

# ***Chesapeake City Walkable Community Workshop***



**JUNE 2012**

**SPONSORED BY**



**WILMAPCO**





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Learn more about the Walkable Community Workshop Program at [www.wilmapco.org/walkable](http://www.wilmapco.org/walkable)

Learn more about WILMAPCO planning in Chesapeake City at [www.wilmapco.org/chesapeake\\_city](http://www.wilmapco.org/chesapeake_city)



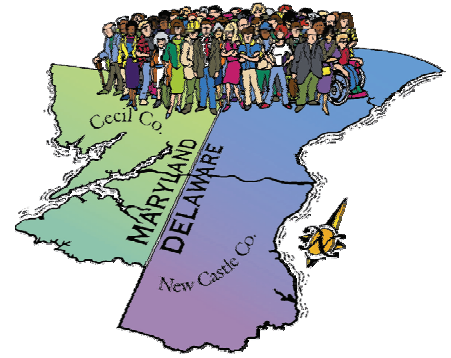


## INTRODUCTION

WILMAPCO was selected for the 2005 Walkable Community Workshops (WCW) program—part of the National Center for Bicycling & Walking effort to work directly with communities. WCWs are interactive events that bring together residents, elected officials, advocates, public agency staff, health practitioners, educators, planners and engineers to make our communities safer and easier to walk in. Since 2005, workshops have been held throughout the WILMAPCO region, providing information on how we can turn our communities into the kind of pedestrian-friendly places we all like to experience.

### WHO IS WILMAPCO?

The Wilmington Area Planning Council (WILMAPCO) is the bi-state Metropolitan Planning Organization (MPO) serving New Castle County, DE and Cecil County, MD. Our policy-making body, the WILMAPCO Council, consists of state, county and municipal representatives. We have the important role of educating and involving the public and local agencies in the transportation decision-making and funding process. Our Regional Transportation Plan calls for improving our quality of life by protecting public health and supporting our communities, transporting people by providing transportation choices including facilities for bicycling and walking, and supporting economic activity and growth by making our region an attractive place to live and work. Making our communities more walkable achieves all these goals, and more.



### WHY ARE WALKABLE COMMUNITIES IMPORTANT?

**We are all pedestrians.** Whether we think of ourselves as one or not, we are pedestrians. We may walk to work, walk for exercise, walk to do errands or simply walk from where we park the car to the neighborhood store; we all need safe facilities for walking.

**Walking is crucial to give those who don't drive a travel choice.** Many in our region are too young to drive, have a permanent or temporary disability which prevents

their driving, have no access to a car, or choose not to drive. In Cecil County, Maryland, 25% of the population is under 18, 12% is over 65 (this number is expected to grow rapidly in the years to come), 16% of the population has a disability, and 5% of households have no available vehicle. Many people in these population groups need to walk in order to lead active and independent lives.

**Walkable communities are healthier communities.** Americans' waistlines are getting wider, triggering a rise in related illnesses including heart disease and diabetes. The Centers for Disease Control estimates that in Maryland 27% of adults are obese, only 65% of adults engage in the recommended amount of physical activity, and 24% of adults engage in no leisure-time physical activity at all. Additionally, only 16% of adolescents get the recommended amount of physical activity. In Cecil County the problem is even worse, as 32% of adults are obese and 28% of adults are physically inactive. Yet we know that pedestrian-friendly communities make it easier for people to integrate physical activity into their daily lives. Indeed, those who report having access to sidewalks are 27 percent more likely to be physically active.

**Everyone benefits from walkable communities.** Even if you don't personally enjoy walking, you still benefit from living in a walkable community. Approximately 40 percent of all trips are less than two miles – an easy walk or bike ride in an area with safe pedestrian and bicycling facilities. More people walking and bicycling can help reduce overall levels of congestion, benefiting drivers too. Less driving can also help reduce air pollution caused by motor vehicles. There are economic benefits as well, with higher property values and greater sales in commercial areas.



Source: Sharon Weygand,  
<http://www.chesapeakecity-md.gov>

## WHAT IS A WALKABLE COMMUNITY WORKSHOP?

A WCW is typically a four-hour session that includes an educational presentation on what makes a community walkable, a walking audit of a specific area, and a mapping session, where participants engage in brainstorming solutions. Focusing on a particular area's walkability, participants study sidewalks, pathways, inviting streetscape, crosswalks, destinations, etc. The process gives everyone the tools for making a community walkable and provides realistic next steps that can be used to achieve their ideas.

There are **three main parts of a workshop**:



**Part 1** – The presentation talks about sidewalk design, crosswalks, traffic calming, community design and other tools communities need to create walkable communities.



**Part 2** – The walking audit gives participants a chance to walk through the area, identifying issues and thinking about applying what they have learned from the presentation. Getting out and walking is key to illustrating the challenges that people face when pedestrian facilities are not available.



**Part 3** – During the mapping exercise people put down on paper their vision and realistic actions for improving the study area. Participants ended the session by committing to specific next steps to continue the process started at the workshop.



## CHESAPEAKE CITY BACKGROUND AND RECOMMENDATIONS

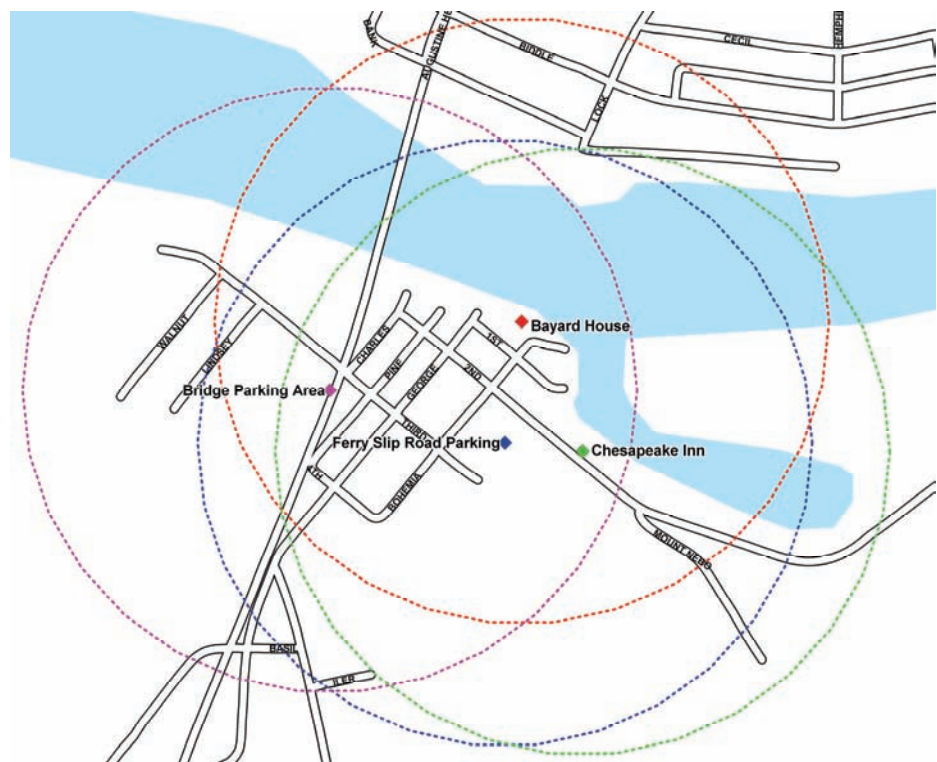
## BACKGROUND

Chesapeake City is a town of about 700 residents that straddles the Chesapeake & Delaware Canal in eastern Cecil County. The town owes its historic development to its age and location on the C&D Canal, a major shipping canal connecting the Delaware River to the Port of Baltimore. Today, Chesapeake City's residents take pride in that history, especially in the South Chesapeake City Historic District which contains numerous 19<sup>th</sup> Century buildings and a walkable grid pattern of development.

Though Chesapeake City is already more walkable than many communities, residents are interested in ideas to help make the town even more accessible to bicyclists and pedestrians. Upcoming improvements include completion of the C & D Canal Trail on the north side of the canal, and bicycle and pedestrian pathway connecting the southern downtown with Bohemia Manor High School. These improvements are expected to promote added trips by walking and bicycling within the larger region, which the town wishes to support through pedestrian improvements downtown.



Chesapeake City residents have expressed safety concerns related to traffic volume and speed on State Route 286 (2<sup>nd</sup> and George Streets) through town. Residents have also expressed interest in improving the pedestrian environment through enhanced way-finding, traffic calming measures, and better crossings at intersections throughout the town. To discuss these issues, a Walkable Community Workshop was held in partnership with the Town of Chesapeake City on June 20, 2012. This document presents the findings of that workshop.



**Five-minute walk radius around key locations.** Most of S. Chesapeake City is within a 5-minute walk of major destinations.

About 15 residents, planners, and government officials attended the workshop, which was held in Chesapeake City's Town Hall. After participating in a live and/or virtual walking tour, residents and planners identified several walkability issues during a mapping exercise and offered suggestions for improvements. In addition to the general issues listed below, more specific ones are represented on the map shown on page 12. The walking route, highlighted in red, examined connections between downtown shops and dining, the elementary school, parking, and regional bicycle and walking trails.





