

# Baltimore Pike for Everyone

## Complete Street Strategies for Baltimore Pike

Chester County, Pennsylvania



Prepared by the Chester County Planning Commission, 2015

# Acknowledgments

## Plan advisory committee

Rebecca Brownback, Avondale Borough  
Jane Laslo, East Marlborough Township  
Joe Scalise, Kennett Square Borough  
Lisa Moore, Kennett Township  
Steven Brown, London Grove Township  
Steve Price, Lower Oxford Township  
Spencer Andress, New Garden Township  
Betsy Brantner, Oxford Borough  
Karen Versuk, Penn Township  
Ricky Railing, Upper Oxford Township  
Sharon Nesbitt, West Grove Borough  
Greg Krykewycz, Delaware Valley Regional  
Planning Commission  
Robert Grabus, Chester County Economic  
Development Council  
Pamela Johnson, PennDOT District 6  
Linda Ingenthron, Southern Chester County  
Organization on Transportation  
John Miesel, Transportation Management  
Association of Chester County

## Chester County Board of Commissioners

Terence Farrell  
Kathi Cozzone  
Michelle Kichline



## Chester County Planning Commission

Matthew Hammond, P.E., Chairman, West Bradford  
Township  
Dr. Douglas Fasick, Vice-chairman, Oxford Borough  
Daniel DiMucci, RLA, ASLA, West Goshen Township  
Judy L. DiFilippo, Tredyffrin Township  
Kevin C. Kerr, Upper Uwchlan Township  
Nancy Mohr, Newlin Township  
E. Martin Shane, East Goshen Township  
Joseph J. Tarantino, Tredyffrin Township  
John C. Washington, III, South Coatesville Borough

## Planning Commission staff

Ronald T. Bailey, AICP, Executive Director  
David D. Ward, AICP, Assistant Director  
Randy Waltermeyer, AICP, Transportation Services  
Director  
William Deguffroy, Transportation Planner  
Kevin Myers, Community Planner  
Sean O'Neill, AICP, Community Planner  
Diana Zak, Graphics Supervisor  
Christopher Bittle, Graphics Specialist  
Elizabeth Kolb, Graphics Specialist  
Steven Cummings, Technical Services Specialist

# Table of contents

|   |    |
|---|----|
| Introduction .....                          | 4  |
| Policy Framework.....                       | 6  |
| Corridor Demographics .....                 | 8  |
| Existing Conditions.....                    | 10 |
| Corridor Vision.....                        | 13 |
| Toolbox for Completing Baltimore Pike ..... | 14 |
| Recommendations.....                        | 16 |
| Ordinance Review .....                      | 32 |
| Moving Forward .....                        | 34 |
| Additional Resources .....                  | 36 |

# Introduction

A complete street is a road that is safe for any user whether they are people on bikes, people walking, people riding public transportation or people driving automobiles and regardless of their ability. The National Complete Streets Coalition provides this definition:

*“Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.”*

This document focuses specifically on the twenty mile Baltimore Pike Corridor through eleven municipalities in southern Chester County;

- Avondale Borough,
- East Marlborough Township,
- Kennett Square Borough,
- Kennett Township,
- London Grove Township,
- Lower Oxford Township,
- New Garden Township,
- Oxford Borough,
- Penn Township,
- Upper Oxford Township, and
- West Grove Borough.



This document recommends improvements that are intended to improve safety and comfort for all users. Recommendations are being provided for facility improvements throughout the corridor, and policy recommendations that could be implemented at the municipal level are outlined.

A complete streets plan was recommended in [Housing & Transportation Options for Southern Chester County](#), a study completed in February 2014. The Plan was developed by Planning Commission staff with funding from the Delaware Valley Regional Planning Commission as an implementation strategy of the [Chester County Public Transportation Plan](#); adopted by the County Commissioners in July 2014.



# Policy Framework

**Landscapes2** is Chester County's comprehensive policy plan. The goal for transportation within Landscapes2 is, "Provide a safe, intermodal transportation system which optimizes mobility and access, sustains quality of life, strengthens the economy and protects the environment." Two objectives to focus on from Landscapes2 as they relate to this document are for non-motorized and public transportation.

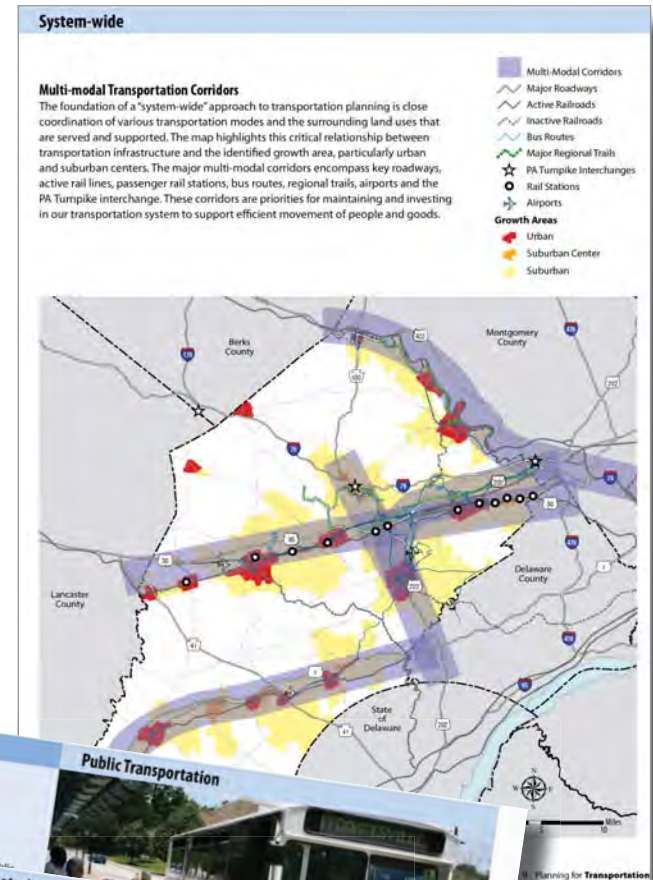
## T2: Non-motorized

Provide a safe and functional non-motorized network that increases mobility and accessibility, reduces automotive dependency and improves air quality.

## T3: Public transportation

Provide an affordable, reliable, and accessible public transportation network to offer mobility, encourage favorable land use patterns, sustain the environment, and alleviate congestion within designated growth areas.

These two objectives provide the basis for the need for this Complete Streets Document, and support a "system-wide" approach to transportation planning identified in the County's Comprehensive Plan. The Multi-Modal Corridors map highlights a critical relationship between transportation infrastructure and land uses; particularly within growth areas defined in Landscapes2.



**Objective**  
T3: Public transportation  
Provide an affordable, reliable, and accessible public transportation network to offer mobility, encourage favorable land use patterns, sustain the environment, and alleviate congestion within designated growth areas.

**Objective**  
T2: Non-motorized  
Provide a safe and functional non-motorized network that increases mobility and accessibility, reduces automotive dependency, and improves air quality.

**Policies**

- T 2.1 Provide a safe network of bicycle and pedestrian links within and between residential, employment, commercial, educational, public, and recreational land uses.
- T 2.2 Promote development design and density that encourages bicycling and walking, including sidewalks or other pedestrian facilities in urban and suburban centers.
- T 2.3 Provide standards for non-motorized travel and improve the roadway network to encourage bicycling and walking.
- T 2.4 Enhance bicycle and pedestrian transit.



**The Chester County Public Transportation Plan**

was adopted by the County Commissioners in 2014 as an amendment to Landscapes2. The Plan focuses on three main subject areas; System, Environment, and Experience. Recommendations to these three focus areas come together to provide a reliable, safe, and enjoyable public transportation network in Chester County. Baltimore Pike for Everyone is a direct implementation strategy of the Chester County Public Transportation Plan.

**Housing and Transportation Options for Southern Chester County**, completed by the Chester County Planning Commission in 2014, studied housing conditions and transportation access for residents focusing on the Baltimore Pike Corridor. Specifically, it identified difficulties faced by the predominately Latino population that is employed in the mushroom industry. Findings of the Study indicated the difficulty that people employed in the agriculture industry face when commuting to work. As such, the Study recommended that a complete streets plan for the Baltimore Pike corridor be completed by the Chester County Planning Commission.

**T-4 (a): Prepare a Complete Streets Plan for the corridor with a focus on expanding opportunities for safe bicycle and pedestrian travel**

The County Planning Commission could seek funding to prepare a “Complete Streets” plan for the Baltimore Pike corridor. A Complete Streets Plan would include facilities for all possible users; pedestrians, cyclists, transit, and automobiles. The plan would establish design guidelines to ensure that improvements made in the corridor would accommodate, wherever possible, all users.

**Housing and Transportation Options for Southern Chester County**  
2014

**IMPLEMENTATION STRATEGIES**

*The ability to speak to the bus drivers in the study area: The Garage community and youth centers in West Grove, and the Light House Youth Center in Oxford.*

**the pool of Spanish-speaking SCCOOT bus drivers**  
ings for drivers of the SCCOOT route, TMACC and its contractor recruiting bilingual (English/Spanish) individuals. The ability to speak a native language can serve as an encouragement to riders who do n. A bilingual driver can explain fares, stops, and routes and be sure ere he/she needs to go.

**T-4 Bicycle and pedestrian transportation**

**Conclusion**  
Travel by bicycle and/or walking is limited because of: (i) limited shoulders and high posted speed limits; (ii) limited bike/pedestrian amenities; and (iii) lack of a local bike shop

**Strategies**

**T-4 (a) Prepare a Complete Streets Plan for the corridor with a focus on expanding opportunities for safe bicycle and pedestrian travel**  
The County Planning Commission could seek funding to prepare a “Complete Streets” plan for the Baltimore Pike corridor. A Complete Streets plan would include facilities for all possible users; pedestrians, cyclists, transit, and automobiles. The plan would establish design guidelines to ensure that improvements made in the corridor would accommodate, wherever possible, all users.

