

FINAL REPORT

September 26, 2014



HATS REGIONAL Bicycle and Pedestrian Study

prepared for
Harrisburg Area Transportation Study (HATS)

in cooperation with
Pennsylvania Department of Transportation

prepared by
Gannett Fleming, Inc.



pennsylvania
DEPARTMENT OF TRANSPORTATION



**Tri-County Regional
Planning Commission**
*Our mission is to foster the long-term livability and
viability of our communities, counties and region.*



HATS
Regional Bicycle & Pedestrian Study

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Executive Summary

The Time is Right to Overcome Obstacles

The time is right to make a leap forward in how we plan and implement projects that make it safer and more convenient to travel on foot and by bicycle.

- **Popular Demand:** More people—especially young people—are seeking out walkable, bikeable neighborhoods and communities. They value sustainability, quality of life, community, air quality, cost-effective transportation, and fun outdoor exercise more than hours spent in a car—in fact, vehicle-miles traveled is decreasing. There is substantial public interest in and support for improving non-motorized transportation and recreation options, and an associated economic benefit. For example, buyer demand increases home values in walkable neighborhoods, and trails and other recreational destinations anchor economic opportunity.
- **Public Health:** Communities that encourage active transportation help residents build more exercise into their daily lives—a literal first step toward addressing adult and childhood obesity and the related costly health issues. With obesity threatening the health of about one-third of Pennsylvania’s adults, making it feasible and pleasant to walk or ride a bike directly supports public health goals. Transportation is getting considerable attention by public health organizations and officials.
- **Funding Climate:** Nationally, MAP-21, the current federal transportation legislation, allows more flexibility in funding bicycle and pedestrian projects (although overall non-motorized funding is lower than in previous years). In Pennsylvania, Act 89 of 2013 created a multimodal fund dedicated to projects other than highways; a minimum of \$2 million will be directed to bicycle and pedestrian projects each year.





Although these conditions are promising, planning for bicyclists and pedestrians has been fragmented and inconsistent throughout the Greater Harrisburg region. There are many reasons—three counties and 103 municipalities all with separate decision-making powers; the physical barrier of the Susquehanna River; and a lack of communication and coordination among municipalities, advocacy groups, and non-profit organizations. Although good plans and projects have been developed in various pockets of our three-county area, we could

accomplish more with a cohesive regional vision backed by strategic and innovative regional action and state-level support.

Regional Communication and Collaboration is Key

Given the above challenges and opportunities, the Harrisburg Area Transportation Study (HATS) launched this Regional Bicycle and Pedestrian Study as part of its 2040 Regional Transportation Plan. HATS is the federally designated metropolitan planning organization for Dauphin, Cumberland, and Perry counties, and is responsible for regional transportation planning. While bicycle and pedestrian travel has long been considered as part of multimodal long-range transportation planning efforts, this is the first standalone HATS study dedicated to bicycle and pedestrian issues.

The aim was to build communication and collaboration through the study process, identify and analyze broad issues and opportunities for the region related to bicyclists and pedestrians, and together develop a cohesive direction and specific steps to help align efforts of the region's communities and stakeholders.

Study Methodology and Key Findings

The study considered where we are now, where we want to be in terms of the regional bicycle and pedestrian environment, and how we can get there. The study process included the following:

- **Advisory committee** – Represented a broad range of stakeholders in the arena of bicycle and pedestrian transportation and oversaw the study.
- **Public outreach** – Included a public survey, survey of municipal officials, interviews with stakeholders, and three public open houses—one in each county.
- **Current conditions** – The team analyzed relevant state and federal laws and design standards, recent studies, existing types of bicycle and pedestrian infrastructure and types of users, data on bicycle and pedestrian travel, safety statistics, and other resources.



The top institutional challenges identified include:

- **Transition toward multimodal focus:** Although there has been a shift in recent years toward a more comprehensive consideration of all modes, transportation planning and project development at all levels is often focused on highway improvements for cars and trucks. This can limit meaningful consideration of non-motorized modes. Ultimately, bicycle and pedestrian elements will routinely be integrated with all or most transportation projects. Our region desires to continue—and accelerate—this journey with PennDOT and others.
- **Reliance on volunteers:** Coordination and advocacy for bicycle and pedestrian improvements in the region has traditionally been an all-volunteer effort, limiting reach and effectiveness. Volunteer efforts should continue and expand, bolstered by more attention and involvement by transportation agencies.
- **Leadership opportunity:** Consistent, focused leadership at the state, regional, and local levels is needed to provide guidance and champion plans. Filling the PennDOT Bicycle and Pedestrian Coordinator position is an essential first step.

At the individual project level, common infrastructure and safety shortcomings include:

- Disconnected sidewalks and trails
- Busy intersections that are difficult to cross on foot
- No bicycle lanes and inadequate shoulders
- Poor lighting
- Poor signage to bicycle and pedestrian routes
- Disregard of traffic laws by motorists





Desired Future and How to Get There

After establishing current conditions and needs, the study team and advisory committee worked to define broad priorities for the HATS region related to bicycles and pedestrians, expressed as an overarching vision with supporting goals and prioritized strategic actions. The six priority goals described below provide the springboard for a comprehensive and cohesive approach to improving bicycle and pedestrian transportation for the Harrisburg region. That in turn will enhance mobility, quality of life and potentially economic development.

VISION

The Tri-County region steadily improves its policies, infrastructure, and programs to promote bicycle and pedestrian movement, connectivity, and safety. This systematic approach enables more people to bike and walk more often for transportation, recreation, and wellness.

Goal #1 – PLANNING: Establish methods to identify and prioritize bicycle and pedestrian improvements. Leverage all available funding and non-financial resources to complete identified improvements.

- Continue the Regional Connections grant program to promote regional multimodal connectivity.
- Engage municipal partners to undertake sub-regional or corridor studies of bicycling and walking facilities and needs.
- Create a comprehensive inventory of all identified bicycle and pedestrian improvements that can be considered for available funding programs.
- Establish a process to prioritize bicycle and pedestrian projects for available funding.

Goal #2 – INFRASTRUCTURE: Improve the region’s bicycle and pedestrian network connecting people, communities, and destinations for both transportation and recreation.

- Advocate for a staff position at HATS dedicated to bicycle and pedestrian issues that can review projects prior to inclusion on the TIP, drive implementation of the goals and actions in this study, and act as the primary bicycle and pedestrian resource for the region.
- Ensure that the PennDOT Bicycle and Pedestrian Checklist is used on all HATS TIP projects.
- Assist the PA Pedalcycle and Pedestrian Advisory Committee in updating the PennDOT Bicycle and Pedestrian Checklist by providing input and review.
- Consider creating a HATS-specific bicycle and pedestrian checklist that includes a diverse range of criteria, including land use and economic development.
- Promote the use of the updated bicycle and pedestrian checklist by municipalities for their local projects. Establish a simple program to recognize those that do.



- Partner with PennDOT and municipalities to review resurfacing and maintenance projects to identify potential restriping, shoulder improvements, and other low-cost options that provide greater bicycle and pedestrian accommodation.
- Conduct a brief survey to understand what type of assistance would most benefit municipalities in developing bicycle and pedestrian infrastructure.

Goal #3 – CULTURE: Implement education, enforcement, and encouragement initiatives targeting multiple audiences to foster a supportive climate for bicycling and walking.

- Continue planning and partnership discussions regarding the creation of a multi-county regional bicycle sharing program.
- Create a network of organizations to partner with and support municipalities in pursuit of the Bicycle Friendly Community designation and Walk Friendly Community designation.
- Create a map of the best bike routes in Harrisburg City and surrounding areas based on information from actual users.
- Expand the use of free bicycle corral storage at special events to all events in the region. Combine bike corrals with off-site parking as a traffic and parking management program.

Goal #4 – SAFETY: Reduce crashes involving bicyclists and walkers through infrastructure improvements and educational efforts.

- Partner with the Pennsylvania Department of Education, local driver education teachers, statewide driver education associations, AAA, AARP, and other organizations offering driver training to include bicycle and pedestrian safety messages in driver education training.
- Conduct an ongoing analysis of crash data to identify trends and problem areas.
- Seek Highway Safety funds from PennDOT to develop and implement bicycle and pedestrian safety campaigns. Seek partnerships with media organizations to publicize safety messages.



**Goal #5 – HEALTH: Partner with health-related organizations and communities to increase bicycling and walking for wellness and disease prevention.**

- Recruit healthcare personnel from hospitals, health insurance companies, public health agencies, and related organizations to participate in MPO planning activities.
- Participate with healthcare organizations such as Pinnacle Health and Holy Spirit Health System on their Community Healthcare Plans.
- Explore collaboration opportunities with the Pennsylvania Department of Health, Bureau of Health Promotion and Risk Reduction.

Goal #6 – PARTNERSHIPS: Create cooperative partnerships between public, private, and non-profit organizations to coordinate efforts for greater impact.

- Establish ongoing public outreach methods that help identify issues and opportunities, including a basic speaker's bureau package to make presentations and share information. Integrate outreach with media partnerships action discussed under the Safety goal.
- Expand existing partnership with the Pennsylvania Department of Conservation and Natural Resources (DCNR) for training opportunities.
- Routinely identify potential partners by sectors and follow up with outreach to determine mutually beneficial projects.

From Study to Real Improvements

The study team developed performance measures and an action tracker to designate responsibility and monitor progress in achieving goals and advancing actions. The HATS Bicycle and Pedestrian Task Force will begin actively working to implement actions in Fall 2014. Working toward the goals of this study will help create a regional environment in which individual projects can be successful. These projects—such as improving crosswalks, connecting trails, or building “complete streets” with wider sidewalks and bicycle lanes—will be identified and advanced locally, through plans focused on smaller geographical areas such as corridors, municipalities, or portions of our three-county region.

Developing this plan was both inspiring and challenging. Implementation will be even more challenging, yet rewarding in tangible ways. The study process established a foundation of positive collaboration, and this plan already has many motivated supporters eager to take an active role in its ambitious implementation.

Central Pennsylvania has incredible assets such as the Susquehanna River, small communities, short commutes, academic institutions, and a bevy of cultural amenities. We have the opportunity to make further meaningful improvements in the livability, sustainability, and health and safety of our region by improving bicycle and pedestrian access and connectivity.

How will you help advance these goals?



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List of Appendices

The following are provided electronically on CD:

Advisory Committee List

May 2014 Open House Materials and Input

Public Survey Results

Municipal Survey Results



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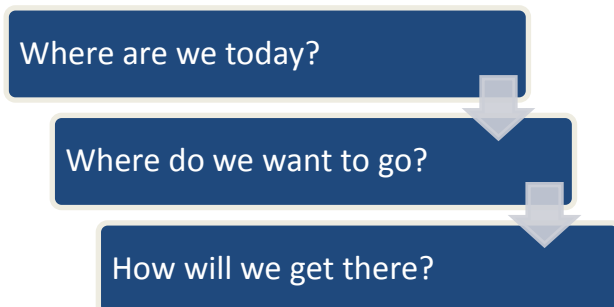
Introduction and Background

The Harrisburg Area Transportation Study (HATS) is the federally designated Metropolitan Planning Organization (MPO) for Dauphin, Cumberland, and Perry counties. Federal regulations require transportation planning activities to be “Continuing, Cooperative, and Comprehensive.” In other words, it must be ongoing, exploring both short- term and long-term trends and goals. It must involve many interested parties through various participation processes. Finally, it must include all modes of travel and consider related issues, such as land use and economic development planning. As part of the Comprehensive aspect of these requirements, HATS undertook this regional study of bicycle and pedestrian modes. The final bicycle and pedestrian study will serve as a stand-alone study, but is also incorporated into the 2040 HATS Regional Transportation Plan, which is the long-range transportation planning document for Perry, Cumberland, and Dauphin Counties.

This study considered three overarching questions:

- Where are we today?
- Where do we want to go?
- How will we get there?

These questions served as a high-level framework for the planning process and are reflected in the organization of this report.



As a high-level study encompassing three counties, this document aims to identify broad issues and opportunities for the region related to bicyclists and pedestrians. It provides a cohesive direction and specific steps to help align efforts of the region’s myriad communities and stakeholders. The study was not designed to produce a list of specific infrastructure improvement projects, although problem areas and improvement ideas were requested from study participants and their responses have been recorded. They will be used to inform future planning and project identification efforts in smaller geographical areas, such as corridors, municipalities, or small regions. The transition from vision to real-world improvements is discussed in Part 3 – Tactical Approach: How Will We Get There?

Plan Development Process

This study was overseen by an advisory committee that represented a broad range of stakeholders in the arena of bicycle and pedestrian transportation. The committee met six times to review study progress and provide input. The perspectives of committee members helped ensure the study considered the full range of bicycle and pedestrian issues and opportunities in the three-county region. The advisory committee’s meeting dates and primary objective for each meeting are noted below.



- 4/30/2013 – Kickoff meeting
- 8/27/2013 – Review Existing Conditions report
- 11/14/2013– Establish Future Priorities for improving bicycling and walking
- 1/14/2014 – Begin crafting the Vision, Goals, and Actions for the study
- 4/21/2014 – Finalize the Vision, Goals, and Actions
- 8/7/2014 – Review the Final Report

A series of initial public outreach activities was undertaken to establish the current state and use of bicycle and pedestrian infrastructure, the current level of bicycle and pedestrian activity, and the perception and opinions on bicycling and walking in general within the study area. These activities were launched in Summer 2013 and are noted below with the span of their activity.

- Public survey, July-October 2013
- Municipal survey, July-August 2013
- Interviews, July-August, 2013

When the majority of the work on the HATS Bicycle and Pedestrian Study was complete, three public open houses were held—one in each county of the study area. At these open houses, boards and maps were displayed that summarized the study process and data gathered to date. Attendees were invited to mark up maps of the region to help identify problems on the current bicycle and pedestrian network. A questionnaire was used to solicit additional input from attendees. The open house meetings were held as noted below.

- 5/12/2014 – Dauphin County, Lower Paxton Township Building
- 5/15/2014 – Perry County, County Commissioner’s Conference Room
- 5/22/2014 – Cumberland County, Cumberland County Service Center

Public input from the open house meetings helped shape this final report, which was reviewed by the advisory committee and adopted by HATS on September 26, 2014, as part of the Regional Transportation Plan.





Why Conduct a Study of Only Bicycle and Pedestrian Issues?

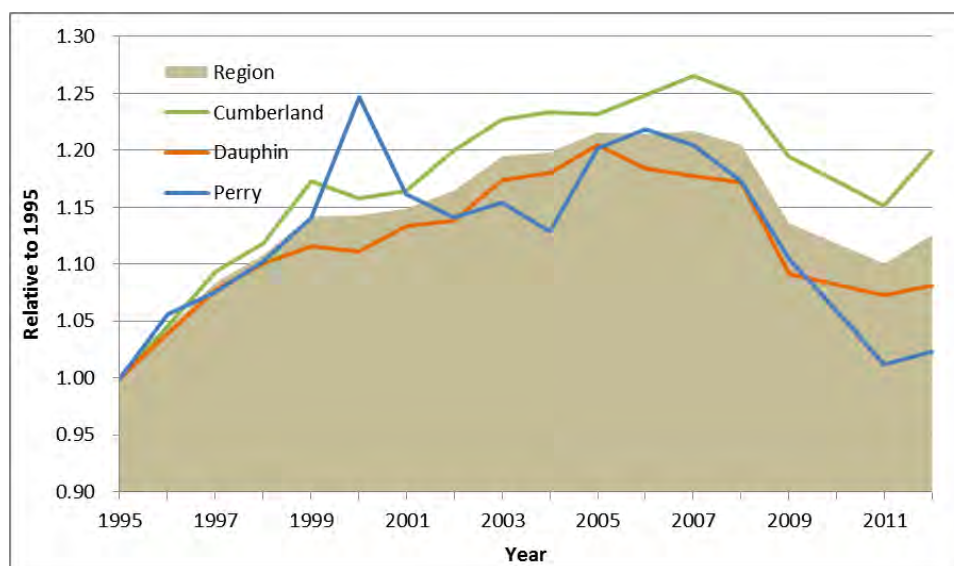
In the past, bicyclists and pedestrians have been discussed in the HATS Regional Transportation Plan as part of the overall transportation system. In an effort to provide greater detail on bicycle and pedestrian issues, HATS elected to examine these issues in a separate study which will be summarized and incorporated into the Regional Transportation Plan's 2014 update.

Other factors also point to the need to look at bicycling and walking in greater detail. Some of these factors are national trends affecting the region, while others are related to the unique role that Tri-County Regional Planning Commission (Tri-County) and HATS play in offering coordinated planning services for the entire region of 103 municipalities. All trends and issues discussed below offer additional justification for conducting an in-depth look at how to best plan for and accommodate bicyclists and pedestrians in our region.

Ongoing Decline in VMT

For decades transportation planners have assumed a steady increase in vehicle miles traveled (VMT) in developing near- and long-term travel demand forecasts. As a result of the Great Recession and increasing fuel prices, VMT leveled off locally between 2005 and 2007 and began to decrease in subsequent years. In fact, Perry County VMT has decreased to levels last seen in 1995—18 years ago! In 2012, VMT began to increase in all counties, although it will take several more years to know the true strength of this trend.

VMT Increase Relative to 1995



Nationally, however, a report from the U.S. Public Interest Research Group (U.S. PIRG) Education Fund finds that the slowdown in driving is likely to continue. The report finds the Millennial generation is



leading this change. While Baby Boomers continue to commute with the same vehicle patterns as in past years, 16- to 34-year-olds drove 23 percent fewer miles on average in 2009 than in 2001—the greatest decline in driving of any age group. In addition, “Millennials are more likely to live in urban and walkable neighborhoods and are more open to non-driving forms of transportation”.¹

Millennials (16- to 34-year-olds) are driving fewer miles, and are more likely to live in urban and walkable neighborhoods and be more open to non-driving forms of transportation.

Public Health

Because bicycling and walking are forms of active transportation, a strong bicycle and pedestrian transportation system can have positive impacts on the health of the population it serves.

In 2012, more than 29 percent of Pennsylvania’s adults were considered obese,² and this statistic has been worsening for several decades. Researchers at the Robert Wood Johnson Foundation³ have been studying the effects of obesity and have concluded:

- Public transit users walk an average of 19 minutes daily getting to and from public transportation.
- Countries with lower rates of obesity tend to have higher rates of commuters who walk or bike to work.
- The risk of obesity increases 6 percent with every additional hour spent in the car, and decreases 5 percent with every kilometer walked on a regular basis.

Sustainability

Pollution and climate change are an ongoing concern, which have led to the search for incorporating sustainability into our lives. Environmental sustainability refers to minimizing harm to the environment and reducing depletion of natural resources, thereby supporting long-term ecological balance. Travel by non-motorized modes instead of a single occupant vehicle for daily commuting, special trips, or recreation is a highly sustainable choice, eliminating the fuel consumption and emissions that otherwise would be associated with that trip.

¹ <http://uspirtg.org/news/usp/new-report-reduction-driving-likely-continue>

² Centers for Disease Control and Prevention; <http://www.cdc.gov/obesity/data/adult.html>

³ Robert Wood Johnson Foundation; http://www.rwjf.org/en/blogs/new-public-health/2012/10/better_transportatio.html



Economic Development

Walkable neighborhoods and communities—those where it is feasible and pleasant to walk from residences to a range of nearby destinations—are desirable to many home buyers. Walkability, as well as the presence of trails within and between neighborhoods, is associated with increased demand and therefore increased home values.⁴ Additionally, destination trails have had very positive impacts on local and regional economies. The York Heritage Rail Trail County Park 2012 User Survey and Economic Impact Study estimated the trail had an annual economic impact of approximately \$2.5 million on the local economy. Several business establishments along the trail derive a significant portion of their sales from trail users.⁵

Walkability and connectivity typically increase home values, and destination trails have positive economic impacts.

Changes in Funding for Bicycle and Pedestrian Infrastructure

MAP-21, the current federal transportation funding legislation, has reorganized funding for non-motorized transportation by consolidating several programs from the previous transportation funding legislation, SAFETEA-LU, into the newly formed Transportation Alternatives Program. While this change allows greater flexibility for funding bicycle and pedestrian projects, MAP-21 provides less funding overall than SAFETEA-LU.

In Pennsylvania, transportation funding reform has been a priority for several years, as options to close the gap between transportation needs and funding have been studied and debated. The passage of Act 89 in November 2013 was a major milestone toward this end. In addition to generating additional gas tax revenue, Act 89 created a multimodal fund dedicated to aviation, railroad, ports and waterways, bicycle, and pedestrian projects. A minimum of \$2 million will be directed to bicycle and pedestrian projects annually.

Addressing the Need for Regional Planning

Municipal Control of Land Use

In Pennsylvania, control of land use rests at the municipal level—townships, boroughs, and cities. In the Tri-County region, 103 separate municipalities control land use decisions, including off-road trail and

⁴ Walking the Walk: How Walkability Raises Home Values in U.S. cities
<http://atfiles.org/files/pdf/WalkingEconCEOsforCities.pdf>

⁵

<http://yorkcountypa.gov/images/pdf/Parks/2012%20hrtcp%20user%20survey%20%20economic%20impact%20analysis%20final%201-30-2013.pdf>



path development, sidewalk locations and maintenance, and local road design. Ongoing communication is therefore essential among regional planners and municipal officials and planners regarding bicycle and pedestrian issues. This context underscores the importance of efforts by Tri-County Regional Planning Commission and HATS to foster a regional dialogue on best practices for bicycle and pedestrian accommodation.



Crossroads and Connections

The Harrisburg area is a crossroads for Dauphin, Cumberland and Perry counties. The three counties converge near Harrisburg. In addition to this geographic convergence, the primary commute patterns converge into the capital city, reflecting the city's status as a major employment destination, especially for employees of the Commonwealth of Pennsylvania.

Connections between the counties and even between Harrisburg and its Cumberland County suburbs are complicated by the

Susquehanna River. This wide river limits connections to bridge crossings, therefore special attention is needed to ensure good connectivity for bicyclists and pedestrians. Regional planners have recognized this need and recently completed the Susquehanna Cross-River Connections Study. Its focus was to evaluate the Harrisburg area's four bridges over the Susquehanna, as well as connections on either side of the river, and develop recommendations for specific projects that will optimize safety and mobility for all modes. Bicycle and pedestrian safety and connectivity were a particular emphasis of the study.

Coordination of Planning Efforts

Planning for bicyclists and pedestrians has been fragmented and inconsistent throughout the region. Some municipalities and groups of municipalities have forged ahead with trail and greenway plans, bicycle routes, and sidewalk requirements for new developments, while other municipalities have not. On the advocacy side, there are several bicycle advocacy organizations and non-profit agencies that have similar goals, but their efforts to coordinate have been limited to date.

Collaborating through this study to articulate goals and objectives for bicycle and pedestrian accommodation in the region has established a framework that can focus the efforts of municipalities, advocacy organizations, and non-profits toward a shared vision. Building on the information sharing and communication encouraged by this study can help coordinate progress toward implementation.



Part 1 – Existing Conditions: Where Are We Today?





What Do People Have to Say About Bicycling and Walking?

An important part of any planning study is public outreach and data gathering. This study employed three principal outreach activities during the initial data collection phase: an online public survey, an online survey for municipal officials, and interviews with selected stakeholders. Each outreach effort and the results are discussed below.

Public Survey

An online survey was administered to gauge the thoughts of and solicit ideas from the general public in the region. A number of different e-mail lists from Tri-County and other organizations were used to inform the public about the survey. Additionally, Tri-County used its social media presence to advertise the survey. Information regarding the survey was also posted at libraries throughout the region.

A total of 1,064 respondents provided their experiences and thoughts on bicycle and pedestrian issues. Survey questions and summarized responses follow.

Questions

The survey requested the following input:

1. Zip code in which you live.
2. Do you currently walk or ride a bike on a regular basis?
3. If yes, do you walk/bike primarily for recreation or for transportation?
4. Are there any places along the routes that you regularly walk or bike that are unsafe or make you feel less safe than other places?
5. If yes, where are those locations and what are the safety issues?
6. Do you regularly ride the bus?
7. If yes, how do you usually get to the bus stop?
8. In general, how likely would you be to walk or bike more often if the following improvements were made?
 - Trails and paths that are separate from roadways
 - Wider shoulders on roadways
 - Bike lanes on roadways
 - Having shopping and employment destinations within walking/biking distance of your home
 - Providing crosswalks or improving existing crosswalks
 - Sidewalks
 - Pedestrian buttons at traffic signals

1,064 people in the region provided input via the public survey.



- Showers and changing facilities at your workplace
 - Group bike rides
 - Educational courses on safe biking
9. List any other improvements that would make you walk or bike more frequently.
 10. List any gaps in existing trails or routes in the region (Cumberland, Dauphin, and Perry counties) that make it unsafe or impossible to walk or bike. What is required to fill in those gaps?
 11. What is your favorite place to walk or bike and why?
 12. List any places outside of the region that you would like the bike and pedestrian network to connect to.
 13. Please provide any other information that you believe is relevant to this bicycle and pedestrian plan.
 14. Do you have a vehicle that you can use on a regular basis?
 15. Please enter the name of the city, borough, or township where you live.
 16. What is your age?
 17. What is your gender?

