Colorado Guide for the Development of Local and Regional Bicycle and Pedestrian Plans

Gay Page
Bicycle/Pedestrian Program
Colorado Department of Transportation
4201 East Arkansas Avenue DTD
Denver Colorado 80222
303-757-9982
bicycleinfo@dot.state.co.us
www.dot.state.co.us/bikeped/

Table of Contents

Introduction

The United States Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and reauthorized the legislation in 1996 as the Transportation Equity Act for the 21st Century (TEA-21). These federal transportation acts require State Departments of Transportation to do many things including the:

- Development of a long-range statewide transportation plan;
- Development a bicycle and pedestrian master plan; and the
- Requirement to fund a Bicycle and Pedestrian Coordinator position to "promote and facilitate the increased use of non-motorized transportation, including developing facilities for the use of pedestrians and bicyclists and public educational, promotional, and safety programs for using such facilities."

In partial fulfillment of these federal requirements the Colorado Department of Highways became the Colorado Department of Transportation (CDOT) in 1991 and organized the state into 15 Transportation Planning Regions (TPR's) to develop regional specific transportation plans based on their unique needs and characteristics. The TPR Regional Transportation Plans are the basis for the development of CDOT's Statewide Transportation Plan. Also as part of this reorganization, CDOT officially placed the Bicycle/Pedestrian Program in the Planning Branch of the Division of Transportation Development (CRS 43-1-104(D)) and included a bicycle and pedestrian element in the Statewide Transportation Plan again based on the specific needs outlined in the Regional Transportation Plans.

When ISTEA became law in 1991, CDOT began focusing on the development of a multimodal statewide transportation system to move people, goods and services safely and efficiently. Bicycling and walking are recognized as important elements in building a seamless, integrated multimodal transportation system and constructing shoulders and sidewalks, providing access to transit, installing bicycle parking, teaching children to ride and walk safely, installing curb cuts and ramps for wheelchairs, striping bike lanes and building trails all contribute to the national transportation goals for safety, mobility, economic growth and trade, enhancement of communities and the natural environment, and national security.

Today, bicycling and walking are acceptable modes of transportation both within and beyond metropolitan areas. Citizens throughout Colorado are recognizing their energy efficiency, cost effectiveness, health benefits and environmental advantages and they are viable alternatives to the automobile for commuting to work, school, or for errands. Because more Coloradans are bicycling and walking, safe, convenient and well-designed facilities are essential. Motor vehicles, air, rail, transit, pedestrians and bicycles are all elements of Colorado's transportation system and promoting walking and bicycling will improve the efficiency and productivity of the entire transportation system.

In addition to the obvious benefits of providing the integrated multimodal transportation system mentioned above, a new and interesting partnership is being forged between transportation and health professionals. The national obesity crisis in America prompted the federal government to release data showing the relationship between health, physical activity, and community design. It has been shown that poor community design, where the transportation infrastructure makes it difficult to walk or bicycle promotes physical inactivity, which in turn increases the incidence of overweight Americans (up from 47% in 1976 to 61% in 1999). The federal government is calling on planning and health professionals, elected officials, and citizens to partner to create active community environments by creating opportunities to safely walk and bicycle.

To achieve these goals, all roadways should be designed and constructed under the assumption that bicyclists and pedestrians will use them. Bicycles and pedestrians should be considered in all phases of transportation planning, roadway design, engineering, new construction, reconstruction, capacity improvements and transit projects. The selection of the type of bicycle or pedestrian facility depends on many factors; including vehicular and bicycle traffic characteristics, adjacent land use and expected growth patterns.

Facilities, however, are only one of several elements essential to building a successful bicycle and pedestrian transportation system. Bicycle and pedestrian safety education and training, encouraging walking and bicycling, and enforcing the rules of the road as they pertain to bicyclists, pedestrians and motorists should be combined with facilities development to form a comprehensive statewide approach to bicycle and pedestrian use.

Therefore, this guide covers each of the "4 E's":

- Engineering
- Education
- Enforcement
- Encouragement

The 4 E's are the basis of comprehensive bicycle and pedestrian planning, as all bicycle or pedestrian related issues fall into one or more of these categories. This document is divided into two main sections. The first section addresses the system or facilities plan, which covers planning and engineering issues with information guiding the development of the bicycling and walking infrastructure. The second section relates to program related issues and information, and covers education, enforcement and encouragement.

System Plan

GUIDING PRINCIPLES

The following principles provide the foundation for institutionalizing bicycling and walking into Colorado's transportation system:

Accessibility – Walking and bicycling are a free and direct means of accessing local goods, services, community amenities and public transit and should be provided with equitable access to all transportation facilities and services. Facilities must meet all Americans with Disabilities Act rules and regulations.

Connectivity – Enhance modal and intermodal transfers and connections with the transportation network.

Coordination – Integrate bicycle and pedestrian transportation facilities and services with other planning and development.

Corridor Preservation – Identify transportation corridors necessary for expansion or enhancement of the transportation system.

Customer Focus – Address the needs and perceptions of community members through a comprehensive public involvement process.

Environmental Sustainability – Be dedicated to protecting and enhancing the environment. Walking and bicycling rely on human power and have negligible environmental impact.

Equity – Walking is the only mode of travel that is universally affordable and allows all people (children, adults, senior citizens, people with disabilities, and low-income) to travel independently.

Economic Viability – A bicycle and pedestrian-friendly environment encourages social interaction and contributes to the economy.

Financial – Identify and consider new and creative sources of funding in addition to anticipated resources.

Health and Well-being – Walking and bicycling are proven methods of promoting personal health and well-being.

Mobility – Consider the movement of people, goods, services and information.

Multimodal – Consider all modes of transportation and identify the most appropriate mix of modal facilities and services.

Popsicle Principle – Facilitate the ease by which an eight-year-old child can safely and happily walk or bike to a neighborhood store for a Popsicle.

Safety – Incorporate appropriate measures to minimize danger, risk or injury in the development, operation, and maintenance of transportation facilities. An environment in which people feel safe and comfortable walking increases community safety for all.

System Management – Optimize the effectiveness of current transportation facilities and services.

System Maintenance – Define the appropriate maintenance level for transportation facilities and services.

PLANNING

Experience has taught us; "if you build it they will come". Experience also tells us that if you build it well and you build it where people want to go they will come in droves! Communities that are bicycle and pedestrian-friendly have one thing in common - they place a high priority on planning methods and policy-making that favor alternative transportation.

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 users of the system. Bicyclists and pedestrians have the same mobility needs as every other user of the transportation system and use local, regional and state roadway systems for access to jobs, services and recreational activities. Therefore, planning for existing and potential bicycle and pedestrian use must be integrated into the planning process and proposed bicycle and pedestrian projects should be consistent with local or regional transportation plans.

Whether a separate bicycle and pedestrian plan is developed or supportive policies are adopted within your comprehensive plan or other planning documents, implementation will be greatly facilitated through collaborative regional planning, where local and regional bicycle and pedestrian facilities are identified so that all parties understand, incorporate, and proceed to implement their respective components of the system.

Important elements that can assist the development of a local or regional bicycle and pedestrian plan are a bicycle and pedestrian advisory committee, staff, and the support of public officials. In addition, local and regional bicycle and pedestrian plans typically include the following sections (see Appendix C):

- Executive Summary
- Vision
- Strategic Planning Model
- Current Conditions and Needs
- Implementation Plan

It is also very helpful to develop a map of existing and proposed bicycle and pedestrian facilities. Cities, Counties, and State Transportation Planning Regions should confer during this process to ensure connectivity across city, county and regional boundaries.

Due to the different characteristics of walking and bicycling, communities or regions may choose to write two separate plans – one for pedestrians and another for bicycling. However, a combined plan for both modes can be successful if the needs of each mode are clearly identified. For instance, pedestrian needs may be primarily local, but the bicycle system will reach beyond local borders and have regional and statewide significance. Issues like access to transit do not necessitate separate planning documents as long as both modes are addressed equitably.

ENGINEERING

Engineering includes facilities – the system, maintenance, and parking. The bicycle or pedestrian transportation system must allow users with varying abilities to safely and efficiently travel from origin to destination. A comprehensive bikeway system will enable bicyclists to travel from town-to-town throughout the state and between neighboring states.

Bicycle facilities include on-street facilities such as bike lanes, wide curb lanes, shoulders and off-street facilities such as shared-use paths. Plans should include a mix of on and off-street facilities to provide a seamless network for travel from state highways to county and local roads to off-street paths. Mountain biking facilities may be included in a local or regional plan if the community considers them a part of their non-motorized transportation system and they serve more than a recreational purpose. In any plan trailheads should be indicated and bicycle and pedestrian access to backcountry trails should be provided whenever possible.

Pedestrian needs tend to be more localized. All urban and suburban roadways should be designed to ADA standards for sidewalks and trails. Pedestrian facilities include sidewalks, shared-use paths, pedestrian malls, bridges and underpasses. As with the bicycle system, the pedestrian system should provide access across highways and other barriers that divide origins and destinations. Bridges and underpasses must include sidewalks and shoulders or bike lanes.

The following should be taken into consideration when developing the engineering or system portion of the plan:

- Bicycle and pedestrian facilities need a certain level of maintenance in order to remain usable and safe. Maintenance levels can range from frequent sweeping and routine repair and vegetation trimming to maintenance by request only. Level and schedule of maintenance can decided on a corridor-by-corridor basis but should be based on an adopted maintenance policy. No facility should be built without a maintenance plan in place. The level of maintenance for these facilities should be planned and budgeted while a project is being planned. Maintenance for existing facilities also needs consideration.

- Consideration should be given to adequate bike parking at all destinations, much the same as providing car parking at destinations. Providing appropriate bicycle parking facilities encourages the use of bikeway systems and is a necessary component of these systems. Colorado bicycle parking guidelines are outlined in the *Colorado Bicycling Manual* published by the CDOT Bicycle/Pedestrian Program.

- Connectivity within each modal system as well as from one system to another ensures the success of the entire transportation system. Intermodal linkages should be provided wherever it is possible to interface between two or more modes. This includes providing appropriate facilities for cycling and walking to bus stops and

terminals, train stations, park and rides, airports, and other modal facilities. This also includes providing appropriate bicycle parking and, in some cases, the ability to transport bicycles via transit or other modes.

- Cyclists and pedestrians come in all ages, sizes and backgrounds, and have a variety of origins and destinations. Remember to accommodate children, seniors, tourists, and all economic and social stratums in your plans.

- An analysis of crash statistics is a useful tool in developing a system plan. Information such as location (intersection, midblock, street, path), number of crashes in each location, crash type, age of victim, and the cause of the crash should be available through law enforcement agencies' accident reports.

  This information is useful in determining the need and priority of new facilities, reconstructing existing facilities or the need for better signing, traffic control and/or education. You may want to keep closer track of this information in the future by requesting that law enforcement agencies send you monthly reports as they become available. You may also request that other data be collected such as helmet use of crash victims.

- Because roadways typically offer the most direct routes, the least expensive and safest alternative for bicyclists are on street bicycle facilities such as shoulders or bike lanes. On street bikeways should be included in all roadway projects regardless of whether an off street facility exists or has been proposed. Designers and engineers should consult the AASHTO *Guide for the Development of Bicycle Facilities* for assistance in choosing the appropriate type of facility.

- Bike Route signs should be considered as an engineering element. They should be consistent on a given system and provide adequate information for cyclists to navigate to their destination. Necessary elements include distance, direction and destination. Through routes within the state and between Colorado and bordering states may be part of a future statewide and/or interstate signage system. Chapter 9 of the *Manual on Uniform Traffic Control Devices* (MUTCD) provides information on signing for bicycle systems.

- Your plan should identify where bicycles and pedestrians are prohibited. In Colorado, bicycles are vehicles and therefore, allowed on all interstates and state highways with very few exceptions (primarily urban interstates). You may consult the *Colorado Bicycling Map* published by the CDOT Bicycle/Pedestrian Program for the exact locations where bicyclists must use an alternate route on the state highway system. Prior to a road being closed to cyclists, there must be a parallel facility (a frontage road or separate path) within 450' of the road proposed for closure. Language requiring the preservation of continuous bicycle routes and prevention of severing existing routes are in TEA-21 and the Colorado Statutes.

PLANNING AND ENGINEERING QUESTIONS

As a planning tool, ask the following questions during the development of the system plan. In addition, completion of the *Walkability and Bikeability Checklists* in the Appendices of this document can reveal important information about current conditions.