**T-4 (b) Identify resources for proposed improvements within the County’s Transportation Improvements Inventory that would support implementation of a Complete Streets Plan for the corridor**  
The Chester County 2013 Transportation Improvements Inventory identifies eight bicycle or pedestrian projects proposed within the study area. Three of those projects are located along the Baltimore Pike corridor. In New Garden Township, a bikeway lane is planned along Baltimore Pike from Mill Road to the Newark Road intersection. Further west on Baltimore Pike, London Grove Township proposes to construct sidewalks between Route 41 and the eastern boundary of West Grove Borough. Another bikeway is proposed for State Road in London Grove Township from PA Route 41 to PA Route 841. In a related project, the Borough of Kennett Square is investigating funding sources and feasibility for a proposed sidewalk along Cypress Street from the Magnolia Place development east into the Borough. Chester County Planning Commission staff will work with municipalities to identify additional funding

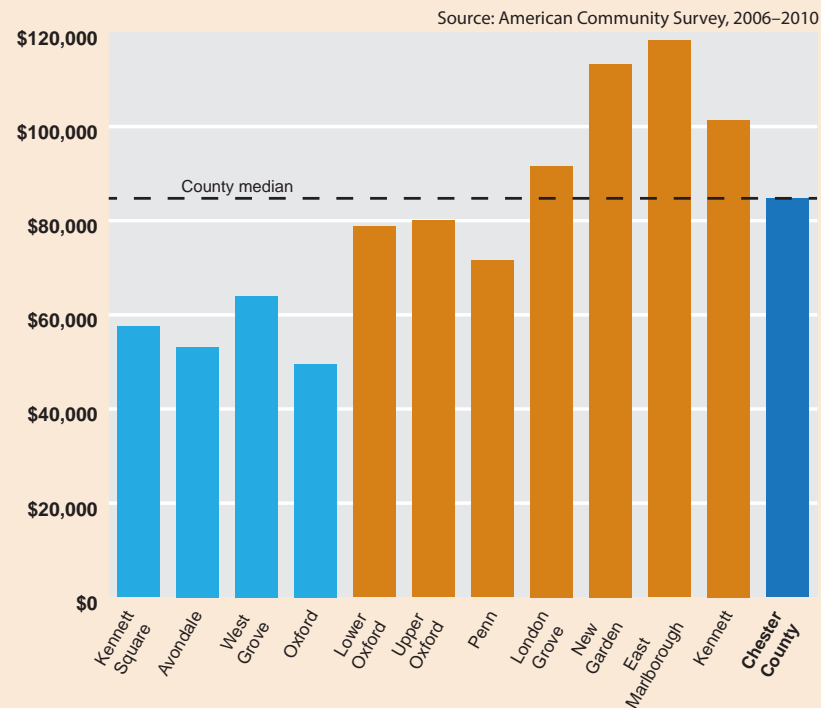
51

# Corridor Demographics

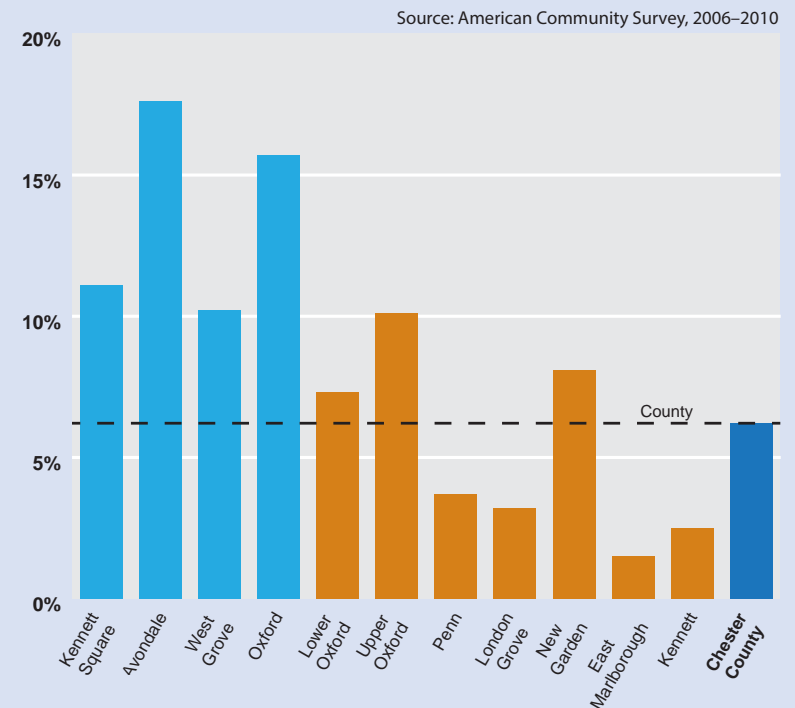
The key factors that impact individual transportation choices are income, ability, and availability. Chester County is one of the most affluent counties in Pennsylvania. The study area as a whole is also affluent. However, there are some disparities present. The median household income in the boroughs within the study area is far lower than the townships. In areas of the corridor there is a large proportion of 65 and older residents. Older residents who no longer drive and those who cannot afford to are going to find other means to travel about the corridor. If they are able, bicycling and walking may be an option, if not these individuals rely on public transportation.



## Median household income



## Poverty rate - individuals





The demographics of the study area were discussed in much greater detail in the [Housing and Transportation Options for Southern Chester County](#) study.



## Vehicles per household

Source: U.S. Census Bureau, American Community Survey 2008-2012

|                  | Total Households | 1 or More Vehicles | No Vehicles | Percent No Vehicles |
|------------------|------------------|--------------------|-------------|---------------------|
| Oxford           | 1,638            | 1,500              | 138         | 8%                  |
| Lower Oxford     | 1,124            | 1,069              | 55          | 5%                  |
| Upper Oxford     | 740              | 699                | 41          | 6%                  |
| Penn             | 2,195            | 2,081              | 114         | 5%                  |
| West Grove       | 990              | 982                | 8           | 1%                  |
| London Grove     | 2,290            | 2,261              | 29          | 1%                  |
| Avondale         | 381              | 374                | 7           | 2%                  |
| New Garden       | 3,786            | 3,643              | 143         | 4%                  |
| Kennett          | 3,205            | 2,961              | 244         | 8%                  |
| Kennett Square   | 1,909            | 1,744              | 165         | 9%                  |
| East Marlborough | 2,487            | 2,487              | 0           | 0%                  |
| Study Area       | 20,745           | 19,801             | 944         | 5%                  |
| Chester County   | 183,793          | 174,807            | 8,986       | 5%                  |



# Existing Conditions

## Public Transportation

The Transportation Management Association of Chester County (TMACC) operates the only fixed route public transit service within this region of Chester County. The service, known as SCCOOT, is 32.6 miles long. This makes it the longest continuous bus routes in the Chester County. Ridership is traditionally low on SCCOOT which can be attributed to low local knowledge of the service and lack of amenities at stops. Infrastructure “last mile” connections are limited which causes the bus to deviate its course to serve the locations with higher ridership.

## Bike Lanes and Sidewalks

Baltimore Pike is home to one of the few bike lanes in Chester County. Bike lanes were constructed from roughly West Grove in the west to Toughkenamon in the east as a recommendation of the Southeastern Pennsylvania Bicycle and Pedestrian Mobility Plan (DVRPC, 1995). Other bicycling amenities include the Kennett Pike Bikeway and recreational trails. Sidewalk networks serve pedestrians’ needs within the four boroughs along Baltimore Pike.



**Legend**

**Committee & Community Input**

- Barrier to Mobility
- Opportunity for Improvement
- Ongoing Project



## Roadway Network

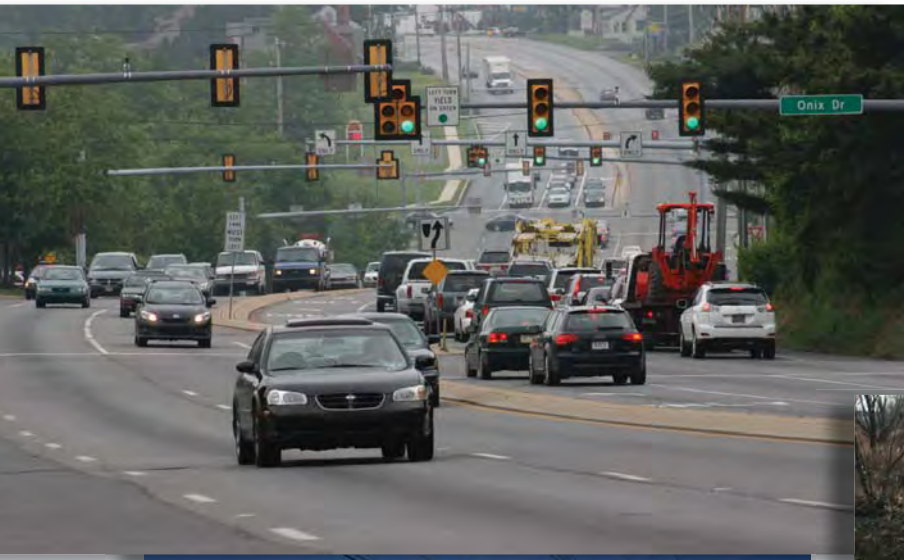
The road network is described best by the [Housing and Transportation Options for Southern Chester County](#) study:

*“Roadways in the study area have been designed to serve the traditional land uses, characterized primarily by agriculture outside the boroughs. There are compact roads with sidewalks within the boroughs and winding country roads and highways in between. The majority of roadways are narrow with limited shoulders and few accommodations for bicyclists or pedestrians. Many roadways were designed exclusively around the use of the car. This is especially true along the major corridors, Baltimore Pike and Route 41. Poor access management, characterized by numerous and often offset access points along these two roadways, can create dangerous situations for bicyclists and pedestrians. Therefore, many people rely on the automobile for travel throughout the study area.”*

The character of the roadways, especially Baltimore Pike, in this area of Chester County illustrates the need for a coordinated effort to improve safety for all users of the corridor.

**Agriculture** plays a vital role in the economy of Chester County and is especially prevalent along the Baltimore Pike Corridor. For this reason there is a high likelihood that farm equipment will need to utilize Baltimore Pike on occasion. The trips would tend to be short in length, but they do present a potentially hazardous conflict between other roadway users. Additionally, some residents in this region of the County rely on horse and carriage for transportation.





# Corridor Vision

Making Baltimore Pike a “complete street” requires the roadway is safe and convenient for people of all ages and abilities no matter what their means of travel is. **The vision is to provide accommodation for people biking, people walking, people using the SCCOOT Bus, and people using any other form of non-motorized transportation while still maintaining the roadway’s efficiency to move motorized vehicle traffic.**

Community and stakeholder input played a crucial role in developing the recommendations outlined in this document. Early on in the development of this document, committee members and the public were asked to identify locations along Baltimore Pike that they viewed as barriers to their ability to efficiently and safely travel in the corridor. The barriers identified ranged from long missing connections between communities, missing amenities at bus stops, and roadway design issues. Additionally, opportunities for mobility were identified where there are existing favorable conditions. Opportunities along the corridor include the existing sidewalk networks within the boroughs and existing bicycle lanes along Baltimore Pike.

Other initiatives that were underway concurrently with the development of this document in this corridor were also considered when developing the recommendations.

