ROUGH SURFACE											
32 SEATTLE WATERLINE SPUR	Cedar River/ Riverview Park	161st/ 131st Ave NE	SEPARATED MULTI-USE TRAIL, ROUGH SURFACE											
33 NE 12th STREET BIKEWAY	Edmonds Avenue NE	Union Avenue NE	SIGNED SHARED ROADWAY											
34 NE SUNSET BLVD/ SR 900 BICYCLE LANES	NE 3rd/NE 4th Street	SE May Valley Road	BICYCLE LANES											TIP 1, 2; WS PBP
35 MAPLEWOOD HEIGHTS SCHOOL ROUTE	Duvall Avenue NE to SE 132nd Street to 144th Avenue SE	SE 132nd Street to 144th Avenue SE	SIGNED SHARED ROADWAY											Safe Routes to Schools
36 LINDBERGH/RENTON PARK SCHOOL ROUTE	108th Avenue SE	128th Avenue SE (Renton Park Elementary)	SIGNED SHARED ROADWAY											Safe Routes to Schools
37 MONROE AVENUE NE BICYCLE LANES	NE 4th Street	NE 12th Street	BICYCLE LANES											TIP 1, 2
38 SOUTH 3rd PLACE BICYCLE LANES	Rainier Ave. South	Shattuck Ave. South	BICYCLE LANES											TIP 1, 2

					Evaluation Key			Negative or Insufficient Info.			Somewhat Positive			Strongly Positive			
					○			●			●						
					1			2			3						
TRAIL/ROUTE NAME <i>Proposed routes only</i>	FROM	TO	PROP. CROSS SECTION										NOTES, Possible Funding Sources				
				SAFETY	ACCOMMODATION / ACCESSIBILITY	CONTINUITY / DIRECTNESS	CONNECTIVITY / LINKAGE	REGIONAL TRAIL CONNECTIVITY	TRAIL EXPERIENCE	SENSITIVITY	CONCURRENCY	FUNDING OPPORTUNITIES					
39	GREEN RIVER TO LAKE YOUNGS CONNECTOR	SR 167 (Kent/Green River ultimately)	Lake Youngs	BICYCLE LANES	○	○	○	●	●	○	●	○	○		TIP 1, 2		
40	140th AVENUE SE BICYCLE LANES	Maple Valley Hwy (SR 169)	SE 208th Street	BICYCLE LANES (EXTEND EXISTING)	○	●	○	●	●	○	●	○	○		WS PBP		
41	PUGET DRIVE SE AND SOUTH 21st STREET BICYCLE LANES	Panther Creek	116th Avenue SE and Beacon Way SE	BICYCLE LANES/ CLIMBING LANES	○	○	●	●	○	○	●	○	○		TIP 1, 2		
<b>LOWER PRIORITY IMPROVEMENTS</b>																	
42	PARK AVENUE NORTH BIKEWAY	North 30th Street	North 40th Street/Lake Washington Blvd	SIGNED SHARED ROADWAY	○	○	●	●	●	○	●	○	○				
43	FAIRWOOD-PETROVITSKY PARK BIKEWAY	140th Avenue SE	Petrovitsky Park	SIGNED SHARED ROADWAY	○	○	●	●	●	○	●	○	○				
44	UNION AVENUE NE BICYCLE LANES	SE 95th Way	Dead end (about SE 4th Street)	BICYCLE LANES	○	○	●	●	○	○	●	○	○		TIP 1, 2		
45	TAYLOR AVENUE NW & HARDIE AVENUE SW BIKEWAY	Lake Washington Blvd North	SW 7th St	SIGNED SHARED ROADWAY (EXISTING)	○	○	●	●	○	○	●	○	○				
46	CHIEF SEALTH TRAIL	Seattle City limits	Renton City Limits (west)	REGIONAL TRAIL, PAVED	●	●	○	○	●	○	○	○	●		KC		
47	THUNDER CREEK TRAIL	I-405	Puget Drive SE	SEPARATED MULTI-USE TRAIL, ROUGH SURFACE	●	○	○	○	○	○	○	○	○				
48	PHILIP ARNOLD PARK BIKEWAY	Cedar Avenue SE	Beacon Way South/ Puget Drive SE	SIGNED SHARED ROADWAY	○	○	○	○	○	○	●	○	○				
49	SE 171st WAY BIKEWAY	140th Avenue SE	SE 176th Street	SIGNED SHARED ROADWAY	○	○	●	●	○	○	●	○	○				
50	CEDAR-SAMMAMISH TRAIL	Cedar River at 154th Avenue SE	Issaquah City Limits	REGIONAL TRAIL, PAVED	●	●	○	●	●	○	○	○	●		KC		
51	SOOS CREEK TRAIL	Cedar River Trail	Lake Meridian	REGIONAL TRAIL, PAVED	●	●	○	●	●	○	○	○	●		KC		
52	SE MAY VALLEY ROAD BIKEWAY	Lake Washington Blvd North	Issaquah-Hobart Road	SIGNED SHARED ROADWAY	○	○	○	○	●	●	○	○	○				

**KEY TO POTENTIAL FUNDING SOURCES: (refer to Appendices G, H and I)**

CMAQ	Congestion Mitigation and Air Quality Program, MPO Allocation
I-405 Congestion Relief	WSDOT
KC	King County Department of Natural Resources and Parks - Regional Trails
STP - Enhancement	Surface Transportation Act, Enhancement Program
STP - MPO Allocation	Surface Transportation Act, MPO Allocation
TIP	City of Renton Transportation Improvement Program
WS PBPB	Washington State Pedestrian and Bicycle Program
KC Prop 2	King County Proposition 2
RCO/Trails	Washington State Recreation and Conservation Office
Parks CIP	City of Renton Parks Capital Improvement Project