- Where are the activity centers (employment, shopping, schools, entertainment and recreation, etc.)?
  - Can you get there by bicycling or walking?
  - If not, where are the gaps?
  - What future projects would fill these gaps?
  - What improvements can be made to the existing system to encourage bicycling and walking to these destinations?

- Would an Origin and Destination study be useful?

- What benefits would there be if it were possible to bicycle or walk rather than drive?

- What on and off-street bicycle and pedestrian facilities currently exist?

- Which of these are in need of improvement or repair?

- What streets can be improved to incorporate on street bicycle facilities?

- Inventory bicycle and pedestrian traffic control device problems and issues including signage, striping, signal timing, etc. This can be written in general terms, with a more in depth discussion of particular problem areas. The question to ask is, "Does this treatment do the job it needs to?"

BICYCLE SYSTEM DATA

Develop a table and/or map of existing and proposed bicycle facilities that identify problem areas and gaps in the bicycling network.

1. A map with the region's bicycle facilities marked according to the information below. Color is helpful, but not necessary as long as the line width is distinguishable between existing on and off street facilities.

SOLID (WIDE) GREEN	**Existing On Street** - (bike lanes, shoulders, low volume roads, and other appropriate bike routes that need no significant improvement)
GREEN DOTTED	**Proposed On Street**
SOLID (NARROW) RED	**Existing Off Street** - paved shared-use paths
RED DASHED	**Proposed Off Street** - paved shared-use paths
YELLOW/PURPLE	**Potential future off street corridors** - (rails to trails, rails with trails, fiber optic routes, irrigation ditch systems, etc.)

   Label destinations, camping, and other pertinent regional information and indicate junctions with recreational trailheads, etc. State the purpose or significance of the link if it is not a through route or the destination is not clear.

   Information about these facilities including shoulder or path width, needed improvements on existing facilities, relationship linkages, priority level, approximate cost, additional information.

2. Estimate the total number of proposed bike parking spaces and storage facilities needed during the life of your plan to adequately provide for bicycles at public areas and intermodal connections, including downtowns, public buildings and spaces, and at intermodal connections (park and rides, transit stops, train stations, airports, etc.).

PEDESTRIAN SYSTEM DATA

Develop a table and/or map of existing and proposed pedestrian facilities that identify problem areas and gaps in the walking network. The facilities can include sidewalks or walkways, bridges, overpasses, or underpasses. Lack of curb cuts, obstructions such as poorly placed signs, poles, hydrants, etc., and areas of poor surface quality that must be improved under ADA requirements should be included.

OPERATION AND MAINTENANCE

According to AASHTO, the jurisdictions responsible for the operation, maintenance and policing of bicycle and pedestrian facilities should be established prior to construction. In addition to construction costs, operating and maintenance costs should be considered and included in the overall budget for the facility. Neglecting routine maintenance eventually may render bicycle facilities unridable and such deteriorating facilities may become a liability to the state or community. Citizens should be encouraged to report bicycle facilities that are in need of maintenance. A central contact person who can authorize maintenance work should be designated to receive such reports.

A smooth surface, free of potholes and debris, should be provided on all bicycle and pedestrian facilities. Glass, sand, litter, and fallen leaves often accumulate on bike lanes, paved shoulders, and shared use paths; therefore, regular sweeping is desirable. Pavement edges should be uniform and should not have abrupt drop-offs. Signs and pavement markings should be inspected regularly and kept in good conditions, and if determined to be no longer necessary, promptly removed. Highways with bicycle traffic may require a more frequent and higher level of maintenance than other highways.

MAINTENANCE QUESTIONS AND DATA

The following questions should be asked while developing the maintenance element of the system plan:

- How are existing facilities maintained?
- How will proposed facilities be maintained?
- What levels of maintenance are appropriate for each facility?
- What is the definition of each of the levels of maintenance?
- What are the problems associated with bicycle and pedestrian facility maintenance?
- List current maintenance resources for bicycle and pedestrian facilities including equipment for sweeping, plowing and other routine maintenance operation, and the number of FTEs (Full Time Employees) to perform these tasks.
- Provide a statement regarding what an acceptable level of maintenance is and whether that level is being met in the region.

- Provide a statement regarding the appropriateness and adequacy of the type and quantity of current maintenance equipment.

- Provide a list of agencies and departments responsible for bicycle and pedestrian facility maintenance in the various areas of the region (city, county, state, transportation department, parks and recreation, etc.)

- Develop a list or statement of projected maintenance needs for the next 20 years, including costs if possible.

- Provide a policy statement regarding maintenance of bicycle and pedestrian facilities that will be implemented throughout the region.

- Provide a statement regarding the willingness of the agencies in the region to maintain state bicycle and pedestrian facilities built there and at what level.

Program Plan

EDUCATION

Education is the most important element in reducing bicyclists and pedestrian injuries, reducing hostility between the various transportation modes, ensuring that the law is obeyed, and that facilities are properly designed and built. Cyclists, pedestrians, and motorists need safety education. Police officers need education regarding the manner in which to enforce bicycle and pedestrian laws, and engineers and planners need facility design education.

The CDOT Bicycle/Pedestrian Program is interested in working with communities throughout the state to provide the educational resources mentioned above, including the tools, materials, and funding information. Available CDOT bicycle and pedestrian education resources include an education program to train trainers (police officers, fire and health professionals, school teachers, and other community groups) to teach a comprehensive bicycle and pedestrian education course to students in grades K-5. Numerous written resources are available including the Colorado Bicycling Manual, Colorado Bicycling Map, Rules of the Road and Trail Wallet Cards, Administration of Bicycle Event on Colorado Roads, and others (see CDOT Publications in Appendix F).

The CDOT Bicycle/Pedestrian Program also offers facility design workshops for planners and engineers in both the public and private sectors. These workshops can help prevent costly lessons in the field, as few planners and engineers are trained on bicycle or pedestrian facility design. The program staff may also be used to facilitate town meetings, public involvement workshops, host community design charrettes, and to provide instruction for law enforcement officers regarding bicycle and pedestrian rights and responsibilities.

WHY TEACH TRAFFIC SAFETY?

The change in bicycling in recent years has created a new attitude towards bicycle safety education. Bicycles are owned by approximately 30% of the U.S. population, 45% of which ride at least occasionally. 80%-90% of children own a bicycle by the time they are in second grade. A 1999 CDOT study of bicycling and walking in Colorado determined that there are three million bicyclists in the state. Of those, only 40% have received any type of bicycle safety instruction and 33% received pedestrian safety instruction. When asked where children should receive bicycle and pedestrian safety instruction nearly 50% of the respondents indicated school as the appropriate location and the instructors should be police officers or firefighters. Parents were listed as the second choice followed by schoolteachers, parks & recreation departments, community organizations, and pamphlets or brochures.

People of all ages are interested in learning how to ride their bikes in a safe and confident way. ***Parents*** want their young children to learn safe traffic skills and behavior. ***Children*** want to develop their skills so they can be safe and predictable traffic participants when walking or using their bicycles. ***Cyclists*** are interested in improving the bicycling environment in their community. ***Community leaders*** are becoming increasingly involved in making their cities and neighborhood safe for all pedestrians and bicyclists.

Because walking and bicycling are such important components in our communities, it makes sense to do whatever is necessary to encourage safe behaviors. It is important to look for ways to increase the safety, knowledge, and skills of all pedestrians and bicyclists, especially children. Consider the facts: every day in America, at least one child is killed and another 1,000 are rushed to the emergency room with serious injuries from bicycle crashes. Many of these children could be saved with proper education and appropriate safety equipment.

Statistics in support of education programs:

- A child need only fall from a height of 2 feet and hit their head to suffer traumatic brain injury.

- Head injuries account for 62% of bike related deaths, 67% of bicycle related hospital admissions, and 33% of bicycle related emergency room visits. Properly fitted helmets have been shown to reduce bicycle related brain injuries by almost 85%.

- Nationally, 50% of bicyclist fatalities between the ages of 7 - 15 are the fault of the cyclist. The average age of bicyclists killed in crashes in the last ten years has risen from 23 years of age to 30.8 years of age, illustrating the increasing involvement of adults in bicycling.

- Nationally, parents within a 2-block radius of school hit 50% of all school age children involved in pedestrian/motor vehicle crashes.

- Consistent, comprehensive, statewide bicycle and pedestrian education for elementary school children is important in order to ensure the lowest possible number of injuries and fatalities. Grades K-2 are the most appropriate groups to learn how to be safe as pedestrians. Grades 3-6 are the target groups for bicycle education programs.

- Though keeping children safe is a main concern in bicycle and pedestrian education, many adult cyclists and pedestrians' benefit from effective bike safety and pedestrian instruction also.

- Very young children, the elderly, and intoxicated individuals are particularly susceptible to motor vehicle/pedestrian crashes.

- In addition to safety education, educating youths about transportation choices and their benefits and consequences may produce fewer auto dependent adults.

EDUCATION QUESTIONS AND DATA

- Do an inventory of education programs for planners, engineers, and law enforcement officers. Include contacts for any of these programs.

- Take an inventory of current bicycle and pedestrian education programs. Include workshops, classes, assemblies, and "rodeos" at schools, parks and recreations departments, etc. Include information on who is providing the class or resource, (i.e., police department, service club, school, scouting organization, etc.).

- What is the status of bicycle and pedestrian education in your community?
  - Does it exist?
  - What improvements should be implemented?
  - Who is responsible for the education programs?
  - Are there sufficient resources available?
  - Are the current programs effective?

- What are the obstacles to providing adequate bicycle and/or pedestrian education?

- Are you interested in using the CDOT Bicycle/Pedestrian Program as a resource for educational materials and classes?

- Identify your target audiences:

AUDIENCE	AGE	SCHOOL GRADE	SKILLS/TRAFFIC SAFETY RULES
Preschool	0 - 5		Pedestrian
Early Elementary	6 - 9	K - 3	Pedestrian/Bicycle
Upper Elementary	10 - 12	4 - 6	Pedestrian/Bicycle
Middle School	13 - 14	7 – 8	Pedestrian/Bicycle
High School	15 - 18	9 - 12	Pedestrian/Bicycle/Motor vehicle
Adult	19 - 65		Pedestrian/Bicycle/Motor vehicle
Senior	66+		Pedestrian/Bicycle/Motor vehicle
Parents			Pedestrian/Bicycle/Motor vehicle
Motorists			Pedestrian/Bicycle/Motor vehicle

- Identify Primary Education Delivery Mechanisms

  Considering the vast influences to which we are exposed in today's society, the list below provides only those trainers and/or influences with the greatest potential impact on the target audience. As the curriculum and collateral material for each of the target audiences is developed, the appropriate sub-categories of each of the delivery mechanisms listed will be defined in detail.

AUDIENCE	**PRIMARY TRAINERS and/or INFLUENCES**
Preschool	Parents / Day care providers / Teachers
Early Elementary	Parents / Teachers / Peers / Media
Upper Elementary	Parents / Teachers / Peers / Media
Middle School	Peers / Media / Parents / Teachers
High School	Peers / Media / Parents / Teachers / Employers / Driver training
Adult	Peers / Media / Employers / Community safety & health professionals / Government
Senior	Peers / Media / Community safety & health professionals / Government
Parents	Peers / Media / Employers / Community safety & health professionals / Government Children / Physicians / PTO's (Parent Teacher Organizations)
Motorists	Peers / Media / Employers / Community safety & health professionals / Government

- Develop Implementation Strategies

  Embarking on a traffic safety education program for all ages is an ambitious effort and will require multiple implementation strategies to reach all of the target audiences, not to mention the logistics involved in reaching the diverse cultures within each audience. The overview of sample strategies that follow revolve around the concept that to instill preferred traffic behaviors in new drivers, there must be a core education program institutionalized into schools throughout the state and eventually the nation. This is based on the premise that ingraining these behaviors in children will ultimately result in them becoming better and more considerate motor vehicle drivers.

Sample Implementation Strategies:

Strategy A Target Audience: K-12
Home to School: Safe Travel for School Children

The goal of this strategy is to institutionalize a Walk/Bike to School program in every school in your community and to provide instructor training to ensure successful and ongoing implementation. Tools include the Walking School Bus and Bike Trains where adult guides accompany children to school.

Strategy B Target Audience: Early and Upper Elementary
Home to School: Safe Travel for Elementary for the School Child

The goal of this strategy is to institutionalize a Kindergarten - 5th Grade pedestrian and bicycle traffic safety education curriculum in every elementary school in your community and to provide instructor training to ensure successful and ongoing implementation.

Strategy C Target Audience: Early and Upper Elementary
Train the Trainer Course for Community Professionals (i.e., teachers, PTO's, parent, police, fire & health professionals, scout leaders, day care providers, parks and recreation personnel, etc.)

