

TECHNICAL MEMORANDUM #1
Vermont Agency of Transportation
State DOT
Bicycle and Pedestrian Policies

**Vermont Bicycle and
Pedestrian Policy Plan**

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Table 1. Topics Addressed by State DOT Bicycle and Pedestrian Policies

Technical Memo #1

1.0 State Department of Transportation Bicycle and Pedestrian Policies

Disclaimer: The information below is presented for purposes of providing an overview of applicable state and federal policy guidance and to facilitate the discussion of policy issues as they relate to the revision of the VT Bike & Ped Policy Plan. Inclusion here does not constitute an endorsement by VTTrans of the policies stated unless otherwise noted.

1.1 INTRODUCTION

This memorandum examines pedestrian and bicycle policies established by state departments of transportation (DOTs) throughout the U.S. The experience of these states shows that there are many ways that policies can be established and that the policies vary widely in scope. A better understanding of other states' policies will be helpful as VTTrans re-evaluates current policies, and develops a strategic policy approach for the future.

At this early stage in this project, this initial review does not establish the appropriateness of other states' policy approaches for use in Vermont. It is our opinion that such judgments would be premature, and that instead this information should frame the future discussion on policies and performance measures that are needed in Vermont. This memorandum therefore is a "work in progress" and is intended to get this discussion started. It is also important to note that any given issue addressed in one state's DOT policy document(s) may be addressed by another DOT but outside a formal policy document.

Also, this memorandum is not intended to serve as a comprehensive analysis of policies in all 50 states. It is important to note that there have been two recent, comprehensive bicycle and pedestrian policy studies by national advocacy groups: the Thunderhead Alliance's *Complete Streets Report* (published in March 2004) and "*Are We There Yet,*" published by the National Center for Bicycling and Walking in February 2003. While those two reports were informative during the development of this memorandum, we do not attempt to summarize their findings here. Rather, this technical memorandum is intended as an objective discussion of policy directions and issues that may be relevant to Vermont.

Differentiation between "policy" and "practice"

A policy is the official language that dictates how an agency will address a particular issue or set of issues. In any given state, there is a complex hierarchy of different types of policies: State law, formal policy, and rules administered at various government agencies. Some of these policies are "more fixed" than others – particularly those that have been codified into law or are otherwise official in documents that are widely available to the public.

Policies are often stated in terms of what the agency “will” do, “shall” do, or “shall consider” as it conducts daily business. Policies differ from plan recommendations, which suggest or mandate programs and activities that the agency will accomplish in the future. Policies also differ from guidelines. Guidelines, or design manuals, have been developed by many agencies (including VTTrans) to give further direction to agency staff on specific design issues. However, guideline manuals may also contain policy statements. For example, the Vermont pedestrian and bicycle policies are included within in the Agency of Transportation’s Pedestrian and Bicycle Facility Planning and Design Manual.

Policies are also different than practice. Practice is a term used to describe everyday decisions that are made within the agency. Practices generally evolve over time. This includes decisions about roadway construction and maintenance projects, safety funding, education and training, data collection, and other areas of responsibility – whether or not they are addressed in policy statements. The effectiveness of a pedestrian and bicycle policy is shown by whether or not its words (or intentions) are put into practice.

Complex relationships between policy and practice

The level to which a state DOT accommodates pedestrian and bicycle transportation is a complex interaction between policy and practice. There are examples throughout the U.S. of policies that are ineffective in practice because staff are either unaware of them, ignore them, or are unable to adhere to them for a variety of reasons (inadequate training, lack of funds, lack of jurisdiction, etc). By contrast, there are also a number of examples of government agencies that have few formal policy statements about accommodating pedestrians and bicyclists, but do far more in practice for improving pedestrian and bicycle conditions than other agencies that have more detailed policies. There are yet other examples of states that have recently instituted policies that affect projects that enter the scoping stage after a certain date, which means that the new policies may not have an appreciable impact for several years or decades.