**RENTON TRAILS & BICYCLE MASTER PLAN**

**Table 2. DIVISION-SEPARATED ROUTE INVENTORY AND RECOMMENDED IMPROVEMENTS**

	TRAIL /ROUTE NAME	FROM	TO	Approx Length in Miles	CURRENT CROSS-SECTION	PROP. TYPICAL CROSS-SECTION	NOTES
<b>PARKS DIVISION - PRIORITIZED BY PROJECT</b>							
<b>1a</b>	<b>TWO RIVERS TRAIL: FORT DENT TRAIL CONNECTOR</b>	Fort Dent Park	Monster Road SW	0.25	Soft-surface trail, rough, under railroad trestle	SEPARATED MULTI-USE TRAIL, PAVED	UP & BNSF ROW between Tukwila/ Ft. Dent Park/ Interurban Trail and Renton. Path follows Black River to its confluence with Green River
<b>1b</b>	<b>TWO RIVERS TRAIL: BLACK RIVER TRAIL</b>	Black River Riparian Forest Trailhead/ Monster Road SW	Naches Avenue SW	0.9	Soft-surface trail, rough	SEPARATED MULTI-USE TRAIL, PAVED	Trail parallels railroad ROW
<b>1c</b>	<b>TWO RIVERS TRAIL: NACHES AVENUE SW</b>	Black River Riparian Forest Trailhead	SW 7th St	0.2	Local street	SEPARATED MULTI-USE TRAIL, PAVED	
<b>1d</b>	<b>TWO RIVERS TRAIL: SW 7th STREET</b>	Oakesdale Avenue SW	Burnett	1.3	Minor arterial with sidewalks	SEPARATED MULTI-USE TRAIL, PAVED	Add bikes lanes through "road diet" to create SEPARATED trail?
<b>1e</b>	<b>TWO RIVERS TRAIL: SHATTUCK AVENUE SOUTH</b>	South 7th Street	Houser Way South	0.17	Collector with some sidewalks, perpendicular parking on west side	SEPARATED MULTI-USE TRAIL, PAVED	Reconfigure on-street parking to accommodate bikes
<b>1f</b>	<b>TWO RIVERS TRAIL: HOUSER WAY SOUTH</b>	Shattuck Avenue South	Burnett Avenue South	0.3	Local street without sidewalks	SIGNED SHARED ROADWAY	
<b>1g</b>	<b>TWO RIVERS TRAIL: HOUSER WAY SOUTH (RAILROAD ROW)</b>	Burnett Avenue South	Main Avenue South	0.3	Local street + RR tracks and sidewalks	SEPARATED MULTI-USE TRAIL, PAVED	New cross-section to allow RR use between Burnett and Main (long term?)
<b>2</b>	<b>SPRINGBROOK TRAIL</b>	Black River Trail/Monster Road SW	SW 43rd Street	2.85	Separated multi-use trail, paved	SEPARATED MULTI-USE TRAIL, PAVED AND SOFT SURFACE	2 segments to be completed
<b>3</b>	<b>MAY CREEK TRAIL</b>	Lake Washington	Cougar Mountain County Park	3.8	Soft-surface hiking only trail	SEPARATED MULTI-USE TRAIL, SOFT SURFACE	Missing link Lake Washington. Hiking/walking only. Creek crossing required.
<b>4</b>	<b>PANTHER CREEK TRAIL</b>	Cleveland Richardson Property	Lake Street Park	2	No existing trail	SEPARATED MULTI-USE TRAIL, SOFT SURFACE	1.7 to City Limits, 2.8 to Springbrook Watershed Park. Could be included as part of I-405 redevelopments. Include connection to Edlund Property.
<b>5</b>	<b>HONEY CREEK TRAIL</b>	Honey Creek/ May Creek confluence	Union Avenue NE	1.25	Separated multi-use trail, rough surface	SEPARATED MULTI-USE TRAIL, SOFT SURFACE	Hiking/walking only. Creek crossing required.

**Table 2. DIVISION-SEPARATED ROUTE INVENTORY AND RECOMMENDED IMPROVEMENTS**

	TRAIL /ROUTE NAME	FROM	TO	Approx Length in Miles	CURRENT CROSS-SECTION	PROP. TYPICAL CROSS-SECTION	NOTES
6	<b>DEVIL'S ELBOW TRAIL</b>	Edmonds Avenue NE	Duvall Avenue NE/Coal Creek Parkway	1.7	Abandoned local street, with sidewalks	MIXED CROSS-SECTION: SEPARATED MULTI-USE TRAIL, PAVED (EXISTING) + BICYCLE LANES	
7	<b>LIBERTY PARK CONNECTOR</b>	Cedar River Trail	Bronson Way North/Factory Avenue North	0.2	Public park; informal access through park	SEPARATED MULTI-USE TRAIL, PAVED	Need a bikeway on east side of park to connect Cedar River Trail and Garden Ave.
8	<b>SAM CHASTAIN MEMORIAL TRAIL</b>	Cedar River Trail	Gene Coulon Park	0.7	No existing trail	MULTI-USE TRAIL, BOARDWALK	Not intended for bikes; on hold indefinitely.
9	<b>BURNETT AVENUE SOUTH LINEAR AND PEDESTRIAN PARK</b>	South 7th Street	Cedar River Trail	1	Collector/linear park with paved path and sidewalks & separated multi-use path & street	SIGNED SHARED ROADWAY	
10	<b>SEATTLE WATERLINE TRAIL</b>	Downtown/I-405 at Cedar Ave. South	Lake Youngs Watershed	3.75	Separated multi-use trail, rough surface	SEPARATED MULTI-USE TRAIL, ROUGH SURFACE	Utilizes utility corridor, w. spur to Cascade Park
11	<b>SEATTLE WATERLINE SPUR</b>	Cedar River/Riverview Park	161st/131st Ave SE	1	Separated multi-use trail, rough surface	SEPARATED MULTI-USE TRAIL, ROUGH SURFACE	Utilizes utility corridor
12	<b>THUNDER CREEK TRAIL</b>	I-405	Puget Drive SE	0.9	Separated multi-use trail, rough surface	SEPARATED MULTI-USE TRAIL, ROUGH SURFACE	Could be included w/ I-405 redevelopment
13	<b>BLACK RIVER TRAIL</b>	Black River Riparian Forest Trailhead/Monster Road	Springbrook Trail	1.53	Separated pedestrian trail, soft-surface	SEPARATED MULTI-USE TRAIL, SOFT SURFACE (EXISTING)	Trail alongside water/heron rookery
14	<b>CEDAR RIVER TRAIL</b>	Lake Washington	City Limits (east)	4.5	Paved regional trail	REGIONAL TRAIL, PAVED (EXISTING)	Ped. only: 6th to Lake Washington (.6 mi)
15	<b>INTERURBAN TRAIL</b>	Sumner	Tukwila	10	Paved regional trail	REGIONAL TRAIL, PAVED (EXISTING)	
16	<b>RENTON SENIOR CENTER</b>	Logan Avenue North	Williams Avenue North	0.15	Separated multi-use path, paved	SEPARATED MULTI-USE TRAIL, PAVED (EXISTING)	Confirm ability to share path alongside Sr. Center (combine bikes and peds.)
<b>KING COUNTY PARKS</b>							
<b>TWO RIVERS TRAIL: see Parks Division Projects</b>							
	<b>SOOS CREEK TRAIL</b>	Cedar River Trail	Soos Creek Park (Kent) at SE 208th Street	4.5	Separated multi-use trail, rough surface	REGIONAL TRAIL, PAVED (EXTEND)	Some existing segments; some segments being developed by King County
	<b>CHIEF SEALTH TRAIL</b>	Seattle City limits/ terminus of exist. trail	Renton City Limits (west)	TBD	Utility corridor, undeveloped	REGIONAL TRAIL, PAVED	Various options to connection point to Renton
	<b>CEDAR-SAMMAMISH TRAIL</b>	Cedar River at 154th Avenue SE	Issaquah City Limits	1.8	No existing trail	REGIONAL TRAIL, PAVED	King County Trails Project; acquisition and route planning in progress