## **Jennersville Mobility Study**

Penn Township conducted a pedestrian connectivity study around Jennersville, focused on how to best connect the numerous commercial, office, institutional, and residential uses in that area.



## **Kennett & New Garden Townships Sidewalk Project**

The two townships received a grant through the Transportation Alternatives Program for the construction of sidewalks to connect commercial and residential areas in the townships to Kennett Square Borough.

## **US 1, Baltimore Pike Widening**

Key sidewalk connections were included in PennDOT’s plans to widen US 1 in East Marlborough Township.

All of these plans feed the vision to make Baltimore Pike a complete street and provides the basis to the recommendations set forth in this document. The following pages illustrate facility improvements that can be made along the corridor to improve safety and convenience for all users. Since the corridor is roughly 18 miles long and passes through eleven municipalities, the improvements have been illustrated on four separate maps. Renderings have been provided for some specific locations to illustrate what implementing a complete street might look like at those locations.

# Toolbox for Completing Baltimore Pike

## Transit improvements

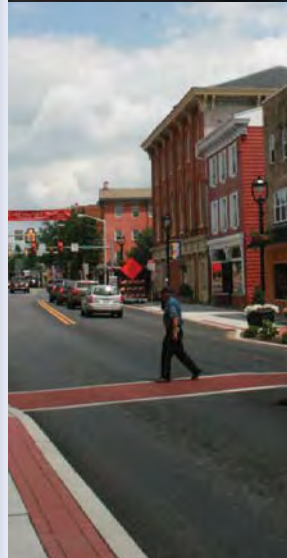


**Bus Turnout**  
A location within the right of way for buses to pull out of the travel lanes for passenger boarding and unloading.

**Bus Shelter**  
Structures that provide people using public transit a safe waiting area and protection during inclement weather.

## Pedestrian facilities

**Sidewalk**  
A paved pathway paralleling a highway, road, or street intended for people walking.



**Crosswalk**  
A public right-of-way used for pedestrian travel across a roadway at an intersection or any portion of a block to provide safe pedestrian access to adjacent properties.

## Traffic calming/access management



**Median Island**  
An island in the center of a road that physically separates the directional flow of traffic intended to slow motor vehicles.

**Access Management**  
Enabling access to land uses while maintaining roadway safety and mobility through design and spacing of driveways.



**Curb Extension or Neckdown**  
A physical narrowing of the roadway at intersections.

## Bicycle facilities



**Bicycle Lane**  
Bicycle lanes are designated travel lanes for exclusive use by people on bicycles.

**Bikeable Shoulder**  
A paved shoulder or wide curb lanes provide accommodation for people on bicycles adjacent to the vehicle travel lanes.



**Shared Lane**  
Accommodates people on bicycles and people driving in the same travel lane. The use of sharrows (pictured) can increase awareness of a shared roadway arrangement.



**Signage**  
There are various different signs that can give a visual queue that there may be people on bicycles utilizing the roadway.

## Multi-use facilities



**Multi-use Trail**  
A pathway that is physically separated from the roadway and provides accommodation for all non-motorized travel options.

# Recommendations



**Legend**

**Proposed Improvements**

- Access Management
- Multi-use Trail
- On Road Bike Facility
- Sidewalk (Capital Improvement)
- Sidewalk (Land Development)
- Bus Shelters
- Gateways

**Existing Features**

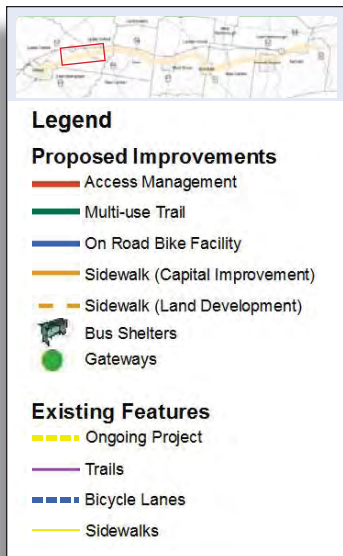
- Ongoing Project
- Trails
- Bicycle Lanes
- Sidewalks

The [Chester County Public Transportation Plan](#) recommends providing pedestrian connections within growth areas as defined by [Landscapes2](#) and shelters at heavily used stops. Therefore, throughout the corridor, sidewalks are recommended to be installed adjacent to Baltimore Pike, and bus shelters are recommended for stops that have greater than 5 boardings a day. The improvement maps identify both sidewalk connections that should pursue capital funding for construction and ones that should be required of the land development review process. Additionally, on-road bicycling facilities are recommended throughout the much of the corridor. Those facilities could come in the form of bicycle lanes, bike-able shoulders, shared travel lanes, or signage. The appropriate bicycle facility should be determined on a case-by-case basis.

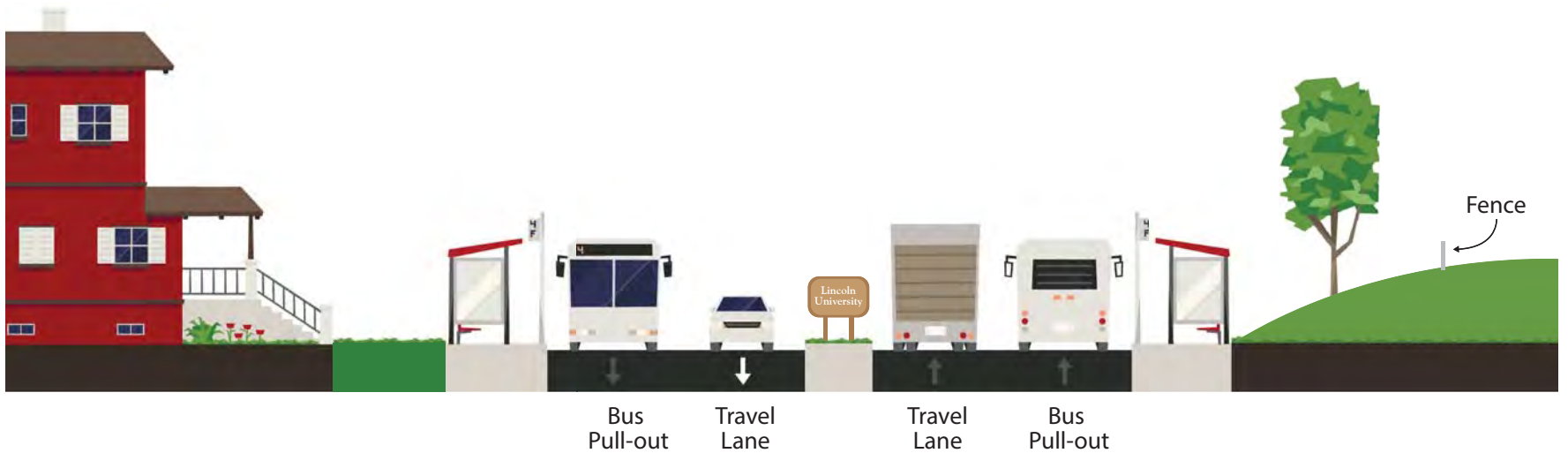
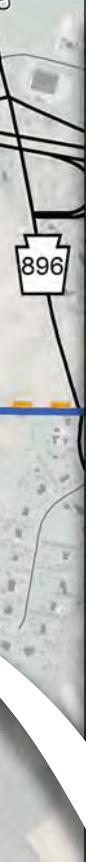
Though not on Baltimore Pike, PA 10 as it exits Oxford Borough was included in the study area. Recommendations for PA 10 include completing the sidewalk connection between the Borough and the Oxford Square shopping center on PA 10, improving the SCCOOT bus circulation, a bus turnout and bus shelter, pedestrian connections to the shopping centers, and a high visibility crosswalk for people to walk across PA 10. Access management improvements are recommended for Baltimore Pike as it enters the Oxford Borough from the East. Currently, there is no delineation of where the roadway ends and where people are intended to enter businesses. Also, a gateway treatment is recommended to cue people driving that they are entering the urban area of Oxford Borough and act as traffic calming.

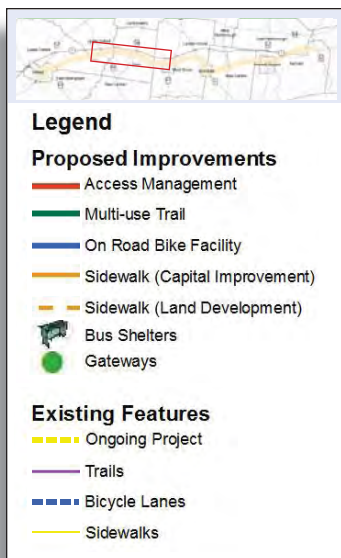
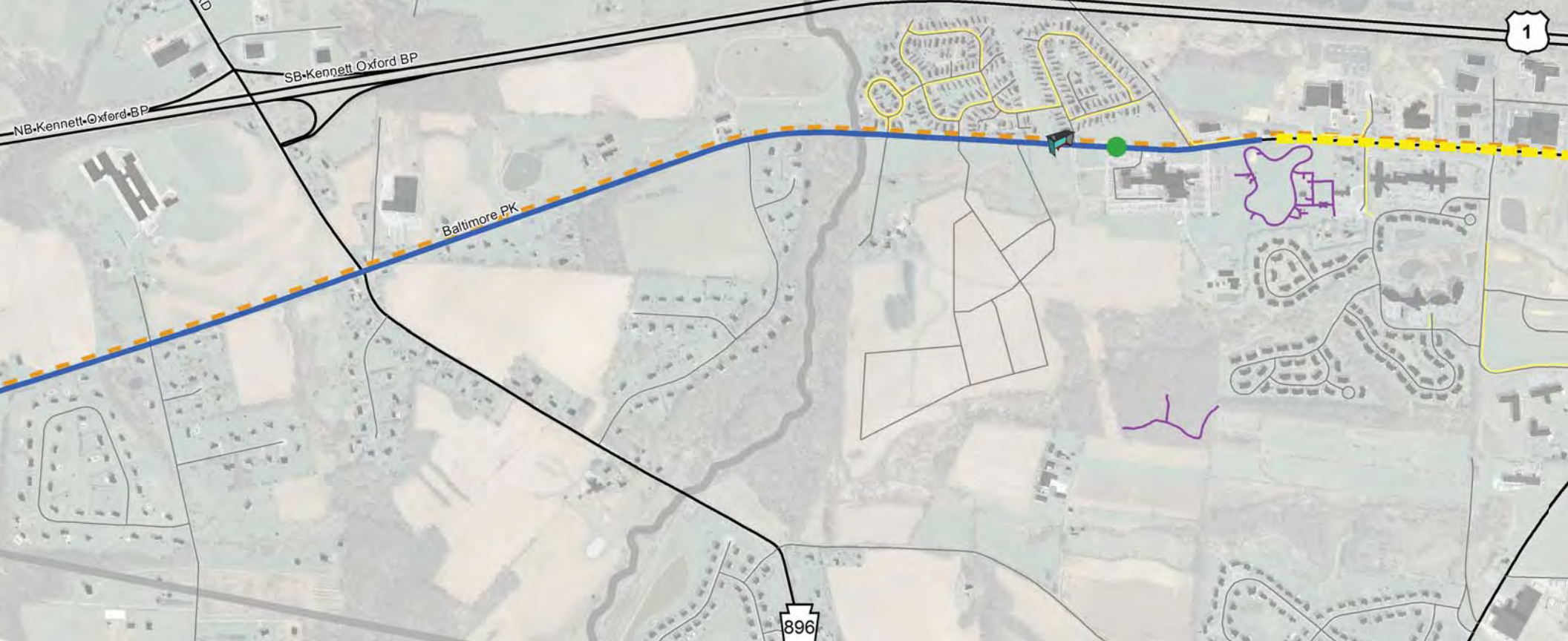






The improvements recommended for Baltimore Pike in the area near Lincoln University include: traffic calming median islands that could also serve as gateway features, bus turnouts for the SCCOOT bus, bus shelters, and better pedestrian connections to the SCCOOT bus stops on either side of Baltimore Pike. These improvements are depicted both in the cross section and the aerial view on the following page.





