

Twenty Year

Bicycle & Pedestrian Access Master Plan



**Making Maryland
the Best State for
Bicyclists and Pedestrians**

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Introduction

Maryland is a great State in which to walk, use a wheelchair, ride a bicycle or participate in some other form of non-motorized transportation, from the vibrant pace of downtown Baltimore, Annapolis and Bethesda, to the tranquility of historic small towns and older suburban communities. Maryland is striving to be the best state in the nation for pedestrians and bicyclists. The Maryland Department of Transportation (MDOT), in consultation with a wide range of representatives from all levels of government, special interest groups, design professionals and citizens, came up with the following Vision Statement to describe what it means to be the "best":

Maryland will be a place where people have the safe and convenient option of walking and bicycling for transportation, recreation, and health. Our transportation system will be designed to encourage walking and bicycling, and will provide a seamless, balanced and barrier-free network for all.

MDOT's increased commitment to pedestrian and bicycle transportation is an outgrowth of Maryland's "Smart Growth" planning initiatives, which seek to improve quality of life for Maryland's citizens by promoting development policies that support existing communities and contain suburban sprawl. The benefits of promoting Smart Growth policies include reduced roadway congestion, enhanced access between homes, workplaces, schools, shopping and recreation areas, and reduced pollution of Maryland's air and water, including the sensitive Chesapeake Bay watershed. MDOT's role in this effort, as provided in the *2002 Maryland Transportation Plan*¹, is to increase the availability of cost-efficient modes of transportation such as public transportation, bicycling and walking to access major activities. To support these initiatives, the Maryland Transportation Plan emphasizes investment in alternatives to automobile travel, including walking and biking. This policy direction both supports and is

Benefits of Increased Levels of Walking and Bicycling

Mobility - Bicycling and walking contribute to the safe and efficient movement of people and goods to their destinations.

Safety - Developing a connected and cohesive system of pedestrian and bicycle facilities on State-owned roadways and increasing educational and enforcement activities can help reduce injuries and fatalities.

Smart Growth - Maryland leads the nation in Smart Growth initiatives which include promoting development that provides citizens with transportation choices. The Plan is an important component of the Smart Growth program because it ensures the availability of opportunities for bicycling and walking.

Quality of Life - A system of sidewalks and bikeways and improved access for these modes makes it possible for more people to choose bicycling and walking over other modes, more often. Throughout the nation, residents place a high value on the availability of sidewalks and walking paths.

Health - There is documented evidence that bicycling and walking provide health benefits and are excellent methods to add activity to increasingly sedentary lifestyles.

Environmental Benefits - Each time a person chooses to make a trip by bicycling or walking instead of driving, that person prevents the creation of air and water pollution, consistent with the Chesapeake 2000 Agreement.

¹ The Maryland Transportation Plan (MTP) is MDOT's long-range transportation policy plan. The MTP sets policy for the Department over a twenty-year period and is updated every three years, consistent with federal requirements.

supported by the State's Smart Growth initiatives.

In response to increased public interest in bicycle and pedestrian travel and statewide and federal transportation policy direction², the Maryland General Assembly created the *Bicycle and Pedestrian Access Act of 2001* during the 2000 legislative session. This law mandated the development of a twenty-year bicycle and pedestrian master plan that would systematically direct resources to bicycle and pedestrian projects using both new and existing programs. State law is reinforced by federal direction contained in the Intermodal Surface Transportation Efficiency Act of 1991 and the Transportation Equity Act for the 21st Century, which requested that states develop bicycle/pedestrian plans to guide investments in these modes and to encourage statewide approaches to them.

The planning effort was divided into three phases. In the first phase, key stakeholders (public citizens, advocates, business, community and government representatives throughout the State) were consulted to identify a vision and goals for bicycle and pedestrian transportation in



Maryland. This was followed by a technical study of existing conditions as well as the challenges and opportunities facing bicycle and pedestrian transportation in the State. The planning process concluded with the identification of specific recommendations for implementation. These recommendations are the cornerstone of *The MDOT Twenty-Year Bicycle and Pedestrian Access Master Plan*.

The documents and technical reports listed below are the products of the technical process used to develop this master plan. They are available through the project website which can be found at www.smarttransportation.com:

- *Plan Development Report - Policy Vision Plan*
- *Plan Development Report - Overview of Greenways and Long Distance Routes*
- *Plan Development Report - Overview of State Agency Policies and Programs for Pedestrian and Bicycle Access*
- *Plan Development Report - Overview of Legal and Administrative Conditions*

² The Federal Highway Administration, consistent with the Bicycle and Pedestrian Provisions of the Federal-Aid Program, expects every transportation agency to make accommodation for bicycling and walking a routine part of their planning, design, construction, operations and maintenance activities. The goals, strategies, and actions of this Master Plan, as later described here, commits MDOT to make bicycling and walking accommodations a routine part of MDOT activities.

Listening to Citizens and Stakeholders

Listening to Citizens and Stakeholders

Critical to the success of this Plan is the widespread support of the many stakeholders involved in bicycling, pedestrian and land use issues. Listening was the first phase of the three-phased planning process. Input and direction were sought from the public, walking and bicycling advocacy groups, State, regional and local officials, and interested citizens at district and regional meetings held throughout Maryland. Further input was obtained through ongoing dialogue made possible by project newsletters and an interactive web site. This Plan was developed using information received at more than 18 meetings held between October 2000 and May 2002 and from the many comments received through E-mail, letters or conversations.

Additionally, the Plan was developed in consideration of the advice of the Maryland Bicycle and Pedestrian Advisory Committee, a group appointed by the

Governor consisting of representatives of bicycle and pedestrian advocacy groups, members of the public, and State agencies with responsibility for overseeing bicycle and pedestrian travel or representing stakeholder groups with special interests in bicycle or pedestrian issues, such as Marylanders with disabilities. This Committee was formed for the purpose of providing advice to the Governor on pedestrian and bicycle issues.