**Table 2. DIVISION-SEPARATED ROUTE INVENTORY AND RECOMMENDED IMPROVEMENTS**

	TRAIL /ROUTE NAME	FROM	TO	Approx Length in Miles	CURRENT CROSS-SECTION	PROP. TYPICAL CROSS-SECTION	NOTES
<b>TRANSPORTATION DIVISION - PRIORITIZED BY PROJECT</b>							
1	<b>DUVALL AVENUE NE BICYCLE LANES (138th Avenue SE/Coal Creek Pkwy)</b>	SE 136th St/ Maplewood Heights Elem.	Coal Creek Parkway/ Northern City Limits	2.9	Minor arterial with sidewalks and bike lanes NE 4th to SR 900 (1.15 mi existing)	BICYCLE LANES (EXTEND EXISTING)	Carry bike lanes through intersections.
2	<b>NORTH AND NE 3rd/4th STREET BICYCLE LANES</b>	Logan Avenue North	Eastern City Limits	3	Principal arterial with sidewalks and limited bikes lanes	MIXED CROSS-SECTION: SEPARATED MULTI-USE TRAIL + BICYCLE LANES	
3	<b>TUKWILA STATION/ LONGACRES WAY CONNECTOR (SW Grady Way and Longacres Way SW)</b>	Monster Road SW	Tukwila Station		Principal arterial + collector	MIXED CROSS-SECTION: SEPARATED MULTI-USE TRAIL + BICYCLE LANES	
4	<b>LAKE WASHINGTON LOOP: AIRPORT PERIMETER ROAD &amp; LOGAN AVENUE NORTH</b>	West entrance to Airport	Park Avenue North	1.3	Shared use roadway/ designated bike route + bike lanes on Logan	SIGNED SHARED ROADWAY (EXISTING)	Long term: add separate bike/ped. bridge over river crossing at Logan/Airport Rd. Bridge possibly in Parks' purview? Bike lanes planned and funded; long term: improve river crossing at Logan/Airport
5	<b>SE PETROVITSKY ROAD BICYCLE LANES (South 43rd Street/ 179th Street/SE Carr Road / SE Petrovitsky Rd)</b>	Tukwila/Green River Trail and Interurban Trail	Petrovitsky Park	6	Principal arterial with some sidewalks, short separated multi-use trail segment near Ridgewood Elem.	BICYCLE LANES	Busy, narrow street. ROW looks to be nearly fully utilized. Some ex. separated trail at Ridgewood Elem.
6	<b>GARDEN AVENUE NORTH AND NORTH 6th STREET BICYCLE LANES</b>	Cedar River Trail	Bronson Way	1.12	Garden: Local/minor arterial (4th to 6th) with sidewalks. 6th: principal arterial (minor Park to Garden) with sidewalks	BICYCLE LANES	Reconfigure median/curb on 6th to allow bikes to make left/southbound turn onto Williams Ave. North
7	<b>CASCADE TRAIL AND SW 27TH STREET CONNECTOR</b>	Interurban Trail/Strander Blvd	Talbot Road South	1.3	Utility corridor, streets with sidewalks, exist. 0.3 mile segment of separated trail west of Oakesdale Avenue SW	MIXED CROSS-SECTION: SEPARATED MULTI-USE TRAIL + SHARED ROADWAY	23rd: Oakesdale to Shattuck/ Shattuck: 23rd to S. 15th/ S. 15th: Shattuck Avenue S. to S. Puget Dr/ S. Puget Dr: S. 15th S to Cascade Park
8	<b>NE 7th STREET BIKEWAY</b>	NE Sunset Blvd	Monroe Avenue NE	0.5	Street: collector with some sidewalks; on-street school walk route on south side	SIGNED SHARED ROADWAY	Existing on-street trail separated with curb
9	<b>NE 10th STREET BIKEWAY</b>	NE Sunset Blvd	NE 164th St	1.25	Street: collector with some sidewalks; on-street school walk route on south side	SIGNED SHARED ROADWAY	Existing on-street trail separated with curb

**Table 2. DIVISION-SEPARATED ROUTE INVENTORY AND RECOMMENDED IMPROVEMENTS**

	TRAIL /ROUTE NAME	FROM	TO	Approx Length in Miles	CURRENT CROSS-SECTION	PROP. TYPICAL CROSS-SECTION	NOTES
10	<b>OAKESDALE AVENUE SW BICYCLE LANES</b>	SW 7th Street	SW 43rd Street	2.2	Arterial with sidewalks and bike lanes	BICYCLE LANES (EXTEND EXISTING)	Extend existing bike lanes north under I-405 overpass with I-405 improvements, to connect with SW 7th Street;
11	<b>TALBOT ROAD SOUTH BICYCLE LANES</b>	SW 7th Street	Renton City Limits (southwest)	3.25	Collector, bike lanes north of SW 43rd Street. Some sidewalks; on-street school walk route on east side, bike lanes from SW 43rd to S. 200th	BICYCLE LANES (EXTEND EXISTING)	Bike lane/trail under I-405 could be included w/ I-405 redevelopment
12	<b>EDMONDS AVENUE NE BIKEWAY AND BICYCLE LANES</b>	NE 4th Street	NE 27th Street	2	Arterial and collector street with sidewalks	MIXED CROSS-SECTION: BICYCLE LANES + SIGNED SHARED ROADWAY	Bike Lanes: NE 27th to NE 7th Streets Signed shared roadway: NE 7th to NE 3rd Streets
13	<b>BENSON DRIVE SOUTH/ SR 515 BICYCLE LANES</b>	South Grady Way	SE 192nd Street	4.1	Major arterial	BICYCLE LANES	
14	<b>RIVERSIDE DRIVE NORTH BIKEWAY</b>	Williams Avenue North	Bronson Way North	0.23	Street: local without sidewalks	SIGNED SHARED ROADWAY	
15	<b>BENSON ROAD AND MAIN AVENUE SOUTH BICYCLE LANES</b>	South 2nd Street	SE 176th Street	2.5	Minor arterial with some sidewalks	BICYCLE LANES	Bike lanes/trail could be added to Overpass over I-405 with I-405 redevelopment
16	<b>SOUTH 2nd AND 3rd STREET BIKEWAY</b>	Rainier Avenue South	Main Avenue South	1	Principal arterial, one-way, with sidewalks	SIGNED SHARED ROADWAY	Check to see if bike lanes can be accommodated thru narrowing of lanes
17	<b>FACTORY AVENUE NORTH BIKE LANES</b>	Bronson Way South	North 4th Street	0.3	Minor arterial	BICYCLE LANES	
18	<b>SHATTUCK AVENUE SOUTH BICYCLE LANES</b>	Houser Way South	South 2nd Street	0.34	Collector street with sidewalks	BICYCLE LANES	
19	<b>116th AVENUE SE BICYCLE LANES</b>	Beacon Way SE/Puget Drive SE	City Limits (south)	2.5	Minor arterial, exist. separated path north of SE 168th	MIXED CROSS-SECTION: SEPARATED MULTI-USE TRAIL, PAVED (EXISTING) + BICYCLE LANES	
20	<b>LAKE/ TOBIN/ SHATTUCK BICYCLE LANES</b>	Airport Perimeter Road	South 2nd Street	0.4	Local street, with sidewalks	SIGNED SHARED ROADWAY	Required to because 2nd and 3rd are one-way. Alternative would be Logan from Airport Way to 2nd or 3rd.
21	<b>WILLIAMS &amp; WELLS AVENUE BIKEWAY</b>	South Grady Way	North 6th St	1	Minor arterial, one-way, with sidewalks	SIGNED SHARED ROADWAY	Reconfigure crossing at 6th to allow bike passage
22	<b>LAKE TO CREEK CONNECTOR</b> (North 30th/ Kennewick Place North/ NE 27th Street)	Burnett Avenue North	Honey Creek	1.2	Street: collector and minor arterials with sidewalks and bike lanes	BICYCLE LANES	