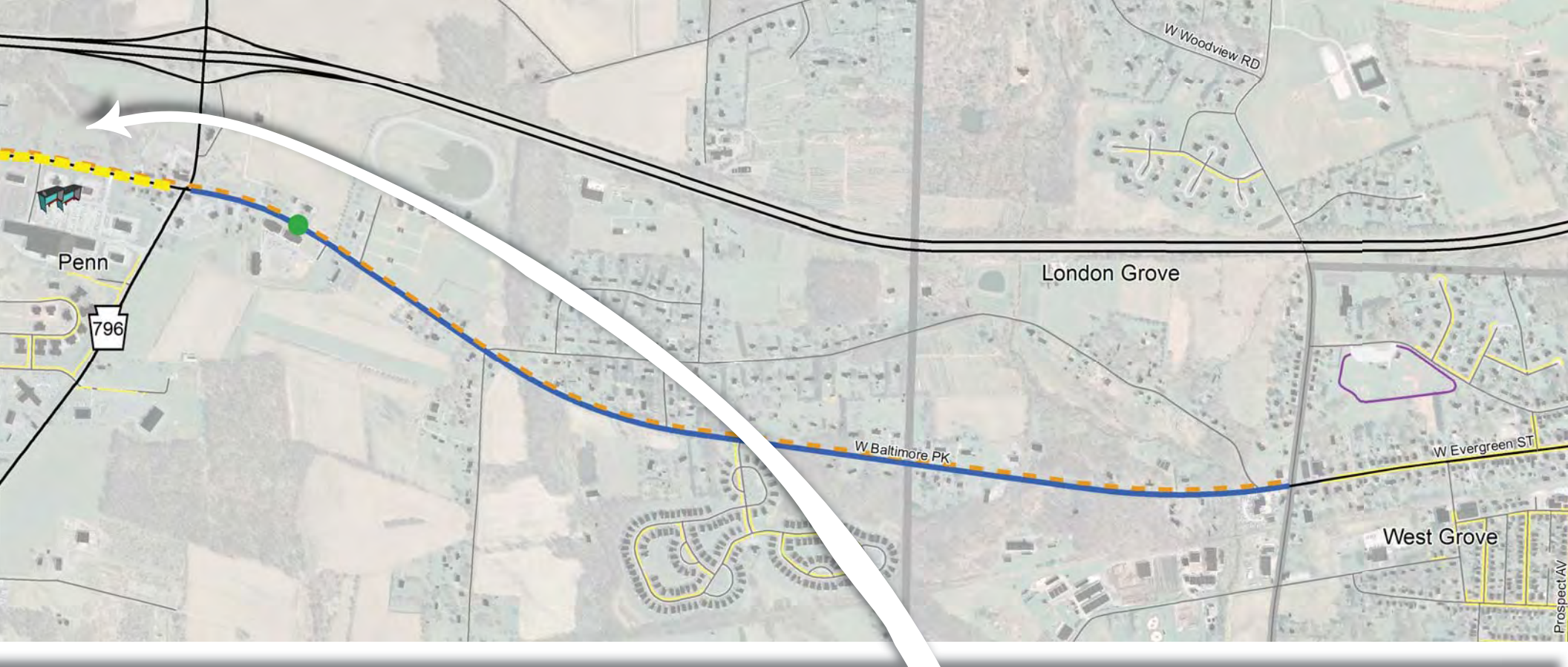
### Jennersville

Concurrent with this Plan, Penn Township developed a pedestrian connectivity study around Jennersville. The Jennersville Multi-modal Study focused on how to best connect the numerous commercial, office institutional, and residential uses focused around Jennersville village. Priority objectives from the Study include:

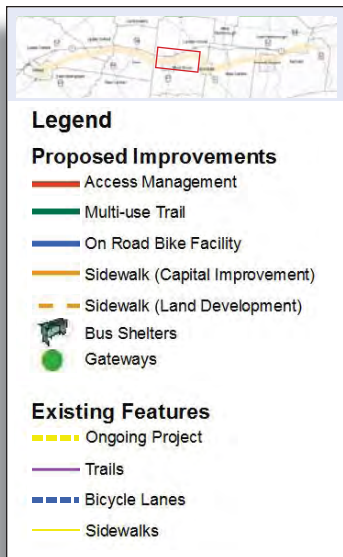
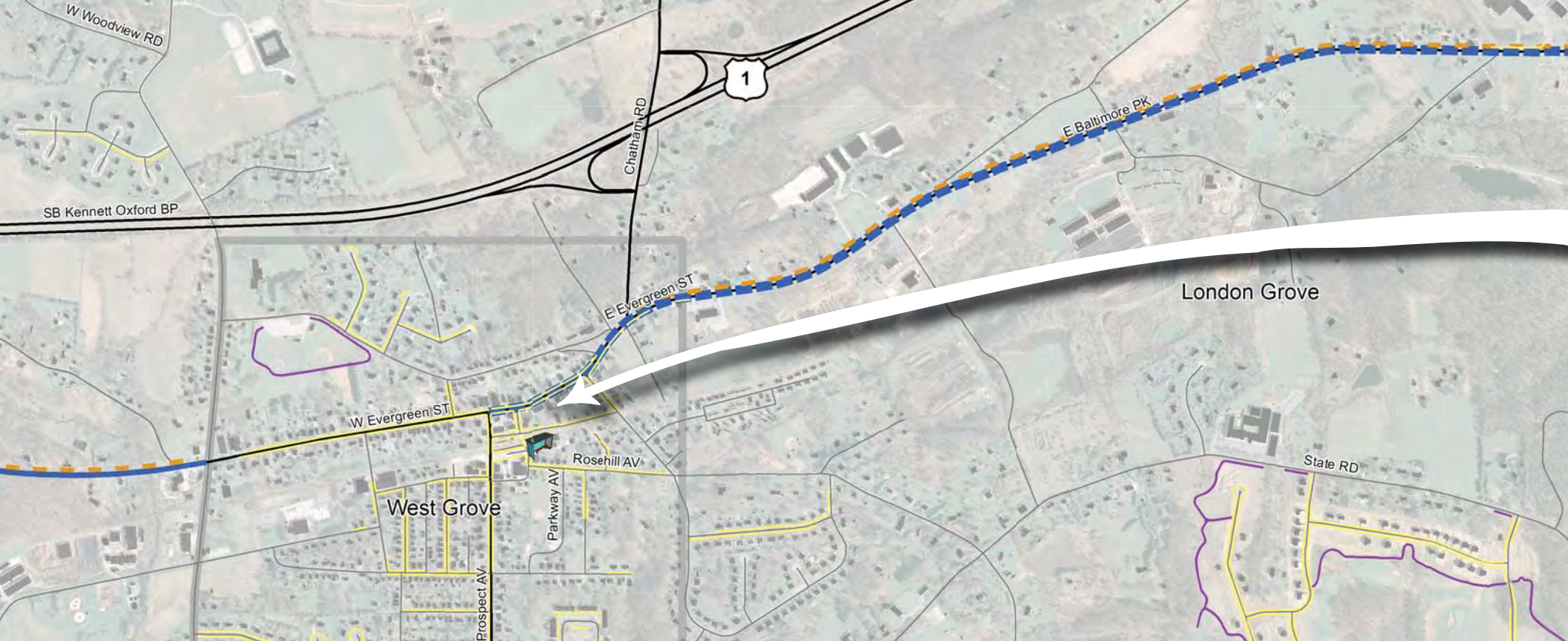
- Reduce current speed limits to a “desired operating speed” which is more pedestrian friendly
- Reduce lane widths
- Restripe Baltimore Pike to include bicycle lanes where possible and install associated signage
- Install a traffic signal at Jenner’s Pond Road/ Commerce Boulevard and Baltimore Pike

- Acquire pedestrian right-of-way and construct a multi-use walkway along the southerly side of Baltimore Pike from Jenner’s Pond Road west to Lewis Road including handicap accessible crossings at the existing signalized intersection
- Acquire pedestrian right-of-way and construct a multi-use walkway along the southerly side of Baltimore Pike from Jenner’s Pond Road east to Shoppes at Jennersville including handicap accessible crossing at existing signalized intersection
- Increase public awareness of SCCOOT bus service
- Improve the safety, visibility, and user comfort of existing SCCOOT bus stops

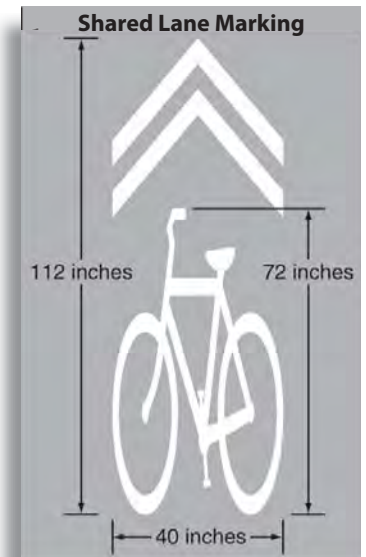
A full listing of objectives and recommendations to improve pedestrian and bicycle connections in Jennersville can be found in the Jennersville Multi-modal Study.