Listening

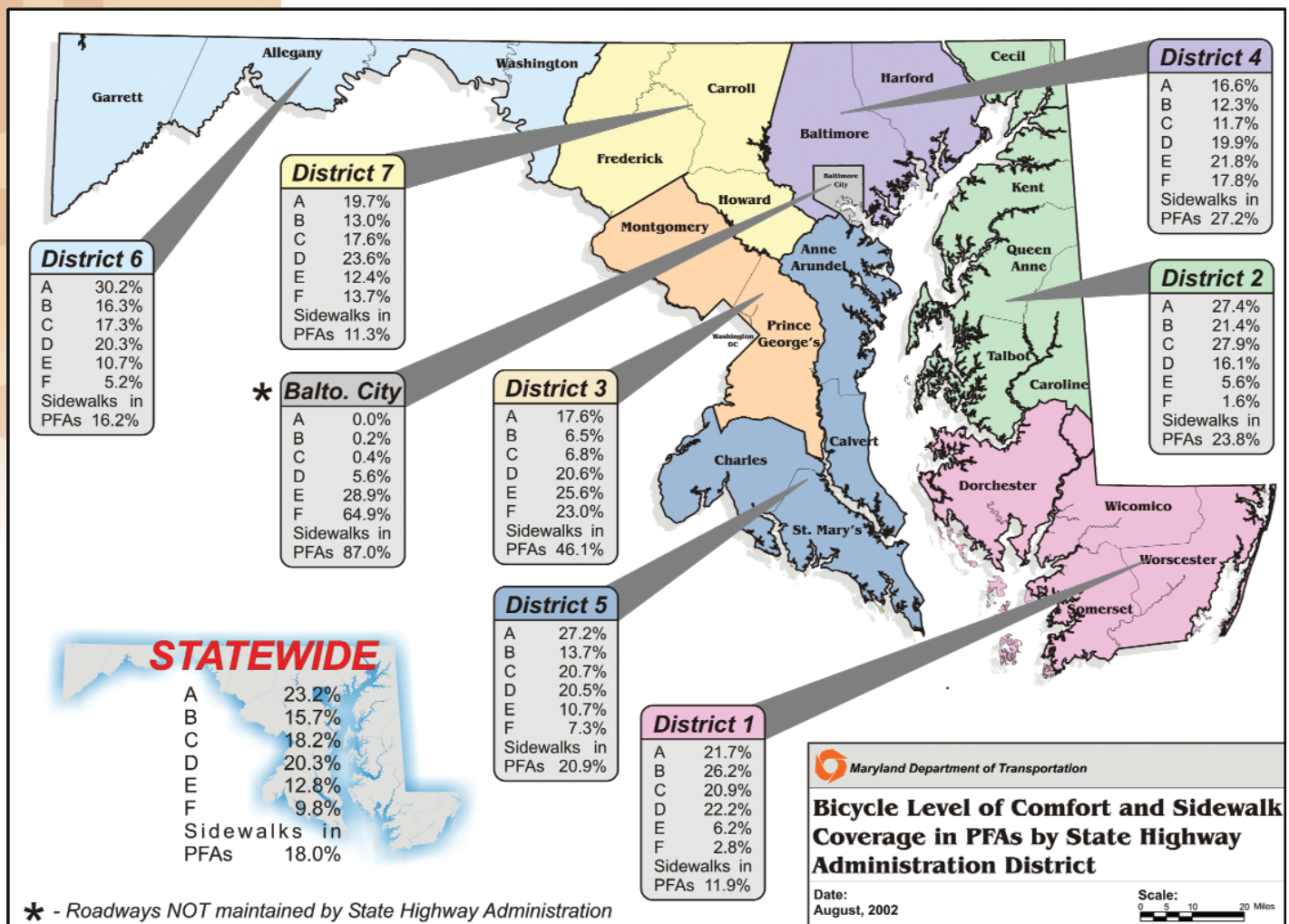
Existing Conditions

Existing Conditions

Existing Conditions

In 2002, MDOT contributed more than \$55 million dollars to improve the quality and safety of bicycling and walking in Maryland using a number of different State and federal funding programs. Despite the State's considerable investment in these networks, an extensive review of existing conditions conducted by MDOT (documented in the companion technical appendix) revealed that there is still work to be done towards improving the transportation system to be more amenable and inviting to biking and walking. The complete review included an exhaustive inventory and analysis of applicable Maryland policies and programs, legal and administrative codes, trails, State highways, and roadways in the City of Baltimore in an attempt to identify the most persistent challenges to creating a safer, more comprehensive and reliable system for traveling by foot, wheelchair or bike.

Almost 5,000 miles of State-owned roadway was assessed for bicycle and pedestrian conditions. For bicycle conditions, MDOT used a nationally-recognized methodology, the *Bicycle Level of Comfort*, or *BLOC* (also known as *Bicycle Level of Service*). Maryland is one of the first states to undertake this kind of comprehensive, system-wide analysis of bicycle accessibility. The BLOC assessment revealed that 55



percent of the State's road network received a "grade" of C or better (using a typical "A" through "F" grading system) with the worst conditions occurring in urban areas. This performance is consistent with national trends, with relatively good quality conditions occurring in rural areas that have lower traffic volumes and wider rights-of-way, and less comfortable conditions occurring in urbanized areas with older, heavily used roads.

As the map on the previous page indicates, conditions for bicyclists are not consistent throughout the State, and several areas of persistent need stand out. Another assessment examined the availability of sidewalks along State highways, particularly in Priority Funding Areas³ (PFAs) where pedestrian activity would be highest. Results of this assessment, also indicated on the map, noted a wide range of sidewalk availability throughout the State.



There is no equal set of quality standards comparable to the BLOC system to analyze pedestrian level of comfort. Factors that contribute to the comfort and safety of all pedestrians – walkers and wheelchair users - include the width and condition of sidewalks, the availability of curb cuts, pedestrian crossings, signalization, and lighting.

The BLOC information is a useful tool for identifying bicycle transportation needs on the State highway system. Consistent with the approach taken to address highway needs, Maryland will use the BLOC grades as a way to screen and prioritize projects. This approach reflects the State's current fiscal environment, in which needs outstrip the availability of funds to address them.

Other issues revealed through the assessment include legal and safety challenges to bicycle and pedestrian travel on facilities operated by the Maryland Transportation Authority, such as restrictions on the bridges crossing the Susquehanna River and Chesapeake Bay, and public attitudes which often do not embrace bicycling and walking on the State's primary and secondary road system. Such challenges cannot be met by simply building physical facilities. They require more comprehensive approaches involving information, education, enforcement, and even legislative action.

³ A Priority Funding Area, or PFA, is an area designated as a priority for growth and development. Consistent with the Smart Growth Act, the State typically only funds transportation projects falling within a PFA, with some minor exceptions.

Programs and Partnerships

Programs and Partnerships

Programs and Partnerships

MDOT makes use of a wide array of State programs to develop the bicycle and pedestrian network. The Neighborhood Conservation Program and the Sidewalk Retrofit and Bicycle Retrofit programs are used to integrate elements such as “pedestrian-and-bicycle friendly” street designs, sidewalks and bike paths, transit shelters and other facilities, shoulders, curbs, lighting and street amenities to create a safer and more welcome environment for all users of the State highways - pedestrians and bicyclists, as well as motorists and public transit users. Design, management and maintenance practices at the Maryland State Highway Administration (SHA) have evolved to provide a greater degree of accommodations for all users of the State highway system, including walkers, persons of limited physical abilities, and bicyclists. Maryland SHA has been a national leader in a new initiative called “Thinking Beyond the Pavement,” in which context sensitive design programs seek to build and improve facilities to meet the needs of the entire traveling community. Projects on the primary and secondary road network are increasingly incorporating bicycle and pedestrian enhancements such as curb cuts, wide sidewalks, pedestrian crossings and signalization, wider shoulders, wide curb lanes and marked bike-ways.

MDOT also is conducting studies and programs that target specific pedestrian and bicycle transportation needs. For example, the Maryland “Safe Routes to Schools” program identifies strategies for improving the safety of bicycling and walking to school. In addition, the Maryland Transit Administration (MTA) and State Highway Administration (SHA) have completed Access 2000, a comprehensive study of pedestrian and bicycle access to rail transit stations in Maryland. Providing adequate bicycle and pedestrian access to public transit is important to meeting another critical transportation goal – doubling transit ridership in Maryland by 2020.



Creating a safe and inviting bicycle and pedestrian transportation system requires attention to more than physical infrastructure. It also requires users and motorists to have a basic knowledge of travel safety and etiquette. MDOT, through the SHA’s Highway Safety Office and Office of Communications, has sought to improve public understanding of the rules of the road for all users – bicyclists, pedestrians and motorists - through training, education, enforcement, and promotional programs.