**Table 2. DIVISION-SEPARATED ROUTE INVENTORY AND RECOMMENDED IMPROVEMENTS**

	TRAIL /ROUTE NAME	FROM	TO	Approx Length in Miles	CURRENT CROSS-SECTION	PROP. TYPICAL CROSS-SECTION	NOTES
23	<b>NE 12th STREET BIKEWAY</b>	Edmonds Avenue NE	Union Avenue NE	1	Street: collector with some sidewalks; on-street school walk route on south side	SIGNED SHARED ROADWAY	Existing on-street trail separated with curb
24	<b>NE SUNSET BLVD/ SR 900 BICYCLE LANES</b>	NE 3rd/NE 4th Street	SE May Valley Road	6.5	Principal arterial with sidewalks	BICYCLE LANES	4.1 in Renton, 6.5 total
25	<b>MAPLEWOOD HEIGHTS SCHOOL ROUTE</b> (Duvall Avenue NE to SE 132nd Street to 144th Avenue SE)	Duvall Avenue NE to SE 132nd Street to 144th Avenue SE	SE 132nd Street to 144th Avenue SE	1.2	Street: local with some sidewalks	SIGNED SHARED ROADWAY	
26	<b>LINDBERGH/RENTON PARK SCHOOL ROUTE</b> (SE168th Street, 128th Avenue SE and SE 164th Street)	108th Avenue SE	128th Avenue SE (Renton Park Elementary)	2.4	Collector and local streets	SIGNED SHARED ROADWAY	
27	<b>MONROE AVENUE NE BICYCLE LANES</b>	NE 4th Street	NE 12th Street	1	Minor arterial with sidewalks	BICYCLE LANES	
28	<b>SOUTH 3rd PLACE BICYCLE LANES</b>	Rainier Ave. South	Shattuck Ave. South	0.25	Local street	BICYCLE LANES	
29	<b>GREEN RIVER TO LAKE YOUNGS CONNECTOR</b> (South 200th St, 196th Avenue SE, SE 192nd Street)	SR 167 (Kent/Green River ultimately)	Lake Youngs	3.9	Minor arterials	BICYCLE LANES	Extend to Kent (proposed grade separated crossing of SR 167) to connect w. Green River
30	<b>140th AVENUE SE BICYCLE LANES</b>	Maple Valley Hwy (SR 169)	SE 208th Street	4.3	Principal arterial. Existing bikes lanes SR 169 to SE Petrovitsky Rd (2 mi).	BICYCLE LANES (EXTEND EXISTING)	Existing segment SR 169 to Petrovitsky (2 mi); extend bike lanes south to S. 208th (2.3 mi)
31	<b>PUGET DRIVE SE AND SOUTH 21st STREET BICYCLE LANES</b>	Talbot Road South	116th Avenue SE and Beacon Way SE	1	Minor arterial with limited sidewalks	BICYCLE LANES (EXTEND EXISTING)	Climbing lanes uphill only?
32	<b>PARK AVENUE NORTH BIKEWAY</b>	North 30th Street	North 40th Street/Lake Washington Blvd North	0.75	Local street	SHARED USE ROADWAY	
33	<b>FAIRWOOD-PETROVITSKY PARK BIKEWAY</b>	SE 164th Street	Petrovitsky Park	3.3	Arterial	SHARED USE ROADWAY	
34	<b>UNION AVENUE NE BICYCLE LANES (132nd Avenue NE)</b>	SE 95th Way	Dead end (about SE 4th Street)	2.1	Minor arterial with sidewalks	ADD BICYCLE LANES	
35	<b>TAYLOR AND HARDIE BIKEWAY</b>	Northern city limits (toward Rainier Avenue South)	SW 7th St	1.4	Shared use roadway/ designated bike route (Collector, except Hardie from Renton Ave S Extension to Langston Rd S)	NO CHANGE	
36	<b>PHILIP ARNOLD PARK BIKEWAY</b> (Cedar Avenue, South 7th Street and Beacon Way South)	Beacon Way South and Cedar Avenue SE/Puget Drive SE	Puget Drive SE		Local and collector streets	SHARED USE ROADWAY	
37	<b>SE 171st WAY BIKEWAY</b>	140th Avenue SE	SE 176th Street	0.41	Street	BICYCLE LANES	

**Table 2. DIVISION-SEPARATED ROUTE INVENTORY AND RECOMMENDED IMPROVEMENTS**

	TRAIL /ROUTE NAME	FROM	TO	Approx Length in Miles	CURRENT CROSS-SECTION	PROP. TYPICAL CROSS-SECTION	NOTES
38	<b>NE 12th STREET BIKEWAY</b>	NE Sunset Blvd	Monroe Avenue NE	0.5	Street: collector with some sidewalks; on-street school walk route on south side	SIGNED SHARED ROADWAY	Existing on-street trail separated with curb
39	<b>SE MAY VALLEY ROAD BIKEWAY</b>	Coal Creek Parkway	Issaquah-Hobart Road/SR 900	2.4	Rural arterial, no sidewalks	SIGNED SHARED ROADWAY	
40	<b>LAKE WASHINGTON LOOP: HOUSER WAY NORTH BIKEWAY</b>	North 8th Street	Park Avenue North	0.5	Shared use roadway/designated bike route (Minor Arterial)	SIGNED SHARED ROADWAY (EXISTING)	
41	<b>MONSTER ROAD SW BICYCLE LANES</b>	Oakesdale Avenue SW/Black River Trail Head	SW 16th Street	0.7	Collector street with bike lanes and some sidewalks	BICYCLE LANES (EXISTING)	
42	<b>PACCAR Trail: GARDEN AVENUE NORTH &amp; NORTH 8th STREET</b>	North 6th Street	Houser Way North	0.5	Separated multi-use trail on east and south side on minor arterial with sidewalks	SEPARATED MULTI-USE TRAIL, PAVED (EXISTING)	Propose name change to distinguish from other section of Garden - PACCAR trail. Need to determine how much more width is needed.
43	<b>SW 16th STREET BICYCLE LANES ("Longacres Bikeway")</b>	Longacres Drive	Oakesdale Avenue SW	0.35	Collector street with sidewalks and bike lanes	BICYCLE LANES (EXISTING) + SIGNED SHARED ROADWAY	Extend to Lind or E. Valley Road