The goal of Strategy B is to train community professionals to teach the children in their communities the appropriate traffic behaviors to keep them safe as they walk or bike in their neighborhoods. Trainers will be taught how to use the K-5 Curriculum (above) and how to adapt it to fit other training opportunities such as a community safety fair or special event. The course will provide the trainers with classroom instruction, hands on pedestrian and bicycle skills, what to teach at different ages/grades, and resource and collateral materials for distribution to the children and their parents.

Strategy D Target Audience: High School, Adult, Senior, Parents, Motorists
Share the Road Campaign (TV, radio, bus boards, bus benches, print, billboards, press releases)

Perpetuate CDOT's annual S*hare the Road Campaign* via the addition of local media partners in your community and ongoing upgrades to current campaign materials.

Strategy E Target Audience: All levels
Collateral Materials

These materials have unlimited potential for outreach to different markets/audiences. Develop an education catalog that includes the core curriculum, collateral materials, other resources, products, and schedule of events and training programs.

Develop male and female action figures of leaders in your community. These characters would be age/grade specific and could be carried throughout the education materials (i.e., video games) as well as integrated into product development, i.e., bikes, helmets, accessories, clothing, etc.

The action figures could be energized with a "Power Pak" of correct traffic behaviors, i.e., Stop at all Stop signs, Ride on the right, etc. They receive energy points each time they obey a "Power Pak" rule, etc.

- Coloring books
- Comic books
- Theme books, i.e., *The Adventures of Hard Rock Ziggy*
- Placemats/Children's Menus in restaurants throughout the community with education tips
- Interactive video games / CD Rom's
- Clothing with "Power Pak" rules written in the design
- Brochures, Pamphlets, Board Game(s)
- Bumper Stickers, Helmet Stickers, Pins, etc.
- School Crossing Guard Program
- Walk & Roll Program for Senior Citizens to accompany children to and from school
- Adult "How to" Guides: Touring, Commuting, Riding with Children
- Annual community Bike Expo/Rodeo
- Elementary and Middle School Bike Teams using your community's action team model

ENFORCEMENT

Each locality, in conjunction with its law enforcement agencies, should decide to what extent cyclist and pedestrian rights and responsibilities should be enforced. Because of the variation of resources within each enforcement agency and the extent to which violations are a problem in each jurisdiction, the level of enforcement may vary.

Enforcement goes hand in hand with education. Education is not as effective if there is inadequate enforcement to back it up. Therefore, it is important to enforce the rights and responsibilities of all modes of transportation by ticketing motorized and nonmotorized transportation users alike. Cyclists and pedestrians should expect to be ticketed for traffic offenses the same as motorists. Motorists should expect to be ticketed for offenses against pedestrians and cyclists.

ENFORCEMENT QUESTIONS AND DATA

- Do the law enforcement agencies in the region provide adequate enforcement? Where?

- Do law enforcement officers know the laws regarding:

  - Bicyclists' rights
  - Bicyclists' responsibilities
  - Pedestrians' rights
  - Pedestrians' responsibilities
  - Motorists' responsibilities regarding bicyclists
  - Motorists' responsibilities regarding pedestrians?

- What are the obstacles to better enforcement?

- Is there a way that CDOT might be of assistance?

- Develop a summary of enforcement practices regarding bicyclists and pedestrian rights and responsibilities, by enforcement agency. This includes ticketing cyclists and pedestrians for traffic violations, and ticketing motorists' violations against cyclists and pedestrians. The summary should include a brief statement about the level of enforcement in each agency, including the number of tickets issued annually for each type of violation, if possible, and the general attitude in the agency of enforcing cyclist and pedestrian rights. Include any other enforcement issues.

- Provide a regional statement of a proposed enforcement policy regarding bicyclist and pedestrian rights and responsibilities, including fiscal impacts, staff and equipment needed.

NATIONAL STRATEGIES FOR ADVANCING BICYCLE SAFETY

The *National Strategies for Advancing Bicycle Safety* is a call to action for policy makers, educators, advocates, transportation experts, health and injury professionals, and others with an interest in safe bicycling. The strategies encompassed in the document are those that, over the next three to five years, are capable of enhancing bicycle safety for riders of all ages. The specific goals and strategies are summarized below.

GOAL #1 *Motorists Will Share the Road*

- Create a coordinated "Share the Road" public education campaign that can be adapted at the state and local levels.
- Amend the motor vehicle code to give precedence to bicyclists in the absence of overriding traffic rules.
- Include components on "safe bicycling" and "sharing the road" in driver education programs.

GOAL #2 *Bicyclists Will Ride Safely*

- Create a national "Ride Safely" marketing campaign targeting bicycle riders.
- Encourage statewide bicycle safety conferences to promote the National Strategies for Advancing Bicycle Safety.
- Expand school-based and community-based programs that teach bicycle safety to children and adult bicyclists.
- Educate community professionals on effective ways to promote safe bicycling.
- Motivate decision makers at all levels to adopt policies that promote safe bicycling.

GOAL #3 *Bicyclists Will Wear Helmets*

- Create a national bicycle helmet safety campaign.
- Create tools to promote and increase bicycle helmet use that can be adapted for use at the state and local levels.
- Assist states and communities that decide to address bicycle helmet use through state and local laws and enforcement.

GOAL #4 ***The Legal System Will Support Safe Bicycling***

- Improve the collection and quality of data concerning bicycle crash incidents, including both traffic and non-traffic sites.
- Create tools that help law enforcement officers enforce bicycle-safety traffic laws aimed at bicyclists and motorists.
- Promote the most promising enforcement efforts at those local sites where they are most likely to be effective.
- Encourage the court system to follow through on bicycle safety enforcement by imposing meaningful penalties for both motorist and bicyclist violations.

GOAL #5 ***Roads and Paths Will Safely Accomodate Bicyclists***

- Document and evaluate the safety and effectiveness of facility design options.
- Improve 100,000 miles of roadways that serve everyday travel by providing striped bicycle lanes and other safe bicycling facilities.
- Train professionals responsible for the planning, design, and operation of the transportation system to better consider and accommodate bicycle travel.

ENCOURAGEMENT

Encouraging cycling and walking as a substantial component to the modal mix can help mitigate air pollution and traffic congestion, as well as promote healthier, more friendly communities. Providing the means for enjoyable cycling and walking can also be a boon to tourism and Colorado's economy as both modes become increasingly popular for transportation and recreation. Many Colorado ski areas have discovered the economic value of catering to bicyclists and hikers. The overwhelming interest in trail development from the eastern plains to the northwest plateau is a good indication that promoting cycling and walking is perceived as beneficial. In fact, a CDOT study on the economic impact of bicycling concluded that the bicycling industry in Colorado annually contributes a billion dollars to the state's economy and employs over 8,500 people.

One-way trips of five miles or less are often suitable for bicycling. Often cyclists are willing to travel even farther distances for commuting trips or for recreation. Shorter trips are often suitable for walking. Tourists often prefer walking and cycling as part of their vacationing activities and appreciate bicycle and pedestrian friendly towns. For these reason, it is important to consider nonmotorized transportation for visitors and residents alike.

Providing safe, well-designed and maintained facilities encourages bicycling and walking. Facility improvements for nonmotorized transportation can be a relatively inexpensive way to increase mobility and the quality of life. Showers, lockers, and bike parking facilities at destinations, particularly at places of employment is another.

Lack of adequate bike parking deters people from bicycling to a destination much the same as inadequate car parking deters drivers. An adequate number of spaces and well-designed parking are essential. Ease of use, flexibility in parking and locking methods, attractiveness, weather protections, and protection of bicycle and people from falls or damage are all assets. Areas with frequent pedestrian traffic deter theft. Bike lockers at employment centers, modal transfer centers, and other locations where secure, long-term parking is necessary will encourage commuter cyclists.

Annual events such as CDOT's Colorado Bike Month (June), Bike to Work Day (the fourth Wednesday in June), Colorado Pedestrian Month (October), Walk to School Day, and National Trails Day are activities designed to promote bicycling and walking through events and media attention. This provides every city and town throughout the state an opportunity to focus on nonmotorized transportation in the way it most benefits them. These events are designed to celebrate nonmotorized transportation, encourage people to bicycle or walk, build awareness through safety campaigns in the media, and institutionalize bicycling and walking as viable modes of transportation.

ENCOURAGEMENT QUESTIONS AND DATA

- How can bicycling and walking be used as economic generators?
- How can bicycling and walking be used to increase tourism?
- Are tourists encourage to use nonmotorized transportation?
- What are the obstacles to encouraging bicycling and walking?
- What are the things that actually discourage bicycling and walking?
- How can CDOT be of assistance?
- Are there bicycle and pedestrian planners anywhere within the region? List name, address, phone, and email.
- Who is currently responsible for bicycle and pedestrian issues and projects? List name, address, phone, and email.
- If these positions or individuals do not exist, what would be the advantages of creating a position for the city, county or region?
- Summary of ways in which the region currently encourages bicycling and walking.
- Develop a policy statement encouraging cycling and walking (see Appendices). Include goals and objectives.
- A list of communities currently participating in events such as Colorado Bike Month. Bike to Work Day, and Colorado Pedestrian Month.
- A list of schools currently participating in Walk to School Day.
- List communities that would like to participate in these events in the future. Include name, address, phone, and email.

PARTNERS AND PUBLIC PARTICIPATION

Citizens of the United States have had input into the government process since our country began. A government "of the people, by the people, and for the people" is seen as a basic tenet of democracy and forms the underlying ideal of public involvement. Participation transforms the democratic system, energizing it by creating a permanent connection between citizens and their government.

Public officials should intensify efforts to creatively stimulate public participation in transportation planning. The public is an essential element of the process, and failure to include them is unhealthy to any planning process. The public brings to the table important information, knowledge, expertise, and insights for designing workable solutions and they are more likely to accept and support a transportation management decision they have participated in shaping. Developing partnerships with the public is particularly important for local officials because of the many conflicting interpretations about the needs of community members. Collaboration provides opportunities to bridge gaps in understanding, language, values, and perceptions and it facilitates an exchange of information and ideas that are essential for enabling all parties to make informed decisions.

Citizens need to be educated about the transportation planning process and provided with a seat at the decision-making table. Due to limited financial resources, balancing competing transportation priorities, and special interests, public participation will always be a challenge. This makes educating the public about the complicated and technical process of arriving at transportation solutions that much more important. Public involvement programs should become a routine part of the development of all transportation policy—not just project-specific, but routinely and seamlessly incorporated into the way government conducts business. The new paradigm of a mutually respectful, fair, and open process constitutes the 21st Century vision for public participation in transportation decision-making.

One tool for public participation is a Technical Advisory Committee (TAC). Comprised of bicycling and walking professionals, citizens, and others, a TAC could help develop the bicycle and pedestrian elements of a Regional Transportation Plan, or they could provide information necessary for the development of a local or regional Bicycle and Pedestrian Master Plan.

Who could be invited to participate on a Technical Advisory Committee?

Bicycle advocates
Pedestrian advocates
Bicycle clubs
Walking clubs
Bicycle Colorado
Citizens of all ages including children and seniors
County Commissioners, City/Town Council Members

City, County & State Transportation Planners, Engineers & Maintenance Supervisors
CDOT Bicycle/Pedestrian Program Manager and Region Staff
Representatives from educational institutions:
- School teachers, administrators, and PTA's/PTO's
- Colleges & Universities

Representatives from various community groups:
- AARP, Senior Centers
- Low Income Residents
- Disabled citizens
- Children ages 6 and up

Representatives from the business community:
- Chamber of Commerce
- Visitor's Center/Tourism Bureau
- Hotels and Restaurants
- Tourist attractions

Industry professionals:
- Law enforcement
- Firefighters and Paramedics
- Health Professionals
- Parks and Recreation

Glossary

BICYCLE - Every vehicle propelled solely by human power upon which any person may ride, having two tandem wheels or two parallel wheels and one forward wheel, all of which are more than fourteen inches in diameter.

BICYCLE FACILITIES - A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically designated for the exclusive use of bicycles.

BIKE LANE - A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

BIKE PATH - See Shared Use Path.

BICYCLE ROUTE SYSTEM - A system of bikeways designated by the jurisdiction having authority with appropriate directional and information route markers, with or without specific bicycle route numbers. Bike routes should establish a continuous routing, but may be a combination of any and all types of bikeways.

BIKEWAY - A generic term for any road, street, path or way, which in some manner is specifically designated for bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

ELECTRIC BICYCLE - A bicycle or tricycle with a low-powered electric motor weighing less than 100 pounds with a top motor-assisted speed up to 20 miles per hour.