Partnerships are central to implementing this Master Plan. Creating a safer and easier environment for bicycling and walking in Maryland cannot be accomplished by MDOT alone. A comprehensive effort on the part of all levels of government, private sector organizations and individuals will be necessary to realize fully the benefits of walking and bicycling. There are a number of partnerships that should be strengthened in the future:

- coordination between MDOT and other state and federal agencies to encourage activities and programs that support bicycle and pedestrian access (see the matrix of Master Plan strategies).

- coordination with local and regional governments on pedestrian and bicycle issues, programs and projects. These partnerships are also an important part of the State's efforts to encourage smart growth.
- coordination and partnership with the public health community. Public health advocates and organizations in Maryland are important allies in the effort to provide safe, walkable and bikable communities.
- coordination and partnership with the private sector, such as:
 - employer-initiated "clean commute" programs, working with developers to establish pedestrian-friendly transit-oriented developments, and other similar types of efforts.
 - partnerships with local pedestrian and bicycle advocates.

These are only a few of the many partnerships that will be needed in the future. A shared approach to bicycle and pedestrian travel is what, in fact, exists today. For example, local government agencies share the cost of building sidewalks along State highways with MDOT. The local share of sidewalk construction depends on whether the projects involve building new or retrofitting existing highways, and whether they are located in a county's Priority Funding Area. Sidewalk maintenance along State highways is entirely a local responsibility. Local agencies also provide the sidewalks and bicycle facilities located on their land and roads - about 80 percent of total highway miles in Maryland are locally owned and operated - and develop land use and other policies to promote walking and cycling in their communities.

MDOT similarly shares responsibility for building and enhancing many of the State's long-distance trails and greenways. Many of these trails are managed by the Maryland Department of Natural Resources, as in the case of the Northern Central Railroad Trail, or by the National Park Service, as in the case of the C & O Canal Towpath. Other facilities are owned and managed by municipal governments.

MDOT distributes Federal Transportation Enhancements funding towards a number of trail projects, including Baltimore City's Gwynns Falls Trail and Maryland's portion of the Allegheny Highlands Trail. When fully completed the Allegheny Highlands Trail, combined with the existing C & O Canal Towpath, will form a 415-mile trail corridor extending from Pittsburgh to Washington, D.C.





Inside the Bicycle and Pedestrian Access Master Plan

The MDOT Bicycle and Pedestrian Access Master Plan is a comprehensive guide to developing, improving, and maintaining bicycle and pedestrian travel in Maryland over a twenty-year period. The Plan largely addresses the conditions for biking and walking along State highways. Yet, it also serves as guidance and a call to action to other State and local agencies that oversee local, federal and related systems that can foster better bicycle and pedestrian travel in Maryland.

The Plan's vision statement serves as the fundamental principle guiding the identification of Master Plan goals. This vision statement was developed in consultation with a wide range of stakeholders. In addition to this vision statement, five goals were developed for the Bicycle and Pedestrian Master Plan to articulate the State's direction for accommodating the needs of pedestrians and bicyclists over the next twenty years in a manner that supports related goals in the *Maryland Transportation Plan (MTP)*. To guide implementation, the goals are supported by policy strategies and specific actions – programs, projects, and activities – that, when

MARYLAND BICYCLE AND PEDESTRIAN ACCESS PLAN VISION

Maryland is striving to be the best State in the nation for bicycling and walking. The Maryland Department of Transportation, in consultation with a wide range of representatives from all levels of government, special interest groups, design professionals and citizens came up with the following Vision Statement to describe what it means to be the "best":

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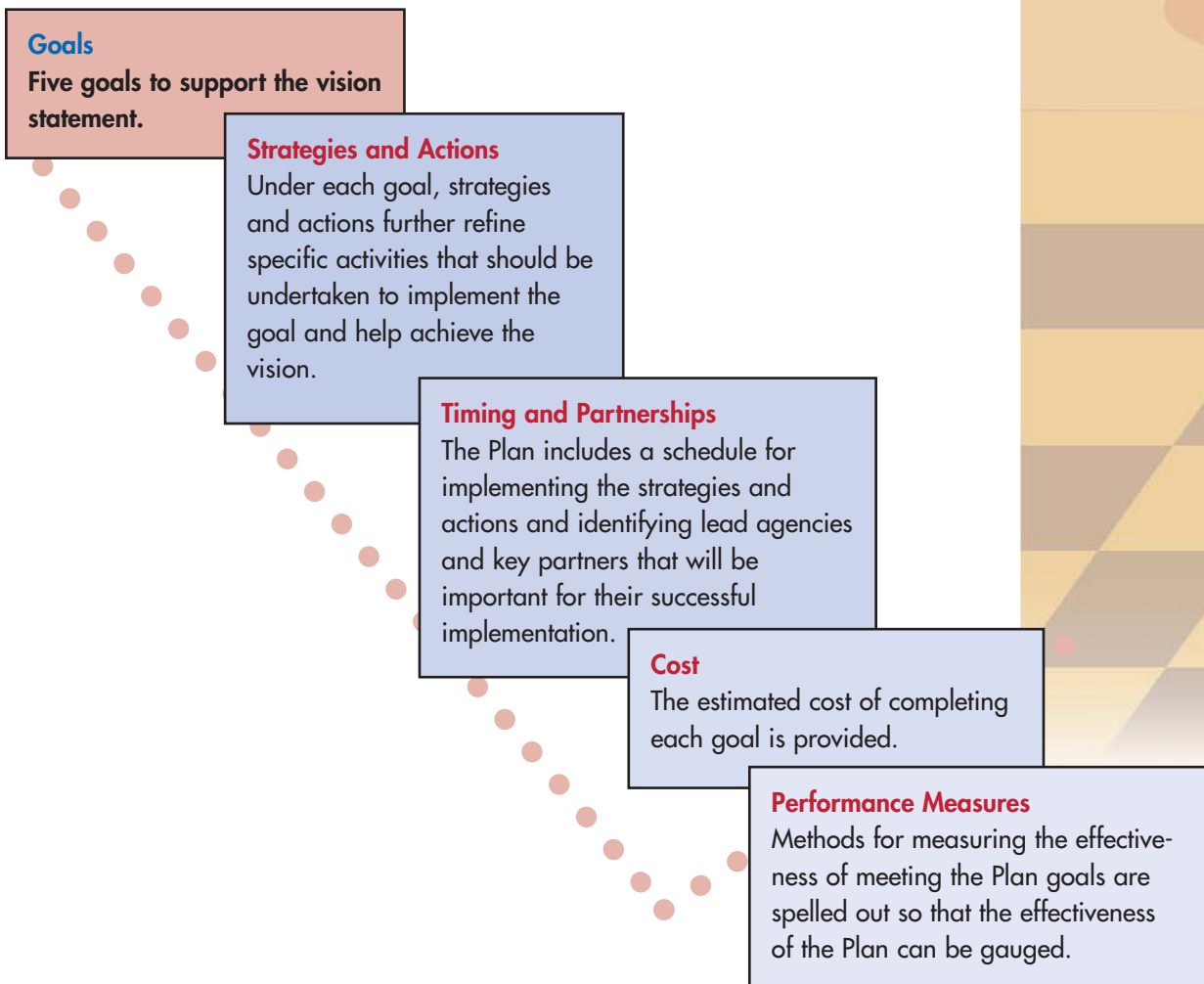
implemented, will achieve the Plan goals. This common vision and goals will help to ensure that MDOT and its partners in other State agencies, local government and the business community share a desire for the same outcome in the development of Maryland's future bicycle and pedestrian transportation system.