States that are recognized as being leaders for their effectiveness in accommodating pedestrians and bicyclists are often described as having “institutionalized” these modes in their daily business – i.e. made them an integral component of their practice. It is important to note that policy statements alone do not ensure success – it is also a measure of political support among elected leaders and high-level officials, leadership on the part of the state pedestrian and bicycle coordinator, the influence of advocacy groups (and amount of constructive assistance they provide), and active participation by local and regional governments.

1.2 RELEVANT FINDINGS: STATE PEDESTRIAN AND BICYCLE POLICIES

This section summarizes information collected from a sample of 17 state DOTs about their pedestrian and bicycle policies. It discusses different ways that policies are established and differences in the scope of state DOT policies. Most of the state policies that were reviewed were

posted online in plan documents, design guidelines, state legislation, or state DOT pedestrian and bicycle program web pages. The findings are described below.

1) Many states do not have publicly-stated pedestrian and bicycle policies. A 2005 study by the Thunderhead Alliance found that 12 states have formal policies requiring “routine accommodation” of pedestrians and bicyclists in all new construction and reconstruction projects (1). A 2003 study by the National Center for Bicycling and Walking looked at the *practices* of state DOTs. This study found that 18 states include sidewalks in all state highway projects in urban areas and that 25 states accommodate bicyclists in all state highway projects (2). This illustrates that there are some states that may not formally issue policies, yet provide for routine accommodation of bicyclists and pedestrians in practice.

2) Bicycle and pedestrian policies are established at different levels of government. The list below shows the different levels of government that have been involved in establishing pedestrian and bicycle policies in the states that were studied for this memorandum.

- *State Legislatures.* In Oregon, Florida, Maryland, and Rhode Island, the state legislatures have established statutes that direct the state DOT to accommodate pedestrians and bicyclists.
- *Secretary of the DOT/State Transportation Board.* California, Idaho, Kentucky, North Carolina, South Carolina, Tennessee, Virginia have policies that were issued by the Secretary of Transportation. In many cases, the policy was issued with approval or guidance from the State Transportation Board.
- *DOT Staff.* In some states, DOT staffs play an important role in further refining policy guidance. Undefined responsibilities, vague language, and other guidance from the policy language often require interpretation from the DOT. Oregon DOT wrote its interpretation of the state statute (ORS 366.514) in the 1995 Oregon Bicycle and Pedestrian Plan. In states such as Florida, Idaho, and New Jersey, staff have established design standards to help carry out the policy.

3) Design manuals are sometimes used as a vehicle for issuing policies. Pennsylvania and Vermont have established policies through staff or consultant-developed design manuals without a formal pedestrian and bicycle policy directive from the state legislature or DOT secretary. In the case of Vermont, the design manual, was formally adopted by the DOT Secretary, but the policy language was crafted during the development of the design manual. PennDOT’s pedestrian and bicycle checklist is an appendix to its design guidelines. The checklist was developed to ensure that project engineers consider pedestrian and bicycle facilities during all phases of project development. However, other key sections of the design manual do not address pedestrian and bicycle accommodation (www.bicyclecoalition.org/checklist/padot_position.htm). This lack of consistency hampers the inclusion of non-motorized facilities in some projects. Policy statements that are not backed up by practical guidance within state-issued design manuals appear to be less effective.

4) The scope of state DOT policies is strongly influenced by the types of roadways that are under the jurisdiction of the state. For example, Wisconsin DOT's Pedestrian Policy Plan (2000) provides design guidance for sidewalk installation along state highways. The Plan defers to municipalities for sidewalk installation policies on other roads. In a state such as North Carolina where the vast majority of roadways are state-owned, no similar distinction is necessary. Therefore any such policy must "make sense" given the particular balance of roadway ownership in a state. It is also important to note that in states with a strong local government structure, state DOT's have traditionally been careful to avoid the appearance of dictating local policy.

This explains some of the differences in policies of states that even lie adjacent to one another. Maryland and Virginia are good examples of this dichotomy. Virginia recently passed one of the most aggressive policies for the routine accommodation of bicycles and pedestrians in the nation. This was within the purview of Virginia DOT as the primary owner of the roadway network in Virginia, and the agency responsible for setting roadway design policies. In Maryland, only 18% of the roadway network is owned by the state. While Maryland DOT's 20-Year Bicycle and Pedestrian Access Plan makes strong policy statements (albeit less prescriptive than Virginia's), it acknowledges the shared responsibilities for achieving the goals of the Plan.

