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Transportation: Paving the Way for Walking and Biking

Did you know?

Annual federal transportation funding for bicycle and pedestrian projects has risen eighty-fold—from almost \$5 million in 1988 to almost \$416 million in 2002.

Opposite and above – For many Americans walking or bicycling is the only viable option of getting around. Others choose to walk or bike for fitness, economic, or environmental reasons, or simply for recreation and the enjoyment of being outdoors.

Every state DOT now has a bicycle and pedestrian coordinator to help implement bicycle and pedestrian solutions as a routine part of transportation planning.

For many individuals—those too young or too old to drive, those who cannot afford to own a car, or those who simply choose not to own a car—walking or bicycling is the only viable option of getting around. Many people choose to walk or bike for fitness, economic, or environmental reasons, or simply for recreation and the enjoyment of being outdoors.

Bicycling and walking provide major benefits—including improved health, recreation, and mobility for individuals, and neighborhood cohesion and increased tourism for communities. Increased biking and walking can help reduce roadway congestion, cut air pollution, and contribute to livable communities. Transportation is a major supporter in helping Americans realize these benefits—providing an astonishing 80-fold increase in funding for bicycle and pedestrian projects—from \$4.9 million in 1988 to almost \$416 million in 2002.²⁷ This infusion of funds has been a major boost for new bicycle and trail projects with the support of new federal, state, and local policies to advance walking and biking as a mode of transportation as well as recreation.

In the past decade, transportation has provided unprecedented support for bicycling and walking—basic forms of transportation that are accessible to virtually all Americans. In support of this, federal and state governments have taken unprecedented steps. Consider the following facts:

- ▶ The federal government calls for establishing bicycle and pedestrian ways in all transportation projects, unless exceptional circumstances exist.²⁸
- ▶ Every state DOT now has a bicycle and pedestrian coordinator to help implement bicycle and pedestrian solutions, and transportation agencies have placed a new emphasis on bicycling as a routine part of transportation planning, design, construction, operations, and maintenance activities.
- ▶ Walking and biking are safer, with about a 13 percent reduction in the number of pedestrian and bicyclists killed in traffic crashes from 1993 to 2001.²⁹



Transportation is working to increase biking and walking and the associated health benefits, including reduced risk of coronary heart disease, stroke, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages.

- ▶ More than 2,000 local trails (shared-use paths) were designated in the year 2000 as Millennium Trails as part of the White House Millennium Initiative. These community trails, together with 50 Millennium Legacy Trails and 16 National Millennium Trails designated in 1999, highlight the transportation benefits of bicycling and walking.
- ▶ According to U.S. census data, some 563,476 people reported riding bicycles to work and 3,412,899 workers 16 years and over reported walking to work in 2000.³⁰
- ▶ In 2001 alone, over one thousand new bicycle and pedestrian projects were funded with federal transportation dollars.³¹
- ▶ Health professionals are raising concerns regarding increased incidence of obesity in the United States. Transportation is working to increase biking and walking and the associated health benefits, including reduced risk of coronary heart disease, stroke, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages.
- ▶ In 2002, 65 percent (\$270 million) of bike/ped funds came from transportation enhancement activities, while 35 percent (\$145 million) came from the Congestion Mitigation and Air Quality Improvement Program, and various other surface transportation programs. On top of that, some highway projects include incidental bicycle and pedestrian components that are not reflected in the various program funding levels.

About three quarters of the federal funding for bicycle and pedestrian improvements comes from the Transportation Enhancements Program. Far from providing just paths and trails, bicycle and pedestrian projects funded by the program include:

- ▶ sidewalks;
- ▶ bicycle parking;
- ▶ bicycles on buses;
- ▶ pedestrian and bicycle transportation facilities including shared-use paths;
- ▶ pedestrian and bicycle safety and education activities; and
- ▶ preservation of abandoned railway corridors (also known as rail-trails or rails-to-trails).³²

Since 1992, more than half of the \$5 billion in federal transportation enhancement funds have been used for pedestrian and/or bicycle facilities and related projects. About one-third to one half of these projects are shared-use paths or trail-related, including more than 1,000 rail-trail projects.³³

Another program—the Recreational Trails Program—has provided over \$136 million in federal transportation funding since 1993, for a variety of recreational trails and related facilities, with another \$135 million coming from additional sources—including other federal agencies, states and localities, and trail clubs. The law provides states \$50 million per year for 2000 to 2003.