A table is provided at the end of this document that presents the five Bicycle and Pedestrian Master Plan goals with their corresponding strategies and actions. Each action has been assigned a relative timeframe - short-term (FY 2003-2008) or long-term (FY 2009 and beyond) - for start of implementation after the Plan is adopted. A rough cost estimate for implementation of each goal is provided. The cost esti-

Costs are based on standardized assumptions for the costs of implementing certain types of improvements, such as adding a shoulder to a primary road. Costs of individual projects vary considerably depending on numerous factors, such as the need for and cost of land, design and environmental considerations.

Consistent with the MTP, this document includes a set of performance measures that will be used by MDOT on an annual basis to determine the extent to which the Department is meeting the goals set forth in this Plan.

It is expected that the goals, strategies and performance criteria will evolve as actions are implemented and conditions in Maryland change. A report on the Plan progress will be issued annually as part of the *State's Annual Attainment Report* and, every three years, will be integrated with the updated *Maryland Transportation Plan (MTP)*.



Technical Appendices

There are two technical appendices that support the Master Plan. The first technical appendix details the approach and outcomes of the physical inventory conducted earlier in the planning process. It also includes a bicycle and pedestrian needs inventory, developed in consultation with local officials. Not all local jurisdictions are represented in the lists. MDOT will consider additions and deletions from local officials as needs are identified.

MDOT reviewed the inventories provided by the local agencies and developed two tiers of needs for further review and consideration by MDOT. Roadways in Tier 1 demonstrate the greatest need for bicycle and pedestrian accommodations, whereas roadways in Tier 2 show less need.

Tier 1 routes meet all of the following criteria:

- 1) The road segment is recommended for improvement in a local/regional bicycle or pedestrian plan
- 2) The road segment is within a Priority Funding Area
- 3) The road segment has an Bicycle Level of Comfort of "E" or "F".

Tier 2 routes meet either one of the following two criteria:

- 1) The road segment is recommended for improvement in a local bicycle or pedestrian plan
- 2) The road segment is a Bicycle Level of Comfort of "E" or "F".

MDOT will continue to work with local officials to update and prioritize areas of greatest need. Projects will be selected from these lists during programming for implementation based on assessments of engineering feasibility, environmental

impacts, costs, and local support. To proceed with planning, design and construction of any given project, the appropriate funding must be identified in the capital program. The availability of funds to address bicycle and pedestrian needs will depend upon the total funds contained in the State's capital program. Funding levels vary according to the performance of the Transportation Trust Fund and other variables.

The second appendix to the Bicycle and Pedestrian Master Plan is a model land use guidance document for supporting bicycle and pedestrian

travel at the local level. MDOT hopes that this document will provide guidance to local officials in planning and providing adequate conditions for walking and biking in their jurisdictions.



Goals, Strategies, and Actions

Master Plan Goals, Strategies and Actions

Goal 1 Facility Integration and Expansion

Goal 1: Facility Integration and Expansion

Integrate and expand the State's bicycle and pedestrian facilities, creating a connected network of on-road, off-road and transit-related accommodations that will encourage and facilitate increased levels of bicycling and walking and improve access for individuals with disabilities.

Strategy 1A:

Integrate Bicycle and Pedestrian Facilities into Routine Roadway Development Policy

With passage of federal and State legislation, and in response to public interest, SHA revised highway design and construction policies to better meet the needs of bicyclists and pedestrians using the State highway system. Future roadway planning, engineering, design and construction will continue to strive for a more balanced transportation system that includes a seamless, safe and accessible bicycle and pedestrian network and encourages bicycle and pedestrian travel wherever possible.

Meeting this strategy requires that bicycle and pedestrian needs are identified and addressed in the development of all road and bridge projects, with the exception of interstates and freeways, including those managed by the Maryland Transportation Authority. To achieve this, the State will evaluate current practices and guidelines that address pedestrian and bicyclist needs.



Strategy 1B:

Focus and Expand Trail Development Initiatives

Maryland has a number of extraordinary trails that provide recreational as well as utilitarian walking and bicycling. Because of the State's relatively small size, Maryland has a unique opportunity to create a truly Statewide, off-road trail system that offers direct access to major activities. Greenways and long distance trails in Maryland are documented in the plan development report, *Overview of Greenways and Long Distance Routes*. Many community based trail projects have been completed, and MDOT has encouraged the continued development of plans for multi-use trails that focus on completing crucial missing links to creating regional long-distance trails. Creating and implementing the plan will require improved coordination with other agencies and local governments to develop trail master plans as well as incorporate new design guidelines and access issues on the road network.



Goal 1

Facility Integration and Expansion

Strategy 1C:

Enhance and Expand Bicycle/Pedestrian Access to Transit

Maryland has an extensive bus and rail transit system with thousands of daily riders. In an effort to improve access to these facilities for all users, bike racks are being installed on buses, access for bikes is permitted on the Baltimore Light Rail and Metro systems as well as Metrorail trains in Washington, D.C. The MTA's Smart Growth Transit Program will continue to improve access to rail transit by walkers

and bicyclists. Sidewalks and pads are being installed at bus stops for pedestrians and persons with disabilities. These programs advance MTA's goal to make all rail stations and bus stops conveniently accessible by foot, wheelchair, and bicycle as an affordable means to increase access to public transit. Additionally, this strategy encompasses promoting land uses and development surrounding transit facilities to enhance the environment for walking and biking, as well as improving public transit ridership.



Goal 2 Facility Preservation and Maintenance

Goal 2: Facility Preservation and Maintenance

Preserve, protect and maintain the State's existing bicycle and pedestrian facilities and rights-of-way including bike lanes, roadway shoulders, sidewalks, crosswalks, trails and side paths.

Strategy 2A:

Integrate Bicycling and Walking into Planning and Roadway Maintenance Routines

Integrating bicycling and walking into the planning, inventory and maintenance routines of transportation agencies is as important as addressing roadway design policy. System inventory activities that address bicycling and walking will help ensure sufficient accommodations in future years. For example, SHA will attempt to not sever major bicycle routes without insuring the availability of an adequate alternate route. Sensitive maintenance routines will address aspects of the transportation system that matter greatly to cyclists, pedestrians, and individuals who are mobility impaired. Maintenance remains a local responsibility. Implementation of this strategy will require outreach and coordination with local agencies.

To meet this strategy, the State will evaluate existing programs and develop a program for Americans with Disabilities Act (ADA) compliance and improved programs for facility maintenance, in partnership with local agencies.



