



**Idaho**

**Bicycle and Pedestrian  
Transportation  
Plan**



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# Table of Contents

Introduction	1
Chapter I. Vision and Goals	2
Chapter II. Action Strategies	4
Chapter III. Comprehensive Approach to Bicycle and Pedestrian Transportation Planning	14
Appendix A Idaho Transportation Department Policies	19
Appendix B Design Standards for Bicycles	21
Appendix C Idaho Statutes Pertaining to Pedestrians and Bicycles	31
Appendix D References	36



# Introduction

At a time when concerns about traffic congestion and air quality are mounting, there is an emerging realization that bicycling and walking are legitimate alternatives to motorized modes of transportation.

There are extensive policies, procedures, and funding mechanisms for highways, transit services, and other transportation systems at the federal, state, and local levels. Before alternative non-motorized forms of transportation can become a viable option for Idaho's communities, numerous issues and concerns must be identified and solutions provided. This *Idaho Bicycle and Pedestrian Transportation Plan* serves as a first step in establishing a statewide vision, goals and strategies, disseminating information, and providing guidelines pertinent to the cyclist and walker.

Since the establishment of a bicycle and pedestrian planning program within the Idaho Transportation Department, there is a clearinghouse and professional staff support for implementing the vision, goals, and action strategies contained in this plan.

Please take advantage of the opportunities to shape the future of non-motorized transportation in Idaho.



*Bicycling is a legitimate alternative to motorized transportation.*

Questions, comments, and requests for more information may be directed to:

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**Your input is greatly needed and very much appreciated.**



# Chapter I

## Vision and Goals

### Vision

Idaho will become a place where people choose to make walking or riding a bicycle a part of their everyday lives. Residents and visitors will be able to walk and ride with confidence, safety, and security in every community. New and enhanced facilities and services will make the trip more pleasant, more convenient, without conflict with motorized modes, and with minimal barriers to the mobility impaired. Bicycle and walking will become a routine part of the transportation system and everyday trips.

### Goals

Bicycling and walking are healthy, non-polluting, and fun forms of transportation. They do not consume natural resources and do not require a costly infrastructure to support since they can largely use the existing infrastructure if it is modified to meet their needs. Walking and bicycling are available to all segments of society, to people of all ages, and in every community across this country and state. Increased levels of bicycling and walking can help to alleviate some of the negative effects of growth, including traffic congestion, air pollution, excessive noise, and degradation of the environment.

Idaho's cities have been planned, developed, and paved to support the use of the "SOV"—single occupied vehicle. As a result, cities have grown outward, with people traveling increasingly long distances to destinations such as work, school, and shopping. Distance means time so increased capacity becomes necessary to reduce travel time which in turn allows for new developments farther from primary destinations. As a result, travel by foot or bicycle has become a less desirable and often infeasible option. It is also perceived to be more dangerous and threatening.

The *Idaho Bicycle and Pedestrian Transportation Plan* of Idaho's long range transportation planning process sets the stage for changes in our transportation mix. The plan is about expanding options for personal



transportation. Most importantly, it is about making the changes needed in Idaho's transportation system to encourage greater use of human-powered travel modes.

### **The goals of this plan are:**

1. To double the percentage of total trips made by bicycling and walking in Idaho;
2. To simultaneously reduce by 10 percent the number of bicyclists and pedestrians killed or injured in traffic crashes.

It is within this context of vision and goals that this plan has been prepared. It offers a plan of action for creating a more balanced transportation system, a system that recognizes the unique benefits of bicycling and walking to individuals as well as communities. Its implementation must be carried out at all levels: individual citizens, support organizations, local and state governments, and the U.S.

Department of Transportation which has already adopted the following policy goal: "Bicycling and walking are two overlooked options in our national transportation mix. The Federal Highway Administration is committed to working with the states to encourage their use and make them safer."



*Trips by walking can be dramatically increased by designing safe and pleasant downtown environments.*

# Chapter II

## Action Strategies

### The Public's Perspective

The Idaho Transportation Department (ITD) district offices coordinated local-jurisdiction workshops and regional public involvement meetings in 1993 and 1994 to gather information for regional plans and programs. Each Metropolitan Planning Organization was an active participant in the process. The purpose was to inform and interact with local officials and the public on the development of the *Idaho Transportation Plan*, the draft

*Statewide Transportation Improvement Program*, and the *Idaho Bicycle and Pedestrian Transportation Plan*.

The meetings were not intended to be hearings, but serve as an opportunity for local officials and the public to hear about all transportation modes and learn about the procedures for selecting projects for implementation in their regions. They were given an opportunity to comment on long-range plans and propose changes to current Idaho Transportation Board-approved programs. Local plans and projects were included in the process.



*The ITD actively pursued input from the public in preparation of the Idaho Bicycle and Pedestrian Transportation Plan.*

The comments were summarized for each district and potential projects or actions were identified. These were provided to each district engineer and top managers within ITD. Comments were then analyzed and reviewed, and individual responses drafted and published in a report which is available upon request. The participants were asked to express their concerns and suggestions to improve transportation in their areas. Significant comments were received on all modes and issues in each region and grouped under: 1) Long-range Planning, 2) Transportation Improvement Program, 3) Statewide Planning Process,



4) Bicycle/Pedestrian, 5) Aeronautics, 6) Public Transportation, 7) Rail, and 8) Local Projects.

The synthesis of the regional meetings involves a comprehensive compilation and categorization of information and identification of issues, goals, policies, and strategies. The facts and ideas derived from public input has been fully considered and integrated into the *Idaho Bicycle and Pedestrian Transportation Plan*.

The comments received during the public involvement meetings are summarized as follows:

- Provide for and make safety improvements for bicyclists and pedestrians
- Provide more safety promotion, education, training, and enforcement for bicyclists and motorists
- Involve local citizens advisory committees in the planning process
- Establish a State Bicycle Advisory Committee
- Place greater emphasis on separated bike paths for children and family transportation
- Recognize a network of bicycle and pedestrian facilities which also includes pathways outside of the highway right-of-way
- Provide better maintenance of all pathway facilities
- Make improvements to the local roads for capacity, safety, width, bicyclists, pedestrians, condition, and arterial movements

- Encourage railroads to sell unneeded properties along inactive tracks for other non motorized transportation needs
- Preserve abandoned rail corridors for trails and rail banking
- Provide better coordination of all transportation providers and inter-modal connections
- Accommodate bicyclists on public transportation buses



*The Wood River Trail System utilizes an old railroad right-of-way to connect several Blaine County communities together.*

## Proposed Strategies

When bicycle/pedestrian programs began in the late 1960's, the emphasis was strictly on providing and improving facilities. The summarization of public comments listed above demonstrates the continuing prevalence of this perspective in Idaho. However, it has been demonstrated many times in communities across the country that simply providing a bicycle- and pedestrian-friendly physical environment cannot address all of the challenges associated with non-motorized

transportation. Some safety problems, for example, may be more easily solved through programs than through facilities. As communities have gained experience, identified key ingredients to successful programs, and considered other needs, the concept of a comprehensive “4-E” program has emerged. This approach combines the elements of Engineering, Education, Enforcement, and Encouragement.

The Intermodal Surface Transportation Efficiency Act (ISTEA) is a mandate for action which has sparked a growing interest in bicycle and pedestrian transportation. Yet few communities in Idaho have the technical or informational guidelines for a successful program.

In addition, Idaho’s extensive network of trails also serves a transportation function under certain circumstances, such as the Boise River Greenbelt, Wood River Trail System (Sun Valley), and the North Idaho Centennial Trail (Coeur d’Alene). It is also important to identify and assess existing corridors which have potential to provide vital links or major components of a bicycle/pedestrian transportation network. Therefore, in order to address this need, the 1993 *Idaho Trails Plan* which includes the *Idaho Rail-Trail Plan*, is incorporated by reference into this plan.

Cooperatively, the ITD and the Idaho Department of Parks and Recreation will pursue the respective goals, strategies, and actions where opportunities for partnerships are presented.