Demographics of Respondents

The majority of respondents live in Dauphin County, and the largest percentage are located in the City of Harrisburg. Fifty-three percent of the respondents were male and 47 percent female, with an average respondent age of 48 years old, and an age range between 20 and 82 years old.

Distribution of Respondents by County

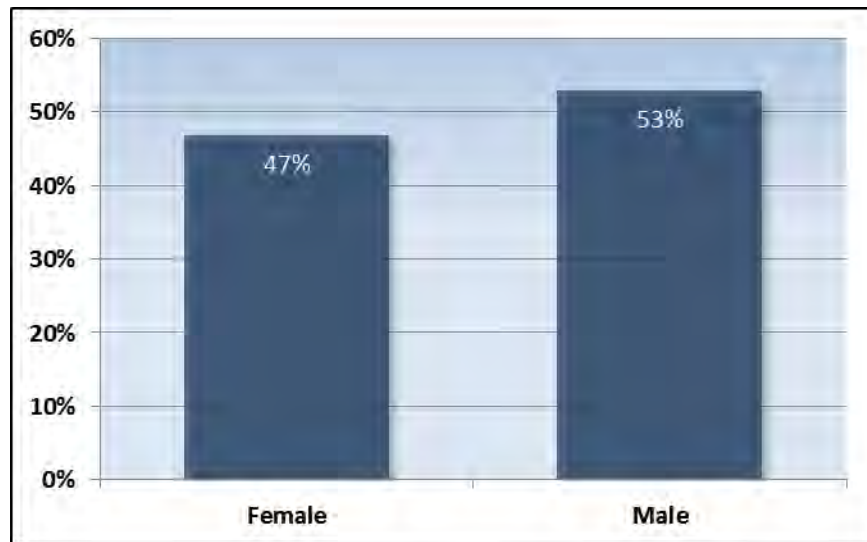
County	Number of Respondents	Percent
Perry	58	5%
Cumberland	376	35%
Dauphin	533	50%
Other	97	9%
Total	1,064	100%



Distribution of Survey Respondents by Municipality (Top 10)

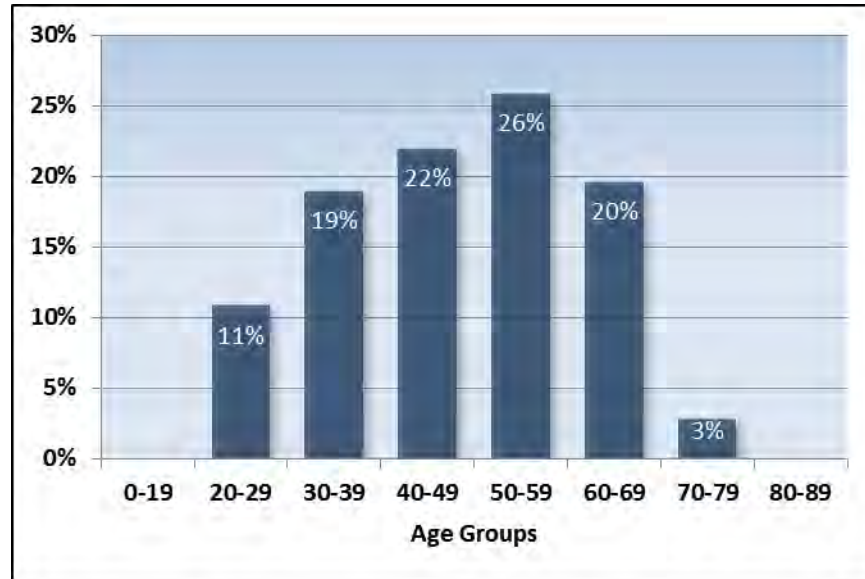
Location	County	# of Respondents	Percent
Harrisburg City	Dauphin	159	14.9%
Susquehanna Township	Dauphin	71	6.7%
Lower Paxton Township	Dauphin	63	5.9%
Hampden Township	Cumberland	34	3.2%
Camp Hill Borough	Cumberland	32	3.0%
Carlisle Borough	Cumberland	32	3.0%
New Cumberland Borough	Cumberland	27	2.5%
Derry Township	Dauphin	27	2.5%
East Pennsboro Township	Cumberland	26	2.4%
Swatara Township	Dauphin	24	2.3%

Distribution of Respondents by Gender

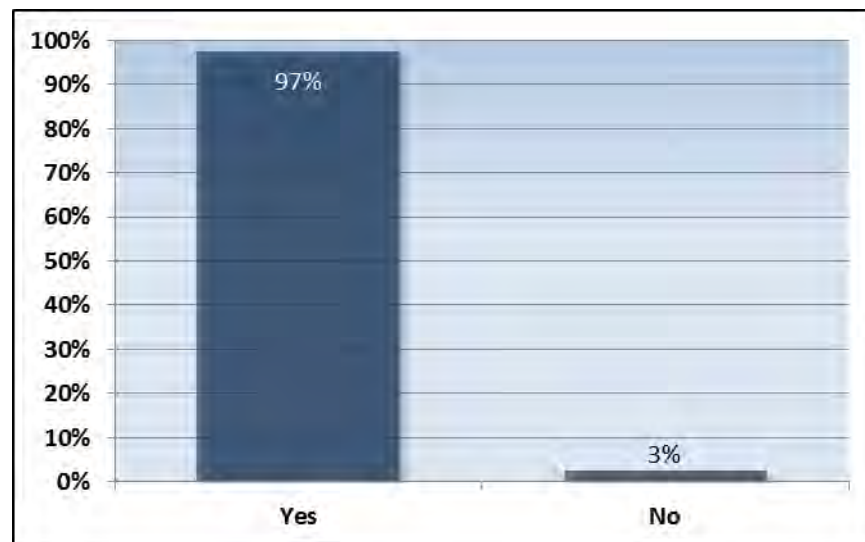




Distribution of Respondents by Age



Do you have a vehicle that you can use on a regular basis?

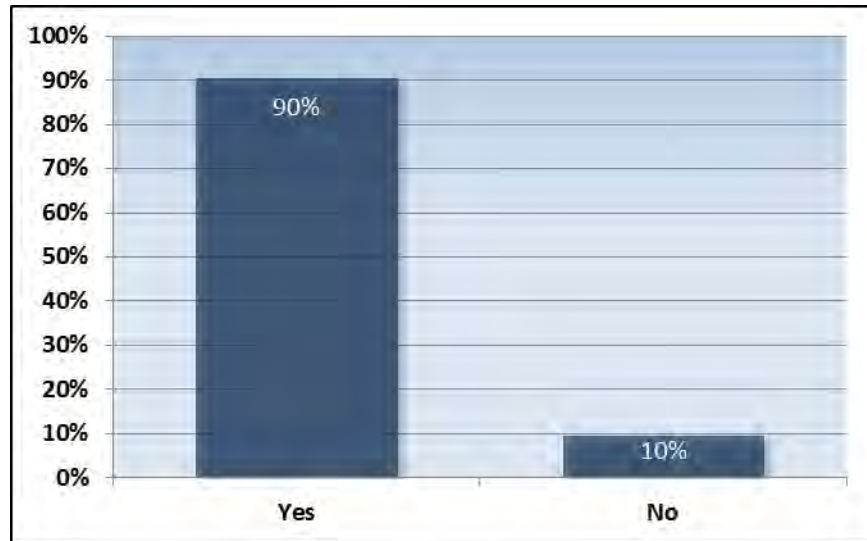




Current Bicycle/Pedestrian Utilization

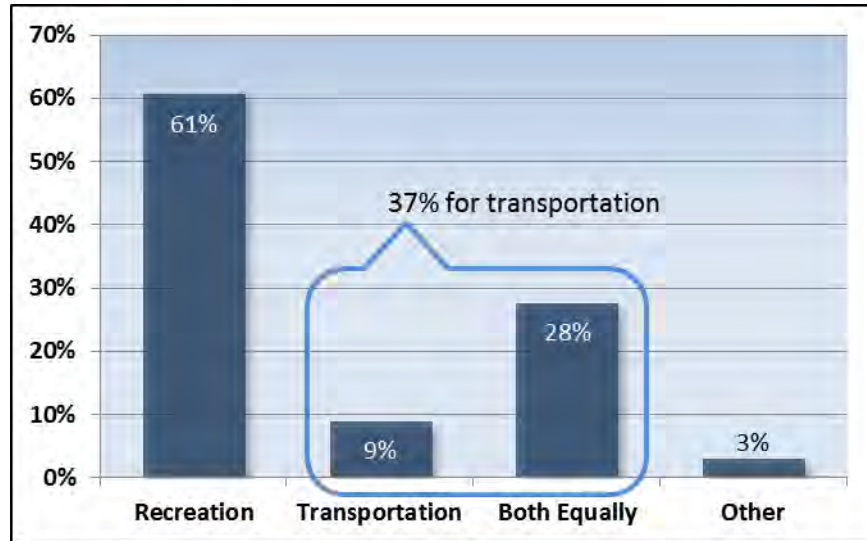
Of all respondents, 90 percent said that they currently walk or ride a bike on a regular basis. This high percentage was expected because the survey was targeted toward this audience.

Question 2 - Do you currently walk or ride a bike on a regular basis?

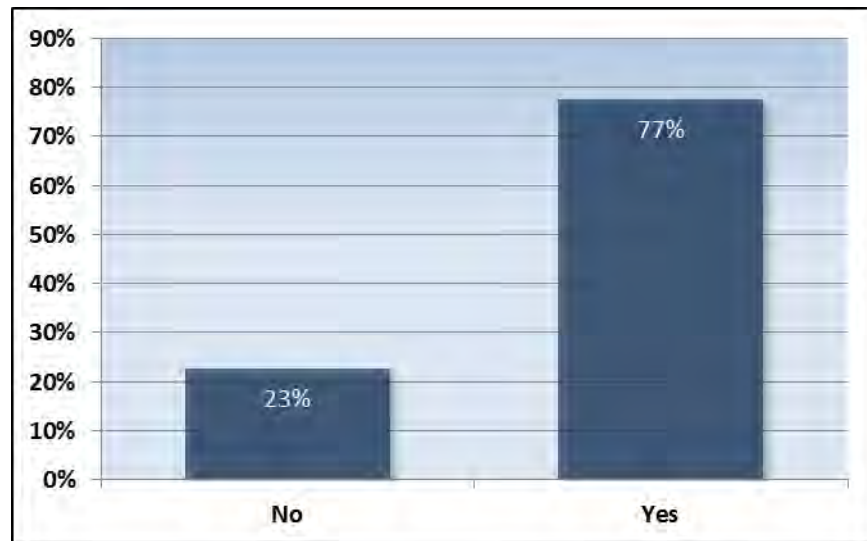




Question 3 - Do you walk/bike primarily for recreation or for transportation?



Question 4 - Are there any places along the routes that you regularly walk or bike that are unsafe or make you feel less safe than other places?



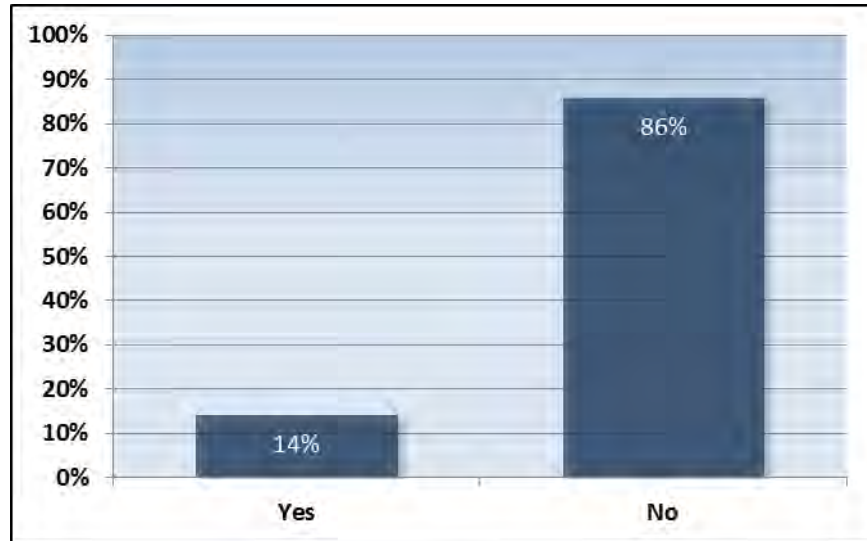


Question 5 - What are the locations that make you feel unsafe and what are the safety issues?

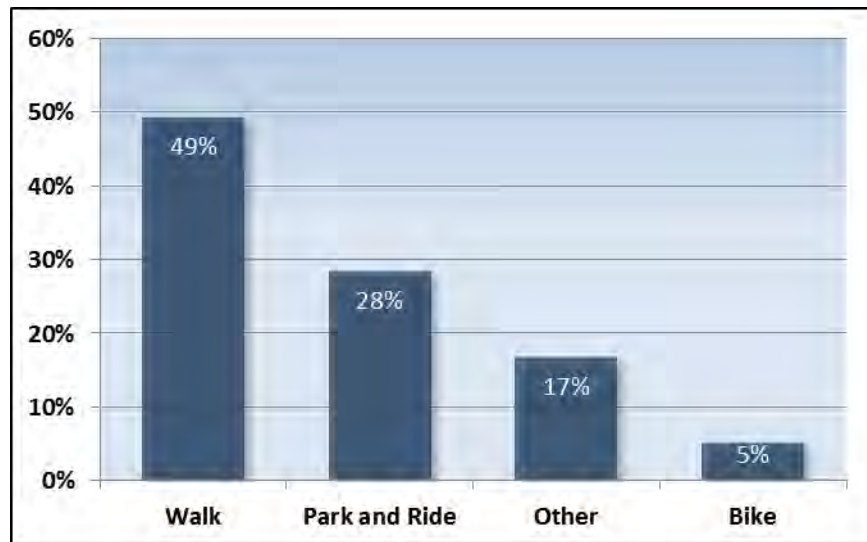
Location (Top 15)	Number of Mentions	Examples of Safety Issues
Lemoyne Bottleneck/Market Street/Market Street Bridge	43	<ul style="list-style-type: none"> No bike lanes Narrow shoulders Restricted sight distance
Front Street, Harrisburg	39	<ul style="list-style-type: none"> Vehicle speeds Difficult to cross Lack of sidewalk at North Front St.
Second Street, Harrisburg	34	<ul style="list-style-type: none"> Vehicle speeds Difficult to cross Lack of shoulder or bike lane
Lisburn Road	21	<ul style="list-style-type: none"> Vehicle speeds Narrow shoulders
Susquehanna Bridges	21	<ul style="list-style-type: none"> Vehicle speeds No bike signage
Greenbelt Road Crossings	14	<ul style="list-style-type: none"> Vehicle speeds Difficult to cross
Linglestown Road (Route 39)	14	<ul style="list-style-type: none"> No bike lanes Traffic congestion Disconnected sidewalks
Forster Street, Harrisburg	13	<ul style="list-style-type: none"> Vehicle speeds Difficult to cross multiple lanes
Greenbelt at PennDOT Riverfront Office Center	11	<ul style="list-style-type: none"> Lack of personal safety
Trindle Road, Camp Hill to Mechanicsburg	11	<ul style="list-style-type: none"> Inadequate shoulders Vehicles don't obey crosswalks Congestion
Derry Street, Harrisburg	11	<ul style="list-style-type: none"> Vehicle speeds Inadequate shoulders
Riverfront Park	10	<ul style="list-style-type: none"> Poor lighting/personal safety Bicycle/pedestrian conflicts
Nyes Road	10	<ul style="list-style-type: none"> Inadequate shoulders
U.S. 22 from Colonial Park to Paxtonia	9	<ul style="list-style-type: none"> Inadequate shoulders Disconnected sidewalks
Union Deposit Road	9	<ul style="list-style-type: none"> Inadequate shoulders Disconnected sidewalks



Question 6 - Do you regularly ride the bus?



Question 7 - If yes, how do you usually get to the bus stop?





Question 8 - In general, how likely would you be to walk or bike more often if the following improvements were made?

Improvement	Percent saying Likely or very likely
Trails and paths that are separate from roadways	90%
Wider shoulders on roadways	85%
Bike lanes on roadways	82%
Having shopping and employment destinations within walking/biking distance of your home	73%
Providing crosswalks or improving existing crosswalks	68%
Sidewalks	59%
Pedestrian buttons at traffic signals	54%
Showers and changing facilities at your workplace	47%
Group bike rides	35%
Educational courses on safe biking	25%





Question 9 - List any other improvements that would make you walk or bike more frequently.

Improvements (Top 10)	Number of Mentions
More paths/trails that are separate from roads and traffic	64
Educate drivers regarding pedestrians and bikes	59
More bike racks at destinations	44
Provide bike lanes along existing roads	41
Wider shoulders on existing roads	38
Enforce laws affecting bicycle and pedestrian safety	25
Create additional sidewalks in developed areas and/or connect existing sidewalks	17
Provide facilities that improve walking and biking (showers at work, benches along trails, rest rooms for walkers and bikers)	17
Encourage biking and walking (maps of preferred routes, group commuter rides, more bike shops)	17
Add or improve crosswalks/signals/pushbuttons for pedestrians at intersections	16

Numerous respondents again mentioned improvements from the previous list, as well as offering ideas for additional improvements.



Question 10 - List any gaps in existing trails or routes in the region that make it unsafe or impossible to walk or bike. What is required to fill in those gaps?

Gaps (Top 10)	Number of Mentions
Susquehanna River crossings between Harrisburg and Wormleysburg	43
Capital Area Greenbelt	17
Cumberland Valley Rail Trail from Newville to Carlisle	15
Greenbelt connections to other towns (Hershey, Lebanon, Camp Hill, New Cumberland, Dillsburg)	13
The Greenbelt crossing at Linglestown Road	13
Improved maps and signage for the Eshenour Trail in Derry Township	10
Lemoyne bottleneck	9
Bike Route J railroad underpass in Dauphin Borough	8
A connection from Front Street to Fort Hunter	8
Personal safety improvements on Greenbelt and in Wildwood Park (safety call phone, signage, and lighting)	7

Question 11 - What is your favorite place to walk or bike, and why?

Favorite Places to Walk or Bike (Top 15)
Capital Area Greenbelt
Riverfront Park
My neighborhood
Wildwood Park
Trails
Rural Roads
City Island
Derry Township Eshenour Trail
Front Street, Harrisburg
Parks
Cumberland Valley Rail Trail
Appalachian Trail
Downtown Harrisburg
York Heritage Rail Trail
Conewago Rail Trail

Characteristics of Favorite Place
Light traffic or no traffic
Good scenery
Safety (both personal safety and traffic safety)
Convenience
Preferred terrain
Nature exploration
Well-maintained
Good surface
Good length
Convenient/secure parking
Pet-friendly



Municipal Survey

During Summer 2013, an online survey was submitted to all 103 municipalities within the three-county region to gauge the current level of local planning for bicycle and pedestrian modes. A total of 18 questions were asked of the municipalities; 67 of the 103 municipalities responded and included a representative sample of each county: 20 from Cumberland, 30 from Dauphin, and 17 from Perry. The responses varied widely and often reflected the relative rural or urban nature of each municipality. The survey questions and a summary of responses are shown below.

Questions

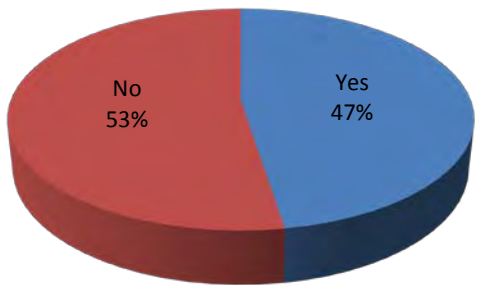
1. Does your municipality have existing OFF-ROAD bicycle and pedestrian facilities (e.g., trails, paths, etc.)?
2. Does your municipality have existing ON-ROAD bicycle and pedestrian facilities (e.g., bike lanes, sidewalks, etc.)?
3. If yes for either question above, do you have maps or GIS data or other location information for these facilities that you can share with us?
4. Approximately what percentage of sidewalks within your municipality are compliant with ADA regulations regarding curb ramps and tactile warning surfaces?
5. How do you determine the order in which to upgrade sidewalks for ADA compliance?
6. Does your municipality have plans to construct any trails or OFF-ROAD bicycle and pedestrian facilities within the next 10 years?
7. Does your municipality have plans to construct any ON-ROAD bicycle or pedestrian facilities within the next 10 years?
8. If yes for either question above, do you have maps or GIS data or other location data for these facilities that you can share with us? Please provide a source or contact for this information.
9. What policies or practices are in place for the maintenance and reconstruction of existing sidewalks?
10. Does your zoning ordinance or subdivision and land development ordinance (SALDO) require bicycle or pedestrian facilities (e.g., sidewalks, trails, etc.) with new development?
11. If yes, what facilities are required and are they required within the entire municipality or just within certain zones or areas?
12. If your SALDO requires sidewalks, roughly how often is this requirement waived? What are the most common reasons for the waiver?
13. Does your SALDO require the dedication of recreation land for new developments?
14. If yes, does it allow a fee in lieu of dedication of land? Is this dedication of recreation land or fee in lieu ever used to create trails or other bicycle and pedestrian networks?
15. Has your municipality used an Official Map to delineate future trails or other bicycle and pedestrian facilities?
16. Please list any other plans or policies related to bicycle and pedestrian transportation in effect in your municipality.



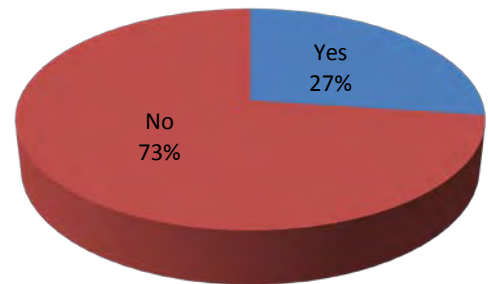
17. Please list any areas in your municipality that have safety issues or a history of accidents related to bicycles and pedestrians.
18. Please note any other bicycle and pedestrian issues in your municipality that you'd like to share.

Existing and Proposed Bicycle and Pedestrian Facilities

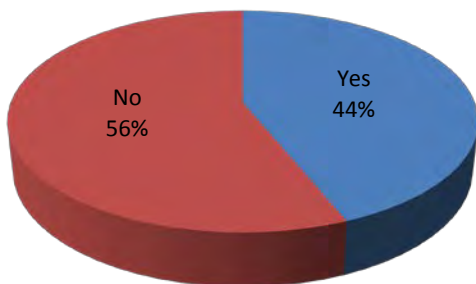
Does the municipality have off-road bike/ped facilities?



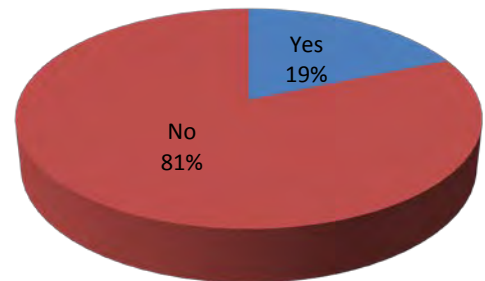
Are there plans to construct any within the next 10 years?



Does the municipality have on-road bike/ped facilities (sidewalks, bike lanes)?

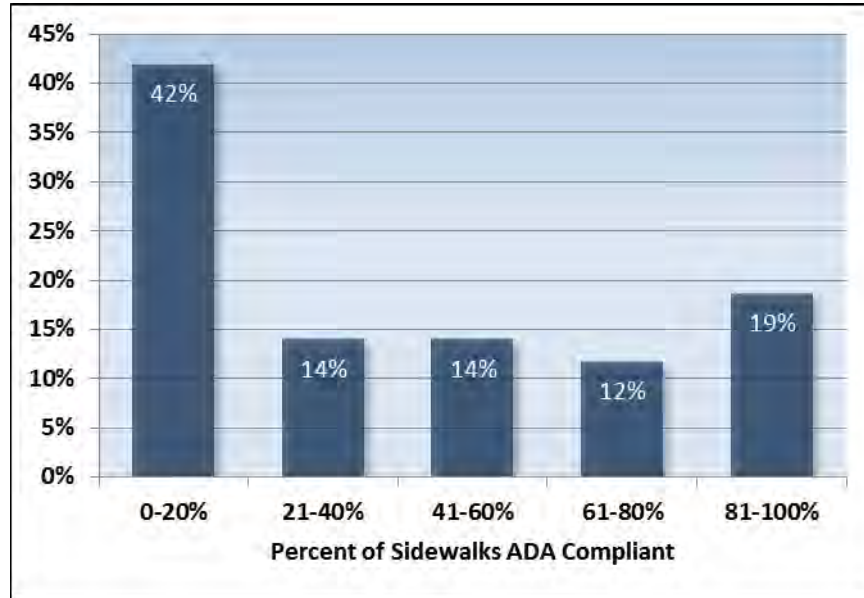


Are there plans to construct any within the next 10 years?





