

**BIKEWAY PLAN
FOR THE
ROANOKE VALLEY**



**Adopted by the Roanoke Valley Area Metropolitan Planning Organization
(A Division of the Fifth Planning District Commission, Roanoke, Virginia)**

August 1997

This report was prepared by the staff of the Fifth Planning District Commission through the assistance of the United States Department of Transportation, Federal Highway Administration, Virginia Department of Transportation and the Roanoke Valley Bikeway Plan Bicycle Advisory Committee.

The contents of this report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Administration or the Virginia Department of Transportation. This report does not constitute a standard, specification or regulation.

The Federal Highway Administration and the Virginia Department of Transportation acceptance of this report as fulfillment of the objectives of this planning study does not constitute endorsement / approval of the need for any recommended improvements, nor does it constitute approval of their location and design, nor a commitment to fund any such improvements. Additional project level environmental impact assessments and/ or studies of alternatives may be necessary.

Acknowledgments

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Introduction: Roanoke Valley Bikeway Plan

The Roanoke Valley Area Metropolitan Planning Organization (MPO), a division of the Fifth Planning District Commission, has long recognized the many problems associated with a transportation system dependent primarily on single occupant automobiles. Traffic congestion, environmental pollution, dependence on uncertain energy reserves and detrimental social impacts are undesirable conditions that demand correction through effective transportation systems planning. Every day, travelers are faced with congested traffic conditions that increase journey times considerably. Unhealthy levels of pollutants are generated daily from the motor vehicle traffic. Even though automobiles have been made more fuel-efficient and greater air quality standards have been enacted, there is still much work left to be done. Despite the promotion of car- and van-pooling services and improvements in regional mass transit service, motor vehicle traffic is still expected to increase considerably in future years. To address these problems, additional modal alternatives to the single occupant vehicle (SOV) are necessary. At the same time, given growing financial constraints, governments are now forced to search for low-cost, easy-to-implement solutions to their transportation problems. Bicycling is one such alternative mode that must be developed as an integral part of the transportation network.

The goal of increased bicycling is echoed on the national level. In 1994, the Federal Highway Administration published the *National Bicycling and Walking Study*. This is a multi-part plan of action for meeting two primary goals: 1) to double the percentage of trips made by bicycling and walking (from 8% to 16%), and 2) to reduce the number of automobile-related bicycle and pedestrian injuries by ten percent.

The 1990 Nationwide Personal Travel Survey (NPTS), which is published by the Federal Highway Administration, indicates that more than a quarter of bicycle travel trips are one mile or less in length, 40 percent are two miles or less, almost half are three miles or less, and two-thirds are 5 miles or less. Moreover, 53 percent of all people nationwide live less than two miles from the closest public transportation route, making a multi-modal bicycle- or walking-transit trip an attractive possibility. Many travel trips can be effectively covered by means of bicycle transportation. For longer travel trips, bicycles can provide greater access to intermodal stations and services from adjacent neighborhoods.

According to *The Comprehensive State Bicycle Plan for Minnesota*, public savings from reduced pollution, oil import, and congestion costs have been estimated at between five and twenty-two cents for every automobile mile displaced by bicycling and walking. Bicycles may serve as an excellent, all-around short-distance transportation alternative for trips to work, schools, shopping, recreational facilities and other intra-neighborhood destinations.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 calls for a multimodal approach to transportation planning. In an era of limited construction opportunities and growing maintenance costs, combined with projected increases in vehicular traffic from continuing high

levels of commercial and residential growth, a multimodalism approach to transportation system planning is necessary to achieve the most efficient utilization of the metropolitan area's existing and planned transportation facilities. Multimodalism is the integration of all modes of transportation -- highways, public transportation, bicycle and pedestrian facilities, rail, airport facilities -- into an interconnected system. Bicycling is not only energy efficient to the nation, but healthy and economical for the users. Most importantly, bicycling encourages better use of our existing transportation network by minimally impacting physical surroundings as well as government budgets. Bicycle and pedestrian transportation modes, either alone or combined with mass-transit modes, are some of the most cost effective, viable alternatives to the increasing use of the automobile.

Coordination with the Roanoke Valley Conceptual Greenway Plan

The *Roanoke Valley Conceptual Greenway Plan* was completed in December 1995 outlining routes and implementation strategies for a network of multi-purpose trails throughout the City of Roanoke, City of Salem, Roanoke County, and Town of Vinton. Greenways have been identified throughout the country as a key component to a community's overall quality of life. They provide a broad spectrum of benefits ranging from transportation to flood reduction to recreation.

Greenways will have a strong positive impact for the Valley's citizens, creating new and exciting choices for individuals without access to an automobile, for the handicapped, for recreationists and fitness enthusiasts.

To show how the *Roanoke Valley Conceptual Greenway Plan* complements the Bikeway Plan, "off-road" greenways are included in the bikeway map at the end of this document. Note that only those greenways with potential bicycle accommodations are identified on the map. For instance, it is anticipated that some greenways will not permit bicycles due to unsuitable terrain or conflicts in uses such as a horse trail.

The Bikeway Plan is a transportation plan that is focused on developing a network of interconnected bikeway facilities on roadways and "off-road" that provide an alternative to the automobile. Bicycles can be used for a number of purposes such as commuting, personnel errands and recreation. Recreation, according to the Census Bureau, is the most common reason for bicycling. Many recreational bicyclists will be able to take advantage of the on-road facilities being proposed in the Bikeway Plan. Some bicyclists, such as novice users, will not, however, be comfortable with on-road facilities. The Greenway Plan presents an added opportunity to meet this need by providing facilities with little conflict from automobiles. As more greenways and bikeways are developed, every effort should be made to coordinate the goals and objectives of both plans. For a more detailed look at the types and locations of greenways being proposed, please refer to the tables included in this document.

Bicycle Trip Characteristics

The Nationwide Personal Transportation Survey (NPTS) provides an overview of bicycle travel characteristics that are useful for plan analysis. These include 1990 data averages for bicycle trip rates by individual characteristics (i.e., age, sex, presence of drivers license), household characteristics (i.e., income, life cycle, geographic location), and trip purpose. The characteristics for trip purpose and trip distance (geographic location) were selected primarily to examine non-motorized trip making. According to survey data, 0.7 percent of all travel trips are currently made by bicycle. As the average person makes twenty travel trips per week, increased levels of bicycle usage would not only decrease this multiple trip dependence on the automobile but also yield positive environmental, health and physical fitness benefits.

Trip Purpose

Annual

Approximately 55% of all (documented) annual bike trips are made for social and recreational purposes. Family and personal business bicycle trips comprise 20% of annual trips while 14% of trips are for civic, educational and religious reasons. These statistics are especially useful for planning bicycle facilities by geographic location where a physical attracter (by use) is located. Work-related trips account for roughly 10% of all annual bike trips, down 5% from 1983 levels. The U.S. Census "Journey to Work: survey provides another source of bicycle trip information. This survey is conducted every ten years and is targeted toward workers aged 16 and above. Survey respondent data indicated that approximately 4.0 % of all workers commuted to work by bicycle in 1990, down slightly from 1980 Census results depicting 4.2% bicycling levels.

Daily

Daily bicycle trip rates mirror annual trends, in that higher daily rates are seen for social/recreational and family/personal business purposes than for work-related purposes.

Daily Bicycle Trips for each Household by Trip Purpose	Trip Rate
Earning a Living	0.002
Family and Personal Business	0.004
Civic, Educational and Religious	0.001
Social and Recreational	0.008

Note: Trip rates based on total number of daily "person trips"
Source: NPTS Databook - Volume 1, (1990)

In comparison, less than 0.15% of the Roanoke Metropolitan Area population used the bicycle as

a means of transportation to work for 1990, falling below the national average of 0.32%. Daily transportation data (1990) for the Roanoke Metropolitan Area indicated that:

Daily Bike Trips to Work	Total Daily Trips to Work (all modes)	Percent
149	100,944	0.15%

Source: CTTTP Study

Trip Distance

Research indicates that cycling distances often vary by geographic region and trip purpose. 1990 survey data indicated that greater bicycle distance translated to decreased bicycle usage by trip length.

The national average trip length is approximately two miles, regardless of use, however maximum distances may approach five to six miles. Trips for social/recreational purposes generally average 2.2 miles in length; work-related trips average 2.1 miles in length and family/personal business trips average 1.6 miles in length. The average bike trip length rarely exceeds five miles.

Planning

Developing a potential bikeway network requires the identification of existing trip attracters and generators. Bicycle planners try to locate facilities near places of employment, recreation and multimodal hubs (such as rail/transit terminals or parking lots) so that an existing travel population base can be tapped for bicycle usage.

It is interesting to note that there is little national evidence that bicycle trip rates increase as population densities increase. Rather, the existence of bicycle facilities seems to be a determining factor for non-motorized travel usage regardless of population density. The Federal Highway Administration (FHWA), 1991 Harris Poll reported that 46 percent of adults aged 18 and older--82 million Americans--had ridden a bicycle in the previous year. Of those persons polled:

- 46% stated they would sometimes commute to work by bicycle if bicycle lanes (facilities) were available; and
- 53% would commute to work if separated, designated bike paths were available.

Roanoke Bicycle Plan Development

The Bicycle Advisory Committee was formed in March 1996 to address the needs of bicycling in the Roanoke Valley. This Committee consists of representatives from Botetourt County, Greenway Steering Committee, City of Roanoke, Roanoke County, Roanoke Valley Bicycle Club, City of Salem, Valley Beautiful, Town of Vinton, Virginia Department of Transportation--Transportation Planning Division, and Virginia Department of Transportation--Salem District. This group was established to review past and future bicycle needs, provide overall policy guidance and to assist in the preparation and review of the plan. Note that the 1996 Bikeway Plan is adapted from the 1991 and 1981 Bikeway Plans that were approved by the Metropolitan Planning Organization and the Fifth Planning District Commission.

The staff of the Fifth Planning District Commission and the Bicycle Advisory Committee identified several objectives for use in the plan preparation. The first objective was to examine the overall connectivity of routes and encourage the development of a logical network that enables bicycles to be used as an alternative mode of transportation. Secondly, the Committee sought to improve safety by promoting driver and bicycle education programs. Routes should also be designed to minimize conflict between motorists and bicycles. Lastly, because of limited funding for transportation projects, careful consideration was given to insure the plan remains financially feasible.

In addition, to ensure that each participating government understands the intent of the Bikeway Plan and its implications on future bikeway development, the Metropolitan Planning Organization (MPO) adopted the following implementation process guidelines:

1. The Roanoke Valley Area MPO will seek official adoption by local units of government of the **Roanoke Valley Area Bikeway Plan**.
2. The **Roanoke Valley Area Bikeway Plan's** bicycle facilities improvement recommendations will be shown as a part of the local jurisdictions' thoroughfare plan map.
3. The MPO Long-Range Transportation Plan's roadway projects will include estimated costs and types of bicycle facility improvements recommended by the **Roanoke Valley Area Bikeway Plan**.
4. The total cost shown for any roadway projects listed in the MPO's Transportation Improvement Program (TIP) will reflect the cost of providing the types of bicycle facility improvements recommended by the Roanoke Valley Area Bikeway Plan.

Policy Recommendations

The Roanoke Valley Area MPO's Bicycle Advisory Committee recommends that each jurisdiction encourage the use of bicycle travel as an alternative to automobile use to:

- 1) Improve air quality in the Roanoke metropolitan area;
- 2) Reduce the usage of non-renewable energy resources;
- 3) Enhance the mobility of individuals without automobiles;
- 4) Provide more transportation options in the region;
- 5) Mitigate traffic congestion across the roadway network;
- 6) Promote a healthy environment for the citizens of the Roanoke metropolitan area.

The following policy recommendations have been developed to better facilitate the area-wide bicycle planning and implementation process.

