

7 - Regional Bicycle System

Introduction

Bicycles offer a viable and economical mode of transportation with fewer negative impacts on air quality and finite land resources than those associated with the automobile. This chapter addresses issues associated with our need to provide an adequate network of facilities to accommodate regional bicycle trip demand.

By improving the efficiency of our existing transportation system, we can move more people and goods on the facilities we already have in place. The development of a balanced, multimodal transportation system provides us with more mode choices than just the single-occupant vehicle. By creating additional realistic travel options, such as bicycling, we can expand our transportation flexibility and improve our overall community mobility.

The bicycle is a tremendously efficient form of transportation. It burns no fossil fuels and requires very little road space. Bicycles can quickly transport people over distances of up to five miles (or even more) and do not use up significant amounts of our urban land resource for parking. Since many travel trips in the SKATS area are under five miles, there is a potential for shifting some car trips onto bicycles. For this reason, promoting the use of bicycles is an important strategy to reduce traffic congestion and air pollution and make more effective use of our existing transportation infrastructure.

Historically, one of the main barriers to increased bicycle use in the Salem-Keizer urbanized area is the lack of a direct, continuous, convenient, and safe system of bicycle facilities. A major result of recent transportation improvement efforts in the area has been to successfully plan and implement missing portions of the region's bicycle system. The Regional Bicycle System provides an adequate system of bicycle facilities in the Salem-Keizer area that will serve to facilitate our increased use of bicycles to meet our daily transportation needs. Significant increases in the use of bicycles requires that:

- an appropriate infrastructure of regional and local bicycle systems is in place; and
- adequate supporting facilities such as bicycle parking, storage, etc., are provided at key locations.

To this end, this chapter includes:

- 1) the bicycle system of regional significance and definitions of the Regional Bicycle System facilities;
- 2) an inventory of the current bicycle infrastructure and a description of its service area;
- 3) the goals, objectives, and policies related to the Regional Bicycle System;
- 4) the facility and financial needs associated with completing the Regional Bicycle System over the next 24 years; and
- 5) the regional strategies and specific improvements required to meet the goals and objectives of the Plan related to bicycle travel.

Regional Bicycle System (RBS) and Function

The designated RBS (**Map 7-1**) identifies the interconnected network of bicycle facilities that form the primary structure of the Salem-Keizer area's transportation system specifically designed to accommodate longer-length, "regional" bicycle trips. This system is intended to provide a safe and efficient bicycle network across and around the urban area and direct bicycle access to regional activity centers such as Salem's Central Business District, the Capitol Mall, Lancaster Mall, Chemeketa Community College, Salem Airport/Fairview Industrial Park, the State Fairgrounds, Salem Industrial/Cherry Business Park, Wallace Marine Park, and Minto-Brown Island Park.

SKATS "owns" none of the roadways in the area. Rather, the facilities that comprise the Regional Bicycle System are owned and operated by a number of different jurisdictions in the SKATS region: the city of Salem, the city of Keizer, Marion and Polk counties, and the Oregon Department of Transportation (ODOT). Each of these entities is responsible for planning, implementing, operating, and maintaining some portion of the overall Regional Bicycle System. Actual bicycle trips will probably use a mix of regional and local facilities. The "regional" system consists of a coordinated network of bicycle facilities on city streets, county roads, and state highways. The emphasis on "regional" bicycle travel characterizes the functional difference between the regional system and the local systems. The underlying function of the regional system is to accommodate longer distance bicycle trips and provide bicycle access to regional activity centers. The local bicycle systems are designed to accommodate shorter, more localized trips and provide connections to and from the regional facilities. For example, someone commuting by bicycle from a residence in the city of Keizer to a place of employment in the Capitol Mall area would be considered to be making a regional bicycle commute trip, while someone riding their bicycle to the corner store to buy a loaf of bread would be making a "local" trip. In general, regional bicycle trips normally seek the shortest and most direct route available. A person making a typical bicycle commute trip between East Salem and the Capitol Mall area would likely use one of the major east-west travel corridors on the regional system, such as State or Market streets, which provide the fastest and most direct travel route with the minimum amount of delay (from stop signs and intersections). The regional system identified

in this Plan complements the local bicycle system (which consists primarily of collector and local service facilities intended for shorter trips and more localized travel demand), and is either coincident with, or accessible to, the region's transit system (Cherriots) routes. This provides the bicyclist a greater opportunity for connectivity between bikes and buses and effectively expands the coverage and extent of the regional bicycle system.