Question 4 - Approximately what percentage of sidewalks within your municipality are compliant with ADA regulations regarding curb ramps and tactile warning surfaces?



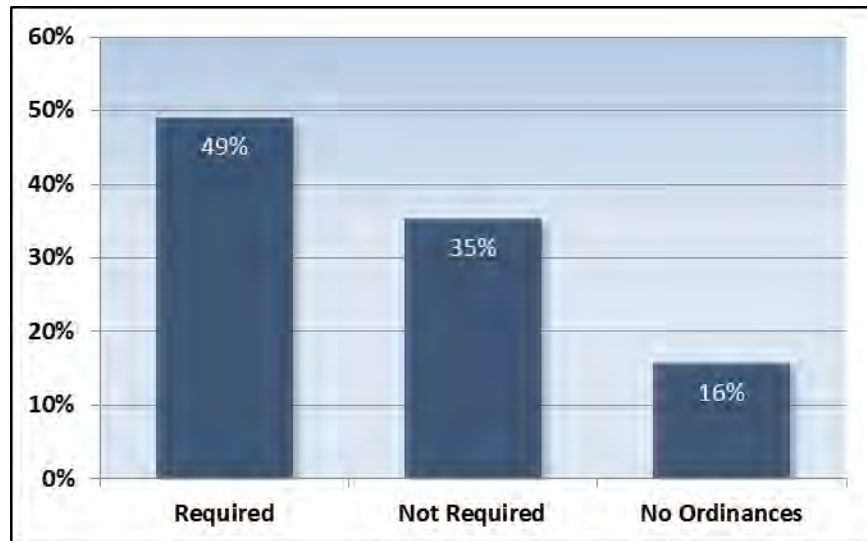
Question 9 - What policies or practices are in place for dealing with the maintenance and reconstruction of existing sidewalks?

Of those municipalities that have sidewalks, most said that sidewalk repair or replacement is the responsibility of the property owner. Many of these municipalities noted that this requirement is written into an ordinance. Several municipalities stated that they have used grants and Community Development Block Grant funding to assist with sidewalk repair or upgrades.





Question 10 - Does your zoning ordinance or subdivision and land development ordinance (SALDO) require the provision of bicycle or pedestrian accommodations with new development?



Question 11 - If yes, are the accommodations required within the entire municipality or just within certain zones or areas?

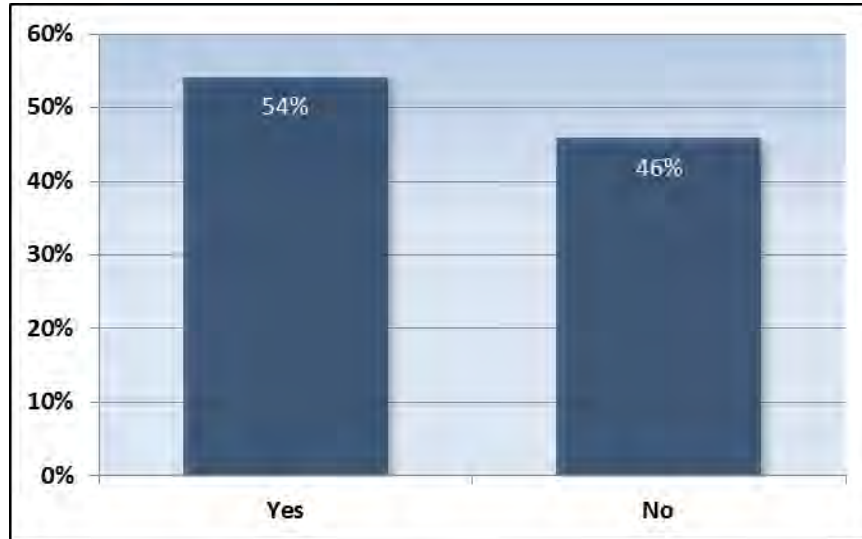
Answers to this question varied. Some municipalities require sidewalks with all new development, while others limit it to certain zoning districts or certain types of development. One municipality reported that trails are required to connect cul-de sacs in new developments. Trails may also satisfy recreational land requirements in development ordinances.

Question 12 - If your SALDO requires sidewalks, roughly how often is this requirement waived? What are the most common reasons for the waiver?

Most municipalities reported that sidewalks are generally not waived. If they are waived, it is for cases where the residential development is on very large lots or is isolated in a rural area, or the applicant has demonstrated a physical hardship with the development site that makes sidewalks difficult or impossible to install.



Question 13 - Does your SALDO require the dedication of recreation land for new developments?



Question 14 - If yes, does it allow a fee in lieu of dedication of land? Is this dedication of recreation land or fee in lieu ever used to create trails or other bicycle and pedestrian networks?

All respondents but one allow a fee in lieu of dedication of land. Only one municipality noted that the fees were used for trail construction.

Question 15 - Has your municipality used an Official Map to delineate future trails or other bicycle and pedestrian facilities?

Three municipalities said they have used their Official Map to show future bicycle or pedestrian facilities.

Question 16 - Please list any other plans or policies related to bicycle and pedestrian transportation in effect in your municipality.

Municipalities generally noted their comprehensive plans, park and recreation plans, and a few bicycle and pedestrian plans.



Question 17 - Please list any areas in your municipality that have safety issues or a history of accidents related to bicycles and pedestrians.

No answers included specific high crash locations. Notable responses include:

- Several boroughs noted safety issues related to poor sidewalk conditions
- Camp Hill Bypass
- PA 230/West Harrisburg Pike between Middletown and Harrisburg Airport
- Lack of sidewalks from Halifax Borough to schools in Halifax Township
- Lack of sidewalks from Newville Borough to commercial establishments in West Pennsboro Township

Interviews

A series of interviews was conducted with various stakeholders in the Tri-County region. The interviews were divided into two tiers. The first tier of interviews was with representatives of the organizations that are recognized as the principal stakeholders for the area. These are the organizations involved in land use and transportation planning and bicycle advocacy. The second tier of interviews consisted of a variety of organizations and municipal governments officials. Many of the people that were identified for the second tier were suggested by first tier interviewees.

Many of the interviewees were asked the same series of seven questions. Primary themes of the answers to these questions are presented below. In addition, each person interviewed was asked questions that were specific to their organization or involvement in promoting bicycling and walking. Some of their responses are also summarized.

Question 1 - What role do you and your organization play in the promotion of bicycling and walking in the Tri-County region?

Answers to this question varied widely depending on the mission or purpose of the organization. The Harrisburg Bicycle Club, as an example, tries to play a central role in encouraging more bicycling and promoting safe riding techniques. County planning agencies and the Tri-County Regional Planning Commission, on the other hand, see increased walking and biking as being beneficial, but they have a wider mission beyond advocacy.

Question 2 - How does increased walking and biking fit into the mission or goals of your organization?

Similar to Question 1, the answers varied greatly. However, all groups derive a direct or indirect benefit from increased walking and cycling.



Question 3 - What other organizations do you currently work with (or could you work with) to better promote biking and walking?

Answers to this question identified a wide range of organizations that are presented below:

American Planning Association, PA Chapter	PA Department of Agriculture (Nutrition Issues)
Appalachian Trail Conservancy	PA Department of Conservation and Natural Resources
Bicycle Access Council	PA Department of Health
Bike Harrisburg	PA Department of Transportation
Bike Shops	PA Pedalcycle and Pedestrian Advisory Committee
Boy Scouts (Eagle Scout projects)	PA State Association of Township Supervisors
Capital Area Greenbelt Association	PA Walks and Bikes
Capital Area Transit	Pro Wellness
City Beautiful 2.0	Quality Bicycle Products (QBP)
Civic Club of Harrisburg	Rails to Trails Conservancy
County Parks and Recreation Departments	Realtor's Association
Cumberland Valley Rails-to-Trails Council	Recycle Bicycle
Department of Education (School Siting)	Safe Routes to School
Developers	School Districts
Harrisburg Bike Club	South Mountain Partnership
Lebanon Valley Bicycle Club	Susquehanna Appalachian Trail Club
Lykens Valley Rail Trail Association	Susquehanna Area Mountain Bike Association
Municipalities	
PA Chiefs of Police Association	



Question 4 - What do you believe are the top 3 actions needed to increase walking and biking in the region?

Clear themes emerged from the answers to this question. Similar actions were summarized into one bullet and all actions that were mentioned by more than one respondent are shown below. The most frequently noted actions are listed first.

- Provide new infrastructure such as bike lanes, bike routes, and sidewalks.
- Have PennDOT fully embrace bicycle and pedestrian modes and incorporate appropriate infrastructure into all projects.
- Provide additional education for vehicle drivers, cyclists, and pedestrians on the rules of the road.
- Create maps and brochures on issues such as the best routes for cycling, rules of the road, and the benefits of cycling and walking.
- Post signs alerting drivers to the presence of bicyclists and walkers.
- Have county and municipal planning agencies fully embrace bicycle and pedestrian modes and incorporate appropriate infrastructure into all projects and development regulations.
- Create educational campaigns that frame bicycle and pedestrian issues in the context of broader issues with more perceived urgency, such as reducing obesity and oil/energy use.

Question 5 - What are the 3 main barriers to increased walking and biking in the region?

Responses are summarized below, with the most frequently noted comments presented first.

- Existing infrastructure does not offer adequate space for walking and biking and will be difficult and expensive to upgrade.
- Lack of (or a perceived lack of) safety when riding or walking in or near traffic.
- The existing attitudes of residents toward cycling and walking.
- Weather.
- Lack of funding for bicycle and pedestrian projects.
- Poor roadway maintenance and potholes.
- Lack of a full-time bicycle and pedestrian coordinator at PennDOT.
- Bicycle and pedestrian accommodations are not incorporated into recent roadway projects.

Question 6 - What must a bicycle and pedestrian plan for the region focus on to be successful? (focus on making a successful plan, not the implementation or specific infrastructure upgrades)

Responses are summarized below, with the most frequently noted comments presented first.

- Identify gaps in the bicycle and pedestrian network and plan appropriate projects to close those gaps.
- Promote ongoing bicycle and pedestrian safety education.
- Promote culture change at PennDOT.



- Promote the recognition of bike and pedestrian issues by those with authority over transportation policy and funding (the legislature, PennDOT executives, and municipal officials).
- Be bold enough to consider ambitious goals, but yet realistic enough to focus on achievable goals.
- Prioritize easily accomplished projects and projects that have a high return on investment.
- Contain measurable metrics to gauge plan success.
- Promote the completion of ongoing surveys on public sentiment and attitudes about biking and walking.
- Include outreach to lower income areas.

Question 7 - Are there others that you believe we should talk to for input into this plan?

Answers to this question were varied and several of the people mentioned were subsequently interviewed.

As a part of the interviews, the study team talked with representatives from four municipalities that were mentioned by interviewees. Each of these municipalities had notable accomplishments in some aspect of planning for and implementing greater accommodations for bicycle and pedestrian transportation. The results of those interviews are incorporated in the preceding interview summary.





What Context Exists for Improving Bicycling and Walking?

This section summarizes laws, regulations, planning studies, and design guidelines that define the context for creating a more conducive and inviting environment for bicycling and walking in Cumberland, Dauphin, and Perry counties.

Federal Laws and Regulations

Federal policy related to bicycling and walking is largely reflected by funding made available through the current transportation funding law. In 2012, the U.S. Congress passed and President Obama signed the Moving Ahead for Progress in the 21st Century Act (MAP-21) transportation funding legislation.

MAP-21

Under the previous federal transportation funding legislation (SAFETEA-LU) there were three distinct programs that provided funding for bicycle and pedestrian projects:

1. Transportation Enhancements
2. Safe Routes to School
3. Recreational Trails

These three programs were replaced by a new Transportation Alternatives Program (TAP) under MAP-21. According to guidance from the Federal Highway Administration (FHWA), MAP-21 provides “...funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.”⁶

More specifically, TAP funds may be used for:

1. Bicycle and pedestrian facilities
2. Bicycle and pedestrian education (grades K-8 only)
3. Conversion of abandoned railway corridors to trails
4. Construction of turnouts, overlooks, and viewing areas
5. Outdoor advertising management

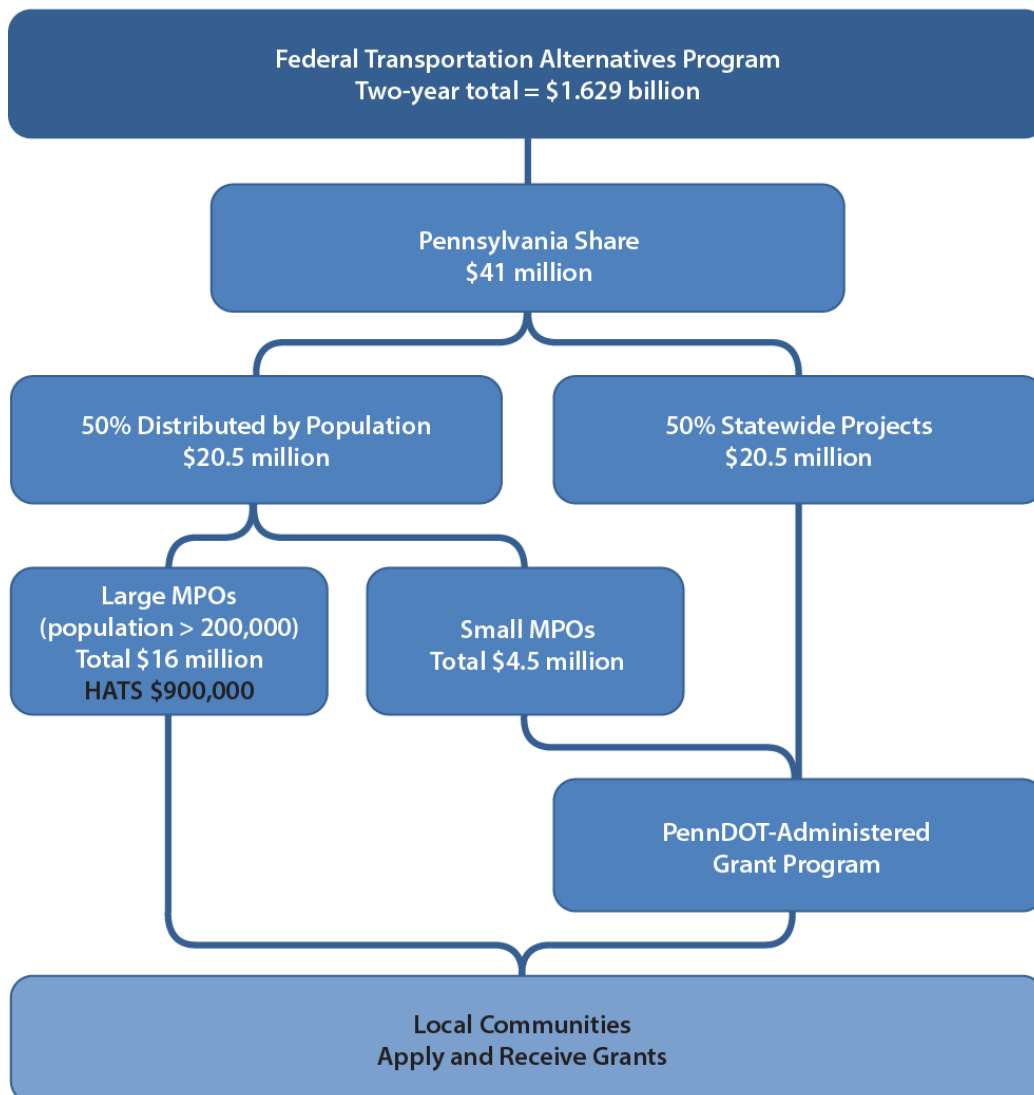
Transportation Alternatives Program (TAP) funding under MAP-21 may be used for qualifying bicycle and pedestrian projects.

⁶ <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>



6. Historic preservation and rehabilitation of historic transportation facilities
7. Vegetation management
8. Archaeological activities
9. Stormwater management
10. Wildlife mortality mitigation

Each state is provided TAP funding based on the state's proportionate share of fiscal year (FY) 2009 Transportation Enhancements funding. Total TAP funding available for all states in federal fiscal year (FFY) 2013 is \$808.8 million; in FFY 2014 it increases to \$819.9 million. Pennsylvania's total share for the two years of MAP-21 is approximately \$41 million. \$16 million will be distributed to large MPOs for investment in local projects; the remaining \$25 million PennDOT will use to fund prioritized projects throughout Pennsylvania.





The population of Cumberland, Dauphin, and Perry counties is greater than 200,000, qualifying HATS as a large MPO. Therefore, HATS is given a suballocation of TAP funding to directly distribute to projects within the three counties. This suballocation amounts to a total of \$886,594. In addition, projects within the region can compete for the funds that are available statewide and administered by PennDOT. For most TAP projects, a 20 percent state/local match is required.

State Laws, Regulations, and Policy

The Commonwealth of Pennsylvania has several sources that set policy for cycling and walking in the state. The primary source is the vehicle code, which specifically addresses bicyclists and pedestrians and their rights and responsibilities. The vehicle code and other source documents are discussed below.

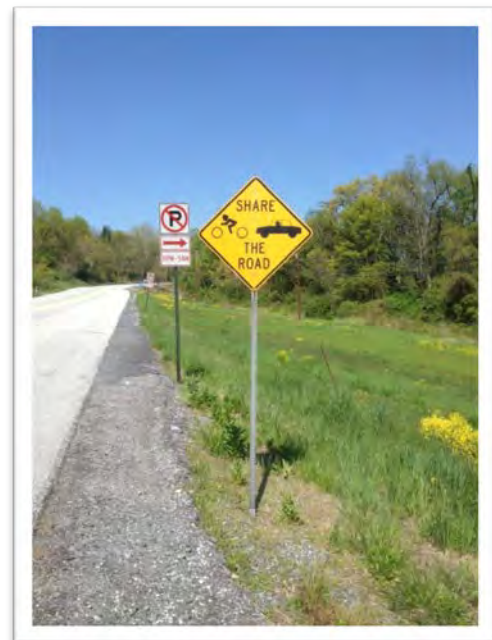
PA Vehicle Code (Title 75)

Bicycles

The Vehicle Code states the general rule for bicycles (§3501(a)) as *“Every person riding a pedalcycle [bicycle] upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle...”* except as stated in special provisions.

The special provisions for bicycles within Title 75 include:

- May be operated on the shoulder.
- Must yield to pedestrians on sidewalks or bicycle path.
- Riders under 12 years of age must wear a helmet meeting nationally recognized standards.
- No bicycles shall be operated on freeways except where official exceptions apply.



Pedestrians

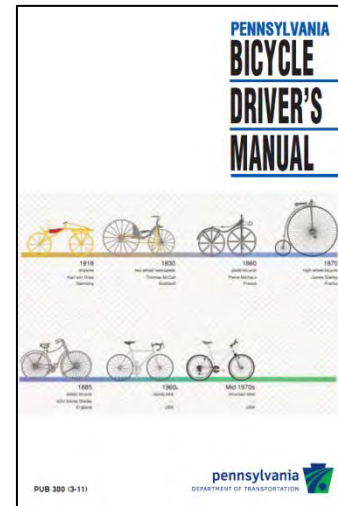
Chapter 35, subchapter C includes the rights and duties of pedestrians. In summary the rights and duties are:

- A vehicle must yield the right-of-way to a pedestrian walking on the sidewalk or crossing the roadway within any marked crosswalk or within any unmarked crosswalk at an intersection.
- A pedestrian must not suddenly leave a curb and walk or run into the path of a vehicle which is so close as to constitute a hazard.
- A pedestrian crossing a roadway at any point other than within a crosswalk at an intersection or any marked crosswalk must yield the right-of-way to all vehicles upon the roadway.
- Where a sidewalk is provided and its use is practicable, a pedestrian must not walk on the roadway.

- Where a sidewalk is not available, a pedestrian must walk as far to the edge of the roadway or shoulder as practicable.

Pennsylvania Bicycle Driver's Manual

The document outlines the sections of the vehicle code related to bicycle operation and includes a booklet entitled Street Smarts, which teaches good riding habits, how to share the road with vehicles, and other similar lessons geared toward safe operation of bicycles.

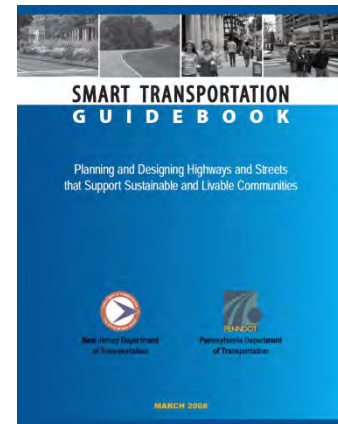


PennDOT Bicycle and Pedestrian Checklist

The Bicycle and Pedestrian Checklist was developed by PennDOT and is located in PennDOT Design Manual 1X. Roadway designers are required to consider bicycles and pedestrians when designing new roadways and upgrades to existing roadways. Working through the checklist is the recommended method to accomplish this requirement. The checklist addresses issues of planning and programming, project scoping, and final design.

Smart Transportation Guidebook

This guidebook was developed jointly by the New Jersey Department of Transportation and PennDOT in 2008. It provides guidance to help agencies, local governments, developers, and others plan for and design roadways that support sustainable and livable communities. It encourages planners and roadway designers to consider a number of criteria beyond the standard level of service measures. It focuses on accommodating all modes of travel appropriately within the communities they serve. Portions of the guidebook have now been incorporated into PennDOT design manuals, making them official policy.



2007 PennDOT Bicycle and Pedestrian Plan

The purpose of the plan is to integrate bicycle and pedestrian transportation into PennDOT's routine project development processes, as required under federal law, and to include Pennsylvania planning partners in these efforts. The plan does not mandate any special funding for bicycle/pedestrian activities.

Regional and County Level

There are many documents and databases at the regional and county levels that are relevant to bicycle and pedestrian use, goals, and future projects in and around the Tri-County region. Issues of funding, safety, economic development, and land preservation all figure prominently throughout these various documents, though the most interesting finding may be the consistency with which the region's



transportation planning agencies are looking to enhance and formalize a region-wide, interconnected trail system. Within these documents, goals for pedestrian improvements are largely focused on improving circulation within urban cores and pursuing more safe routes to school. A brief discussion and summary of the reviewed documents follows.

2035 HATS Regional Transportation Plan (2011)

The Regional Transportation Plan (RTP) is the region's long-range transportation plan which lays out the multimodal priorities for the future for the three counties of the region. As the MPO for the region, HATS is required by FHWA to produce and update the plan every four years. The plan identifies the region's principal bicycle and pedestrian trails, which include:

- Bicycle PA Route J
- The Capital Area Greenbelt
- Cumberland Valley Rail Trail
- Lykens Valley Rail Trail
- Stony Creek Rail-Trail
- Appalachian Trail
- Darlington, Tuscarora, and Horseshoe hiking trails

The RTP also identifies bicycle and pedestrian focus area categories to assist in sustaining and developing these facilities. The categories include:



- Create a regional pedestrian/bicycle database to include an inventory of sidewalks, roadway shoulder widths, etc.
- Improve access to Harrisburg from the West Shore.
- Complete and/or expand existing and proposed trails.
- Promote local and regional bicycle/pedestrian planning.
- Improve pedestrian movement in Harrisburg.
- Improve bicycle and pedestrian movement on the West Shore.

Susquehanna Greenway Strategic Action Plan (2006)

The Susquehanna Greenway Strategic Action Plan was created to guide the development of the greenway from a concept to an on-the-ground reality of destinations and way points linked by both water and land trails. The Susquehanna Greenway Partnership has been tasked with implementing the vision of the Susquehanna Greenway and actively pursues this vision through collaborative efforts with communities and organizations along the Susquehanna River.



A portion of the Susquehanna Greenway from the Juniata River to Harrisburg is also encompassed by the Main Line Canal Greenway. This greenway stretches from Harrisburg to Pittsburgh along the Allegheny and Juniata Rivers, following the path of the historic Main Line Canal.

Cumberland County Comprehensive Plan (2003, updated in 2011)

The Cumberland County Comprehensive Plan is a complete look at existing and future growth and development within the county. The plan addresses bicycle and pedestrian issues with an examination of existing facilities within the county. It specifically notes several strategies for bicycles and pedestrians:

- Incorporate bicycle, pedestrian, horse and buggy, and ADA improvements into county and municipal transportation projects.
- Promote land use practices that support bicycling and walking.
- Update and implement Land Partnerships, the County's Open Space and Smart Growth Plan.