A. Incorporate a bicycle element in all jurisdictional planning policies.

- Include bicycling in all stages of the transportation and land use planning process, from initial concept through implementation.
- Identify a network of existing and future bicycle routes (both on and off-street) in the urban core, suburban and rural area. Ensure that these routes are included in the land use and transportation plans, and not be eliminated as development occurs.
- Identify bicycle route corridors before they are developed and preserve opportunities (right-of-way) for bicycle facilities development on identified corridors through the local land use development process.
- Encourage land developers to finance and construct bicycle routes and parking facilities within their developments.
- Encourage each jurisdiction to allocate dedicated bicycle "funds" annually to assure the construction and maintenance of bicycle facilities.
- Encourage an advisory committee that meets on a regularly scheduled basis to monitor the progress on bicycle-related improvements such as pavement striping, signage, roadway improvement, etc. (See A Virginia Guide for Bicycle Facility Planning, Section B-2.
- Encourage each jurisdiction to appoint an individual to coordinate local bicycle planning facility effort.
- Encourage each jurisdiction to examine ~~A~~traffic calming@ techniques which will provide safer and more pleasant conditions for motorists, bicyclists and pedestrians on local street.

B. Provide adequate bicycle support facilities.

- Encourage bicycle parking facilities at all park and ride lots, selected downtown parking lots and the Campbell Court Transfer station.
- Encourage local zoning ordinances to require bicycle parking and related facilities as part of all new construction or major renovation, including office, retail, industrial, and housing developments.
- Encourage jurisdictions to install bicycle parking facilities at public spaces such as city halls, museums, libraries and civic centers.
- Encourage the provision of showers and changing facilities in all new or renovated commercial development.
- Encourage the development of safe bicycle crossings at intersecting railroad lines by promoting cooperation between railroad companies and the localities.
- Encourage the use of traffic signals that are equipped to respond to bicycles, enabling them to safely travel through intersections.

C. Utilize bicycle facility design standards within each jurisdiction and encourage the adherence of these standards in the jurisdictions.

- Encourage local jurisdictions to use AASHTO's Guide for the Development of Bicycle Facilities or VDOT's guidelines for bicycle facilities and MUTCD for proper signage and markings.

D. Roadway improvements in the future should accommodate bicycle and pedestrian modes of transportation.

- Encourage widened curb lanes, provide bicycle lanes or pave the shoulders and install sidewalks on all major roadways.
- Encourage the use of curb-slot storm drainage inlets, or install bicycle-safe grates over all roadway drains.
- Encourage the installation of bicycle and pedestrian traffic crossing signal push buttons, bicycle sensitive signal detectors and special markings identifying traffic instructions and road hazards.

- Encourage the identification of existing physical barriers to bicycling and walking (such as rivers, bridges, railroad tracks, highway crossing, etc.) and implement solutions to overcome them.
- Encourage the development of bicycle and pedestrian friendly intersections that facilitate safe through movement.
- Encourage the building of all new or rehabilitated bridges to the full width of the road and provide widened curb lanes, bicycle lanes or separated facilities for bicycles, and sidewalks for pedestrians.
- Encourage, where feasible, the building of separated bicycle facilities adjacent to all new roads that prohibit bicycling, unless alternate bicycle-compatible roadways exist nearby.

Bicycle Safety

Bicycle safety is an important element of the Bikeway Plan. The following items are recommended so that a comprehensive safety program is in place for the initial stages of bikeway development:

- 1.) Create a bicycle education program to emphasize training and public awareness. Bicycle safety courses can be offered through recreation departments, fitness organizations / clubs and schools.
- 2.) A major cause of accidents is due to the bicyclist's failure to obey related traffic laws. These laws must be included with bicycle safety courses and they should be enforced by the police departments. The City of Roanoke, Roanoke County and Salem currently have officers that patrol on bicycle that should be continued and if feasible expanded. National reports such as *The National Bicycling and Walking Study* suggest that police using bicycles are more effective in patrolling bikeways, downtown and neighborhoods.
- 3.) Insure bikeway facilities are well designed so accidents can be minimized. Design features should include appropriate signage, adequate lane width to accommodate bicycles on the roadways or separated bike lanes.

The overall safety of the facilities should be reexamined annually to determine if particular areas are deficient. It will not be possible to eliminate accidents entirely but targeted improvements should be made to specific problem areas. This should include examining the physical conditions of the facilities as well as the effectiveness of law enforcement and public education. Because these elements complement one another each should be given equal consideration. It is possible for a bikeway to be well designed and still be dangerous if the riders are not aware of the applicable laws.

Bicycle Facility Recommendations for Improvements

The Bicycle Advisory Committee has identified the following bicycle facility classifications for use in project planning. These classifications are based on 1991 AASHTO standards but have been adapted so they more closely fit with the needs of the Roanoke Valley. Any route improvements identified in the tables can be included in one or more of these categories depending upon the specifics of the project.

Group A - Bike Trail or Path: Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with cross flows by motor vehicles minimized.

Group B - Bike Lane: An on-road bikeway that has been designated by striping, signing, adequate pavement width and pavement markings for the preferential or exclusive use of bicyclists.

Group C - Widened Outside Lane or Paved Shoulder: A roadway with a widened outside lane or paved shoulder that is constructed with an additional 2 to 3 feet of pavement width in order to accommodate bicycles.

Group D - Restripe for Shared Roadway: A roadway designated for potential use by bicycles that is restriped to increase the width of the outside lane and decrease the width of the inside lane. This creates an outside lane with which bicycles may ride more safely and conflicts with passing vehicles is minimized.

Group E - No Improvement Necessary: A roadway that accommodates bicycle use without the need for additional improvements.

Note: For the bikeway map these categories are collapsed into “on-road” and “off-road” facilities. Programmed roadways that include bicycle accommodations are shown on the bikeway map inserted at the end of the plan. *For bicycle accommodations to be considered as part of roadway improvements with Federal or State funds, the roadway must be on an approved bikeway plan.* The jurisdiction still has the option to include the bicycle accommodation (extra width, striping, etc.) or not when the roadway project is initiated.

The tables on the following pages identify those roadways that are recommended to include bicycle accommodation in each local jurisdiction. Individual routes are also shown on the Bikeway Map as either “on-road” or “off-road” at the back of this document. The type of accommodation being requested will vary depending upon the conditions along the route. This may range from a fully separated bike lane to no improvement if the roadway is already safe for bicycle use. In special circumstances such as uphill sections of a roadway, it may also be warranted to add extra pavement width or a bike lane so that conflict with passing motorists can be reduced.

Table 1 - Botetourt County: Recommended Roadways for Bicycle Accommodation

<i>Botetourt County: Recommended Roadways for Bicycle Accommodation</i>				
Route/Street Name	From	To	Type of Improvement	Description
Route 220	Route 11	MPO Boundary	B	Four-lane road, Urban Principal Arterial; widen roadway to accommodate bicycle lane
Alternate Route 220	Roanoke County Boundary	Route 11	B	Four-lane road, Urban Principal Arterial; widen roadway to accommodate bicycle lane
Blue Ridge Parkway	Roanoke County Boundary	MPO Boundary	E	Two-lane road, no improvements necessary to accommodate bicycle traffic
Route 11	Roanoke County Boundary	MPO Boundary	B	Four to five-lane road, Rural Major Collector; widen roadway to accommodate bicycle lane
Route 460/221 (Challenger Avenue)	Roanoke County Boundary	MPO Boundary	C	Four-lane road, Rural Principal Arterial; roadway needs widening to accommodate bicycle traffic
Route 601 (Shadwell Drive)	Roanoke County Boundary	Route 11	C	Two-lane road, Urban Collector, roadway needs widening to accommodate bicycle traffic
Route 651 (Stoney Mountain Road)	Route 11	MPO Boundary	C	Two-lane road, Urban Local, roadway needs widening to accommodate bicycle traffic
Route 654 (Read Mountain Road)	Alt. Route 220	Route 11	E	Two-lane road, Urban Collector; no improvement necessary to accommodate bicycle traffic
Route 738 (Webster Road)	Route 460	Route 460	C	Two-lane road, Rural Minor Collector; roadway needs widening to accommodate bicycle traffic
Route 779 (Catawba / Valley Road)	Route 11	MPO Boundary	C	Two-lane road, Rural Major Collector; roadway needs widening to accommodate bicycle traffic

Table 2 - Roanoke County: Recommended Roadways for Bicycle Accommodation

<i>Roanoke County: Recommended Roadways for Bicycle Accommodation</i>				
Route/Street Name	From	To	Type of Improvement	Description
Alternate Route 220	Route 460	Botetourt County Boundary	B	Four-lane road, Urban Principal Arterial; due to high traffic volumes and truck traffic needs widening to accommodate an on road bicycle lane
Barley Road	Route 11/460 (W. Main St.)	Route 612 (Poor Mountain Road)	E	Two-lane road, Urban Collector; no improvement necessary to accommodate bicycle traffic.
Barrens Road	Belle Haven Road	Nover Ave.	C	Two-lane road, Urban Local, roadway needs widening to accommodate bicycle traffic
Barrens Road	Nover Ave.	Rt. 117 (Peters Creek Rd.)	E	Two lane road, Urban Local; no improvement necessary to accommodate bicycle traffic
Belle Haven Road	Barrens Road	Loch Haven Dr.	C	Two-lane road, Urban Local; roadway needs widening to accommodate bicycle traffic
Blue Ridge Parkway	Botetourt County Boundary	MPO Boundary	E	Two lane road, Unclassified; no improvements necessary to accommodate bicycles
Colonial Avenue	Route 419 (Electric Road)	Route 221	C	Two-lane road, Urban Minor Arterial; roadway needs widening to accommodate bicycle traffic
Edgebrook Road	Red Ln.	Mountain Heights Dr.	E	Two-lane road, Urban Local; no improvements necessary to accommodate bicycles
John Richardson Road	Oakland Boulevard	Route 115 (Plantation Road)	C	Two-lane road, unclassified; roadway needs widening to accommodate bicycle traffic
Laban Road	Barrens Road	Loman Dr.	C	Two-lane road, Urban Local; roadway needs widening to accommodate bicycle traffic
Loch Haven Drive	Route 419 (N Electric Road)	Belle Haven Road	C	Two-lane road, Urban Local; roadway needs widening to accommodate bicycle traffic
Loman Drive	Laban Road	Walrond Park	C	Two-lane road that lead to a dead end at Walrond Park, Urban Local; roadway needs widening to accommodate bicycle traffic
Mountain Heights Drive	Route 311 (Thompson Memorial Dr.)	Edgebrook Road	E	Two-lane road, Urban Local, no improvements necessary to accommodate bicycles
Ranchcrest Drive	Rt. 221	Rt. 613 (Merriman Road)	C	Two-lane road, Urban Local; roadway needs widening to accommodate bicycle traffic
Roanoke Mountain Spur	Blue Ridge Parkway	Blue Ridge Parkway	E	Two-lane road with low traffic volumes and speed, Unclassified; Blue Ridge Parkway property, no improvements necessary to accommodate bicycle traffic
Route 11 (Williamson Road)	City of Roanoke Boundary	Rt. 117 (Peters Creek Road)	C	Three-lane road with wide center turn lane, Urban Principal Arterial; roadway needs widening to accommodate bicycle traffic