5) A number of state DOT's have recently taken a top-down approach to adopt new bicycle and pedestrian policies. In most cases, this has been done to counteract internal inertia and/or resistance toward addressing bicycle and pedestrian issues in daily practice. In each of the most recent examples (South Carolina, Kentucky and Virginia), new policy statements have been adopted by the leadership of the DOT in order to remedy what is perceived to be a lack of adequate safety for these modes. It has occurred in some cases out of strongly held views on the part of the individuals in leadership positions. In Virginia and South Carolina, the adoption of these policies was a direct result of the Secretary's intervention.

Scope of State DOT Pedestrian and Bicycle Policies

The set of publicly-available DOT policies that were examined for this report addressed a very wide range of pedestrian and bicycle policy issues. Table 1 shows the categories of pedestrian and bicycle topics addressed in each state policy. The sections below discuss how each of the topics in Table 1 are integrated into the policies of different states.

TABLE 1. TOPICS ADDRESSED BY STATE DOT BICYCLE AND PEDESTRIAN POLICIES

STATE	TOPICS ADDRESSED BY STATE DOT BICYCLE AND PEDESTRIAN POLICIES															
	Facility Provision	Facility Design	Maintenance	Crossings/ Intersections	ADA Accessibility	Bike Routes	Shared-Use Paths	Parking	Land Use	Environment	Education	Planning	Funding	Physical Activity/ Health	Research	Economic Development
Arizona	X	X	X				X					X	X			
California	X	X	X		X					X	X	X	X			
Connecticut	X	X	X				X					X	X			
Florida	X	X	X			X		X				X				
Idaho	X	X	X				X						X			
Illinois	X	X	X					X				X				
Kentucky	X	X	X	X	X				X			X				
Maryland	X	X	X									X				
North Carolina	X	X	X				X	X			X	X	X			
Oregon	X		X		X		X		X	X	X	X	X		X	X
Pennsylvania	X	X		X	X			X	X			X				
Rhode Island	X		X			X				X			X			
South Carolina	X	X	X							X		X				
Tennessee	X	X		X	X		X				X	X				
Virginia	X	X	X	X	X	X	X			X		X	X		X	X
Vermont	X	X	X						X		X	X		X		

Source of Vermont data: Vermont Pedestrian and Bicycle Facility Planning and Design Manual - 2002

Facility Provision

While each state pedestrian and bicycle policy discusses the provision of non-motorized facilities, the strength of the policy language varies widely. Virginia uses some of the strongest language. VDOT “will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking”. Vermont uses similar terms - the VTrans policy states that “VTrans will...incorporate pedestrian [and bicycle] facilities in all transportation projects and programs, where applicable.” CalTrans “fully considers the needs of non-motorized travelers (including pedestrians, bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products”. Arizona says that “it is ADOT’s policy to include provisions for bicycle travel in all new major construction and reconstruction projects”. Kentucky “will consider the incorporation of pedestrian facilities...”

Policy language issued by several other state DOT’s is less stringent on the issue of non-motorized facilities, using policy language that gives the DOT the ability to opt out of providing bicycle and pedestrian facilities in some cases. Some examples are provided below:

- Illinois DOT’s policy states that they will, “give consideration to accommodating bicyclists and pedestrians,” and requires specific warrants to be met for including non-motorized facilities in projects.
- States such as Connecticut and North Carolina require municipalities to take on the cost of providing and/or maintaining facilities before consenting to provide them during road construction projects, and will include such facilities only at the request of the local government. North Carolina will include pedestrian and bicycle facilities in new projects, not necessarily during reconstruction projects (which are only required to maintain the same level of accommodation that was previously provided). Connecticut will construct sidewalks in locations where they did not previously exist only if a locality provides the full non-federal share of designing and constructing the sidewalk.
- Arizona specifies that the policy applies only to major new construction and major reconstruction projects.