Goal 3 Safety

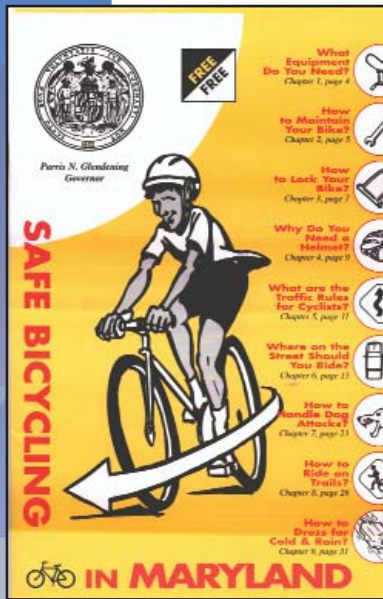
Goal 3: Safety

Provide safe and convenient bicycle and pedestrian accommodations for every type of trip, and for all levels of ability.

Strategy 3A:

Coordinate Education, Engineering, and Enforcement Safety Activities

Studies have shown that the most effective traffic safety initiatives are those that integrate engineering, education and enforcement at both the programmatic and project level. For example, successful Safe Routes to School programs include making modifications to the streets around schools, educating and training the students how to walk and bike safely to school, and enforcing the traffic laws for all street users in and around school zones. Full implementation of this strategy will require the active participation of Maryland schools, State agencies in addition to the Maryland Department of Transportation, the General Assembly, and local governments to develop and implement new safety programs and campaigns



Goal 4: Education and Encouragement

Develop education and promotional programs that will increase bicycling and walking and foster a pro-bicycle and pro-pedestrian awareness in individuals, private sector organizations, and all levels of government.

Strategy 4A:

Establish and Support Encouragement Program

Achieving this vision will require more than infrastructure improvements. The adage is true, "If you build it, they will come!" but only if they know it is there and how it can be used. Maryland has a number of unique opportunities to use education and marketing strategies to increase the use of bicycling and walking as a mode of transportation to access jobs, shopping, recreation, and transit for longer trips.

Partnerships with the Department of Natural Resources, the Department of Business and Economic Development, MDOT modal administrations, and private employers will be instrumental in developing a variety of activities to encourage walking and bicycling in Maryland through special events, marketing and other means.



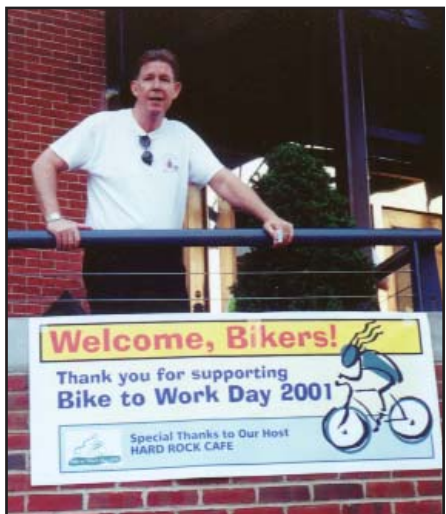
Strategy 4B:

Increase Communication with Stakeholders

Many people are unaware of their rights and responsibilities as bicyclists, pedestrians, persons with disabilities, and motorists sharing the same roadways. Public

and stakeholder communication is needed to increase public awareness and understanding of these issues. Stakeholder communication should be provided in many forms and should use many mediums—annual funding reports, program guides, websites, maps, and person-to-person meetings, especially in the field.

A variety of activities are identified to provide more information regarding transportation planning, programming, funding processes and relevant State laws and policies. Strong State coordination with local programs is also encouraged.



Goal 4

Education and Encouragement

Strategy 4C: **Provide Professional Development and Training**

Agencies are continuously challenged to integrate the needs of multiple users and user groups into the planning, design and operation of transportation facilities and services. This strategy focuses on developing professionals with specialized knowledge and skills in the travel needs of bicyclists, pedestrians and disabled citizens through professional development and training.

A number of methods are identified to enhance the quality of bicycle and pedestrian facility design through training programs and sharing of information by State agencies.



Strategy 4D: **Create New Forums for Learning, Dialogue and Research**

The field of bicycle/pedestrian planning and design is growing and changing rapidly. New ideas and technologies are being introduced regularly, and professionals rely heavily on the ideas and experiences of other communities throughout the U.S. and Europe. Maryland has tremendous resources to draw upon, including its University System and its proximity to Washington, D.C. and national leaders.

Harnessing and utilizing these resources effectively would enable Maryland to develop and be recognized for its excellence and leadership in bicycle and pedestrian education, technology transfer and research.

Several methods are identified to foster improved education for students and professionals regarding facility design and traffic safety.



Goal 5: Smart Growth

Work with local communities to increase their understanding of how land use, transportation and other policies and planning processes need to be modified to achieve increased levels of bicycling and walking, especially in Priority Funding Areas.

Strategy 5A:

Institute New Non-Motorized Travel and Health Impact Surveys

Current data about the extent of bicycling and walking are insufficient for effective planning and use as performance measures. Information about how bicycling and walking potentially affect public health is also insufficient to fully understand the impact of these activities. Development of Maryland-specific data will establish fresh baselines, enable new performance measures to be created and assist policy makers with program development and project funding decisions.

Survey activities are noted to provide an information base to begin to evaluate the health effects of bicycling and walking on the State population.

Strategy 5B:

Initiate a Bicycle and Pedestrian Partnership Program (BPPP)

The Retrofit Bicycle, Retrofit Sidewalk, Smart Growth Transit Program, Neighborhood Conservation, Transportation Enhancements and National Recreational Trails programs are highly popular programs for developing and funding bicycle and pedestrian improvements in Maryland's older communities. The State faces the critical task of determining how to both increase the total amount of resources available for these activities and concentrate them in the areas of greatest need. Implementation of a Bicycle and Pedestrian Partnership (BPPP) program is a logical way to do both by bringing the appropriate stakeholders to the table to discuss ways to address bicycle and pedestrian travel in Maryland.

The BPPP will provide a much-needed framework for State/local partnerships focused on bicycling and walking. Bicycle and pedestrian travel is inherently a local activity, so it is essential that improvements on State facilities complement local networks. The BPPP can ensure that in Maryland's most populated communities, land use and transportation actions, on-road and off-road networks, transportation and recreation agencies, safety education, enforcement and promotion programs, planning and funding initiatives are all being effectively coordinated.

Strategy 5C:

Continue Strong Transportation Policy Guidance

MDOT has established a long-range transportation plan (MTP) for the State that strongly supports mode choice, smart growth, environmental preservation and development of a safe and modally diverse transportation system. It establishes a highly supportive policy context for bicycling and walking. As a result, this Plan recommends a series of actions designed to ensure that MDOT's internal business and strategic planning processes support and are consistent with Maryland bicycle and pedestrian policies.