Roanoke County: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Route 11	Williamson Road & Rt. 117 (Peters Creek)	Botetourt County Boundary	B	Four-lane road, Urban Principal Arterial; because of high volume and speed a bike lane is needed
Route 115 (Plantation Road)	Rt. 601 (Hollins Road / Roanoke City Boundary)	Dexter Road	C	Two-lane road, Urban Minor Arterial; roadway needs widening to accommodate bicycle traffic
Route 115 (Plantation Road)	Dexter Road	Rt. 11	D	Five-lane road with center turn lane, Urban Minor Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
Route 115 (Plantation Road)	Rt. 11	Walrond Dr.	D	Five-lane road with center turn lane, Urban Minor Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
Route 116 (Mount Pleasant Boulevard, JAE Valley Road)	MPO Boundary	City of Roanoke Boundary	D	Two-lane road, high volume, high speeds, Urban Minor Arterial / Rural Major Collector; adjust striping to create wider outside lane to accommodate bicycle traffic
Route 117 (Peters Creek Road)	City of Roanoke Boundary	Rt. 11 (Williamson Road)	C	Four-lane road, C&G along sections, wide shoulders, Urban Principal Arterial; roadway needs widening to accommodate bicycle traffic
Route 118 (Airport Road)	City of Roanoke Boundary / Barnes Road	Peters Creek Road	C	Two-lane road, Urban Collector; roadway needs widening to accommodate bicycle traffic
Route 221 (Brambleton Avenue)	City of Roanoke Boundary	Rt. 419 (Electric Road)	D	Five-lane road, center turn lane, C&G, Urban Minor Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
Route 221 (Bent Mountain Road)	Rt. 419 (Electric Road)	Rt. 897 (Crystal Creek Road)	B	Five-lane road, Urban Principal Arterial; needs bike lane to accommodate bicycle traffic
Route 221 (Bent Mountain Road)	Rt. 897 (Crystal Creek Road)	MPO Boundary	B	Two-lane road, Urban Principal Arterial; needs bike lane to accommodate bicycle traffic
Route 24 (Stewartsville Road)	Town of Vinton Boundary	MPO Boundary	C	Four-lane road, Urban Minor Arterial; roadway needs widening / paving to accommodate bicycle traffic
Route 311 (Thompson Memorial Drive)	City of Salem Boundary	MPO Boundary	C	Four-lane road, Urban Collector; roadway needs widening / paving to accommodate bicycle traffic
Route 419 (Electric Road)	Rt. 685 (Keagy Rd.) - Salem City Limits	Rt. 904 (Starkey Road)	C	Four-lane road, Urban Principal Arterial, roadway needs widening shoulder to accommodate bicycle traffic
Route 419 (Electric Road)	City of Roanoke Boundary (Route 220)	Rt. 904 (Starkey Road)	C	Four-lane road, Urban Principal Arterial, roadway needs widening / additional pavement width to accommodate bicycle traffic
Route 460 (Challenger Avenue)	City of Roanoke Boundary	Botetourt County Boundary	C	Four-lane road, Urban Principal Arterial; roadway needs widening / additional pavement width to accommodate bicycle traffic
Route 460/11	MPO Boundary	City of Salem Boundary	C	Three-lane road, center turn lane, Urban Collector / Rural Major Collector; roadway needs widening / additional pavement width to accommodate bicycle traffic
Route 601 (Hollins Road)	Rt. 115 (Plantation Road)	Rt. 601 (Shadwell Dr.)	C	Two-lane road, Urban Collector; roadway needs widening to accommodate bicycle traffic

Roanoke County: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Route 601 (Shadwell Drive)	Rt. 601 (Hollins Road)	Botetourt County Boundary	C	Two-lane road, Urban Collector; roadway needs widening to accommodate bicycle traffic
Route 605 (Old Mountain Road)	City of Roanoke Boundary	Rt. 605 (Shadwell Dr.)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 605 (Sanderson Drive)	Rt. 605 (Shadwell Dr.)	Botetourt County Boundary	E	Two lane road, Urban Collector, no improvement necessary to accommodate bicycle traffic
Route 605 (Shadwell Drive)	Rt. 605 (Old Mountain Road)	Rt. 605 (Sanderson Dr.)	C	Two lane road, Urban Collector, no improvement necessary to accommodate bicycle traffic
Route 612 (Poor Mountain Road)	MPO Boundary	Barley Dr.	C	Two-lane road, low volumes and speeds, narrow bridge over creek, Urban Collector; needs widening to accommodate bicycle traffic
Route 613 (Merriman Road)	Ranchcrest Dr.	Meadowlark Rd.	C	Two lane road, Rural Major Collector; needs widening to accommodate bicycle traffic
Route 613 (Merriman Road)	Meadowlark Rd.	Rt. 688 (Cotton Hill Rd.)	B	Two-lane road, Urban Collector; needs widening to accommodate bicycle lane in the future
Route 616 (Carlos Road)	Rt. 601 (Hollins Road)	Rt. 605 (Old Mountain Road)	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 618 (Highland Road)	City of Roanoke Boundary	Rt. 658 (Rutrough Road)	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 619 (Wildwood Road)	City of Salem / I-81	Rt. 635 (Goodwin Ave.)	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 623 (Green Ridge Road)	Rt. 628 (Woodhaven Road)	Rt. 780 (Cove Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 628 (Woodhaven Road)	Rt. 623 (Green Ridge Road)	Rt. 117 (Peters Creek Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 629 (Green Ridge Road)	Rt. 780 (Cove Road)	Rt. 623 (Green Ridge Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 629 (Green Ridge Road)	Rt. 780 (Cove Road)	City of Salem Boundary	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 634 (Hardy Road)	Town of Vinton Boundary	Blue Ridge Parkway	B	Two-lane road, Urban Collector; needs widening to accommodate bicycle lane in the future
Route 635 (Goodwin Avenue)	City of Salem Boundary	Rt. 619 (Wildwood Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 639 (West River Road)	MPO Boundary	MPO Boundary	C	Two lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 639 (West River Road)	MPO Boundary	MPO Boundary	E	Two-lane road, Urban Collector; no improvement necessary to accommodate bicycle traffic

Roanoke County: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Route 639 (West Riverside Drive)	Rt. 760 (Diuguids Ln)	City of Salem Boundary	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 651 (Mountain View Road)	Town of Vinton Boundary	MPO Boundary	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 654 (Feather Road)	Rt. 634 (Hardy Road)	Rt. 24 (Stewartsville Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 658 (Rutrough Road)	City of Roanoke Boundary	Rt. 618 (Highland Road)	C	Two-lane road, Urban Collector / Rural Major Collector; needs widening to accommodate bicycle traffic
Route 679 (Buck Mountain Road)	Rt. 904 (Starkey Road)	Rt. 220	C	Two-lane road, Urban Collector / Rural Major Collector, needs widening to accommodate bicycle traffic
Route 685 (Keagy Road)	Rt. 419 (Electric Road)	City of Roanoke Boundary	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 687 (Penn Forest Boulevard)	Colonial Ave.	Rt. 800 (Chaparral Dr.)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 687 (Penn Forest Boulevard)	Rt. 800 (Chaparral Dr.)	Rt. 904 (Starkey Road)	E	Two lane road, Urban Collector, no improvement necessary to accommodate bicycle traffic
Route 688 (Cotton Hill Road)	Rt. 613 (Merriman Road)	Rt. 221	C	Two-lane road, Urban Local, because this is a narrow winding road and potentially hazardous it needs widening to a paved shoulder to accommodate bicycle traffic
Route 689 (Roselawn Road)	Route 692 (Sugar Loaf Mt. Rd.)	Rt. 221	C	Two-lane road, Rural Major Collector, needs widening to accommodate bicycle traffic
Route 692 (Sugar Loaf Mountain)	685 (Keagy Rd.)	689 (Roselawn Rd.)	C	Two-lane road, Urban Collector, needs widening to accommodate bicycle traffic
Route 694 (Twelve O'clock Knob Road)	MPO Boundary	City of Salem Boundary	E	Two-lane road, Urban Collector; no improvement necessary to accommodate bicycle traffic
Route 705 (Red Lane)	City of Salem Boundary	Edgebrook Road	C	Two-lane road, Urban Local, needs widening to accommodate bicycle traffic
Route 760 (Diuguids Lane)	Rt. 639 (W. Riverside Dr.)	City of Salem Boundary	C	Two-lane road, Urban Local, needs widening to accommodate bicycle traffic
Route 780 (Cove Road)	Rt. 419 (Electric Road)	Rt. 623 (Green Ridge Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 780 (Cove Road)	Route 629 (Green Ridge Road)	Rt. 623 (Green Ridge Road)	C	Two-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic
Route 800 (Chaparral Drive)	Route 419 (Electric Rd.)	Purple Finch Road	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 800 (Chaparral Drive)	Purple Finch Road	Rt. 613 (Merriman Road)	E	Two-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic
Route 897 (Crystal Creek Road)	Rt. 221 (Bent Mountain Road)	Crystal Creek	E	Two-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic

Roanoke County: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Route 897 (Crystal Creek Road)	Crystal Creek	Rt. 613 (Merriman Road)	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Route 904 (Starkey Road)	Rt. 613 (Merriman Road)	Benois Road	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Route 904 (Starkey Road)	Benois Road	Rt. 419 (Electric Road)	D	Five-lane road, center turn lane, Urban Collector; adjust striping to create wider outside lane to accommodate bicycle traffic
Timberview Road	Rt. 419 (Electric Road)	MPO Boundary	E	Two-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic
Valley Pointe Pkwy.	Rt. 628 (Woodhaven Road)	Concourse Dr.	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Valley Pointe Pkwy.	Concourse Dr.	Rt. 117 (Peters Creek Road)	D	Four-lane road, Urban Local; adjust striping to create wider outside lane to accommodate bicycle traffic
Walrond Drive	Loman Dr.	Rt. 115 (Plantation Road)	C	Two-lane road, leads to park, Urban Local; needs widening to accommodate bicycle traffic
Walrond Park Bike Trail	Loman Dr.	Goff Road	A	Construct bicycle trail through Walrond Park
Yellow Mt. Road	MPO Boundary	City of Roanoke Boundary	C	Two-lane road, Urban Collector / Rural Major Collector; needs widening to accommodate bicycle traffic