Facility Design

Most of the state policies mentioned pedestrian and bicycle facility design. Some, such as Arizona, Pennsylvania, Illinois, and Tennessee, specified minimum widths of basic facilities like shoulders, wide outside lanes, and sidewalks. Others, like Idaho, include sections of their policy that provide more detailed design guidelines. Many states have developed design guidelines that are separate from their policies. These guidelines are typically provided as stand-alone documents or as chapters of their roadway design manuals. In Vermont, the state pedestrian and bicycle policies are provided as distinct elements of the pedestrian and bicycle design manual (the pedestrian and bicycle policies are each provided on their own pages of the manual).

Maintenance

A group of states, including California, Florida, Maryland, Oregon, Rhode Island, South Carolina, and Virginia state that routine maintenance activities should address pedestrian and bicycle facilities. Vermont's policy is to "maintain the transportation system so pedestrian [and bicycle] use are maximized". Other states, such as Arizona, Connecticut, Idaho, Illinois, and North Carolina place the burden of maintaining sidewalks and some bicycle facilities on local jurisdictions. For example, Idaho states that "bicycle/pedestrian facilities shall not be maintained by Idaho Transportation Department unless they are an integral part of the roadway surface."

Crossings/Intersections

A few state policies mention non-motorized roadway crossings or intersections. Pennsylvania's pedestrian and bicycle checklist includes entire sections that specify the types of pedestrian and bicycle features that should be provided at intersections. The policies of Kentucky, Tennessee, and Virginia mention accommodating pedestrians and bicyclists at intersections in a more general way.

ADA Accessibility

Only a small number of states mention ADA accommodation explicitly in their policies. These states include all the states that discuss intersection or crossing issues in their policies (Pennsylvania, Kentucky, Tennessee, and Virginia) as well as California and Oregon.

Specific Facility Types

Several states highlight policies related to the provision of specific facility types, such as bike routes, shared-use paths, and bike parking. Regarding bike routes, Florida policy specifies the need for uniform bicycle route signing. Rhode Island lists bicycle route signs as a permissible bike facility. Virginia's policy encourages the development of long-distance signed bicycle routes with the necessary facilities to create safe bicycling conditions.

With respect to shared-use paths, Arizona, Idaho, and North Carolina give the responsibility for providing and maintaining these facilities to local jurisdictions. In Connecticut, Oregon, and Virginia, shared-use paths are an option to be considered by the DOT for providing pedestrian and bicycle access in a corridor.

Bike parking is mentioned in the policies of North Carolina and Pennsylvania. North Carolina's policy states, "secure and adequate bicycle parking facilities shall be provided wherever practicable and warranted in the design and construction of all state-funded buildings, parks, and recreational facilities." PennDOT's bicycle checklist includes bike parking facilities as a necessary project element to provide connectivity with transit or destinations, such as trail heads.

Land Use

State DOT policies referenced land use issues in two distinct ways. Oregon and Vermont encourage the coordination of pedestrian and bicycle accommodations with land use development. Oregon cites the importance of coordinating pedestrian and bicycle systems with statewide planning goals and to provide multimodal connectivity among places. Vermont's policy encourages land use and transportation development that accommodates pedestrians and bicyclists. Vermont also encourages municipalities to follow the pedestrian and bicycle guidelines in their local plans and developments, which will help create connected networks of pedestrian and bicycle facilities in compact villages and urban centers.

Another group of states used pedestrian and bicycle attractors as means of defining where pedestrian and bicycle facilities would be provided (Florida, Illinois, Kentucky, and Pennsylvania). For example, Florida places special emphasis on projects in or within one mile of an urban area, and Illinois will provide pedestrian and bicycle accommodations if a roadway "provides primary access to a park, recreational area, school, or other significant destination."

Environment

Non-motorized transportation is often encouraged because it does not produce tailpipe emissions. Several states mentioned this benefit in their pedestrian and bicycle policy statements. Unlike other states, Rhode Island's policy references environmental issues to restrict the locations of pedestrian and bicycle facilities. The policy specifies that non-motorized facilities should not be constructed in areas where they will have adverse impacts on the environment.