Regional Bicycle System Facilities

"Bicycle facility" is a general term used to denote physical improvements and provisions designed to accommodate and encourage the use of bicycles as a viable and practical mode of transportation. The SKATS Regional Bicycle System has two classes of facilities: the routes that bicyclists take between origin and destination, and the supporting facilities that exist at the destination.

The SKATS Regional Bicycle System envisioned in this Plan contains approximately 174 miles of bicycle routes, consisting of bicycle lanes, multi-use paths, shoulder bikeways, and wide outside lanes and alternative bicycle routes. These routes are generally associated with the highway system of regional significance and provide access to major employment, shopping, business, and educational centers and major transportation connections in the Salem-Keizer area. The bicycle facilities identified in this plan are located within the SKATS boundary. Facilities located outside of this area are addressed in the transportation plans of the respective responsible jurisdiction.

Facilities to support the use of bicycles include racks on buses, provision of bicycle parking and signage. These facilities are an important part of the regional bicycle system, supporting the use of the bicycle as a practical means of transportation.

There are six basic types of bicycle routes on the Regional Bicycle System. A brief description of each type of bicycle route is provided below in descending order of classification.

Bicycle Lanes: A portion of a roadway that has been designated for the preferential or exclusive use of bicyclists. The standard width for bicycle lanes is six feet with a minimum of four feet (five-foot minimum if adjacent to a curb, parking, or guardrail). Bicycle lanes should be marked with an eight-inch white stripe and pavement stencils. If parking is permitted, a five-foot wide bike lane should be placed between the parking space and the travel lane.

Shoulder Bikeway: A type of bikeway where bicycle travel is provided on the paved shoulder of the roadway. Shoulder bikeways are most common on rural roads. The standard width for a shoulder bikeway is six feet. A five-foot minimum can be used if adjacent to a curb, parking, or guardrail. If there are severe physical limitations, a four-foot wide shoulder is regarded as minimally acceptable.

Wide Outside Lane (formerly called Shared Roadway): Bicyclists and motorists share the same travel lanes, which are at least 14 feet wide, but no greater than 16 feet wide. On wide outside lanes, bicyclists and motorists have equal status as vehicles occupying the travel lane. This type of facility is often the only alternative when there is inadequate right-of-way available for

bicycle lanes without creating undesirable impacts. Wide outside lanes are the minimally acceptable type of bicycle facilities on the RBS and should be considered for upgrading where feasible. Existing wide outside lane segments of the RBS will be re-examined in subsequent Plan updates to determine whether sufficient changes in limiting conditions have occurred to warrant further consideration for eventual upgrading to a higher class of facility.

Multi-Use Path: Multi-use paths are physically separated from motor vehicle traffic and are normally two-way facilities, and shared with bicycles, pedestrians, joggers, and skaters. The standard width is 10 feet for a two-way multi-use path.

Shared Roadway: There are no specific bicycle standards for shared roadways. They are simply the roads as constructed. Shared roadways function well on local streets, collectors, and rural roadways where traffic volumes and speeds are low. On urban arterials, roads should be widened to include shoulder bikeways or bicycle lanes.

Bicycle Boulevards: Bicycle boulevards are the same as *Shared Roadways*, but with minor modifications made to enhance the convenience and safety of bicycle users, such as prioritizing flow along the route at intersections. These modifications are typically made to local streets, but can serve regional trips. Bike boulevards are often located on streets parallel to major roads.