## SIGNAGE RECOMMENDATIONS

### Introduction

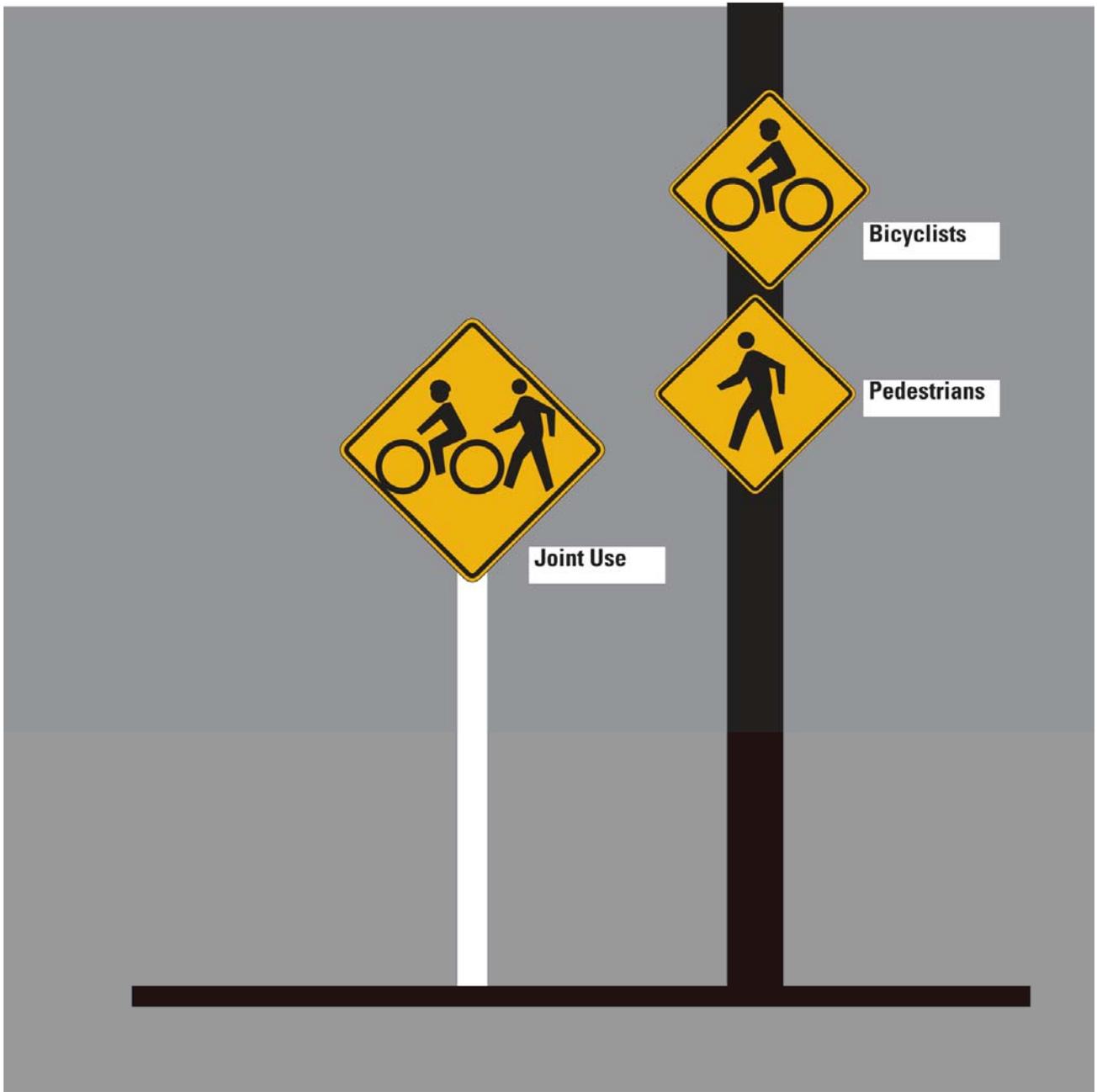
Road networks rely on signage to communicate what conditions drivers can expect to encounter and to communicate rules of the road and traffic control. Nonmotorized networks rely on those same signs, but require additional roadside caution signs and pavement markings to enhance awareness and safety for both motorized and nonmotorized users. In addition, wayfinding signage for bicycles is critical to the connectivity and convenience of the nonmotorized network, especially for links between regional trails, or routes where bicycle facilities may not be contiguous. The Trails and Bicycle Master Plan addresses both caution and wayfinding signage.

Roadside caution signs and pavement markings follow the standards and guidelines of the Manual of Uniform Traffic Control Devices and the AASHTO Guidelines for the Development of Bicycle Facilities. Bicycle route signage is based on regional standards.

The timing of the Trails and Bicycle Master Plan process coincided with the Downtown Wayfinding Project, the focus of which was to “guide people into and around the Downtown area, better connect Downtown with The Landing, and enhance Downtown identity.” The Trails and Bicycle Master Plan coordinated with the Downtown Wayfinding Project to the extent that it helped identify gateways into the City and location kiosks in relation to the proposed trails and bicycle network.

The following pages show examples of the proposed sign types.





**Roadside Caution Signs**

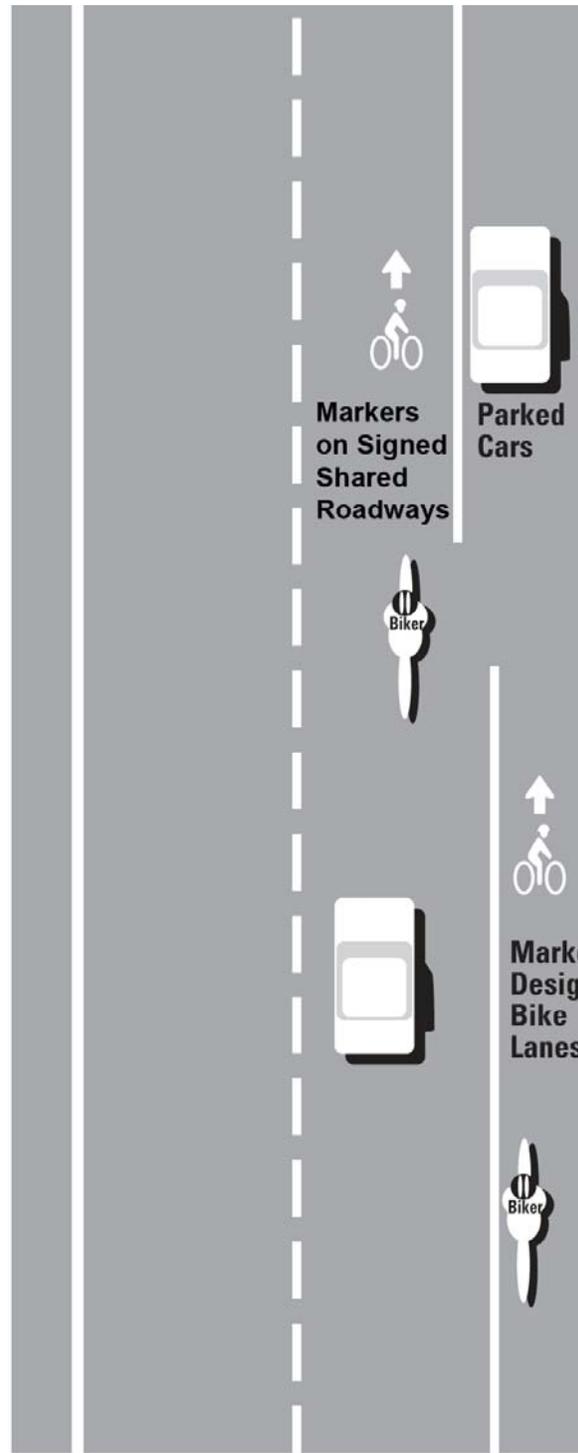
Shown mounted to freestanding posts or to existing utility poles or light standards.