The remainder of this chapter proposes a comprehensive “4-E” program of action strategies implemented at the state and local level. This approach is directed toward the goal of increasing safe and convenient travel by non-motorized modes. It must combine the efforts of many people at all levels of government with full participation and support by the public. Officials in pub-

lic works, planning, enforcement, education, ITD districts, cities, counties, highway districts, operations, maintenance, and so on all have a role and must work together if this state is to be successful in this goal.

These actions comprise the non-motorized strategy for accomplishing the overall statewide goals established in the 20-year *Idaho Transportation Plan*. Therefore, a brief description which lists the goals, objectives and strategies of that document is also included. Copies of the *Idaho Transportation Plan* (ITP) can be obtained by contacting the ITD at the address and phone number on page 1.



*A shoulder bikeway is one of three types of standard bicycle facilities.*

## **E #1:** **Engineering and planning**

Pathways (on-street and separated) are a principle element of quality-built environments in that they provide a means for non-motorized transportation. In order to attain and maintain these potentials, pathway planning, implementation, and





*Bicycle lanes (shown above) and separated pathways (below right) are the other two standard types of bicycle facilities.*

development must keep pace with the growing urban environment and changing needs of its citizens. A commitment to planning, implementation, development, maintenance, and funding of these elements is the first step to the realization of a successful pathway plan. These action strategies reflect such a commitment. Officially adopted engineering design standards are included in Appendix B.

## Action strategies

1. Develop regional and local master plans, as appropriate, of bicycle and pedestrian considerations and adopt them to be included as the transportation element of comprehensive land-use plans.
  - Map current and potential non-motorized destinations
  - Identify necessary improvements for existing roads
  - Target major barriers for removal
  - Provide new or expanded separated pathways where needed
  - Provide linkages to public transportation

- Consider bicycle parking at all existing destinations
- 2. Set up standard procedures for addressing on-going pedestrian and bicycle needs.
  - Adopt bicycle/pedestrian-friendly roadway design standards
  - Eliminate small problems through a “spot improvement” program
  - Modify land-use policies and planning and



zoning ordinances to make short nonmotorized trips more feasible and useful. Develop a model local ordinance for bicycle and pedestrian transportation

- Ensure that the Americans with Disabilities Act requirements are met on all transportation projects
- Review chip-seal policies of state and local agencies and revise as necessary
- Develop design and construction guidelines for rumble strips on highway shoulders



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## Reference to the 20-year *Idaho Transportation Plan*

Goal #2 in the ITP states, “Transportation plans, programs, and strategies will integrate the inter-modal needs of the state.” The following objectives and strategies are dependent upon the successful implementation of the actions listed above in order to achieve acceptable performance outcomes.

### **Objective A:**

Plan, Manage, Maintain, and Improve the Intermodal Transportation System.

Strategy 1: Local agencies, MPOs and ITD, in conjunction with transportation providers, will take reasonable actions to make each trip flow smoothly from start to destination regardless of the mode used;

Strategy 2: Local agencies, MPOs and ITD, in conjunction with transportation providers, will preserve and improve the system by prioritizing state and local funding and programs to maintain service and the existing infrastructure in good condition;

Strategy 3: ITD will implement management systems which are directly related to planning, managing, maintaining, and improving the transportation system;

Strategy 4: ITD and MPOs will analyze various modal alternatives as needed to upgrade the transportation system.

### **Objective B:**

Manage Transportation Demand.

Strategy 2: Local agencies, MPOs and ITD, in conjunction with transportation providers, will plan cooperatively to coordinate all modes and provide public information for a wider selection of trip choices;

Strategy 5: ITD, in coordination with MPOs and others, will consider multi-modal transportation systems in high density corridors.



*Federal highway project funds will convert this former route of Interstate 90 into a multi-use separated pathway.*

## **Objective C:**

Coordinate Land Use and Transportation Decisions.

Strategy 1: ITD, MPOs, and regional planning organizations will encourage local land use decision-makers to consider the consequences of land development on the transportation system and take measures to mitigate the effects;

Strategy 2: Cities, counties, local and regional air quality agencies, the private sector, state, and federal agencies will coordinate the exercise of their respective responsibilities under statutes regarding air quality.

## **Objective D:**

Develop and Maintain Roadway, Bicycle, and Pedestrian Facilities.

Roadway Strategies:

Strategy 1: ITD and local agencies will complete reconstruction and relocation of deficient segments of state and local roadways as funding priorities allow;

Strategy 2: ITD will annually update the Recommended Roadway Widths Map, which serves as a guide to highway improvements based upon the functional classification of state highways, traffic volumes, and level of development.

Bicycle and Pedestrian Strategies:

Strategy 1: Local agencies, MPOs, and ITD, in coordination with bicycle groups and transit providers, will plan bikeway networks;

Strategy 2: Local agencies, MPOs and ITD, in coordination with transit providers, will provide for pedestrian circulation and connection with other modes;

Strategy 3: Local agencies will encourage developers to: 1) design mixed use and increased density; 2) facilitate the interface with other transportation services; 3) reduce distances between destinations; 4) provide for convenience and safety;

Strategy 4: ITD will encourage local bicycle and pedestrian plans by giving priority for state/federal funding to projects drawn from adopted bicycle/pedestrian plans.

Goal #5 states, "Transportation decision-making process will provide opportunities for interagency cooperation, coordination, public involvement, and privatizing public works and services." The following objectives and strategies are dependent upon the successful implementation of the actions listed above in order to achieve acceptable performance outcomes.

## **Objective A:**

Provide a continuing and cooperative planning process.

Strategy 1: ITD will initiate a cooperative transportation planning process with local elected officials that have jurisdiction over transportation for the non-metropolitan urban or rural parts of the state;

Strategy 2: ITD will initiate a cooperative transportation planning process with local elected officials that have jurisdiction over transportation for the metropolitan areas of the state.

### **Objective B:**

Achieve transportation goals through public involvement and effective partnerships with capability to resolve conflicts.

Strategy 1: Transportation agencies will provide for early and ongoing public and governmental involvement by all affected and interested parties;

Strategy 2: ITD, in cooperation with local entities, will develop and initiate procedures to quickly resolve disputes on land use, transportation, and air quality concerns.



*Safe riding habits and injury prevention behavior are the primary messages of Idaho's bicycle safety education campaign.*

## **E #2: Education**

Engineering alone cannot reduce the conflicts between bicyclists/pedestrians and motorists. Education is the key in reducing the number and severity of accidents. In addition to basic rules of the road, there is also education on safe riding techniques and maneuvering out of a particular situation. There needs to be a realization that bicycling is not "riding" but "driving." We need to begin teaching those involved in this form of

transportation that they are active participants on the roadway which carries certain responsibilities and expectations.

### **Action strategies**

1. Provide instruction in lawful, responsible behavior among bicyclists, pedestrians, and motorists.
  - Teach bicycling and walking "rules of the road" to children
  - Teach bicycling and walking "rules of the road" to adults



- Include bicycle and pedestrian information in driver education
- 2. Deliver safety messages through print and electronic media.
- Design messages which are targeted to different audiences
- Create a process for effective, consistent, and ongoing delivery of these messages
- Develop a statewide bicycle-helmet promotion targeted at school-aged children

## Reference to the 20-year *Idaho Transportation Plan*

Goal #1 states, “Transportation improvements will promote and sustain the safe and efficient movement of people, goods, services, and information.” The following objectives and strategies are dependent upon the successful implementation of the actions listed above in order to achieve acceptable performance outcomes.

### **Objective C:**

Provide Reasonably Safe and Secure Travel Environment.

Strategy 1: Provide safety and security measures for pedestrians and transit users commensurate with the problems to be addressed;

Strategy 3: Provide bicycle security racks and other accommodations at major destination points and other strategic locations;

Strategy 4: Provide a reasonably safe roadway environment to avoid or reduce the severity of vehicle accidents;

Strategy 5: Implement the Highway Safety Management System which contains goals and strategies for safety improvements on highways;

Strategy 6: Provide driver’s licensing measures that promote safety.

## **E #3: Enforcement**

Predictability is the key to harmony on the roadway. Sometimes bicyclists will make a maneuver unexpected by a motorist and a conflict occurs. On the other hand, motorists sometimes feel bicyclists do not belong on the roadway and treat them as such. Motorists and bicyclists have rules and responsibilities by which they must abide. The most effective enforcement technique is education but sometimes it is necessary to consider other active methods of law enforcement.