Facilities for bicycle parking include bike racks, bike lockers, and bike stations or garages. Each of the facilities provides the bicyclist a means of securing their bike when they reach their destination.

Bike racks: The most common of the parking facilities for bicycles, these allow the bicyclist a convenient and temporarily safe spot for parking their bicycle while shopping or eating at an establishment. Typical bike racks include inverted U bars allowing two bikes to be locked to them. Usually these are uncovered and located on the sidewalk.

Bike lockers: These are enclosed lockable boxes, large enough to place a bicycle and a few bags. Lockers are typically located in the downtown area, or where there is a need for long-term safe parking of a bicycle. More expensive than bike racks, they provide protection from the elements and possible vandalism to the bike. Bike lockers are rented from a central authority for set periods of the year.

Bike stations/garages: For areas with high bicycle usage and storage needs, these types of facilities provide the highest degree of security and protection for the bicycle. Bike garages provide an enclosed, lockable storage area for many bikes. These are typically unattended, with the user renting a key from a central authority. The bike station takes this concept and adds amenities that make commuting by bike more attractive, such as showers, changing rooms, and on-site service for the bicycle. Occasionally, these facilities include a complete bicycle store or provide rentals.

The Regional Bicycle System envisioned in this Plan embodies a combination of existing and committed bicycle facilities and recommended system improvements, which are described in the following sections of this document.

The Existing Regional Bicycle System

Considerable progress has been made to date by affected jurisdictions in the SKATS area toward completing the bicycle facilities identified as part of the Regional Bicycle System. Several on-street bicycle lanes and other related facilities that encourage bicycle travel have been constructed in recent years. Where they exist, these bike lanes provide a designated, safe space for the bicyclist on the roadway surface and respond to the fact that bicyclists generally wish to travel in patterns similar to motorists and want to take the most direct and safest route possible.

Unfortunately, however, significant portions of the Regional Bicycle System have yet to be completed. On the whole, we still lack a seamless network of bicycle facilities with which to serve the regional trip-making needs of urban residents who choose to travel by bicycle. The existing network of bicycle facilities is still somewhat disjointed, with many important links missing. System continuity is vital if bicycling is to become a convenient, safe, and attractive transportation alternative in the region. Although a number of important segments of the Regional Bicycle System are already in place, under construction, or committed to be built in the near term, the "matter-of-course" provision of roadway bicycle facilities has not always been easy in the past, due in part to a lack of community consensus, insufficient funding, and the perceived high costs of displacing other uses. One alternative to costly right-of-way acquisition, the removal of on-street parking, can impact convenient automobile accessibility to nearby commercial businesses. Other low-impact bicycle facility alternatives, such as wide outside lane treatments, may not provide the level of safety, continuity, or directness necessary to significantly encourage bicycle use as a viable alternative to the use of the automobile.

As of the end of 2002, approximately 110 miles (63 percent of the total system) of the RBS are existing facilities, which include all roadway bicycle facilities scheduled to be constructed through that year (**Map 15-3**). As more facilities are added to the region's bicycle system, it is expected that the level of bicycle usage in the SKATS area will increase.

Despite this progress, there are still a significant number of "missing" and/or incomplete segments of the system, with few continuous linkages to regional activity centers and other major destinations. As a result, many bicyclists are often forced to share the road with automobiles without a designated space to ride safely; or they must go out of direction on the local street system in order to reach their destination.

As of 2006, bike lockers are located only in the downtown area (**Map 7-1**), with the more ubiquitous bike racks located throughout the Salem-Keizer area. Since the lockers were introduced in 1997, the number rented increased yearly until 2000, at which point a decrease has occurred until 2006, when the number increased (**Table 7-1**). Zoning codes for the city of Salem prescribe the number of bike racks necessary in combination with business development.

Currently, all Salem-Keizer Transit buses are equipped with bike racks, allowing two bicycles on each bus. Future buses will also be equipped with bike racks.