HIGHWAY - A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

RAIL-TRAIL - A shared use path, either paved or unpaved, built within the right-of-way of an existing or former railroad.

RIGHT-OF-WAY - A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

RIGHT OF 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, including shoulders, intended for vehicular use.

RUMBLE STRIPS - A grooved pavement sometimes used on shoulders of highways to alert motorists who stray onto the shoulder.

SHARED ROADWAY - A roadway that is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.

SHARED 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. Pedestrians, skaters, wheelchair users, joggers, other non-motorized users, and electric bicycles may also use shared use paths.

SHOULDER - The portion of the roadway contiguous with the traveled way for accommodation of bicycle travel, stopped vehicles, for emergency use and for lateral support of sub-base, base and surface courses.

SIDEWALK - The portion of a street or highway right-of-way designed for preferential or exclusive use by pedestrians.

Appendix A

WALKABILITY CHECKLIST

www.walkinginfo.org

Walkability Checklist

How walkable is your community?

Take a walk with a child and decide for yourselves.

Everyone benefits from walking. But walking needs to be safe and easy. Take a walk with your child and use this checklist to decide if your neighborhood is a friendly place to walk. Take heart if you find problems, there are ways you can make things better.

Getting started:

First, you'll need to pick a place to walk, like the route to school, a friend's house or just somewhere fun to go.

The second step involves the checklist. Read over the checklist before you go, and as you walk, note the locations of things you would like to change. At the end of your walk, give each question a rating. Then add up the numbers to see how you rated your walk overall.

After you've rated your walk and identified any problem areas, the next step is to figure out what you can do to improve your community's score. You'll find both immediate answers and long-term solutions under "Improving Your Community's Score..." on the third page.

Partnership for a Walkable America

Pedestrian and Bicycle Information Center

U.S. Department of Transportation

Take a walk and use this checklist to rate your neighborhood's walkability.

How walkable is your community?

Location of walk _____

_____

Rating Scale:

1	2	3	4	5	6
awful	many problems	some problems	good	very good	excellent

1. Did you have room to walk?

☐ Yes ☐ Some problems:

- ☐ Sidewalks or paths started and stopped
- ☐ Sidewalks were broken or cracked
- ☐ Sidewalks were blocked with poles, signs, shrubbery, dumpsters, etc.
- ☐ No sidewalks, paths, or shoulders
- ☐ Too much traffic
- ☐ Something else _____

Locations of problems: _____

Rating: (circle one)
1 2 3 4 5 6

_____

_____

2. Was it easy to cross streets?

☐ Yes ☐ Some problems:

- ☐ Road was too wide
- ☐ Traffic signals made us wait too long or did not give us enough time to cross
- ☐ Needed striped crosswalks or traffic signals
- ☐ Parked cars blocked our view of traffic
- ☐ Trees or plants blocked our view of traffic
- ☐ Needed curb ramps or ramps needed repair
- ☐ Something else _____

Locations of problems: _____

Rating: (circle one)
1 2 3 4 5 6

_____

_____

3. Did drivers behave well?

☐ Yes ☐ Some problems: Drivers...

- ☐ Backed out of driveways without looking
- ☐ Did not yield to people crossing the street
- ☐ Turned into people crossing the street
- ☐ Drove too fast
- ☐ Sped up to make it through traffic lights or drove through traffic lights?
- ☐ Something else _____

Locations of problems: _____

Rating: (circle one)
1 2 3 4 5 6

_____

_____

4. Was it easy to follow safety rules? Could you and your child...

☐ Yes	☐ No	Cross at crosswalks or where you could see and be seen by drivers?
☐ Yes	☐ No	Stop and look left, right and then left again before crossing streets?
☐ Yes	☐ No	Walk on sidewalks or shoulders facing traffic where there were no sidewalks?
☐ Yes	☐ No	Cross with the light?

Locations of problems: _____

Rating: (circle one)
1 2 3 4 5 6

_____

_____

5. Was your walk pleasant?

☐ Yes ☐ Some unpleasant things:

- ☐ Needed more grass, flowers, or trees
- ☐ Scary dogs
- ☐ Scary people
- ☐ Not well lighted
- ☐ Dirty, lots of litter or trash
- ☐ Something else _____

Locations of problems: _____

Rating: (circle one)
1 2 3 4 5 6

_____

_____

How does your neighborhood stack up? Add up your ratings and decide.

1. _____
2. _____
3. _____
4. _____
5. _____

Total _____

26–30	Celebrate! You have a great neighborhood for walking.
21–25	Celebrate a little. Your neighborhood is pretty good.
16–20	Okay, but it needs work.
11–15	It needs lots of work. You deserve better than that.
5–10	Call out the National Guard before you walk. It's a disaster area.

Now that you've identified the problems,
go to the next page to find out how to fix them.

Now that you know the problems,
you can find the answers.

Improving your community's score...

	What you and your child can do immediately	What you and your community can do with more time
1. Did you have room to walk?		
Sidewalks or paths started and stopped Sidewalks broken or cracked Sidewalks blocked No sidewalks, paths or shoulders Too much traffic	• pick another route for now • tell local traffic engineering or public works department about specific problems and provide a copy of the checklist	• speak up at board meetings • write or petition city for walkways and gather neighborhood signatures • make media aware of problem • work with a local transportation engineer to develop a plan for a safe walking route
2. Was it easy to cross streets?		
Road too wide Traffic signals made us wait too long or did not give us enough time to cross Crosswalks/traffic signals needed View of traffic blocked by parked cars, trees, or plants Needed curb ramps or ramps needed repair	• pick another route for now • share problems and checklist with local traffic engineering or public works department • trim your trees or bushes that block the street and ask your neighbors to do the same • leave nice notes on problem cars asking owners not to park there	• push for crosswalks/signals/ parking changes/curb ramps at city meetings • report to traffic engineer where parked cars are safety hazards • report illegally parked cars to the police • request that the public works department trim trees or plants • make media aware of problem
3. Did drivers behave well?		
Backed without looking Did not yield Turned into walkers Drove too fast Sped up to make traffic lights or drove through red lights	• pick another route for now • set an example: slow down and be considerate of others • encourage your neighbors to do the same • report unsafe driving to the police	• petition for more enforcement • request protected turns • ask city planners and traffic engineers for traffic calming ideas • ask schools about getting crossing guards at key locations • organize a neighborhood speed watch program
4. Could you follow safety rules?		
Cross at crosswalks or where you could see and be seen Stop and look left, right, left before crossing Walk on sidewalks or shoulders facing traffic Cross with the light	• educate yourself and your child about safe walking • organize parents in your neighborhood to walk children to school	• encourage schools to teach walking safely • help schools start safe walking programs • encourage corporate support for flex schedules so parents can walk children to school
5. Was your walk pleasant?		
Needs grass, flowers, trees Scary dogs Scary people Not well lit Dirty, litter	• point out areas to avoid to your child; agree on safe routes • ask neighbors to keep dogs leashed or fenced • report scary dogs to the animal control department • report scary people to the police • report lighting needs to the police or appropriate public works department • take a walk wih a trash bag • plant trees, flowers in your yard	• request increased police enforcement • start a crime watch program in your neighborhood • organize a community clean-up day • sponsor a neighborhood beautification or tree-planting day • begin an adopt-a-street program
A Quick Health Check		
Could not go as far or as fast as we wanted Were tired, short of breath or had sore feet or muscles	• start with short walks and work up to 30 minutes of walking most days • invite a friend or child along	• get media to do a story about the health benefits of walking • call parks and recreation department about community walks • encourage corporate support for employee walking programs

Need some guidance?
These resources might help...

Great Resources

WALKING INFORMATION

Pedestrian and Bicycle Information Center (PBIC)
UNC Highway Safety Research Center
730 Airport Road , Suite 300
Campus Box 3430
Chapel Hill, NC
27599-3430
Phone: (919) 962-2202
www.pedbikeinfo.org
www.walkinginfo.org

National Center for
Bicycling and
Walking
Campaign to Make
America Walkable
1506 21st Street, NW
Suite 200
Washington, DC 20036
Phone: (800) 760-NBPC
www.bikefed.org

WALK TO SCHOOL DAY WEB SITES

USA event: www.walktoschool-usa.org
International: www.iwalktoschool.org

STREET DESIGN AND TRAFFIC CALMING

Federal Highway Administration
Pedestrian and Bicycle Safety Research Program
HSR - 20
6300 Georgetown Pike
McLean,VA 22101
www.fhwa.dot.gov/environment/bikeped/index.htm

Institute of Transportation Engineers
www.ite.org

Surface Transportation Policy Project
www.transact.org

Transportation for Livable Communities
www.tlcnetwork.org

ACCESSIBLE SIDEWALKS

US Access Board
1331 F Street, NW
Suite 1000
Washington, DC 20004-1111
Phone: (800) 872-2253;
(800) 993-2822 (TTY)
www.access-board.gov

PEDESTRIAN SAFETY

National Highway Traffic Safety Administration
Traffic Safety Programs
400 Seventh Street, SW
Washington, DC 20590
Phone: (202) 662-0600
www.nhtsa.dot.gov/people/injury/pedbimot/ped

National SAFE KIDS Campaign
1301 Pennsylvania Ave. NW
Suite 1000
Washington, DC 20004
Phone: (202) 662-0600
Fax: (202) 393-2072
www.safekids.org

WALKING AND HEALTH

Centers for Disease Control and Prevention
Division of Nutrition and Physical Activity
Phone: (888) 232-4674
www.cdc.gov/nccdphp/dnpa/readyset
www.cdc.gov/nccdphp/dnpa/kidswalk/index.htm

Prevention Magazine
33 East Minor Street
Emmaus, PA 18098
www.itsallaboutprevention.com

Shape Up America!
6707 Democracy
Boulevard
Suite 306
Bethesda, MD
20817
www.shapeup.org

WALKING COALITIONS

America Walks
P.O. Box 29103
Portland, Oregon
97210
Phone: (503) 222-1077
www.americawalks.org

Partnership for a Walkable America
National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
Phone: (603) 285-1121
www.nsc.org/walkable.htm

Appendix B

BIKEABILITY CHECKLIST

www.bicyclinginfo.org

Bikeability Checklist

How bikeable is your community?

Riding a bike is fun!

Bicycling is a great way to get around and to get your daily dose of physical activity. It's good for the environment, and it can save you money. No wonder many communities are encouraging people to ride their bikes more often!

Can you get to where you want to go by bike?

Some communities are more bikeable than others: how does yours rate? Read over the questions in this checklist and then take a ride in your community, perhaps to the local shops, to visit a friend, or even to work. See if you can get where you want to go by bicycle, even if you are just riding around the neighborhood to get some exercise.

At the end of your ride, answer each question and, based on your opinion, circle an overall rating for each question. You can also note any problems you encountered by checking the appropriate box(es). Be sure to make a careful note of any specific locations that need improvement.

Add up the numbers to see how you rated your ride. Then, turn to the pages that show you how to begin to improve those areas where you gave your community a low score.

Before you ride, make sure your bike is in good working order, put on a helmet, and be sure you can manage the ride or route you've chosen. Enjoy the ride!

NHTSA
National Highway Traffic Safety Administration

Pedestrian and Bicycle Information Center

U.S. Department of Transportation

Go for a ride and use this checklist to rate your neighborhood's bikeability.

How bikeable is your community?

Location of bike ride (be specific): _____

Rating Scale:

1	2	3	4	5	6
awful	many problems	some problems	good	very good	excellent

1. Did you have a place to bicycle safely?

a) On the road, sharing the road with motor vehicles?

☐ Yes ☐ Some problems (please note locations):

- ☐ No space for bicyclists to ride
- ☐ Bicycle lane or paved shoulder disappeared
- ☐ Heavy and/or fast-moving traffic
- ☐ Too many trucks or buses
- ☐ No space for bicyclists on bridges or in tunnels
- ☐ Poorly lighted roadways

Other problems: _____

_____

b) On an off-road path or trail, where motor vehicles were not allowed?