Education

Several states referenced the issue of education in terms of safety (North Carolina, Tennessee, and Vermont). Oregon's educational policy includes safety, but it also includes promoting the benefits of bicycling and walking as well as teaching planners, developers, engineers, and others about land use and development patterns that support pedestrian and bicycle travel. California's policy mentions training internal staff, local agency staff, and interest groups about design guidelines, funding sources, and other non-motorized issues.

Planning

Some policies require the DOT to develop a statewide pedestrian and bicycle plan (Arizona), while others commit to incorporating non-motorized issues into all state- and federally-funded transportation plans (Vermont). Connecticut's policy directs the DOT to construct footpaths and bicycle trails that are designated in its statewide plan.

States like Illinois, Kentucky, Tennessee, and Virginia specify that local plan recommendations will be used as a key consideration for providing pedestrian and bicycle facilities.

Funding

A group of states cited funding for pedestrian and bicycle projects as a regular DOT expense. These included Idaho (which will purchase right-of-way for a future sidewalk), Oregon (which requires cities and counties to spend at least one percent of their highway funds on pedestrian and bicycle facilities each year), and Virginia. Virginia's policy states, "Highway construction funds can be used to build bicycle and pedestrian accommodations either concurrently with highway construction projects or as independent transportation projects. Both types of bicycle and pedestrian accommodation projects will be funded in the same manner as other highway construction projects for each system (i.e., interstate, primary, secondary, or urban)." This means that if VDOT pays for 80 percent of the cost of a new primary highway, it would also pay for 80 percent of the cost of a sidewalk and wide shoulder along a new primary highway.

Three states discussed funding in terms of the types of non-motorized projects that they would not pay for. Arizona, Connecticut, and North Carolina all specified that certain projects must be paid for by local jurisdictions.

California mentions that the state DOT should make sure local agencies and interest groups are familiar with the state funding programs that are available. Rhode Island simply states that "the director shall take into consideration the cost of the facilities in relationship to available funding.

Other Topics

Several other topics are addressed in state DOT pedestrian and bicycle policies. These include health and active lifestyle benefits of walking and bicycling (Vermont), support for pedestrian and bicycle research to improve non-motorized safety and mobility (Oregon and Virginia), and using pedestrian and bicycle improvements to encourage tourism and economic development (Oregon and Virginia).

None of the states made specific mention of law enforcement issues in policy documents/statements.

1.3 RELEVANT FINDINGS: STATE PEDESTRIAN AND BICYCLE PERFORMANCE MEASURES

With the increasing amount of federal spending on pedestrian and bicycle facilities and programs throughout the U.S. since the early 1990s, there have been more efforts at all levels of government to establish non-motorized transportation performance measures. While some state agencies have collected data on pedestrian and bicycle use and facilities to benchmark the progress of non-motorized transportation programs, both reports mentioned at the beginning of this memo cite the lack of performance measures for bike and pedestrian modes as being a problem throughout state DOTs. The performance measures that do exist are often weak and/or are not routinely measured.

Non-motorized transportation performance measures can be difficult to establish because they require good data. The most common data available to states are often census journey-to-work data and police-reported crash data. Both of these sources have limitations. The census does not include non-motorized trips that are linked with transit (such as walking to the bus on the way to work) or that are made for recreational, social, or shopping purposes. Police-reported crash data are limited to collisions that are reported to the police and entered into police reports correctly. A study by Stutts and Hunter (1996) found that only 56% of pedestrian and 48% of bicyclists were successfully linked to records in state motor vehicle crash files¹. With Vermont's new police crash report form (instituted in mid-2002), the rate of pedestrian and bicycle crash reporting is likely to be higher than other states. However, under-reporting of pedestrian and bicycle crashes remains an important limitation due to the fact that many minor pedestrian and bicycle collisions with vehicles are not reported to police and because many pedestrian and bicycle injuries do not occur on roadways².

Further, there are few consistent, established methods of counting, surveying, and inventorying non-motorized facilities around the country (though these methods are developing in several states, and the Federal Highway Administration has produced a report to share these methods and suggest strategies for improving data collection). As a result, agencies often need to make significant initial investments to establish the pedestrian and bicycle data collection procedures that can be used to track performance measures over time.