**Table 7-1
Yearly Bicycle Locker Rentals, 1997 to 2004**

	AVERAGE NUMBER OF LOCKERS RENTED	NUMBER OF LOCKERS	PERCENT RENTED
1997	7	26	27%
1998	11	26	42%
1999	13	26	50%
2000	17	26	65%
2001	15	26	58%
2002	15	30	50%
2003*	13*	32	41%
2004*	12	32	38%
2005*	13	32	41%
2006 - half	19	32	

* October 2003 to October 2005: 6 lockers unrentable due to construction at Chemeketa Parkade

Goals, Objectives, and Policies

The Bicycle System chapter is a blueprint for developing a safe, seamless, and efficient system of bicycle facilities in the SKATS area. Since SKATS does not actually build, maintain, or operate any portion of the facilities comprising the system, the Bicycle System chapter of the RTSP is implemented through the cooperative adoption of regional goals, objectives, and policies. The local bicycle system plans must be consistent with the adopted goals, objectives, and policies contained in the regional Plan. In turn, the regional Plan must be consistent with state and federal plans, policies, and mandates.

The goals, objectives, policies, and recommendations included in this chapter were formulated through an extensive development and review process with the SKATS Bicycle Advisory Committee (BAC) during the 1996 update, and are intended to address the major regional issues affecting bicycling needs that were identified in the public process. All of the goals, objectives, and policies contained in this chapter are geared toward promoting the increased use of bicycles as a means of meeting the transportation needs of the citizens of the region.

Goal 1: An identified system of regional bicycle facilities within the Salem-Keizer urban area.

Objective 1: Establish a system of regional bicycle facilities within the Salem-Keizer urban area that provides an adequate level of service to meet regional bicycling mobility needs.

Policy 1: The Bicycle System chapter of the Regional Transportation Systems Plan shall designate the bicycle system of regional significance the Regional Bicycle System (RBS) within the Salem-Keizer urban area.

Objective 2: Develop and maintain an accurate and up-to-date inventory of the RBS in order to respond to the changing needs of the bicycling public in the region.

Policy 1: The RBS facilities inventory shall be included in the Bicycle System Element of the RTSP and updated on a regular basis to maintain currency and accuracy.

Goal 2: A safe system of regional bicycle facilities within the Salem-Keizer urban area.

Objective 1: Design a system of regional bicycle facilities that enhances safety by improving compatibility among bicycling and other transportation modes.

Policy 1: All bicycle facilities on the Regional Bicycle System shall be constructed in accordance with ODOT bicycle facility standards where applicable.

Policy 2: Project designs that accommodate bicycle facilities within the roadway rights-of-way shall be implemented on the Regional Bicycle System where practicable.

Objective 2: Provide for well maintained Regional Bicycle System facilities that afford a safe environment and reduce potential hazards to the traveler.

Policy 1: Jurisdictions are encouraged to adopt routine maintenance standards and practices that ensure smooth, clean, and safe conditions on the RBS facilities.

Policy 2: Local jurisdictional support of volunteer community services and programs that assist in the provision of adequate maintenance service on Regional Bicycle System facilities.

Policy 3: Bicycle safety devices such as bicycle-proof drain grates, rubberized or concrete pads at railroad crossings, and appropriate signage shall be utilized on RBS facilities wherever practicable.

Objective 3: Achieve greater public awareness of safe bicycling and motoring practices, procedures, and skills.

Policy 1: The development and implementation of regionwide bicycle safety and education programs aimed at all ages are encouraged in order to improve bicycle skills, increase the observance of traffic laws, and enhance the overall safety of the traveling public in the region.

Policy 2: Encourage jurisdictions to monitor and analyze bicycle accident data to formulate ways to improve bicycle safety.

Goal 3: A continuous and direct system of regional bicycle facilities in the Salem-Keizer urban area that adequately responds to the transportation needs and desires of bicyclists.