Cumberland Countywide Greenway Study (2000)

This study examines ways in which Cumberland County can create greenways, and provides a framework for establishing greenways through public-private partnerships. The greenway plan includes:

- A plan of action for public participation and data collection
- Data collection and analysis
- Identification of potential greenway corridors
- Determination of potential users
- Identification of potential linkages
- Prioritization of greenway corridors
- Potential impacts and benefits
- Greenway management and financing strategies
- Recommendations for implementation

The recommendations of this study are to:

- Establish an effective greenway planning system.
- Organize a management system for greenways.
- Create partnerships for greenway development.
- Establish a funding program to support greenways.
- Develop a public education program about greenways.
- Develop a pilot greenway project.

Cumberland County Land Partnerships Plan (2013)

This plan provides a countywide strategy for balancing preservation and development by identifying opportunities to improve quality of life through farmland preservation, natural resource protection, and park, trail, and greenway infrastructure. The plan identifies existing parks and natural areas in the



county and identifies future deficiencies based on two different parkland standards: status quo and model community.

The plan recommends conceptual greenways that tie together Shippensburg, Newville, Carlisle, Mechanicsburg, and Lemoyne, as well as connecting to the Blue Mountain/Kittatinny Ridge Greenway on the northern edge of the county and the South Mountain/Highlands Greenway to the south.

The plan identifies acquisition/development, planning, partnerships, and education as key tools for reaching these goals.

Perry County Greenways, Parks, Recreation, and Open Space Plan (2011)

This plan was developed as a supplement to the Perry County Comprehensive Plan and is intended to be used in concert with the other elements of the County Comprehensive Plan and the Tri-County Regional Growth Management Plan to provide additional direction for the county over the next 10 to 15 years.

The plan identifies eight strategies for implementation. These include (in ranked order):

1. Conserve land and water resources, and promote activities that contribute to the ecological health of the county.
2. Protect the county's scenic character and rural lifestyle.
3. Provide assistance and outreach to municipalities and private sector partners.
4. Establish partnerships to promote and implement greenways, parks, recreation, and open space.
5. Expand existing recreation programs.
6. Link the county through the development of greenways and trails.
7. Provide new and enhance existing recreation facilities.
8. Promote tourism and compatible economic development.

There are many associated actions to address these strategies within the plan.

Perry County Comprehensive Plan (2007)

The comprehensive plan provides polices to guide future growth and development. The plan looks at land use, housing, and utilities, as well as transportation. The Perry County Comprehensive Plan has several bicycle and pedestrian compatible objectives and related strategies:

- Encourage improvements that provide for a safer means of pedestrian travel.
 - Encourage and support improvements to crosswalks and sidewalks in downtown areas.
 - Encourage sidewalk construction in residential developments that will be served by public utilities and/or meet a specified dwelling unit density.
 - Encourage sidewalk construction in areas where residential and commercial retail developments are within a specific distance of one another.
 - Consider the use of PennDOT liquid fuels funds to assist with pedestrian improvements.



- Increase understanding of the link between land use and pedestrian travel.
 - Support developments that provide pedestrian connection to their communities.
 - Encourage housing projects for the elderly and handicapped to locate within a reasonable distance of essential service providers.
 - Inventory pedestrian facilities in downtowns.
 - Support trail design for pedestrian utilization to separate this mode of travel from motorized transportation.
 - Support local efforts to establish projects under the PennDOT Safe Streets Initiative.
- Encourage improvements that provide for a safer means of bicycle travel.
 - Support efforts to widen Perry County’s highway system, especially in areas around schools and public recreation areas.
 - Consider the use of PennDOT liquid fuels funds to assist with bicycle improvements.
- Increase understanding of the link between land use and bicycle travel.
 - Support developments that encourage bicycle use to connect people with their communities.
 - Support trail design for bicycle utilization to separate this mode of travel from motorized transportation.

The link between land use and bicycle and pedestrian transportation is discussed in many of the region’s plans.

Improving bicycle and pedestrian connectivity—especially on trails separated from motorized traffic—is another common theme.

Dauphin County Comprehensive Plan

Dauphin County’s Comprehensive Plan specifically addresses bicycle and pedestrian issues within the context of an overall plan for the continued development of the county. Bicycle and pedestrian recommendations from the transportation portion of the plan are:

- Incorporate bicycle and pedestrian improvements into the transportation planning process.
- Encourage mixed-use zoning and “traditional” community development.
- Encourage development and preservation of bicycle/walking trails, rail-trails, greenways, and open space.
- Consider using county Liquid Fuels funds to finance certain bicycle and pedestrian improvements.
- Specify bicycle and pedestrian routes into downtown Harrisburg.

Dauphin County Parks, Recreation, Open Space, and Greenways Study (2009)

The stated objectives of this plan are to:

- Preserve and enhance the visual character of Dauphin County’s landscapes.



- Improve the quality of life for residents and the visitor experience for tourists.
- Protect important habitat areas and preserve migration paths for wildlife.
- Create a network of natural and historic features throughout the county that serves as an educational tool for the public.
- Enhance recreational and exercise opportunities in appropriate settings.
- Provide opportunities for non-motorized transportation links, connections, and pathways in appropriate settings.
- Preserve and enhance historic districts by linking historic sites within the greenway system, not only in Harrisburg, but in small villages and boroughs such as Linglestown, Hummelstown, and Middletown.

There are 46 recommendations in the plan within five subject areas:

- Physical projects
- Outreach/education/information programs
- Detailed planning projects/studies
- Other potential projects and programs
- Guidelines for future actions

Surrounding Counties

Lancaster County Bicycle and Pedestrian Transportation Plan– Phase 2 (2004)

Building off of Phase 1 of this plan, completed in 2000, the Phase 2 plan provides bicycle and pedestrian recommendations and an implementation plan for both physical improvements and increased education.

Bicycle and pedestrian improvement areas are identified in three tiers: Pilot, Tier 1, and Tier 2. Pedestrian improvement areas are focused on urban areas, including Elizabethtown and along the Susquehanna River. Bicycle improvements areas are more widespread throughout the county, but Elizabethtown and the Susquehanna are both still involved. No pilot or Tier 1 bicycle or pedestrian improvement area is adjacent to the HATS region.

Lancaster County Long-Range Transportation Plan (LRTP) (2012)

The plan provides a framework for transportation planning through 2040. There are two bicycle/pedestrian strategies identified in the LRTP:

- Develop safe and convenient bicycle and pedestrian accommodations for every type of trip and for all levels of ability.
- Improve and maintain shoulders on the county's roadway network (specifically on the county's non-motorized priority network) in a context-sensitive manner.

York County LRTP (2013)

The plan provides a framework for transportation planning through 2035. The plan identifies a potential county bikeway corridor, including PA 114 toward Mechanicsburg and PA 74 toward Carlisle.

York County Open Space Plan (2006)

This plan is designed to “serve as a guidebook for open space preservation and future greenways.” The plan identifies a greenway focus area between Goldsboro and York Haven along the Susquehanna, called the Susquehanna Riverside.

Adams County LRTP (2012)

The LRTP identifies long-term transportation needs and strategies. This plan recommends projects and strategies to be implemented in the near term (within 1-4 years), medium term (5-12 years), and long term (13-25 years). A Capital Improvements Plan summarizes these actions.

The only bicycle/pedestrian project on the Adams Capital Improvements Plan is the Gettysburg Inner Loop Trail System, and it is listed as a candidate project only. The Candidate Project Evaluation Framework used to recommend projects contains several factors relevant to bicycle/pedestrian: “Maintain a Sense of Play & Quality of Experience,” “Community Mobility,” and “Safety.”

Adams County Greenways Plan (2010)

This plan provides a vision and strategy for greenways throughout the county. Key recommendations include:

- Implement a pilot project, such as the Hanover to Gettysburg trail, connecting urbanized areas to the county’s central hub.
- Protect greenways through zoning.
- Establish a water resource committee.
- Improve flood protection.

Proposed connections closest to the study area include the scenic railroad line from Gettysburg north through Idaville; the U.S. 15 scenic viewshed; and proposed trails connecting New Oxford, Abbottstown, and East Berlin.

Franklin County LRTP (2013)

The LRTP identifies long-term transportation needs and strategies. One goal is directly relevant to bicycle and pedestrian issues, as follows:

- Goal 5 (Medium Priority): Increase the accessibility and mobility options available to people and for freight.
 - Objective 5.1: Promote and increase the use of alternative modes of travel.



- Objective 5.3: Identify needed non-motorized system improvements and seek to identify financial and/or institutional implementation mechanisms.

Additionally, the Non-Motorized Action Plan includes the following:

- Investigate and work with municipalities to implement low-cost, high-benefit improvements to enhance non-motorized travel, where appropriate. These improvements may include
 - Enhanced striping and pavement treatments to increase visibility of pedestrians at crosswalks;
 - Advanced warning signage at highly traveled pedestrian, bicycle, and buggy routes; and
 - An improved connected network for pedestrians and bicyclists by including street connectivity standards and sidewalk/trail/multi-use path requirements as part of local land use (Subdivision and Land Development Ordinance [SALDO]) regulations.
- Incorporate the widening of roadway shoulders and/or reduce vertical crest curves in the design and construction of programmed transportation improvement projects along key buggy routes.
- Investigate the need for safety improvements along Path Valley Road (SR 75) between Upper Strasburg Road and Big Spring Road, as it serves as a major north-south buggy route.
- Focus on bicycle and pedestrian improvements surrounding schools identified as urban, suburban, or small town with a connected/limited-connected street network as identified in the existing conditions summary.

Other notes: “Amish Concentration Areas” are shown along the border of Cumberland and Perry counties. Existing trails in Franklin County already connect to Cumberland and Perry counties.

Juniata/Mifflin County Greenway, Open Space, and Rural Recreation Plan (2009)

The plan “crafts a vision for a protected recreation system of parks, open space, and greenways that sustains the region’s natural and scenic resources.” The most relevant goal to the Tri-County region is

Goal 2: Connect the counties and the region beyond through a network of greenways and trails.

The plan envisions a central spine of the regional greenway that would connect Mifflin, Port Royal, and Thompsettown to Millerstown Borough in Perry County.

Juniata and Mifflin Counties Prioritized Greenways

- Main Line Canal Greenway: Juniata County
- Main Line Canal Greenway: Mifflin County to Juniata County to Lewistown
- Main Line Canal Greenway: Mifflin County to Lewistown to Huntingdon County
- Kishacoquillas Creek Greenway: Lewistown to Reedsville
- Black Log Mountain/Shade Mountain Greenway: West of the Juniata River
- Kishacoquillas Creek Greenway: Reedsville to Belleville
- Susquehanna Greenway
- Tuscarora Creek Greenway



- Black Log Mountain/Shade Mountain Greenway: East of the Juniata River
- Stone Mountain Greenway
- Mid-State Trail Greenway
- Tuscarora Mountain Greenway
- Jacks Mountain Greenway: West of the Juniata River
- Jacks Mountain Greenway: East of Juniata River

Lebanon County LRTP (2012)

The plan provides a framework for transportation planning through 2035. There are no bicycle or pedestrian projects on the Lebanon County Transportation Improvement Plan (projects expected to be funded within the next four years), but several long-range projects are listed, including rail-trail conversion, streetscaping in Lickdale, and countywide bike rack installation.

Other Plans in the Region

Several plans within the region have been created to study a smaller geographical area resulting in a list of specific infrastructure improvement projects for bicyclists and pedestrians. These plans and the geographical area they cover are shown on Map 9 (in the Maps section at the end of the document) and are described below.

Building a Better Greenbelt: Signs, Safety, and a Riverfront Link to Fort Hunter (2014)

The Capital Area Greenbelt Association (CAGA) is a non-profit, all volunteer organization dedicated to reestablishing and maintaining the 20-mile trail and greenway corridor around Harrisburg and its neighboring municipalities. This study provided both the preliminary engineering and a financing strategy for three high-priority improvements, as follows:

Comprehensive Sign Plan – This initiative involves placement of new signs at about 210 locations, replacing about 140 outdated and sometimes confusing signs. CAGA raised private funds for the new signs and used volunteer labor to help install the new signs.

Traffic Safety Improvements – Preliminary engineering designs at seven locations are proposed to bring these areas up to current safety standards. Improvements include flashing pedestrian signals, sidewalks, refuge islands between opposing lanes of busy streets to make crossing easier and safer, new trail approaches to intersections, and safety barriers. Final design work is expected to begin in 2014 with construction in 2015.

Riverfront Link to Fort Hunter – The plan concludes that linking Wildwood Park to Fort Hunter is feasible and that the 1.5-mile trail, half of which would be located on Front Street north of Linglestown Road, would be a tremendous recreational asset to the community. Project cost is estimated at \$2 million and federal and state grants will be sought to fund construction.



Letort Regional Authority Trail/Urban Greenway Feasibility Study

The LeTort Regional Authority is a Cumberland County-based organization whose mission is to protect and preserve the LeTort Spring Run and its watershed by developing access and recreational opportunities within the watershed. As part of this feasibility study, the authority evaluated points of interest within the watershed and the existing and proposed routes necessary to connect them. The study areas included Carlisle Borough and the surrounding municipalities of North Middleton Township, South Middleton Township, and Middlesex Township.

NeWPeC Feasibility Study/Master Plan: The Newville to Carlisle Extension of the Cumberland Valley Rail Trail (2013)

This study explores a rail-to-trail conversion project in Cumberland County that would extend the current Cumberland Valley Rail Trail east from Newville to a new terminus in Carlisle. This document provides recommendations for development, operation, management, and maintenance. Design specifications are not part of the plan, however.

The envisioned trail extension would connect to several existing and planned trails, including Green Ridge Village senior community, Big Spring High School, and the Carlisle Bicycle/Pedestrian Trail Network.

Eastern Cumberland County Regional Trails Master Plan (2013)

This plan is a regional trails master plan for eight municipalities in eastern Cumberland County - Camp Hill Borough, East Pennsboro Township, Hampden Township, Lower Allen Township, Mechanicsburg Borough, Monroe Township, Silver Spring Township, and Upper Allen Township. The primary purpose of the initiative was to compile and organize multi-municipal data into a single, consistent plan and then identify region-wide trail destinations, linkages, costs, and priorities.

The plan identified nine priority corridors for on-road and off-road improvements for bicyclists and pedestrians in eastern Cumberland County. Routes and estimated construction costs follow.



Eastern Cumberland County Regional Trails Master Plan Priority Corridors

Proposed Bicycle and Pedestrian Route	Estimated Cost
(A) Locust Point Road	\$ 91,130
(B) Conodoguinet Pkwy / S. Market St.	\$348,288
(C) River Road / Bella Vista Drive / 21st St.	\$333,594
(D) Arcona Rd. / Lisburn Road	\$122,570
(E) Wertzville Rd. / Creekview Rd./ Orrs Bridge Rd.	\$285,064
(F) Carlisle Pike	\$864,324
(G) Trindle Road	\$376,844
(H) Boiling Springs Road	\$ 95,682
(I) Lisburn Road / Main St.	\$212,662
Grand Total for Priority Routes Only	\$2,730,158

Susquehanna Cross-River Connections Study (2014)

This study involved evaluating four bridges connecting the City of Harrisburg to the municipalities on the West Shore of the Susquehanna River—the M. Harvey Taylor Bridge, Walnut Street Bridge, Market Street Bridge, and the former Cumberland Valley Railroad Bridge (also referred to as the CAT Bridge). The purpose of the study was to evaluate and enhance existing connections between the City of Harrisburg and West Shore communities while improving safety and mobility for all modes of transportation. A particular emphasis was given to non-motorized modes. The study produced a range of improvement options that ranged from minor spot improvements such as crosswalks and new signage to a detailed exploration of the reuse of the CAT Bridge for the exclusive use of bicycles, pedestrians, and transit. A number of the recommendations from the study have been placed on the 2015-2018 TIP for funding.

A number of the recommended improvements from the 2014 Cross-River Connections Study have been placed on the 2015-2018 TIP for funding.

Dauphin County Regional Bicycle Connections Study (in progress)

The Regional Bike Connections Study encompasses the municipalities of Harrisburg City, Swatara Township, Paxtang Borough, Hummelstown Borough, and Derry Township within Dauphin County. North and South Londonderry Townships and Palmyra Borough in Lebanon County are also involved in the study. The effort will seek to identify existing bike trails and bike routes and then identify needed links



and extensions. Specific infrastructure improvement recommendations will be made. The study is expected to conclude in late 2014.

Lykens Valley Rail Trail Feasibility Study (2005)

This feasibility study describes the existing former rail corridor extending from Millersburg, Dauphin County, west to Williamstown and the Schuylkill County line and explores its conversion to a rail-trail. The trail would span a distance of 20.5 miles and connect several of the boroughs of upper Dauphin County. The study explored the surrounding landscape and natural resources and considered potential impacts of the trail.

Local Level

Municipalities throughout the HATS region have addressed bicycle and pedestrian issues in a wide variety of ways. Based on input from the study advisory committee and from stakeholder interviews, several municipalities were identified that have been actively planning for cycling and pedestrians. The study team conducted interviews with a representative from each of those municipalities to collect first-hand information on their planning efforts. Summaries follow by municipality.

Lower Allen Township, Cumberland County

Lower Allen Township's 2006 Comprehensive Plan set the stage for its current efforts to include bicycle and pedestrian accommodations in the township. Public outreach identified a desire for more trails in the community. In response, a citizen committee was formed to create a trail network plan for the township. The resultant plan identified proposed on- and off-road connections and prioritized their implementation. To give the trail plan legal weight, it was made a part of the township's Official Map. To date, the entire trail plan has been implemented and the township is considering how the next phase of trail planning should evolve.

After adopting the 2006 Comprehensive Plan, Lower Allen Township updated its zoning ordinance and subdivision and land development ordinance (SALDO) to implement the plan. The SALDO currently contains the following requirements that are favorable for bicycle and pedestrian travel:

- Requires pedestrian connections between developments, even if roadway connections are not made.
- Requires dedication of recreation land or a fee in lieu thereof. Trails may be used to satisfy this requirement if they make connections outside of the immediate development.
- Requires sidewalks in all developments, or a fee in lieu of them if they are waived. Any fees generated are placed into a sidewalk fund to make connections where gaps exist.

Derry Township, Dauphin County

Derry Township has been very successful in developing the Jonathan Eshenour Memorial Trail. The trail is currently 13 miles long and runs through much of the township, providing access to parks,

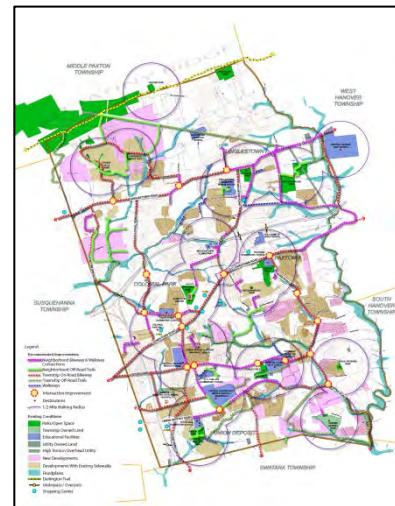
neighborhoods, and commercial areas. The trail has benefitted from donations by the Eshenour Foundation, which has collected funds in memory of the trail's namesake, a local resident who died in a bicycle crash in 1997. Major landholders such as the Milton Hershey School and the Hershey Medical Center have provided trail easements over their property to make connections.

The trail has generally been considered a recreational asset rather than a transportation facility. However, the township is in the midst of an update to its comprehensive plan as well as a multi-municipal bicycle connections study, and aims to enhance the transportation aspect of the trail. This new focus could help to create new sections of the trail that enable it to function as a transportation corridor as well as a recreational amenity.

Lower Paxton Township, Dauphin County

In 2004, Lower Paxton Township adopted a new comprehensive plan. The top issue identified during public outreach (beyond taxes and traffic congestion) was the lack of facilities for biking and walking, both on-road and off-road. To address this deficiency, a greenways plan was created by the township's recreation commission. That plan identified proposed trails and on-road accommodations for bicyclists and walkers that could be developed to connect all areas of the township.

Following the creation of the greenways plan, a Greenways Committee was formed to drive the implementation of the plan. The committee meets regularly and pursues projects that build on the existing system of trails and paths to form connections and a network. They also explore ways to make roadways more accommodating to pedestrians and bicyclists. In addition, the committee has made recommendations to the planning commission regarding updates to the SALDO to require development plans to show existing and planned greenways.



Carlisle Borough, Cumberland County

Carlisle Borough began its interest in greater bicycle and pedestrian accommodations in 2006 when the LeTort Regional Authority and Carlisle Borough applied for a Cumberland County Land Partnerships grant to do a trail and urban greenways study. This study included the borough and its surrounding townships and envisioned a network of interconnected trails and on-road routes that built upon the existing LeTort Nature Trail. To date, the borough has built out all trails called for in the study and currently has a 13.8-mile network of trails and enhanced streets connecting all parks, schools, and downtown Carlisle. The borough is currently implementing a plan to install signage and sharrows (shared lane markings) on the roads with bike trails.

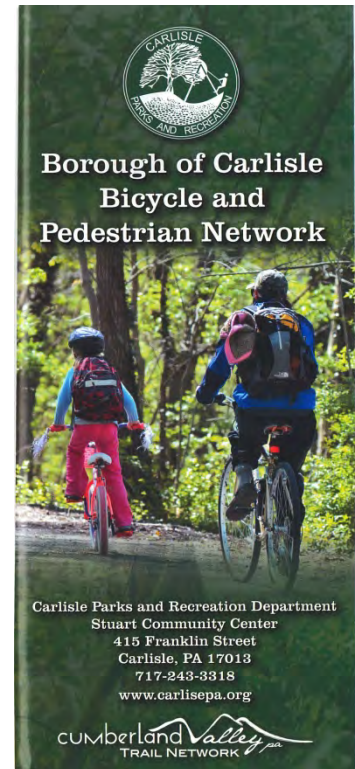


The LeTort plan did not call for the downtown Carlisle “road diet” (reducing 4 lanes of traffic to 2 in order to allow the creation of a center turn lane and bike lanes) but likely influenced its approval and implementation by setting the stage for the current bicycle and pedestrian emphasis. Public sentiment regarding the road diet continues to be mixed, but the bike lanes are well-used.

Commonalities

Several commonalities among these municipalities may indicate criteria for success for expanded bicycle and pedestrian initiatives in other municipalities. Each of the following factors was mentioned by at least two of the four municipalities as being instrumental in their efforts:

- Public input supporting greater bicycle and pedestrian accommodations, especially trails.
- Use of a comprehensive plan or other planning document to expand discussions and interest in bicycling and walking issues.
- Buy-in of the municipal governing body.
- The active involvement of at least one champion to drive plans through to implementation.

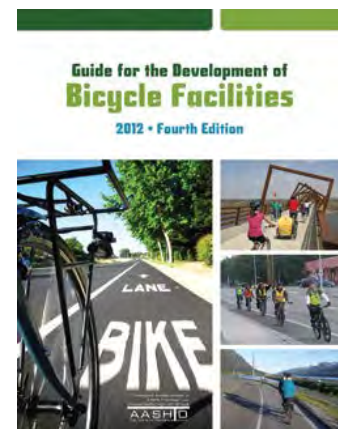


Design Standards

Several guidebooks, manuals, and standards exist for the design and construction of bicycle and pedestrian facilities. These can be used in conjunction with the standards in the American Association of State Highway and Transportation Officials (AASHTO) “Green Book” (A Policy on Geometric Design of Highways and Streets) and the PennDOT Design Manual. FHWA has officially endorsed the first four documents described below. In a memo dated August 20, 2013, FHWA notes that these documents represent the type of design flexibility recommended for the further development of non-motorized transportation networks.

AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities, 4th ed. (2012)

The AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities provides technical guidance on how to plan for and design bicycle infrastructure. The guide first discusses planning considerations, including data collection, travel demand analysis, and improvement selection. It then presents design standard for the most common bicycle infrastructure, including:





- Shared lanes
- Marked shared lanes
- Paved shoulders
- Marked bike lanes
- Bike boulevards
- Shared use paths
- Bike parking

AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities (2004)

This document provides guidance on the planning, design, and operation of pedestrian facilities along streets and highways. Recommended measures to accommodate pedestrians vary depending on the type of roadway facility, adjacent land uses, and design of individual building sites.