Table 3 - City of Roanoke: Recommended Roadways for Bicycle Accommodation

<i>City of Roanoke: Recommended Roadways for Bicycle Accommodation</i>				
Route/Street Name	From	To	Type of Improvement	Description
2 nd Street, SW	Franklin Road	Salem Avenue	E	Four-lane, Urban Local; road currently under construction, no improvement necessary to accommodate bicycle traffic
5 th Street, SW	Elm Ave.	Orange Avenue	E	Three-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic
9 th Street, SE	Rt. 116 (Riverland Road)	Bullitt Ave.	E	Two-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic
9 th Street, SE	Rt. 24 (Bullitt Ave.)	Campbell Ave.	D	Four-lane road, Urban Local; adjust striping to create wider outside lane to accommodate bicycle traffic
10 th Street, NW	Fairfax Ave.	Rt. 11 (Williamson Road)	C	Two-lane road, Urban Minor Collector; needs widening to accommodate bicycle traffic
10 th Street	Campbell Ave., SW	Fairfax Ave., NW	E	Four-lane road, Urban Minor Arterial; no improvement necessary to accommodate bicycle traffic
13 th Street, SW	Wasena Terrace	Salem Ave.	C	Two-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic
13 th Street, SW	Virginia Ave.	Wasena Terrace	D	Four-lane road, Urban Principal Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
13 th Street, SE	Riverdale Rd.	Dale Ave.	D	Five-lane road, Urban Minor Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
13 th Street, SE	Dale Ave.	Tazewell Ave.	E	Two-lane road, Urban Principal Arterial; no improvement necessary to accommodate bicycle traffic
13 th Street, SE	Tazewell Ave.	Wise Ave.	C	Two-lane road, Urban Minor Collector; needs widening to accommodate bicycle traffic
14 th Street, SE	Wise Ave.	Norfolk Ave.	C	Two-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic
24 th Street, NW	Shenandoah Ave.	Rt. 460 (Orange Ave.)	D	Four-lane road, Urban Local; adjust striping to create wider outside lane to accommodate bicycle traffic
26 th Street, SW	Jefferson St.	Avenham Ave.	E	Two-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic
Airport Road	Williamson Road	Roanoke County Boundary / Barnes Road	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic
Avenham Avenue	Franklin Road	Broadway St.	E	Two lane road, on street parking, Urban Local; no improvement necessary to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Aviation Drive	Rt. 101 (Hershberger Road)	Municipal Road	D	Four-lane road, Urban Local; adjust striping to create wider outside lane to accommodate bicycle traffic
Bellevue Avenue	Jefferson St.	Walnut Ave.	C	Two lane road, on street parking, Urban Local; needs widening to accommodate bicycle traffic
Bennington Street	Rt. 116 (Riverland Road)	Riverdale Rd.	C	Two-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic
Berkley Road	Town of Vinton Boundary	King Ave.	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic
Brambleton Avenue (Route 221)	Roanoke County Boundary	Brandon Avenue	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Brandon Avenue	City of Salem Boundary	Edgewood St.	C	Five-lane road, Urban Principal Arterial; programmed roadway being constructed with a widened outside lane (13 feet)
Brandon Avenue	Edgewood St.	Rt. 221 (Brambleton Ave.)	E	Two-lane road, Urban Principal Arterial; no improvement necessary to accommodate bicycle traffic
Brandon Avenue	Rt. 221 (Brambleton Ave.)	Colonial Ave.	D	Four -lane road, Urban Minor Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
Brandon Avenue	Colonial Ave.	Franklin Road	E	Four-lane road, Urban Minor Arterial; no improvement necessary to accommodate bicycle traffic
Broad Street	Shadylawn / Sunrise	Greenlawn Avenue	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic; (segment length is one city block)
Broadway	Franklin Road	McClanahan St.	E	Two-lane road, Urban Collector; no improvement necessary to accommodate bicycle traffic
Bullitt Avenue (Route 24)	Jamison Avenue	13th Street	D	One-way two-lane road, urban minor arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Bullitt Avenue / Elm Avenue (Route 24)	Jefferson Street	Jamison Avenue	D	Four-lane divided road, urban minor arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Burrell Street	Rt. 460 (Orange Ave.)	Liberty Road	E	Two-lane road, Urban Collector; no improvement necessary to accommodate bicycle traffic
Campbell Avenue	13 th St., SW	7 th St., SW	E	Two-lane road, Urban Principal Arterial; no improvement necessary to accommodate bicycle traffic
Campbell Avenue	7 th St., SW	5 th St., SW	D	Three-lane road, Urban Principal Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic
Campbell Avenue	5 th St., SW	Williamson Road	E	Two-lane road, Urban Principal Arterial; no improvement necessary to accommodate bicycle traffic
Campbell Avenue	Williamson Road, SE	Norfolk Ave., SE	E	Two-lane road, Urban Local; no improvement necessary to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Clarendon Road	Sunrise Avenue	Shadylawn Avenue	E	Two-lane road, unclassified; no improvement necessary to accommodate bicycle traffic
Colonial Avenue	Roanoke County Boundary	Winding Way Road	C	Two-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic
Colonial Avenue	Winding Way Road	Overland Road	E	Two-lane road, Urban Minor Arterial; no improvement necessary to accommodate bicycle traffic
Colonial Avenue	Overland Road	Persinger Road	D	Three-lane road, Urban Minor Arterial; no improvement necessary to accommodate bicycle traffic
Colonial Avenue	Persinger Road	26 th St.	E	Two-lane road, Urban Minor Arterial; no improvement necessary to accommodate bicycle traffic
Colonial Avenue	26 th St.	23 rd St.	C	Four-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic
Colonial Avenue	23 rd St.	Brandon Ave.	E	Four-lane road, Urban Minor Arterial; no improvement necessary to accommodate bicycle traffic
Courtland Road	Orange Avenue	Oakland Avenue	E	Two-lane residential road; no improvements necessary to accommodate bicycle traffic
Delray Street	Ravenwood Avenue	Route 101 (Hershberger Rd.)	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic
Elm Avenue	Main Street / Roanoke River	Jefferson Street	E	Three-lane road, urban minor arterial, primarily through residential area; not enough room to accommodate bicycle traffic or to make improvements to roadway
Franklin Road	Roanoke County Boundary	Elm Avenue	D	Two- to five-lane road, urban minor arterial, through commercial area; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Franklin Road	Elm Avenue	Williamson Road	E	Two- to five-lane road, urban minor arterial, through downtown area; no improvement necessary to accommodate bicycle traffic
Gainsboro Rd.	Salem Avenue	Orange Avenue	E	Two-lane road / Four-lane road; Urban Local, no improvement necessary to accommodate bicycle traffic
Garden City Boulevard	Hartsook Boulevard	Route 116 (Riverland Road)	C	Two-lane road, urban collector; needs widening to accommodate bicycle traffic
Garden City Boulevard	Yellow Mt. Road	Hartsook Boulevard	E	Wide two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
Garst Mill Road	Grandin Road	Roanoke County Boundary	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Grandin Road	Route 419 (Electric Road)	Dover Road	C	Two-lane road, urban minor arterial/urban collector; needs widening to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Grandin Road	Dover Road	Carlton Road	E	Wide two-lane road, urban minor arterial; no improvements necessary to accommodate bicycle traffic
Grandin Road	Carlton Road	Guilford Avenue	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Grandin Road	Guilford Avenue	Memorial Avenue	D	Two-lane road, urban minor arterial; restripe sections to evenly distribute lane width, no improvements needed along other sections, improvements needed at intersection with Brandon Avenue to accommodate bicycle traffic
Greenlawn Avenue	Broad Street	Ravenwood Avenue	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic
Green Ridge Road (Route 629)	Salem City Boundary	Cove Road	C	Two-lane road, Urban Minor Arterial / Urban Collector, needs widening to accommodate bicycle traffic
Guilford Avenue	Livingston Road	Grandin Road	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Gus Nicks Boulevard	Town of Vinton Boundary	Route 460	D	Four-lane road, urban minor arterial; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Hershberger Road (Route 101)	Route 11 (Williamson Road)	Roanoke County Boundary	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Hershberger Road (Route 101)	Route 116 (Cove Road)	Route 11 (Williamson Road)	D	Divided six-lane road, urban principal arterial, high traffic volumes; restripe road segment to add width to outside lanes to accommodate bicycle traffic
(Hershberger Road (Route 101)	Route 117 (Peters Creek Road)	Route 116 (Cove Road)	C	Two-lane road, urban principal arterial; needs widening to accommodate bicycle traffic
Hershberger Road (Route 101)	City of Roanoke Boundary	Rt. 115 (Plantation Road)	C	Four-lane road, Urban Principal Arterial; roadway needs widening to accommodate bicycle traffic
Hollins Road	14 th St., SE	Route 460 (Orange Avenue)	E	Two-lane road, urban minor arterial; no improvement necessary to accommodate bicycle traffic
Hollins Road	Route 460 (Orange Avenue)	North Corporate Limits - City of Roanoke	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
I-581 Overpass (planned)	Valley View Blvd., Phase 1	Valley View Blvd., Phase 1	C	New overpass to be constructed over I-581; overpass plans include area for future facility to be added for bicycle accommodations.
J.P. Fishburn Parkway	Mill Mountain Parkway Spur	Walnut Avenue	E	U.S. Park Service two-lane road; no improvements necessary to accommodate bicycle traffic
Jefferson Street	Cornwallis Avenue	McClanahan Street	E	Wide two-lane residential road; no improvements necessary to accommodate bicycle traffic
Jefferson Street	McClanahan Street	Flannagan Dr.	C	Three-lane road, urban collector; needs widening to accommodate bicycle traffic
Jefferson Street	Flannagan Dr.	Reserve Avenue	D	Wide four-lane road, urban collector; restripe road segment to add width to outside lanes to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Jefferson Street	Reserve Avenue	Elm Avenue	C	Four-lane road, urban collector/urban minor arterial; needs widening to accommodate bicycle traffic
Keagy Road	Roanoke County Boundary (Electric Ave.)	Salem Boundary (Lee Highway)	C	Two-lane road, unclassified; needs widening to accommodate bicycle traffic
Kimball Avenue	Route 11 (Williamson Road)	Orange Avenue	D	Four- to five-lane road, center turn lane on five-lane section very wide; restripe road segment to add width to outside lanes to accommodate bicycle traffic
King Street	Gus W. Nicks Boulevard	Route 460	C	Two-lane road, urban collector; needs widening to accommodate bicycle traffic
Lafayette Boulevard	Route 460 (Melrose Avenue)	Cove Road	E	Wide two-lane road, urban minor arterial; no improvements necessary to accommodate bicycle traffic
Liberty Road	Burrell Street	Courtland Road	E	Two-lane residential road, urban collector; no improvements necessary to accommodate bicycle traffic
Liberty Road	Courtland Road	Courtland Road	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic; (connects two sections of Courtland Road)
Livingston Road	Spring Road	Guilford Avenue	E	Two-lane residential road; no improvements necessary to accommodate bicycle traffic
Main Street	Route 11 (Brandon Avenue)	Elm Ave. / Roanoke River	E	Wide two-lane road, urban minor arterial, Wasena Bridge has four-lanes and sidewalks on both sides; no improvements necessary to accommodate bicycle traffic
McClanahan Street	Franklin Road	Broadway Street	E	Two- to four-lane road, urban collector; no improvements necessary, widen or restripe at intersection with Franklin Road to accommodate bicycle traffic
McClanahan Street	Broadway Street	Crystal Spring Avenue	D	Three-lane road, urban collector; restripe road segment to add width to outside lanes to accommodate bicycle traffic
McClanahan Street	Crystal Spring Avenue	Jefferson Street	E	Wide two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
Memorial Avenue	Grandin Road	Virginia Avenue	E	Four-lane road, urban principal arterial, sidewalks on Memorial Bridge, no improvements necessary to accommodate bicycle traffic
Mill Mountain Parkway Spur	J.P. Fishburn Pkwy	Blue Ridge Parkway	E	U.S. Park Service two-lane road unclassified; no improvements necessary to accommodate bicycle traffic
Municipal Road	Aviation Drive	Airport Road	C	Two-lane road, unclassified; leading to Roanoke Regional Airport; needs widening to accommodate bicycle traffic
Norfolk Avenue	Campbell Avenue	14 th St., SE	E	Wide two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic
Oakland Boulevard	Courtland Road	John Richardson Rd.	E	Two-lane residential road, unclassified; wide between Birchwood Street and Route 101 (Hershberger Road); no improvements necessary to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Old Mountain Road	Hollins Road	Roanoke County Boundary	C	Two-lane road, urban collector; needs widening to accommodate bicycle traffic
Overland Road	Route 221 (Brambleton Avenue)	Colonial Avenue	E	Wide two-lane road, urban collector; access to elementary and middle schools; no improvements necessary to accommodate bicycle traffic
Peters Creek Road (Route 117)	Brandon Avenue	Melrose Avenue	C	Divided four-lane road, urban principal arterial, high traffic volumes, segment between Route 11 and Route 460 is currently under construction and will have wide outside lane.
Peters Creek Road (Route 117)	Melrose Avenue	Woodhaven Rd.	C	Divided four-lane road, urban principal arterial; needs widening to accommodate bicycle traffic
Plantation Road	Kanter Road	Liberty Road	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic - (Note: continuation of Plantation Rd. included in table under section titled "Route 115 - Plantation Rd.")
Plantation Road	Route 460 (Orange Avenue)	Kanter Road	E	Wide two-lane road, urban minor arterial; no improvements necessary to accommodate bicycle traffic - (Note: continuation of Plantation Rd. included in table under section titled "Route 115 - Plantation Rd.")
Ravenwood Avenue	Greenlawn Avenue	Delray Street	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic
Riverdale Road	Bennington St.	Roanoke County Boundary	C	Two -lane road; urban collector; widening to accommodate bicycle traffic
Round Hill Avenue	Oakland Boulevard	Clarendon Road	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic
Route 11 (Williamson Road) connect to the north corporate limits.	Elm Avenue	North Corporate Limit Roanoke City	E	Two-to-four lane road, urban principal arterial / minor arterial; no improvement necessary to accommodate bicycle traffic.
Route 24 (Dale Avenue)	13 th Street, SE	Town of Vinton Boundary	D	Four-lane divided road, urban minor arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 24 (Jamison Avenue)	Route 24 (Bullitt Avenue)	13 th Street, SE	D	One-way two-lane road, urban minor arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 115 (Hollins Road)	Old Mountain Road	Plantation Road	C	Two-lane road, unclassified; roadway needs widening to accommodate bicycle traffic
Route 115 (Hollins Road)	Kyle Avenue	Old Mountain Road	C	Two-lane road, urban minor arterial between Kyle Avenue and Liberty Road; needs widening to accommodate bicycle traffic
Route 115 (Hollins Road)	Route 460 (Orange Avenue)	Kyle Avenue	E	Two-lane road, urban minor arterial; no improvements necessary to accommodate bicycle traffic
Route 115 (Plantation Road)	Liberty Road	Wingfield Avenue	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Route 115 (Plantation Road)	Wingfield Avenue	Roanoke County Boundary	D	Wide four-lane road, urban minor arterial; no improvements necessary to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Route 116 (Cove Road)	Route 629 (Greenridge Road)	Route 117 (Peters Creek Road)	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Route 116 (Cove Road)	Route 117 (Peters Creek Road)	Lafayette Boulevard	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Route 116 (Mount Pleasant Boulevard)	Roanoke County Boundary	Bennington Street	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Route 116 (Riverland Road)	Piedmont Avenue	Bennington Street	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Route 116 (Piedmont Avenue)	Route 116 (Walnut Avenue)	Route 116 (Riverland Road)	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Route 116 (Walnut Avenue Bridge)	Route 116 (Piedmont Avenue)	Jefferson Street	D	Two-lane road, urban minor arterial; recently constructed, restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 460 (Melrose Avenue)	City of Salem Boundary	Monroe Street	D	Four-lane divided road, urban principal arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 460 (Melrose Avenue)	Monroe Street	24 th Street, NW	E	Four-lane divided road, urban principal arterial, high traffic volume, wide outside lanes; no improvement necessary to accommodate bicycle traffic
Route 460 (Melrose Avenue / Salem Turnpike)	24 th Street, NW	Route 460 (Orange Avenue / 22 nd St., NW)	D	Three-lane road, urban principal arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 460 (Orange Avenue)	Salem Turnpike / 22 nd St., NW	10 th Street, NW	D	One-way two-lane road, urban principal arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 460 (Orange Avenue)	10 th Street, NW	Gus Nicks Boulevard, NE	D	Four-lane road, urban principal arterial, some sections are divided, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 460/221(Orange Avenue)	Gus Nicks Boulevard	Roanoke County Boundary	C	Four-lane divided road, urban principal arterial, high traffic volume; needs widening to accommodate bicycle traffic
Rutrough Road	Route 116 (Mount Pleasant Boulevard)	Roanoke County Boundary	C	Two-lane road, urban collector, narrow and winding; needs widening to accommodate bicycle traffic
Salem Avenue	13 th Street, SW	6 th Street, SW	E	Two-lane road, urban principal arterial; no improvements necessary to accommodate bicycle traffic
Salem Avenue	6 th Street, SW	5 th Street, SW	D	One-way two-lane road, urban principle arterial; restripe road segment to distribute lane width to accommodate bicycle traffic
Salem Avenue	5 th Street, SW	Williamson Road	E	One-way two-lane road, urban principle arterial; no improvement necessary to accommodate bicycle traffic
Salem Turnpike	City of Salem Boundary	Forest Park Elementary School	C	Two-lane road, urban minor arterial, access to Forest Park Elementary School; needs widening to accommodate bicycle traffic
Salem Turnpike	Forest Park Elementary School	24 th Street	E	Wide two-lane road, urban minor arterial, access to Forest Park Elementary School; no improvements necessary to accommodate bicycle traffic