Objective 1: *Establish a continuous and direct system of regional bicycle facilities that adequately responds to the regional transportation needs of bicyclists in the Salem-Keizer urban area.*

Policy 1: Designate a continuous and direct system of regional bicycle facilities in the Bicycle System chapter of the SKATS Regional Transportation Systems Plan.

Policy 2: Identify facility improvements necessary to ensure a direct and continuous network of bicycle facilities on the Regional Bicycle System.

Objective 2: *Establish a Regional Bicycle System that provides access to regional activity centers and other major destinations.*

Policy 1: Designate a continuous and direct system of regional bicycle facilities that provides access to regional activity centers and other major destinations.

Policy 2: Identify necessary facility improvements on the Regional Bicycle System to ensure adequate bicycle access to regional activity centers and other major destinations.

Goal 4: **A constructed system of regional bicycle facilities within the Salem-Keizer urban area.**

Objective 1: *Construct the bicycle facilities necessary to implement the established Regional Bicycle System by the year 2031.*

Policy 1: Affected jurisdictions shall include bicycle facilities on all newly constructed regional arterials.

Policy 2: Affected jurisdictions shall include bicycle facilities as part of major improvement projects on roadways identified as part of the Regional Bicycle System unless significant constraints can be demonstrated. In such cases, viable alternatives shall be provided.

Objective 2: *Adequately fund the construction of the bicycle infrastructure and supporting facilities necessary to complete the established Regional Bicycle System by the year 2031.*

Policy 1: Support continuation of current (or equivalent) federal, state, and local funding mechanisms to implement regional and local bicycle facilities and amenities within the Salem-Keizer urban area.

Policy 2: SKATS and local jurisdictions shall cooperatively seek additional revenue sources as necessary to ensure timely completion of the bicycle facilities that comprise the RBS.

Objective 3: *Ensure multimodal equity by incorporating bicycle facilities into the planning, design, construction, and maintenance activities associated with roadways identified as part of the RBS.*

Policy 1: Needed projects on the RBS shall be fully integrated into the evaluation and selection process associated with the development of the Region's Transportation Improvement Program (TIP).

Goal 5: A coordinated system of regional bicycle facilities in the SKATS area.

Objective 1: *Integrate the Regional Bicycle System facilities with other transportation modes.*

Policy 1: The Regional Bicycle System shall provide bicycle access to public transit transfer node(s), park-and-ride sites, and other major transportation centers such as regional airport terminals and passenger railroad stations.

Policy 2: Regional bicycle planning efforts shall be coordinated with other transportation service providers to assure the opportunity for intermodal connectivity.

Policy 3: Support the continuation of the "Bikes On Buses" Program for all public transit routes.

Objective 2: *Ensure a continuing, comprehensive, and cooperative planning process that provides for the efficient and timely implementation of the Regional Bicycle System Plan.*

Policy 1: Coordinate bicycle system planning and development efforts in the Salem-Keizer urban area with federal, state, and local agencies, as well as other public and private transportation providers.

Policy 2: Prepare, adopt, and update a Bicycle System chapter of the Regional Transportation Systems Plan that is consistent with federal and state guidelines and developed through a continuous, comprehensive, and cooperative transportation planning process, including thorough public review.

Policy 3: Ensure that the portions of the Local Transportation Systems Plans dealing with bicycling are consistent with the Regional Bicycle System Plan through recurring Plan review.

Policy 4: Coordinate roadway improvement projects in the region with recommended bicycle system needs to take advantage of cost sharing opportunities (i.e., resurfacing, widening, upgrading, etc.).

Objective 3: *Provide for an open and ongoing public involvement process that ensures full participation and input into the planning process associated with the development of the Bicycle System chapter of the Regional Transportation Systems Plan.*

Policy 1: Establish a regionwide public participation process that ensures timely public notice, adequate information and appropriate opportunities for public input regarding all improvement projects affecting the Regional Bicycle System.