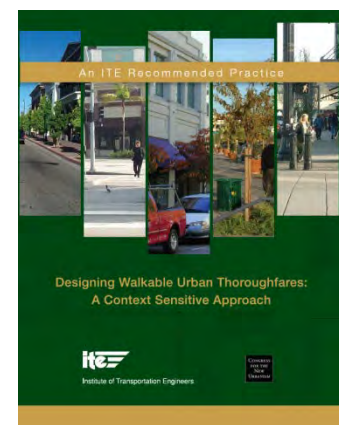
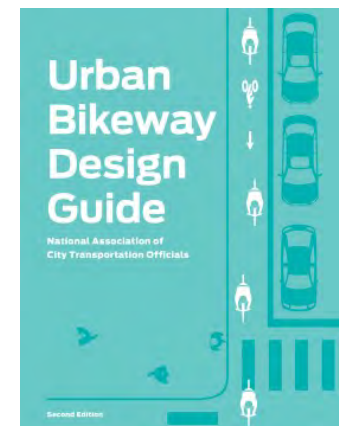
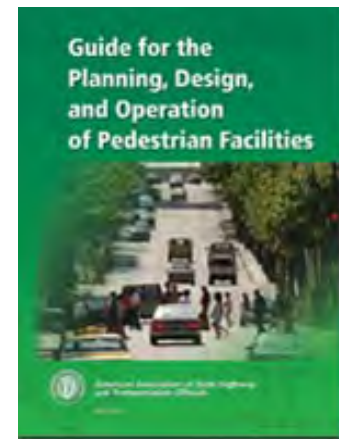
NACTO Urban Bikeway Design Guide (2012)

The NACTO Urban Bikeway Design Guide is based on best practices and is specifically oriented toward city streets. Most of the treatments detailed are not directly referenced in the current version of the AASHTO Guide to Bicycle Facilities, although nearly all are permitted under the Manual on Uniform Traffic Control Devices (MUTCD). All of the NACTO Urban Bikeway Design Guide treatments are in use in cities in the U.S. and around the world. Some of the designs included in this guide that are not included in the AASHTO Guide are:

- Buffered bike lanes
- Contra-flow bike lanes
- Left-side bike lanes
- Raised cycle tracks
- Bike boxes (designated signalized intersection area)
- Various signing and marking options

ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach (2010)

This guide shows how the flexibility inherent within the AASHTO “Green Book” (A Policy on Geometric Design of Highways and Streets) can be used to create walkable, bikeable, and transit-supportive roadways within

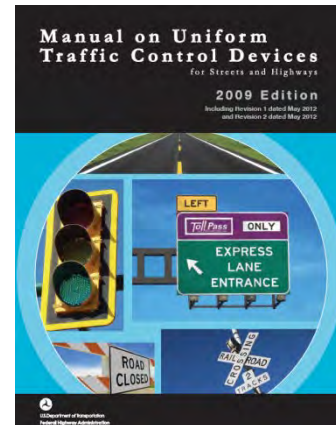


urbanized areas. It describes how to balance the needs of all roadway users and considers land uses and community desires for the areas.

Manual on Uniform Traffic Control Devices (MUTCD)

The FHWA MUTCD provides guidance on the placement of signs, signals, and pavement markings. It includes guidance on the following topics applicable to bicycle and pedestrian modes:

- Pedestrian crosswalks and mid-block crossings
- Pedestrian traffic signals
- Pedestrian signs
- Bike lane striping and marking
- Sharrow (shared lane) markings
- Bicycle signs such as Share the Road and Bicycle Route



U.S. Department of Transportation ADA Standards for Transportation Facilities (2006)

The Americans with Disabilities Act of 1990 (ADA) prohibits discrimination based on disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications. Implementing regulations for the ADA require all newly constructed or altered public facilities to be accessible to persons with disabilities, including public streets and sidewalks.

The U.S. Department of Transportation has issued ADA standards for transportation facilities that are based on the ADA Accessibility Guidelines produced by the United States Access Board. In general, the ADA standards regulate the following factors related to pedestrian travel ways:

- Sidewalk width, grade, and cross slope
- Curb ramp placement, grade, and detectable warnings
- Traffic signal timing for pedestrian phases and the location of pedestrian push buttons

The U.S. Access Board is currently developing additional ADA standards specifically for public rights-of-way that will provide additional guidance on issues not addressed in the current U.S. DOT ADA standards, such as: wheelchair access to on-street parking, pedestrian signals, and crosswalks.

Additional Resources

In addition to the design standards listed in the previous section, the following resources are noted as worthwhile resources for creating communities that encourage walking and bicycling.



League of American Bicyclists – Bicycle Friendly America

The League of American Bicyclists has developed the Bicycle Friendly America program as a means to provide a roadmap, hands-on assistance, and recognition for states, communities, universities, and businesses that want to improve conditions for bicycling.

The program has four components; the Bicycle Friendly Community component is most applicable to this study. It analyzes a community using more than 50 elements that fall within one of five categories of evaluation:

- Engineering – Creating safe and convenient places to ride and park.
- Education – Giving people of all ages and abilities the skills and confidence to ride.
- Encouragement – Creating a strong bike culture that welcomes and celebrates bicycling.
- Enforcement – Ensuring safe roads for all users.
- Evaluation and Planning – Planning for bicycling as a safe and viable transportation option.



Based on the results of the evaluation, a community may be awarded a Bicycle Friendly Community designation. There are five levels of designation: bronze, silver, gold, platinum, and diamond.

Pennsylvania has five bicycle friendly Communities: Philadelphia, Pittsburgh, State College, York, and Franklin. All are ranked in the bronze category, with the exception of Philadelphia, which is ranked silver.

Walk Friendly Communities

Walk Friendly Communities is an initiative sponsored by a number of different organizations, including private companies, government agencies, and private associations. It is designed to be a national program to provide information to encourage communities to prioritize safe walking environments, as well as to recognize those communities that successfully do so. The Walk Friendly Communities program utilizes the same five categories of evaluation as the Bicycle Friendly Communities program, and awards are given at four levels: bronze, silver, gold, and platinum. Pennsylvania has two Walk Friendly Communities: Philadelphia (silver) and Indiana (bronze).

Trail and Path Planning: A Guide for Municipalities

This guide, developed by Chester County Planning Commission and released in 2007, presents information on how municipalities can address trail and path planning in their various planning and



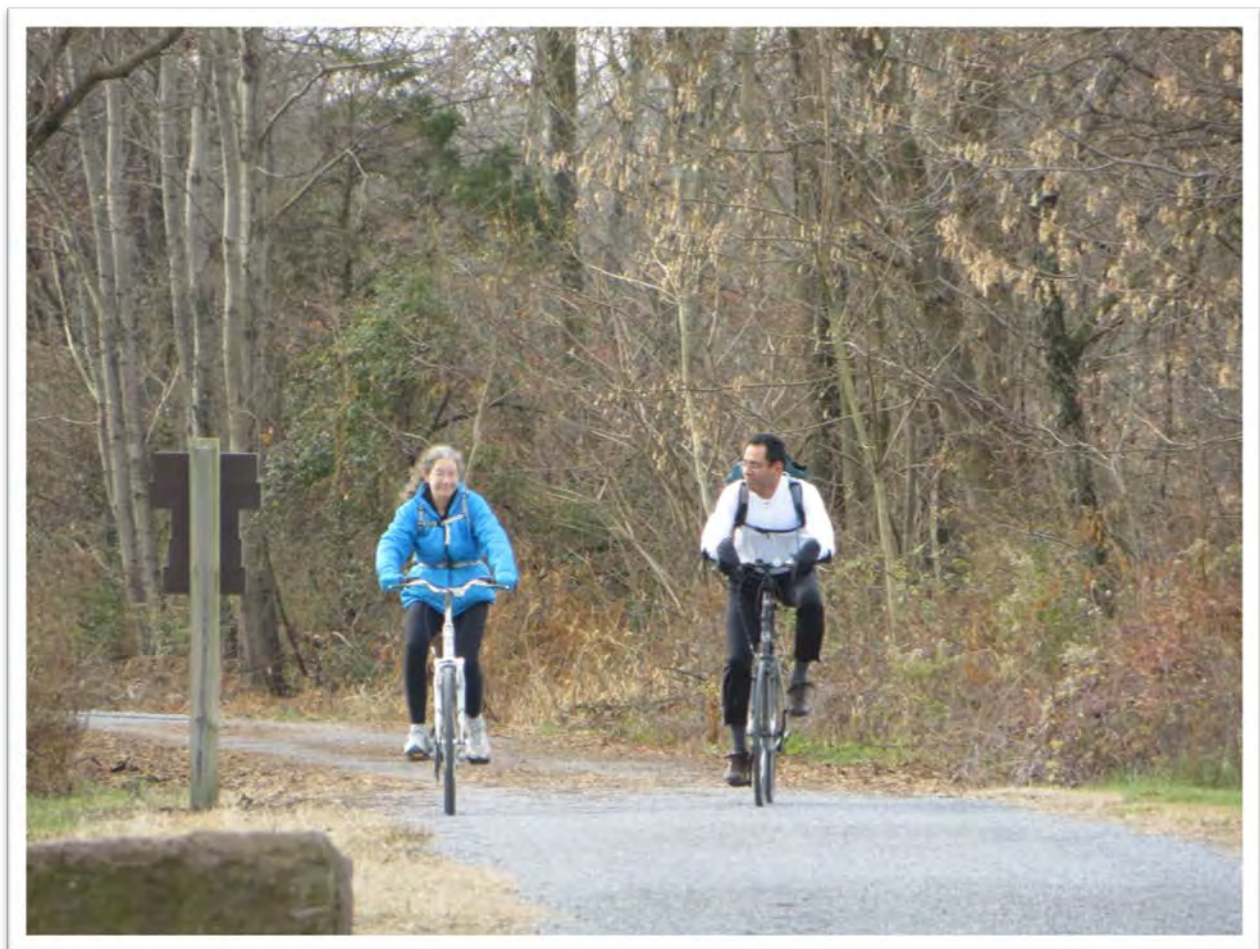
regulatory documents. The comprehensive plan, zoning ordinance, subdivision and land development ordinance, and official map may all be used to encourage proper location and construction of trails.

<http://www.chesco.org/DocumentCenter/View/415>

Pennsylvania Trail Design and Development Principles: Guidelines for Sustainable Non-Motorized Trails

This document, prepared by the Pennsylvania Department of Conservation and Natural Resources, includes more than 250 pages of detailed information on creating trails for non-motorized users, including shared use paths for both bicyclists and pedestrians. It contains five chapters covering the full range of necessary trail information, including planning, design requirements, sustainability, construction, and management.

http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_20028130.pdf





The Types of Cyclists

Cyclists can be grouped into various categories reflecting their skill level and trip purpose, which directly influence their infrastructure needs. Several classification schemes have been developed by different organizations. These categorizations are important to consider when designing bicycle facilities and targeting activities designed to expand cycling within an area.

ABC Classification

The ABC classification scheme includes three groups of cyclists.

Advanced (A) cyclists regularly ride a bicycle for everyday commuting and recreation. They typically prefer the fastest and most direct route, especially when commuting.

Basic (B) cyclists are those that are more comfortable on dedicated facilities, avoiding shared use roadways. They generally do not ride every day, and when they do, they primarily ride for recreation.

Children (C) act much like basic riders, but require the use of helmets, and are generally accompanied by adults, except on local or residential streets.

A variation on this theme combines the B and C groups together because in practice their riding characteristics and needs are similar.

AASHTO Classification

The AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities suggests that riders can be classified in three separate categories.

- **Trip Purpose** – utilitarian vs. recreation
- **Rider Age** – older vs. younger
- **Rider Skill and Comfort** – experienced and confident vs. casual and less confident

The characteristics of each classification can be used to anticipate the type of cycling infrastructure most appropriate for that user.

Portland Classification

Another way to classify cyclists was developed in 2006 by Roger Geller, the Bicycle Coordinator for the Portland, Oregon, Office of Transportation. This classification was meant to address bicycling for transportation, rather than recreation. He divided the population of Portland into four basic groups:

- Strong and Fearless
- Enthused and Confident
- Interested but Concerned
- No Way, No How



The **Strong and Fearless** riders will cycle regardless of roadway conditions. Riding a bicycle is a core part of their identity and they will ride almost anywhere.

The **Enthusied and Confident** cyclists are often comfortable sharing the road with automobile traffic, but given a choice, prefer to operate in bike lanes or other bicycle infrastructure.

The largest percentage of the population is **Interested but Concerned**. They have heard about how bicycle-friendly Portland is and may even like riding a bicycle, but they are afraid to ride with motorized traffic. Traffic fears prevent them from riding more often or riding on the larger roads that would be required to commute to work or other destinations.



The **No Way, No How** group is completely uninterested in bicycling because of topography, inability, or lack of interest.

Geller estimated the percentage of Portland’s population that fell into each category. In an attempt to validate the four categories and Geller’s estimate, in 2013 a scientific survey was done in the Portland region.⁷ Based on the survey and associated analysis, a new estimate of the percentage of the population in each category was created. The distribution of the population into the four categories based on the two estimates is presented in the following table.

Estimated Distribution of Portland Bicyclists by Category

Category	Geller’s Estimate	2013 Study
Strong and Fearless	<1%	4%
Enthusied and Confident	7%	9%
Interested but Concerned	60%	56%
No Way, No How	33%	31%

⁷ Dill, J. and N. McNeil, Transportation Research Record, No. 2387, Transportation Research Board of the National Academies, Washington, D.C., 2013, pp. 129-138.



In each estimate of the distribution of cyclists into the four categories, the largest group is the Interested but Concerned. The large size, coupled with the fact that they have some level of interest in bicycling, makes them the prime audience to target using various methods for increased cycling levels.

Additional survey questions provided greater clarity to the perceptions and attitudes of this group. Data from the survey showed that the Interested but Concerned group had similar levels of interest in bicycling as both the Strong and Fearless and the Enthused and Confident groups. The Interested but Concerned group, however, had concerns about safety, traffic, and cycling ease that were greater than the other groups. Based on an analysis of the survey questions, the study offered several actions that may entice the Interested but Concerned group to begin cycling for transportation or to cycle more frequently.

- Where possible, create paths and trails separate from the streets.
- On roadways with high volumes, high speeds, and/or multiple lanes, create bicycle infrastructure that increases the physical separation from motor vehicles, such as bicycle tracks.
- Introduce traffic calming, speed controls, and bike lanes within neighborhoods and lower volume roads.
- Create a mix of land uses to bring origins and destinations closer together.
- Design encouragement programs showing that people socially similar to them also ride a bicycle for transportation.

For maximum results, these factors should be considered when planning infrastructure upgrades and outreach programs designed to encourage bicycling.

Types of Walking and Biking Infrastructure

There are several general types of infrastructure for bicycling and walking. For each type, there are multiple variations. Each situation, with its unique location and circumstances, may require a unique treatment to ensure the safety and mobility of these users. Detailed guidance on selecting the best treatment is contained in the Design Standards section of this report. The general facility types are described below.

Bicycle Facilities

Shared Roadway (no shoulder)

Shared use of roadway travel lane by bicycles and motor vehicles.

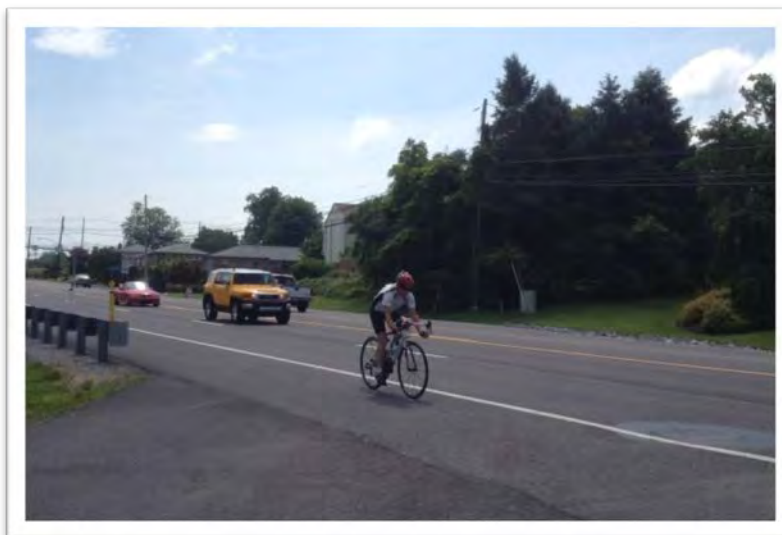
Sharing the lane in Lemoyne Borough



Shared Roadway (paved shoulder)

Delineated shoulder available for bicyclists.

Shoulder on Linglestown Road





Bike Lane

Dedicated lane for non-motorized vehicles

Bike Lane in Carlisle Borough



Bicycle Boulevard

Shared roadway with low traffic volumes with specific amenities to improve the bicycling environment.

Berkeley, California, Bicycle Boulevard
Photo: Payton Chung, flickr.com, [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)



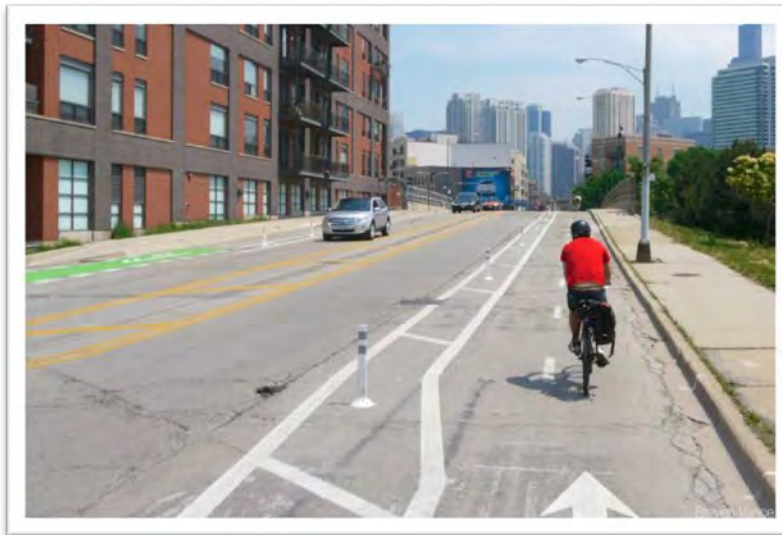


Cycle Track

Dedicated one- or two-way lane(s) separated from motor vehicles by curbs, parked cars, bollards (short posts) or other physical barriers.

Milwaukee Avenue Cycle Track, Chicago, Illinois

Photo: Steven Vance, flickr.com, [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)



Pedestrian Facilities

Sidewalks

Pathways parallel to roadways.

Sidewalk in downtown Lemoyne Borough





High Visibility Crosswalk

Pedestrian pavement markings that are easily seen by motorists.

High visibility crosswalk in Camp Hill



Signalized Intersection Improvements

Treatments targeted to improve pedestrian safety and comfort, including pedestrian signals.

Pedestrian signal head in Harrisburg City





Mid-block Crosswalk

Designated roadway crossings at locations other than an intersection.

Mid-block crosswalk in Camp Hill

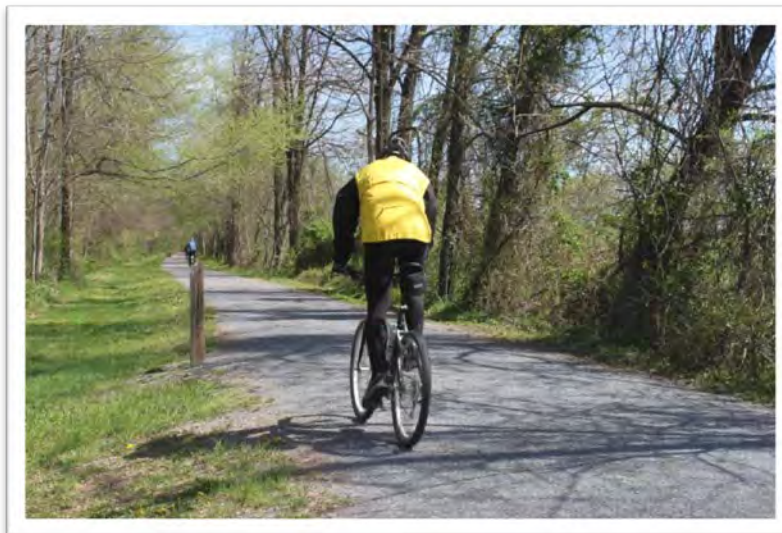


Shared-Use Facilities

Multi-Use Trails

Off-road facilities for multiple user modes.

Cumberland Valley Rail Trail





What is the Current Environment for Biking and Walking?

This section discusses the environment within Cumberland, Dauphin, and Perry Counties for bicycling and walking. Existing facilities, rates of walking and biking, and vehicular crashes are reviewed.

Existing Facilities and Conditions

Map 1 (see Maps section at end of report) shows the major bicycle and pedestrian facilities in the region. The map does not include sidewalks because no database of sidewalk locations exists. It also does not include many small multi-use paths that are in local parks throughout the region. These trails and paths would not be distinguishable on mapping done at the regional level.

Maps 2 and 3 show the traffic volumes on state roads within the region. Bicyclists and pedestrians walking on roadways without sidewalks generally prefer lower volume roadways.

Maps 4, 5, and 6 show the roadways of the region classified by the type of cycling for which they are best suited. The Harrisburg Bicycle Club spearheaded the creation of these maps and based the classifications on in-person field observations of the roadways.

The maps include three classifications for the region's roadways. **Regional** routes are often the most direct routes between destinations and are most often chosen by bicyclists traveling for transportation. **Collector** routes may be used by cyclists to access the regional routes or may be used as a transportation route to a destination not located near a regional route. **Scenic** routes are lower volume roads in more rural areas that would most likely be used by a rider out for exercise or recreation.

These maps also show sections of roadway that are an important part of a longer regional, collector, or scenic route, but which are inadequate for safe bicycling. The most frequent problem is the lack of shoulders and inadequate lane width to accommodate safe cycling.

Maps 7 and 8 shows the areas of the region where walkability and sidewalk connectivity is most important. The map identifies many locations that should be accessible by foot, such as schools and major employers. The map indicates a ½-mile buffer around each of these locations. A half-mile is a distance that is walkable by most people in 15 to 20 minutes. Overlapping buffer areas are shown in yellow, orange, or red, based on the number of overlapping buffer areas. The areas that are the "hottest" represent the most overlapping buffers and therefore the greatest number of destinations with ½ mile. These areas should be prioritized for pedestrian improvement projects.

As noted previously, Map 9 shows the major bicycle and pedestrian studies of the region that have been completed to date. In addition, the map indicates potential destinations and corridors that could be studied in the future for bicycle and pedestrian improvements.

Current Rate of Walking and Cycling

ACS Journey to Work



The federal government, previously with the U.S. Census and now with the American Community Survey (ACS), collects data on how people travel to their place of work. Commute trips represent less than 20 percent of all trips taken, however their influence is much larger. Commute trips define the peak travel demands placed on the transportation system within a region, and are therefore a major consideration when defining transportation needs on any specific corridor or area.

Data from the 2008-2012 ACS was used by the U.S. Census Bureau in a report on bicycling and walking, titled *Modes Less Traveled—Bicycling and Walking to*

Work in the United States: 2008-2012. Within this report, the cities in the U.S. with the highest levels of commuting by bicycle and walking were identified. Those cities with the highest levels of bicycle commuting are largely on the West Coast or Rocky Mountain region and tend to be college towns or have significant numbers of college-aged residents. Davis, California, has the highest rate of bicycling to work at 18.6 percent.

The top locations for walking to work are more geographically diverse. Many are again college towns or feature a destination such as a beach or military base. The top city for walking is Ithaca, New York, with a walking rate of 42.4 percent. State College, Pennsylvania, appears on this list with 36.2 percent of work trips occurring on foot.

Within the Tri-County region, the percentage of commuters that walked or rode a bike to work is much more modest than the top areas listed above. The percentage of people that cycle to work in the region is slightly less than the national average. In contrast, the region exceeds the national average of walking commuters. The tables below present the walk and bike share for the region based on the 2008-2012 ACS data.

Within the region, the percentage of commuters walking to work has decreased since 2000, consistent with national trends. Conversely, bicycling's commute share has risen slightly, tracking with the national average.

Note that the data from the ACS only represents trips to work. Any other walking or bicycling trips are not counted by the ACS or any other data collection effort. In order to count non-work trips, a separate physical count or large survey effort would be required.



Share of Bicycle Commuters

Location	Percentage of Commuters That Biked
Cumberland County	0.4
Dauphin County	0.2
Perry County	0.1
Regional Average	0.3
National Average	0.6

Source: U.S. Census Bureau, 2008-2012 ACS

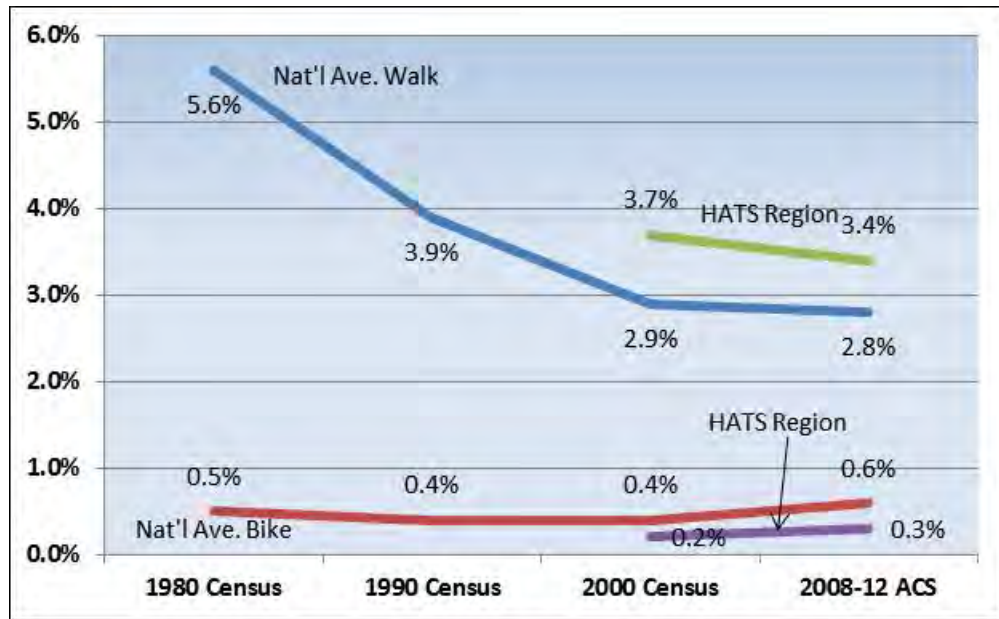
Share of Walking Commuters

Location	Percentage of Commuters That Walked
Cumberland County	3.9
Dauphin County	3.1
Perry County	2.4
Regional Average	3.4
National Average	2.8

Source: U.S. Census Bureau, 2008-2012 ACS



Walking and Bicycling to Work, National and Regional Averages



Source: U.S. Census Bureau

Transit Connections

The vast majority of transit riders walk to and from the bus. Thus, the quality of the pedestrian environment around bus routes and specifically at bus stops is especially important. Pedestrian improvement should be given priority near bus routes and stops, with particular attention paid to:

- Sidewalks or safe shoulders for walking.
- Well-marked crosswalks where bus stops and major destinations are on opposite sides of the street.
- Accessibility improvements, including curb ramps, pedestrian push buttons, and pedestrian signal heads at nearby intersections.