City of Roanoke: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Salem Turnpike	24 th Street	Loudon Avenue	D	Four-lane divided road, urban collector; restripe road segment to distribute lane width to accommodate bicycle traffic
Salem Turnpike	Loudon Avenue	Route 460 (Melrose Avenue)	D	Wide two-lane road, urban minor arterial; restripe road segment to distribute lane width to accommodate bicycle traffic
Shadylawn Avenue	Broad Street	Round Hill Avenue	E	One-way road, unclassified; no improvements necessary to accommodate bicycle traffic; (Shadylawn Ave. is one-way and may be used for bicyclists traveling south towards Orange Ave.)
Shenandoah Avenue	City of Salem Boundary	Crowmoor Street	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Shenandoah Avenue	Crowmoor Street	Route 11 (Williamson Road)	E	Two-lane road, urban minor arterial, fairly wide lanes; no improvements necessary to accommodate bicycle traffic
Sycamore Avenue (1 block)	Courtland Road	Courtland Road	E	Two-lane road, unclassified, fairly wide lanes; no improvements necessary to accommodate bicycle traffic
Spring Road	Livingston Road	Route 221 (Brambleton Avenue)	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic; (connects two sections of Courtland Road)
Sunrise Avenue	Round Hill Avenue	Broad Street	E	One-way road, unclassified; no improvements necessary to accommodate bicycle traffic; (Sunrise Ave. is one-way and may be used for bicyclists traveling north towards Hershberger Road)
Tazewell Avenue	Williamson Road	Interstate 581 Bridge	C	Four-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Tazewell Avenue	Interstate 581 Bridge	13 th Street, SE	D	Two-lane road, urban minor arterial; restripe sections to evenly distribute lane width to accommodate bicycle traffic
Thirlane Road	Aviation Drive	Route 117 (Peters Creek Road)	C	Two-lane road, unclassified; roadway needs widening to accommodate bicycle traffic
Thurston Avenue	Courtland Road	Courtland Road	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic; (connects two sections of Courtland Road)
Walnut Avenue	Piedmont	Ivy St.	C	Two -lane road, unclassified needs widening to accommodate bicycle traffic
Walnut Avenue	Ivy St.	J. Fishburn Parkway	E	Two-lane road; no improvement necessary
Wise Avenue	Norfolk Avenue	Town of Vinton Boundary	E	Wide two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
Wonju Street	Franklin Road	Colonial Avenue	D	Four-lane divided road, urban minor arterial, high traffic volume; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Yellow Mountain Road	Jefferson Street	Roanoke County Boundary	C	Two-lane road, urban collector, section between Jefferson Street and Morrison Street is steep along each side of roadway; needs widening to accommodate bicycle traffic

Table 4 - City of Salem: Recommended Roadways for Bicycle Accommodation

<i>City of Salem: Recommended Roadways for Bicycle Accommodation</i>				
Route/Street Name	From	To	Type of Improvement	Description
2 nd Street	Chestnut Street	Union Street	C	Two-lane residential road, urban minor arterial; roadway needs widening to accommodate bicycle traffic
4 th Street	Route 460/11 (West Main Street)	Route 460 (Roanoke Boulevard)	C	Two- to five-lane road, urban minor arterial, through commercial area, high traffic volume; needs widening to accommodate bicycle traffic
8 th Street	College Avenue	Roanoke Boulevard	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Academy Street	College Alley	Taylor Avenue	E	Two-lane residential road, urban collector; no improvements necessary to accommodate bicycle traffic
Blair Street	Lewis Avenue	Taylor Avenue	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Broad Street	College Alley	Carrollton Avenue	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Cameron Street	Route 460/11 (West Main Street)	Lewis Avenue	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Carrollton Avenue	Highfield Road	Red Lane	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Chestnut Street	2 nd Street	Route 460/11 (West Main Street)	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Clay Street	High Street	Route 311 (Thompson Memorial Drive)	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic

City of Salem: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Cleveland Avenue	High Street	Route 311 (Thompson Memorial Drive)	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Cloyd Street	Mill Lane	Ellison Avenue	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
College Alley	Academy Street	Broad Street	E	Two-lane residential road, urban principal arterial; no improvements necessary to accommodate bicycle traffic
Dalewood Avenue	Reece Road	Green Ridge Road	E	Two-lane residential road, urban minor arterial; no improvements necessary to accommodate bicycle traffic
East Riverside Drive	Route 11 (Colorado Street)	Route 11 (Apperson Drive)	E	Two-lane residential road, urban collector; no improvements necessary to accommodate bicycle traffic
Eddy Avenue	Piedmont Avenue	Union Street	E	Two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
Ellison Avenue	Smythe Drive	Cloyd Street	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Front Avenue	West Riverside Drive	West Riverside Drive	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Goodwin Avenue	Route 460/11 (West Main Street)	Roanoke County Boundary	E	Two-lane residential road, urban collector; no improvements necessary to accommodate bicycle traffic
Green Ridge Road	Dalewood Avenue	Roanoke City Boundary	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Hawthorn Road	Broad Street	High Street	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
High Street	Clay Street	Hawthorn Road	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Highfield Road	Carrollton Avenue	Logan St.	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Indiana Street	8 th Street	Route 419 (Electric Road)	C	Two-lane road, unclassified; needs widening to accommodate bicycle traffic
Lake Avenue	Route 460/11 (West Main Street)	Logan Street	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Lewis Avenue	Cameron Street	Blair Street	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Logan Street	Lake Avenue	Highfield Road	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Lynchburg Turnpike	East Main Street	Route 460 (Texas Street)	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic

City of Salem: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
East Main Street (Route 460 / 11)	Route 311 (Thompson Memorial Drive)	Route 419 (Electric Road)	C	Two- to five-lane road, urban principal arterial, through commercial area; roadway needs widening to accommodate bicycle traffic
Main Street (Route 460 / 11)	4 th Street	Route 311 (Thompson Memorial Drive)	E	Two-lane road, urban principal arterial, through downtown City of Salem; no improvements necessary to accommodate bicycle traffic
Market Street	Roanoke Boulevard	McClung Street	E	Two-lane road, unclassified; no improvements necessary to accommodate bicycle traffic
McClung Street	Red Lane	Market Street	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
McVitty Road	Route 11 (Apperson Drive)	City of Salem Boundary	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Mill Lane	Cloyd Street	Route 460/11 (West Main Street)	C	Two-lane road, unclassified; access to Elementary School; needs widening to accommodate bicycle traffic
Piedmont Avenue	Riverside Drive	Eddy Avenue	E	Two-lane residential road, urban collector; no improvements necessary to accommodate bicycle traffic
Red Lane	McClung Street	Roanoke County Boundary	C	Two-lane residential road, unclassified; needs widening to accommodate bicycle traffic
Reece Road	Route 419 (Electric Road)	Dalewood Avenue	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Roanoke Boulevard	Route 460 / 11 (East Main Street)	Route 11 (College Avenue)	D	Four-lane road, urban minor arterial; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Roanoke Boulevard	Route 11 (College Avenue)	Route 460 (4th Street)	E	Two-lane divided road, urban minor arterial; no improvements necessary to accommodate bicycle traffic
Roanoke Boulevard	Route 460 (Texas Street)	Hemlock Road	C	Two- to five-lane road, urban minor arterial; needs widening and/or restriping to accommodate bicycle traffic
Roanoke Boulevard	Hemlock Road	City of Roanoke Boundary	E	Wide two-lane road, urban minor arterial; no improvements necessary to accommodate bicycle traffic
Route 11 (Apperson Drive)	City of Roanoke Boundary	Route 11 (Colorado Street)	C	Two, four, five lane road, urban principal arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 11 (Colorado Street)	East Riverside Drive	College Avenue	C	Four-lane road, urban principal arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 11 (College Avenue)	Route 11 (Colorado Street)	Route 11 (East Main Street)	C	Two-lane road, urban principal arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 112 (Wildwood Road)	Route 460/11 (West Main Street)	Roanoke County Boundary	D	Four-lane divided road, urban principal arterial, high traffic volumes; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 311 (Thompson Memorial Drive)	Route 11 (College Avenue)	East Main Street	D	Four-lane divided road, urban minor arterial; restripe road segment to add width to outside lanes to accommodate bicycle traffic