## GETTING ALONG THE STREET: SIDEWALKS, BIKE ROUTES AND PATHWAYS

### **Issue:** Local Pedestrian Connectivity:

For the most part Chesapeake City is well-connected, due to the fact that its streets are organized in a grid pattern. Several gaps do remain in the study area's sidewalk network. Gaps identified during the workshop include the southwest side of 2<sup>nd</sup> Street from Bohemia Street to Ferry Slip Road, around Pell Gardens, 1<sup>st</sup> Street, 3<sup>rd</sup> Street, and 4<sup>th</sup> Street. The most glaring of these issues is a lack of adequate sidewalks connecting areas of the town to Chesapeake City Elementary School on 3<sup>rd</sup> and 4<sup>th</sup> streets. Also, the parking areas under MD 213 on both sides of 3<sup>rd</sup> Street and on Ferry Slip Road by MD 286 are not adequately connected to the town's system of sidewalks.



Lack of sidewalks along the elementary school's driveway

### **Solutions:**

Missing links in the existing sidewalk network should be filled and new sidewalks and pathways should be pursued to improve pedestrian connectivity. Adding sidewalks on 4<sup>th</sup> Street leading to the elementary school would be a key improvement, as would adding another sidewalk along the entrance to the school's parking lot on 3<sup>rd</sup> Street. These improvements may be eligible for funding through the Maryland Safe Routes to School (SRTS) program.

### **Issue:** Pedestrian and Bicycle Pathways:

The town wishes to brand itself as a regional walking and bicycling destination. Plans for multiuse bicycle and pedestrian paths are underway to complete the C&D Canal Trail on the north side of the canal and a connection paralleling MD 213 to from the Post Office to Bohemia Manor High School. Bicycle and pedestrian improvements are needed to better tie the downtown into these larger projects.

### **Solutions:**

The town should continue to pursue implementation of the C&D Canal and MD 213 pathways. It is also important to fully connect these facilities with the downtown through infrastructure and wayfinding signs. Connections should be improved from the MD 213 gateway into town and the ferry landing area by Pell Gardens. Currently, the MD 213 bridge has no bicycle lane and narrow sidewalks. Improved bicycle pavement markings and signage would connect the MD 213 trail to the south and C&D Canal Trail to the north, as well as link this corridor to the downtown. Where sufficient width does not exist for bicycle lanes, the Town and SHA should consider additional signage and shared pavement markings as appropriate.

Another recommendation is the extension of the C&D Canal Trail along the southern bank of the canal. Currently, pathway and boardwalk exist near the Pell Gardens and the marina. This could be extended to link with the parking area under MD 213 to create a pleasurable and direct route between parking lots and waterfront destinations, and make the walk from the parking part of the recreational experience.

### **Issue:** Sidewalk Maintenance and ADA Access.

Some of the existing sidewalk infrastructure in Chesapeake City is deteriorating. Recently an effort was made to help smooth the sidewalks by shaving down stones that had become misaligned. The shaving, while not as ideal as complete replacement, serves to help make the surface easier to navigate for small children, the elderly, and those with disabilities. Many sidewalks are still in need of further repairs. Still others lack sufficient width or are blocked by porches, utility poles or other obstructions that make route not ADA accessible or convenient for any pedestrian. Many pedestrians are seen walking in the street to avoid narrow sidewalks.



Obstructed sidewalks may not meet ADA guidelines

### **Solutions:**

It was noted during the workshop that the town will soon be replacing all broken sidewalk slabs. This effort will go a long way in promoting walkability in Chesapeake City. During the replacement it would also be helpful to address connectivity issues by filling in



gaps where there is currently no sidewalk. Workshop participants discussed potentially burying utilities long term to reduce obstructions.

**Issue: Bicycle Accessibility.** Complete communities are not only friendly to pedestrians, but also friendly to cyclists. To safely ride with motorized traffic, cyclists benefit from dedicated road space (bike lanes), safe motorist speeds, and/or appropriate signage/pavement markings. These features alert motorists to the presence of cyclists and their rightful place on the roadway. Many local roads in Chesapeake City have vehicle speeds that are slow enough to be safe for cyclists without additional signage or pavement markings. On main thoroughfares, however, special attention to cyclists may be warranted. One workshop participant expressed concern that many bicyclists were using sidewalks instead of traveling on the roadway. Steps could be taken to educate both drivers and cyclists on the proper use of bicycles on town streets.

#### Solutions:

Without adequate right-of-way for dedicated bicycle lanes, appropriate signage and pavement markings should be considered in locations where bicyclists may be present. “Share the Road” signs and “sharrow” or shared lane markings could be installed to alert drivers to be careful of cyclists on the roadway. The “sharrow” markings serve to purpose of reminding cyclists that they are supposed to bike in the roadway and not on the sidewalks, and also show correct lane position when riding near parked cars.



Sharrow lane marking (left) and “Share the Road” signage (right)  
Sources: [www.pedbikeimages.org](http://www.pedbikeimages.org) and [www.bikexpert.com](http://www.bikexpert.com)

Participants also suggested exploring the feasibility of making George Street one-way between the C&D Canal and 3<sup>rd</sup> Street in order to decrease traffic and provide space for a bike lane.

## GETTING ACROSS THE STREET: INTERSECTIONS AND CROSSWALKS

#### Issue: Pedestrian Crossings:

Chesapeake City is a fairly safe environment for pedestrians due to relatively low-speed traffic on most streets. However, ADA-compliant curb ramps are lacking at many of the intersections within the town. Additionally, several intersections around Chesapeake City do not provide well-marked, formal crosswalks, or markings have become faded. Finally, there is a high level of concern associated with the area near the Chesapeake Inn restaurant. Pedestrians often cross SR 286 to get to the parking area and playground on Ferry Slip Road as well as valet parking used by Chesapeake Inn, yet there is no crosswalk in this vicinity.

**Pedestrian crossing sign.**  
*The fluorescent yellow/green (FYG) shown here is more noticeable than traditional yellow crosswalk signs. This is best used by the school and at mid block crossings.*



**Curb ramps.**  
*Curb ramps allow wheel chair and baby carriages to comfortably access crosswalk. This example has what is known as "truncated domes." Truncated domes provide a textural clue to vision-impaired pedestrians that they are at an intersection.*



**Crosswalks.**  
*Zebra striping or wide stripes in reflective paint are most noticeable to drivers.*



#### **Solutions:**

The addition of well-marked crosswalks and signs alerting motorists of pedestrian presence are essential to ensure safety. Bulb-outs and ADA accessibility upgrades such as truncated domes could be utilized at several intersections throughout town. The possibility of a crosswalk on MD 286 near the marina and Chesapeake Inn restaurant may be explored but would need final approval from the State Highway Administration (SHA).

#### **AESTHETICS AND BEYOND**

##### **Issue: Speeding/Unruly Vehicle Traffic.**

Residents reported that motorists often drive too fast on 2<sup>nd</sup> and George Streets through town and near the Chesapeake Inn restaurant, making walking unsafe. A 2009 count revealed that 2<sup>nd</sup> Street through town saw an average of more than 1,600 automobiles per day and that George Street saw an average of approximately 3,200 automobiles per day. A combination of high levels of traffic and high speeds can pose significant danger for pedestrians in Chesapeake City.



**Solutions:**

Traffic calming techniques should be explored, especially in high traffic areas. Traffic calming solutions come in many varieties, and many of them also enhance the pedestrian environment. Bulb-outs can help shorten the distance that pedestrians have to navigate to cross an intersection and can also help slow down traffic. Speed humps, mini traffic-circles, signage, and wide sidewalks can also help alleviate concerns associated with speeding traffic.

As mentioned before, signage on SR 286/2<sup>nd</sup> Street between Bohemia Avenue and the Chesapeake Inn restaurant would also be helpful in alleviating safety concerns.

*Mini circle**Bulb out*

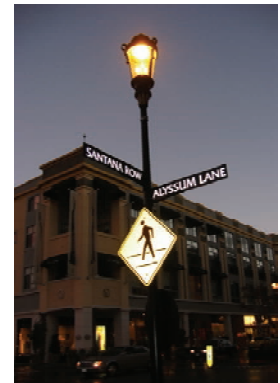
**Issue: Pedestrian Amenities.** In order to feel safe and comfortable on a walking facility, pedestrians need certain amenities such as sufficient lighting, places to rest, and pleasant surroundings. Luckily, much of Chesapeake City is very well-lit and has ample places to rest, especially the blocks closest to the canal. It is also beneficial that Chesapeake City's historic setting serves as a very pleasant and interesting surrounding.

**Solutions:**

One area that could be served well by enhanced pedestrian amenities is the area near the Chesapeake City Elementary School. Adjacent to the school is a municipal parking lot, located under SR 213, which would also benefit from enhanced pedestrian amenities such as trees and increased lighting. Improved pedestrian lighting and wayfinding signs are needed to link parking areas, particularly those under MD 213, with the downtown since restaurant visitors and employees must walk to parking lots at night.

Chesapeake City attracts many visitors who would benefit from improved wayfinding signs. Current signs are faded, and not very noticeable. Improved signs could include the town logo and give distances to destinations oriented toward pedestrians with distance or time information.

In addition to increased lighting and street trees, signage and other elements of the built environment can have an effect on the perceived and actual levels of pedestrian safety. Some attendees and town officials at the WCW expressed interest in replacing standard speed limit signs throughout the town with special wooden signs that would maintain the current size and font but add a decorative border and picture of the Chesapeake City bridge. Attendees felt that such a change would add to the historic character of the town and enhance the pedestrian environment. Further discussion of such a possibility could be pursued, with the understanding that the town would have to coordinate closely with the State Highway Administration (SHA).





