

6: BICYCLE PLAN

This chapter summarizes existing and future facility needs for bicycles in the City of Richland. The following sections outline the criteria to be used to evaluate needs, provide a number of strategies for implementing a bikeway plan and recommend a bikeway plan for the City of Richland. The needs, criteria and strategies were identified in working with the City's Technical Advisory Committee and Steering Committee for the Transportation Plan.

Needs

There are few designated on-street bike facilities within the City. One is on Swift Boulevard between Wright Avenue and Stevens Drive and the other is on Columbia Point between George Washington Way and its eastern terminus. There are also several multi-use paths – these can be used by both pedestrian and bicycle travelers. They are primarily located along the Columbia River, along I-182, and along SR 240. The existing bike lane system on arterial and collector streets does not provide adequate connections from neighborhoods to schools, parks, retail centers, or transit stops. Continuity and connectivity are key issues for bicyclists and the lack of facilities (or gaps) cause significant problems for bicyclists in Richland. Without connectivity of the bicycle system, this mode of travel is severely limited (similar to a road system full of cul-de-sacs). Local streets do not require dedicated bike facilities since the low motor vehicle volumes and speeds allow for both autos and bikes to share the roadway. Cyclists desiring to travel through the City generally either share the roadway with motor vehicles on major streets or find alternate routes on lower volume local streets.

Bicycle trips are different from pedestrian and motor vehicle trips. Common bicycle trips are longer than walking trips and generally shorter than motor vehicle trips. Where walking trips are attractive at lengths of a quarter mile (generally not more than a mile), bicycle trips are attractive up to two to three miles. Bicycle trips can generally fall into three groups: commuters, activity-based and recreational. Commuter trips are typically home/work/home (sometimes linking to transit) and are made on direct, major connecting roadways and/or local streets. Bicycle lanes provide good accommodations for these trips. Activity based trips can be home-to-school, home-to-park, home-to-neighborhood commercial or home-to-home. Many of these trips are made on local streets with some connections to the major functional classification streets. Their needs are for lower volume/speed traffic streets, safety and connectivity. It is important for bicyclists to be able to use through streets¹. Recreational trips share many of the needs of both the commuter and activity-based trips, but create greater needs for off-street routes, connections to rural routes and safety. Typically, these bike trips will exceed the normal bike trip length

¹ This can include end of cul-de-sac connections, but even better is regular spacing of local streets.

Facilities

Bicycle facility needs fall into two primary categories: route facilities and parking facilities. Bicycle lanes (or trails) are the most common route facilities in Richland. Racks, lockers and shelters are typical bicycle parking facilities that are provided at individual land use sites. Bicycle ways can generally be categorized as bike lanes, bicycle accommodation, or off-street bike paths/multi-use trails. Bike lanes are areas within the street right-of-way designated specifically for bicycle use. Federal research has indicated that bike lanes are the most cost effective and safe facilities for bicyclists when considering all factors of design. Bicycle accommodations are where bicyclists and autos share the same travel lanes, including a wider outside lane and/or bicycle boulevard treatment (priority to through bikes on local streets). Multi-use paths are generally off-street routes (typically recreationally focused) that can be used by several transportation modes, including bicycles, pedestrians and other non-motorized modes (i.e. skateboards, roller blades, etc.). The term bikeway is used in this plan to represent any of the bicycle accommodations described above. The bicycle plan designates where bike lanes and multi-use paths are anticipated and any other bicycleways are expected to be bike accommodations (i.e. shared with motor vehicles).

Bicycle lanes adjacent to the curb are preferred to bicycle lanes adjacent to parked cars or bicycle lanes combined with sidewalks. Six-foot bicycle lanes are recommended. Provision of a bicycle lane not only benefits bicyclist but also motor vehicles which gain greater shy distance/emergency shoulder area and pedestrians which gain buffer between walking areas and moving vehicles. On reconstruction projects, bicycle lanes of five feet may need to be considered. Bicycle accommodations can be provided by widening the curb travel lane (for example, from 12 feet to 14 or 15 feet. This extra width makes bicycle travel more accommodating and provides a greater measure of safety). Off-street trails should be planned for 12 feet in width, desirable for mixed-use activity (pedestrian and bike). Signing and marking of bicycle lanes should follow the Manual on Uniform Traffic Control Devices. Design features in the roadway can improve bicycle safety. For example, using curb storm drain inlets rather than catch basins significantly improves bicycle facilities.