☐ Yes ☐ Some problems:

- ☐ Path ended abruptly
- ☐ Path didn't go where I wanted to go
- ☐ Path intersected with roads that were difficult to cross
- ☐ Path was crowded
- ☐ Path was unsafe because of sharp turns or dangerous downhills
- ☐ Path was uncomfortable because of too many hills
- ☐ Path was poorly lighted

Other problems: _____

_____

Overall "Safe Place To Ride" Rating: (circle one)

1 2 3 4 5 6

2. How was the surface that you rode on?

☐ Good ☐ Some problems, the road or path had:

- ☐ Potholes
- ☐ Cracked or broken pavement
- ☐ Debris (e.g. broken glass, sand, gravel, etc.)
- ☐ Dangerous drain grates, utility covers, or metal plates
- ☐ Uneven surface or gaps
- ☐ Slippery surfaces when wet (e.g. bridge decks, construction plates, road markings)
- ☐ Bumpy or angled railroad tracks
- ☐ Rumble strips

Other problems: _____

_____

Overall Surface Rating: (circle one)

1 2 3 4 5 6

3. How were the intersections you rode through?

☐ Good ☐ Some problems:

- ☐ Had to wait too long to cross intersection
- ☐ Couldn't see crossing traffic
- ☐ Signal didn't give me enough time to cross the road
- ☐ Signal didn't change for a bicycle
- ☐ Unsure where or how to ride through intersection

Other problems: _____

_____

Overall Intersection Rating: (circle one)

1 2 3 4 5 6

Continue the checklist on the next page...

4. Did drivers behave well?

☐ Yes ☐ Some problems, drivers:

- ☐ Drove too fast
- ☐ Passed me too close
- ☐ Did not signal
- ☐ Harassed me
- ☐ Cut me off
- ☐ Ran red lights or stop sign

Other problems: _____

_____

Overall Driver Rating: (circle one)

1 2 3 4 5 6

5. Was it easy for you to use your bike?

☐ Yes ☐ Some problems:

- ☐ No maps, signs, or road markings to help me find my way
- ☐ No safe or secure place to leave my bicycle at my destination
- ☐ No way to take my bicycle with me on the bus or train
- ☐ Scary dogs
- ☐ Hard to find a direct route I liked
- ☐ Route was too hilly

Other problems: _____

_____

Overall Ease of Use Rating: (circle one)

1 2 3 4 5 6

6. What did you do to make your ride safer?

Your behavior contributes to the bikeability of your community. Check all that apply:

- ☐ Wore a bicycle helmet
- ☐ Obeyed traffic signal and signs
- ☐ Rode in a straight line (didn't weave)
- ☐ Signaled my turns
- ☐ Rode with (not against) traffic
- ☐ Used lights, if riding at night
- ☐ Wore reflective and/or retroreflective materials and bright clothing
- ☐ Was courteous to other travelers (motorist, skaters, pedestrians, etc.)

7. Tell us a little about yourself.

In good weather months, about how many days a month do you ride your bike?

- ☐ Never
- ☐ Occasionally (one or two)
- ☐ Frequently (5-10)
- ☐ Most (more than 15)
- ☐ Every day

Which of these phrases best describes you?

- ☐ An advanced, confident rider who is comfortable riding in most traffic situations
- ☐ An intermediate rider who is not really comfortable riding in most traffic situations
- ☐ A beginner rider who prefers to stick to the bike path or trail

How does your community rate? Add up your ratings and decide.

(Questions 6 and 7 do not contribute to your community's score)

1. _____
2. _____
3. _____
4. _____
5. _____
Total _____

26–30	Celebrate! You live in a bicycle-friendly community.
21–25	Your community is pretty good, but there's always room for improvement.
16–20	Conditions for riding are okay, but not ideal. Plenty of opportunity for improvements.
11–15	Conditions are poor and you deserve better than this! Call the mayor and the newspaper right away.
5–10	Oh dear. Consider wearing body armor and Christmas tree lights before venturing out again.

Did you find something that needs to be changed?

On the next page, you'll find suggestions for improving the bikeability of your community based on the problems you identified. Take a look at both the short- and long-term solutions and commit to seeing at least one of each through to the end. If you don't, then who will?

During your bike ride, how did you feel physically? Could you go as far or as fast as you wanted to? Were you short of breath, tired, or were your muscles sore? The next page also has some suggestions to improve the enjoyment of your ride.

Bicycling, whether for transportation or recreation, is a great way to get 30 minutes of physical activity into your day. Riding, just like any other activity, should be something you enjoy doing. The more you enjoy it, the more likely you'll stick with it. Choose routes that match your skill level and physical activities. If a route is too long or hilly, find a new one. Start slowly and work up to your potential.

Now that you know the problems,
you can find the answers.

Improving your community's score...

1. Did you have a place to bicycle safely?

	What you can do immediately	What you and your community can do with more time
a) On the road?		
No space for bicyclists to ride (e.g. no bike lane or shoulder; narrow lanes) Bicycle lane or paved shoulder disappeared Heavy and/or fast-moving traffic Too many trucks or buses No space for bicyclists on bridges or in tunnels Poorly lighted roadways	• pick another route for now • tell local transportation engineers or public works department about specific problems; provide a copy of your checklist • find a class to boost your confidence about riding in traffic	• participate in local planning meetings • encourage your community to adopt a plan to improve conditions, including a network of bike lanes on major roads • ask your public works department to consider "Share the Road" signs at specific locations • ask your state department of transportation to include paved shoulders on all their rural highways • establish or join a local bicycle advocacy group
b) On an off-road path or trail?		
Path ended abruptly Path didn't go where I wanted to go Path intersected with roads that were difficult to cross Path was crowded Path was unsafe because of sharp turns or dangerous downhills Path was uncomfortable because of too many hills Path was poorly lighted	• slow down and take care when using the path • find an on-street route • use the path at less crowded times • tell the trail manager or agency about specific problems	• ask the trail manager or agency to improve directional and warning signs • petition your local transportation agency to improve path/roadway crossings • ask for more trails in your community • establish or join a "Friends of the Trail" advocacy group

2. How was the surface you rode on?

Potholes Cracked or broken pavement Debris (e.g. broken glass, sand, gravel, etc.) Dangerous drain grates, utility covers, or metal plates Uneven surface or gaps Slippery surfaces when wet (e.g. bridge decks, construction plates, road markings) Bumpy or angled railroad tracks Rumble strips	• report problems immediately to public works department or appropriate agency • keep your eye on the road/path • pick another route until the problem is fixed (and check to see that the problems are fixed) • organize a community effort to clean up the path	• work with your public works and parks department to develop a pothole or hazard report card or online link to warn the agency of potential hazards • ask your public works department to gradually replace all dangerous drainage grates with more bicycle-friendly designs, and improve railroad crossings so cyclists can cross them at 90 degrees • petition your state DOT to adopt a bicycle-friendly rumble-strip policy

3. How were the intersections you rode through?

Had to wait too long to cross intersection Couldn't see crossing traffic Signal didn't give me enough time to cross the road The signal didn't change for a bicycle Unsure where or how to ride through intersection	• pick another route for now • tell local transportation engineers or public works department about specific problems • take a class to improve your riding confidence and skills	• ask the public works department to look at the timing of the specific traffic signals • ask the public works department to install loop-detectors that detect bicyclists • suggest improvements to sightlines that include cutting back vegetation; building out the path crossing; and moving parked cars that obstruct your view • organize community-wide, on-bike training on how to safely ride through intersections

Improving your community's score...

(continued)

	What you can do immediately	What you and your community can do with more time
4. Did drivers behave well?		
Drivers: Drove too fast Passed me too close Did not signal Harassed me Cut me off Ran red lights or stop signs	• report unsafe drivers to the police • set an example by riding responsibly; obey traffic laws; don't antagonize drivers • always expect the unexpected • work with your community to raise awareness to share the road	• ask the police department to enforce speed limits and safe driving • encourage your department of motor vehicles to include "Share the Road" messages in driver tests and correspondence with drivers • ask city planners and traffic engineers for traffic calming ideas • encourage your community to use cameras to catch speeders and red light runners
5. Was it easy for you to use your bike?		
No maps, signs, or road markings to help me find my way No safe or secure place to leave my bicycle at my destination No way to take my bicycle with me on the bus or train Scary dogs Hard to find a direct route I liked Route was too hilly	• plan your route ahead of time • find somewhere close by to lock your bike; never leave it unlocked • report scary dogs to the animal control department • learn to use all of your gears!	• ask your community to publish a local bike map • ask your public works department to install bike parking racks at key destinations; work with them to identify locations • petition your transit agency to install bike racks on all their buses • plan your local route network to minimize the impact of steep hills • establish or join a bicycle user group (BUG) at your workplace
6. What did you do to make your ride safer?		
Wore a bicycle helmet Obeyed traffic signals and signs Rode in a straight line (didn't weave) Signaled my turns Rode with (not against) traffic Used lights, if riding at night Wore reflective materials and bright clothing Was courteous to other travelers (motorists, skaters, pedestrians, etc.)	• go to your local bike shop and buy a helmet; get lights and reflectors if you are expecting to ride at night • always follow the rules of the road and set a good example • take a class to improve your riding skills and knowledge	• ask the police to enforce bicycle laws • encourage your school or youth agencies to teach bicycle safety (on-bike) • start or join a local bicycle club • become a bicycle safety instructor

Need some guidance?
These resources might help...

Great Resources

STREET DESIGN AND BICYCLE FACILITIES

American Association of State Highway and Transportation Officials
444 North Capitol Street, NW, Suite 249
Washington, DC 20001
Tel: (202) 624-5800
www.aashto.org

Institute of Transportation Engineers
1099 14th Street, NW, Suite 300 West
Washington, DC 20005-3438
Tel: (202) 289-0222
www.ite.org

Association of Pedestrian and Bicycle Professionals (APBP)
P.O. Box 23576
Washington, DC 20026
Tel: (202) 366-4071
www.apbp.org

Pedestrian and Bicycle Information Center (PBIC)
UNC Highway Safety Research Center
730 Airport Road, Suite 300
Campus Box 3430
Chapel Hill, NC 27599-3430
Tel: (919) 962-2202
www.pedbikeinfo.org
www.bicyclinginfo.org

Federal Highway Adminisrtation
400 Seventh Street, SW
Washington, DC 20590
www.fhwa.dot.gov/environment/bikeped/index.htm

EDUCATION AND SAFETY

National Highway Traffic Safety Administration
400 Seventh Street, SW
Washington, D.C. 20590
Tel: (202) 366-1739
www.nhtsa.dot.gov/people/injury/pedbimot/bike/

League of American Bicyclists
1612 K Street NW, Suite 401
Washington, DC 20006
Tel: (202) 822-1333
www.bikeleague.org

National Bicycle Safety Network
www.cdc.gov/ncipc/bike/default.htm

National Safe Kids Campaign
1301 Pennsylvania Ave NW, Suite 1000
Washington, DC 20004
Tel: (202) 662-0600
www.safekids.org

PATHS AND TRAILS

Rails to Trails Conservancy
1100 17th Street SW, 10th Floor
Washington, DC 20036
Tel: (202) 331-9696
www.railtrails.org

National Park Service
Rivers, Trails and Conservation Assistance Program
1849 C Street, NW, MS-3622
Washington, DC 20240
www.ncrc.nps.gov/rtca/rtca-ofh.htm

HEALTH

Centers for Disease Control and Prevention
Division of Nutrition and Physical Activity
4770 Buford Highway, NE
Atlanta, GA 30341-3724
www.cdc.gov/nccdphp/dnpa
Tel: (770) 488-5692

National Center for Injury Prevention and Control
Childhood Injury Prevention
4770 Buford Highway, NE
Atlanta, GA 30341
www.cdc.gov/ncipc

ADVOCACY AND USER GROUPS

Thunderhead Alliance
1612 K Street, NW, Suite 401
Washington, DC 20006
Tel: (202) 822-1333
www.thunderheadalliance.org

League of American Bicyclists
1612 K Street, NW, Suite 401
Washington, DC 20006
Tel: (202) 822-1333
www.bikeleague.org

National Center for Bicycling and Walking
1506 21st Street, NW, Suite 200
Washington, DC 20036
Tel: (202) 463-6622
www.bikewalk.org

Surface Transportation Policy Project
1100 17th Street, NW, 10th Floor
Washington, DC 20036
Tel: (202) 466-2636
www.transact.org

OTHER USEFUL RESOURCES

Bikes and transit: www.bikemap.com

Bicycle information: www.bicyclinginfo.org

Bicycle-related research:
www.tfhrc.gov/safety/pedbike/pedbike.htm

Bicycling Magazine: www.bicycling.com/

Bicycle touring:
Adventure Cycling Association
P.O. Box 8308
Missoula, MT 59807
(800) 755-2453
(406) 721-8754
www.adv-cycling.org

Appendix C

SAMPLE ELEMENTS OF A BICYCLE AND PEDESTRIAN PLAN

I. Executive Summary

II. Acknowledgements

List partners, stakeholders, and staff contributing to the development of the plan – they may include:

- Regional Planning Commission
- Bicycle & Pedestrian Technical Advisory Committee
- City & County Elected Officials
- Staff
- Citizen Groups

III. Vision

The vision statement should reflect where the region wants to be. For example: "(Name of TPR) is a place where people choose to bicycle and walk. Residents and visitors are able to conveniently walk and bicycle with confidence and a sense of security in every community. Building facilities for both modes are a routine part of transportation planning and engineering."