### **Action strategies**

1. Improve existing traffic laws and enforcement of laws.
  - Review and, if necessary, modify laws that affect bicyclists and pedestrians
  - Enforce laws that impact bicycle and pedestrian safety
  - Identify locations of extreme non-compliance and conduct a “spot enforcement program.”
2. Reduce the incidence of serious crimes against non-motorized travelers.



- Reduce the number of bicycles stolen and increase the proportion of recovered bicycles
- Develop a program for reducing physical assaults on bicyclists and pedestrians
- 3. Use non-motorized modes to help accomplish unrelated law enforcement goals.
  - Implement bicycle patrols in appropriate areas

## Reference to the *20-year Idaho Transportation Plan*

Goal #5 states, "Transportation decision-making processes will provide opportunities for interagency cooperation, coordination, public involvement, and privatizing public works and services." The following objectives and strategies are dependent upon the successful implementation of the actions listed above in order to achieve acceptable performance outcomes.

### **Objective B:**

Achieve transportation goals through public involvement and effective partnerships with capability to resolve conflicts.

Strategy 1: Transportation agencies will provide for early and ongoing public and governmental involvement by all affected and interested parties;

Strategy 2: ITD, in cooperation with local entities, will develop and initiate procedures to quickly resolve disputes on land use, transportation, and air quality concerns.

## **E #4: Encouragement**

People desire mobility options. The simplest way to encourage other modes is simply not to discourage. For decades, planners and engineers have sought ways to accommodate the mobility of cars. Today we recognize a need and value for other forms of transportation as well. Encouragement then is the culmination of the previous three "Es:" engineering roads that are safe and convenient; educating motorists and non-motorists of conventional rules and the importance of predictability and harmony; and enforcement for those who choose to follow unlawful behavior.



*Special events focus public attention to bicycling and walking as a mode of transportation.*

### **Action strategies**

1. Increase incentives for bicycling and walking and reduce incentives for driving single-occupant motor vehicles.
  - Add non-motorized options to agency/company motor pools
  - Require companies and agencies to produce balanced transportation plans for their employees' commuting needs

- Recognize participants and promote successful trip-conversion programs sponsored by agencies and companies
- 2. Provide casual introduction to bicycling and walking as transportation to non-participants.
  - Include bicycling and walking activities in local recreation programs
  - Promote utilitarian non-motorized transportation through introductory special events
- Offer key target audiences detailed information on non-motorized travel
- 3. Use electronic and print media to spread information about the benefits of non-motorized transportation.
  - Develop and disseminate positive messages through public-service announcements, special-events promotion, and news releases

## Reference to the *20-year Idaho Transportation Plan*

Goal #5 states, "Transportation decision-making processes will provide opportunities for interagency cooperation, coordination, public involvement, and privatizing public works and services." The following objectives and strategies are dependent upon the successful implementation of the actions listed above in order to achieve acceptable performance outcomes.

### **Objective A:**

Provide a continuing and cooperative planning process.

Strategy 1: ITD will initiate a cooperative transportation planning process with local elected officials that have jurisdiction over transportation for the non-metropolitan urban or rural parts of the state;

Strategy 2: ITD will initiate a cooperative transportation planning process with local elected officials who have jurisdiction over transportation for the metropolitan areas of the state.

### **Objective B:**

Achieve transportation goals through public involvement and effective partnerships with the capability to resolve conflicts.

Strategy 1: Transportation agencies will provide for early and ongoing public and governmental involvement by all affected and interested parties;

Strategy 2: ITD, in cooperation with local entities, will develop and initiate procedures to quickly resolve disputes on land use, transportation and air quality concerns.

# Chapter III

## Comprehensive Approach to Bicycle and Pedestrian Transportation Planning

Transportation planning is a process for making decisions about the development of transportation facilities. This includes providing accurate information about the effects proposed transportation projects will have on the community and projected users. Bicycle and pedestrian planning is no exception. However, because much of the information necessary to reach sound decisions about providing for safe, efficient use is already available as a by-product of the normal operation of the road system, the bicycle/pedestrian planning process is a specific application of the overall transportation-planning process.



*Local officials meet with bicycle advocates to discuss facility improvements.*

This is also true of efforts to produce or update a transportation element of a local comprehensive land-use plan. The planning process used to develop or improve roadways for motorists as part of local planning efforts is equally valid for the non-motorized modes.

There are, however, some important design features to be taken into account to best accommodate bicyclists, and for this reason planners and engineers should refer to the AASHTO Guide (see Additional Reference Publications, page 30) and the State Design Manual (bicycle element is included in this plan as Appendix B) during the planning process for streets and highways. Eventually, bicycle “drivers” should be anticipated and provided for on all roadways where bicycles are not excluded by statute or regulation, regardless of functional classification.

Many model planning processes could be used to select routes and design facility treatments to accommodate bicyclists and pedestrians. The following process is only one example. It consists of six steps:



## 1. Establish Performance Criteria for a Bicycle/Pedestrian Network

Performance criteria define the qualitative and quantitative variables to be considered in determining the desirability and effectiveness of a facility network. These can include:

**Accessibility:** This is measured by the distance a facility is from a specified trip origin or destination, the ease by which this distance can be traveled by bicycle or on foot, and the extent to which all likely origins and destinations are served. More importantly, no residential area or high-priority destination (such as school, shopping center, business center, or park) should be denied reasonable access by bicycle or foot.

**Directness:** Most bicyclists will not use even the best bicycle facility if it greatly increases the travel distance or trip time over that provided by other alternatives.

Therefore, routes need to be reasonably direct.

**Continuity:** The proposed network should be as complete as possible. If gaps exist, they should not force bicyclists and pedestrians into traffic environments that are unpleasant or threatening, such as high-volume or high-speed motor-vehicle traffic with narrow outside lanes or no sidewalks.

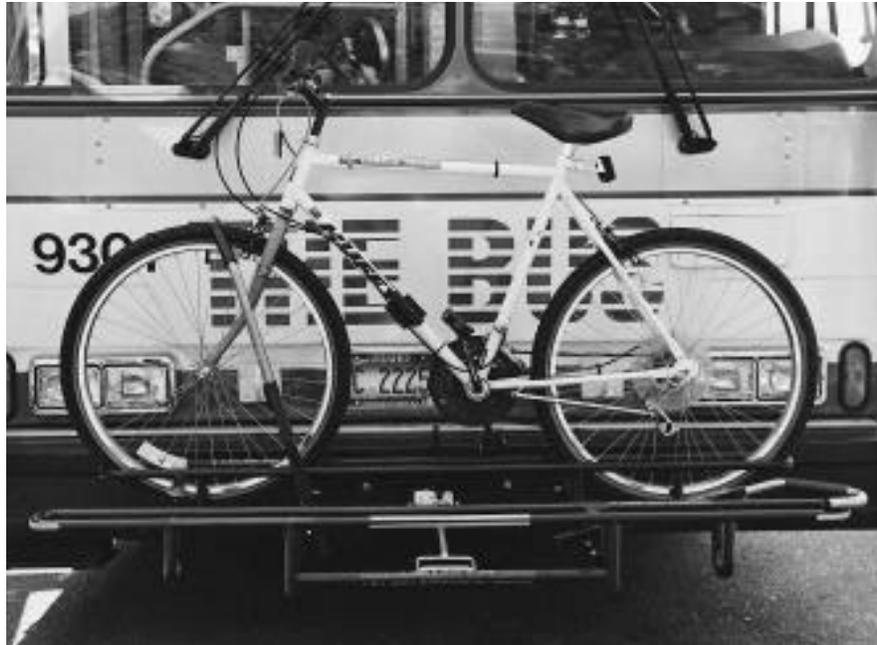
**Route Attractiveness:** This can encompass such factors as separation from motor traffic, visual aesthetics, and the real or perceived threat to personal safety along the facility.

**Low Conflict:** The route should present few con-

flicts between bicyclists, pedestrians, and motor-vehicle operators.

**Cost:** This would include the cost to both establish and maintain the system.

**Ease of Implementation:** The ease or difficulty in implementing proposed changes depends upon available space and existing traffic operations and patterns.