Additional suggestions include:

- Improve conditions around the new municipal parking lots under the bridge. Possible improvements could include sidewalks, multi-use paths, improved lighting, and improved signage. Awareness of the parking lots and a feeling of safety in the area around them will help decrease congestion in town, as people will choose to park in the lots and walk around.
- Beautify the area around the sewage treatment plant to help make the intersection of Charles and 2<sup>nd</sup> Streets, and the scenic overlook located there, more pleasing to pedestrians.
- Consider adding planters in all of the alleys throughout town. The planters should be placed in the roadway and staggered, creating a chicane which cars must weave through. This will serve as a traffic calming device while also beautifying the alleys.

**Issue: Bicycle Parking.** Bicycle parking is a needed amenity for those traveling to shops and dining. Bicycle parking is needed throughout the downtown, at the Town Hall, and near Pell Gardens.

**Solution:**

Bicycle racks can be simple and affordable, or more decorative to fit in with other streetscaping in the community. Recommend bicycle rack design is described on the next page.

In addition, the town should promote awareness of the town's bicycle borrowing program to encourage visitors and residents alike to borrow bikes and use them to get around town.

**Issue: On street Parking.** Front-in angled parking forces people into the street when loading items into their trucks, and pushes car passengers toward the road. Drivers have difficulty seeing traffic when pulling out, especially bicycle traffic.

**Solution:**

Back-in angled parking can be accomplished by reversing the angle of the striping for parking spaces. Using back-in angled parking is done similarly to parallel parking and it allows better visibility for exiting drivers.



# 1. THE RACK ELEMENT

**Definition:** the rack element is the part of the bike rack that supports one bicycle.

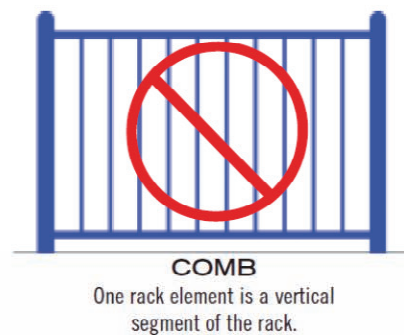
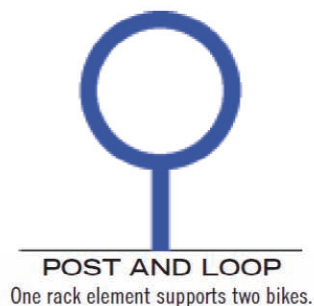
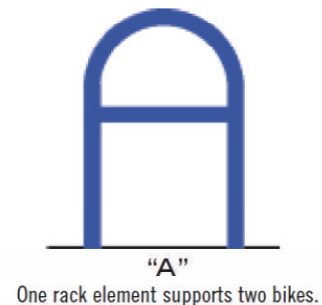
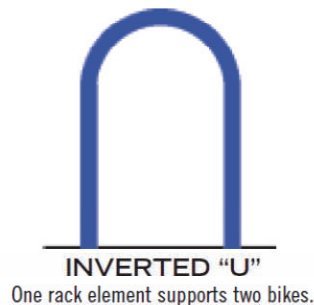
The rack element should:

- Support the bicycle upright by its frame in two places
- Prevent the wheel of the bicycle from tipping over
- Enable the frame and one or both wheels to be secured
- Support bicycles without a diamond-shaped frame with a horizontal top tube (e.g. a mixte frame)
- Allow front-in parking: a U-lock should be able to lock the front wheel and the down tube of an upright bicycle
- Allow back-in parking: a U-lock should be able to lock the rear wheel and seat tube of the bicycle

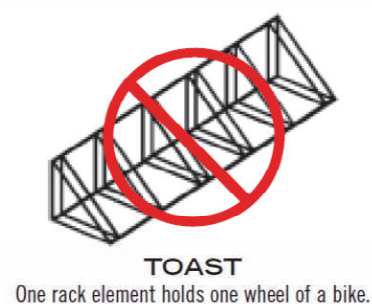
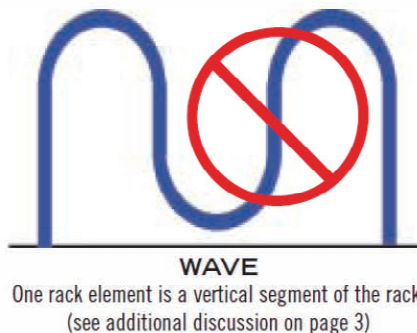


Comb, toast, school-yard, and other wheel-bending racks that provide no support for the bicycle frame are NOT recommended.

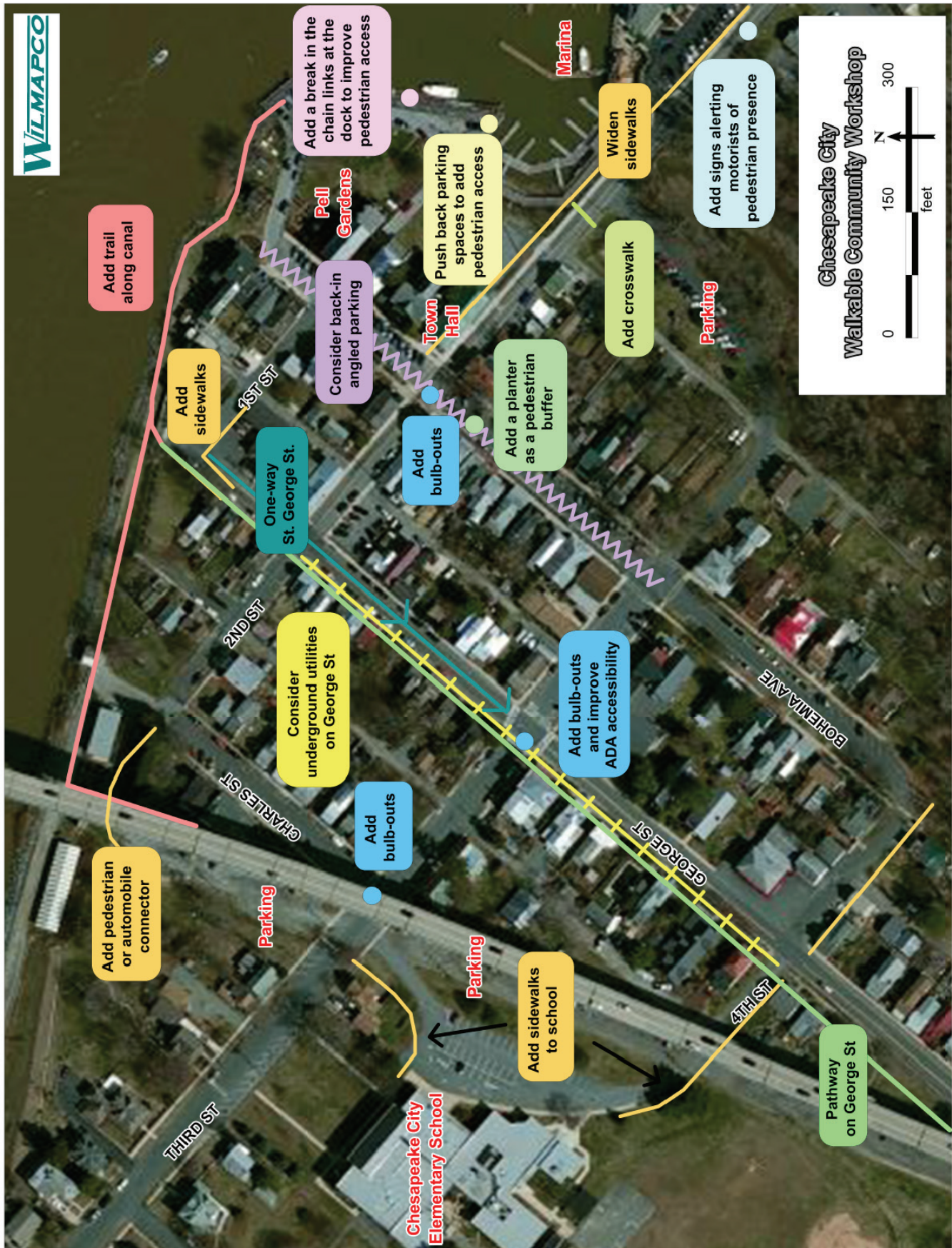
The rack element should resist being cut or detached using common hand tools, especially those that can be concealed in a backpack. Such tools include bolt cutters, pipe cutters, wrenches, and pry bars.



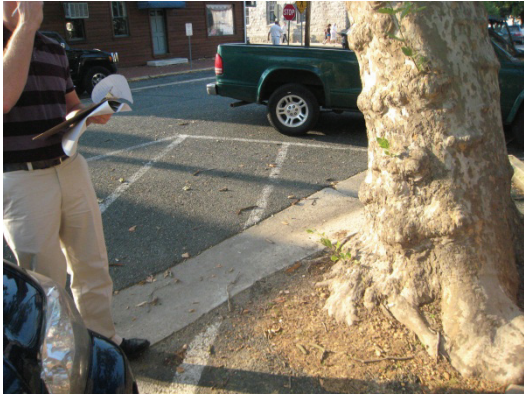
Not recommended









**HIGHLIGHTS FROM THE WALKING AUDIT**

*Pavement markings indicating no parking zone*

Participants on the walking audit suggested that this space on Bohemia Avenue, where pavement markings indicate no parking, would be a good place for a planter. The planter would serve the dual purpose of traffic calming and being aesthetically pleasing.