IV. Strategic Planning Model

This section will provide a framework for actions necessary to achieve the regions' vision for bicycling and walking. It should include:

INTRODUCTION

BACKGROUND

- What has led to the present situation
- Why we want change
- How we can affect change

TARGET USAGE GOALS

What could happen if the vision were achieved?

The *National Bicycling and Walking Study* published by the US DOT in 1994, presents a national policy on bicycling and walking. It is a plan of action for activities at the federal, state and local levels for promoting greater use and safety of bicycling and walking. It include the specific goals:

- *To double the current percentage (from 7.9% to 15.8%) of total trips made by bicycling and walking; and*
- *To simultaneously reduce by ten percent the number of bicyclists and pedestrians killed or injured in traffic crashes.*

Your region could adopt these national goals in your plan. In addition, following are some samples of Target Usage Goals for your consideration and that may by used as the starting point for discussion. Each goal will need to address the Rational, Critical Success Factors, and Means of Measurement.

Sample Target Usage Goals

GOAL #1
Increase the number of people bicycling or walking to work as the primary mode of transportation by 50%, from 2% to 3%, by 2006.

Rational:
This will facilitate the need for research in the region to determine the number of people bicycling and walking. Statistics for the state are in the CDOT study, *Bicycling and Walking in Colorado* – available on the web at www.dot.state.co.us/bikeped.

Critical Success Factors:
- Employer encouragement and support programs
- Access to work sites by bicyclists and pedestrians

Means of Measurement:
- Transportation To and Place of Work, US Census data

GOAL #2
Increase the percentage of bicycle and pedestrian trips that are 5 miles or less from 5% to 15% of all trips by 2006.

GOAL #3
Increase the number of commuters bicycling to transit stations at least once a week to 2.5% of total ridership by 2006.

GOAL #4
Place bicycling and walking for pleasure in the top three most popular outdoor recreation activities by 2006.

PURPOSE
Reason for this Plan

APPROACH
Explain how your plan works

METHODOLOGY
Organization and structure of the planning effort

V. CURRENT CONDITIONS AND NEEDS

ISSUES
Where we are now? Inventory and assess:
- Existing Facilities
- Community Design
- Acceptance & Legitimacy issues related to public perception of these modes
- Confidence & Security issues related to education and enforcement

GOALS AND OBJECTIVES
What needs to happen and what result needs to be achieved to produce the vision?

This section could have goals and objectives for each of the four E's as well as for planning and public participation:

Sample Goals and Objectives

GOAL 1
Create a bicycle and pedestrian friendly transportation infrastructure by planning, designing, constructing and managing transportation and recreation

facilities that will accommodate and encourage use by bicyclists and pedestrians and be responsive to their needs.

OBJECTIVE A

Design all new and improved roadways under the assumption that bicyclists and pedestrians will use them and that bicyclists and pedestrians will have the opportunity to share the road with motorists.

GOAL 2

Make community destinations, transit facilities and recreation facilities accessible and convenient for use by all types and skill levels of bicyclists and pedestrians

OBJECTIVE A

Provide a support system of ancillary facilities such as bicycle parking, changing rooms and showers, maps, etc., that will serve the needs of bicyclists and pedestrians at destinations.

VI. Implementation Plan

ROLES AND RESPONSIBILITIES

Identify who does what and by when.

IMPLEMENTATION STRATEGIES AND ACTIONS

What will make things change?

Implementation strategies represent programs and actions that are necessary to make things change in order for the vision, goals, and objectives to be achieved. They address programmatic, funding, staffing, policy, legislative, and procedural issues that will implement change. They outline and suggest appropriate roles and responsibilities, participation, involvement and direction of state agencies, counties, municipalities, transportation planning regions, developers, individuals, etc., and their relation to the leaders developing the transportation plans.

Sample Strategies

LEGISLATIVE STRATEGIES

Adopt ordinances or resolutions that support bicycling and walking (zoning and land use, design standards, parking, maintenance).

POLICY STRATEGIES

Policies and procedures can be established that result in changes necessary to achieve goals. E.g., Adopt policies, procedures and guidelines requiring that roadway projects be designed to accommodate shared use and to ensure safety for pedestrians, bicyclists, and motorists.

FUNDING STRATEGIES

Because the success of the implementation of the transportation plan relies heavily on efforts by regional and local governments, funding sources must be available. E.g., Utilize the entire range of available transportation funds for bicycle and pedestrian projects and programs. Create a dedicated fund for bicycle and pedestrian projects and programs that are identified in local and regional transportation planning documents.

ADMINISTRATIVE STRATEGIES

Organizations could institute staffing and procedural changes in order to assure a continuing process. E.g., Expand the responsibilities of existing staff to carry out increased bicycle and pedestrian activities. Responsibilities will include review of transportation projects; development of bicycle and pedestrian facility databases; review of studies and proposals by other agencies to assure consideration of bicycle and pedestrian concerns; initiation of independent projects; coordination, contact and provision of technical assistance to other agencies and entities.

PROFESSIONAL DEVELOPMENT STRATEGIES

Accommodating bicycling and walking in the transportation and recreation systems requires a new discipline of thought and application of standards and guidelines. E.g., Require city and county engineers, planners, enforcement officers, maintenance personnel, and other employees to attend continuing education programs in the area of bicycle and pedestrian planning and design.

COMMUNICATION STRATEGIES

Acceptance of bicycling and walking as legitimate modes in the transportation system requires knowledge and understanding on the part of all users. A comprehensive approach to achieving the vision will require extensive communication between the various agencies and levels of government and the users of the transportation system. E.g., Establish organizational networks for distribution of bicycle and pedestrian information. Prepare and distribute promotional and informational materials on local and regional bicycling and walking events and activities.

PERFORMANCE MEASURES

How do we measure success?

A means of measuring the success of the achievement of a goal is necessary to establish program priorities and allocate resources. Performance can be measured in terms of quantity, quality, timeliness, and cost.

Sample Performance Measures

GOAL 1 (This is the goal from the Current Conditions and Needs section above) Create a bicycle and pedestrian friendly transportation infrastructure by planning, designing, constructing and managing transportation and recreation facilities that will accommodate and encourage use by bicyclists and pedestrians and be responsive to their needs.

PERFORMANCE MEASURES

1. Percent of transportation improvement projects that have been reviewed for consideration of bicycle and pedestrian facilities.

2. Percent of roadways that are bicycle and pedestrian compatible.

3. Percent of or total amounts of capital and/or resources devoted to managing the accommodation of bicycling and walking.

4. Percent of built project that have incorporated appropriate pedestrian and bicycle accommodations.

CRITICAL SUCCESS FACTORS

- Presence of a supportive policy and a procedure for the consideration of bicycling and walking in all transportation improvement projects.

- Presence of staff or assignment of accountability to manage review procedure.

- Presence of standards guidelines for bicycle and pedestrian facilities.

- Presence of a plan to encourage bicycling and walking.

VII. APPENDICES

MAP
LIST OF TECHNICAL AND SUPPORTING DOCUMENTS
LIST OF ACRONYMS
GLOSSARY OF TERMS

Appendix D

DESIGN GUIDANCE

ACCOMMODATING BICYCLE AND PEDESTRIAN TRAVEL: A RECOMMENDED APPROACH

AND

U.S. DOT POLICY STATEMENT

ON

INTEGRATING BICYCLING & WALKING INTO TRANSPORTATION INFRASTRUCTURE

PURPOSE

Accommodating Bicycle and Pedestrian Travel: A Recommended Approach is a policy statement adopted by the United States Department of Transportation. US DOT hopes that public agencies, professional associations, advocacy groups, and others adopt this approach as a way of committing themselves to integrating bicycling and walking into the transportation mainstream.

The Design Guidance incorporates three key principles:

a) A policy statement that **bicycling and walking facilities will be incorporated into all transportation projects** unless exceptional circumstances exist;

b) An approach to achieving this policy that has already worked in State and local agencies; and

c) A series of action items that a public agency, professional association, or advocacy group can take to achieve the overriding goal of improving conditions for bicycling and walking.

The Policy Statement was drafted by the U.S. Department of Transportation in response to Section 1202 (b) of the Transportation Equity Act for the 21st Century (TEA-21) with the input and assistance of public agencies, professional associations and advocacy groups.

INTRODUCTION

Bicycling and walking issues have grown in significance throughout the 1990s. As the new millennium dawns public agencies and public interest groups alike are striving to define the most appropriate way in which to accommodate the two modes within the overall transportation system so that those who walk or ride bicycles can safely, conveniently, and comfortably access every destination within a community.

Public support and advocacy for improved conditions for bicycling and walking has created a widespread acceptance that more should be done to enhance the safety, comfort, and convenience of the nonmotorized traveler. Public opinion surveys throughout the 1990s have demonstrated strong support for increased planning, funding and implementation of shared use paths, sidewalks and on-street facilities.

At the same time, public agencies have become considerably better equipped to respond to this demand. Research and practical experience in designing facilities for bicyclists and pedestrians have generated numerous national, State and local design manuals and resources. An increasing number of professional planners and engineers

are familiar with this material and are applying this knowledge in towns and cities across the country.
The 1990 Americans with Disabilities Act, building on an earlier law requiring curb ramps in new, altered, and existing sidewalks, added impetus to improving conditions for sidewalk users. People with disabilities rely on the pedestrian and transit infrastructure, and the links between them, for access and mobility.

Congress and many State legislatures have made it considerably easier in recent years to fund nonmotorized projects and programs (for example, the Intermodal Surface Transportation Efficiency Act and the Transportation Equity Act for the 21st Century), and a number of laws and regulations now mandate certain planning activities and design standards to guarantee the inclusion of bicyclists and pedestrians.

Despite these many advances, injury and fatality numbers for bicyclists and pedestrians remain stubbornly high, levels of bicycling and walking remain frustratingly low, and most communities continue to grow in ways that make travel by means other than the private automobile quite challenging. Failure to provide an accessible pedestrian network for people with disabilities often requires the provision of costly paratransit service. Ongoing investment in the Nation's transportation infrastructure is still more likely to overlook rather than integrate bicyclists and pedestrians.

In response to demands from user groups that every transportation project includes a bicycle and pedestrian element, Congress asked the Federal Highway Administration (FHWA) to study various approaches to accommodating the two modes. The Transportation Equity Act for the 21st Century (TEA-21) instructs the Secretary to work with professional groups such as AASHTO, ITE, and other interested parties to recommend policies and standards that might achieve the overall goal of fully integrating bicyclists and pedestrians into the transportation system.

TEA-21 also says that, "Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation projects, except where bicycle and pedestrian use are not permitted." (Section 1202)
Safety considerations in transportation plans and projects, according to TEA-21, shall include the installation, where appropriate, and maintenance of audible traffic signals and audible signs at street crossings. (Section 1202 (a)).

In August 1998, FHWA convened a Task Force comprising representatives from FHWA, AASHTO, ITE, bicycle and pedestrian user groups, State and local agencies, the U.S. Access Board and representatives of disability organizations to seek advice on how to proceed with developing this guidance. The Task Force reviewed existing and proposed information on the planning and technical design of facilities for bicyclists and pedestrians and concluded that these made creation of another design

manual unnecessary. For example, AASHTO published a bicycle design manual in 1999 and is working on a pedestrian facility manual.

The area where information and guidance was most lacking was in determining when to include designated or special facilities for bicyclists and pedestrians in transportation projects. There can also be uncertainty about the type of facility to provide, and the design elements that are required to ensure accessibility.

For example, when a new suburban arterial road is planned and designed, what facilities for bicyclists and pedestrians should be provided? The task force felt that once the decision to provide a particular facility was made, the specific information on designing that facility is generally available. However, the decision on whether to provide sidewalks on neither, one or both sides of the road, or a shoulder, striped bike lane, wide outside lane or separate trail for bicyclists is usually made with little guidance or help.