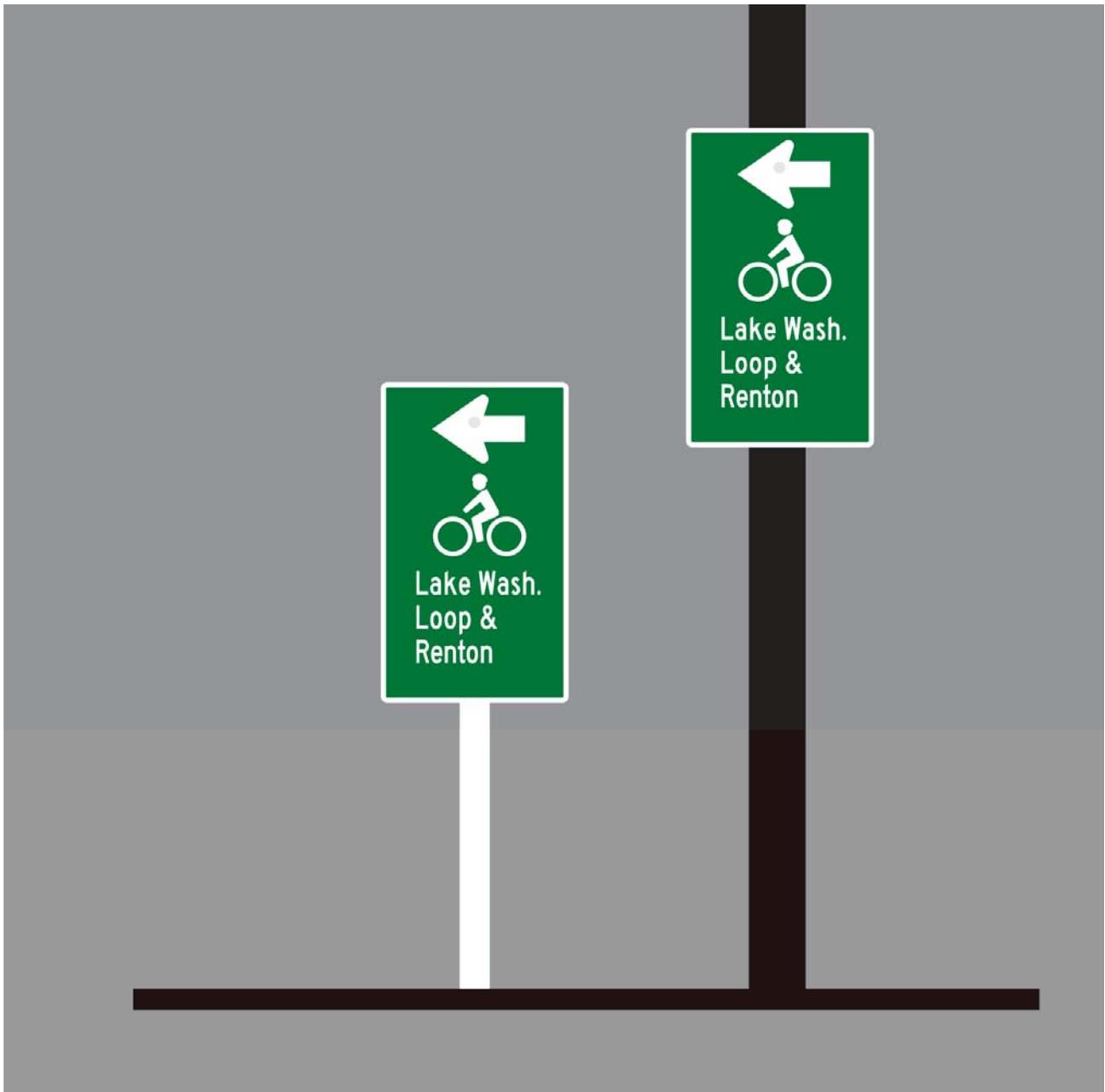
**Pavement marking showing loop detector location for bicycles.**



**Bicyclist Symbol**



## **Pavement Markers**



**Bike Route Signs**

Shown mounted to freestanding posts or to existing utility poles or light standards.



### Bike Route Signs

Sample application, shown at an existing signed shared roadway.



**Bike Route Signs**

Sample application, shown at an existing signed shared roadway.





# PART 4: BACKGROUND/PLAN AND POLICY REVIEW





## PART 4: BACKGROUND/PLAN AND POLICY REVIEW

### **REVIEW AND SUMMARY OF PREVIOUS PLANS AND POLICIES**

A major task in the development of this trails and bikeways Master Plan was the review of previous planning documents and policies and the identification of information relevant to this plan. Planning for non-motorized facilities is addressed at all levels of government: local, region/county, state, and federal, and numerous plans were reviewed to ensure concurrency with current regional planning efforts and to avoid contradictory recommendations with previous planning efforts.

At each level of government the messages about bicycle and pedestrian facilities is echoed: to make communities more livable, make them accessible by foot and bicycle. Provide safe and convenient routes through thoughtful design and arrange land uses to make destinations more accessible so people can and will choose to make non-motorized and transit trips rather than driving.

The primary basis of the review was the City's Comprehensive Plan, its open space plan, and most importantly, existing non-motorized plans: for trails (1993) and for walkways. Several regional plans also held particular relevance for this study. Finally, state and federal planning-level documents were reviewed.

### **CITY OF RENTON PLANNING EFFORTS**

#### **Comprehensive Plan**

Several sections of the Comprehensive Plan address non-motorized facilities: the Parks, Recreation, Open Space, and Trails Element; the Transportation Element; and the Community Design Element.

Non-motorized facilities are addressed both directly and indirectly in several goals of the Transportation Element:

Goal 1: Contribute to a balanced multi-modal transportation system through reasonable, planned, economically feasible arterial improvements that enhance HOV and transit operations, support adopted land use plans, protect or improve business access, and protect Renton's neighborhoods.

Goal 2: Maximize the use of transit in Renton by providing step-by-step improvements to produce regionally linked and locally oriented transit services and facilities needed to serve travel demand generated by Renton residents and businesses.

Goal 4: Maintain, enhance and increase pedestrian and bicycle travel by providing both safe and convenient routes and storage for the commuting and recreating public.

The Non-motorized Transportation section further articulates these goals by stating that the plan is designed to “enhance the quality of life in Renton, to improve walking and bicycling safety, and to support the pedestrian and bicycle transportation modes as alternatives to the use of automobiles.”

The plan’s objectives include the following:

- Recognize and capitalize upon the multi-functionality of non-motorized facilities: accommodate both commuting and recreational uses
- Enhance both internal circulation and linkages to regional routes and destinations
- Provide connections to open space areas and other recreational opportunities
- Ensure a comprehensive, interconnected non-motorized network
- Facilitate connections to transit facilities
- Recognize and accommodate the diversity of non-motorized travel modes, user abilities (ensuring ADA compliancy of new facilities) and trip purposes
- Add hiking trails, water trails, canoe launches

The Non-motorized section acknowledges that the City’s existing transportation system has not been oriented toward accommodating pedestrians and bicyclists and the policies. The non-motorized plan, therefore, provides a framework to reevaluate the existing system for the needs of pedestrians and bicyclists, and to provide for a better environment for non-motorized travel.