Bicycle parking is required in Richland for new land use applications (see Zoning Code Section 23.74.117 -- Bicycles). These criteria define the number and type of bike parking facilities that are required for commercial, industrial, institutional and recreational uses. It is noted that residential uses are not included in the code requirements. Larger apartment complexes could benefit by providing on-site bike storage facilities.

Criteria

The city's vision statement has a set of goals and policies to guide transportation system development in Richland (see Chapter 2). Several of these policies pertain specifically to bicycle needs:

Goal 6: The City will encourage the use of transportation modes that maximize energy conservation, circulation efficiency and economy.

- Policy 1 – The City will support increased use of multi-modal transportation. This includes, but is not limited to, high occupancy vehicle lanes, bicycle trails, park-and-ride facilities, carpools, vanpools, buses and mass transit.

- Policy 2 – The City will coordinate planning efforts for non-motorized modes of travel with other jurisdictions and develop an integrated area-wide plan for non-motorized travel modes that ensures continuity of routes.
- Policy 5 – The City will seek to receive formal recognition as a “Bicycle Friendly Community.”

• *New Policy 6 – The City will coordinate site development guidelines to encourage and enable use of alternative modes.*

These goal and policies are the criteria that all bikeway improvements in Richland should be measured against to determine if they conform to the intended direction of the City.

Strategies

Several strategies were considered for construction of future bikeway facilities in Richland. These strategies were studied to provide the City with priorities since it is likely that the available funding will be insufficient to address all of the projects identified in the Bikeway Master Plan.

Strategy 1 - “Connect Key Bicycle Corridors to Schools, Parks, Transit Centers and Activity Centers”

This strategy provides bikeway links to schools, parks, recreational facilities and activity centers from the arterial/collector bikeway network. This strategy provides added safety to likely bicyclist destinations as well as destinations where children are likely to travel. Examples would include Stevens Drive, Swift Boulevard, Lee Boulevard, Gage Boulevard and the off-street multi-use paths throughout Richland. As with pedestrian facilities, bicycle facilities are important to provide access to transit centers and major transit stops. Most of the transit system’s riders begin or end their trip either as a pedestrian or cyclist.

Strategy 2 - “Bicycle Corridors that Connect to Major Recreational Facilities”

This strategy provides a connection between the bikeway network and major recreational facilities, such as the Columbia River Trail. Examples would be the Greenway Trail, and the proposed powerline corridor along Stevens Drive in the western part of the City.

Strategy 3 - "Fill in Gaps in the Network where Some Bikeways Exist"

This strategy provides bikeways that fill in the gaps between existing bikeways where a significant portion of a bikeway corridor already exists. This strategy maximizes the use of existing bicycle facilities to create complete sections of an overall bikeway network. Examples would include the Columbia River Trail and Swift Boulevard where short segments would complete routes.

Strategy 4 - “Develop Maintenance Program to Clean Bike Lanes”

This strategy establishes a program to provide maintenance services to clean the bike lanes. Debris in bike lanes is one of the biggest complaints (deterrents) of bicyclists.

Strategy 5 - “Bicycle Corridors that Commuters Might Use”

This strategy focuses on providing bicycle facilities where commuters are likely to go such as local (within Richland) or regional (i.e. Kennewick, West Richland, Pasco) employment

centers or leading to transit that provides access to regional employment centers. Examples would include SR 240 off-street trail, Stevens Drive, Columbia River Trail, and Gage Boulevard.

Strategy 6 - "Bicycle Corridors that Connect Neighborhoods"

This alternative puts priority on bicycle lanes for routes that link neighborhoods together. Some of these could include paths crossing parks, schools or utility rights-of-way.

Strategy 7 - "Construct All Bikeways to City of Richland Standards"

This strategy focuses on upgrading any substandard existing bikeways to current city/county standards. Current standards are for six foot wide bike lanes with appropriate striping and signs for bicycle safety.