After a second meeting with the Task Force in January 1999, FHWA agreed to develop a ***Policy Statement on Accommodating Bicyclists and Pedestrians in Transportation Projects*** to guide State and local agencies in answering these questions. Task Force members recommended against trying to create specific warrants for different facilities (warrants leave little room for engineering judgment and have often been used to avoid providing facilities for bicycling and walking). Instead, the purpose of the Policy Statement is to provide a recommended approach to the accommodation of bicyclists and pedestrians that can be adopted by State and local agencies (as well as professional societies and associations, advocacy groups, and Federal agencies) as a commitment to developing a transportation infrastructure that is safe, convenient, accessible, and attractive to motorized AND nonmotorized users alike. The Policy Statement has four elements:

SEC. 1202. BICYCLE TRANSPORTATION & PEDESTRIAN WALKWAYS

(b) DESIGN GUIDANCE.

(1) IN GENERAL

In implementing section 217(g) of title 23, United States Code, the Secretary, in cooperation with the American Association of State Highway and Transportation Officials, the Institute of Transportation Engineers, and other interested organizations, shall develop guidance on the various approaches to accommodating bicycles and pedestrian travel.

(2) **ISSUES TO BE ADDRESSED**

The guidance shall address issues such as the level and nature of the demand, volume, and speed of motor vehicle traffic, safety, terrain, cost, and sight distance.

(3) RECOMMENDATIONS

The guidance shall include recommendations on amending and updating the policies of the American Association of State Highway and Transportation Officials relating to highway and street design standards to accommodate bicyclists and pedestrians.

(4) TIME PERIOD FOR DEVELOPMENT

The guidance shall be developed within 18 months after the date of enactment of this Act.

a) An acknowledgment of the issues associated with balancing the competing interests of motorized and nonmotorized users;

b) A recommended policy approach to accommodating bicyclists and pedestrians (including people with disabilities) that can be adopted by an agency or organizations as a statement of policy to be implemented or a target to be reached in the future;

c) A list of recommended actions that can be taken to implement the solutions and approaches described above; and

d) Further information and resources on the planning, design, operation, and maintenance of facilities for bicyclists and pedestrians.

THE CHALLENGE: BALANCING COMPETING INTERESTS

For most of the second half of the 20th Century, the transportation, traffic engineering and highway professions in the United States were synonymous. They shared a singular purpose: building a transportation system that promoted the safety, convenience and comfort of motor vehicles. The post-war boom in car and home ownership, the growth of suburban America, the challenge of completing the Interstate System, and the continued availability of cheap gasoline all fueled the development of a transportation infrastructure focused almost exclusively on the private motor car and commercial truck.

Initially, there were few constraints on the traffic engineer and highway designer. Starting at the centerline, highways were developed according to the number of motor vehicle travel lanes that were needed well into the future, as well as providing space for breakdowns. Beyond that, facilities for bicyclists and pedestrians, environmental mitigation, accessibility, community preservation, and aesthetics were at best an afterthought, often simply overlooked, and, at worst, rejected as unnecessary, costly, and regressive. Many States passed laws preventing the use of State gas tax funds on anything other than motor vehicle lanes and facilities. The resulting highway environment discourages bicycling and walking and has made the two modes more dangerous. Further, the ability of pedestrians with disabilities to travel independently and safely has been compromised, especially for those with vision impairments.

Over time, the task of designing and building highways has become more complex and challenging. Traffic engineers now have to integrate accessibility, utilities, landscaping, community preservation, wetland mitigation, historic preservation, and a host of other concerns into their plans and designs – and yet they often have less space and resources within which to operate and traffic volumes continue to grow.

The additional "burden" of having to find space for pedestrians and bicyclists was rejected as impossible in many communities because of space and funding constraints and a perceived lack of demand. There was also anxiety about encouraging an activity that many felt to be dangerous and fraught with liability issues. Designers continued to design from the centerline out and often simply ran out of space before bike lanes, paved shoulders, sidewalks and other "amenities" could be included.

By contrast, bicycle and pedestrian user groups argue the roadway designer should design highways from the right-of-way limits in, rather than the centerline out. They advocate beginning the design of a highway with the sidewalk and/or trail, including a buffer before the paved shoulder or bike lane, and then allocating the remaining space for motor vehicles. Through this approach, walking and bicycling are positively encouraged, made safer, and included as a critical element in every transportation project rather than as an afterthought in a handful of unconnected and arbitrary locations within a community.

Retrofitting the built environment often provides even more challenges than building new roads and communities: space is at a premium and there is a perception that providing better conditions for bicyclists and pedestrians will necessarily take away space or convenience from motor vehicles.

During the 1990s, Congress spearheaded a movement towards a transportation system that favors people and goods over motor vehicles with passage of the Intermodal Surface Transportation Efficiency Act (1991) and the Transportation Equity Act for the 21st Century (1998). The call for more walkable, livable, and accessible communities, has seen bicycling and walking emerge as an "indicator species" for the health and well being of a community. People want to live and work in places where they can safely and conveniently walk and/or bicycle and not always have to deal with worsening traffic congestion, road rage and the fight for a parking space. Vice President Gore launched a Livability Initiative in 1999 with the ironic statement that "a gallon of gas can be used up just driving to get a gallon of milk."

The challenge for transportation planners, highway engineers and bicycle and pedestrian user groups, therefore, is to balance their competing interest in a limited amount of right-of-way, and to develop a transportation infrastructure that provides access for all, a real choice of modes, and safety in equal measure for each mode of travel.

This task is made more challenging by the widely divergent character of our nation's highways and byways. Traffic speeds and volumes, topography, land use, the mix of road users, and many other factors mean that a four-lane highway in rural North Carolina cannot be designed in the same way as a four-lane highway in New York City, a dirt road in Utah or an Interstate highway in Southern California. In addition, many different agencies are responsible for the development, management, and operation of the transportation system.

In a recent memorandum transmitting Program Guidance on bicycle and pedestrian issues to FHWA Division Offices, the Federal Highway Administrator wrote that "We expect every transportation agency to make accommodation for bicycling and walking a routine part of their planning, design, construction, operations and maintenance activities." The Program Guidance itself makes a number of clear statements of intent:

- Congress clearly intends for bicyclists and pedestrians to have safe, convenient access to the transportation system and sees every transportation improvement as an opportunity to enhance the safety and convenience of the two modes.
- "Due consideration" of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities.

- To varying extents, bicyclists and pedestrians will be present on all highways and transportation facilities where they are permitted and it is clearly the intent of TEA-21 that all new and improved transportation facilities be planned, designed and constructed with this fact in mind.

- The decision not to accommodate [bicyclists and pedestrians] should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.

The Program Guidance defers a suggested definition of what constitutes "exceptional circumstances" until this Policy Statement is completed. However, it does offer interim guidance that includes controlled access highways and projects where the cost of accommodating bicyclists and pedestrians is high in relation to the overall project costs and likely level of use by nonmotorized travelers.

Providing access for people with disabilities is a civil rights mandate that is not subject to limitation by project costs, levels of use, or "exceptional circumstances". While the Americans with Disabilities Act don't require pedestrian facilities in the absence of a pedestrian route, it does require that pedestrian facilities, when newly constructed or altered, be accessible.

POLICY STATEMENT

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:

- Bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.

- The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.

- Where sparsity of population or other factors indicate an absence of need. For example, the Portland Pedestrian Guide requires "all construction of new public streets" to include sidewalk improvements on both sides, unless the street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.

2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day, as in States such as Wisconsin. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.
   Rumble strips are not recommended where shoulders are used by bicyclists unless there is a minimum clear path of four feet (five feet next to curbs, guardrails, etc.) in which a bicycle may safely operate.

3. Sidewalks, shared use paths, street crossings (including over and under crossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.

4. The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following additional steps:

   - Planning projects for the long-term. Transportation facilities are long-term investments that remain in place for many years. The design and construction of new facilities that meet the criteria in item 1) above should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements. For example, a bridge that is likely to remain in place for 50 years, might be built with sufficient width for safe bicycle and pedestrian use in anticipation that facilities will be available at either end of the bridge even if that is not currently the case.

   - Addressing the need for bicyclists and pedestrians to cross-corridors as well as travel along them. Even where bicyclists and pedestrians may not

commonly use a particular travel corridor that is being improved or constructed, they will likely need to be able to cross that corridor safely and conveniently. Therefore, the design of intersections and interchanges shall accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient.

- Getting exceptions approved at a senior level. Exceptions for the non-inclusion of bikeways and walkways shall be approved by a senior manager and be documented with supporting data that indicates the basis for the decision.

- Designing facilities to the best currently available standards and guidelines. The design of facilities for bicyclists and pedestrians should follow design guidelines and standards that are commonly used, such as the AASHTO *Guide for the Development of Bicycle Facilities*, AASHTO's *A Policy on Geometric Design of Highways and Streets*, and the ITE Recommended Practice "*Design and Safety of Pedestrian Facilities*".

POLICY APPROACH

"REWRITE THE MANUALS" APPROACH

Manuals that are commonly used by highway designers covering roadway geometrics, roadside safety, and bridges should incorporate design information that integrates safe and convenient facilities for bicyclists and pedestrians -- including people with disabilities - into all new highway construction and reconstruction projects.

In addition to incorporating detailed design information - such as the installation of safe and accessible crossing facilities for pedestrians, or intersections that are safe and convenient for bicyclists - these manuals should also be amended to provide flexibility to the highway designer to develop facilities that are in keeping with transportation needs, accessibility, community values, and aesthetics. For example, the Portland Pedestrian Design Guide (June 1998) applies to every project that is designed and built in the city, but the Guide also notes that:

> "Site conditions and circumstances often make applying a specific solution difficult. The Pedestrian Design Guide should reduce the need for ad hoc decision by providing a published set of

> guidelines that are applicable to most situations. Throughout the guidelines, however, care has been taken to provide flexibility to the designer so she or he can tailor the standards to unique circumstances. Even when the specific guideline cannot be met, the designer should attempt to find the solution that best meets the pedestrian design principles described [on the previous page]".

In the interim, these manuals may be supplemented by stand-alone bicycle and pedestrian facility manuals that provide detailed design information addressing on-street bicycle facilities, fully accessible sidewalks, crosswalks, and shared use paths, and other improvements.

Examples: Florida DOT has integrated bicycle and pedestrian facility design information into its standard highway design manuals and New Jersey DOT is in the process of doing so. Many States and localities have developed their own bicycle and pedestrian facility design manuals, some of which are listed in the final section of this document.

APPLYING ENGINEERING JUDGMENT TO ROADWAY DESIGN

In rewriting manuals and developing standards for the accommodation of bicyclists and pedestrians, there is a temptation to adopt "typical sections" that are applied to roadways without regard to travel speeds, lane widths, vehicle mix, adjacent land uses, traffic volumes and other critical factors. This approach can lead to inadequate provision on major roads (e.g. a four foot bike lane or four foot sidewalk on a six lane high-speed urban arterial) and the over-design of local and neighborhood streets (e.g. striping bike lanes on low volume residential roads), and leaves little room for engineering judgment.

After adopting the policy that bicyclists and pedestrians (including people with disabilities) will be fully integrated into the transportation system, State and local governments should encourage engineering judgment in the application of the range of available treatments.

For example:

- Collector and arterial streets shall typically have a minimum of a four foot wide striped bicycle lane, however wider lanes are often necessary in locations with parking, curb and gutter, heavier and/or faster traffic.

- Collector and arterial streets shall typically have a minimum of a five foot sidewalk on both sides of the street, however wider sidewalks and landscaped buffers are necessary in locations with higher pedestrian or traffic volumes,

and/or higher vehicle speeds. At intersections, sidewalks may need to be wider to accommodate accessible curb ramps.

- Rural arterials shall typically have a minimum of a four foot paved shoulder; however wider shoulders (or marked bike lanes) and accessible sidewalks and crosswalks are necessary within rural communities and where traffic volumes and speeds increase.

This approach also allows the highway engineer to achieve the performance goal of providing safe, convenient, and comfortable travel for bicyclists and pedestrians by other means. For example, if it would be inappropriate to add width to an existing roadway to stripe a bike lane or widen a sidewalk, traffic calming measures can be employed to reduce motor vehicle speeds to levels more compatible with bicycling and walking.

ACTIONS

The United States Department of Transportation encourages States, local governments, professional associations, other government agencies and community organizations to adopt this Policy Statement as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. By so doing, the organization or agency should explicitly adopt one, all, or a combination of the various approaches described above AND should be committed to taking some or all of the actions listed below as appropriate for their situation.

a) Define the exceptional circumstances in which facilities for bicyclists and pedestrians will NOT be required in all transportation projects.

b) Adopt new manuals, or amend existing manuals, covering the geometric design of streets, the development of roadside safety facilities, and design of bridges and their approaches so that they comprehensively address the development of bicycle and pedestrian facilities as an integral element of the design of all new and reconstructed roadways.

c) Adopt stand-alone bicycle and pedestrian facility design manuals as an interim step towards the adoption of new typical sections or manuals covering the design of streets and highways.

d) Initiate an intensive re-tooling and re-education of transportation planners and engineers to make them conversant with the new information required to accommodate bicyclists and pedestrians. Training should be made available for, if not required of, agency traffic engineers and consultants who perform work in this field.