Objective 4: *Provide a network of supporting facilities and amenities designed to enhance the Regional Bicycle System and encourage the use of bicycling as a practical transportation mode.*

Policy 1: Encourage the development and implementation of a system of supportive bicycle facilities and amenities (i.e., bicycle parking, storage, showers, system maps, etc.) within the Salem-Keizer urban area.

Policy 2: Encourage the development of adequate internal bicycle circulation systems at major regional activity centers.

Policy 3: Encourage the implementation of consistent bicycle signage throughout the SKATS area.

Recommended Improvements

Some of the needed improvements to the Regional Bicycle System are committed bicycle projects that are already scheduled for construction and have their funding obligated in the SKATS Regional Transportation Improvement Program (TIP) or other acknowledged public facilities plan. We are scheduled to add approximately three miles of bike lanes by the end of 2004. At that time, 65 percent of the system will be completed (**Map 7-1**). Many, if not all, of the bicycle lanes added in the past and to be added in the future are the result of street projects, typically to bring the street up to urban standards, rather than projects that specifically add bike lanes. A detailed list of committed RBS facilities is included in **Table 15-1**.

Even with the committed projects in the SKATS TIP, there will continue to be significant segments of the RBS missing, precluding convenient access to many regional destinations. As a result, many regional-length bicycle trips will still have to be made in circuitous or out-of-direction fashion on the local street system in order to reach their destination. Approximately 61 miles (35 percent of the total system) of additional recommended system improvements are needed beyond those already existing and committed (see above) to complete the RBS (**Map 15-3**). A detailed list of recommended improvements in addressing these needs is shown in **Table 15-2**.

The current level of utilization of existing bicycle lockers indicates that there is a meaningful demand for long-term, safe, and convenient bicycle parking in downtown Salem. Additional bicycle storage facilities are needed throughout the Salem-Keizer area to support the increasing use of bicycles as a means of commuting to work or to the store. In particular, this plan recommends adding, at a minimum, bicycle racks at all current and future transit centers and transfer stations. The provision of bicycle racks addresses the short-term parking needs of bicyclists, and provides a method to gauge demand at the individual transit transfer stations.

As demand for longer-term bicycle parking solutions grows, bicycle lockers will be provided for the extra level of security and weather protection they provide.

Outstanding Issues

Several portions of the designated Regional Bicycle System in the SKATS area cannot accommodate the addition of dedicated bike lanes or even widened outside lanes. Two examples are North River Road from Lockhaven Road to the Salem Parkway and Liberty Road South, from Commercial Street to Browning Avenue. Impediments to the addition of bicycle facilities on these segments range from safety concerns to the financial cost of acquiring the necessary right-of-way to outright community opposition. Finding a satisfactory solution to these problem areas will require additional time and effort and remain an outstanding issue in the regional transportation planning process.

Connecting Keizer and Salem is a near-term goal for the Regional Bicycle System. Currently, Commercial and Liberty streets have bike lanes, as does Cherry Avenue. Broadway and North River Road do not have bike lanes, nor is there room in the current right-of-way of either street to expand them to include a bike lane. One option to address this situation would be the development of a bike path along the Willamette River, providing access for the residents of Keizer west of North River Road to downtown Salem. This path would be part of the larger Willamette Partnership (WP) plan to link cities along the Willamette River together via a multi-use path. Currently, this proposal is still in the conceptual stages, with no specific routes through Salem-Keizer identified. The completion of a path as envisioned by the WP is compatible with the goals of the RTSP to provide residents of Salem-Keizer with multiple mode and route options when traveling between origin and destination.

Combining the two issues above, there needs to be reexamination of the current regional bicycle and pedestrian networks to determine their suitability in facilitating the safe and easy movement of people using these modes. One area of study will be whether additional roads, classified below minor arterial, should be included in the regional bicycle network to facilitate the movement between the region's destinations while bypassing areas where the provision of bicycle lanes is problematic.

These issues will require additional study and public deliberation and input before a preferred alternative can be identified and included in the Plan.