Table 6-1 provides an assessment of how each of the strategies meets the requirements of the goals and policies related to bicycle facilities.

Table 6-1: Bicycle Facility Strategies Comparisons

Strategy	Policies			
	6-1	6-2	6-5	6-6
1. Connect Key Bicycle Corridors to Schools, Parks, Recreational Uses, Transit Centers and Activity Centers	■	□	□	●
2. Bicycle Corridors that Connect to Major Recreational Uses	□	■	□	●
3. Fill in Gaps in the Network where Some Bikeways Exist	□	●	●	○
4. Develop Maintenance Program to Clean Bike Lanes	●	●	□	○
5. Bicycle Corridors that Commuters Might Use	□	■	●	○
6. Bicycle Corridors that Connect Neighborhoods	□	□	□	●
7. Construct All Bikeways to City of Richland Standards	●	●	□	■

- Fully meets criteria
- Mostly meets criteria
- Partially meets criteria
- Does not meet criteria

Table 6-2 summarizes the bicycle corridors created by overlaying the bicycle network over the arterial and collector system in Richland.

Table 6-2: Corridors in Proposed Bikeway Network

North-South Corridors	East-West Corridors
SR 240 Bypass	Horn Rapids
Stevens Drive/Wellsian Way	Snyder Street
George Washington Way	Van Giesen Street
Columbia River Trail	Swift Boulevard
Leslie Road	Lee Boulevard
Steptoe Street	Aaron Drive
Duportail/Queensgate	I-182 Trail
	Columbia Park Trail
	Gage Boulevard

Since bicyclists can generally travel further distances than pedestrians, connections that lead to regional destinations such as Kennewick, West Richland, the Hanford Site, rural Benton County, and Pasco are important. Richland’s bicycle network should connect to these agencies bicycle networks. Key locations where connections should be made to these other jurisdiction’s networks are shown in Table 6-3.

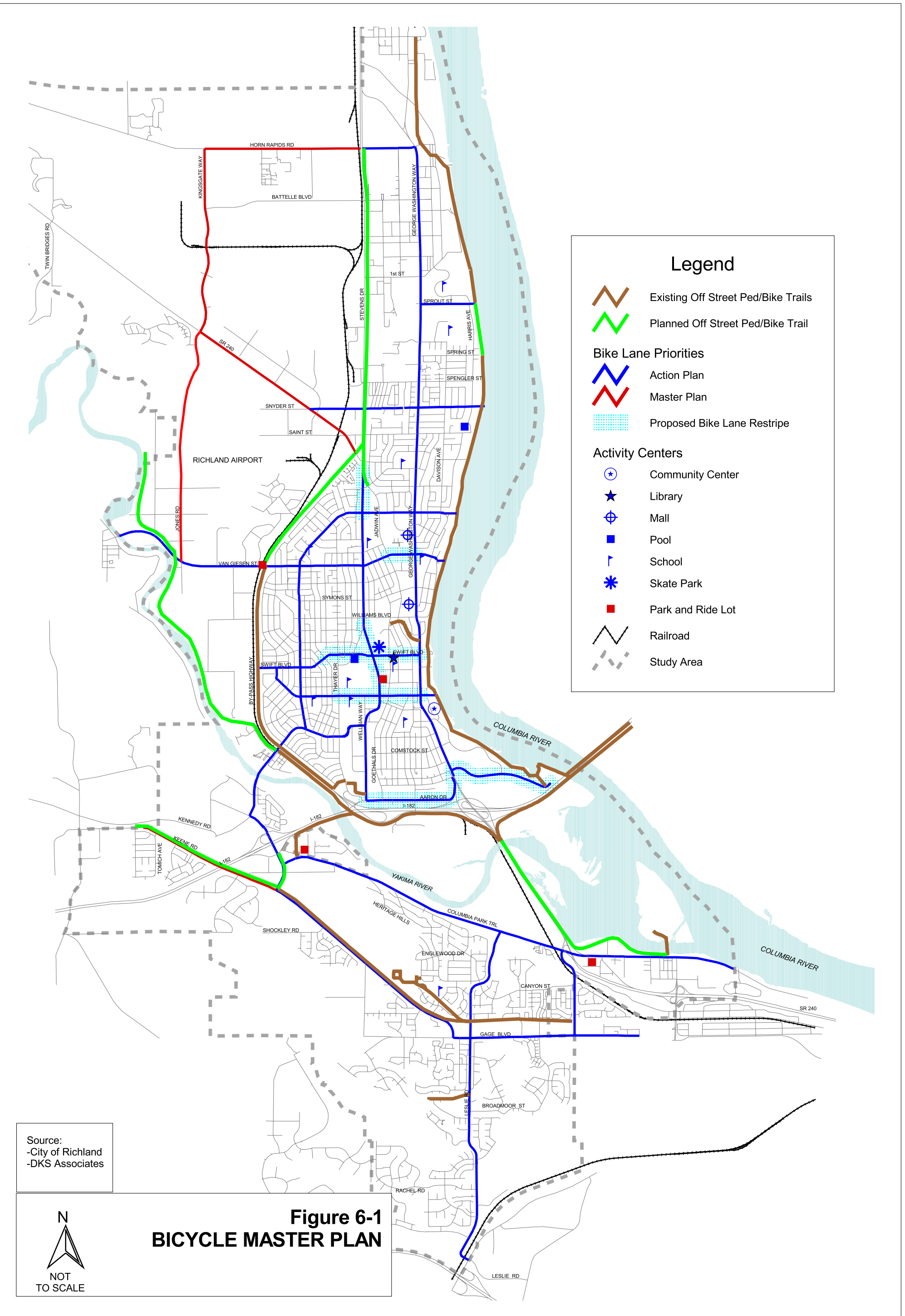
Table 6-3: Bicycle Connectivity to Adjacent Jurisdictions