*One component of local planning should include the integration of bicycling and walking to public transportation.*

## 2. Inventory Existing System

Both the existing roadway system and any existing bicycle/pedestrian facilities should be inventoried and evaluated. The condition, location, and level of use of existing facilities should be recorded to determine if they warrant incorporation into the proposed network or if they should be removed. If existing facilities are to be used as the nucleus of a new or expanded network, the inventory should note what improvements to the existing portions of the network may be required

to bring the new network up to uniform design and operations standards.

A simple inventory of the roadway system could be based on a map of the annual average daily traffic counts (including bicycle traffic) on each road segment within a community or region. A more complex inventory could include factors like the number of the traffic lanes, width of the travel lanes, posted speed limit or actual average operating speed, pavement condition, and certain geometric and other factors (e.g., the frequency of commercial driveways, grades, and railroad crossings).

### 3. Identify Appropriate Travel Corridors

Predicting non-motorized travel corridors for a community is not the same as identifying the routes that bicyclists and pedestrians currently use. Instead, travel corridors can be thought of as “desire lines” connecting neighborhoods that generate trips with other zones that attract a significant number of trips.

For motor-vehicle traffic, most peak morning trips are made between residential neighborhoods and employment centers. During the afternoon peak, the opposite is true. In the evening or on weekends, the pattern of trip generation is much more dispersed as people travel to shopping centers, parks, and other residential areas.

Estimating these trip flows for an entire city can be a complex, time-consuming effort requiring significant amounts of raw data and sophisticated computer models. Transportation planning for bicyclists and pedestrians is much the same. Non-motorized planning attempts to provide for use based upon existing land uses, assuming that the present impediments to bicycle and

pedestrian use are removed. The underlying assumption is that people on bicycles or on foot want to go to the same places as people in cars (within the constraints imposed by distance), and the existing system of streets and highways reflects the existing travel demands of the community. Further, most adults have a mental map of their community, based upon their experience as motor-vehicle operators, thus, they tend to orient themselves by the location of major streets and highways.

Although the use of existing traffic flows is a useful overall predictor of bicyclists’ desired routes, a few special situations may require adjustments to the corridor map:

- Schools, especially colleges and universities, and military bases can generate a fairly large share of bicycle trips. This is especially true for campuses where motor vehicle parking is limited.
- Parks, beaches, libraries, green ways, rivers and lakes, scenic roads, and other recreational facilities attract a proportionately higher percentage of bicycle trips.



*Identifying corridors for bicycle facility improvements is an important part of local bikeway plans.*



#### 4. Evaluate and Select Specific Route Alternatives

The corridor-identification procedure identifies desire lines for bicycle and pedestrian travel between various locations. The next step is to select specific routes within these corridors that can be designed or adapted to accommodate and provide access to and from these locations. The aim is to identify the routes that best meet the performance criteria established in the first step of this planning process.

Typically, this step and the selection of appropriate design treatments are highly interactive processes. The practicality of adapting a particular route to accommodate cyclists and walkers may vary widely, depending upon the type of design treatment selected. For example, a less direct route may become the best option if comparatively few, inexpensive, and easily implemented design improvements are required.

Therefore, step 4 should be approached as a process in which both route selection and design treatment are considered together to achieve a network that is highly advantageous and affordable to the user, has few negative impacts on neighbors and other non-users, and can be readily implemented.

In summary, the selection of a specific route alternative is a function of several factors, including:

- The degree to which a specific route meets the needs of the anticipated users as opposed to other route options.
  - The possible cost and extent of construction required to implement the proposed facility treatment.
  - The comparative ease of implementing the proposed design treatment. For example, one option may entail the often-unpopular decision to alter or eliminate on-street parking while another does not.
- The opportunity to implement the proposed design treatment in conjunction with a planned highway construction or reconstruction project.

A more inclusive list of factors to be considered in the selection of a specific route is presented in the AASHTO Guide.

#### 5. Select Appropriate Design Treatments

Guidelines for evaluating an appropriate design treatment are presented in Appendix B. The principal variables affecting the applicability of a design treatment are:

a. The design bicyclist. Is the proposed route projected to be used primarily by group A bicyclists or is it intended to also serve as part of a network of routes for group B and group C bicyclists?

b. The type of roadway project involved on the selected route. Is the roadway scheduled for construction or reconstruction, or will the incorporation of design improvements be retro-fitted into existing geometrics or right-of-way widths?

c. Traffic operations factors. The most significant traffic-operations factors for determining the appropriateness of various design treatments are:

- Traffic volume
- Average motor vehicle operating speeds
- Traffic mix
- On-street parking
- Sight distance
- Number of intersections and entrances

*Special note when considering separated multi-use pathways:*

Street and driveway crossings of pathways create a significantly critical condition resulting in the potential for conflicts between bicyclists/pedestrians and motor vehicles.



## A suggested analysis of separated multi-use pathways:

Number of Crossings per Mile	Design Consideration
0	Ideal for safe pathway
1 - 4	Use special care to treat the conflicts
5 - 8	Proceed with extreme caution. Consider substituting with on-street bicycle lanes.
> 8	DANGEROUS CONDITION. Substitute with on-street bicycle lanes or other treatment.

### 6. Evaluate the Finished Network Plan using the Established Performance Criteria

Will the proposed network meet the criteria established at the start of the planning process? If it does not meet most of these criteria, or inadequately meets a few critical goals, either the proposal will require further work or the performance criteria must be modified. In the latter case, the planning process as a whole should be reviewed to determine if previously discarded routes should be reconsidered. They may now be the more-preferred options in light of the newly modified criteria.

This reality check is important. Many well-considered proposals become ineffective when it is determined that the finished product no longer meets its established objectives.

Because so little is known about the bicycling and walking situations in most communities, it is difficult to predict what level of expenditure and planning activity will be needed to implement a comprehensive program. Until the needs have been identified and the problems assessed, the



*Full bicycle parking "lots" are a sign of a successful program.*

necessary scope of the program will likely remain unknown. However, the basic approach suggested here is to make bicycling and pedestrian considerations part of the normal process of land-use planning. In many cases, this may require little extra effort and expense.

An active public-participation process is another key ingredient to a successful planning process. In most Idaho communities, this should lead to the creation of a citizen's advisory committee. Several Idaho communities now have such committees that have been favorably recognized for their efforts and exhibit a high level of commitment and continuing participation in the local planning process.

# Appendix A

## Idaho Transportation Department Policies

It is the mission of ITD to provide a quality transportation system that is safe, reliable, and serves the needs of the traveling public, commerce, and industry. The agency supports the planning and development of a balanced, multi-modal (including bicyclists and pedestrians) transportation system.

Policies to accomplish this undertaking were adopted by the Idaho Transportation Board in June, 1993 (B-09-08) and subsequent administrative policies were established (A-09-08). ITD's director is authorized to establish standards and specifications for the provision of bicycle/pedestrian facilities in conjunction with federal-aid or state-funded highway projects.

These policies further state:

### General

Development and construction of bicycle/pedestrian facilities shall be assessed on all federal-aid or state-funded highway projects.

Bicycle/pedestrian facilities should be compatible with local bicycle/pedestrian comprehensive plans. If no plan exists, ITD should make every effort to provide facilities compatible to the area.

Where a need has been determined and highway rights-of-way are inadequate for bicycle/pedestrian facilities, additional right-of-way may be purchased in fee or by easement. If the facility is not contiguous to the highway right-of-way, the non-contiguous right-of-way must be purchased by another public entity. The matching ratio must also be provided by another agency.

Bicycle/pedestrian facilities shall not be maintained by ITD unless they are an integral part of the roadway surface.

### Bicycle Facilities

All federal-aid projects in or adjacent to urbanized areas and recreation areas should be reviewed for possible inclusion of bicycle facilities, unless the project location makes their addition impractical.



*State policy requires that the development and construction of bicycle and pedestrian facilities shall be assessed on all federal-aid or state funded highway projects.*

The recommended method for providing bicycle facilities is to widen the roadway shoulders in accordance with the American Association of State Highway and Transportation Officials (AASHTO) standards or others set by ITD.

Paved shoulders that are widened for bicycle use should include a special surface treatment during the application of seal

coats. Examples are plant mix seal, fog, or slurry seal. A standard cover or chip coat should not be used on bicycle facilities.