*Sidewalk with shaved edges*

Sidewalks that have uplifted have been shaved down to provide a smoother walking surface, a great temporary solution to improve accessibility. There are currently plans to replace all of the sidewalks in town.



*Crosswalk at 3<sup>rd</sup> Street and Bohemia Avenue*

This crosswalk on Bohemia Avenue is one of many in the town that could be enhanced with “piano key” markings for visibility, curb-cuts and truncated domes for accessibility, and bulb-outs to shorten the crossing distance and calm traffic.



*Pedestrians in the street*

These pedestrians chose to walk in the roadway on 3<sup>rd</sup> Street. A more inviting pedestrian environment, combined with enhanced pavement markings and signage, will help keep pedestrians on the sidewalks and in crosswalks.



*Intersection of 3<sup>rd</sup> Street and Charles Street*

The intersection of 3<sup>rd</sup> and Charles Streets offers another opportunity for pedestrian bulb-outs or a mini traffic circle. These traffic calming measures would make it easier for pedestrians to get from the parking lots beneath the bridge to the businesses in town.



*Angled parking on Bohemia Avenue*

Consideration should be given to changing the angled parking on Bohemia Avenue from “pull-in” style to “back-in” style parking. Back-in parking provides the motorist with a better view of cyclists, pedestrians, and other cars. A protective barrier is also created when the passengers of the car open their doors, keeping small children from running into the street.



*Sidewalk on SR 286*

Traffic travels fast on this stretch of SR 286 near the town dock and marina. A mid-block crosswalk and ample signage here would allow pedestrians to get from the parking area to the marina and the Chesapeake Inn restaurant.





*Ferry landing area inaccessible due to chains*

These chain-linked posts create a barrier that keeps pedestrians from utilizing the walkway in front of the town dock. Currently pedestrians can only enter on the ends. Creating a break in the middle will make this area more accessible.



*George Street near scenic overlook*

This area of George Street is one place where extending the sidewalk will help make the scenic overlook more accessible. In this instance the new sidewalk will also help better define the street, separating it from the parking lot.



*Intersection of George and 2<sup>nd</sup> Streets*

This intersection at George and 2<sup>nd</sup> Streets lacks pedestrian facilities. The addition of crosswalks and ADA compliant amenities throughout the town will greatly enhance walkability.



*Entrance to elementary school and municipal parking lot*

This intersection would benefit greatly from a redesign that incorporated sidewalks and traffic calming measures. Such a redesign would ensure the safety of both the children using the school and town visitors that park in the lots under the bridge.

## POTENTIAL FUNDING

State and Federal transportation funds, typically matched by local and/or private funds, are the primary source of for constructing much of the recommended active transportation network. In competitive funding processes, projects are considered more viable if a variety of local, state, federal and private sources can be used. This section outlines common types of funding used.

### FEDERAL FUNDING PROGRAMS

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Federal funding primarily comes from transportation programs established in the Surface Transportation Program legislation, currently known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act—a Legacy for Users). Reauthorization of SAFETEA-LU, currently under development, is likely to bring changes to these programs.

#### TRANSPORTATION ENHANCEMENTS/TRANSPORTATION ALTERNATIVE PROGRAM

Note that this program will be revised in the near future due to federal policy changes as part of MAP-21. The Transportation Enhancement (TE) Activities offer funding opportunities to help expand transportation choices and enhance the travel experience through 12 eligible TE activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping, historic preservation, and environmental mitigation. TE projects must relate to surface transportation and must qualify under one or more of the 12 eligible categories.

TE Activities Defined:

1. Provision of facilities for pedestrians and bicycles.
2. Provision of safety and educational activities for pedestrians and bicyclists.
3. Acquisition of scenic easements and scenic or historic sites (including historic battlefields).
4. Scenic or historic highway programs (including the provision of tourist and welcome center facilities).
5. Landscaping and other scenic beautification.
6. Historic preservation.
7. Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals).
8. Preservation of abandoned railway corridors (including the conversion and use of the corridors for pedestrian or bicycle trails).
9. Inventory, control, and removal of outdoor advertising.
10. Archaeological planning and research.
11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.
12. Establishment of transportation museums.

Information can be found visiting [www.sha.state.md.us](http://www.sha.state.md.us) and selecting “Community and Environment” and then “Community Improvement” from the menu. Applications should be submitted between January and March annually. In Maryland, project sponsors must provide a match of at least 50 percent of a project’s total costs. This must include a non-federal, cash match of at least 20 percent which may include the costs of project development, design, and right-of-way acquisition. Funds provided on a cost reimbursement basis.

Maryland TE Coordinator

Keith Kucharek  
Assistant Division Chief  
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Maryland State Highway Administration



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### **SAFE ROUTES TO SCHOOLS**

Note that this program will be revised in the near future due to federal policy changes as part of MAP-21. The SRTS Program was established in August 2005 as part of the most recent federal transportation legislation--SAFETEA-LU. MAP-21 permits the funding of safe route to school activities using Transportation Alternatives funding.

The Program provides funds to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are:

1. To enable and encourage children, including those with disabilities, to walk and bicycle to school
2. To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age
3. To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8)

Call for applications are publicized typically once per year. Grants are distributed to state, local and regional agencies, as well as nonprofit organizations. In order to apply for SRTS funds, an organization representative must attend a workshop that details the process and program.

Maryland Safe Routes to School Coordinator  
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State Highway Administration  
7491 Connelley Drive  
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Phone: (410) 787-7620  
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Email: [jpelaia@sha.state.md.us](mailto:jpelaia@sha.state.md.us)  
[www.saferoutesinfo.org](http://www.saferoutesinfo.org)

### **NATIONAL RECREATIONAL TRAILS PROGRAM**

The Recreational Trails Program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, and

equestrian use. The program matches federal funds with local funds or in-kind contributions to implement trail projects. Projects can be sponsored by a county or municipal government, a private nonprofit agency, a community group or an individual (non-governmental agencies must secure an appropriate government agency as a co-sponsor).

Funds must be matched by at least 20% funding from the project sponsor which must be committed and documented in the local jurisdiction's budget. Prior property acquisition may be counted as an in-kind contribution if it occurred within two years of the proposal submission. A Memorandum of Understanding outlining funding and project implementation responsibilities will be prepared by SHA and signed by all parties before the project funds are released.

Eligible projects and activities include:

- maintenance and restoration of existing recreational trail
- development and rehabilitation of trailside facilities and trail linkages
- purchase and lease of trail construction equipment
- construction of new trails
- acquisition of easements or property for recreational trails or recreational trail corridors
- implementation of interpretive/educational programs to promote intrinsic qualities, safety, and environmental protection, as those objectives relate to the use of recreational trails

Maryland gives preference to projects which:

- have broad-based community support
- provide linkages to or complete existing trails
- provide improvements to a trail in order to benefit or mitigate impacts to the natural environment
- will be accomplished with youth conservation or service groups to perform construction and maintenance

Information can be found visiting [www.sha.state.md.us](http://www.sha.state.md.us) and selecting "Community and Environment" and then "Hikers and Bicyclists" from the menu.

Maryland National Recreational Trails Contact  
 Terry Maxwell, Recreational Trails Coordinator  
 Maryland State Highway Administration  
 Mail Stop C-303, PO Box 717  
 Baltimore MD 21203-0717  
 Phone 410-545-8637 or 800-446-5962  
 Fax 410-209-5003  
[tmaxwell@sha.state.md.us](mailto:tmaxwell@sha.state.md.us)

## **OTHER FEDERAL PROGRAMS**

MAP-21 – In addition to the specific programs outlined above, MAP-21 includes several other programs for which bicycle and pedestrian projects may be eligible. Applications for Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Program (CMAQ) funds can be discussed with MDOT and WILMAPCO. Typically, these programs are used for larger, multimodal projects that include bicycle and pedestrian elements.

Rivers, Trails and Conservation Assistance Program—The RTCA is a program offered through the National Parks Service. It provides technical planning assistance in the establishment of greenways, trails and related open space. For information visit [www.nps.gov/rtca](http://www.nps.gov/rtca).

## MARYLAND FUNDING PROGRAMS

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### MARYLAND BIKEWAYS PROGRAM

The Maryland Bikeways Program is an initiative that began in 2012 to support planning, design and construction of projects that create and improve bicycle connections in Maryland. The objective of this program is to facilitate travel by bicycle in Maryland, by better connecting communities with key destinations, like work, school and shopping. Eligible activities include:

- Creation or update of a bicycle plan or feasibility study
- Design of bicycle infrastructure to better connect communities to transit and other destinations
- Linkage of a local bicycle route to a state bike facility
- Minor retrofits, signing, striping, or grate replacement to enhance use and visibility of on road bike facilities

Contact:

MDOT Office of Planning and Capital Programming  
410-865-1277  
MDBikeways@mdot.maryland.gov  
www.cycle.maryland.gov

### SIDEWALK RETROFIT PROGRAM

The Sidewalk Retrofit Program was established in 1995 to provide funding for the construction of new and the reconstruction of existing sidewalks and pathways on State roads. In State Designated Neighborhoods/Sustainable Communities, projects are eligible for 100% funding by SHA while other may require a 50% local match. Local jurisdictions should discuss and prepare potential project proposals with the SHA District Engineer. Proposals are accepted on an ongoing basis. The Chief Engineer's Office will review and select projects.