Jurisdiction	Interface Street	Link Included in Richland Bike Master Plan
West Richland	Van Giesen Street	Van Giesen Street
	Keene Road	Keene Road
	Kennedy Road	Duportail Road
Kennewick	Gage Boulevard	Gage Boulevard
	Columbia Center Boulevard	Columbia Park Trail
	Steptoe Street	Steptoe Street
	Columbia Park Trail	Columbia Park Trail
	SR 240 Off-Street Trail	SR 240 Trail
	Clearwater Avenue	Leslie Road
Benton County	Stevens Drive	SR 240 Trail, GWW
	Reata Road	Leslie Road
Pasco	I-182 Off-Street Trail	I-182 Off-Street Trail

Recommended Bicycle Facility Plan

A list of likely actions to achieve fulfillment of these priorities was developed into a Bicycle Master Plan. The Bicycle Master Plan (Figure 6-2) is an overall plan and summarizes the “wish list” of bicycle-related projects in Richland, providing a long-term map for planning bicycle facilities. From this Master Plan, a more specific, shorter term, Action Plan was developed. The Action Plan consists of projects that the City should actively try to fund. These projects form a basic bicycle grid system for Richland. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well. The Master Plan elements considered bicycle facilities identified in the adopted Regional Non-Motorized Transportation Plan². Recommended new facilities, on-street bike lanes, and off-street trails, are consistent with the RTP bike route designations. Additional bike facilities within the city streets are recommended in this plan that extend beyond the regional scope of the RTP element.

² Benton-Franklin Council of Governments, *Regional Non-Motorized Transportation Plan for Benton and Franklin Counties and Tri-Cities Urban Area*, Adopted November 2000.



Legend

- Existing Off Street Ped/Bike Trails
- Planned Off Street Ped/Bike Trail
- Bike Lane Priorities**
- Action Plan
- Master Plan
- Proposed Bike Lane Restripe
- Activity Centers**
- Community Center
- Library
- Mall
- Pool
- School
- Skate Park
- Park and Ride Lot
- Railroad
- Study Area

Source:
-City of Richland
-DKS Associates

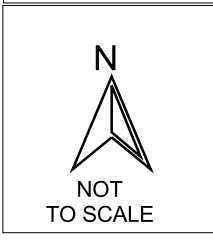


Figure 6-1
BICYCLE MASTER PLAN

Recommended Project List

Table 6-4 outlines potential bicycle projects in Richland. The City, through its Capital Improvement Program (CIP) and other available funding sources (along with joint funding with other agencies such as WSDOT or development approval), would implement these projects. Multi-use paths identified on the bicycle plans should be aligned to cross roadways at intersections for safe crossing rather than crossing roadways at mid-blocks without traffic control.