Recreational trails are used mostly for hiking and walking, although they also support other recreational uses, including equestrian, cross-country skiing, snowmobiles, and in-line skating.

As of 2002, 4,870 trails projects were reported by states.³⁴ These include building new trails and adding trail connections, building restrooms, water fountains, establishing educational programs, maintaining trails, resurfacing trail treads, providing accessibility for mobility-impaired persons, and more.

The Great Allegheny Passage from Pennsylvania to Maryland

The Great Allegheny Passage is the longest multi-purpose rail-trail in the East, with 100 continuous miles of trail open in Pennsylvania from McKeesport to Meyersdale, and an additional 20 miles scattered throughout the Pittsburgh area. When the project is completed in 2005, the rail-trail will offer a total of 150 miles of non-motorized, nearly level trail between Pittsburgh, Pennsylvania, and Cumberland, Maryland, with a 52-mile spur to Pittsburgh International Airport. At Cumberland, the Great Allegheny Passage will link with the Chesapeake and Ohio Canal towpath, creating a 300-mile, off-road route between Pittsburgh and Washington, D.C. The trail allows hikers, bicyclists, cross-country skiers, and people with disabilities the opportunity to discover the region's spectacular river gorges, mountain vistas, and sweeping cityscapes. The trail leads travelers through the Allegheny Mountains making use of refurbished railroad bridges and tunnels on their journey along waterways, unique rock formations, and wildlife areas.

A public/private partnership between the Pennsylvania Department of Transportation and the Allegheny Trail Alliance—a coalition of seven trail



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Far from providing just paths and trails, bicycle and pedestrian projects funded by the Transportation Enhancements Program also includes bicycles on buses.

organizations—manages this comprehensive project and has contributed to its success.

A 1998 study showed the direct economic impact of the Great Allegheny Passage exceeded \$14 million a year—even though the trail was only half finished at that time. The study—based on surveys of trail users and local businesses—recorded more than 350,000 visitor trips on the trail each year with users spending \$12.01 to \$15.33 per person, per trip. The study also estimated that trail users spent between \$5.4 and \$14.1 million near six trailheads. In addition, annual expenditures on bicycles and related equipment—attributable to the trail over the prior two years—were between \$8.9 and \$12.2 million. The study suggests a total, direct annualized impact of \$14.3 to \$26.5 million.

In 1998, four new trail-oriented businesses opened in the Allegheny County town of Boston—including bike rentals, restaurants, a bed-and-breakfast, and a novelty shop. In Confluence—one of the project's first trailhead towns—the trail has encouraged the development of several new businesses including three new restaurants, two new bed-and-breakfasts and a bicycle rental program at the local video store. In addition, several homes have been purchased and renovated by trail users, some as primary residences and others as vacation homes. As result, real estate values in Confluence are increasing.

Clearly, the Great Allegheny Passage has positively affected the economies of the communities it passes through. The trail network preserves a valuable transportation corridor while providing a wealth of benefits to communities along its way.³⁵

The Mineral Belt Trail in Leadville, Colorado

At an elevation of 10,400 feet above sea level, the Mineral Belt Trail (MBT) is one of the highest paved rail-trails in the country. The MBT was a challenge to developers because it is located within a Superfund Site, a national historic district, a mining district with overlapping claims, and an area of high topographic relief—all of this in a small community with limited financial resources.

In July 2000, seven years after the trail's groundbreaking, Leadville officially opened the Mineral Belt Trail, a 12.5-mile rail-trail through the town. The successful completion of the trail was the result of strong partnerships between Union Pacific Railroad Company, Colorado State Parks, Colorado Department of Transportation, U.S. Environmental Protection Agency (EPA), Asarco Mine, the town of Leadville, Lake County, and private landowners.

Interesting features of the trail include the safe and legal access it provides to historic mining areas, panoramic views of Colorado's three highest peaks (including Mount Elbert, the state's highest mountain) and the trail's use, sanctioned by the EPA, as an impervious cap over the old railroad corridor.



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Owners of restaurants and lodging facilities along the Mineral Belt Trail in Leadville, Colorado (left), report that they are serving customers who have come into town specifically to ride the trail. The trail has helped Leadville prevent an economic recession by contributing to the town's revitalization efforts and successful development as a recreation and tourism destination.