CONCLUSION

There is no question that conditions for bicycling and walking need to be improved in every community in the United States; it is no longer acceptable that 6,000 bicyclists and pedestrians are killed in traffic every year, that people with disabilities cannot travel without encountering barriers, and that two desirable and efficient modes of travel have been made difficult and uncomfortable.

Every transportation agency has the responsibility and the opportunity to make a difference to the bicycle-friendliness and walkability of our communities. The design information to accommodate bicyclists and pedestrians is available, as is the funding. The United States Department of Transportation is committed to doing all it can to improve conditions for bicycling and walking and to make them safer ways to travel.

FURTHER INFORMATION AND RESOURCES

General Design Resources

A Policy on Geometric Design of Highways and Streets, 1994 (The Green Book). American Association of State Highway and Transportation Officials (AASHTO), P.O. Box 96716, Washington, DC, 20090-6716, Phone: (888) 227-4860.

Highway Capacity Manual, Special Report 209, 1994. Transportation Research Board, Box 289, Washington, DC 20055, Phone: (202) 334-3214. Next Edition: FHWA Research Program project has identified changes to HCM related to bicycle and pedestrian design.

Manual on Uniform Traffic Control Devices, 1988. Federal Highway Administration (FHWA), Superintendent of Documents. P.O. Box 371954, Pittsburgh, PA 15250-7954. Next Edition: 2000, will incorporate changes to Part IX that will soon be subject of Notice of Proposed Rulemaking.
Flexibility in Highway Design, 1997. FHWA. HEP 30, 400 Seventh Street SW, Washington, DC 20590.

Pedestrian Facility Design Resources

Design and Safety of Pedestrian Facilities, A Recommended Practice, 1998. Institute of Transportation Engineers, 525 School Street, S.W, Suite 410, Washington, DC 20024-2729, Phone: (202) 554-8050.

Pedestrian Compatible Roadways-Planning and Design Guidelines, 1995. Bicycle / Pedestrian Transportation Master Plan, Bicycle and Pedestrian Advocate, New Jersey Department of Transportation, 1035 Parkway Avenue, Trenton, NJ 08625, Phone: (609) 530-4578.

Improving Pedestrian Access to Transit: An Advocacy Handbook, 1998. Federal Transit Administration / WalkBoston. NTIS, 5285 Port Royal Road, Springfield, VA 22161.

Planning and Implementing Pedestrian Facilities in Suburban and Developing Rural Areas, Report No. 294A, Transportation Research Board, Box 289, Washington, DC 20055, Phone: (202) 334-3214.

Pedestrian Facilities Guidebook, 1997. Washington State Department of Transportation, Bicycle and Pedestrian Program, P.O. Box 47393, Olympia, WA 98504.

Portland Pedestrian Design Guide, 1998. Portland Pedestrian Program, 1120 SW Fifth Ave, Room 802; Portland, OR 97210. (503) 823-7004.

* *Implementing Pedestrian Improvements at the Local Level*, 1999. FHWA, HSR 20, 6300 Georgetown Pike, McLean, VA .

* *AASHTO Guide to the Development of Pedestrian Facilities,* 2000. AASHTO. (available in 2003)

Bicycle Facility Design Resources

Guide for the Development of Bicycle Facilities, 1999., American Association of State Highway and Transportation Officials (AASHTO), P.O. Box 96716, Washington, DC, 20090-6716, Phone: (888) 227-4860.

Implementing Bicycle Improvements at the Local Level, (1998), FHWA, HSR 20, 6300 Georgetown Pike, McLean, VA .

Bicycle Facility Design Standards, 1998. City of Philadelphia Streets Department, 1401 JFK Boulevard, Philadelphia, PA 19103.

Selecting Roadway Design Treatments to Accommodate Bicyclists, 1993. FHWA, R&T Report Center, 9701 Philadelphia Ct, Unit Q; Lanham, MD 20706. (301) 577-1421 (fax only)

North Carolina Bicycle Facilities Planning and Design Guidelines, 1994. North Carolina DOT, P.O. Box 25201, Raleigh, NC 27611. (919) 733-2804.

Bicycle Facility Planning, 1995. Pinsof & Musser. American Planning Association, Planning Advisory Service Report # 459. American Planning Association, 122 S. Michigan Ave, Suite 1600; Chicago, IL 60603.

Florida Bicycle Facilities Planning and Design Manual, 1994. Florida DOT, Pedestrian and Bicycle Safety Office, 605 Suwannee Street, Tallahassee, FL 32399.

Evaluation of Shared-use Facilities for Bicycles and Motor Vehicles, 1996. Florida DOT, Pedestrian and Bicycle Safety Office, 605 Suwannee Street, Tallahassee, FL 32399.

Bicycle and Pedestrian Design Resources

Oregon Bicycle and Pedestrian Plan, 1995. Oregon Department of Transportation, Bicycle and Pedestrian Program, Room 210, Transportation Building, Salem, OR 97310, Phone: (503) 986-3555

Improving Conditions for Bicyclists and Pedestrians, A Best Practices Report, 1998. FHWA, HEP 10, 400 Seventh Street SW, Washington, DC 20590.

Traffic Calming Design Resources

Traffic Calming: State of the Practice. 1999. Institute of Transportation Engineers, 525 School Street, SW, Suite 410; Washington, DC 20024.

Florida Department of Transportation's Roundabout Guide. Florida Department of Transportation, 605 Suwannee St., MS-82, Tallahassee, FL 23299-0450.

National Bicycling and Walking Study. Case Study # 19, Traffic Calming and Auto-Restricted Zones and other Traffic Management Techniques-Their Effects on Bicycling and Pedestrians, Federal Highway Administration (FHWA).

Traffic Calming (1995), American Planning Association, 122 South Michigan Avenue, Chicago, IL 60603

Traditional Neighborhood Development Street Design Guidelines, 1997. Proposed Recommended Practice, Institute of Transportation Engineers, 525 School Street, SW, Suite 410; Washington, DC 20024.

Making Streets that Work, City of Seattle, 600 Fourth Ave., 12th Floor, Seattle, WA 98104-1873, Phone: (206) 684-4000, Fax: (206) 684-5360.

Traffic Control Manual for In-Street Work, 1994. Seattle Engineering Department, City of Seattle, 600 4th Avenue, Seattle, WA 98104-6967, Phone: (206) 684-5108.

ADA-related Design Resources

Accessible Pedestrian Signals, 1998. U.S. Access Board 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Accessible Rights of Way: A Design Manual, 1999. U.S. Access Board, 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Designing Sidewalks and Trails for Access, Part One. 1999. FHWA, HEPH-30, 400 Seventh Street SW, Washington, DC 20590.

ADA Accessibility Guidelines for Buildings and Facilities, 1998 (ADAAG). U.S. Access Board, 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253.

Uniform Federal Accessibility Standards, 1984 (UFAS), available from the U.S. Access Board, 1331 F Street NW, Suite 1000; Washington, DC 20004. (800) 872-2253

Universal Access to Outdoor Recreation: A Design Guide, 1993. PLAE, Inc, MIG Communications, 1802 Fifth Street, Berkeley, CA 94710. (510) 845-0953.

Recommended Street Design Guidelines for People Who Are Blind or Visually Impaired. American Council of the Blind, 1155 15th Street NW, Suite 720; Washington, DC 20005. (202) 467-5081.

Trail Design Resources

Trails for the 21st Century, 1993. Rails to Trails Conservancy, 1100 17th Street NW, 10th Floor, Washington DC 20036. (202) 331-9696.

Greenways: A Guide to Planning, Design, and Development, 1993. The Conservation Fund. Island Press, 1718 Connecticut Ave NW, Suite 300; Washington, DC 20009.

Trail Intersection Design Guidelines, 1996. Florida Department of Transportation, 605 Suwannee St., MS-82, Tallahassee, FL 23299-0450.

**Indicates publication not yet available*

Appendix E

CDOT Contacts

HEADQUARTERS	4201 E Arkansas Ave	Denver CO 80222	
Executive Director	Tom Norton	303-757-9201	tom.norton@dot.state.co.us
State Bicycle/Pedestrian Program	Gay Page	303-757-9982	gay.page@dot.state.co.us
State Enhancement Program	Karen Sullivan	303-757-9502	karen.l.sullivan@dot.state.co.us
Scenic Byways Program	Sally Pearce	303-757-9786	sally.pearce@dot.state.co.us
Federal Lands Program	Jerry Piffer	303-757-9792	jerry.piffer@dot.state.co.us
Highway Safety Programs	Stephanie Olson	303-757-9465	stephanie.olson@dot.state.co.us
REGION 1	18500 E Colfax	Aurora CO 80011	
Region Transportation Director	Jeff Kullman	303-757-9371	jeff.kullman@dot.state.co.us
Bicycle/Pedestrian Coordinator	Ann Skinner	303-365-7455	ann.skinner@dot.state.co.us
Enhancement Coordinator	Ann Skinner		
REGION 2	905 Erie Ave	Pueblo CO 81002	
Region Transportation Director	Bob Torres	719-546-5452	robert.torres@dot.state.co.us
Bicycle/Pedestrian Coordinator	Karen Schneiders	719-546-5748	karen.schneiders@dot.state.co.us
Enhancement Coordinator	Karen Schneiders		
REGION 3	222 S Sixth St #317	Grand Junction CO 81501-2769	
Region Transportation Director	Owen Leonard	970-248-7225	owen.leonard@dot.state.co.us
Bicycle/Pedestrian Coordinator	Charles Meyer	970-248-7376	charles.e.meyer@dot.state.co.us
Enhancement Coordinator	David Miller	970-248-7216	david.c.miller@dot.state.co.us
REGION 4	1420 Second St	Greeley CO 80632	
Region Transportation Director	Karla Harding	970-350-2101	karla.harding@dot.state.co.us
Bicycle/Pedestrian Coordinator	Diana Heft	970-350-2170	diana.heft@dot.state.co.us
Enhancement Coordinator	Jeff Manuel	970-350-2170	jeff.manuel@dot.state.co.us
REGION 5	2802 N Main #306	Durango CO 81301	
Region Transportation Director	Richard Reynolds	970-385-1402	richard.reynolds@dot.state.co.us
Bicycle/Pedestrian Coordinator	Laurie Blanz	970-385-1400	laurie.blanz@dot.state.co.us
Enhancement Coordinator	Laurie Blanz		
REGION 6	2000 S Holly St	Denver CO 80222	
Region Transportation Director	John Muscatell	303-757-9459	john.muscatell@dot.state.co.us
Bicycle/Pedestrian Coordinator	Terry Fauber	303-757-9935	terry.fauber@dot.state.co.us
Enhancement Coordinator	Myron Swisher	303-757-9866	myron.swisher@dot.state.co.us

Appendix F

CDOT Bicycle & Pedestrian Program Publications

Available on the web at www.dot.state.co.us/bikeped/
or bicycleinfo@dot.state.co.us

All publications are available at no charge and available in large quantities for public distribution.

Colorado Bicycling Manual (80 pg)
Official rules of the road and trail for walking and bicycling in CO. Chapters on commuting, children, pedestrians, equipment, etc.

Rules of the Road & Trail Wallet Cards (plastic card the size of a credit card)
Overview of rules of the road and trail.

Colorado Bicycling Map
State road map for bicyclists includes approximate shoulder width and traffic volumes. Does *not* show local roads, trails or mountain bike routes.

Administration of Bicycle Events on CO Roads: A Guide for Event Managers (50 pg)
Guide to hosting bicycle events on CDOT highways and the special event permit process.

Bicycling & Walking in CO: The Economic Impact & Household Survey Results (50 pg)
Executive Summary of the research study on bicycling and walking in Colorado.

Home to School: Safe Travel for the Elementary School Child (100 pg)
Resource workbook for developing bicycle and pedestrian education session for children in grades K-5.

Commute for Life (15 min. video)
A humorous look at teaching an employee how to commute by bicycle.

Share the Road (8 min. video)
Safety tips and rules of the road for bicycling in large groups and sharing the road with motorists.

Share the Road Annual Media Campaign
Public education and awareness

- TV Commercials (Video of four 30 second commercials)
- Bumper Stickers (Same graphic as used on bus boards and outdoor media)