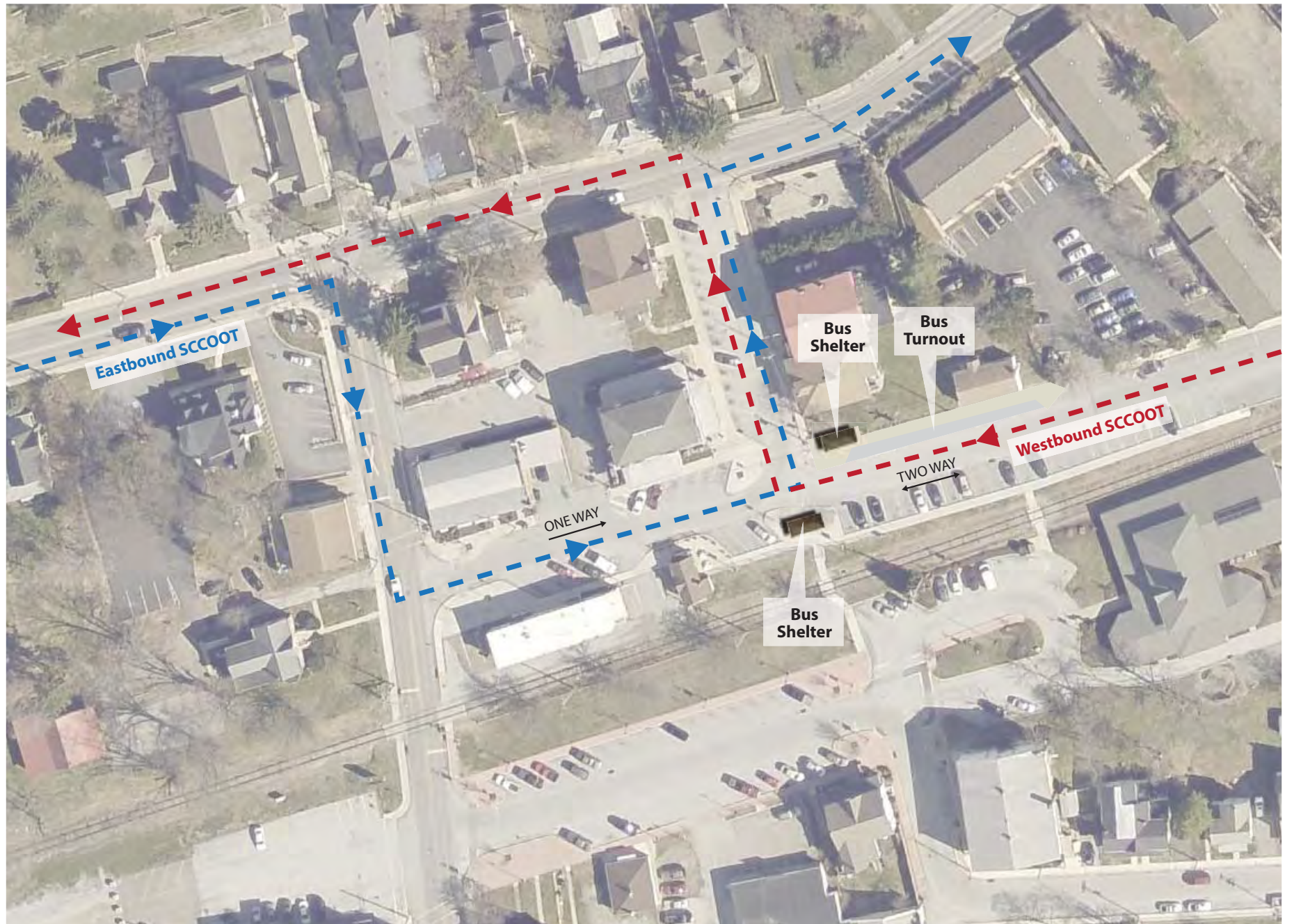


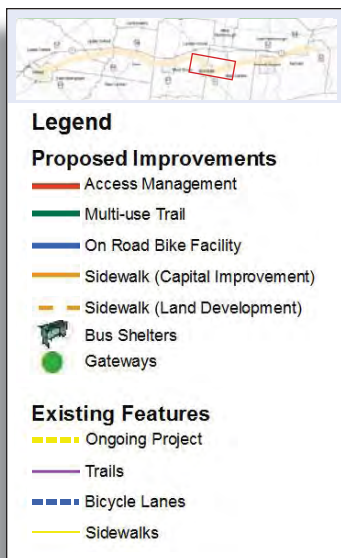
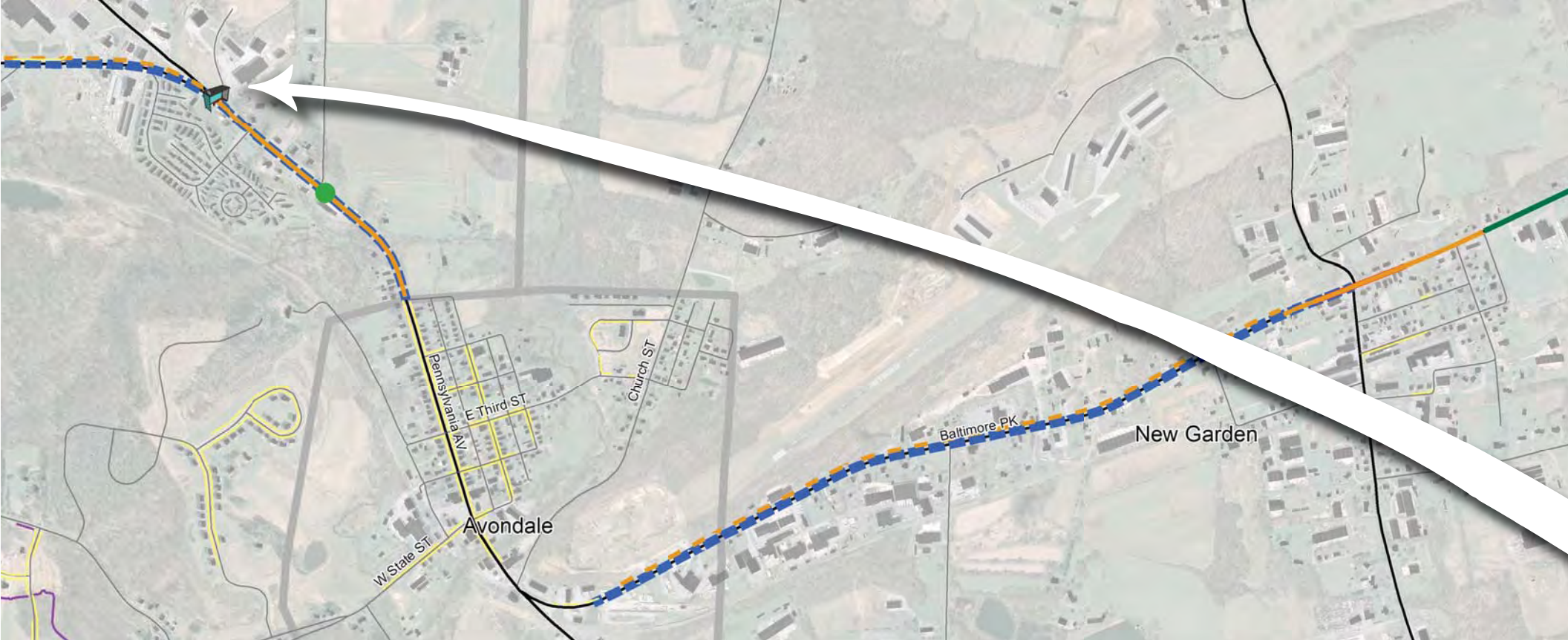
Carol Menke, AICP, LEED AP, Menke & Menke, LLC Landscape Architects & Planners and Penn Township



West Grove Borough has a fairly robust sidewalk network which allows residents access to downtown and the current SCCOOT bus stop outside of the library. To improve SCCOOT bus circulation and reduce end-to-end running times, the bus stops could be relocated onto Railroad Avenue. This would also allow for the opportunity to provide additional bus stop amenities such as bus shelters and a bus turnout for the southbound SCCOOT bus. The Borough is also the starting point for the existing bike lanes on Baltimore Pike from West Grove to Toughkenemon (Newark Road). There is not sufficient right of way width on Evergreen Street to continue the bicycle lanes through the Borough, so an appropriate treatment would be to use a shared lane marking (see figure) to indicate a shared lane configuration.







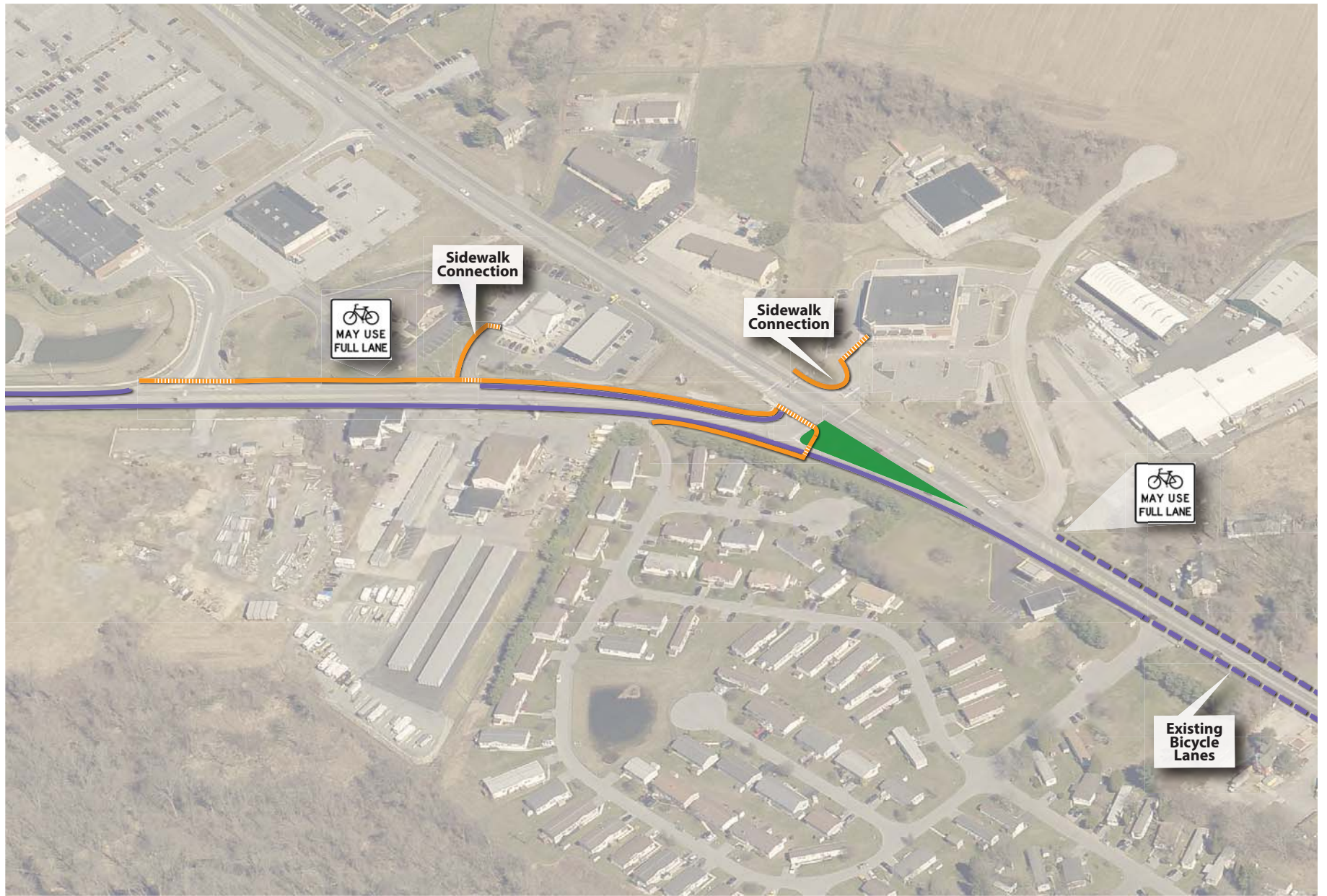
Through the development of this document, the area from intersection of Baltimore Pike and PA 41 and Avondale Borough was identified as particularly hazardous to all users. The volume and speed of traffic as well as the grade of the roadway were cited as the major concerns in this area, so many of the recommendations are geared towards traffic calming. Notable among the recommendations is a gateway treatment at the top of the hill that could be in the form of a median island to slow traffic entering Avondale Borough and a sidewalk connection from the Borough to the shopping center in London Grove Township. The recommendations specifically for the intersection of Baltimore Pike and PA 41 include:

- Clearly defining a safe bicycle path through the intersection

- Bicycle signage to increase motorists' awareness in the intersection
- Sidewalks to increase access to adjacent land uses for people walking
- Improved crosswalks
- Planted vegetation in gore area where Baltimore Pike and PA 41 meet

Additional recommendations for this area can be found on next pages.





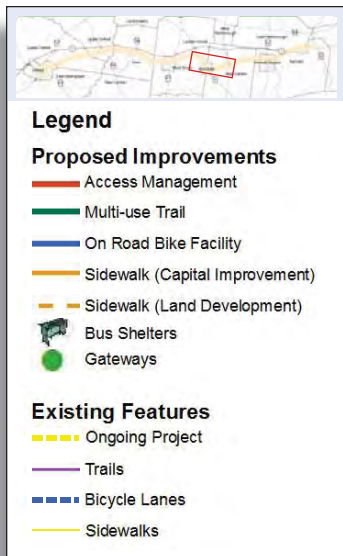
Sidewalk Connection

Sidewalk Connection

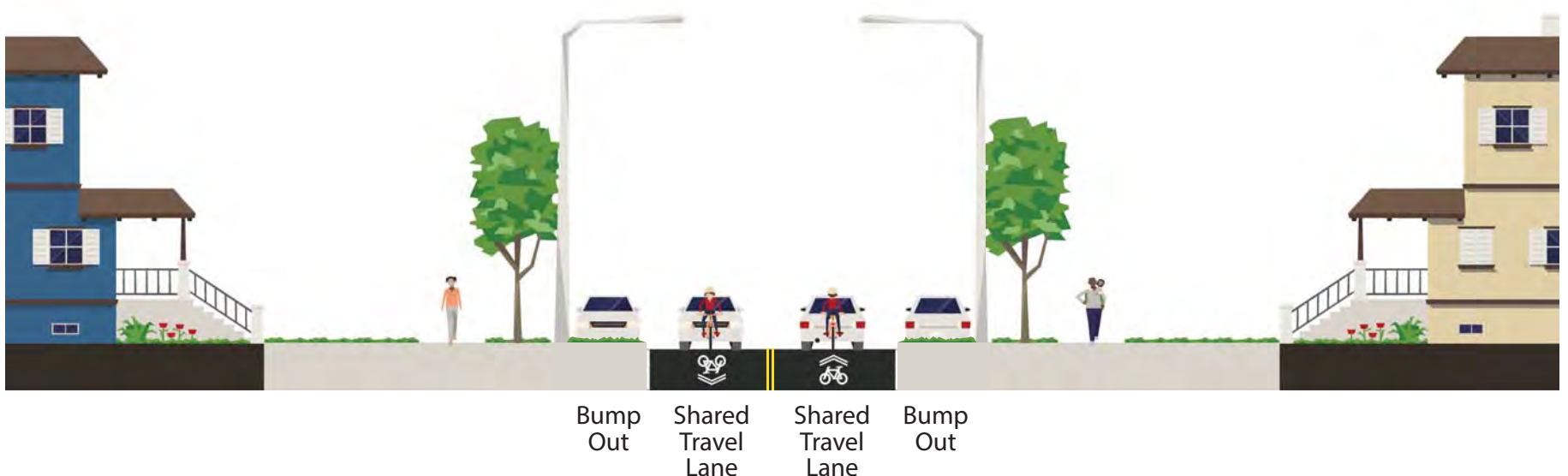
MAY USE FULL LANE

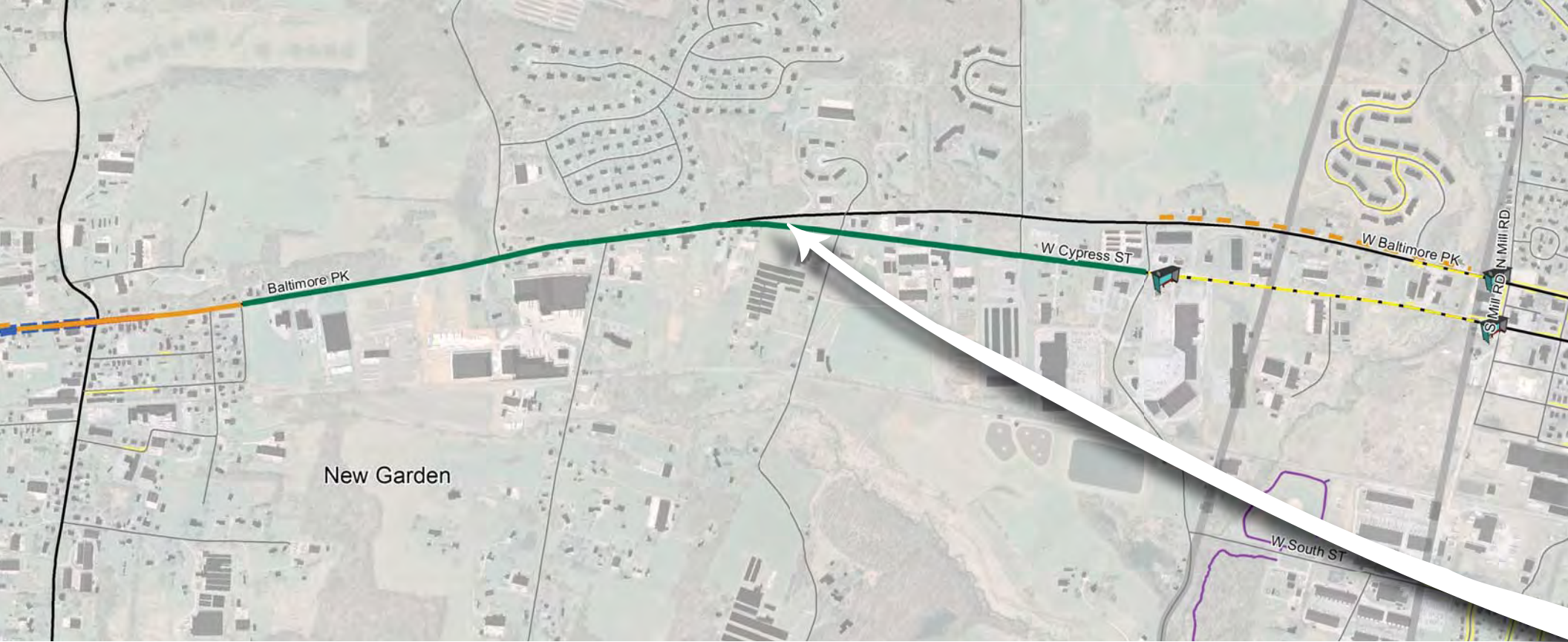

MAY USE FULL LANE

Existing Bicycle Lanes



Since travel lanes on Baltimore Pike are very wide as it continues through Avondale Borough, vehicles tend to travel at a higher rate of speed than the posted 35 miles per hour. Two traffic calming measures that could be deployed in the Borough are: 1) installing bump outs at each major intersection and striping parking spaces and/or 2) adding a fog line to the roadway. Both of these techniques would narrow the travel lanes with the intention of slowing motor vehicle speeds. If on-street parking were to be utilized, then a shared lane configuration would be required. Traffic signal upgrades would improve traffic flow even with lower vehicle speeds.