Implementation Schedule

Goal 1 Actions, Timing, and Cost Estimates

<i>Goal 1 - Facility Integration Expansion</i>		
Total Cost	FY 2003-2008	FY 2009-2023
STRATEGY 1A: Integrate bicycle and pedestrian facilities into routine roadway development policy		
ACTIONS: <i>(MDOT is the lead implementing agency unless noted below)</i>		
1. Continue current programs, such as Bike Retrofit, Smart Growth Transit Program, Sidewalk Retrofit, etc. to construct bicycle and pedestrian facilities and work to obtain additional funding, as needed.		<i>ongoing</i>
2. Incorporate a bicycle/pedestrian/ADA assessment (including field visits) into scoping and engineering activities for all (new/rehab.) roadway and bridge projects.	✓	
3. Incorporate BLOC measures into the scope and design of all roadway and bridge projects with the goal of achieving desired standards for bicyclists at the most reasonable cost.	✓	
4. Implement the Bicycle and Pedestrian Accommodations Checklist developed by SHA staff for internal review of roadway development projects with regard to improving bicycling and walking conditions.	✓	
5. Consider state-of-practice approaches for all roadway and bridge projects, including national standards such as AASHTO and ADAAG (with the exception of interstates and freeways).	✓	
6. Continue to assess internal SHA documents and update with appropriate bicycle and pedestrian design standards and guidelines.		<i>ongoing</i>
7. Increase public awareness of available services.	✓	
8. Develop a best practice document for Maryland bicycle and pedestrian facilities using AASHTO and other national standards to address integrate factors such as traffic calming, spot hazards and safe crossings.	✓	
STRATEGY 1B: Focus and expand trail development initiatives		
ACTIONS:		
1. In coordination with the Department of Natural Resources (DNR), continue to update and implement plans of multi-use trails in the State.	✓	
2. Work with trail operators to develop uniform practices for trail user counting procedures and utilize trail counts to track trail use.	✓	
3. Working together, MDOT and local jurisdictions will examine corridors to identify high-quality commuter routes that provide direct links to major employment/activity centers.	✓	

*denotes a projection of the estimated costs, not for programming purposes.

<i>Goal 1 - Facility Integration Expansion</i>		
Total Cost	FY 2003-2008	FY 2009-2023
. \$1.48-1.68 billion*		
4. Provide support for designation, development, funding, management, and mapping of multi-use trails and greenways that serve both transportation and recreation needs.	✓	
5. Evaluate and address trail/roadway intersection and grade separation needs from the proposed Statewide multi-use trail plans.	✓	
STRATEGY 1C:		
Enhance and expand bicycle/pedestrian access to transit		
ACTIONS:		
1. Evaluate transit stations in terms of existing and potential demand for bike/pedestrian access as well as reasonable improvements to accommodate this demand.	✓	
2. Continue providing funding for capital improvement projects that improve bicycle and pedestrian access to transit stations and bicycle and pedestrian accommodations at the stations.	ongoing	
3. Increase the number of bicycle parking racks and lockers located at rail transit stations.	✓	
4. Continue to increase the number of transit buses that are equipped to transport bicycles.	ongoing	
5. Continue to plan for implementing MARC Bike-on-Rail services on rail cars, as appropriate.	ongoing	
6. Evaluate the potential for locating Bike Stations at major rail transit centers.		✓
7. Continue to examine and provide access and safety improvements to existing and planned new bus stops.	ongoing	



*denotes a projection of the estimated costs, not for programming purposes.

Goal 2

Actions, Timing, and Cost Estimates

Goal 2 - Facility Preservation and Maintenance

Total Cost	\$20.6 million*	
	FY 2003-2008	FY 2009-2023
STRATEGY 2A: Integrate bicycling and walking into planning and roadway maintenance routines		
ACTIONS: <i>(MDOT is the lead implementing agency unless noted below)</i>		
<u>Planning</u>		✓
1. Update the sidewalk and bicycle facility inventory over a three-year cycle.		
2. Continue to ensure that sidewalk, intersection and transit facilities comply with ADA.	<i>ongoing</i>	
<u>Maintenance</u> <i>(Local agencies provide most maintenance of bicycle and pedestrian facilities. These actions will be implemented in coordination with local agencies.)</i>		
3. Include an element in existing highway spot maintenance response program (brochure, web page, etc.) to address the safety of bicycle and pedestrian facilities and networks.	✓	
4. Evaluate maintenance routines implemented by the State and at the local levels to determine if practices need to be changed to better address the needs of bicyclists and pedestrians.	✓	



*denotes a projection of the estimated costs, not for programming purposes.

<i>Goal 3 - Safety</i>			
Total Cost	\$33 million*	FY 2003-2008	FY 2009-2023
STRATEGY 3A:			
Coordinate and enhance safety activities			
ACTIONS: <i>(MDOT will implement in coordination with the following agencies, as noted)</i>			
1	In coordination with the Maryland Department of Education and local schools, promote pedestrian and bicycle safety, knowledge and skills into the Health Education Learner Outcomes and Performance Indicators for grades K – 12.	✓	
2.	In coordination with the Maryland Bicycle and Pedestrian Advisory Committee, Maryland Department of Education and local schools, assess the potential of a Safe Routes to School program.	✓	
3.	Include MDOT materials related to bicycling and walking in brochures provided with vehicle registration renewals.	✓	
4.	Study the possibility for inclusion of additional bicycle and pedestrian related questions on the Motor Vehicle Administration driver's license exam.	✓	
5.	Display and distribute bicycle and pedestrian safety information at all Motor Vehicle Administration locations.	✓	
6.	Work with the appropriate State and local agencies to obtain bicycle and pedestrian crash location data for use in developing targeted, local education and enforcement programs.	✓	
7.	In coordination with local and State law enforcement agencies, analyze and document the effectiveness of all traffic enforcement activities and programs.		✓
8.	In partnership with other State agencies, continue to provide support to local governments for education and enforcement campaigns and programs.	✓	
9.	Encourage the Maryland General Assembly to review the enforcement of existing traffic law violation penalties to determine the sufficiency of their deterrent and punishment value.	✓	
10.	In partnership with local communities and other appropriate agencies, use crash location data and public surveys to identify high crash locations to target engineering, enforcement and education actions.	✓	
11.	Encourage local communities to maintain and step-up visible pedestrian, bicycle and traffic enforcement and education efforts.	✓	
12.	Encourage appropriate local and State agencies to provide pedestrian and bicycle safety education materials in Spanish or other languages used by local residents.	✓	
13.	Encourage the Department of Education and local schools to integrate pedestrian and bicycle safety into English as second language classes.	✓	
14.	In partnership with local communities, provide dual-language signs on pedestrian-activated signals in neighborhoods with high levels of non-English speaking populations.	✓	

*denotes a projection of the estimated costs, not for programming purposes.

Goal 4

Actions, Timing, and Cost Estimates

<i>Goal 4 - Education, Encouragement and Awareness</i>		
Total Cost	\$12 million*	
	FY 2003-2008	FY 2009-2023
STRATEGY 4A:		
Establish and support encouragement programs		
ACTIONS: <i>(MDOT is the lead implementing agency unless noted below)</i>		
1. Continue to enhance bicycle/pedestrian information on the MDOT website.	<i>ongoing</i>	
2. Work with State agencies and employers to support and participate in national, State and local programs and events that promote increased participation in bicycling and walking.	✓	
3. Step-up overall marketing activities designed to promote increased use of bicycle and pedestrian modes as a means to access rail and bus transit services.	✓	
4. Working together with local agencies, MDOT and DNR will create a one-stop shopping outlet on the MDOT and DNR websites for trail maps and other similar information.	✓	
5. In partnership with the Department of Business and Economic Development, initiate a special marketing program for BWI Airport as the preeminent gateway for foreign and national tourists seeking a biking or hiking-based travel experience in Maryland.	✓	
6. Reach out to new markets by developing bicycle and pedestrian travel promotion strategies with new partners, such as the Maryland Department of Health and Mental Hygiene, Department of Business and Economic Development, Department of Housing and Community Development, the business community, and transportation management associations (TMAs).	✓	
7. Explore expansion of the Commuter Choice Maryland program to encourage employers to establish bicycling and walking commute incentive programs and employees.	✓	
STRATEGY 4B:		
Increase communication with stakeholders		
ACTIONS:		
1. Continue to include bicycle facilities, pedestrian improvements, ADA accessibility improvements as part of the Comprehensive Transportation Plan (CTP).	<i>ongoing</i>	
2. Publish and distribute (or create on the MDOT website) a brief compilation and reference guide to State and federal laws and policies related to bicycling and walking.	✓	
3. Publish new Statewide bicycle map which designates bicycle routes and trails.	✓	

*denotes a projection of the estimated costs, not for programming purposes.