Vermont is one of several states that has established pedestrian and bicycle performance measures. VTTrans benchmarks progress on the following two performance measures on an annual basis:

- Reported motor vehicle crashes involving bicyclists & pedestrians
- Miles of bicycle and pedestrian facilities developed

Other states that have established pedestrian and bicycle performance measures and were reviewed for this document include: Arizona, Florida, Maryland, New Jersey, Oregon, Tennessee, Washington State, and Wisconsin. Several general observations can be made about the performance measures in these states.

1) The language used in state DOT performance measures demonstrates different levels of commitment to improving pedestrian and bicycle transportation. The state performance measures that were reviewed can be classified into two categories.

The first category includes performance measures that state simply that pedestrian or bicycle use should “increase” or crashes should “decrease”. This is a weaker measure, as it does not set a measurable goal for the *amount* of increase or decrease. New Jersey DOT provides a good example

¹ Stutts, J.C. and W.W. Hunter. “Police-reporting of Pedestrians and Bicyclists Treated in Hospital Emergency Rooms,” *Transportation Research Record No 1635*, Transportation Research Board, 1998. P. 88-92.

² Aultman-Hall, L and J. LaMondia. *Developing a Methodology to Evaluate the Safety of Shared-Use Paths: Results from Three Corridors in Connecticut*, Connecticut Transportation Institute, Connecticut Department of Transportation, Joint Highway Research Advisory Council, JHR 04-297, Project 02-2, May 2004. Available Online: http://www.engr.uconn.edu/ti/Research/jhr04-297_02-2.pdf.

of this type of policy (see the Appendix for NJDOT's performance measures). States like Vermont and Washington State do not use the words "increase" or "decrease" in their performance measures, but they are also included in this category because their measures imply that performance will be tracked over time and evaluated on an upward or downward trend.

The second category includes the (very few) states that have strengthened their policies by specifying the amount of improvement that should occur during a specific time period. Tennessee DOT's performance measures fall into this category. They include statements such as (under Measure 2): "*Pedestrian Facilities: Sidewalks or walkways on one or both sides of roadway will be provided on 70 percent of all TDOT and local agency roads carrying more than 10,000 vehicles per day and in developed areas by 2010, 80 percent by 2015, and 90 percent by 2020.*" For the full list of Tennessee DOT's performance measures, see the Appendix.

2) Performance measures can address many different aspects of a state pedestrian and bicycle program. The states that were reviewed included performance measures in the following categories:

- *Safety.* Measures of pedestrian and bicycle crashes. Examples include the number of serious injury or fatal pedestrian or bicycle crashes within an area or the percentage of all crashes that involve pedestrians and bicyclists. Note that the best types of safety performance measures account for pedestrian and bicycle usage, or exposure.
- *Usage.* Measures that document how many people are bicycling and walking, or the percent of all trips that are made by pedestrian and bicycle modes. These are typically based on count, census, or survey data.
- *Facilities.* Measures of non-motorized facility provision. Examples are miles of roadway with sidewalks on both sides, miles of roadways with paved shoulders, miles of greenway paths, and percent of intersections with curb ramps or pedestrian signals.
- *Education/Enforcement.* Measures of the number of people educated on pedestrian and bicycle safety or behavior. Includes percentage of students taught in pedestrian and bicycle safety education classes, percent of bicyclists wearing helmets, or number of drivers cited for not yielding to pedestrians in crosswalks.
- *Land use.* Measures of land use development in relation to the location and quality of non-motorized facilities. Florida's Quality of Service is an example.
- *Institutionalization.* Measures that address operating procedures related to non-motorized transportation within organizations. Examples include the total amount spent on pedestrian and bicycle programs by the state DOT, the number of employees that are trained on pedestrian and bicycle design, the number of local governments that prepare pedestrian and bicycle plans, or the number of citizens that are members of pedestrian and bicycle advocacy groups.