Photo courtesy of the National Transportation Enhancements Clearinghouse

Until recent years, mining was the economic backbone for Leadville. The 1999 closure of the Asarco Mine was a devastating blow to Leadville's economy and community spirit. Realizing the need to redefine their community, Leadville residents rallied around the idea of the trail, focusing on the town's natural beauty, recreational opportunities and historic mining areas. The MBT draws tourists to the area year-round, boosting the economic viability of this former mining area. In the months following the trail's opening, Leadville reported a 19 percent increase in sales tax revenues. Owners of restaurants and lodging facilities report that they are serving customers who have come into town specifically to ride the trail. The MBT has helped Leadville prevent an economic recession by contributing to the town's revitalization efforts and successful development as a recreation and tourism destination.³⁶

Planning for Bicycle-Pedestrian Mobility

Increasingly, states and cities see the importance of integrating bicycling and walking into transportation networks through comprehensive planning efforts. Transportation agencies are serving a vital role in getting Americans on the move—setting targets and goals for increased bicycle and pedestrian mobility and establishing strategies for getting there.

New Jersey's Commitment to Bicycling and Walking

The New Jersey Department of Transportation (NJDOT) has made a commitment to encourage bicycling and walking within the state, with an ultimate goal of developing an integrated statewide system of bicycle and pedestrian facilities and infrastructure. The state plans to achieve this goal with a comprehensive, statewide pedestrian and bicycle plan. The first phase of the plan establishes goals and targets that the department is working toward. The next step is to complete an inventory of existing bicycle facilities, develop a list of priority locations for bicycle and pedestrian improvements, and to identify opportunities for improving the bicycle or pedestrian compatibility of existing projects. A database of existing, proposed, and potential bicycle and pedestrian facilities throughout the state will be developed that can be displayed on maps, and easily maintained.

NJDOT Bicycle and Pedestrian Master Plan Goals

- ▶ Create a bicycle-friendly and walkable 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.
- ▶ Ensure community destinations, transit services, and recreation facilities are easily accessible for all levels of bicyclists and pedestrians.
- ▶ Reform land-use planning policies, ordinances, and procedures to maximize opportunities for walking and bicycling.
- ▶ Develop education and enforcement that will result in reductions of accidents, and a greater sense of security and confidence for bicyclists and pedestrians.
- ▶ Increase bicycling and walking by fostering a pro-bicycling and pro-walking ethic in individuals, private-sector organizations, and all levels of government.³⁷



The following list of bike and pedestrian plans across the country—compiled by Pedestrian and Bicycle Information Center³⁸—illustrates progress in integrating non-motorized modes as viable transportation alternatives.

Exemplary Bicycle and Pedestrian Plans Across the United States

Combined Pedestrian and Bicycle Plans

- ▶ **Oregon Bicycle and Pedestrian Plan:** A statewide planning and design guide for both bicycle and pedestrian modes; contains useful graphics and information about many innovative approaches to accommodating bicycling and walking.
- ▶ **Idaho Bicycle and Pedestrian Transportation Plan:** A clear, simple statement of goals and objectives combined with helpful planning and design information for local agencies.
- ▶ **Vermont Bicycle and Pedestrian Plan:** Useful sections on implementation and the roles of different agencies, partners.
- ▶ **Puget Sound Regional Bicycle and Pedestrian Implementation Strategy:** A regional plan (Seattle-area) identifying more than 2,000 miles of needed bike lanes and paths and pedestrian improvements around activity centers.
- ▶ **Boulder Transportation Master Plan:** Bicycle and pedestrian planning are fully integrated into the Boulder, Colorado transportation master plan, with modal split targets of 15 percent of trips by bike, and 24 percent by foot, by 2020.
- ▶ **Brunswick Bicycle and Pedestrian Improvements Plan:** A great example of a plan for a small town of just 15,000; includes specific planned or proposed improvements, design recommendations.
- ▶ **Mesa Regional Transportation Plan:** The City of Mesa's long-range transportation plan has a chapter of bicycling and on walking that provides a good overview of design and planning issues. Contains a vision, objectives, policies, and actions.

Pedestrian Plans

- ▶ **Oakland Pedestrian Master Plan:** This plan is the first in California. The “next steps in pedestrian planning” section highlights pedestrian level of service and pedestrian modeling.
- ▶ **Portland Pedestrian Master Plan:** One of the first comprehensive pedestrian plans for a city; complemented by a detailed design manual for pedestrian facilities.
- ▶ **Cambridge Pedestrian Plan:** Beautifully produced and thorough plan incorporating specific suggestions for sites throughout the city, design guidelines, links to other modes, and more.