<i>Goal 4 - Education, Encouragement and Awareness</i>		
Total Cost \$12 million*	FY 2003-2008	FY 2009-2023
STRATEGY 4C:		
Provide professional development and training		
ACTIONS:		
1. Continue to provide bicycle and pedestrian transportation training for MDOT engineers and planners which incorporates ADA, AASHTO, and other federal design guidelines, in the training curriculum.	<i>ongoing</i>	
2. Expand internal communication strategies which include consideration of the access needs of persons with disabilities, pedestrians, and bicyclists when planning, designing and implementing transportation facilities.	<i>ongoing</i>	
STRATEGY 4D:		
Create new forums for learning, dialogue and research		
ACTIONS:		
1. Select demonstration corridors to provide innovative examples of pedestrian and bicycle facilities.	✓	
2. In partnership with the Maryland Transportation Technology Transfer Center (MTTC), establish a pedestrian and bicycle transportation seminar series for college students and professionals at MDOT and other professionals working in the field of bicycling, walking and traffic safety.		✓
3. In partnership with one or more universities, establish a Statewide institute for bicycle and pedestrian research and technology transfer program to conduct policy research and identify cutting-edge bicycle and pedestrian technology and treatments and procedures that can be evaluated, tested and applied in Maryland.		✓
4. Establish a component of the Smart Growth Leadership Training Course that focuses on pedestrian and bicycle transportation project and policy issues.	✓	

*denotes a projection of the estimated costs, not for programming purposes.

Goal 5

Actions, Timing, and Cost Estimates

<i>Goal 5 - Smart Growth</i>		
Total Cost	FY 2003-2008	FY 2009-2023
STRATEGY 5A:		
Institute new bicycle and pedestrian travel and health impact surveys		
ACTIONS: <i>(MDOT is the lead implementing agency unless noted below)</i>		
1. Conduct a transportation survey to establish baseline use volume data for bicycling and walking.	✓	
2. Assess the relationship between proximity to pedestrian and bicycle facilities and the amount of exercise undertaken by Maryland residents and their fitness levels.	✓	
STRATEGY 5B:		
Initiate a Bicycle and Pedestrian Partnership Program (BPPP)		
ACTIONS:		
1. Explore implementation of a Bicycle and Pedestrian Partnership Program as a framework for MDOT/County & Municipality partnerships focusing on development of effective bicycle and pedestrian facility networks and support for programs that create results at the local level.	✓	
STRATEGY 5C:		
Continue strong transportation policy guidance		
ACTIONS:		
1. Continue assessment of progress in implementing this plan on a regular schedule to coincide with the updating of the Maryland Transportation Plan (MTP), including goals and performance measures from this Plan into the Annual Attainment Report.	<i>ongoing</i>	
2. When developing strategic or business plans, include bicycle and pedestrian related goals and objectives.	✓	
3. Encourage the Department of General Services to adopt a policy of providing secure bicycle parking facilities and related amenities such as showers, clothing lockers and changing rooms in all State government buildings.	✓	
4. Encourage counties and municipalities to adopt policies, procedures and guidelines describing how local roadway projects can be designed to safely accommodate non-motorized modes of travel and how all local planning and land use regulation can address bicycling and walking needs.	✓	
5. Initiate a study of State and local laws, policies and practices that affect sidewalk maintenance and construction.	✓	
6. Encourage all counties to identify bicycle and pedestrian projects in their priority project designations.	✓	

*denotes a projection of the estimated costs, not for programming purposes.

Goal 5

Actions, Timing, and Cost Estimates

Goal 5 - Smart Growth

Total Cost	FY 2003-2008	FY 2009-2023
.....\$6.6 million*		
7. Continue to fund bicycle and pedestrian facility improvements through the Sidewalk and Bicycle Retrofit, Neighborhood Conservation and other funding programs.	ongoing	
8. In the next reauthorization of Federal transportation law, support continuation of funding programs that address bicycling and walking, such as the Transportation Enhancements and safety set-asides of the Surface Transportation Program and the National Recreational Trails Program.	✓	
9. After the next reauthorization of Federal transportation programs, consider creating a partnership program and consolidating the funding application process for bicycle and pedestrian projects and programs.	✓	



*denotes a projection of the estimated costs, not for programming purposes.

Performance Measures

Performance Measures



Performance Measures

In 2002, the Maryland Department of Transportation initiated a system of annually monitoring the Department's success in meeting the goals and objectives of the Maryland Transportation Plan, using a set of performance measures. These results are reported in the Annual Attainment Report that is presented as part of the State's Annual Report on Transportation to the Maryland General Assembly.

Following this newly instated tradition, the Department has selected a set of performance measures for gauging the success of meeting the goals and implementing the recommendations contained in this Bicycle and Pedestrian Master Plan. The measures selected are presented below with source of data in parentheses. Depending on the availability of data, it is expected that this year's performance will be measured to provide a baseline of performance from which future years' success will be gauged. An annual assessment will be included in the Annual Attainment Report submitted to the General Assembly as part of the State Report on Transportation. (Items with an asterisk are monitored in the Annual Attainment Report issued by MDOT.)

Performance measures are important as they represent degrees of success towards achieving an intermodal system that fully accommodates bicyclists and pedestrians of all levels of ability. Progress towards achieving these goals will depend not only on the continuing commitment within MDOT and its modal agencies, but also on critical partnerships with a wide variety of cooperating agencies at the State and local level as well the health of the Transportation Trust Fund and other revenue sources.

PEDESTRIAN TRAVEL PERFORMANCE MEASURES

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

BICYCLE TRAVEL PERFORMANCE MEASURES

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

BICYCLE AND PEDESTRIAN TRAVEL PERFORMANCE MEASURES

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

GOALS OF THE MARYLAND BICYCLE PEDESTRIAN ACCESS MASTER PLAN AND THEIR RELATIONSHIP TO THE GOALS OF THE MTP	
PLAN GOALS	CORRESPONDING MTP GOAL
<p>Goal 1: Facility Integration and Expansion Integrate and expand the State’s bicycle and pedestrian facilities, creating a connected network of on-road, off-road and transit-related accommodations that will encourage and facilitate increased levels of bicycling and walking and improve access for individuals with disabilities.</p>	<p><i>MTP Goal 6: Provide Mobility and Accessibility with Transportation Choice.</i></p>
<p>Goal 2: Facility Preservation and Maintenance Preserve, protect and maintain the State’s existing bicycle and pedestrian facilities and rights-of-way.</p>	<p><i>MTP Goal 2: System Preservation</i></p>
<p>Goal 3: Safety Provide safe and convenient bicycle and pedestrian accommodations for every type of trip, and for all levels of ability.</p>	<p><i>MTP Goal 4: Safety and Security</i></p>
<p>Goal 4: Education and Encouragement Develop education and encouragement programs that will increase levels of bicycling and walking and foster a pro-bicycle and pro-pedestrian ethic in individuals, private sector organizations, and all levels of government.</p>	<p><i>MTP Goal 10: Serving Our Customers</i></p>
<p>Goal 5: Smart Growth Work with local communities to modify land use, transportation and other policies and planning processes to achieve increased levels of bicycling and walking.</p>	<p><i>MTP Goal 1: Smart Growth, Smart Transportation</i></p>



Looking Forward

Looking Forward

The preceding pages of the *Maryland Bicycle and Pedestrian Master Plan* outline the twenty-year blueprint Maryland will follow in its endeavor to *make Maryland the best State for bicyclists and pedestrians*. However, MDOT is already hard at work implementing numerous activities from the Master Plan and is working to bring many more on line in the near future. Below is a sample of the many exciting bicycle and pedestrian projects and activities currently underway or planned for the near future.