Approximately a dozen policies provide a basis for expanding and enhancing the existing network, addressing the following aspects:

- Bicyclists and pedestrians
- Transit use
- Universal access
- The interrelation of the motorized network to the non-motorized

- The diversity of transportation modes/user groups and trip purposes
- Separation between modes/users and safety of users
- Hiking
- Water trails

The existing bicycle and pedestrian network is briefly described and evaluated. Proposed routes are listed.

Outside of the central business district, the Plan states that bicycles are allowed to share the sidewalks with pedestrians, provided they yield to those on foot. At the same time, the plan encourages the separation of modes, in the name of safety, to the greatest degree possible. As the City's network expands, this policy may need to be reevaluated in light of creating a more hospitable and safe environment for pedestrians.

#### Parks, Recreation, Open Space, and Trails Element

The following objectives and policies within the Parks, Recreation, Open Space, and Trails Element deal with non-motorized facilities:

Objective P-F: Create a walkable community by developing and maintaining a comprehensive trails system that provides non-motorized access through the City, maximizes public access to parks, schools, and open space areas, connects to regional trail systems, and provides increased recreational opportunities for the public.

Policy P-63: Trails should provide for the needs of a diverse population of users including groups such as adults, children, seniors, workers, the disabled and other people engaging in either passive and/or active pursuits including:

- a. pedestrians,
- b. recreational bicyclists,
- c. joggers/runners,
- d. in-line skaters,
- e. bicycle commuters
- f. canoeists and kayakers, and
- g. hikers.

Policy P-66: Linkages should be provided with surrounding communities within major regional corridors such as the Cedar River, Green River, the Lake Washington Loop, and the Soos Creek Trail.

Policy P-68: Integrate Renton's recreational trail needs into a comprehensive trail system serving both local and regional users.

Policy P-69: Plan and coordinate appropriate pedestrian and bicycle commuter routes along existing minor arterial and collector arterial corridors.

Policy P-69: Plan and coordinate appropriate pedestrian and bicycle commuter routes along existing minor arterials and collector arterial corridors.

Policy 78: Provide opportunities for the public to access, via Lake Washington, the “Lakes to Locks” regional water trail system.

Again, the separation between foot/bicycle and between trails and roadway, where possible, is advocated.

#### Community Design Element

The section on streets, sidewalks and streetscape in the Community Design Element promotes pedestrian-friendly design through a number of objectives and policies aimed at more detailed design considerations. One policy in particular, however, suggests a number of important criteria for enhancing non-motorized connectivity:

Policy CD-60. Criteria should be developed to locate pedestrian and bicycle connections in the City. Criteria should consider:

- Linking residential areas with employment and commercial areas;
- Providing access along arterials;
- Providing access within residential areas;
- Filling gaps in the existing sidewalk system where appropriate; and
- Providing access through open spaces and building entries to shorten walking distances

In conclusion, the inclusion, enhancement and promotion of non-motorized facilities are supported on many levels through the City’s Comprehensive Plan.

#### **1993 Trails Master Plan**

The 1993 Trails Master Plan is a thorough and well-considered plan for the development of a trail system in and around Renton, the first of its kind for the City. It was adopted as part of the Parks, Recreation, Trails, and Open Space Plan. The plan reflects a focus on open space, preservation, and recreation, and was created through a comprehensive community involvement process.

The plan breaks the City up into six geographic planning areas (though the City now uses slightly different planning areas), based on boundaries formed by major vehicular trans-

portation corridors or major geographic features: Interstate 405, State Routes 900 (Sunset Boulevard), 167 (the Valley Freeway), and 169 (Maple Valley Road and the Cedar River). Within these areas, the plan identifies the major corridors and travel routes for non-motorized travel:

- Northeast Corridors: East Shore Lake Washington, May Creek/Honey Creek
- East Corridors: Renton-Issaquah
- Southeast Corridors: Cedar River, Seattle and Mercer Island Waterlines
- Southwest Corridors: Orillia-Petrovitsky, Green River Valley
- West Corridor: Black River
- Northwest Corridor: West Shore Lake Washington

Each of the proposed corridors, and subsequently the feasibility of the proposed routes, is thoroughly analyzed. The plan recommends a separate, hierarchical system of major and minor trails for pedestrians (24 routes) and bicyclists (28 routes). Many routes share the street right-of-way, and five are mixed use, along separated rights-of-way.

In addition, the plan details trail standards and puts forth an implementation plan. Though the proposed routes are not all still valid, and conditions throughout the City have changed, the plan provides an excellent foundation and resource for non-motorized planning today. It is interesting to contrast the 1990 plan's focus on open space, preservation, and recreation with the current climate of non-motorized planning, with the greater emphasis on bicycling as a mode of transportation.

### **2004 Draft Trails Plan**

The more recent current trails plan provides an updated inventory of existing and planned trails, and serves as a planning-level resource.

It identifies 31 trails or routes, for both hiking and biking, describing in general terms the existing conditions and proposed character (surfacing, primarily) of each trail (see Appendix F). In addition, connections and destinations (parks or facilities) are mapped on top of aerial photographs for each route.

### **Comprehensive Citywide Walkway Study (2003)**

The Comprehensive Citywide Walkway Study is in some ways the counterpart to the trails and bikeways plan. The study features a detailed analysis of how pedestrians are ac-

commodated in the City's existing street network and an identification of the missing links in the system. It also includes detailed analyses and strategies for building out sidewalks – cross-section options, evaluation/prioritization systems, time-lines, cost estimates, and funding options.

The overall purpose of this study differs somewhat from the Trails and Bikeways Plan, with its focus on inventory, identification of missing links and the implementation of sidewalks. However, the study is a valuable complement to the Trails and Bikeways Plan.

### **Long Range Parks, Recreation, Open Space and Implementation Plan (2003)**

The adopted Long Range Parks, Recreation, Open Space Plan presents a valuable mix of big-picture and more detailed analysis of the City's public lands, present and proposed.

Parks and open spaces are important trip generators for non-motorized travel. The identification of existing and future destinations is an important component of the Renton Trails and Bikeways Master Plan. In addition, the plan nicely describes the City's physical setting – natural features, topography, and character.

## **REGIONAL LEVEL**

### **Destination 2030: Metropolitan Transportation Plan for the Central Puget Sound Region (revised 2006)**

The Puget Sound Regional Council developed Destination 2030 to provide a strategy for making regional decisions related to growth, transportation, and other elements that affect the quality of life for residents of the region.

The report proposes strategies to curb trends leading to greater congestion, many of which support and encourage non-motorized improvements. Specific policies that support the Trails and Bikeways Plan echo the policies in the City's Comprehensive Plan.