These types of improvements may be implemented as upgrades to existing infrastructure, where needed. These improvements are also important in areas of new development where transit service exists or where future service may be warranted. Municipalities can incorporate requirements for transit-friendly infrastructure into their ordinances for zoning and for subdivision and land development, and can request comments and suggestions from CAT for improving transit connections within or near to new development.

CAT has plans to install automated passenger counters (APC) in all buses by the end of 2014. APCs count the number of passengers boarding and alighting throughout the bus run and can provide detailed data about the usage of the bus stops within the transit system. Such data could be very useful to prioritize bicycle and pedestrian improvements near the transit stops with the greatest usage.

In recent years, transit agencies have provided new accommodations for bicycles because bicycles and transit are considered mutually beneficial transportation modes; the presence of one can increase the use of the other. A recent research study⁸ found that there are three main benefits from bicycle/transit integration:

- Given the accepted rule of thumb that transit will be used only by those within a 10-minute radius of a station or stop, bicycles significantly enlarge transit's catchment area.
- Integrating bicycles and transit allows bike riders to use transit in sub-optimal travel conditions (weather, difficult terrain, etc.).
- Increased ridership reduces auto dependency, and thus improves air quality.



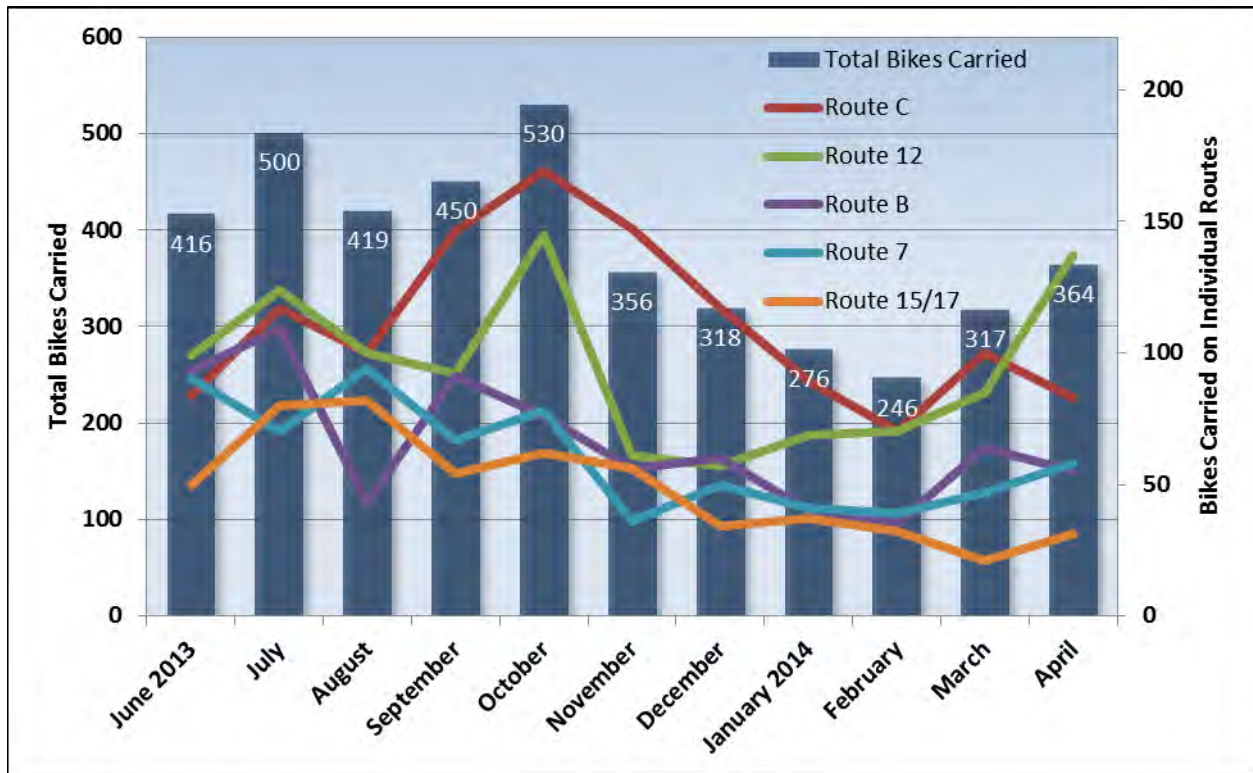
CAT has embraced the bikes-on-buses concept by equipping all buses with a bike rack. In addition, if the rack is full, an additional bike may be allowed inside the bus by the driver on a case-by-case basis. In Summer 2013, CAT began tracking the number of bikes that are transported on its buses. By tracking this data on an ongoing basis, CAT will better be able to plan to accommodate bicyclists on buses.

As the following chart shows, there are seasonal variations in the data, with the fewest bikes carried in the middle of winter. Bike numbers increase in springtime, take a dip in the hottest summer weather, and then rise again as the cooler fall temperatures prevail. Also shown are the five individual routes that carried the greatest number of bikes during the period. The individual routes show a seasonal variation, but with greater fluctuation month-to-month than the system-wide data. Route C (Carlisle) carried the most bikes overall during the period and also recorded the highest number of bike carries in a month (169) in October 2013. Route 12 (Colonial Park/Lingelstown) has also shown strong bike usage, with a clear upward trend in April 2014.

⁸ TCRP Synthesis 62, Integration of Bicycles and Transit



Bicycles Carried by Capital Area Transit by Month and Route



Source: Capital Area Transit

Crashes with Bicycle and Pedestrian Involvement

Bicycle riders and pedestrians are more susceptible to injury or death in a crash because they are not protected by a vehicle the way a driver or passenger is. Additionally, roadway design can be a contributing factor to crashes, therefore an analysis of crashes and locations can help identify areas where physical improvements can increase safety for all users.

In the five most recent years for which data is available, the Tri-County region saw 238 crashes involving bicyclists and 685 with pedestrians. Perry County has the fewest of each type of crash, but also has the fewest trips made by bike or foot. Cumberland and Dauphin have nearly identical bicycle crash numbers, but Dauphin had more than twice as many pedestrian crashes as Cumberland. This disparity is likely due to the fact that the principal urban area of the region, Harrisburg City, is located in Dauphin County. Many more pedestrian trips are made within the city than other areas of the region.



Crashes with Bicycle or Pedestrian Involvement, 2008-2012

	Cumberland County	Dauphin County	Perry County	Total
Bicycle	115	114	9	238
Pedestrian	207	451	27	685
Total	322	565	36	923

Source: PennDOT

Attesting to the fact that bicyclists and pedestrians are very susceptible to injury and death in a traffic crash, of the 923 reported crashes, 920 of them resulted in an injury or death. In all, there were 49 deaths and 918 persons injured. Two of the five bike fatalities were the fault of the bicyclist. In one case the bicyclist was riding on the wrong side of the road and didn't stop at an intersection.

Bicycle and Pedestrian Causing Injury or Fatality, 2008-2012

	Fatalities	Injuries
Bicycle	5	240
Pedestrian	44	678
Total	49	918

Source: PennDOT

The data includes information on several data points, allowing for greater understanding of factors that may have contributed to the crash. The next several tables explore some of these factors. The type of illumination at the time of the crash is the first factor to consider. Although a significant number of crashes occurred in the dark or under street light conditions, the majority of both pedestrian and bicycle crashes were during the day with no adverse lighting conditions.



Bicycle and Pedestrian Crashes by Illumination, 2008-2012

	Dark	Dawn	Daylight	Dusk	Street Lights	Other	Total
Bicycle	10	2	188	13	24	1	238
Pedestrian	80	9	428	13	150	5	685
Total	90	11	616	26	174	6	923
Bicycle	4%	1%	79%	5%	10%	0%	100%
Pedestrian	12%	1%	62%	2%	22%	1%	100%
Total	10%	1%	67%	3%	19%	1%	100%

Source: PennDOT

Crashes are also classified by their location. As the data in the table below shows, pedestrian and bicycle crashes often differ in locations. A majority (57 percent) of pedestrian crashes occur at midblock locations rather than at intersections. By contrast, crashes with bicycle involvement are less likely to occur at midblock. Instead, the majority (62 percent) occur at an intersection, with most of those being a four-way intersection.

Bicycle and Pedestrian Crashes by Location/Intersection Type, 2008-2012

	Midblock	4-Way	T	Y	Roundabout	Multi-Leg	Other	Total
Bicycle	91	102	42	2	0	1	0	238
Pedestrian	393	194	87	3	1	1	6	685
Total	484	296	129	5	1	2	6	923
Bicycle	38%	43%	18%	1%	0%	0%	0%	100%
Pedestrian	57%	28%	13%	0%	0%	0%	1%	100%
Total	52%	32%	14%	1%	0%	0%	1%	100%

Source: PennDOT

The weather can play a role in crashes, and the data includes information on the weather at the time of the crash. The data displayed in the following table, however, shows that the weather likely played only a very minor role as a contributing factor to bicycle and pedestrian crashes. Ninety-five percent of bicycle crashes and 84 percent of pedestrian crashes occurred in clear weather.



Bicycle and Pedestrian Crashes by Weather, 2008-2012

	Clear	Rain	Fog	Rain/Fog	Sleet/Fog	Snow	Other	Total
Bicycle	227	10	0	0	0	0	1	238
Pedestrian	574	86	2	5	1	11	6	685
Total	801	96	2	5	1	11	7	923
Bicycle	95%	4%	0%	0%	0%	0%	0%	100%
Pedestrian	84%	13%	0%	1%	0%	2%	1%	100%
Total	87%	10%	0%	1%	0%	1%	1%	100%

Source: PennDOT

The crash data identifies actions taken by a vehicle driver or bicyclist that contributed to the cause of the crash. In more than half of the 238 bicycle crashes, the crash report stated that the bicyclist had taken actions that contributed to the crash. Those contributing actions are displayed in the table below. Running stop signs and driving on the wrong side of the road are frequent contributors to crashes.

Bicycle Crashes: Bicyclist Contributing Actions, 2008-2012

Bicyclist Actions	Crashes
Other improper driving actions	27
Running stop sign	20
Driving on the wrong side of roadway	13
Making improper/careless turn	11
No contributing action	10
Running red light	9
Making improper entrance to highway	9
Driving the wrong way on one-way street	6
Driver was distracted	6
Driver inexperienced	5
Proceeding w/o clearance after stop	5
All others	10
Total	131

Source: PennDOT



Where the vehicle driver was reported to have caused the crash, a specific contributing action may be listed, but often no contributing action is specified.

Bicycle Crashes: Vehicle Driver Contributing Actions, 2008-2012

Driver Actions	Crashes
No contributing action	35
Making improper/careless turn	12
Proceeding without clearance after stop	11
Careless passing or lane change	10
Other improper driving actions	8
All others	25
Total	101

Source: PennDOT

Similar to the bicycle crashes, contributing actions to pedestrian crashes are identified in the data. As shown in the table below, in more than half the crashes, the vehicle driver is listed as taking no actions that contributed to the crash.

Pedestrian Crashes: Vehicle Driver Contributing Actions, 2008-2012

Driver Actions	Crashes
No contributing action	344
Other improper driving actions	104
Unknown	56
Making improper/careless turn	30
Driver was distracted	28
Driving too fast for conditions	22
Careless or illegal backing on roadway	20
Proceeding w/o clearance after stop	16
Careless parking/unparking	13
Failure to respond to TCD	12
Speeding	7
Affected by physical condition	7
All Others	26
Total	685

Source: PennDOT

Included within the 685 crashes are 11 where the vehicle striking the pedestrian was a bicycle.



Existing Local Advocacy Groups

Advocacy groups can play a significant role in the creation of better conditions and facilities for bicycling and walking. The Tri-County region boasts a number of groups that have bicycle advocacy as a direct part of their mission or closely related to their mission. No advocacy groups are dedicated exclusively to pedestrian issues. The more prominent advocacy organizations are noted below with a brief explanation of their mission or purpose.

Harrisburg Bike Club (HBC)

The Harrisburg Bike Club is a recreational cycling club devoted to encouraging and promoting the riding of bicycles—safely, enjoyably, at all skill levels, and on all forms of bikes. HBC largely serves as an organizer of recreational group rides and related activities, but it also engages in bicycle advocacy efforts.

Bike Harrisburg

Bike Harrisburg began as a loose association of several groups celebrating bike month in 2012 with a series of events. The events were branded with the Bike Harrisburg name. The organization now operates mostly as a coalition of several different initiatives and groups and promotes bicycling in Harrisburg City.

Capital Area Greenbelt Association (CAGA)

The Capital Area Greenbelt Association was formed to organize and plan the continued stewardship of the Capital Area Greenbelt trail, based on the premise that users of public lands can and should accept some responsibility for taking care of those lands. CAGA organizes volunteers to form long-term partnerships with government land managing agencies. While CAGA does not have bicycle advocacy as a core part of its mission, the trail functions as a key piece of bicycling infrastructure in the region and many members of CAGA engage in other cycling advocacy efforts.



Commuter Services of PA

Commuter Services is a professionally staffed organization funded by federal Congestion Mitigation & Air Quality funds that works to reduce traffic congestion and air pollution by helping commuters find alternatives to driving alone, including biking and walking. In addition, Commuter Services reaches out to employers so they can help their workforce find those commuting options.

Quality Bicycle Products (QBP)

QBP is a wholesale distributor of cycling products to retail cycling stores. The company actively engages in promoting social change that supports bicycle riding as a way of life, with their efforts especially



focused in the communities in which they have a business location (Bloomington, Minnesota; Ogden, Utah; and Middletown, Pennsylvania). The Middletown facility will be relocating to Lancaster County in 2015. QBP is spearheading an effort to organize a coalition of bicycle advocates within the boundaries of PennDOT District 8.

Bicycle South Central Pennsylvania (BSCPA)

Bicycle South Central Pennsylvania was formed in Fall 2013 and is a coalition of bicycle advocates within Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, Perry, and York counties. This region coincides with PennDOT District 8. The organization has a 12-person Board of Directors with representation from seven of the eight counties. BSCPA is supported by QBP, the wholesale distributor of cycling products discussed in the previous paragraph.

Susquehanna Area Mountain Bike Association (SAMBA)

The purpose of the Susquehanna Area Mountain Bike Association is to protect and encourage mountain bike trail access by creating positive working relationships with area land management agencies. The association provides information, education, and support to Central Pennsylvania mountain bike riders.

Cumberland Valley Rails-to-Trails Council (CVRTC)

The Cumberland Valley Rails-to-Trails Council is a non-profit organization dedicated to the construction and maintenance of the Cumberland Valley Trail. The trail is now complete from the Shippensburg Township Park outside of Shippensburg to McFarland Street in Newville, approximately 9.5 miles. Plans call for the extension of the trail west into the center of Shippensburg and east to Carlisle Borough.

Appalachian Trail Conservancy

The Appalachian Trail Conservancy's mission is to preserve and manage the Appalachian Trail—ensuring that its natural beauty and cultural heritage can be shared and enjoyed today and into the future. It does this locally through its regional office, located in Boiling Springs Borough in Cumberland County. The presence of the local office has enabled ATC staff the opportunity to be very involved in planning activities in the HATS region.



Part 2 – Strategic Directions: Where Do We Want to Go?





Vision and Goals

The Bicycle and Pedestrian Advisory Committee invested several meetings into defining broad priorities for the HATS region related to bicycles and pedestrians. This direction is expressed at the highest level as an overarching vision of how the region should be addressing bicycling and walking. That vision is expanded into six goals that outline the principal ways that the vision can be achieved.

Vision

The Tri-County region steadily improves its policies, infrastructure, and programs to promote bicycle and pedestrian movement, connectivity, and safety. This systematic approach enables more people to bike and walk more often for transportation, recreation, and wellness.

Goals

- | | |
|-----------------------|---|
| Planning | Establish methods to identify and prioritize bicycle and pedestrian improvements. Leverage all available funding and non-financial resources to complete identified improvements. |
| Infrastructure | Improve the region's bicycle and pedestrian network connecting people, communities, and destinations for both transportation and recreation. |
| Culture | Implement education, enforcement, and encouragement initiatives targeting multiple audiences to foster a supportive climate for bicycling and walking. |
| Safety | Reduce crashes involving bicyclists and walkers through infrastructure improvements and educational efforts. |
| Health | Partner with health-related organizations and communities to increase bicycling and walking for wellness and disease prevention. |
| Partnerships | Create cooperative partnerships between public, private, and non-profit organizations to coordinate efforts for greater impact. |



Strategic Actions

For each of the identified goals, several strategic actions were developed by the advisory committee. The actions were not geared toward individual project-level improvements, but instead focused on advancing the study goals at a system-wide level. The advisory committee sorted the actions into two categories: Highest Priority Actions and Additional Actions for Later Consideration. High priority actions met one of several prioritization criteria, including:

- Creates a visible impact
- Benefits a large number of pedestrians and bicyclists
- Offers fast implementation potential, producing a quick win to build momentum
- Has an existing champion to shepherd progress
- Is relatively easy to implement
- Can be advanced by available resources, and has stakeholder support
- Creates synergy with other actions

Goal #1 - Planning

Establish methods to identify and prioritize bicycle and pedestrian improvements. Leverage all available funding and non-financial resources to complete identified improvements.

Highest Priority Actions

- Continue the Regional Connections grant program to promote regional multimodal connectivity.
- Engage municipal partners to undertake sub-regional or corridor studies of bicycling and walking facilities and needs.
- Create a comprehensive inventory of all identified bicycle and pedestrian improvements that can be considered for available funding programs.
- Establish a process to prioritize bicycle and pedestrian projects for available funding.

Additional Actions for Later Consideration

- Develop user-friendly information on the various funding sources for bicycle and pedestrian funding and disseminate through workshops, the Internet, and other media.
- Create a mini-grant program tailored to small-scale pedestrian and bicycle audits and assessments.
- Implement a web-based system to allow the public to submit bicycle and pedestrian improvement needs.
- Develop a toolbox of policies and ordinances that municipalities can use to support bicycling and walking.
- Inventory intersections with “no pedestrian crossing” signs and evaluate pedestrian safety improvements.
- Conduct transit stop audits to identify bicycle and pedestrian deficiencies.



- Help municipalities to analyze bicycle, pedestrian, and transit issues in local comprehensive plans.
- Identify primary critical gaps and barriers in the existing bicycle and pedestrian network and update on a regular basis.
- Continue the discussions begun in early 2014 regarding the startup of a bikeshare program in the Greater Southcentral Pennsylvania region.





Goal #2 - Infrastructure

Improve the region's bicycle and pedestrian network connecting people, communities, and destinations for both transportation and recreation.

Highest Priority Actions

- Advocate for a staff position at HATS dedicated to bicycle and pedestrian issues that can review projects prior to inclusion on the TIP, drive implementation of the goals and actions in this study, and act as the primary bicycle and pedestrian resource for the region.
- Ensure that the PennDOT Bicycle and Pedestrian Checklist is used on all HATS TIP projects.
- Assist the PA Pedalcycle and Pedestrian Advisory Committee in updating the PennDOT Bicycle and Pedestrian Checklist by providing input and review.
- Consider creating a HATS-specific bicycle and pedestrian checklist that includes a diverse range of criteria, including land use and economic development.
- Promote the use of the updated bicycle and pedestrian checklist by municipalities for their local projects. Establish a simple program to recognize those that do.
- Partner with PennDOT and municipalities to review resurfacing and maintenance projects to identify potential restriping, shoulder improvements, and other low-cost options that provide greater bicycle and pedestrian accommodation.
- Conduct a brief survey to understand what type of assistance would most benefit municipalities in developing bicycle and pedestrian infrastructure.

A staff position at HATS dedicated to bicycle and pedestrian issues is recommended as a regional resource to drive implementation of this plan.

Additional Actions for Later Consideration

- Construct all bicycle and pedestrian improvements according to accepted design standards. Establish a basic means to check/measure the percentage of projects that comply.
- Provide ongoing maintenance for bicycle and pedestrian infrastructure.
- Create a comprehensive GIS database of all existing bicycle and pedestrian infrastructure.
- Evaluate intersections for bicycle, pedestrian, and ADA accessibility when traffic signals are retimed and upgraded. Provide upgrades to the greatest extent possible without major modification.
- Evaluate water courses, electrical transmission rights-of-way, sewer easements, and other corridors as options for new off-road trails for bicyclists and pedestrians.
- Evaluate bus stops for bench, shelter, and bike parking needs.
- Establish phone or web hotlines for the public to report spot repair and maintenance issues on the bicycle and pedestrian network.



- Establish an ongoing data collection effort to quantify the usage and performance of the existing bicycle and pedestrian network.
- Conduct before and after studies of projects to evaluate the impacts of the improvements.
- Work with PennDOT and municipalities to proactively acquire additional right-of-way whenever possible to support future shoulder widening for non-motorized travel.





Goal #3 - Culture

Implement education, enforcement, and encouragement initiatives targeting multiple audiences to foster a supportive climate for bicycling and walking.

Highest Priority Actions

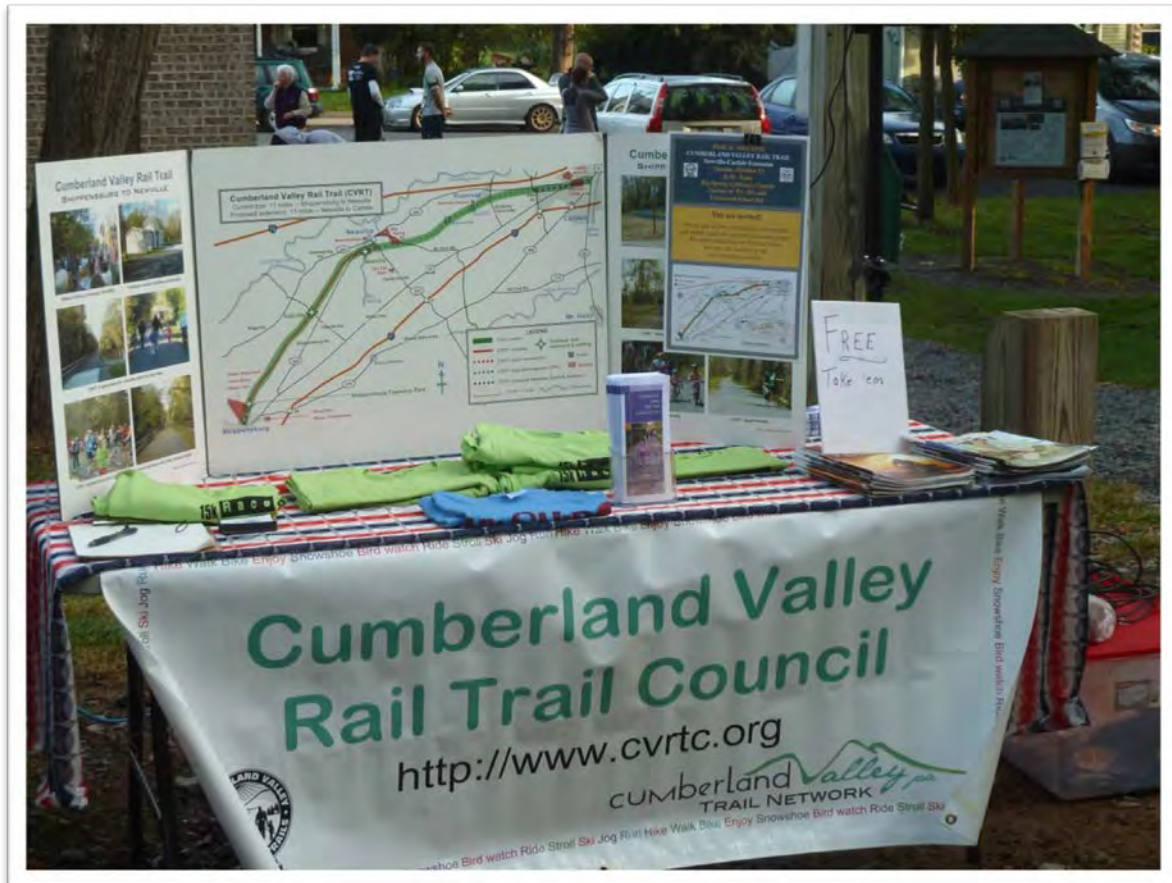
- Continue planning and partnership discussions regarding the creation of a multi-county regional bicycle sharing program.
- Create a network of organizations to partner with and support municipalities in pursuit of the Bicycle Friendly Community designation and Walk Friendly Community designation.
- Create a map of the best bike routes in Harrisburg City and surrounding areas based on information from actual users.
- Expand the use of free bicycle corral storage at special events to all events in the region. Combine bike corrals with off-site parking as a traffic and parking management program.