Duplicate facilities (widened shoulders and a separate bicycle path) shall not be financed (federal-aid/state) or constructed by ITD unless special circumstances make this desirable, as determined by the director.

Adequate traffic controls shall be installed to protect bicyclists and the motoring public in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) standards or others set by ITD.

Alternative recreational uses such as in-line skating, jogging, skate boarding, and equestrian use should be regulated by the agency that is responsible for maintaining the pathway.

All facilities shall comply with the standards and specifications in this statewide plan and also with city and county comprehensive plans as required by section 67-6508, Idaho Code.

## **Pedestrian Facilities**

Sidewalks shall be constructed on all federal-aid urban projects. If the existing need is not apparent, right-of-way should be purchased and grading provided to allow future construction of a sidewalk.

Pedestrian paths in suburban or rural areas shall be considered when a need is shown, such as proximity to schools or recreation areas.

# Appendix B

## Design Standards for Bicycles

This appendix is taken directly from the design standards manual developed by ITD. These standards should apply to most situations where facilities are being designed to accommodate bicycle traffic. If not, planners, designers, and engineers are recommended to follow standards set forth in the AASHTO Guide.

A copy of the state design standards manual is available from the Roadway Design Section, ITD Headquarters, P.O. Box 7129, Boise, ID 83707 or by calling 208-334-8591.

## Glossary of Terms

### AASHTO

American Association of State Highway and Transportation Officials.

### BICYCLE

A vehicle having two tandem wheels propelled solely by human power upon which any person or persons may ride.

### BICYCLE FACILITIES

A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling including parking facilities all bikeways and shared roadways not specifically designated for bicycle use.

### BICYCLE ROUTE (BIKE ROUTE)

A designated segment of a transportation system that is the preferred route for bicycle travel. This designation may be established by the jurisdiction having authority through signing or identification on a map. The term "bike route" should be used for operational purposes and not for bicycle system or facility planning.

### BICYCLE LANE

A portion of a roadway which has been designated by striping signing and pavement markings for the preferential or exclusive use of bicyclists.

### BIKEWAY

Any road, path, or way open to bicycle travel regardless of whether such facilities are designated for the preferential use of bicycles or are to be shared with other transportation modes.

**CLEARANCE, Lateral**  
Width required for safe passage of a bicycle as measured in a horizontal plane.

**CLEARANCE, Vertical**  
Height necessary for the safe passage of a bicycle as measured in a vertical plane.

**COMMUTER/ UTILITY CYCLIST**  
An individual who uses a bicycle primarily to reach a particular destination for practical purposes, such as to purchase or deliver goods and services, or to travel to and from work or school. Messengers are classified as utility cyclists.

**GRADE SEPARATION**  
Vertical separation of travelways through use of a structure so that traffic crosses without interference such as a pedestrian overpass.

**HIGHWAY**  
A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way. Idaho Code Section 40-109 reads, "Roads, streets, alleys, and bridges laid out or established for the public or dedicated to the public."

**LEGEND**  
Words, phrases, or numbers appearing on all or part of a traffic-control device.

**MOTOR VEHICLE**  
A vehicle that is self-propelled or designed for self-propulsion.

**MUTCD**  
Manual on Uniform Traffic Control Devices is approved by the Federal Highway Administration as a national standard for placement and selection of all traffic control devices on or adjacent to all highways open to public travel.

**PAVEMENT MARKING(s)**  
Painted or applied line(s) or legend placed on any pavement surface for regulating, guiding, or warning traffic.

**PEDESTRIAN**  
A person whose mode of transportation is on foot. A person "walking a bicycle" becomes a pedestrian. A general term denoting land or property (or interest therein), usually in a strip, acquired for or devoted to transportation purposes.

**RIGHTOF WAY**  
The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian.

**ROADWAY**  
The portion of the highway for vehicle use, including bicycles. That portion of a motor vehicle law which contains regulations governing the operation of vehicular and pedestrian traffic.

**SEPARATED MULTI-USE PATH**  
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.

**SHARED, ROADWAY**  
A type of bikeway where bicyclists share the roadway with motor vehicles.

**SHOULDER**  
A portion of a highway contiguous to the roadway that is primarily for use by pedestrians, bicyclists, and emergency use of stopped vehicles.

**SHOULDER BIKEWAY**  
A type of bikeway where bicyclists travel on the shoulder of the roadway.



### SHY DISTANCE

The distance between the bikeway's edge and any fixed object capable of injuring a cyclist using the facility.

### SIDEWALK

The portion of a highway or street designed for preferential or exclusive use by pedestrians.

### SIDEWALK BIKEWAY

Any sidewalk signed and/or striped to permit bicyclists to share the sidewalk right-of-way with pedestrians.

### SIGHT DISTANCE

A measurement of the bicyclist's visibility, unobstructed by traffic along the normal path to the farthest point of the roadway surface.

### TRAFFIC CONTROL DEVICES

Signs, signals, or other fixtures, whether permanent or temporary, placed on or adjacent to a travelway by authority of a public body having jurisdiction to regulate, warn, or guide traffic.

### TRAFFIC VOLUME

The given number of vehicles that pass a given point for a given amount of time (hour, day, year).

### TRAVELWAY

Any way, path, road, or other travel facility used by any and all forms of transportation.

### VEHICLE

Any device in, upon, or by which any person or property is or may be transported or drawn upon a public highway and includes vehicles that are self-propelled or powered by any means.

## The Design Bicyclist

Transportation improvements intended to accommodate bicycle use must address the needs of both experienced and less experienced riders.

One solution to this challenge is to develop the concept of a "design bicyclist" and adopt a classification system for bicycle users which includes the following:

- **Group A:  
Advanced Bicyclists**

This group is made up of experienced riders who can operate under most traffic conditions. These bicyclists comprise the majority of the current users of shoulder bikeways and shared lanes on arterial streets and are best served by:

- Direct access to destinations usually via the existing street and highway system.
- The opportunity to operate at maximum speed with minimum delays.
- Sufficient operating space on the roadway or shoulder to reduce the need for either the bicyclist or the motor vehicle operator to change position when passing.

- **Group B:  
Basic Bicyclists**

These bicyclists are less confident of their ability to operate in traffic without special provisions for bicycles. They include casual or new adult and teenage riders as well as serious riders who are uncomfortable cycling in traffic. These bicyclists require:

- Comfortable access to destinations preferably by a direct route and either low-speed low traffic-volume streets or designated bicycle facilities.

- Well-defined separation of bicycles and motor vehicles on arterial and collector streets (bike lanes or wide shoulders) or on separated multiple-use paths.

- **Group C: Children**

Preteen riders whose roadway use is initially monitored by parents. Eventually these riders are accorded independent access to the system. They and their parents require provisions of separated multiple-use paths and:

- Access to key destinations surrounding residential areas including schools, recreational facilities, shopping, or other residential areas.
- Residential streets with low motor vehicle speed limits and volumes.
- Physical separation (multi-use pathways) of bicycles and motor vehicles on arterial and collector streets.

Generally, Group A bicyclists will be best served by designing all roadways to accommodate shared use by bicycles and motor vehicles.

Group B and Group C bicyclists will be best served by a network of neighborhood streets and separated, multi-use pathways.

Full implementation of this approach will result in a condition where every street will incorporate at least the design treatments recommended for Group A bicyclists. In addition, a network of routes will be enhanced by incorporating the bicycle facilities recommended for Group B and Group C bicyclists.

## Types of Bicycle Facilities and Design Standards

Bicycles are legally classified as vehicles and can be ridden on all public roadways in Idaho.

Therefore, bicycle facilities must be designed to allow bicyclists to ride in a manner consistent with motor vehicle operation. There are four basic types of facilities that accommodate bicycle travel. Figures 1 and 2 describe how each type of facility can be applied to various roadway types for each classification of bicyclist.