The Metropolitan Transportation Plan, last revised in 2006, was prepared as a first step toward implementation of the policies set forth in Vision 2030 and Destination 2030, a regional planning document that provides a strategy for decisions related to growth and transportation. The MTP identifies the need to invest in three major program areas:

- Development of a Regional Network of Non-motorized Transportation Facilities.

- Development of Local Networks for Non-motorized Travel.
- Development of Transit Access for Pedestrians and Cyclists.

In addition, the MTP includes a map demarcating a Preliminary Regional Non-motorized Network, which includes major separated trails or bikeways and shared use bikeways or walkways. Appendix 9 “Projects” identifies transportation improvements; both motorized and non-motorized that are formally part of Destination 2030. Data obtained from these listings will be used as an aid in developing this plan.

### **King County Regional Trail Inventory and Implementation Guidelines (2004)**

The City of Renton is sited at the juncture of several important regional trails. King County’s regional trail inventory examines each trail in its system, identifying missing links and proposing short-term and long-term uses for each of these corridors. The regional trails/corridors that pass through or near Renton include:

- Interurban Trail
- Green River Trail
- Lake Washington Loop
- Cedar River Trail
- Soos Creek Trail

Connections to and between these trails will provide both regional and local trail-user benefits and will be a priority of this plan. Of particular interest and priority to King County are connections between the following regional trail corridors:

- Green River/Interurban Trail and Cedar River Trail/Lake Washington Loop
- Cedar River Trail and East Lake Sammamish Trail
- Cedar River and Soos Creek Trails

Making these connections has also been identified by the public as the highest priority for Renton’s non-motorized network.

### **Left by the Side of the Road: Puget Sound Regional Bicycle Network Study, Assessment and Recommendations (Cascade Bicycle Club, 2005)**

This document purports to be the “most detailed assessment of bicycle routes ever performed” in the Puget Sound region. The study examines existing conditions, identifies missing links and prioritizes key connections. It also rates existing

bike routes with a pass or fail rating based on a number of different factors.

The plan examines routes through Downtown Renton, and rates the NE 3rd/4th Street route “fail.”

In addition, the plan identifies a missing link called the “Black River Connector Trail,” which would connect the Interurban Trail with the Black River Trail (enabling a connection with the Lake Washington Loop) via 68th S/Monster Rd and Ft. Dent Park in Tukwila. This trail segment has appeared in other plans as the “Fort Dent Connector” and is also seen as a high priority by King County.

As with King County’s regional trail plan, improvements and completion of these routes would provide benefits beyond just the City of Renton, and are given high priority accordingly.

### **I-405 Corridor Improvements**

The *I-405 Congestion Relief and Bus Rapid Transit Projects* is a multi-modal strategy that features a number of bicycle and pedestrian improvements through jurisdictions along the corridor, as part of the larger I-405 Corridor Improvements Project. Six improvements are identified in the Renton/Tukwila area and will help complete the non-motorized network. Some of these improvements, including some in Renton, are described in the first phase of the master plan, and will be funded through the Washington State Department of Transportation 2003 “Nickel” Funding Package. Others are planned for future phases of the project, to be funded through various funding mechanisms (see Appendix J).

Shorter-term enhancement possibilities associated with the I-405 improvements include the widening of several routes that pass under or over I-405:

- Oakesdale Avenue Southwest
- Talbot Road South
- Benson Road South

These routes are currently not wide enough to safely accommodate bicycles and pedestrians. The City is working with WSDOT to create safer non-motorized routes as these corridors are redeveloped.

### **BNSF Rail Corridor Preservation Study**

King County and the Port of Seattle are considering a purchase and land swap deal that would allow the approximately

65-mile Burlington Northern Sante Fe rail corridor for development as a trail. The BNSF line is the route of the former Spirit of Washington Dinner Train, whose terminus was in downtown Renton at Burnett Avenue South. BNSF temporarily closed the line in 2007 to allow improvements to bridges through downtown Renton. The corridor will still be used to move fuselages between the Boeing Renton Plant and Everett. Details for the development of the corridor were being negotiated during the Trails and Bicycle Master Plan process. The development of the corridor would provide several important opportunities for trail connections/trail heads, and access to the central business district, transit, and some parks/community centers through Renton. These potential connections will be incorporated into the Trails and Bikeways Plan.

## **STATE LEVEL**

### **Washington's Transportation Plan (WTP) 2007-2026 (2006)**

The WTP recognizes the many benefits bicycling and walking provide to a community: environmental, health, and a reduction in congestion and positive economic impact. "Innovation should also facilitate readily available alternative transportation, including bicycles and walking, which conserve energy and contribute to personal health." The goals of the Bicycle Transportation and Pedestrian Walkways Plan are to increase non-motorized travel while also increasing safety, through the following strategies:

- Maximizing funding through partnerships
- Raising awareness of the needs for bicycle and pedestrian safety
- Sharing information on bicycle and pedestrian issues between agencies, jurisdictions, and organizations in Washington State.

Increasing safety is a major focus of the plan, and it proposes to do this through engineering, education and enforcement. Recommendations within Renton's Trails and Bikeways Plan will meet the following criteria for the funding of projects through state funds:

- Improving intersections by providing: curb extensions, lighting, raised median, crosswalk enhancements, signs, signals, and mid-block crossing treatments
- Completing bicycle lanes and sidewalks
- Constructing bicycle and pedestrian paths
- Providing safe routes to transit

- Providing pedestrian and bicycle safety improvements for at-risk group (children, the elderly, and people with disabilities)
- Distribution of educational materials.

## TERMINOLOGY AND DEFINITIONS

This master plan uses a variety of terms to describe proposed and facilities/improvements for bicyclists and pedestrians. These terms are adapted from WSDOT Design Manual, Section 1020 Bicycle Facilities.

**Bicycle route** – An officially designated system of facilities for use by bicyclists. A series of bicycle facilities may be combined to establish a continuous route and may consist of any or all types of bicycle facilities.

**Bike lane** – A portion of a highway or street identified by signs and pavement markings intended for exclusive use by bicycles.

**Dedicated facility** – a bike lane, path or other improvement for the exclusive use by bicycles and/or pedestrians

**Facility** – general term used to describe a set of improvements or measures designed to accommodate bicycles or pedestrians

**Path** – In this master plan, the term path is used to denote an informal route, such as a footpath or desire path.

**Shared roadway** – a roadway that is open to both bicycle and motor vehicle travel. This may be an existing roadway, a street with wide curb lanes, or a road with paved shoulders.

**Shared-use or multi-use path/trail** – a facility, often within a road-right-of-way, that is physically separated from motor vehicle traffic and designed for use by a variety of non-motorized users.

**Signed shared roadway** – a roadway that has been designated as a route for bicycle use by signing and/or other measures intended to increase safety and convenience for bicycles.

**Trail** – according to the AASHTO *Guide for the Development of Bicycle Facilities* (1999), “in many states, the term *trail* means an unimproved recreational facility”. In this master plan, the term trail is used to denote an official non-motorized facility, whether planned or existing, and will be used with qualifying descriptors, such as multi-use trail.

**Walkway** – pedestrian facilities that can be either separated from roadways, such as sidewalks and paths, or part of roadways, such as crosswalks or wide shoulders.



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