GOING ON NOW

<ul style="list-style-type: none"> • Bicycle and Pedestrian Safety Curriculum for Maryland Schools. • Assessing a Safe Routes To Schools program, in coordination with the Maryland Bicycle and Pedestrian Advisory Committee. • Neighborhood Conservation Program project on MD 193. • Maryland Bicycle Retrofit Program. • Planet Walk - a public art project along the Baltimore and Annapolis Trail. • Washington regional media campaign to encourage bicycle and pedestrian travel. • Completing the Anacostia and Allegheny Highland trails. 	<ul style="list-style-type: none"> • Ongoing pilot pedestrian countdown signals in Montgomery County. • Safe Bicycling in Maryland Guide. • Guidelines for locating bus stops for safer pedestrian access. • Study providing access for bicycles on controlled access highways. • Bicycles on buses - throughout the State. • Multi-county pedestrian enforcement initiative. • BWI Trail Improvements Demonstration Project.
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COMING SOON!

<ul style="list-style-type: none"> • New statewide bicycle map. • Best practices guide for bicycle and pedestrian facility design and operation. • Connect BWI trail to the airport terminal and other area trails, such as Patapso Trail. • Develop clearer simpler laws governing bicycle and pedestrian safety. • Develop pedestrian-friendly transit-oriented developments in Owings Mills, West Hyattsville and other key rail stations. • Study opportunities to create pedestrian-friendly transit-oriented developments on new rail transit lines in Baltimore and Washington regions. 	<ul style="list-style-type: none"> • Lexington Park - pathways to schools project. • Transportation survey to identify bicycle and pedestrian usage and travel patterns and needs. • Woodrow Wilson bridge bicycle and pedestrian path. • Pedestrian bridge over I-270 at MD 28. • Adapt existing MARC rail cars with bike racks to permit passengers to carry on bicycles. • Study new methods of increasing the visibility of bicycles and pedestrians on roadways.
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List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act of 1990
ADAAG	Americans with Disabilities Act Accessibility Guidelines
BLOC	Bicycle Level of Comfort
BPPP	Bicycle Pedestrian Partnership Program
BWI Airport	Baltimore-Washington International Airport
CTP	Consolidated Transportation Program
DNR	Department of Natural Resources
MBPAC	Maryland Bicycle and Pedestrian Advisory Committee
MDOT	Maryland Department of Transportation
MdTA	Maryland Transportation Authority
MTA	Maryland Transit Administration
MTP	Maryland Transportation Plan
MVA	Maryland Motor Vehicle Administration
PFA	Priority Funding Area
SHA	State Highway Administration

Maryland Bicycle and Pedestrian Access Act

PUBLIC POLICY

The General Assembly finds that it is in the public interest for the State to include enhanced transportation facilities for pedestrian and bicycle riders as an essential component of the State's transportation system, and declares that it is the policy of the State that:

- 1) Access to and use of transportation facilities by pedestrians and bicycle riders shall be considered and best engineering practices regarding the needs of bicycle riders and pedestrians shall be employed in all phases of transportation planning, including highway design, construction, reconstruction, and repair as well as expansion and improvement of other transportation facilities;
- 2) The modal administrations in the Department shall ensure that the State remove barriers, including restrictions on the bicycle access to mass transit, that impede the free movements of individuals from one mode of transportation to another; and
- 3) As to any new transportation project or improvement to an existing transportation facility, the Department shall work to ensure that transportation options for pedestrians and bicycle riders will be enhanced and that pedestrian and bicycle access to transportation facilities will not be negatively impacted by the project or improvements.

DIRECTOR OF BICYCLE AND PEDESTRIAN ACCESS

- a) **Established** - There is a Director of Bicycle and Pedestrian Access in the Office of the Secretary.
- b) **Appointment** -
 - (1) The Director shall be appointed by the Secretary with the approval of the Governor.
 - (2) The Director shall be a person with experience and knowledge in matters related to bicycle and pedestrian access to transportation facilities.
- c) **Service, reporting and duties** -
 - (1) The Director serves at the pleasure of the Secretary and shall report directly to the Secretary.
 - (2) Subject to the authority of the Secretary, the Director is responsible for carrying out:
 - (i) The powers and duties vested by law in the Director; and
 - (ii) The powers and duties vested in the Secretary and delegated to the Director by the Secretary.
- d) **Salary** - The Director is entitled to the salary provided in the State budget.

BICYCLE-PEDESTRIAN MASTER PLAN

- a) **Requirements; Goals of the Plan** - The Director shall develop and coordinate policies and plans for the provision, preservation, improvement, and expansion of access to transportation facilities in the State for pedestrians and bicycle riders, including development, before October 1, 2002, of a Statewide 20-year Bicycle-Pedestrian Master Plan that:
 - 1) (i) Identifies short-term and long-range goals that are consistent with the purposes of this subtitle; and
 - (ii) For each identified goals includes:
 1. Reasonable cost estimates for achieving the goals; and

2. For purposes of the annual report required under Section 3-216 of this article, objective performance criteria against which progress in achieving the goal can be measured.
 - 2) Complies with applicable federal funding requirements;
 - 3) Provides a model to guide political subdivisions of the State in enhancing bicycle and pedestrian access to transportation facilities;
 - 4) Proposes long-term strategies for improving the State's highways to ensure compliance with the most advanced safety standards for pedestrians and bicycle riders;
 - 5) After consultation with political subdivisions in the State, identifies bicycle-pedestrian priority areas to facilitate the targeting of available funds to those areas of the State most in need.
- b) **Duties of the Director** - To carry out the purposes of this subtitle, the Director shall:
- 1) Participate in the planning of new transportation facilities and improvements to existing transportation facilities;
 - 2) Advise the Secretary on matters concerning bicycle and pedestrian access and any other matter as requested by the Secretary;
 - 3) Initiate a program of systematic identification of and planning for projects related to bicycle and pedestrian transportation that qualify for funds under Federal Highway Administration guidelines;
 - 4) Monitor State transportation plans, proposals, facilities, and services to ensure maximum benefits for pedestrians and bicycle riders in the State; and
 - 5) Consult regularly with the Bicycle and Pedestrian Advisory Committee.
- c) **Secretary's authority** - The exercise of the powers and duties of the Director is subject to the authority of the Secretary.