### BICYCLE RETROFIT PROGRAM

The Bicycle Retrofit Program was initiated by the SHA in 2000 to fund minimal on-road improvements on state highways that would benefit bicycling. Eligible improvements include projects that can be completed quickly and without the need for permits or right-of-way.

Contact:

Russ Anderson, SHA Innovative Contracting Division  
410-545-8839

### ADA COMPLIANCE PROGRAM

This SHA program seeks to provide accommodations for persons with disabilities through a commitment to remove barriers that impede free movement for all pedestrians along State roadways. Funds may be used for 1) Awareness and Technical Training sessions, 2) support of ADA asset management database, and 3) reconstruction of existing sidewalks to meet ADA Compliance. Over \$56 Million has been allocated for this program in FY 2011-FY 2016.

Contact:

John Gover, SHA Innovative Contracting Division  
410-545-8839

**PROGRAM OPEN SPACE**

Program Open Space provides dedicated funds for state and local parks and conservation areas. Funds can be used for trail land acquisition in Maryland. Funds may be used for acquisition, planning and facilities. A 25% match may be required.

James W. (Chip) Price, Program Open Space  
Tawes State Office Bldg., 580 Taylor Ave., E-4, Annapolis, MD 21401-2397  
Phone: 410-260-8426  
Fax: 410-260-8404  
cprice@dnr.state.md.us  
www.dnr.maryland.gov/land/pos

**LOCAL, NON-PROFIT AND PRIVATE**

Examples of local funding sources used in other Maryland jurisdictions include:

- General Obligation Bonds
- Impact Fees
- Local Motor Vehicle Revenue
- General Funds
- Tax increment financing
- Local improvement districts

Projects should piggyback on other projects when possible, and all infrastructure and development projects should consider bicycle and pedestrian improvements. Many improvements can be accomplished for reduced cost when administered through Public Works or SHA along with road construction and widening, street rehabilitation and resurfacing, bridge projects, intersection projects, etc.

A priority for local funds might be to develop design plans for priority improvements. Having “shovel-ready” projects will position Perryville to take advantage of special grants and programs such as the Federal TIGER grants, and Livability Grants.

Developers should provide bicycle and pedestrian improvements recommended, to be built according to the SHA design guidelines. In addition, other bicycle and pedestrian connections should be considered during the development proposal review process, to tie future land use into the bicycle and pedestrian network.

Other jurisdictions use nonprofit grants and foundation funding for maintenance, operations and encouragement projects. One annual bicycling grant program is offered by Bikes Belong ([www.bikesbelong.org](http://www.bikesbelong.org)). An annual greenways grant is the Kodak American Greenways Award ([www.conservationfund.org](http://www.conservationfund.org)). Locally, LSHG can provide direct technical assistance as well as project and grant management.

## NEXT STEPS

- Prioritize short-term and long-term recommendations
- Research funding opportunities and contact appropriate officials to pursue project implementation
- Explore starting a Safe Routes to School program with staff at Chesapeake City Elementary School to implement some of the recommendations



Contact WILMAPCO with any questions or concerns:

Address: WILMAPCO  
850 Library Avenue, Suite 100  
Newark, DE 19711

Phone: 302.737.6205

Fax: 302.737.9584

Web: [www.wilmapco.org](http://www.wilmapco.org)

Email: [wilmapco@wilmapco.org](mailto:wilmapco@wilmapco.org)



## APPENDIX A

**Chesapeake City  
WCW Attendees (14)**

Rev. Mark Avens  
Eric Beckett  
Nick Blendy  
David Dahlstrom  
Harriett Davis  
Heather Dunigan  
Ron Francis  
Natalie Gentry  
Tamika Graham  
Bill Miners  
Randi Novakoff  
Jay Ringloz  
Brandon Rudd  
Elaine Shepard  
Frank Vari

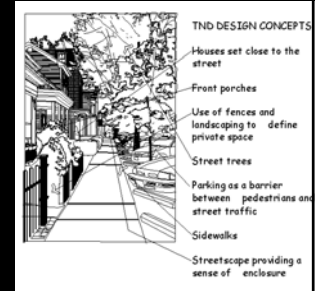
## Walkable Communities Workshop



Creating Livable Places that Work

## Planning in Chesapeake City

- Chesapeake City Design Standards
- Chesapeake City Parking Plan
- C & D Canal Pathway
- Cecil County Bicycle Plan



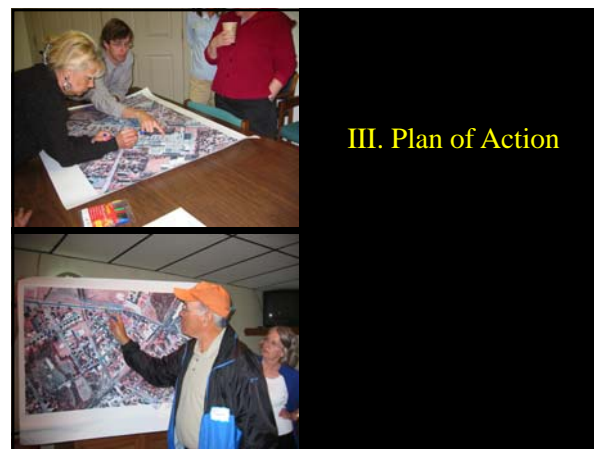
Workshop:  
Three Step  
Process



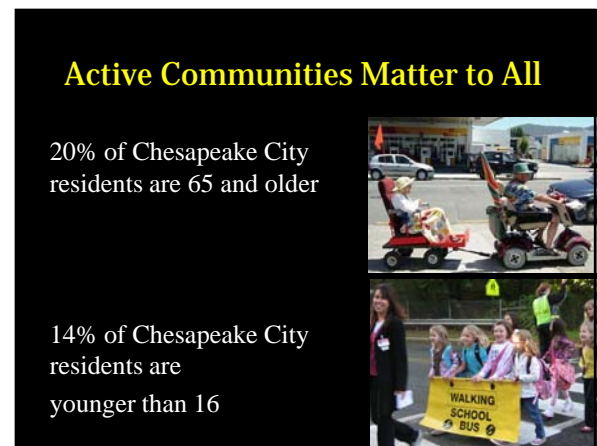
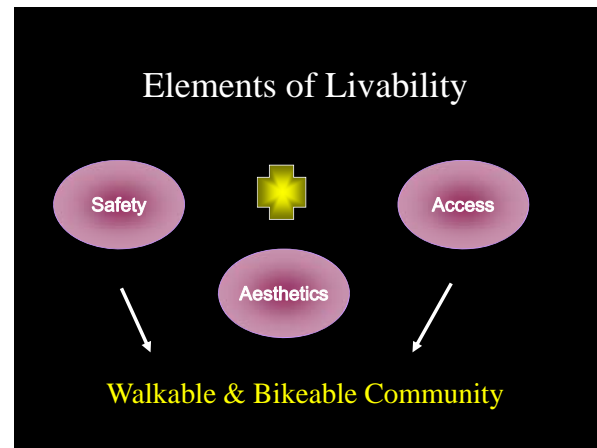
I. Presentation



II. Walkabout

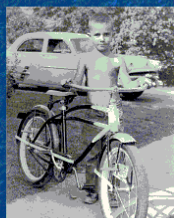


III. Plan of Action



## Health and the Built Environment

### The result?



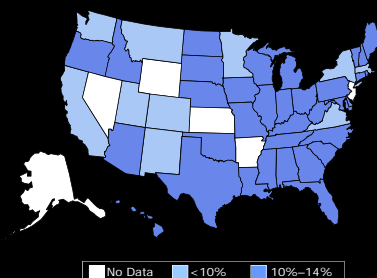
1955



Today



## Obesity Trends Among U.S. Adults: 1990

(\*BMI  $\geq 30$ , or ~ 30 lbs overweight for 5' 4" woman)

In only  
20  
years,  
we  
went  
from  
this...

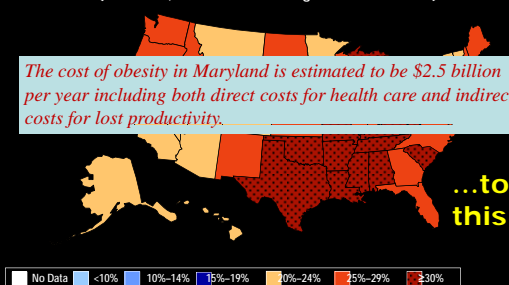
No Data <10% 10%–14%

(Behavioral Risk Factor Surveillance System, CDC, 2004)

## Obesity Trends Among U.S. Adults: 2010

(\*BMI  $\geq 30$ , or ~ 30 lbs overweight for 5' 4" woman)

The cost of obesity in Maryland is estimated to be \$2.5 billion per year including both direct costs for health care and indirect costs for lost productivity.