- ▶ **Madison Pedestrian Transportation Plan:** Adopted in 1997, Madison's visionary plans for walking incorporates planning, design, maintenance, and long-term goals and objectives.
- ▶ **Wisconsin Pedestrian Policy Plan 2020:** One of the few statewide pedestrian plans focuses on the policies and programs that will help improve conditions for walking.
- ▶ **Florida Pedestrian Facilities Planning and Design Handbook:** A detailed manual on pedestrian facility planning and development. Thorough coverage of planning factors, design detail, and more.
- ▶ **Maricopa Association of Governments: Pedestrian Plan 2000:** A comprehensive application of the Pedestrian Level of Service and Latent Demand models for the Phoenix area. Includes detailed action plans.

Bicycle Plans

- ▶ **Florida Bicycle Facilities Planning and Design Handbook:** A detailed manual on bicycle facility planning and development. Thorough coverage of planning factors, design detail, and more.
- ▶ **Maricopa County Bicycle Transportation System Plan:** The policies in this plan institutionalize bicycle accommodation within the agency; a map provides the starting point for improvements in this rapidly growing area surrounding Phoenix, Arizona.
- ▶ **Austin Bicycle Plan:** A two-part plan that provides the policy and programming aspects first, and the design details second. A good example of action plans.
- ▶ **Denver Bicycle Master Plan Update:** A comprehensive bicycle plan adopted in 2002 that updates a 1993 plan. Addresses everything from design standards to route networks cost estimates for missing links, etc.
- ▶ **Portland Bicycle Master Plan:** Significant not just because of the quality of plan itself but also the five-year review of progress that documents how much of the plan has been implemented. Includes good design information.
- ▶ **Los Angeles Bicycle Plan:** A chapter in the transportation element of the city's General Plan; very accessible production with clear assignment of responsibility and lead roles.
- ▶ **Long Beach Bicycle Master Plan:** Clear and concise plan that incorporates user input and provides project ranking and priorities.
- ▶ **MTC Regional Bicycle Plan:** An element in the San Francisco Bay area's regional transportation plan; identifies a 1,600-mile bikeway network and a \$700 million price tag.

- ▶ **Knoxville Regional Bicycle Plan:** A comprehensive regional plan that incorporates by adoption the U.S. DOT design guidance on accommodating bicycles. Specific roles and responsibilities laid out; extensive resources made available.
- ▶ **New York City Bicycle Master Plan:** The plan identifies a 900-mile bike-way network with critical coverage of bridge access and transit issues; links to the 350-mile greenway network.
- ▶ **Madison/Dane County Bicycle Transportation Plan:** A comprehensive plan for “making the region an even better place to bicycle” that includes an impressive needs assessment and priority list of projects that are scheduled. Covers engineering, education, encouragement, and enforcement in detail.
- ▶ **Davis Bike Plan:** Even the city with the highest level of bike use in the nation still needs a bike plan to keep people riding and improve the scope, operation, and maintenance of the already-extensive bikeway network.

Trail/Greenways Plans

- ▶ **Iowa Trails 2000:** A tremendous resource with clear vision and objectives statements, cost estimates, design information, and much more.
- ▶ **Maricopa County:** Includes a policy requiring all county departments to include regional trails in the planning and design of any project near or adjacent to the 221-mile proposed network.
- ▶ **New York City Greenway Plan:** A plan for a 350-mile network of urban greenways crisscrossing New York City.

Other Plans

- ▶ **New Jersey Statewide Bicycle and Pedestrian Master Plan:** An update of the ground-breaking 1995 plan is underway.
- ▶ **Soles and Spokes:** The Pedestrian and Bicycle Plan for Chicago Area Transportation: Another work in progress that is worth watching. This regional plan will encompass the six-county Chicago metropolitan area.
- ▶ **Forsyth County Bicycle and Pedestrian Plan:** This suburban/rural county in the Atlanta metro area is in the midst of creating their first non-motorized plan.
- ▶ **University of Connecticut Master Plan:** The campus of the university is being redesigned with pedestrians at the core.
- ▶ **Hopewell Hamlet Pedestrian Plan:** A fascinating insight into potential pedestrian improvements in this small town in New York’s Hudson River Valley. Great use of photos to show the potential improvements for both bicycling and walking.