Figure 1

**FACILITY IMPROVEMENTS FOR CHILD (Class C)  
AND CASUAL (Class B) BICYCLISTS**

Roadway Type	Urban			Rural
	Arterial	Collector	Residential	
Over/Underpass	▲	■	—	—
Traffic Signals	▲	■	—	—
Shared Lane	●	●	▲	●
Shoulder Bikeway	●	●	—	■
Bicycle Lane	●	■	■	●
Separated Multi-use Path	▲	▲	■	■

- ▲ Most appropriate
- May be appropriate
- Least appropriate
- Not required

Figure 2

**FACILITY IMPROVEMENTS FOR EXPERIENCED BICYCLISTS (Some Class B and Class A)**

Roadway Type	Urban			Rural
	Arterial	Collector	Residential	
Over/Underpass	■	—	—	—
Traffic Signals	■	■	—	—
Shared Lane	■	▲	—	■
Shoulder Bikeway	■	■	—	▲
Bicycle Lane	▲	▲	—	●
Separated Multi-use Path	■	■	—	■

- ▲ Most appropriate
- May be appropriate
- Least appropriate
- Not required



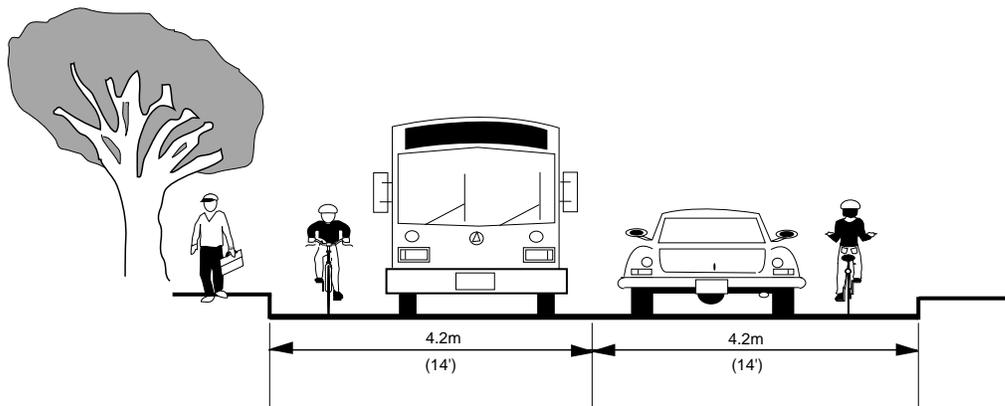
## a. Shared Lanes

On a shared facility, bicyclists and motorists share the same travel lanes. Shared facilities are common on city street systems and roads with limited right-of-way. It can be considered an acceptable solution when there is inadequate width to provide bike lanes or shoulder bikeways.

## b. Shoulder Bikeway

Smooth, paved roadway shoulders provide a suitable area for bicycling conflicting little with faster-moving motor-vehicle traffic. The majority of rural bicycle travel on the state highway system is accommodated on shoulder bikeways. Roadway shoulders for bikeways should be 1.8 meters (6

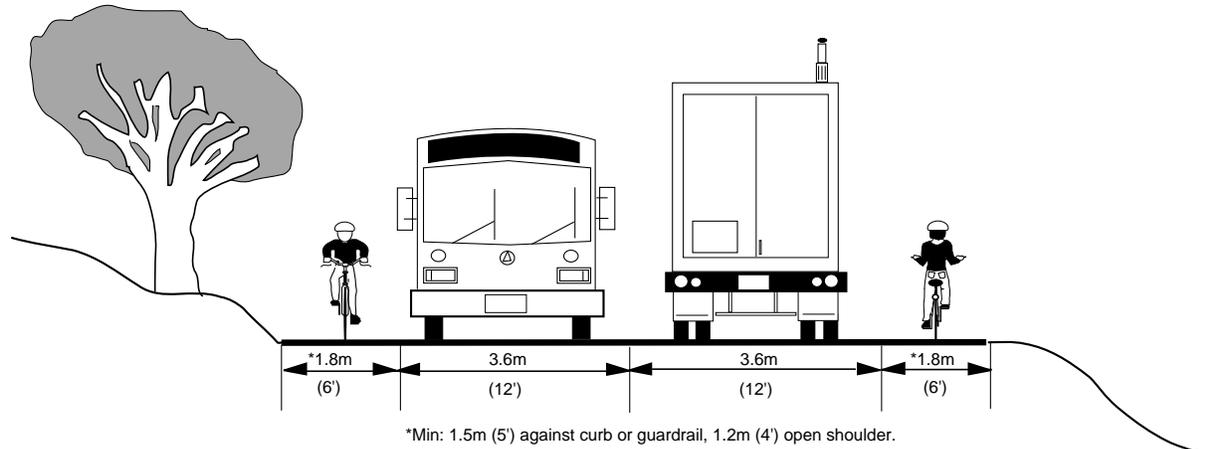
### Shared Lanes



A lane with 4.2 meters (14 feet) of usable width is desired in an urban setting which allows a motor vehicle and a bicycle to operate side by side. Usable width would normally be from curb face to lane stripe, but adjustments need to be made for drainage grates, parking, and longitudinal ridges between pavement and gutter sections. Widths greater than 4.2 meters (14 feet) may encourage the undesirable operation of two motor vehicles in one lane. In this situation, consideration should be given to striping a bicycle lane or shoulder bikeway. Where bicycle travel is significant these roadways may be signed as bicycle routes.

feet) wide or greater. This provides ample width for bicycle traffic. If there are severe physical width limitations a minimum 1.2 meter (4 feet) shoulder may be adequate. Shoulder areas against an ordinary curb face should have a 1.5 meter (5 feet) minimum width or 1.2 meters (4 feet) from the longitudinal joint between a curb and gutter and the pavement edge. Shoulder widths of 1.5 meters (5 feet) are recommended from the face of a guardrail or other roadside barriers. 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. Even minimal width shoulders, 0.6-0.9 meters (2-3 feet), is an improvement over no shoulder at all.

## Shoulder Bikeway



Rumble strips are not recommended for roadway shoulders because they create a rough and inappropriate surface for bicycles. However, when it is determined that rumble strips are a necessary design treatment for safety reasons, then a minimum 0.3-meter (1-foot) wide smooth surface should be provided between the shoulder stripe and the rumble strip.

### c. Bicycle Lanes

Where bicycle travel and demand are substantial, a portion of the roadway is designated for preferential use by bicyclists. Bike lanes are common in urban areas. Bike lanes must always be well marked and signed to call attention to their preferential use by bicyclists (refer to MUTCD).

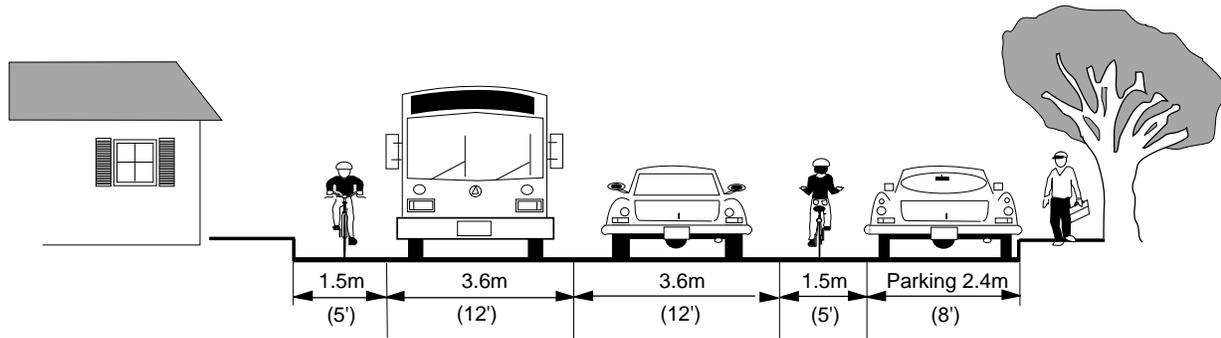
Bike lanes are established on urban arterial and major collector streets. The minimum width for a bike lane is 1.2 meters (4 feet), or 1.5 meters (5 feet) from the face of a curb or guardrail. There

should be a clear riding zone of 1.2 meters (4 feet) if there is a longitudinal joint between the pavement and the curb-and-gutter section. Bike lanes in excess of 1.8 meters (6 feet) wide are undesirable as they may be mistaken for a motor vehicle lane or parking area. Refer to the Idaho Traffic Manual or the MUTCD for detailed specifications for pavement striping, stencils, and signing of bicycle lanes.