City of Salem: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Route 311 (Thompson Memorial Drive)	East Main Street	North - Roanoke County Boundary	D	Four-lane divided road, urban minor arterial; curb and gutter present, restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 419 (Electric Road)	North - Roanoke County Boundary	East Main St.	C	Four-lane divided road, urban principal arterial, high traffic volume; needs widening to accommodate bicycle traffic
Route 419 (Electric Road)	East Main St.	South - Roanoke County Boundary	D	Four-lane divided road, urban principal arterial, curb and gutter present, needs restriping to accommodate bicycle traffic
Route 460 (East Main Street)	Route 419 (Electric Road)	City of Roanoke Boundary	C	Four-lane divided road, urban principal arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 460 (Roanoke Boulevard)	4 th Street	Texas Street	E	Wide two-lane road, urban minor arterial; no improvement necessary to accommodate bicycle traffic
Route 460/11 (West Main Street)	Roanoke County Boundary	Route 460 (4th Street)	D	Five-lane road, urban collector/urban principal arterial, high traffic volumes; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 760 (Diuguids Lane)	Roanoke County Boundary	Route 460 (West Main Street)	C	Two-lane road, urban collector; needs widening to accommodate bicycle traffic
Salem Turnpike	Texas Street	City of Roanoke Boundary	C	Two-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Smythe Drive	Ellison Avenue	Twelve O'clock Knob Road	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Taylor Avenue	Blair Street	Academy Street	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Texas Street	Roanoke Boulevard	Route 419 (Electric Road)	C	Two- to four-lane road, urban minor arterial; needs widening to accommodate bicycle traffic
Twelve O'clock Knob Road	Roanoke County Boundary	West Riverside Drive	C	Two-lane residential road, urban collector; needs widening to accommodate bicycle traffic
Union Street	Eddy Avenue	2 nd Street	E	Two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
West Riverside Drive	Roanoke County Boundary	Piedmont Avenue	C	Two-lane road, urban collector; parallels Roanoke River; needs widening to accommodate bicycle traffic
West Riverside Drive	Piedmont Avenue	Front Avenue	E	Two-lane road, urban collector; low traffic volume; no improvements necessary to accommodate bicycle traffic
West Riverside Drive	Front Avenue	Route 11 (Apperson Drive)	E	Two-lane road, urban collector; low traffic volume; no improvements necessary to accommodate bicycle traffic

Table 5 - Town of Vinton: Recommended Roadways for Bicycle Accommodation

<i>Town of Vinton: Recommended Roadways for Bicycle Accommodation</i>				
Route/Street Name	From	To	Type of Improvement	Description
3 rd Street	Route 24 (Virginia Avenue)	Walnut Avenue	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Bedford Road	Cleveland Avenue	Route 24 (Virginia Avenue)	E	Two-lane residential road, unclassified; no improvements necessary to accommodate bicycle traffic
Berkley Road	Blair Street	City of Roanoke Boundary	C	Two-lane road, unclassified; narrow, leads to recreation park along Glade Creek; needs widening to accommodate bicycle traffic
Bike Trail	Franklin Avenue	Niagara Road	A	Develop off-road bike trail along creek between Franklin Avenue and Niagara Road
Blair Street	Route 24 (Washington Avenue)	Berkley Road	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic
Clearview Drive	Lauderdale Avenue	Virginia Avenue	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic
Cleveland Avenue	Pollard Street	Bedford Road	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic
Franklin Avenue	Pollard Street	Chestnut Street	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic
Gus Nicks Boulevard	Route 24 (Washington Avenue)	City of Roanoke Boundary	D	Four-lane road, urban collector, high traffic volumes; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Lee Avenue	Walnut Avenue	Pollard Street	E	Two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
Lauderdale Avenue	Niagara Road	Clearview Drive	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic
Niagara Road	Bike Trail	Lauderdale Avenue	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic

Town of Vinton: Recommended Roadways for Bicycle Accommodation

Route/Street Name	From	To	Type of Improvement	Description
Pollard Street	Franklin Avenue	Virginia Avenue	E	Two-lane residential road, low traffic volumes; no improvements necessary to accommodate bicycle traffic
Pollard Street	Route 24 (Virginia Avenue)	Jackson Avenue	C	Two-lane road, urban collector; needs widening to accommodate bicycle traffic
Pollard Street	Jackson Avenue	Washington Avenue	D	Three-lane road, urban collector; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 24 (Bypass Road)	Route 24 (Virginia Avenue)	Route 24 (Washington Avenue)	D	Four-lane divided road, urban minor arterial, high traffic volumes; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Route 24 (Virginia Avenue)	City of Roanoke Boundary	Chestnut Street	C	Four-lane divided road, urban minor arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 24 (Hardy Road)	Chestnut Street	Clearview Drive	C	Four-lane divided road, urban minor arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 24 (Hardy Road)	Clearview Drive	Route 634 (Hardy Road) / Wolf Creek	B	Four-lane divided road, urban minor arterial, high traffic volumes; current plans to widen and add bike lane
Route 24 (Washington Avenue)	Route 24 (Bypass Road)	Roanoke County Boundary	C	Four-lane road, urban minor arterial, high traffic volumes; needs widening to accommodate bicycle traffic
Route 651 (Mountain View Road)	Route 24 (Washington Avenue)	Roanoke County Boundary	C	Two-lane road, unclassified; needs widening to accommodate bicycle traffic
Ruddell Road	Blair Street	Route 651 (Mountain View Road)	E	Two-lane residential road, unclassified; low traffic volumes; no improvements necessary to accommodate bicycle traffic
Walnut Avenue	Wise Avenue	Jackson Avenue	E	Wide two-lane road, urban collector; no improvements necessary to accommodate bicycle traffic
Washington Avenue	Gus Nicks Boulevard	Route 24 (Bypass Road)	D	Four-lane road, urban minor arterial, high traffic volumes; restripe road segment to add width to outside lanes to accommodate bicycle traffic
Wise Avenue	City of Roanoke Boundary	Walnut Avenue	D	Wide two-lane road, urban collector; restripe road segment to evenly distribute lane width to accommodate bicycle traffic

Bikeway Estimated Cost Analysis

Table 6 below provides estimated bikeway costs by facility type. Maintenance costs have been included where available. (Maintenance cost figures have not been nationally compiled to the extent that construction cost figures are available, but there is general consensus that these costs approximate construction/maintenance costs for paved shoulders).

Table 6 - Bicycle Facility Cost Estimates (1994 Dollars)

COST ITEM (UNIT)	UNIT COST
Bike Path	
construction (per mile/per foot of width*)	\$3,400
maintenance (per mile/per foot of width*)	\$3,400
Bike Lane with curb/gutter	
construction (per mile/per foot of width*)	\$7,700
maintenance (per mile/per foot of width*)	\$3,400
Bike Lane with curb only	
construction (per mile/per foot of width*)	\$4,500
maintenance (per mile/per foot of width*)	\$3,400
Paved Shoulder	
construction (per mile/per foot of width*)	\$3,400
maintenance (per mile/per foot of width*)	\$3,400
Bicycle/Pedestrian Bridge	
construction (per square foot*)	\$85
maintenance (per mile/per foot of width*)	\$3,400
Bike Trail (bare earth)	
construction (per linear foot*)	\$5
maintenance (per mile per foot of width*)	not available
Bike Trail (asphalt)	
construction (per linear foot*)	\$25
maintenance (per mile/per foot of width*)	\$3,400
Pavement Marking (4" line)	
striping only (per linear foot*)	\$0.50

* Excludes any additional right-of-way costs

Source: *Virginia Guide for Bicycle Facility Planning*, Virginia Dept. of Transportation, 1994

To assist in the bicycle network planning process, Table 7 on the following pages lists projects that are identified as potential bike routes in the Roanoke Valley Bikeway Plan and are shown in the Transportation Improvement Program (1997-1999). This will provide local governments and the Virginia Department of Transportation more opportunity to include bicycle facilities in the initial budgeting process of individual projects. The costs of adding bicycle accommodations to a major road construction / reconstruction are relatively small compared to the total cost of the project. Roads that are retrofitted with bicycle accommodation tend to be more costly because the equipment and materials are not already available as they are during roadway project. Please note that the cost estimates shown below represent construction costs only and do not include right-of-way acquisition.

Table 7 - Potential Bikeway Projects Appearing in the 1997-1999 Transportation Improvement Program

AREA	ROUTE/STREET NAME	FROM	TO	TYPE	IMPROVEMENT DESCRIPTION	COST FACTOR	Mileage	WIDTH (feet)	COST
BC	Route 605 (Sanderson Drive)	Route 654 (Read Mountain Road)	Alt. Route 220	C	Two-lane road, Urban Collector, needs widening to accommodate bicycle traffic	\$3,400	1.13	4	\$15,368
RC	Colonial Avenue	Route 419 (Electric Road)	Route 221	C	Two-lane road, Urban Minor Arterial; needs widening to accommodate bicycle traffic	\$3,400	0.86	4	\$11,696
RC	Route 11	Williamson Road	Botetourt County Boundary	B	Four-lane road, Urban Principal Arterial; because of high volume and speeds a bike lane is needed	\$3,400	1.56	10	\$53,040
RC	Route 221(Bent Mountain Road)	MPO Boundary	Rt. 897 (Crystal Creek Road)	C	Two-lane road, Urban Principal Arterial; needs widening to accommodate bicycle traffic	\$3,400	5.03	4	\$68,408
RC	Route 601 (Hollins Road)	Rt. 115 (Plantation Road)	Rt. 601 (Shadwell Dr.)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic	\$3,400	2.15	4	\$29,240
RC	Route 613 (Merriman Road)	Pine Acres Ln.	Ranchcrest Dr.	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic	\$3,400	0.38	4	\$5,168
RC	Route 628 (Woodhaven Road)	Rt. 623 (Green Ridge Road)	Rt. 117 (Peters Creek Road)	C	Two-lane road, Urban Collector; needs widening to accommodate bicycle traffic	\$3,400	2.6	4	\$35,360
RC	Route 651 (Mountain View Road)	Town of Vinton Boundary	MPO Boundary	C	Two-lane road, Urban Local; needs widening to accommodate bicycle traffic	\$3,400	1.85	4	\$25,160
RC	Route 688 (Cotton Hill Road)	Rt. 613 (Merriman Road)	Rt. 221	C	Two-lane road, Urban Local; because this is a narrow winding road and potentially hazardous it needs widening / paved shoulder to accommodate bicycle traffic	\$3,400	2.75	10	\$93,500
RC	Yellow Mt. Rd.	0.10 mile North of Route 667	Route 220	C	Two-lane road, Rural Major Collector; widened road to include paved shoulder	\$3,400	N/A	N/A	N/A
RCty	10th Street	Gilmer Ave.	Rt. 11 (Williamson Road)	C	Two-lane road, Urban Minor Collector; needs widening to accommodate bicycle traffic	\$3,400	1.6	4	\$21,760
RCty	13th Street	Tazewell Ave.	Wise Ave.	C	Two-lane road, Urban Minor Collector; needs widening to accommodate bicycle traffic	\$3,400	0.23	4	\$3,128
RCty	13th Street	Dale Ave.	Tazewell Ave.	E	Two-lane road, Urban Principal Arterial; no improvement necessary to accommodate bicycle traffic	N/A	N/A	N/A	N/A
RCty	13th Street	Bennington St.	Dale Ave.	D	Five-lane road, Urban Minor Arterial; adjust striping to create wider outside lane to accommodate bicycle traffic	\$2,640	1.19	N/A	\$3,141.5

AREA	ROUTE/STREET NAME	FROM	TO	TYPE	IMPROVEMENT DESCRIPTION	COST FACTOR	Mileage	WIDTH (feet)	COST
RCty	Gainsboro Road	Gilmer Avenue	Route 460 (Orange Avenue)	E	Wide two-lane road, Unclassified; improvements currently underway near Gilmer Avenue; no improvements necessary to accommodate bicycle traffic	N/A	N/A	N/A	N/A
RCty	Route 11 (Brandon Avenue)	City of Salem Boundary	Route 683 (Mud Lick Road)	C	Currently under construction, urban principal arterial, upgrading to four-lane road with wide outside lanes; will accommodate bicycle traffic upon completion.	\$3,400	1.04	4	\$14,144
RCty	Route 117 (Peters Creek Road Extension)	Brandon Avenue	Melrose Avenue	D	Divided four-lane road, urban principal arterial, high traffic volumes, segment between Route 11 and Route 460 is currently under construction and will have wide outside lanes; adjust striping only.	\$2,640	2.23	N/A	\$5,887
RCty	I-581 Overpass (planned)	Valley View Blvd., Phase 1	Valley View Blvd., Phase 1	C	New overpass to be constructed over I-581; overpass plans include area for future facility to be added for bicycle accommodations.	\$85.00	N/A	1500	\$127,500
S	Route 11 (Apperson Drive)	Route 11 (Colorado Street)	City of Roanoke Boundary	C	Two- to four-lane road, urban principal arterial, high traffic volumes; needs widening to accommodate bicycle traffic	\$3,400	2.25	4	\$30,600
S	Route 460 (East Main Street)	Route 419 (Electric Road)	City of Roanoke Boundary	C	Four-lane divided road, urban principal arterial, high traffic volumes; needs widening to accommodate bicycle traffic	\$3,400	0.47	4	\$6,392
V	Route 24 (Hardy Road)	Niagara Road	Wolf Creek	B	Four-lane divided road, urban minor arterial, high traffic volumes; current plans to widen and add bike lane	\$3,400	1.03	10	\$35,020

Note: RCty = City of Roanoke; RC = Roanoke County; S = City of Salem; V = Town of Vinton; BC = Botetourt County

To assist in coordinating with the greenway plan each locality was asked to submit a list of greenways to include in the bikeway plan. The table below is a summary listing for all the localities. Localities selected the greenways based primarily on the following criteria.