3) The best performance measures have several common elements. Based on our review of performance measures from several states, the best bicycle and pedestrian performance measures:

- Are related to the goals of the state bicycle and pedestrian plan

- Provide a description of the data that need to be collected
- Utilize data that can be collected cost-effectively
- Are quantifiable and time-constrained (e.g., provide 50 additional miles of bike lanes on state-owned roads by 2010)
- Can be reported at regular intervals, such as in an annual bicycle performance measures report
- Serve as a benchmarking tool to measure how well the agency's practices match with its stated policies

2.0 APPENDIX: EXAMPLE STATE DOT PERFORMANCE MEASURES

New Jersey Department of Transportation

Goal 1. Build the Infrastructure

- Percent of transportation improvement projects that have been reviewed for consideration of bicycle and pedestrian facilities.
- Percent of highways that are bicycle and pedestrian compatible as defined in NJDOT Roadway Design Manual (pending adoption).
- Percent of or total amounts of capital and/or resources devoted to managing the accommodations of bicycling and walking.
- Percent of built projects that have incorporated appropriate pedestrian and bicycle accommodations.

Goal 2. Improve Access

- Percent of transit and recreation facilities that have bicycle parking and/or are bicycle and pedestrian accessible.
- Percent of government buildings that have secure bicycle parking available.
- Total number or linear miles of designated bicycle/pedestrian facilities.

Goal 3. Update Policies, Ordinances and Procedures

- Percent of site plans that are reviewed for bicycle and pedestrian accessibility.
- Percent of major destinations that are bicycle and pedestrian accessible.

Goal 4. Educate and Enforce

- Percent of students receiving bicycle and/or pedestrian skill training or education.
- Safety program expenditures devoted to bicycle and pedestrian safety education and awareness.
- Percent of law enforcement officials that have received bicycle and pedestrian safety education and enforcement training.
- Number of jurisdictions with police on bikes programs.

Goal 5. Foster a Pro-Bicycling and Walking Ethic

- Number of bicycle and pedestrian groups or citizen advisory bodies that advocate bicycling and walking.
- Level of funding spent on media or advertising that promotes bicycling and walking.

Source: New Jersey Statewide Bicycle and Pedestrian Master Plan, Phase 2, 2004

Tennessee Department of Transportation

Measure 1: Measuring Safety Improvements

1. Collision Reduction: A 10 percent reduction in bicycle and pedestrian collisions on state and local roads by 2010, and a 20 percent reduction by 2020. Collision reductions should be measured by jurisdiction as a rate against the number of people walking or bicycling to work as a primary mode of transportation from the latest U.S. Census source.

Measures 2, 3, 4, and 5: Completion of Facilities

2. Pedestrian Facilities: Sidewalks or walkways on one or both sides of roadway will be provided on 70 percent of all TDOT and local agency roads carrying more than 10,000 vehicles per day and in developed areas by 2010, 80 percent by 2015, and 90 percent by 2020.
3. Bicycle Facilities: Adopted regional and statewide bikeway routes on TDOT roads will be 50 percent complete by 2010, 75 percent complete by 2015, and 100 percent complete by 2020.
4. ADA Facilities: ADA improvements, such as curb ramps, will be included as part of all major TDOT construction and re-construction (including repaving) projects. TDOT will identify existing ADA deficiencies on TDOT roadways and program sufficient funds to complete the top 10 percent of projects annually.
5. Bicycle and Pedestrian Plans: Achieve a 25 percent completion rate of bicycle and pedestrian plans to specific standards by all regions and counties in the state by 2010, 50 percent by 2015, and 100 percent by 2020.

Measures 6 and 7: Increases in Bicycling and Walking

6. Bicycle and Pedestrian Mode Shares: Achieve a 5 percent increase annually in the mode share for bicycling and walking for utilitarian trips, work trips, school trips, transit-linked trips, and discretionary trips.
7. Bicycle and Pedestrian Counts: Achieve a 5 percent increase annually in bicycle and pedestrian counts at 40 selected locations around the state, taken during times to be established in the State Bicycle and Pedestrian Plan. Require all local agencies receiving more than \$500,000 annually in bikeway or pedestrian funding to conduct annual counts within these parameters for 5 years and report the count data to TDOT.

Measure 8: Training

8. Training of TDOT Staff: Offer in-classroom bicycle and pedestrian training to 5 percent of TDOT staff annually, with a goal of 20 percent staff being trained by 2010, 30 percent by 2015, and 50 percent by 2020. Offer Web-based and interactive CD training to all TDOT staff by 2010.