...to  
this

No Data <10% 10%–14% 15%–19% 20%–24% 25%–29%  $\geq 30\%$

(Behavioral Risk Factor Surveillance System, CDC, 2010)

## Health Benefits of Walking

- **3 hrs/wk** of brisk walking (3mph) reduced heart disease risk in women by **35-40%**
- Older adults who walked at least 4 hrs/week were **31% less likely** to be hospitalized for heart disease or stroke.
- Women who walked at least 1 hr/wk reduced risk of heart disease **by 50%**. (amount more important than pace)

## Benefits of Walkable Communities

- Less traffic, pollution & noise
- Better sense of community
- Less crime – “Eyes on the street”
- Good for business
- Affordable travel choices for all--kids, seniors, people with disabilities, people w/out cars
- Healthy communities



People want a safe place to live



I. Getting Along the Streets  
Sidewalks and bike routes



What's wrong with this picture?



What's wrong with this picture?



What's wrong with this picture?

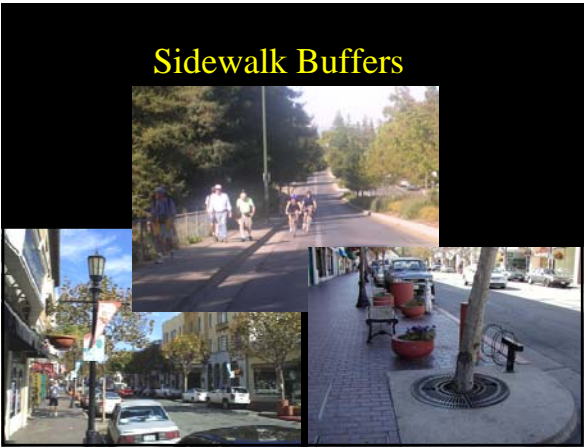
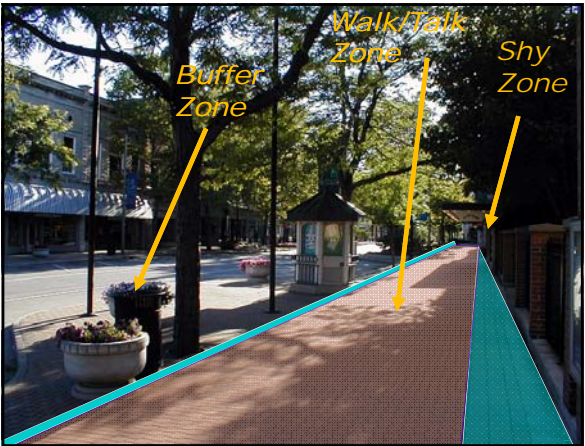


What's wrong with this picture?



What's wrong with this picture?

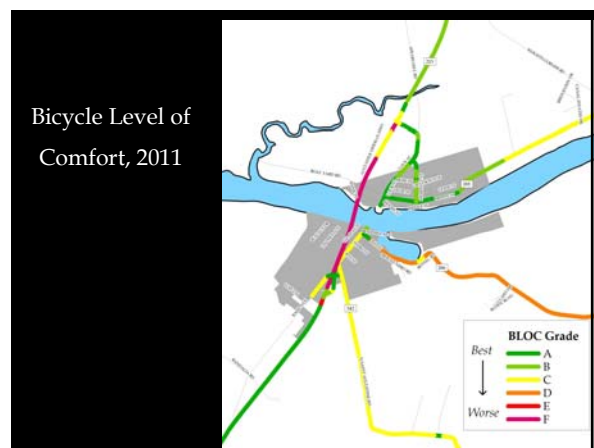
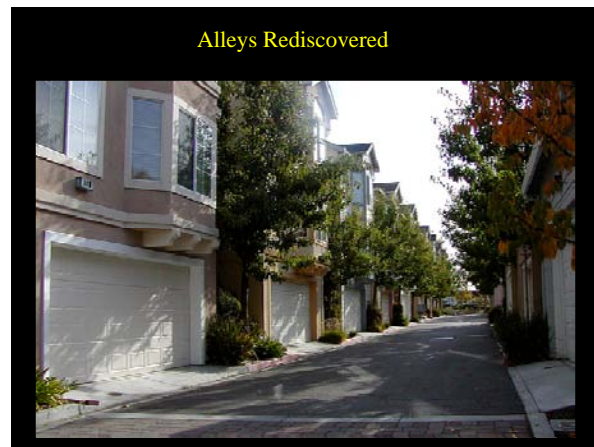
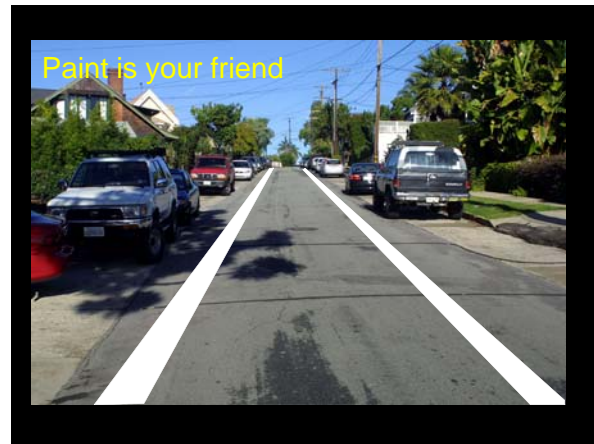














What's  
wrong with  
this picture?



Paths – 8' to 14' wide, 5' setback



Formal, paved or  
all-weather path



Neighborhood  
initiated, informal  
path

### Sidewalk/bike lane issues

- Missing / damaged sidewalk or bike route
- Uneven/sloping walkway
- Sidewalk blocked
- Driveways
- No bike lane or too narrow/wide
- Network of paths for off-road trips

### 2. Getting Across the Street Intersections & Crosswalks





What's wrong with this picture?



What's wrong with this picture?

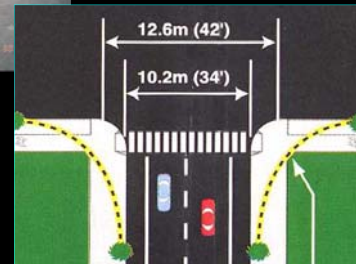


What's wrong with this picture?



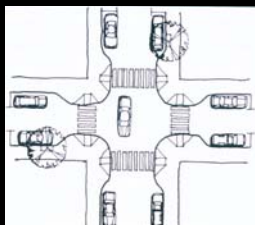
A Tight Curb Radius Reduces Turning Speed

Pedestrian Exposure Time is Reduced



Curb Extensions

Curb Bulbs Reduce the Crossing Distance

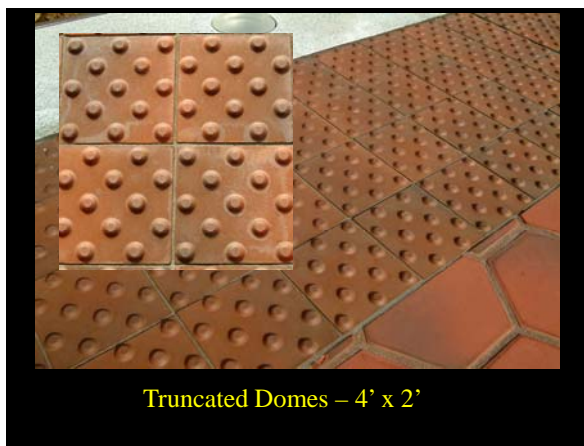


Maximum Width of a Curb Bulb: Six Feet

Curb Bulbs Improve Sight Distance







School crossing signs: color increases visibility



What the pedestrian sees



What the driver sees

Supplement textured crosswalks with white lines to increase visibility



Textured crosswalks – Michael Ronkin  
Designing Streets for Pedestrians and Bicyclists 64

Lower maintenance crosswalk



High-visibility crosswalk



Rectangular  
Rapid Flash  
Beacons



## High-visibility crosswalk



Pedestrian flags

## High-visibility crosswalk



In-street yield signs

## Crossing issues

- Broken or missing pedestrian ramps
  - ◆ Construct/restore ADA accessible ramps
- Faded and hard to see markings
  - ◆ Remark crosswalks/stopbars
- Turning vehicles failing to yield
  - ◆ Improve signs and pavement marking
- Poor draining or ponding in crosswalks
  - ◆ Drainage improvements

## 3. Aesthetics and Beyond



What's wrong with this picture?