- 1.) Bicycle accommodation
- 2.) Coordination with on-road bikeways
- 3.) Transportation links
- 4.) Provision for less skilled bicyclists
- 5.) Recreational use

For more detailed information on these and other greenways not shown, please refer to the *Roanoke Valley Conceptual Greenway Plan*.

Table 8 - Summary Listing for Proposed Greenways for all Localities

Location of Proposed Greenway
Lick Run (Ref. # 21 in greenway plan)
Tinker Creek (Ref. # 24 in greenway plan)
Roanoke River (Ref. # 32 in greenway plan)
Barnhardt Creek (Ref. # 36 in greenway plan)
Mudlick Creek (Ref. # 37 in greenway plan)
Garnard Branch (Ref. # 41 in greenway plan)
Murray Run (Ref. # 43 in greenway plan)
Mill Mountain / ISTEA Greenway (Ref. # 44 in greenway plan)
RCIT to Tinker Creek
Mudlick Creek to Patrick Henry High School
Tanglewood Mall to Virginia Western Community College
Fleming / Ruffner Schools Complex to Lick Run
Valley View Mall to Lick Run
Glade Creek to Tinker Creek (Ref. # 26 & 24)
Wolf Creek (Ref. # 51 in greenway plan)
Dale Ave. /Virginia Ave. / Hardy Rd. (Ref. # 31 greenway plan - within Town of Vinton)
Gus Nicks Blvd. to Washington Ave. to Stewartville Rd. (Ref. #33 - within Town of Vinton)
Wise Ave. / Walnut Ave. / Jackson Ave. / Pollard St. / Cleveland Ave. / Bedford Rd. / Hardy Rd. (within Town of Vinton)
Garst Mill Park Greenway
Hanging Rock Greenway (Kessler Mill Rd.
Green Hill Park to Route 419 adjoining the Roanoke River (Ref. # 32 - greenway plan within City of Salem)

Funding Sources

Federal funding sources/programs include:

Intermodal Surface Transportation Efficiency Act (ISTEA, 1991)

(Non-dedicated bicycle funding sources) Note: ISTEA funds are subject to reauthorization.

- *National Highway System (NHS) Funds (Section 1006)*: may be used to construct bicycle transportation facilities on land adjacent to any highway on the National Highway System.
- *Surface Transportation Program (STP) Funds (Section 1007)*: may be used to construct bicycle transportation facilities related to safe bicycle use. (10% of STP funds are used for "Transportation Enhancements" which include the provision of facilities for bicyclists and pedestrians).
- *Congestion Mitigation and Air Quality Improvement (CMAQ) Funds (Section 1008)*: may be used for either construction of bicycle transportation facilities or non-construction projects related to safe bicycle use (CMAQ funds available in Non Attainment areas *only*.)
- *Federal Lands Highway Funds (Section 1032)*: may be used to construct bicycle transportation facilities in conjunction with roads, highways and parkways at department discretion.
- *Scenic Byways Program Funds (Section 1047)*: may be used to construct bicycle facilities only along designated scenic highways.
- *National Recreational Trails Fund (Section 1302)*: may be used for a variety of recreational trails programs to benefit bicyclists, pedestrians and other non-motorized users. Projects must be consistent with a Statewide Comprehensive Outdoor Recreation Plan required by the Land and Water Conservation Fund Act.
- *Section 402 Funds (Title II, Section 2002)*: may be used for bicycle safety projects within community highway safety grant program funds.
- *Federal Transit Funds (Title III, Section 25)*: allows transit funds to be used for bicycle access to transit facilities, to provide bicycle shelters and parking facilities in or around transit facilities, or to install racks or other equipment for transporting bicycles on transit vehicles.

Federal funding sources/programs (continued):

- National Park Service - *Land and Water Conservation Fund*
- National Park Service - *Urban Park and Recreational Recovery Program (UPARRP)*
- National Park Service - *Federal Lands Highway & Historic Bridges Programs*

State funding sources include:

- VA. Dept. of Transportation (e.g., roadway improvements, enhancement projects, recreational access program)
- Virginia Dept. of Conservation & Recreation (e.g., off -street recreation-focused facilities)
- Virginia Department of Rail & Public Transportation (e.g., rail & transit improvements)

Private funding sources include:

- Developer's contributions
- Neighborhood Associations
- Individual / corporate donations

Potential local funding sources:

- Bicycle licensing fees
- Receipts from fines for bicycling infractions
- Income from the auction of abandoned/found bicycles
- General Fund appropriations

(Sources: A Virginia Guide for Bicycle Facility Planning, 1994, Virginia Department of Transportation and Roanoke Valley Area Long Range Transportation Plan 1995-2015, VDOT/Fifth Planning District Commission, 1996).

Key to Abbreviations

AASHTO:	American Association of State Highway and Transportation Officials
CIP:	Capital Improvement Program
ISTEA:	Intermodal Surface Transportation Efficiency Act of 1991
NPTS:	Nationwide Personal Travel Study
MPO:	Metropolitan Planning Organization
MUTCD:	Manual on Uniform Traffic Control Devices
SixYIP:	Six Year Improvement Program
TIP:	Transportation Improvement Program
USDOT	United States Department of Transportation

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Glossary

Bicycle Lane:	A portion of the roadway which has been designated by striping, signing adequate pavement width and pavement markings for the preferential or exclusive use of bicyclists.
Bicycle Path:	A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the roadway right of way or within an independent right of way.
Bikeway:	Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.
Greenway:	A multi-use path or trail physically separated from motorized vehicular traffic by an open space or barrier.
Highway:	A general term denoting a public way for purposes of vehicular travel, including the entire area within the right of way.
Right of Way:	A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purpose.
Roadway:	The portion of the highway, including shoulders, for vehicle use.
Shared Roadway:	Any roadway upon which a bicycle lane is not designated and which may be legally used by bicycles regardless of whether such facility is specifically designated as a bikeway.
Sidewalk:	The portion of a highway designed for preferential or exclusive use by pedestrian.

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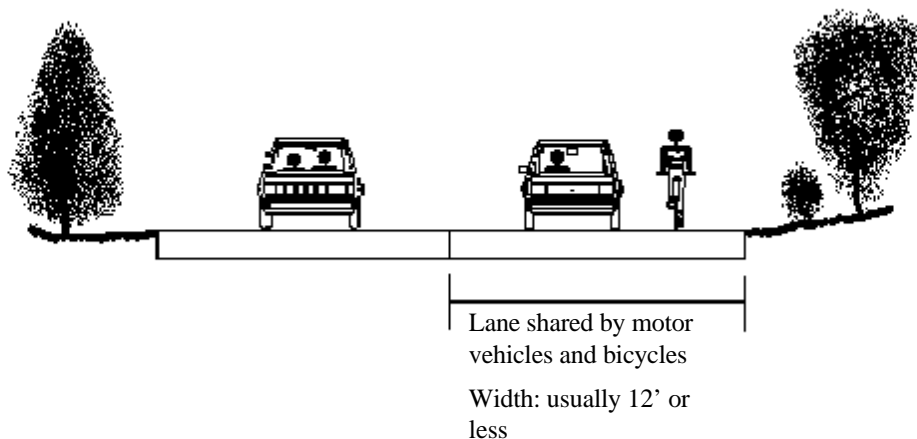
Appendix 1 - Facility Types

On-Road Facility Types

Shared Roadway. AASHTO's "Guide For The Development Of Bicycle Facilities" defines a shared roadway as "Any roadway upon which a bicycle lane is not designated and which may be legally used by bicycles regardless of whether such facility is specifically designated as a bikeway". Following is a list of shared roadway types.

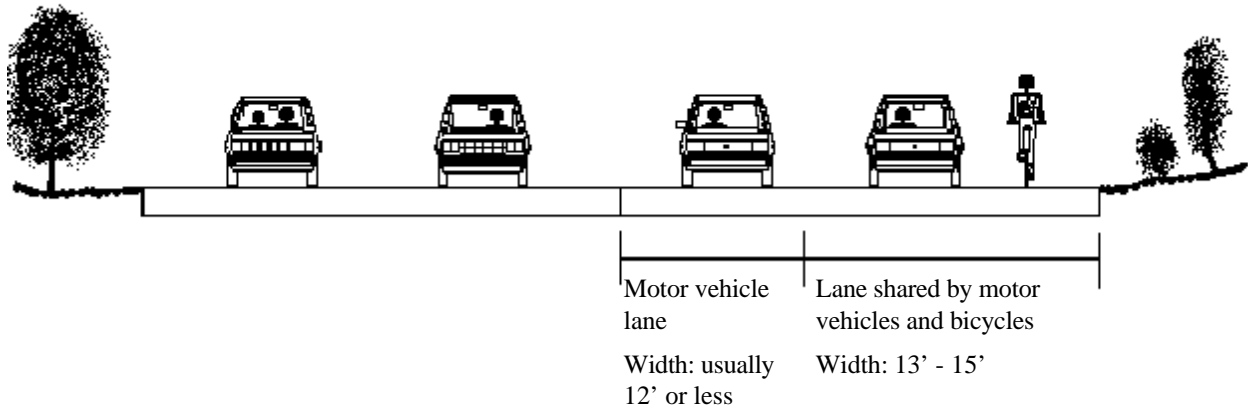
- **Shared lanes** are typically 12 feet or less in width with no shoulders and usually do not require any special signing for bicyclists. For safety purposes, automobile volumes and speeds along roadways designated with shared lanes are typically low. In most instances, when an automobile must pass a bicyclist on a shared lane it must legally cross the centerline or move into another lane of traffic. Because of this situation shared lanes are usually best suited for experienced riders. Although intermediate riders may feel comfortable on roadways with low traffic volumes and speeds.

Shared Lanes



- **Wide lanes** are usually 12-15 feet wide. This extra lane width allows automobile traffic to pass bicyclist without having to leave their lane of travel, effectively increasing safety and reducing conflict. On a two-lane roadway facility both lanes should have extra width; whereas on a four-lane roadway facility only the outside lanes should have extra width. Roadway facilities with wide lanes can handle a higher volume and speed of automobile traffic while maintaining a safe environment for bicycle travel. It should be note that wide lanes are usually more suitable for the experienced rider.

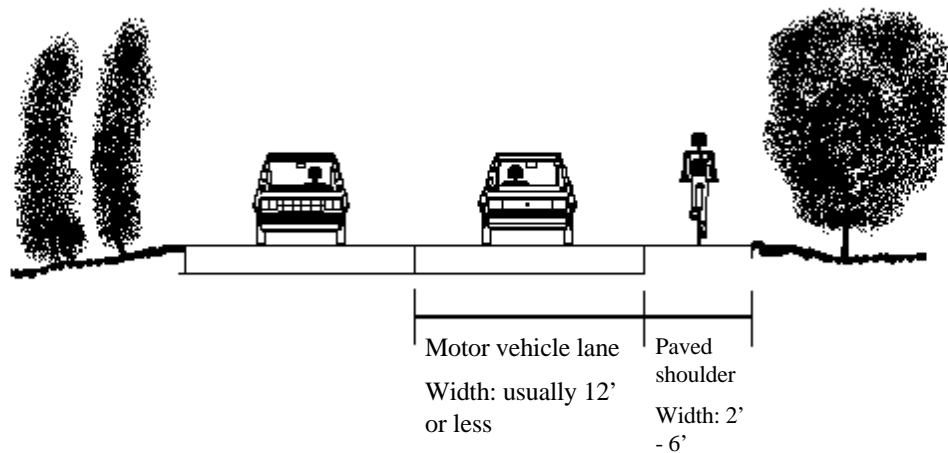
Wide Outside Lanes



- A **shoulder**, according to AASHTO's "*Policy On The Geometric Design Of Highways And Streets*", is defined as "...the portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of the sub-base, base and surface courses". For the purpose of bicycle travel, a shoulder should be a 2-6 foot wide smooth surface without any obstructions. As traffic volumes and speeds increase added width is desirable.