**Legend**

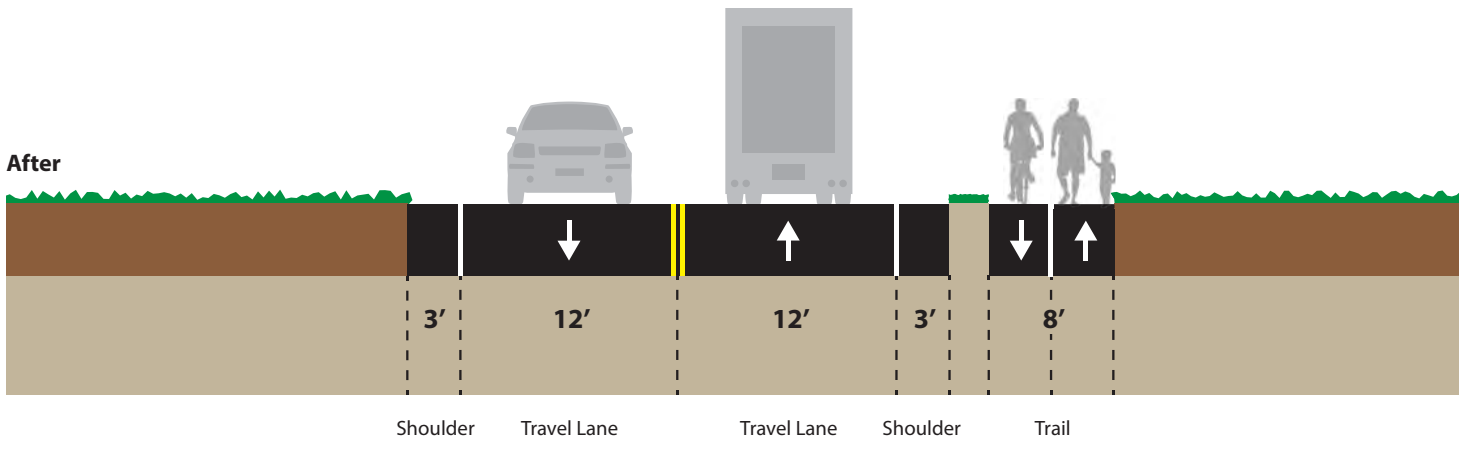
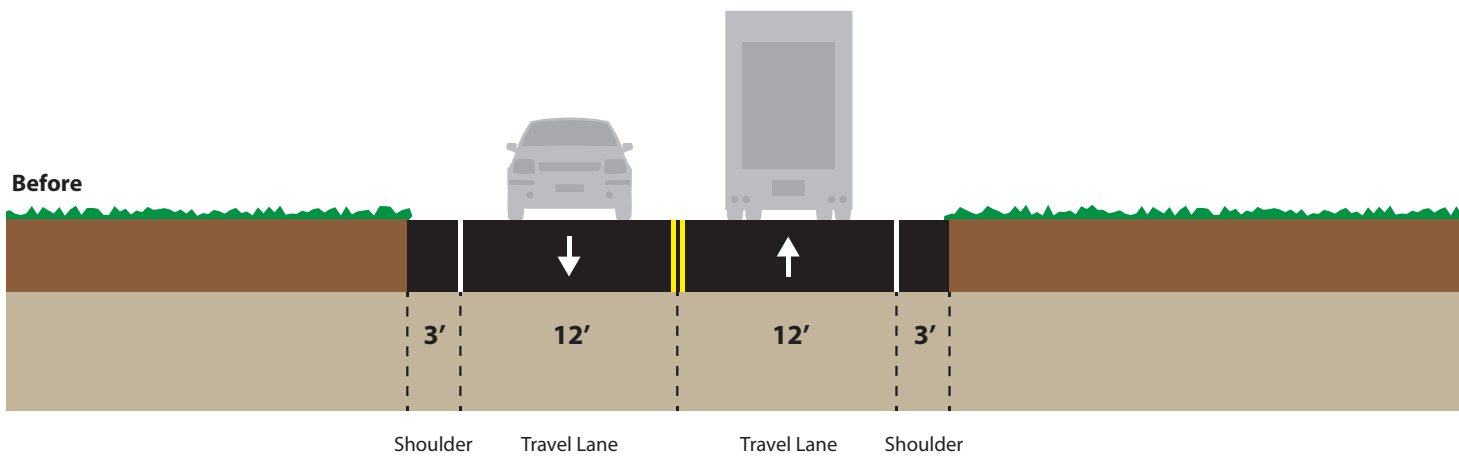
**Proposed Improvements**

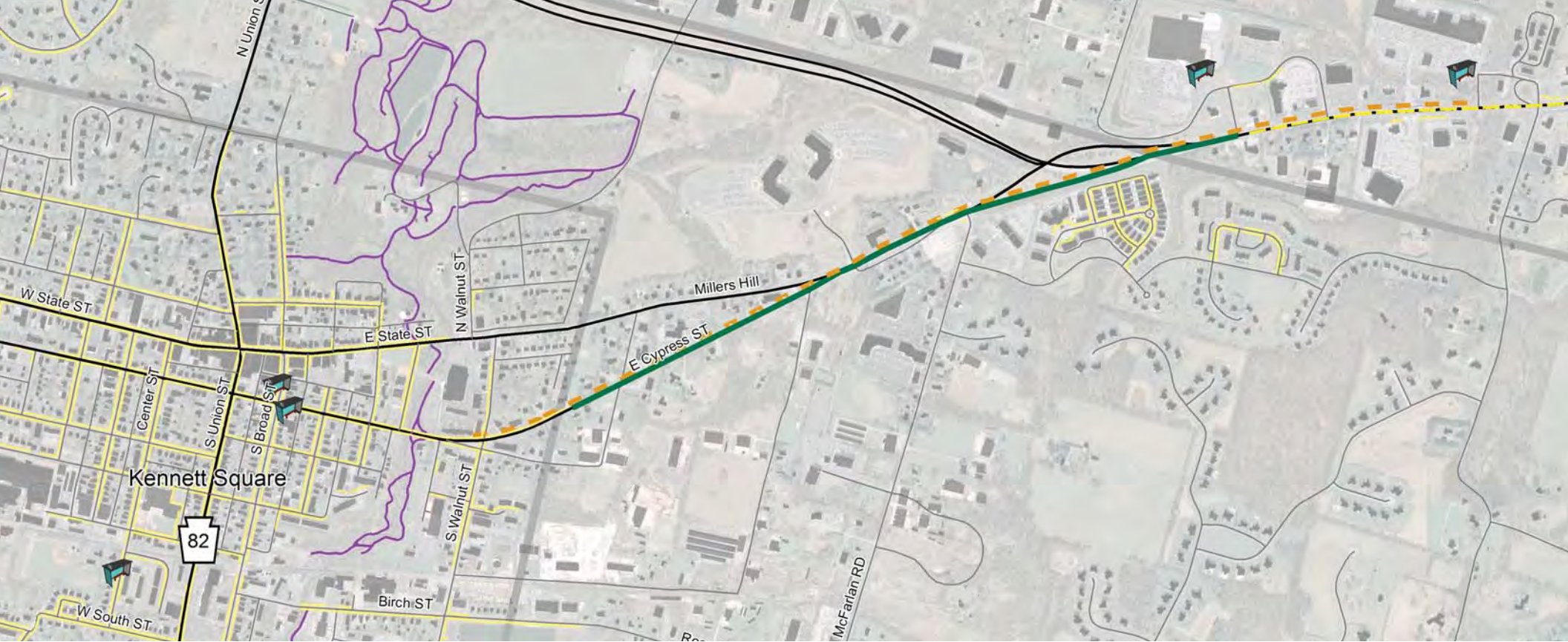

- Access Management
- Multi-use Trail
- On Road Bike Facility
- Sidewalk (Capital Improvement)
- Sidewalk (Land Development)
- Bus Shelters
- Gateways

**Existing Features**

- Ongoing Project
- Trails
- Bicycle Lanes
- Sidewalks

Within the area of Toughkenamon, safety improvements and access management are recommended to regulate motor vehicle access to surrounding land uses. Specifically at the intersection of Newark Road, turning lanes, realignment of Newark Road, and turning radius improvements will address safety and congestion issues. Safety and access management improvements in addition to constructing sidewalks and safe pedestrian crossings at Newark Road would provide a safe area for people to walk or bike on Baltimore Pike through the Village. The existing bicycle lanes on Baltimore Pike end roughly at the intersection of Newark Road. In order to complete the connection from this location to Kennett Square Borough, an off road multi-use trail facility is recommended. Continuing the bicycle lanes eastward from this point was not considered a viable option because the narrow pavement width would not facilitate a recommended bicycle lane width of five feet. A trail could be constructed to connect with the ongoing project by New Garden Township and Kennett Township to construct a sidewalk along Cypress Street. However, constructing a trail along this area of Baltimore Pike will require cooperation from multiple property owners.



**Legend**

**Proposed Improvements**

- Access Management
- Multi-use Trail
- On Road Bike Facility
- Sidewalk (Capital Improvement)
- - - Sidewalk (Land Development)
- Bus Shelters
- Gateways

**Existing Features**

- - - Ongoing Project
- Trails
- - - Bicycle Lanes
- Sidewalks

Sidewalks will be constructed along Cypress Street and State Street to connect retail, services, and residents in Kennett Township and New Garden Township to Kennett Square Borough. A similar treatment as the one recommended to connect Toughkenamon to west side Kennett Square Borough could be utilized to connect the east side of Kennett Square Borough to retail and services in Kennett Township and East Marlborough Township. However, the roadway context differs here. Instead of a two lane highway-- like in New Garden Township-- Baltimore Pike on the east side of the Borough consists of paired, two-lane, one-way streets that merge to form a four-lane highway with traffic signals and turning lanes. Given the speeds and volumes of this roadway design, the preferred treatment for this section of Baltimore Pike was removing pedestrians and bicyclists from the roadway in the form of a sidepath trail.

As of 2015, New Garden Township and Kennett Township are working together to construct a length of sidewalk that would connect Kennett Square Borough to Scarlet Road along Cypress Street. This will provide access for people living and working in the Borough to retail and services along Baltimore Pike. Additionally, at the persistence of East Marlborough Township, PennDOT has agreed to include provisions for future sidewalk connections when US 1 (Baltimore Pike) is widened to six travel lanes. Initiatives and partnerships like this are what it will take to transform Baltimore Pike into a Complete Street that is safe and convenient for people of all ages and abilities.

## Recommend Capital Improvements by Municipality

| Municipality | Improvement Type  | Location   |
|--------------|-------------------|--|
| Oxford       | Crosswalks        | PA 10 at Oxford Square                                   |
|              | Sidewalk          | PA 10 - Oxford Square to Wheeler Blvd                    |
|              | Bus Shelter       | 4th St at Oxford Borough Hall                            |
|              | Bus Shelter       | 3rd St at Hodgson St                                     |
|              | Bus Shelter       | Lincoln St at Park St                                    |
|              | Access Management | LonIn St - 5th St to Wheeler Blvd                        |
|              | Gateway           | Baltimore Pike - Westbound, Approximately Barclay Square |
|              | Bicycle Lanes     | Baltimore Pike - Wheeler Blvd to Reedville Rd            |
| Lower Oxford | Bus Turnouts      | Baltimore Pike - East/Westbound, Lincoln University      |
|              | Bus Shelters      | Baltimore Pike - East/Westbound, Lincoln University      |
|              | Gateway           | Baltimore Pike - Eastbound, Lincoln University           |
|              | Bicycle Lanes     | Baltimore Pike - Reedville Rd to Ashmun Ave              |
| Upper Oxford | Gateway           | Baltimore Pike - Westbound, Lincoln University           |
|              | Bicycle Lanes     | Baltimore Pike - Ashmun Ave to Hoods Ln                  |
| Penn         | Bus Shelter       | Baltimore Pike at Oxford Village                         |
|              | Gateway           | Baltimore Pike - Eastbound, Jennersville                 |
|              | Miscellaneous     | See Jennersville Mobility Study                          |
|              | Bus Shelter       | Shoppes at Jenners Village                               |
|              | Gateway           | Baltimore Pike - Westbound, Jennersville                 |
|              | Bicycle Lanes     | Baltimore Pike - Hoods Ln to London Grove Twp Line       |
| West Grove   | Bus Shelters      | Railroad Ave at Exchange PI - East/ Westbound            |
|              | Bus Turnout       | Railroad Ave at Exchange PI - Westbound                  |
|              | On Road Bicycle   | Evergreen St - Guernsey Rd to Oakland Ave                |
| London Grove | Bicycle Signage   | Baltimore Pike at PA 41 - East/Westbound                 |
|              | Planted Gore Area | Baltimore Pike at PA 41                                  |
|              | Crosswalks        | Baltimore Pike at PA 41                                  |
|              | Sidewalk          | Baltimore Pike - PA 41 to Hepburn Rd                     |
|              | Sidewalk          | PA 41 - Baltimore Pike to 6th St                         |
|              | Gateway           | Baltimore Pike - Eastbound, Avondale                     |