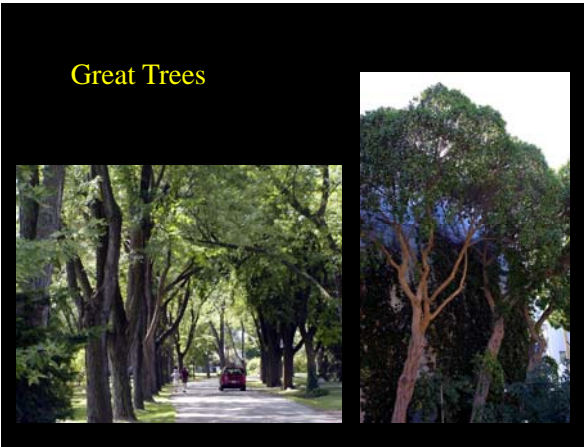
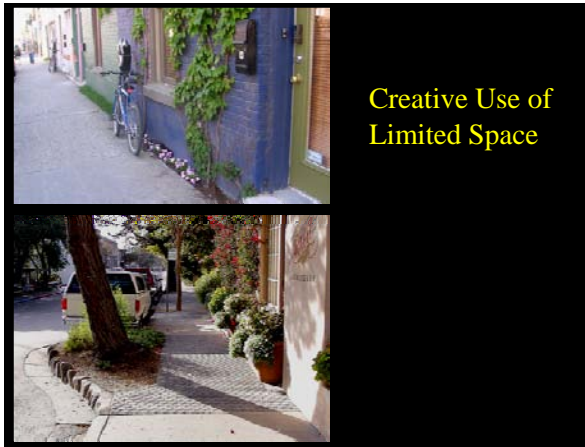


## Creature Comforts

- Bathrooms
- Places to Sit
- Lighting
- Public Art
- Trash Receptacles
- Newspaper Boxes
- Maps/direction









Functional Art



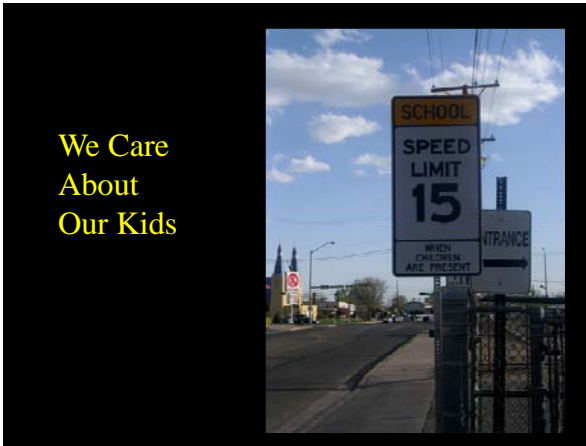
Fun Art



Public Private Partnerships

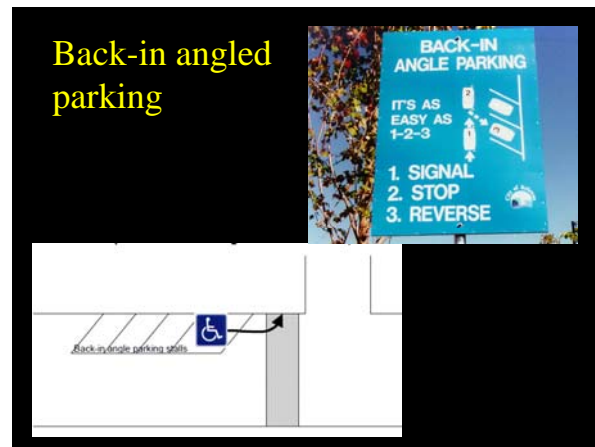


Safe Routes to School

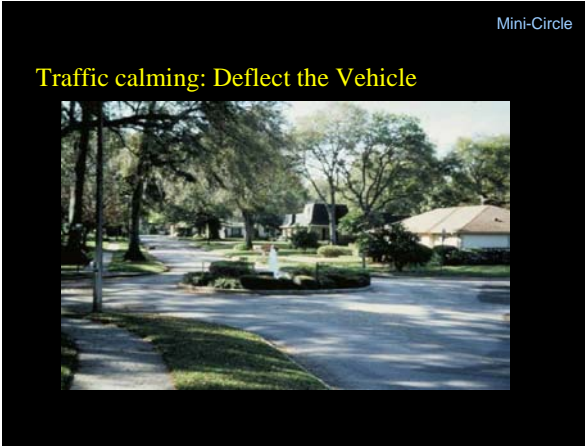
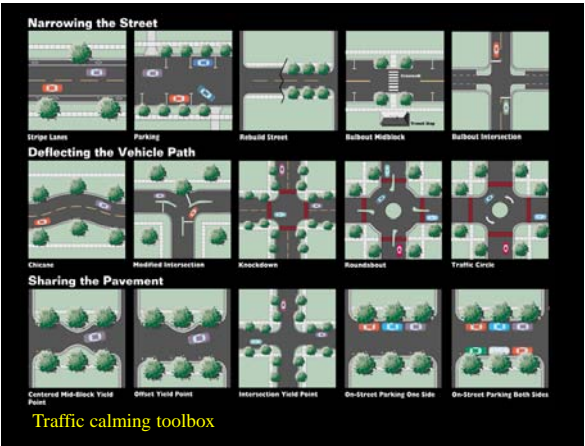
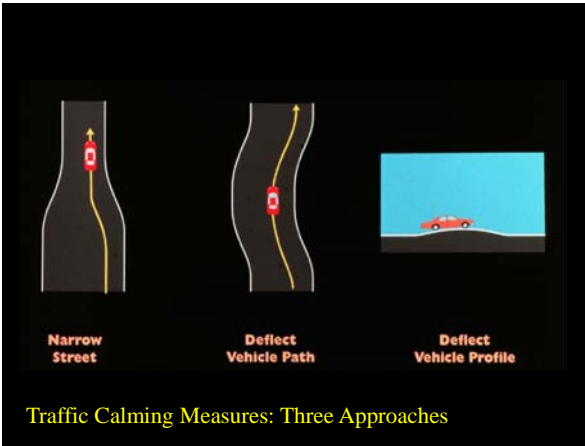


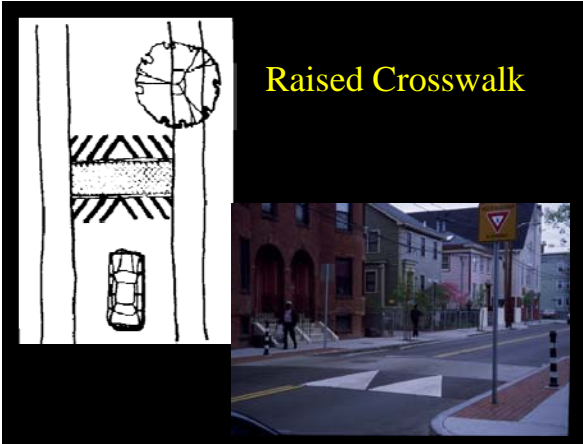
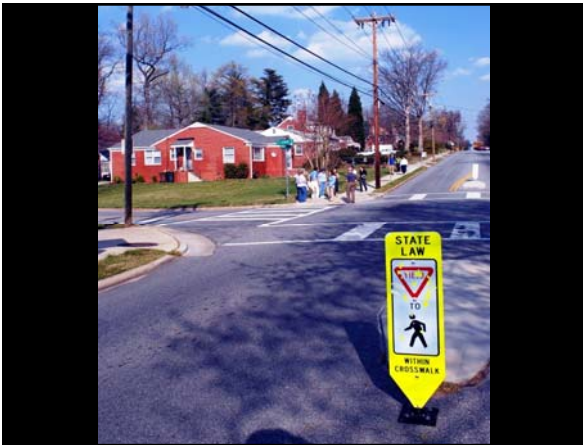
We Care About Our Kids

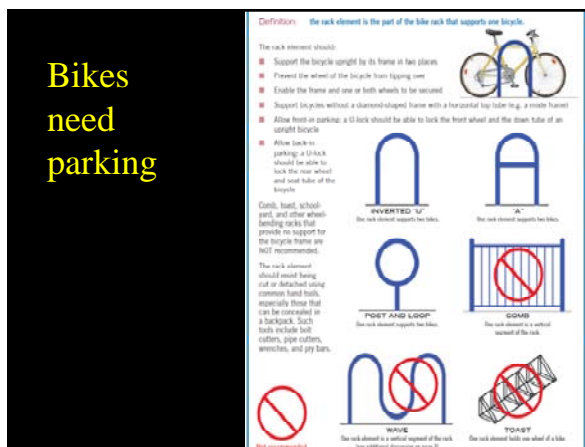
















**Now lets get walking!**

## Thank You

- [www.wilmapco.org/walkable](http://www.wilmapco.org/walkable)
- Heather Dunigan  
302.737.6205 ext. 118  
[hdunigan@wilmapco.org](mailto:hdunigan@wilmapco.org)

# BEYOND THE WALKABLE COMMUNITY WORKSHOP: NEXT STEPS TO MAKE IT COUNT



A WILMAPCO Walkable Community Workshop is an important step in recognizing the need for walkability in your neighborhood. Yet, a workshop alone will not be enough to transform your community into a pedestrian-friendly environment overnight. To spur action, the next step involves creating a greater level of public awareness that increased walkability improves non-motorized safety, physical fitness, social interaction, and overall quality of life. The majority of action required is at the local level. Getting the results your community wants will take time, but is well worth the effort.

**Here's what you can do after your community's walkable workshop to build interest, momentum and get desirable results:**



## Be Active

- ❑ Share the report and brief neighbors, community leaders, and other stakeholders who could not attend the walkable workshop.
- ❑ Identify community and individual actions that can help move your community in the right direction towards implementation.
- ❑ Use your community's report as a resource. It includes contact information for agencies and individuals who can help.



## Get Involved

- ❑ Take small steps towards accommodating safe walking and biking, such as promoting safe crossing and cycling practices.
- ❑ Partner with local pedestrian and bicycle groups on events that promote safety and accessibility for non-motorized transportation.
- ❑ Advocate for necessary policy changes that support safe and walkable communities.
- ❑ Seek out ways to support changes in the way your community is planned and designed to ensure barriers to walkability are removed and new ones are not created.
- ❑ Work with your municipality to include provisions for non-motorized facilities in the transportation element of the Comprehensive Plan.