If parking is permitted, the bike lane must be placed between the parking area and the travel lane and have a minimum width of 1.5 meters (5 feet).

Bike lanes must always be one-way facilities and carry bicycle traffic in the same direction as adjacent motor vehicle traffic. Bike lanes on one-way streets should be on the right side of the roadway, except in areas where a bike lane on the left will decrease the number of conflicts (i.e., those caused by heavy bus traffic or dual right-turn lanes, for example).

## Bicycle Lanes



### d. Separated, Multiple-Use Path

A multiple-use path is a bicycle facility that is physically separated from motor vehicle traffic by an open space or barrier, and it may be within the roadway or independent right-of-way. Separated paths are normally two-way facilities. They may be appropriate in corridors not served by other bikeways, if there are few intersecting roadways.

Where a separated path must be parallel and near a roadway, there must be a 1.5-meter (5-foot) minimum width separating them, or a physical barrier of sufficient height [usually 1.4 meters (4.5 feet) minimum is adequate] must be installed.

Three meters (10 feet) is the standard width for a separated multiple-use path. Paths should be 3.6 meters (12 feet) wide in areas with high bicycle volume or where they are used by a combination of bicyclists, pedestrians, skaters, and joggers. A minimum 0.6-meter (2-foot) graded area should be maintained adjacent to both sides of the pavement to provide clearance (shy distance) from poles, trees, fences, and other obstructions.

Multiple-use paths provide excellent bicycle transportation, especially where the path is truly

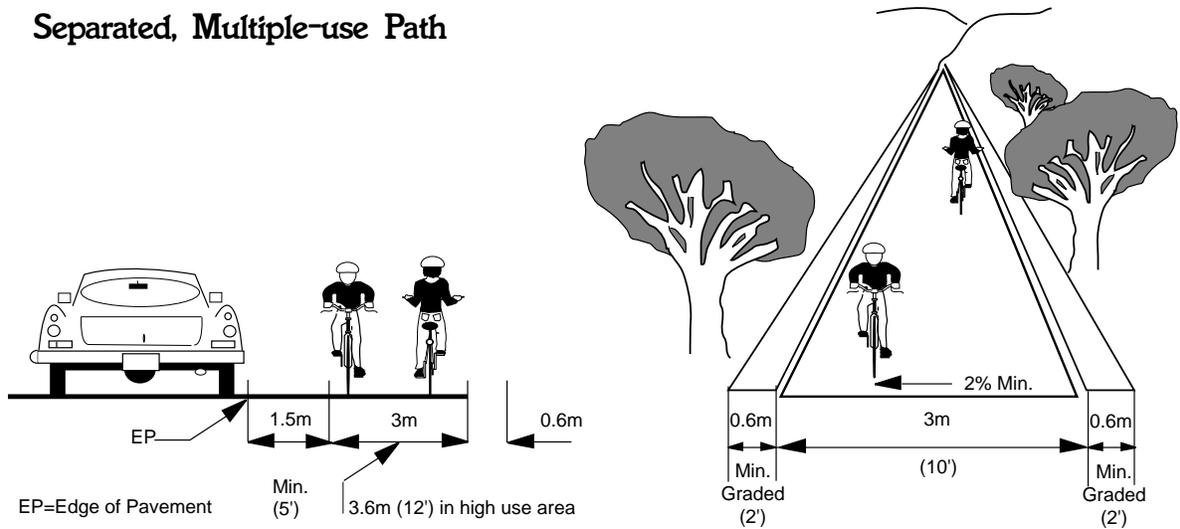
isolated from motor vehicles, such as along green ways or railroad corridors. Special care must be taken to limit the number of at-grade crossings with streets or driveways. Poorly designed paths can put cyclists in a position where the driver of a motor vehicle does not expect them. Motorists are generally looking for traffic on the roadway and may not see a cyclist on a nearby path.

Paths with two-way bicycle traffic should not be placed on or adjacent to roadways. Otherwise, a portion of the cyclists ride against the normal flow of motor vehicle traffic, which is contrary to the rules of the road, with the following consequences:

- Bicyclists and motorists may collide, as right-turning drivers at intersections and driveways rarely look to their right. The drivers fail to see approaching bicyclists who are riding against traffic.
- Some bicyclists ride improperly against the normal flow of traffic to reach the path or continue on against traffic where the path ends. Wrong-way riding is a major cause of bicycle/motor vehicle accidents.

Pathways of 2.4 meters (8 feet) are not recommended in most situations because they become overcrowded. If necessary, they should only be constructed where long-term usage is expected to

## Separated, Multiple-use Path



be low; where there is minimum pedestrian use; and with proper horizontal and vertical alignment to ensure good sight distances. Multiple-use paths built along streams and in wooded areas present special challenges. The roots of shrubs and trees, especially cottonwoods, can pierce the path surface and cause it to bubble up and break apart. Preventative methods include removal of vegetation, realignment of the path away from trees, and placement of root barriers along the edge of the path.

## Additional Reference Publications

The standards set forth in this publication will be adequate for most situations. However, there are many factors that may affect the specific application of these standards to any given roadway or traffic situation. Therefore, the design professional should consult other sources for more detailed specifications prior to finalizing facility design. These publications are considered supplements to this manual and the standards described adopted by reference:

1. *Idaho Maintenance Manual*: facility maintenance, repair, operations.
2. *Idaho Traffic Manual*: signing, marking, striping.
3. *Manual on Uniform Traffic Control Devices*: signing, marking, striping.
4. *AASHTO Guide for the Development of Bicycle Facilities*: width and clearance, design speed, horizontal alignment and superelevation, grade, sight distance, and others.

For additional technical assistance, reference materials, or general information, contact: Bicycle and Pedestrian Planner, Idaho Transportation Department P.O. Box 7129, Boise, Idaho 83707.

# Appendix C

## Idaho Statutes Pertaining to Pedestrians and Bicycles

### Idaho Vehicle Code Title 49, Chapter 7

49-701. Pedestrian obedience to traffic-control devices and traffic regulations.

- (1) A pedestrian shall obey the instructions of any traffic-control devices specifically applicable to him, unless otherwise directed by a peace officer.
- (2) Pedestrians shall be subject to traffic and pedestrian-control signals as provided in sections 49-802 and 49-803, Idaho Code.
- (3) At all other places pedestrians shall be accorded the privileges and shall be subject to the restrictions stated in this title.

49-702. Pedestrians' right of way in crosswalks.

- (1) When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right of way, slowing down or stopping, if need be, to yield to a pedestrian crossing the highway within a crosswalk.
- (2) No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close as to constitute an immediate hazard.
- (3) Subsection (1) of this section shall not apply under the conditions stated in section 49-704(2) Idaho Code.
- (4) Whenever any vehicle is stopped at a marked crosswalk or at an unmarked crosswalk at an intersection to permit a pedestrian to cross the highway, the driver of any other vehicle approaching from the rear shall not overtake and pass the stopped vehicle.
- (5) Except where otherwise indicated by a crosswalk or other traffic-control devices a pedestrian shall cross the highway at right angles to the curb or by the shortest route to the opposite curb.

49-703. Pedestrians to use right half of crosswalks. Pedestrians shall move, whenever practicable, upon the right half of crosswalks.

49-704. Crossing at other than crosswalks.

(1) Every pedestrian crossing a highway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right of way to all vehicles upon the highway.

(2) Any pedestrian crossing a highway at a point where a pedestrian tunnel or overhead pedestrian crossing has been provided shall yield the right of way to all vehicles upon the highway.

(3) Between adjacent intersections at which traffic-control signals are in operation pedestrians shall not cross at any place except in a marked crosswalk.

(4) No pedestrian shall cross a highway intersection diagonally unless authorized by traffic-control devices. When authorized to cross diagonally, pedestrians shall cross only in accordance with the traffic-control devices pertaining to crossing movements.

49-705. Pedestrians yield to authorized emergency vehicles.

(1) Upon the immediate approach of an authorized emergency vehicle making use of an audible or visual signal meeting the requirements of section 49-623, Idaho Code, or of a police vehicle properly and lawfully making use of an audible signal

only, every pedestrian shall yield the right of way to the authorized emergency or police vehicle.