Table 6-4: Recommended Bicycle Facility Projects

Street	From	To
Action Plan		
Aaron Drive	Wellsian Way	George Washington Way
Columbia Park Trail	City Limits	Steptoe St.
Columbia Point Drive	George Washington Way	Columbia River Trail
Duportail Street	Wellsian Way	Queensgate Drive
Gage Boulevard	Keene Road	City Limits
George Washington Way	Horn Rapids Road	Aaron Dr.
Horn Rapids Road	Stevens Dr.	George Washington Way
Lee Boulevard	Swift Blvd.	Columbia River Trail
Leslie Road	Columbia Park Trail	Clearwater Ave
McMurray St/Wright Ave	Columbia River Trail	Duportail Street
Queensgate Drive	Duportail Street	I-82 ramps
Snyder Street	Stevens Dr.	Columbia River Trail
Sprout Street	George Washington Way	Columbia River Trail
Steptoe Street	Columbia Park Trail	Gage Blvd.
Stevens Drive	Lee Blvd.	Catskill St.
Stevens Drive ?(Off-street?)	Horn Rapids Road	Catskill St.
Swift Boulevard	SR 240	George Washington Way
Swift Boulevard	George Washington Way	Sanford Ave.
Van Giesen Street	West City Limits	Columbia River Trail
Wellsian Way	Aaron Dr.	Duportail St.
Other Potential Bike Facilities		
Keene Road	Queensgate Drive	West City Limits
Horn Rapids Road	Stevens Dr.	Kingsgate Way
Kingsgate Way	Horn Rapids Road	SR 224
SR 240	Kingsgate Way	Stevens Dr.
Off Street Bike Facilities		
SR 240	Stevens Dr.	Van Giesen St
SR 240	I-182	Columbia Park

Initial Bike Facility Projects

Most of the identified bike facility projects will occur through frontage improvement paid by re-development or by scheduled capital improvement projects since they require major roadway widening and/or relocation of on-street parking. However, a portion of these projects were identified that could be provided at much less cost because the existing roadway pavement is more than sufficient to serve long-range traffic demands. The criteria applied were cases that have existing paved width was 50 feet or greater, and the long-range (2020) peak hour traffic demands were less than 700 vehicles in the peak direction. The selected roadways can be re-striped to allow bike facilities without widening. Typically, the re-striping projects convert four-lane roadways (two travel lanes in each direction) to three-lane roadways with bike lanes (one travel lane in each direction, a center turn lane, and bike lanes on both sides). The initial list of roadways is shown in Table 6-5.

Table 6-5: Initial Bike Facility Projects

Street	From	To
Stevens Drive	Coast Street	McMurray
Stevens Drive	Williams Avenue	Lee Boulevard
Swift Boulevard	George Washington Way	Thayer Road
Lee Boulevard	Jadwin Avenue	Thayer Road
Aaron Drive	Wellsian Way	Jadwin Avenue
Van Giesen Street	George Washington Way	Jadwin Avenue
Columbia Point Drive	George Washington Way	Eastern Terminus

Complementing Land Use Actions

The City through its Zoning Code has in place requirements for bicycle parking. The existing code specifies on-site parking facilities for a wide range of commercial, institutional, and industrial uses. However, the code does not include requirements for multi-family dwellings, where bike storage can be challenging given the relatively smaller living units and storage areas. It is recommended that this section of code be expanded to include bike parking facilities for multi-family uses above a minimum size (e.g., 4 units, to exclude duplexes and triplexes from the requirement).

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing bicycle and pedestrian facilities in as direct manner as is reasonable. If a development fronts a proposed bikeway or sidewalk (as shown in the Bicycle or Pedestrian Master Plans), the developer shall be responsible for providing the bikeway or walkway facility as part of any half-street improvement required for project mitigation.