## Find Support

- ❑ Contact WILMAPCO staff for further technical assistance and support.
- ❑ Attend City or Town Council meetings to express interest in having more pedestrian and bicycle facilities and improvements to existing facilities.
- ❑ Contact your Legislators to address specific non-motorized concerns in your area.
- ❑ Develop support at your neighborhood level with groups such as civic associations and PTA's to assist in advocacy activities and implementation.
- ❑ Get the media involved in bringing awareness to the problems and highlighting solutions. Be specific about the issues and use a variety of communication strategies.



# BEYOND THE WALKABLE COMMUNITY WORKSHOP: IMPLEMENTATION STRATEGIES



Together community members and partner agencies can take part in necessary activities to improve the pedestrian and bicycle environment. Strategic actions, both large and small, will help your community evolve over time to become more walkable and livable. And the more comprehensive the approach, the more likely your community will achieve long-term success.

## Strategies and Solutions

**Plans and Policies**—Develop a plan that conveys the vision for your community and include prioritized short- and long-term goals based on greatest need and most benefits. For example, your community can create a Pedestrian Safety Plan which includes specific measures that reduce risks for pedestrians. Evaluate policies that support walkability. New policies or changes to existing policies may be necessary before implementation can begin.

**Design and Engineering**—Explore various designs that accommodate safe multimodal facilities. Consider appropriate designs that will control vehicle speeds where necessary, such as traffic calming techniques. Other measures may include reducing roadway width, incorporating raised medians, sidewalks, curb ramps, and other pedestrian-centered facilities. Better design practices encourage walking and bicycling.

**Educate Drivers and Pedestrians**—Education and awareness are tools that reshape the travel behavior of pedestrians, bicyclists, and motorists. Create education and outreach materials to raise awareness and encourage proper use of roadway and non-motorized facilities. Educational programs can be tailored to various age groups. Information should be disseminated in many forms such as flyers, non-motorized facility maps, public meetings, and forums.

**Improve Access to Transit**—Since transit users are pedestrians, walkability should include access to key destinations and to transit facilities. It is important that transit stops and their surrounding areas be safe and accessible for transit users. This will protect transit riders as well as providing support for and encouraging transit use.

**Promote Physical Activity**—Studies show that physical activity is increased with more walkable places. A walkable place gives people choices to walk along sidewalks in good condition and greenways, or bicycle along safe bike routes. Walking and biking can be promoted through plans and policies, community events, and school programs.

**Seek Funding and Build Support**—Finding funding to support and sustain necessary transportation improvements is often challenging. Moreover, financial constraints make project prioritization a key step. To help narrow down priorities, projects with an identified local and/or private funding match should take the lead in the development process. And for a greater advantage in implementation, consider tying non-motorized improvements into roadway projects that are already planned.





# BEYOND THE WALKABLE COMMUNITY WORKSHOP: FUNDING RESOURCES



Pursuing necessary funding for project implementation is perhaps the most important step to make your community vision materialize. Since funding mechanisms to implement projects can vary try, not to limit your potential projects to federal and state resources. In addition to traditional funding streams, seek out grants, private sponsorships, and think of creative funding alternatives.



## Funding Resources for Implementation

**Safe Routes to School**—The SRTS Program provides funding for a wide variety of programs and projects, such as creating safer street crossings and establishing programs that encourage children and their parents to walk and bicycle to school safely. This program requires local community support.

**Transportation Enhancements**—The TE Program provides funding opportunities to help expand transportation choices through activities related to surface transportation. Eligible projects include pedestrian and bicycle infrastructure, safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation. A local match is required.

**Community Transportation Fund**—This fund is designated by individual legislators for specific transportation related projects. This fund allows individual legislators to address small transportation projects that may not meet department priorities. Commonly funded projects through this grant allocation are new sidewalks and repairs, curb-cuts, repaving, and drainage repairs.

**Congestion Mitigation and Air Quality**—The CMAQ Program funds projects that improve air quality and reduce congestion. Eligible bicycle and pedestrian projects include paths, bike racks, support and other facilities that reduce vehicle trips.

**Municipal Funding**—Municipalities often set aside funding for small non-motorized projects such as sidewalk and curb repairs, bicycle lanes striping, or pedestrian signals. For instance, Wilmington has set aside some funding for sidewalk repairs throughout the city.

**Private Funding**—Private sector funding sources can include local non-profit organizations, foundations that provide community grants, land trusts that have set aside funding for land to purchase trails, and large corporations and businesses. In addition, a public-private partnership can be established to leverage limited public funding.

**Community Fundraising**—Another approach is to find creative ways to break a large project into small pieces that can be "purchased" by the public through community fundraising. For instance, a fundraiser can be held to raise cash donations to match Transportation Enhancements funds.

### Creative Funding Examples

Portland, OR—Community members sold bricks from historic areas to fund local sidewalk projects. The fundraiser had a great publicity and community support. Donor names were engraved in each brick and proceeds purchased basic sidewalk construction materials.

Ashtabula, OH—The local trail organization raised one-third of the funding needed to buy the land for a trail by forming a "300 Club." Three hundred acres were needed for the trail and they set a goal of finding 300 residents who would finance one acre each. The land price was \$400 an acre, and they found just over 100 people to buy an honorary acre, raising over \$40,000.

Colorado Springs, CO—The Rock Island Rail-Trail is being partly funded by the Rustic Hills Improvement Association comprised of a group of local home-owners living adjacent to the trail. Ten miles of the trail was cleared of railroad ties by a local boy scout troop.

## BEYOND THE WALKABLE COMMUNITY WORKSHOP: POST-WORKSHOP EFFORTS



### The WILMAPCO Region

**Edgemoor Gardens, DE**—Following the workshop, residents used their walkable workshop report to evaluate the best means for implementation. Together, residents teamed up to find alternative resources to fund needed improvements. The community applied for and received a private grant that provided funding for small scale pedestrian improvements at several key locations.



**Southbridge, DE**—After reviewing their report, residents requested that WILMAPCO develop a neighborhood-level prioritization process to rank the proposed improvements. Gathering community feedback on the technical scoring led to local support to begin implementation. Many of the recommendations are being addressed through the Safe Routes to School Program. Scheduled to launch soon, the program will provide \$375,000 in funding to repair pedestrian facilities near the community's elementary school. A Transportation Enhancements project was also initiated to address the neighborhood's more pressing traffic-calming and streetscape issues.

**Northeast, MD**—During the walking audit, workshop participants generated a list of potential solutions to address a narrow bridge overpass that makes travel for pedestrians and bicyclists unsafe. Those solutions were presented before the Town Council, planners, and developers, who decided on one of the alternatives suggested.

**Perryville, MD**—During the workshop, the Town of Perryville requested WILMAPCO's assistance in creating a greenway plan. WILMAPCO is currently working with the Town to create the Perryville Master Trail Plan which will connect the local library, school, and senior center.

### Other Regions

**Dayton, OH**—After taking inventory of barriers to non-motorized travel, residents formed a "Walk! Downtown Committee" that meets monthly to discuss activities to encourage residents to live, work, and play downtown. The group also focuses on painting crosswalks at intersections, adding public art on the sidewalks, and adding artistic displays to vacant storefronts.



**Glen Cove, NY**—The Mayor of Glen Cove, who attended the workshop, decided the City should take a proactive approach towards traffic safety and non-motorized issues. Along a major street known for speeding vehicles, the City has planned to install traffic restrictors (humps) made of recycled tire pavers to give the appearance of a raised crosswalk. They have also re-striped crosswalks area-wide, improved pedestrian-scale lighting, and applied for two grants to fund a roundabout in the central business district and traffic calming in a neighborhood that is slighted by extreme cut-through traffic.

#### For more information, go to:

[www.activelivingresources.org](http://www.activelivingresources.org) • [www.americabikes.org](http://www.americabikes.org) • [www.americawalks.org](http://www.americawalks.org) • [www.apbp.org](http://www.apbp.org) • [www.bhsi.org](http://www.bhsi.org)  
[www.bicyclecoalition.org/member/delaware](http://www.bicyclecoalition.org/member/delaware) • [www.bicyclinginfo.org](http://www.bicyclinginfo.org) • [www.bikeleague.org](http://www.bikeleague.org) • [www.bikesbelong.org](http://www.bikesbelong.org)  
[www.bikewalk.org](http://www.bikewalk.org) • [www.deldot.gov/information/community\\_programs\\_and\\_services/bike](http://www.deldot.gov/information/community_programs_and_services/bike)  
[www.fhwa.dot.gov/environment/bikeped/index.htm](http://www.fhwa.dot.gov/environment/bikeped/index.htm) • [www.fhwa.dot.gov/environment/te/](http://www.fhwa.dot.gov/environment/te/) • [www.ibike.org](http://www.ibike.org)  
[www.pedbikeimages.org](http://www.pedbikeimages.org) • [www.pedestrian.org](http://www.pedestrian.org) • [www.railtrails.org](http://www.railtrails.org) • [www.safety.fhwa.dot.gov/saferoutes](http://www.safety.fhwa.dot.gov/saferoutes)  
[www.transact.org](http://www.transact.org) • [www.walkinginfo.org](http://www.walkinginfo.org) • [www.walktoschool-usa.org](http://www.walktoschool-usa.org) • [www.wilmapco.org/walk](http://www.wilmapco.org/walk)