"Adding or improving shoulders can often be the best way to accommodate bicyclists in rural areas, and they are also a benefit to motor vehicle traffic. Where funding is limited, adding or improving shoulders on uphill sections first will give slow moving bicyclists needed maneuvering space and decrease conflicts with faster moving motor vehicle traffic". It should be noted that bicycle travel along a roadway shoulder is usually more suitable for the intermediate to experienced rider.

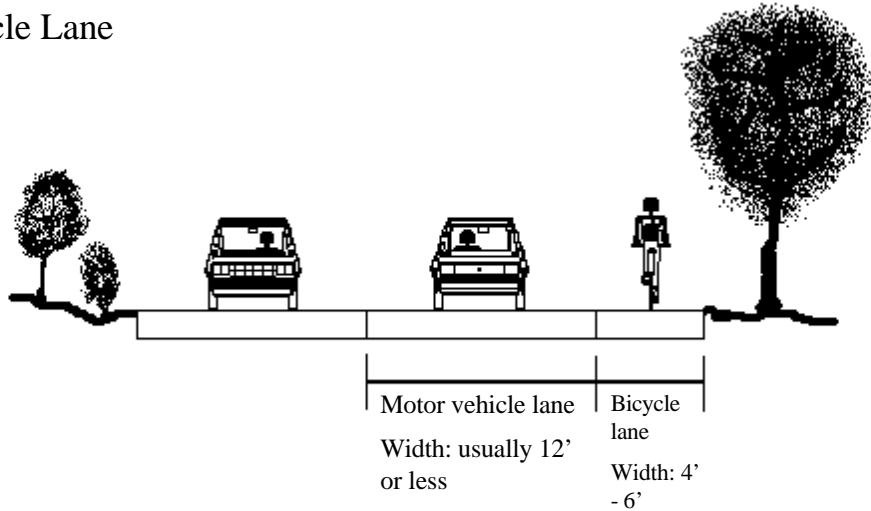
Paved Shoulder



Bike Lanes. AASHTO's "Guide For The Development Of Bicycle Facilities" defines a bicycle lane as "A portion of the roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. The need for bike lanes is usually the result of high traffic volumes and speeds. A bike lane effectively separates automobile and bicycle traffic, by providing bicyclist with a designated, visible "safe space" for travel.

A bike lane should be 4-6 feet wide, depending upon the volume and speed of vehicular traffic, and allow one-way travel in the same direction as adjacent vehicular traffic. For a bike lane to remain useful and safe for bicycle travel it must be kept free of debris and be clearly marked for separation from vehicular traffic. Depending upon the volume and speed of adjacent vehicular traffic a bike lane can be attractive to all type of bicyclist.

Bicycle Lane

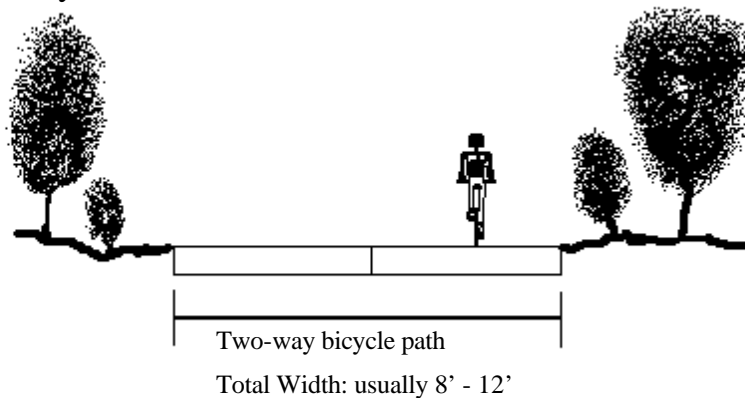


Off-Road Facility Types

Separate Bike Path. AASHTO's "*Guide For The Development Of Bicycle Facilities*" defines a separate bike path as "A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way". Most separate bike paths are two-way facilities between 8-12 feet wide,

"Where adequately wide and uninterrupted right-of-way is available, separate bicycle paths can be used to provide long, continuous routes for commuting or recreation trips. They also can provide access to destinations not otherwise available to bicyclists, and as cut through routes between buildings, cul-de-sacs, and other breaks in the street network".

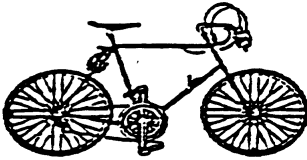
Separate Bicycle Path



Appendix 2 - Bicycling on the Blue Ridge Parkway

Blue Ridge Parkway National Park Service U.S. Department of the Interior

Bicycling



The Blue Ridge Parkway offers bicyclists 469 miles of picturesque travel across Virginia and North Carolina. Ranging in elevation from 600 to 6,000 feet, the road encompasses a variety of ever-changing weather conditions, regardless of season. The Parkway was designed as a scenic leisure road for motorists. Bicyclists should be prepared for significant distances between developed areas and services that vary by season.

To ensure safe and enjoyable bicycling on day or overnight trips, planning is important. We suggest you carry: (1) plenty of water and high energy foods; (2) clothing for safety and protection from adverse weather conditions; and (3) some form of identification.

We encourage you to become familiar with Parkway resources and services before beginning your cycling trip. Parkway maps and additional information are available from Superintendent, Blue Ridge Parkway, 200 BB&T Building, One Pack Square, Asheville, NC 28801. Telephone: (704) 238-0398.

BICYCLING REGULATIONS

- Bicycle riders must comply with all applicable state and federal motor vehicle regulations.
- Bicycles may be ridden only on paved road surfaces and parking areas. Bicycles, including mountain bikes, may not be ridden on trails or walkways.
- The bicycle operator must exhibit a white light or reflector visible at least 500 feet to the front and a red light or reflector visible at least 200 feet to the rear during periods of low visibility, between the hours of sunset and sunrise, or while traveling through a tunnel.
- Bicycles must be ridden single file and well to the right-hand side of the road, except when passing or turning left.
- Bicycle speed must be reasonable for control with regard to traffic, weather, road and light conditions.

FOR SAFE BICYCLING

- Wear a bicycle helmet.

- Be sure your bicycle is in good operating condition. Carry a spare tube and tools for minor repairs.
- Wear high visibility clothing. It sets you apart from the scenery and makes you more visible to motorists.
- Avoid the Parkway during periods of low visibility. Fog and rain may occur unpredictably. Reschedule your trip for better weather or follow lower elevation routes until weather conditions improve.
- Exercise caution when riding through tunnels. Please be sure your bicycle is equipped with reflectors. There are 26 tunnels in North Carolina and 1 tunnel in Virginia.
- Temperatures vary greatly along the Parkway due to different elevations. Wear your clothing in layers, if possible.
- Safe drinking water is available on a seasonal basis at all picnic areas, campgrounds, concession operations, and visitor centers. Water from streams and springs is unsafe for drinking unless you purify it.

- Make an honest evaluation of your abilities before beginning a bicycle trip on the Parkway. In some sections, you will climb as much as 1,100 feet in 3.4 miles.
- When cycling in a group, adjust your spacing to allow motor vehicles to pass safely.

EXTENDED TRIPS

- Some Parkway campgrounds and services are located too far apart for convenient cycling.
- Camping is permitted only at established campgrounds. In some areas, U.S. Forest Service, State Park, and private campgrounds are within easy distance of the Parkway. However, many operate on a seasonal basis.
- Food and lodging services are also available along and adjacent to the Parkway. Most operate seasonally.
- To assist in planning your trip, consult the Parkway Map and Blue Ridge Parkway Directory.
- Carry a first aid kit when possible.
- Please contact a Ranger before leaving a motor vehicle parked overnight on the Parkway.

(5-93)

MAJOR UPHILLS AND ELEVATION CLIMBED

These figures do not include climbs on spur roads, in campgrounds, or picnic areas except where noted. (Statistics courtesy of Tom DeVauxhn, Troutville, Virginia.)

Mileposts	Total EL Climbed*	NORTHBOUND		SOUTHBOUND		
		MAJOR UPHILLS Mileposts	EL Change	MAJOR UPHILLS Mileposts	EL Change	
0-24	1,450 ft.	13.7-10.7	563 ft.	2,810 ft.	0-3	391 ft.
		9.2-8.5	222 ft.		4.7-8.5	1,100 ft.
		4.7-3.0	300 ft.		9.2-10.7	322 ft.
24.0-48.0	2,670 ft.	46.4-43.9	627 ft.	1,742 ft.	18.5-21.0	785 ft.
		40.0-38.8	331 ft.		37.4-38.8	229 ft.
		37.4-34.0	951 ft.		42.0-43.9	570 ft.
48.0-63.0	1,870 ft.	63.0-49.3	1,852 ft.	250 ft.	48.0-49.3	228 ft.
63.0-76.7	0			3,305 ft.	63.0-76.7	3,305 ft.

* This figure represents the total amount of uphill climb within the given mileposts.

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Appendix 3 - Proposed signage for on road bikeways

The following sign is currently under consideration by the Federal Highway Administration for inclusion in the Manual on Uniform Traffic Control Devices. Should this sign be approved, the Bicycle Advisory Committee recommends its usage along shared roadways. This would represent a change from the current “Share the Road” sign that shows only a single bicycle. By displaying both a vehicle and a bicyclist it will help create better public awareness for bicyclists.



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Appendix 4: Roanoke City Priority Listing of Projects (*On-Road Facilities*)

Route / Street Name	From	To	Priority Ranking
Kimball Ave.	Williamson Rd. / Rt. 11	Orange Ave.	Imminent Priority
Brandon Ave.	Brambleton Ave. / Rt. 221	Colonial Ave.	High Priority
Colonial Ave.	Roanoke County Boundary	Winding Way Rd.	High Priority
Colonial Ave.	Winding Way Rd.	Overland Rd.	High Priority
Plantation Rd. / Rt. 115	Kanter Rd.	Liberty Rd.	High Priority
Plantation Rd. / Rt. 115	Liberty Rd.	Wingfield Ave.	High Priority
Plantation Rd. / Rt. 115	Wingfield Ave.	Roanoke County Boundary	High Priority
Brambleton Ave. / Rt. 221	Roanoke County Boundary	Brandon Ave.	High Priority
Hershberger Rd. (Rt. 101)	Williamson Rd. / Rt. 11	Roanoke County Boundary (east)	High Priority
Hershberger Rd. (Rt. 101)	Peters Creek Rd. / Rt. 117	Cove Rd. / Rt. 116	High Priority
Brambleton Ave. / Rt. 221	Roanoke County Boundary	Brandon Ave.	High Priority
24 th St., NW	Shenandoah Ave.	Rt. 460 / Orange Ave.	Medium Priority
Airport Rd.	Williamson Rd.	Roanoke County Boundary	Medium Priority
Campbell Ave.	Williamson Rd., SE	Norfolk Ave., SE	Medium Priority
Main St.	Brandon Ave. / Rt. 11	Elm Ave. / Roanoke River	Medium Priority
Norfolk Ave.	Campbell Ave.	14 th St., SE	Medium Priority

Note: Bikeway projects are categorized into 3 levels: Imminent, High & Medium Priority

Appendix 5: Roanoke City Priority Listing of Projects (*Off-Road Facilities*)

Facility Name
Mill Mountain Greenway
Tinker Creek Greenway
Lick Run Greenway

Appendix 6: Botetourt County Priority Listing (*On-Road Facilities*)

Facility Name
U.S. Route 11
U.S. Route 220
U.S. Route 460
State Route 779
State Route 651

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Roanoke Valley Area MPO Bikeway Map..... *See insert folder in report back cover*

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