Additional Actions for Later Consideration

- Implement a program to provide funding and assistance to locate bicycle parking in needed locations.
- Establish commuter bike groups and commute buddies that meet to commute together to common destinations.
- Promote bicycle commuting through the Commuter Services of PA program.
- Conduct webinars, seminars, and other training on bicycle and pedestrian issues for planners and municipal personnel.
- Develop a “brand” for bicycling in the region and use that brand exclusively for bicycle events and information.
- Establish a series of bicycle and pedestrian events that engage multiple partners in planning, promotion, and execution.
- Promote car-free streets or car-free bridge days (Sunday Parkways).
- Establish one or more new local bicycle races and use such venues as a platform for sharing information on other initiatives.
- Establish bicycle tourist routes in scenic parts of the region and create maps. Seek partnership opportunities for the printing and distribution of the maps.
- Partner with Amtrak and PennDOT to accommodate/pilot walk-on bicycle service on the Keystone and Pennsylvanian trains.
- Continue to accommodate bicycles on transit and review bike-on-bus usage data to identify routes that may need additional capacity.
- Use subdivision and land development plan reviews as an opportunity to comment on bicycle and pedestrian connectivity issues.
- Embrace grassroots efforts that focus on livability, sustainability, community, and arts and seek cooperative partnerships with the organizers.



- Implement training and other programs to mainstream bicycle and pedestrian planning at state agencies (PennDOT Central Office, District Offices, and County Maintenance Offices; DCNR; DCED).



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Goal #4 - Safety

Reduce crashes involving bicyclists and walkers through infrastructure improvements and educational efforts.

Highest Priority Actions

- Partner with the Pennsylvania Department of Education, local driver education teachers, statewide driver education associations, AAA, AARP, and other organizations offering driver training to include bicycle and pedestrian safety messages in driver education training.
- Conduct an ongoing analysis of crash data to identify trends and problem areas.
- Seek Highway Safety funds from PennDOT to develop and implement bicycle and pedestrian safety campaigns. Seek partnerships with media organizations to publicize safety messages.

Additional Actions for Later Consideration

- Conduct an annual brief public survey to gauge perception of the safety of biking and walking.
- Create an ongoing program of walking and bicycling safety audits.
- Propose targeted police enforcement at problem intersections. Warn or ticket drivers, bicyclists, and walkers for unsafe and illegal behavior.
- Promote Pennsylvania's four-foot bicycle passing law using yard signs.
- Promote roadway safety at key intersections and roadways using sign waving events.
- Develop and implement bicycle rodeos and similar events for all ages to teach safe cycling techniques.
- Seek national and international models for training drivers about laws related to bicycles and pedestrians.
- Work with PennDOT to update the Pennsylvania Driver's Manual on an ongoing basis to adequately address laws related to bicycles and pedestrians.



Goal #5 - Health

Partner with health-related organizations and communities to increase bicycling and walking for wellness and disease prevention.

Highest Priority Actions

- Recruit healthcare personnel from hospitals, health insurance companies, public health agencies, and related organizations to participate in MPO planning activities.
- Participate with healthcare organizations such as Pinnacle Health and Holy Spirit Health System on their Community Healthcare Plans.
- Explore collaboration opportunities with the Pennsylvania Department of Health, Bureau of Health Promotion and Risk Reduction.

Additional Actions for Later Consideration

- Conduct health impact assessments on future land developments and highway projects.
- Conduct training for doctors on “Prescriptions for Walking” and similar initiatives.
- Seek other partnership opportunities with any organization with an interest in public health, such as:
 - Mission Readiness
 - Insurance companies
 - Healthcare organizations and hospitals



Goal #6 - Partnerships

Create cooperative partnerships between public, private, and non-profit organizations to coordinate efforts for greater impact.

Highest Priority Actions

- Establish ongoing public outreach methods that help identify issues and opportunities, including a basic speaker's bureau package to make presentations and share information. Integrate outreach with media partnerships action discussed under the Safety goal.
- Expand existing partnership with the Pennsylvania Department of Conservation and Natural Resources (DCNR) for training opportunities.
- Routinely identify potential partners by sectors and follow up with outreach to determine mutually beneficial projects.
 - Colleges and Universities – field projects
 - Boy Scouts – Eagle Scout projects
 - Religious youth groups – service projects
 - Civic Improvement groups (e.g., Harrisburg Young Professionals)
 - Vo Tech Schools – practice for construction trades

Additional Actions for Later Consideration

- Support the startup and continuation of the new bicycle advocacy group: Bicycle South Central PA.
- Support the startup of a pedestrian advocacy group.
- Create a program that trains partner organizations and interested citizens to perform bicycling and walking audits.
- Establish training for law enforcement personnel in bicycle and pedestrian laws and enforcement.
- Strengthen and build on existing partnerships with PennDOT, the Pennsylvania Department of Health, DCNR, school districts, and others.





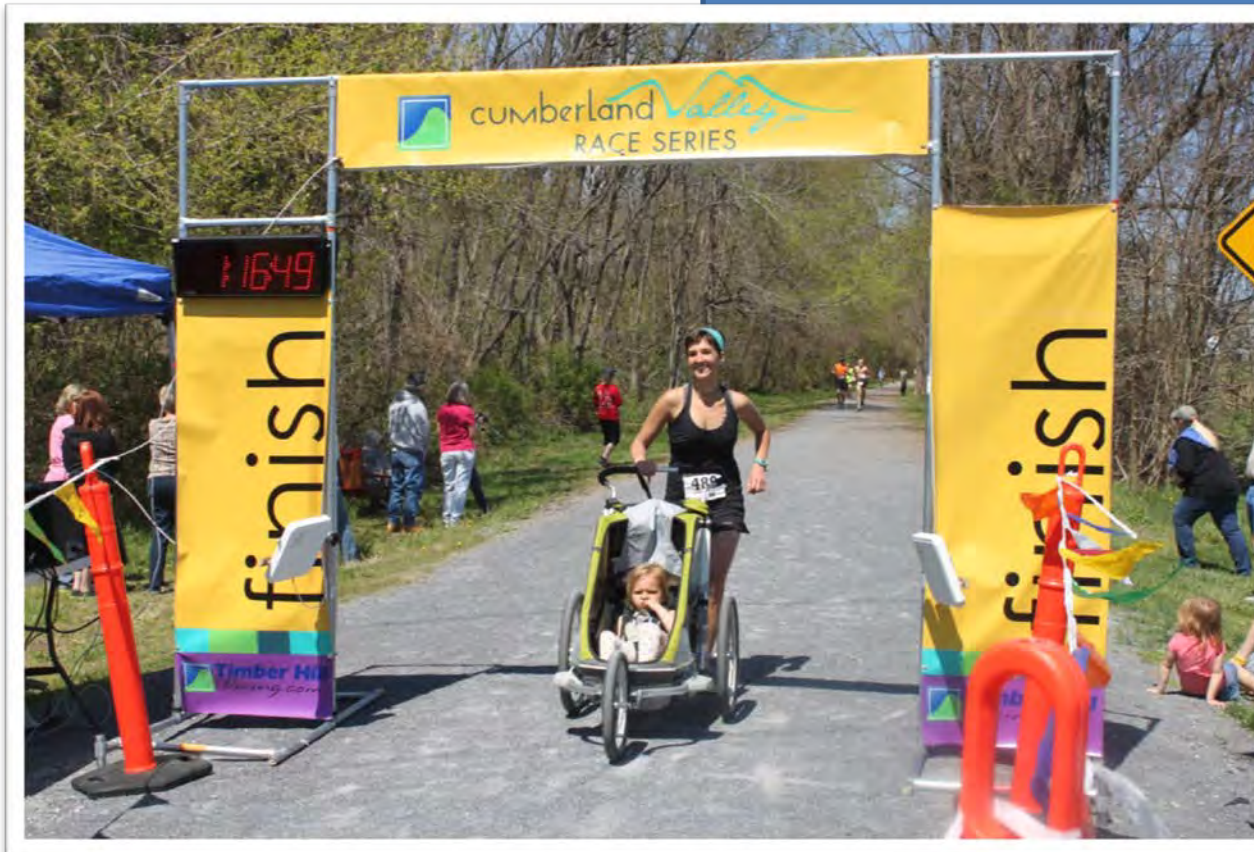
Performance Measures

The Bicycle and Pedestrian Study Advisory Committee developed several performance measures to be considered. These performance measures can be used to track trends in bicycling and walking and gauge the effects of implementing this study’s recommendations. Future implementation of any of the performance measures will be based on rulemaking and policy released from FHWA based on MAP-21 and its successor legislation.

Planning	Establish methods to identify and prioritize bicycle and pedestrian improvements leveraging all available funding and non-financial resources.
	<ul style="list-style-type: none"> • Number of bicycle and pedestrian projects added to the comprehensive project inventory. • Percentage of comprehensive plans that include bicycle and pedestrian transportation.
Infrastructure	Improve the region’s bicycle and pedestrian network connecting people, communities, and destinations for both transportation and recreation.
	<ul style="list-style-type: none"> • Number of bicycle and pedestrian projects completed. Projects should have been identified in a formal study or other established process.
Culture	Implement education, enforcement, and encouragement initiatives targeting multiple audiences to foster a supportive climate for bicycling and walking.
	<ul style="list-style-type: none"> • Percentage of commuters walking or bicycling as counted by the ACS. • Number of bicycles carried by CAT buses.
Safety	Reduce crashes involving bicyclists and pedestrians through infrastructure improvements and educational efforts.
	<ul style="list-style-type: none"> • Number of crashes, injuries, and fatalities involving bicyclists and pedestrians (tracked in absolute numbers and also as a ratio compared to total travel and total population).
Health	Partner with health-related organizations and communities to increase bicycling and walking for wellness and disease prevention.
	<ul style="list-style-type: none"> • Physical activity levels as measured by U.S. Centers for Disease Control and Prevention.
Partnerships	Create cooperative partnerships between public, private, and non-profit organizations to coordinate efforts for greater impact.
	<ul style="list-style-type: none"> • Number of organizations collaborating on bicycling and walking advocacy.



Part 3 – Tactical Approach: How Will We Get There?





Implementation

The effectiveness of any plan depends on how well the implementation design has been considered and agreed to by the plan “owners” and key stakeholders. This section summarizes how the HATS Bicycle and Pedestrian Study will be implemented. Many plans rely on an action tracker or action agenda as the primary management tool for implementing the plan and communicating progress, updating decision-makers, etc. This plan will rely on a simple action tracker as well—the initial action tracker follows this section. Action trackers are updated on an ongoing basis and are meant to be actively used and updated to plan next steps and prioritize strategies.

Implementation Priority Approach

A range of implementation factors was reviewed with the Bicycle and Pedestrian Study Advisory Committee, and a discussion followed to prioritize the factors. There was a general consensus that the following factors were most important in supporting plan implementation. Each factor is discussed in greater detail and is supplemented by several supporting strategies.

Priority Implementation Factors and Associated Strategies

Champions or leads assigned to actions (also support roles, if applicable)

- Action Tracker will identify Champions and Lead and Support roles.
- The Task Force will use that tool to periodically identify and recruit as necessary logical champions or organizations/individuals to lead or support the various actions.

Resources identified for executing actions

- The Action Tracker will include a Resources element.
- It will be used to identify the critical resources required to implement the respective actions.
- Actions lacking resources may be slower to move forward.

Point person assigned in key/lead agencies with clarity on their role

- The first step will be to confirm the commitment from various individuals that they will continue to represent their organizations.
- As those commitments are confirmed, a standard letter will follow that expresses appreciation for their involvement and that summarizes their roles in plan implementation.
- This positive and balanced letter will be drafted to also commend the organization for its support, allowing the letter to be shared with others.

Committee or Task Force to move plan into implementation and stay involved

- It is expected that the HATS Bicycle and Pedestrian Task Force will shepherd the implementation of the actions identified in this study.



- The Task Force will meet at least quarterly and possibly bi-monthly during year one of plan implementation.
- The review of the action tracker and these strategies will be a regular focus, particularly in the first year of plan implementation.
- Periodically, the Task Force will be asked to evaluate plan implementation and to make recommendations for improvement.

Management and policy maker support

- Brief quarterly progress reports of one page or less will be prepared highlighting items of note from the action tracker.
- These will be provided to Task Force members and others to share within their organizations.
- The reports will also be routinely used to update HATS Technical and Coordinating Committees.

Implementation Leads and Champions

For each action, implementation will require a lead agency or champion in partnership with others. Potential lead agencies include the following:

- Bike South Central PA
- HATS Bicycle and Pedestrian Task Force
- Capital Area Greenbelt Association
- Capital Area Transit
- Commuter Services of Pennsylvania
- Harrisburg Area Transportation Study
- Harrisburg Bicycle Club
- Lebanon Valley Bicycle Coalition
- PennDOT
- Tri-County Regional Planning Commission
- County planning agencies
- Capital Region Council of Governments
- Cities, boroughs, and townships within the region
- Penn State Hershey PRO Wellness
- And others

During implementation, a lead agency will be discussed and a preferred lead will be selected. Confirmation and buy-in of the preferred lead will be required prior to assigning an action to that agency.



Action Tracker

The Action Tracker follows. It is meant to function both as an integral part of this plan as well as a stand-alone document that should be updated continually during implementation.

Implementation Timeframe Key

Short – 0 to 6 months

Medium – 6 months to 2 years

Long – 2 to 5 years

Ongoing – 5+ years



Goal #1 Establish methods to identify and prioritize bicycle and pedestrian improvements.
 PLANNING Leverage all available funding and non-financial resources to complete identified improvements.

No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
PL1	Continue the Regional Connections grant program to promote regional multimodal connectivity.	Short		
PL2	Engage municipal partners to undertake sub-regional or corridor studies of bicycling and walking facilities and needs.	Ongoing		
PL3	Create a comprehensive inventory of all identified bicycle and pedestrian improvements that can be considered for available funding programs.	Short		
PL4	Establish a process to prioritize bicycle and pedestrian projects for available funding.	Medium		



Goal #2

Improve the region’s bicycle and pedestrian network connecting people, communities, and destinations for both transportation and recreation.

INFRASTRUCTURE

No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
IN1	Advocate for a staff position at HATS dedicated to bicycle and pedestrian issues that can review projects prior to inclusion on the TIP, drive implementation of the goals and actions in this study, and act as the primary bicycle and pedestrian resource for the region.	Short, Ongoing		
IN2	Ensure that the PennDOT Bicycle and Pedestrian Checklist is used on all HATS TIP projects.	Short, Ongoing		
IN3	Assist the PA Pedalcycle and Pedestrian Advisory Committee in updating the PennDOT Bicycle and Pedestrian Checklist by providing input and review.	Medium		
IN4	Consider creating a HATS-specific bicycle and pedestrian checklist that includes a diverse range of criteria, including land use and economic development.	Medium		



No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
IN5	Promote the use of the updated bicycle and pedestrian checklist by municipalities for their local projects. Establish a simple program to recognize those that do.	Medium		
IN6	Partner with PennDOT and municipalities to review resurfacing and maintenance projects to identify potential restriping, shoulder improvements, and other low-cost options that provide greater bicycle and pedestrian accommodation.	Short, Ongoing		
IN7	Conduct a brief survey to understand what type of assistance would most benefit municipalities in developing bicycle and pedestrian infrastructure.	Short		



Goal #3

Implement education, enforcement, and encouragement initiatives targeting multiple audiences to foster a supportive climate for bicycling and walking.

CULTURE

No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
CU1	Continue planning and partnership discussions regarding the creation of a multi-county regional bicycle sharing program.	Short		
CU2	Create a network of organizations to partner with and support municipalities in pursuit of the Bicycle Friendly Community designation and Walk Friendly Community designation.	Long		
CU3	Create a map of the best bike routes in Harrisburg City and surrounding areas based on information from actual users.	Medium		
CU4	Expand the use of free bicycle corral storage at special events to all events in the region. Combine bike corrals with off-site parking as a traffic and parking management program.	Short		



Goal #4 SAFETY Reduce crashes involving bicyclists and walkers through infrastructure improvements and educational efforts.

No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
SA1	Partner with the PA Department of Education, local driver education teachers, statewide driver education associations, AAA, AARP and other organizations offering driver training to include bicycle and pedestrian safety messages in driver education training.	Long		
SA2	Conduct an ongoing analysis of crash data to identify trends and problem areas.	Short, Ongoing		
SA3	Seek Highway Safety funds from PennDOT to develop and implement bicycle and pedestrian safety campaigns. Seek partnerships with media organizations to publicize safety messages.	Short, Ongoing		



Goal #5
HEALTH

Partner with health-related organizations and communities to increase bicycling and walking for wellness and disease prevention.

No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
HE1	Recruit healthcare personnel from hospitals, health insurance companies, public health agencies, and related organizations to participate in MPO planning activities.	Short		
HE2	Participate with healthcare organizations such as Pinnacle Health and Holy Spirit Health System on their Community Healthcare Plans.	Long		
HE3	Explore collaboration opportunities with the PA Department of Health, Bureau of Health Promotion and Risk Reduction.	Short		



Goal #6

Create cooperative partnerships between public, private, and non-profit organizations to coordinate efforts for greater impact.

PARTNERSHIPS

No.	Strategic Action	Timeframe	Lead/Resources	Current Status/ Next Steps
PA1	Establish ongoing public outreach methods that help identify issues and opportunities including a basic speaker's bureau package to make presentations and share information. Integrate outreach with media partnerships discussed in SA3.	Short, Ongoing		
PA2	Expand existing partnership with DCNR for training opportunities.	Short		
PA3	Routinely identify potential partners by sectors and follow up with outreach to determine mutually beneficial projects. <ul style="list-style-type: none"> • Colleges and Universities – field projects • Boy Scouts – Eagle Scout projects • Religious youth groups – service projects • Civic Improvement groups (e.g., Harrisburg Young Professionals) • Vo Tech Schools – practice for construction trades 	Short, Ongoing		



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Maps





HATS
Regional Bicycle & Pedestrian Study

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Map 1



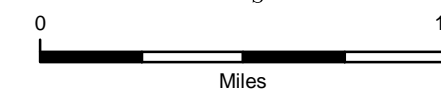
HATS

Bicycle & Pedestrian Study
2014

Existing Regional Bicycle and Pedestrian Facilities

Legend

- Hiking Trails
- Multi-Use Trails
- Bicycle Route J
- Carlisle Bike Lanes
- Interstates
- PA Highways
- US Highways
- County Boundary



Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

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Map 2



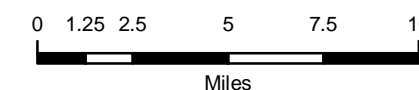
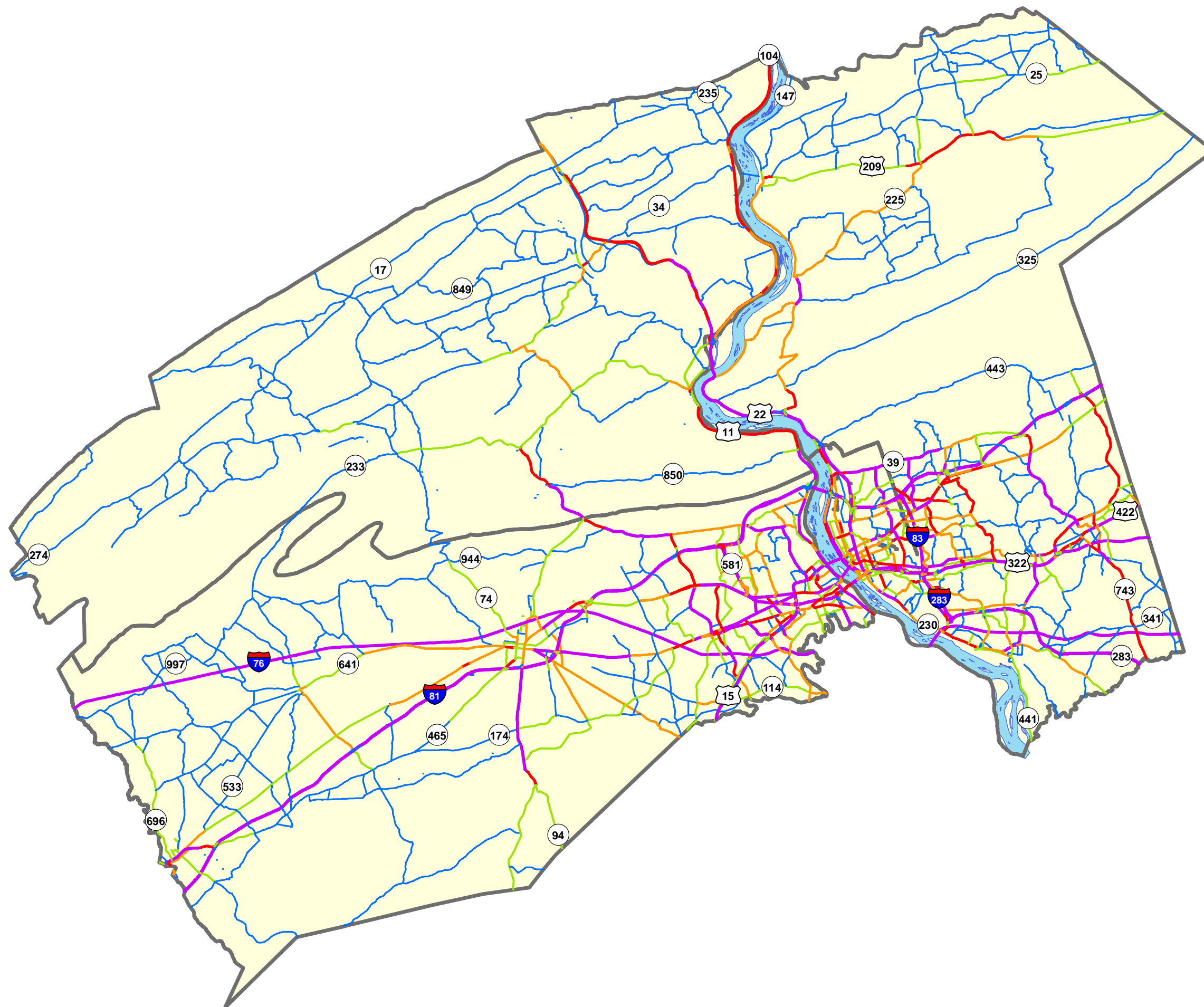
HATS
Bicycle & Pedestrian Study
2014

Regional Traffic Volumes

Legend

AADT Traffic Volume

- 0 - 3000
- 3001 - 6000
- 6001 - 9000
- 9001 - 12000
- 12001 +
- County Boundary
- Susquehanna River



Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

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Map 3



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Harrisburg Metro Traffic Volumes