(2) This section shall not relieve the driver of an authorized emergency or police vehicle from the duty to drive with due regard for the safety of all persons using the highway nor from the duty to exercise due care to avoid colliding with any pedestrian.

49-706. Blind and/or hearing-impaired pedestrian has right of way.

The driver of a vehicle shall yield the right of way to any blind pedestrian carrying a clearly visible white cane or accompanied by a guide dog or a hearing-impaired person accompanied by a hearing-aid dog.

49-707. Pedestrians' right of way on sidewalks.

The driver of a vehicle crossing a sidewalk shall yield the right-of-way to any pedestrian and all other traffic on the sidewalk.

49-708. Pedestrians on highways.

(1) Where a sidewalk is provided and its use is practicable, it shall be unlawful for any pedestrian to walk along and upon an adjacent roadway.

(2) Where a sidewalk is not available any pedestrian walking along and upon a highway shall walk only on a shoulder, as far as practicable from the edge of the roadway.

(3) Where neither a sidewalk nor a shoulder is available, any pedestrian walking

along and upon a highway shall walk as near as practicable to an outside edge of the roadway, and, if on a two-way highway, shall walk only on the left side of the highway.

(4) Except as otherwise provided in this title, any pedestrian upon a roadway shall yield the right-of-way to all vehicles upon the roadway.

#### 49-709. Pedestrians soliciting rides or business.

(1) No person shall stand on a highway for the purpose of soliciting a ride.

(2) No person shall stand on a highway for the purpose of soliciting employment, business or contributions from the occupant of any vehicle.

(3) No person shall stand on or in proximity to a highway for the purpose of soliciting the watching or guarding of any vehicle while parked or about to be parked on a highway.

#### 49-710. Bridge and railroad signals.

(1) No pedestrian shall enter or remain upon any bridge or approach thereto beyond the bridge signal, gate, or barrier after a bridge operation signal indication has been given.

(2) No pedestrian shall pass through, around, over, or under any crossing gate or barrier at a railroad grade crossing or bridge while the gate or barrier is closed or is being opened or closed.

49-714. Traffic laws apply to persons on bicycles and other human-powered vehicles — due care.

(1) Every person operating a vehicle propelled by human power or riding a bicycle shall have all of the rights and all of the duties applicable to the driver of any other vehicle under the provisions of chapters 6 and 7 of this title, except as otherwise provided in this chapter and except as to those provisions which by their nature can have no application.

(2) Every operator or rider of a bicycle or human-powered vehicle shall exercise due care.

#### 49-715. Riding on bicycles.

(1) A person propelling a bicycle shall not ride other than upon or astride an attached permanent and regular seat.

(2) No bicycle or human-propelled vehicle shall be used to carry more persons at one (1) time than the number for which it is designed and equipped.

(3) An adult rider may carry a child securely attached to his person in a backpack or sling or in a child carrier attached to the bicycle.

#### 49-716. Clinging to or following vehicles.

(1) No person riding upon any bicycle, coaster, roller skates, skateboard, sled or toy vehicle shall attach it or himself to any vehicle upon a highway.

(2) The provisions of this section shall not prohibit the attachment of a bicycle trailer or bicycle semitrailer to a bicycle if that trailer or semitrailer has been designed for that attachment.

(3) No person riding upon any bicycle or human-powered vehicle shall follow a vehicle so closely as to constitute an immediate hazard to the rider.

#### 49-717. Position on highway.

(1) Any person operating a bicycle upon a roadway at less than the normal speed of traffic at the time and place and under the conditions then existing shall ride as close as practicable to the right-hand curb or edge of the roadway except under any of the following situations:

- (a) When overtaking and passing another bicycle or vehicle proceeding in the same direction,
- (b) When preparing for a left turn at an intersection or into a private road or driveway,
- (c) When reasonably necessary to avoid conditions including fixed or moving objects, parked or moving vehicles, bicycles, pedestrians, animals, surface hazards or substandard width lanes that make it unsafe to continue along the right-hand curb or edge.

(2) Any person operating a bicycle upon a one-way roadway with two (2) or more marked traffic lanes may ride as near the left-hand curb or edge of the roadway as practicable.

#### 49-718. Riding two abreast.

Persons riding bicycles upon a highway shall not ride more than two (2) abreast except on paths or parts of highways set aside for the exclusive use of bicycles. Persons riding two (2) abreast shall not impede the normal and reasonable movement of traffic and, on a laned roadway, shall ride within a single lane.

#### 49-719. Carrying articles.

No person operating a bicycle shall carry any package, bundle or article which prevents the operator from using at least one (1) hand in the control and operation of the bicycle.

#### 49-720. Stopping — turn and stop signals.

(1) A person operating a bicycle or human-powered vehicle approaching a stop sign shall slow down and, if required for safety, stop before entering the intersection. After slowing to a reasonable speed or stopping, the person shall yield the right of way to any vehicle in the intersection or approaching on another highway so closely as to constitute an immediate hazard during the time the person is moving across or within the intersection or junction of highways, except that a person after slowing to a reasonable speed and yielding the right of way if required, may cautiously make a turn or proceed through the intersection without stopping.

(2) A person operating a bicycle or human-powered vehicle approaching a steady red traffic-control signal shall stop before entering the intersection, except that a person, after slowing to a reasonable speed and yielding the right-of-way if required, may cautiously make a right-hand turn without stopping or may cautiously make a left-hand turn onto a one-way highway without stopping.

(3) A person riding a bicycle shall comply with the provisions of section 49-643, Idaho Code.

(4) A signal of intention to turn right or left shall be given during not less than the last one hundred (100) feet traveled by the bicycle before turning, provided that a signal by hand and arm need not be given if the hand is needed in the control or operation of the bicycle.

49-721. Bicycles on sidewalks.

(1) A person operating a bicycle upon and along a sidewalk, or across a highway upon and along a crosswalk, shall yield the right of way to any pedestrian, and shall give an audible signal before overtaking and passing a pedestrian or another bicyclist.

(2) A person shall not operate a bicycle along and upon a sidewalk or across a highway upon and along a crosswalk, where the use of bicycles is prohibited by official traffic-control devices.

(3) A person operating a vehicle by human power upon and along a sidewalk, or across a highway upon and along a crosswalk, shall have all the rights and duties applicable to a pedestrian under the same circumstances.

49-722. Bicycle racing.

(1) Bicycle racing on the highways is prohibited except as authorized in this section.

(2) Bicycle racing on a highway shall not be unlawful when a racing event has been approved by the department or local law enforcement authorities on any highway under their respective jurisdictions.

Approval of bicycle highway racing events shall be granted only under conditions which assure reasonable safety for all race participants, spectators and other highway users, and which prevent unreasonable interference with traffic flow which would seriously inconvenience other highway users.

(3) By agreement with the approving authority, participants in an approved bicycle highway racing event may be exempt from compliance with any traffic laws otherwise applicable, provided that traffic control is adequate to assure the safety of all highway users.

49-723. Light and reflector required at night.

Every bicycle in use at the times described in section 49-903, Idaho Code, shall be operated with a light-emitting device visible from a distance of at least five hundred (500) feet to the front, attached to the bicycle or the rider, and with a reflector clearly visible from the rear of the bicycle.

49-724. Additional lights authorized.

A bicycle or its rider may be equipped with lights or reflectors in addition to those required in section 49-723, Idaho Code.

# Appendix D

## References

*Guide for the Development of Bicycle Facilities*, American Association of State Highway and Transportation Officials (AASHTO), August 1991

*Oregon Bicycle Plan*, Oregon Department of Transportation, July 1992

*Ada County Ridge-to-Rivers Pathway Plan*, Ada Planning Association, May 1993

*Balancing Engineering, Education, Law Enforcement, and Encouragement: Case No. 11*, National Bicycling and Walking Study, U.S. Department of Transportation, FHWA publication PD-93-009, August 1994

*Selecting Roadway Design Treatments to Accommodate Bicycles*, U.S. Department of Transportation, FHWA publication RD-92-073, January 1994

*The National Bicycling and Walking Study*, U.S. Department of Transportation, FHWA publication PD-94-023, March 1994