Source: Final Draft Bicycle and Pedestrian Plan element of Tennessee Long Range Plan, August 2005.

New York State Department of Transportation

1. Increase Mobility: New York State will meet or exceed the State's share of the USDOT National Bicycling and Walking Study goal of doubling the amount of bicycling and walking in the U.S. by increasing New York State bike/ped commuter trips by 15% (from 7.2% to 8.5% of all work trips) by the year 2015, and by meeting or exceeding the national goal of 16% of all trips, including trips to school, shopping, and other travel destinations.
2. Improve Safety: New York State will work to improve the safety of bicyclists and pedestrians of all ages and abilities, and meet or exceed the USDOT National Bicycling and Walking Study goal of a 10% reduction in the rate of bicyclist/pedestrian injuries and fatalities.
3. Provide Accessibility: New York State will work to ensure accessibility of bicycle and pedestrian transportation to all destinations, including work sites, schools, shopping areas, parks and public transportation, by integrating bicycling and walking into the local, regional and statewide transportation infrastructure.

Source: New York State Bicycle and Pedestrian Plan, 1997

Wisconsin Department of Transportation

State of Wisconsin FFY 2004 Highway Safety Performance Plan

Pedestrian, Bicycle & Pupil Transportation Safety:

1. To decrease pedestrian crashes to 1,440 and combined fatalities (K) and serious (A) injuries to 300 by 2004; and decrease to 1,200 crashes and 300 K-A injuries by 2007 and to 1,000 crashes and 264 K-A injuries by 2009 from 1994 Baseline of 2,059 crashes and 576 pedestrians killed or incapacitated
2. To decrease bicyclist crashes to 800 and combined fatalities (K) and serious (A) injuries to 100 by 2004; to 600 crashes and 75 K-A injuries by 2007 and to 400 crashes and 50 K-A injuries by 2009 from 1994 Baseline of 1,644 crashes and 285 bicycle riders killed or incapacitated.

Wisconsin Bicycle Transportation Plan 2020 (1998)

1. Increase levels of bicycling throughout Wisconsin, doubling the number of trips made by bicycles by the year 2010 (with additional increases achieved by 2020).
2. Reduce crashes involving bicyclists and motor vehicles by at least 10% by the year 2010 (with additional increases achieved by 2020)

Wisconsin Pedestrian Policy Plan 2020 (2000)

1. Increase the number and improve the quality of walking trips in Wisconsin.
2. Reduce the number of pedestrian crashes and fatalities.
3. Increase the availability of pedestrian planning and design guidance and other general information for state and local officials and citizens.

Maryland Department of Transportation

Pedestrian Travel Performance Measures

1. Percentage of trips to work that were made by walking (MDOT*)
2. Percentage of State-owned roadway centerline miles within Priority Funding Areas that have sidewalks. (SHA)*
3. Number and rate per 1 million population of pedestrian fatalities and injuries on State highways. (SHA)*

Bicycle Travel Performance Measures

1. Number and rate per 1 million population of bicyclist fatalities and injuries on State highways. (SHA)*
2. Percentage of State-owned roadway centerline miles with a bicycle level of comfort (BLOC) grade of "D" or better. (SHA)*
3. Percent of appropriate transit vehicles that can accommodate bicycles. (MTA)
4. Center-line mileage of State-owned highways with marked bike lanes. (SHA)
5. Percentage of trips to work that were made by bicycling.

Bicycle and Pedestrian Travel Performance Measures

1. Number of local jurisdictions implementing local ordinances which support bicycling and walking (MDOT)
2. Dollars committed to bicycle and pedestrian projects in the Consolidated Transportation Program (MDOT).

Agencies responsible for collecting and reporting the data are shown in parentheses. Items with an asterisk are monitored in the Annual Attainment Report issued by MDOT.

MDOT = Maryland Department of Transportation

MTA = Maryland Transit Authority (contained within MDOT)

SHA = State Highway Administration (contained within MDOT)

Source: Maryland Department of Transportation Twenty Year Bicycle & Pedestrian Access Master Plan (2002)

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