Legend

AADT Traffic Volume

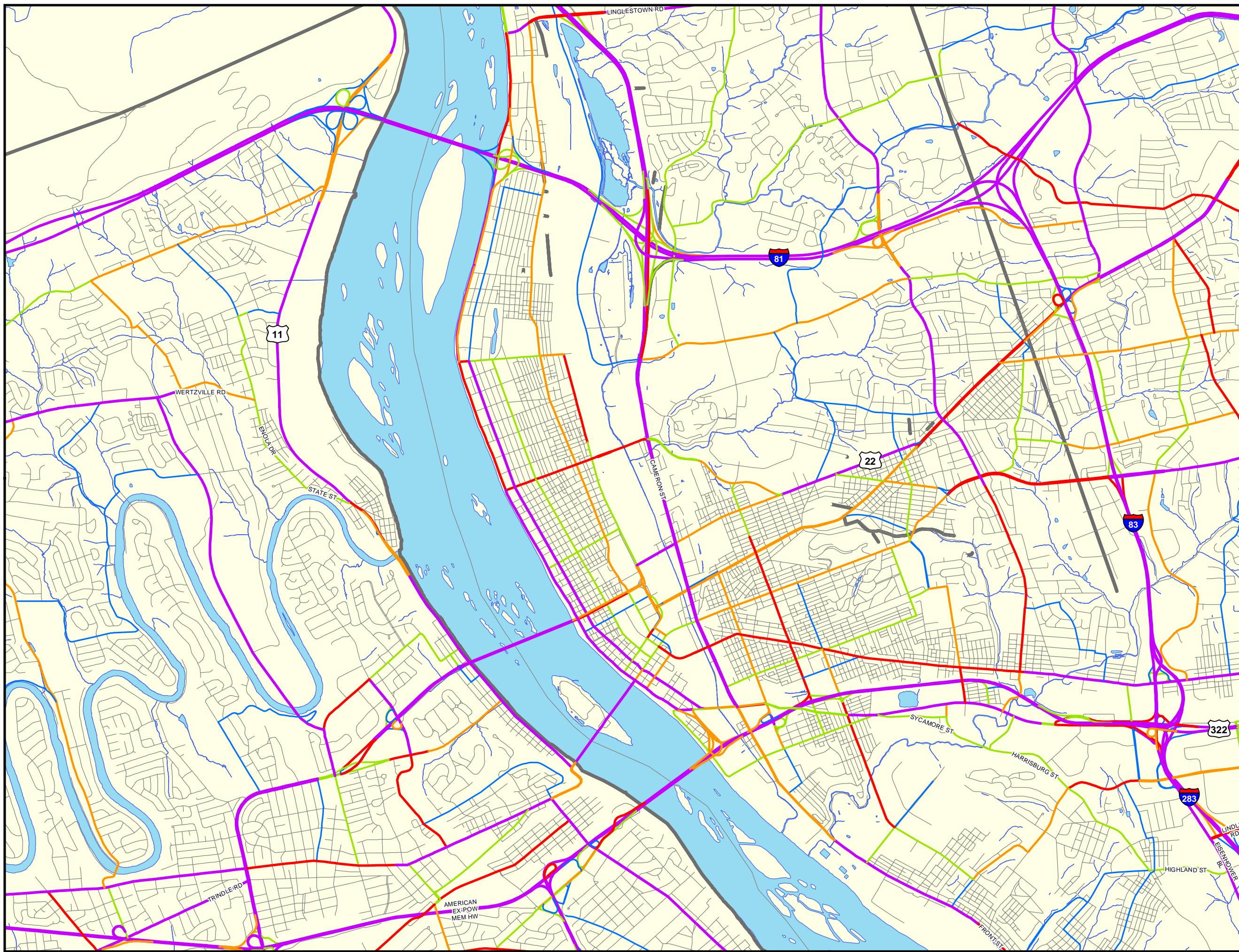
- 0 - 3000
- 3001 - 6000
- 6001 - 9000
- 9001 - 12000
- 12001 +
- Local Roads
- County Boundary
- Rivers and Streams

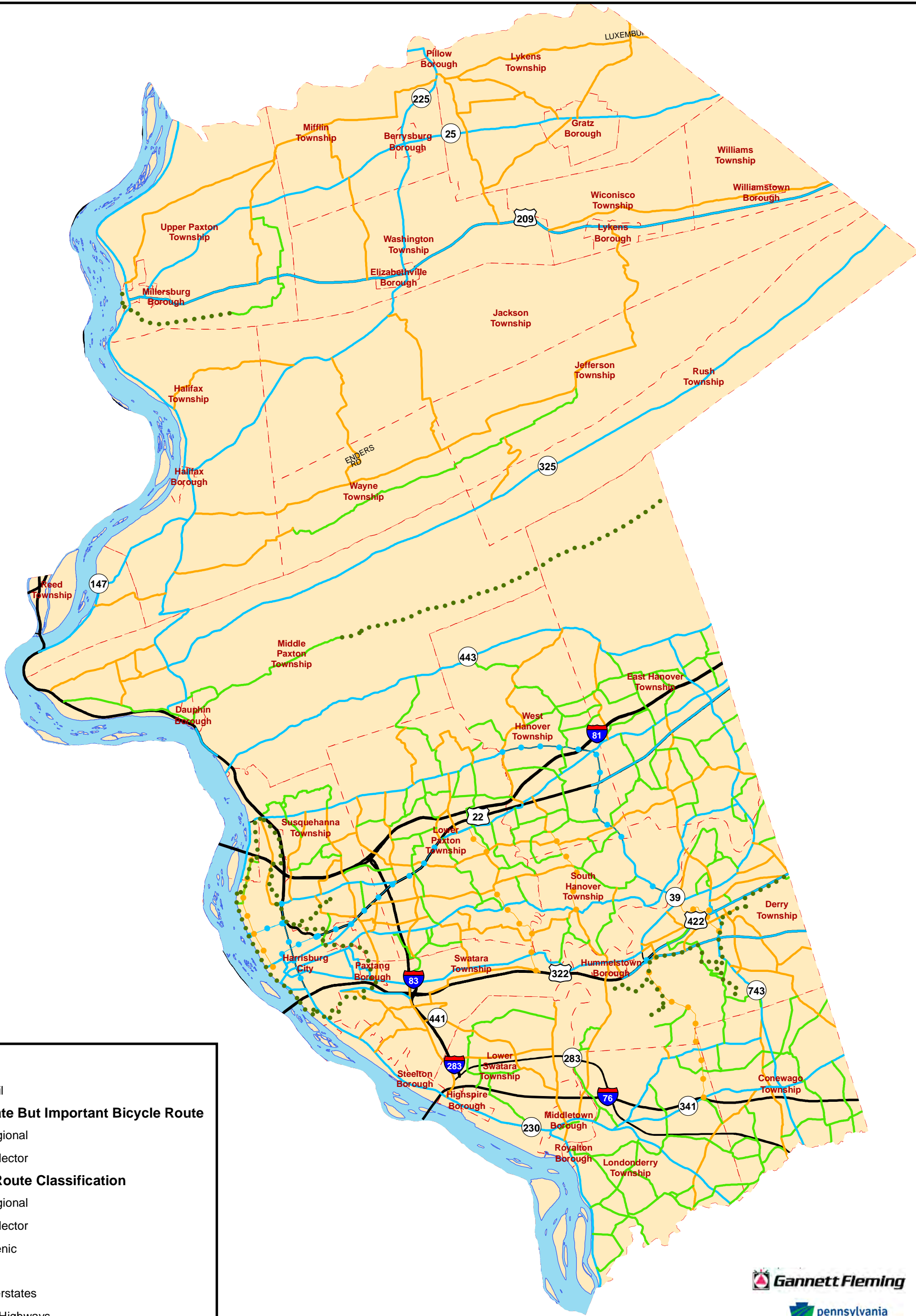


Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

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Legend

- Trail
- Inadequate But Important Bicycle Route**

 - Regional
 - Collector

- Bicycle Route Classification**

 - Regional
 - Collector
 - Scenic

- Interstates
- PA Highways
- US Highways
- Municipal Boundary

Gannett Fleming

pennsylvania
DEPARTMENT OF TRANSPORTATION

Tri-County Regional Planning Commission
The Tri-County Regional Planning Commission is a non-profit organization that provides planning services to the residents of Dauphin, Perry, and Cumberland counties.

HATS
Bicycle & Pedestrian Study
2014

Map 4

Dauphin County Bike Map

Date: September, 2014

0 6
Miles

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

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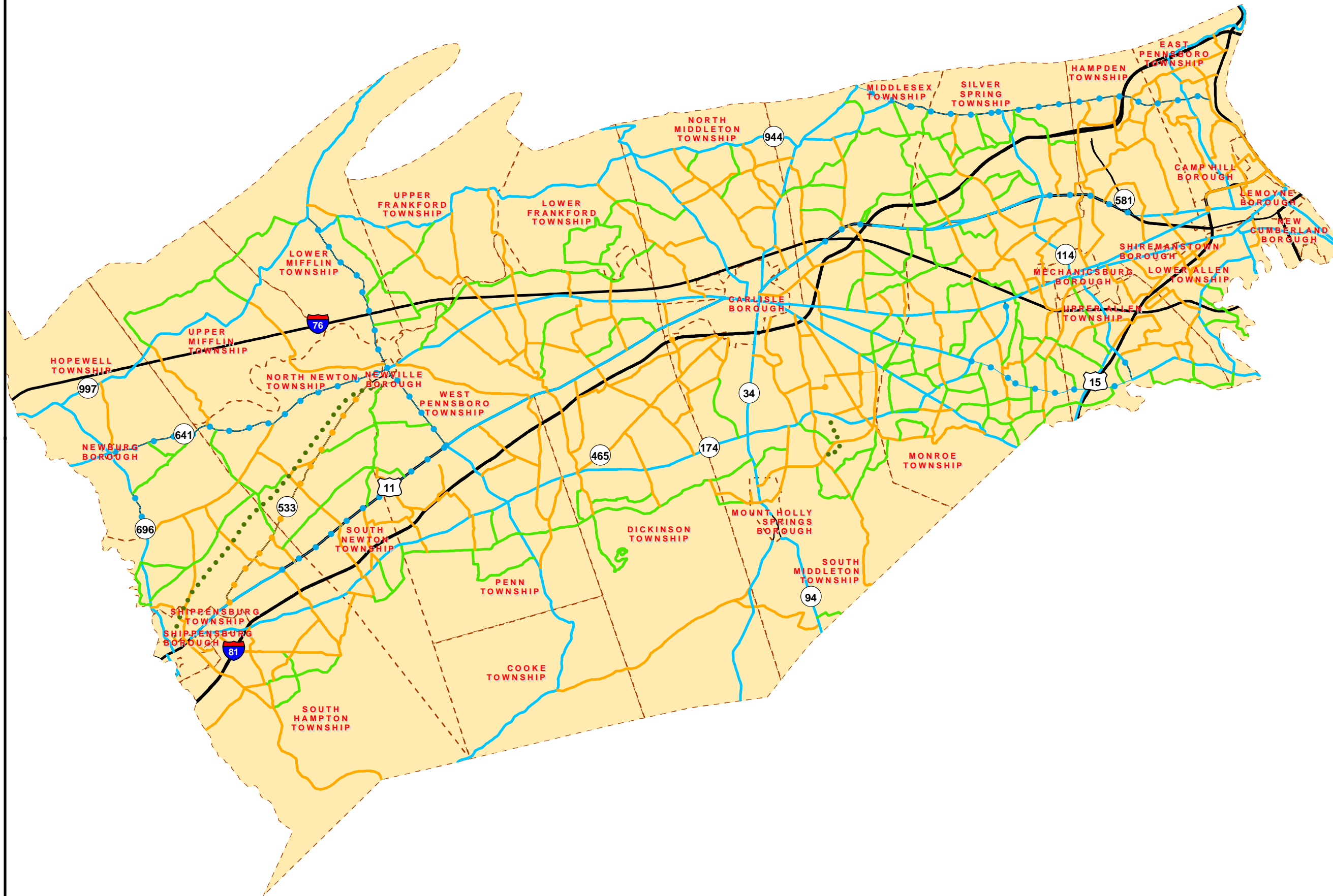
Map 5



HATS

Bicycle & Pedestrian Study
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Cumberland County Bike Map



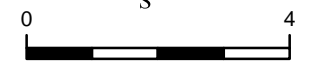
Legend

Bicycle Route Classification

- Regional
- Collector
- Scenic

Inadequate But Important Bicycle Route

- Collector
- Regional
- Trail
- Municipality



Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

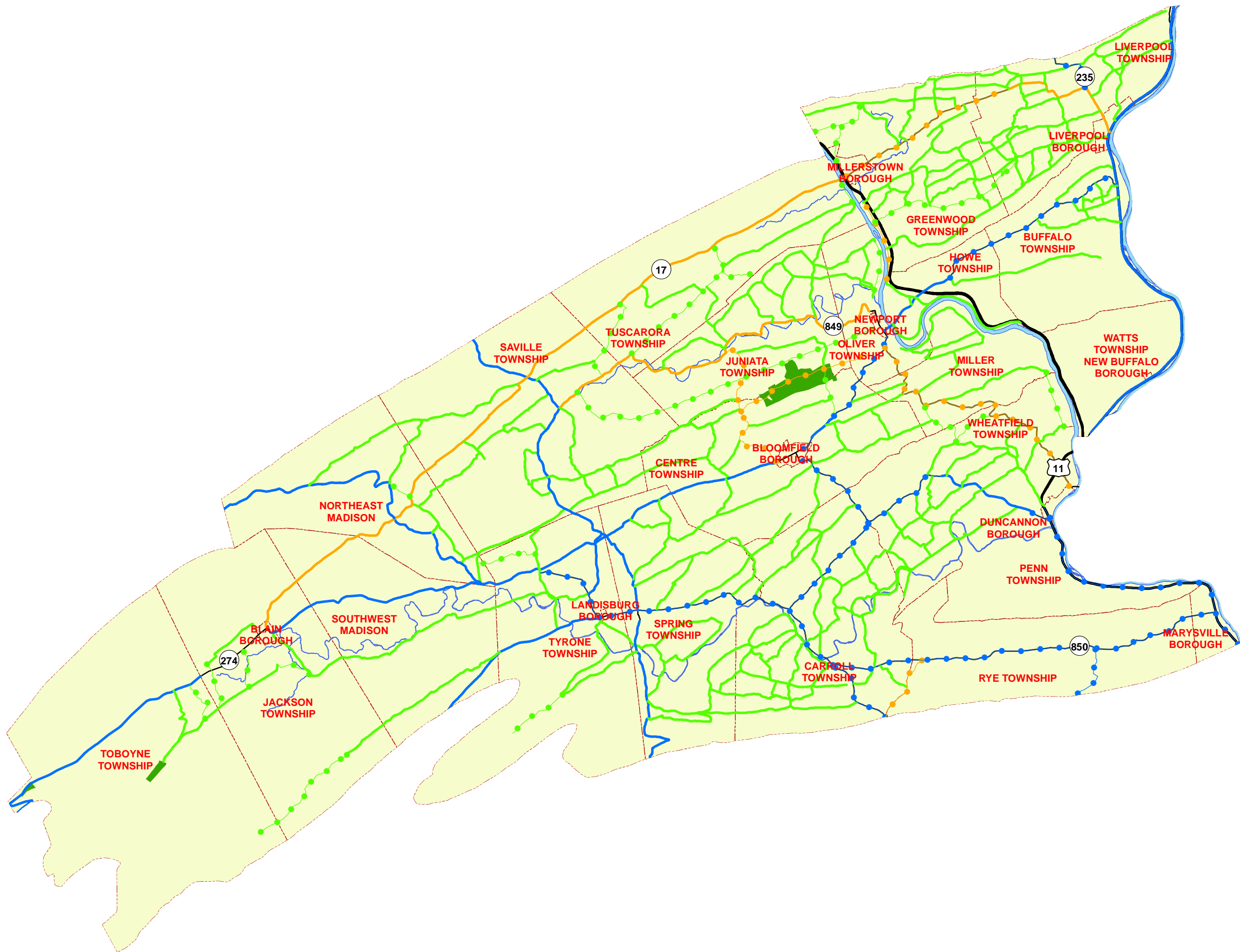
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Map 6



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2014

Perry County Bike Map



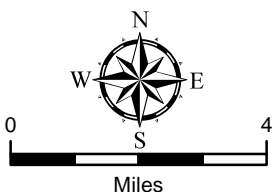
Legend

Inadequate But Important Bicycle Route

- Regional
- Collector
- Scenic

Bicycle Route Classification

- Regional
- Collector
- Scenic
- Interstates
- PA Highways
- US Highways
- State Park
- Municipal Boundary



Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

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Map 8



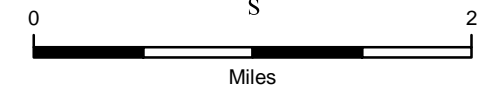
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Bicycle & Pedestrian Study
2014

Harrisburg Metro Priority Walkable Areas

Legend

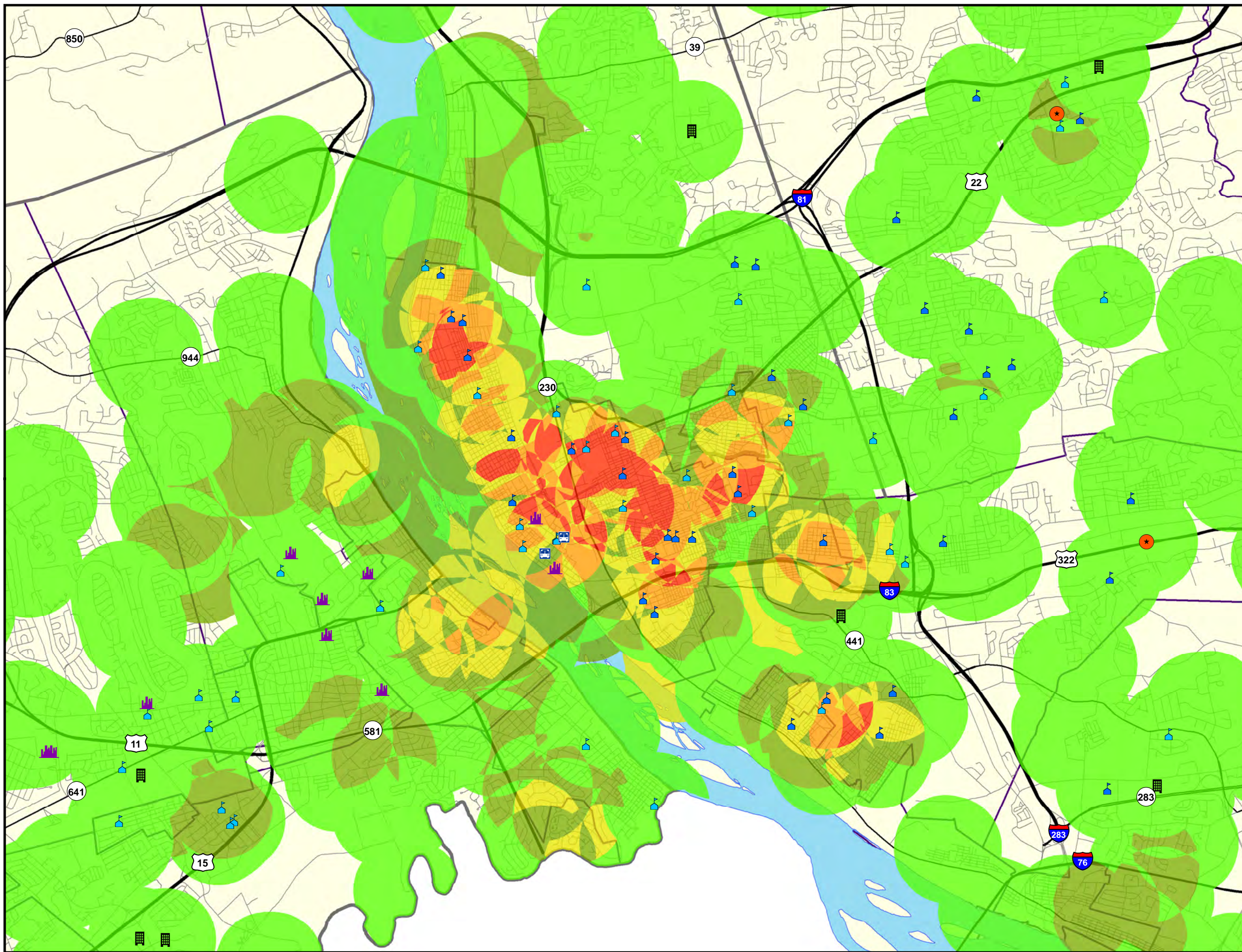
- | | |
|------------------------|-----------------------|
| ● Community_Facilities | — PennDOT Roads |
| 🏢 Major Employers | — Interstates |
| 🚗 Transit Center | — PA Highways |
| 🏫 Private Schools | — US Highways |
| 🏫 Public Schools | Walkable Areas |
| 📍 Areas Of Interest | 🟢 Low |
| 🏢 Office Parks | 🟡 Mid-Low |
| 🌊 Susquehanna River | 🟠 Middle |
| 🗺 Municipal Boundaries | 🟡 Mid-High |
| | 🔴 High |



Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County,
PennDOT, Harrisburg Bike Club

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Map 9

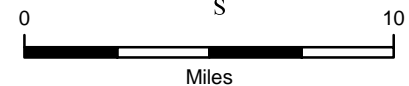
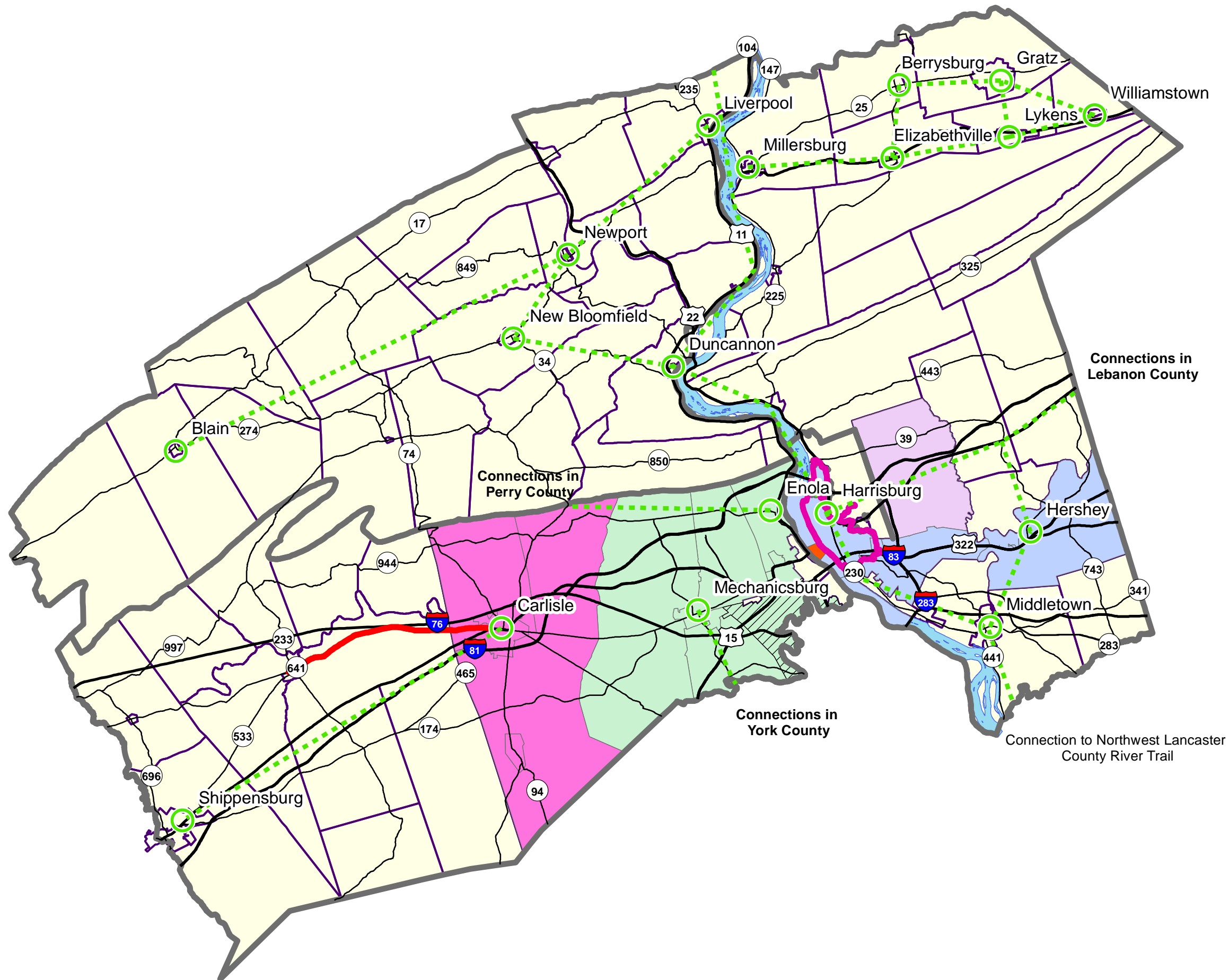


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Bicycle & Pedestrian Study
2014

Existing Areas of Detailed Study and Future Connections for Study

Legend

- | | | | |
|---------------------------------|--|--------------------------|-------------------|
| Potential Future Studies | | Base Map Features | |
| | Future Connections Places | | Interstates |
| | Future Connections Corridors | | PA Highways |
| | | | US Highways |
| | | | Susquehanna River |
| Existing Studies | | | |
| | Building a Better Greenbelt Study | | |
| | Cumberland Valley Rail Trail Extension Master Plan | | |
| | HATS Cross-River Connections Study | | |
| | Lower Allen Trail Plan | | |
| | Regional Bicycle Connections Study | | |
| | Lower Paxton Township Greenway Plan | | |
| | LeTort Regional Authority Trail/Urban Greenway Feasibility Study | | |
| | Eastern Cumberland County Regional Trails Master Plan | | |



Date: September, 2014

Sources:
Cumberland County, Dauphin County, Perry County, PennDOT, Harrisburg Bike Club

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