| Municipality     | Improvement Type    | Location  |
|------------------|---------------------|---|
| Avondale         | Bump-outs           | Pennsylvania Ave at 6th St - East/Westbound                         |
|                  | Narrow Travel Lanes | Pennsylvania Ave - 6th St to State St                               |
| New Garden       | Sidewalks           | Baltimore Pike - Toughkenamon Village                               |
|                  | Crosswalks          | Baltimore Pike at Newark Rd   |
|                  | Multi-use Trail     | Baltimore Pike - Union St to Scarlet Rd                             |
|                  | Bus Shelter         | New Garden Town Square  |
|                  | Sidewalk            | State St - Scarlet Rd to Kennett Twp Line                           |
|                  | Sidewalk            | Cypress St - Scarlet Rd to Kennett Twp Line                         |
| Kennett          | Sidewalk            | State St - New Garden Twp Line to Mill Rd                           |
|                  | Multi-use Trail     | Cypress St/ Baltimore Pike - Walnut St to East Marlborough Twp Line |
|                  | Sidewalk            | State St - Kennett Square Boro Line to East Marlborough Twp Line    |
|                  | Sidewalk            | Cypress St - New Garden Twp Line to Mill Rd                         |
| Kennett Square   | Bus Shelter         | State St at Mill Rd   |
|                  | Bus Shelter         | Cypress St at Mill Rd   |
|                  | Bus Shelter         | Cypress St at Broad St  |
|                  | Bus Shelter         | Center Square Apartments  |
|                  | Sidewalk            | State St - EB Red Clay Ck to Kennett Twp Line                       |
| East Marlborough | Multi-use Trail     | US 1 - Kennett Twp Line to Onix Dr                                  |
|                  | Sidewalks           | US 1 - Onix Dr to Greenwood Rd                                      |
|                  | Bus Shelter         | Wal-Mart Kennett Square   |
|                  | Bus Shelter         | Shoppes at Longwood Gardens   |

# Ordinance Review

As part of the development of this document, an assessment of municipal ordinance regulations addressing bicycle and pedestrian facilities was completed. The inventory should be used by local municipalities when updating their ordinances to better address various bicycle and pedestrian concepts in their communities. Sample ordinance language has been provided to illustrate how these concepts may be addressed by municipal zoning and subdivision/ land development ordinances. A coordinated effort among municipalities to update their ordinances would ensure uniform application complete street concepts along Baltimore Pike. The Chester County Planning Commission provides resources and assistance to municipalities updating their land use ordinances.

| Ordinance Matrix  | Standard                                      | Oxford | Lower Oxford | Upper Oxford | Penn | West Grove | London Grove | Avondale | New Garden | Kennett | Kennett Square | East Marlborough |
|---|---|--------|--------------|--------------|------|------------|--------------|----------|------------|---------|----------------|------------------|
|   | <b>Pedestrian Facilities - Sidewalks</b>      |        |              |              |      |            |              |          |            |         |                |                  |
| Effective standards are in place  | Are pedestrian facilities defined?            |        |              |              |      |            |              |          |            |         |                |                  |
| Standards are in place but a significant issue was identified that limits their effectiveness | Support purpose statement?                    |        |              |              |      |            |              |          |            |         |                |                  |
| No standards are in place for this concept  | When required? (i.e., for what types of uses) |        |              |              |      |            |              |          |            |         |                |                  |
|   | Where required? (i.e., location, etc.)        |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are sidewalks mandatory or optional?          |        |              |              |      |            |              |          |            |         |                |                  |
|   | Is a minimum sidewalk width specified?        |        |              |              |      |            |              |          |            |         |                |                  |
|   | Reference ADA standards? (curb cuts)          |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are bus shelters required?                    |        |              |              |      |            |              |          |            |         |                |                  |
|   | <b>Trail Facilities</b>                       |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are trail facilities defined?                 |        |              |              |      |            |              |          |            |         |                |                  |
|   | When required? (i.e., for what types of uses) |        |              |              |      |            |              |          |            |         |                |                  |
|   | Where required? (i.e., location, etc.)        |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are trails mandatory or optional?             |        |              |              |      |            |              |          |            |         |                |                  |
|   | Is a minimum trail width included?            |        |              |              |      |            |              |          |            |         |                |                  |
|   | Is a surface treatment specified?             |        |              |              |      |            |              |          |            |         |                |                  |
|   | <b>Bicycle Facilities</b>                     |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are bicycle facilities defined?               |        |              |              |      |            |              |          |            |         |                |                  |
|   | When required? (i.e., for what types of uses) |        |              |              |      |            |              |          |            |         |                |                  |
|   | Where required? (i.e., location, etc.)        |        |              |              |      |            |              |          |            |         |                |                  |
|   | Is a surface treatment specified?             |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are bicycle parking facilities required?      |        |              |              |      |            |              |          |            |         |                |                  |
|   | <b>Transit Facilities</b>                     |        |              |              |      |            |              |          |            |         |                |                  |
|   | Is bus shelter defined?                       |        |              |              |      |            |              |          |            |         |                |                  |
|   | When required? (i.e., for what types of uses) |        |              |              |      |            |              |          |            |         |                |                  |
|   | Where required? (i.e., location, etc.)        |        |              |              |      |            |              |          |            |         |                |                  |
|   | <b>Official Map (date adopted)</b>            |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are trails/ paths/ sidewalks designated?      |        |              |              |      |            |              |          |            |         |                |                  |
|   | Are bike routes designated?                   |        |              |              |      |            |              |          |            |         |                |                  |



## Sample Ordinance Language

- i) **Sidewalks** a minimum of five (5) feet in width shall be required on both sides of all public streets where identified in the recommendations of “name of document”. Where sidewalks are not identified, installation is encouraged but not required along both sides of public streets.
- ii) Where **sidewalks** are not identified in the recommendations the applicant may either install sidewalks on both sides of all public streets or pay a fee-in-lieu of the installation of sidewalks, as determined by the municipality.
- iii) **Crosswalks** shall be installed and maintained as an integral component of the sidewalk and pathway system of the [zoning district/ other designation] and shall be provided at all intersections of streets and driveways, and at all continuations of sidewalks and paths across streets and driveways.
- iv) All **crosswalks** shall be signed to indicate a pedestrian crossing.
- v) **Crosswalks** shall be a minimum of six (6) feet wide defined through the use of interlocking unit pavers or striped in accordance with the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD).
- vi) **Bus shelters** shall be installed and maintained for any development where the gross leasable area for commercial, industrial, or institutional uses is X s.f. or more or where there is a residential development of greater than X units where there is existing bus service and/or where the development is determined to be of a significant nature to warrant a bus transit stop.
- vii) **Bus shelters** shall be consistent with the design standards of the SEPTA Bus Stop Design Guidelines developed by SEPTA and DVRPC.
- viii) **Bicycle racks** shall be required as an integral component to the pedestrian orientation of the [zoning district/ other designation] and shall be installed and maintained in accordance with the following:
  - (1) One (1) bicycle rack, [x] in color, with capability of holding up to ten (10) bicycles shall be required for every thirty thousand (30,000) square feet of gross leasable area.
  - (2) Bicycle racks shall be permanently anchored or in a concrete footing to promote stability and security.
  - (3) Bicycle racks shall be located near building entrances, in a visible area, and major areas of pedestrian activity.
  - (4) If and as possible, bicycle racks may be located under a shelter or building overhand or inset to provide shelter for bicycles.
- ix) **Pedestrian Circulation.** The following regulations shall apply to all uses:
  - (1) The Developer shall preserve existing trails or install trails and paths devoted to pedestrian, equestrian, or bicycle use other pedestrian facilities as necessary and desirable to achieve the following:
    - (a) Logically continue, link or expand existing pedestrian facilities on, across and abutting the site consistent with [Comprehensive Plan, Official Map, etc.]. The applicant may be requested to provide an easement dedicated to the municipality with connections to abutting properties that will enable the future continuation of the pedestrian network.
    - (b) Alter the course of a trail within the tract for which development is proposed provided the proposed alteration exhibits quality trail design according to generally accepted principles of trail design. The municipality recommends guidelines in Trail & Path Planning: A guide for Municipalities (2007), available from the Chester County Planning Commission.
    - (c) Provide pedestrian access to existing or anticipated public bus transportation pickup points, public parks, community facilities, commercial areas, or high density residential developments.
    - (d) Implement the pedestrian circulation plan identified on Map [x] of the [Comprehensive Plan, Official Map, etc.].
    - (e) Identify existing and proposed trails and paths during the site development process and install them prior to the construction of buildings and other structures.
    - (f) As appropriate, provide for the continued ownership and maintenance of trails and trail easements by having them dedicated to the public sector, donated to a private conservation organization, or placed under the care of a community organization.

# Moving Forward

A major step in demonstrating a community's commitment to complete streets is the adoption of a complete streets policy. There are over 600 jurisdictions nationwide that have complete streets policies in place. The most common type of policy is a resolution, but other types include internal policies, executive orders, design guidelines, and policies adopted by an elected board. Municipalities along the Baltimore Pike corridor should adopt a complete streets policy to demonstrate their commitment to improving the safety of all users of Baltimore Pike. A sample resolution has been provided.

Physical improvements to the roadway are only a part of the safety equation for Baltimore Pike. To fully transform the corridor into a complete street, strategies that educate and encourage people to seek and use other modes of transportation than automobiles should be explored by the community. Examples of these types of initiatives include; walking school bus, emergency ride home, wayfinding, interpretive signage, issue reporting, spot maintenance, commute planner, etc.

Some of the improvements identified in this document are large in scale and will require the allocation of funding to design and build. In these cases it will take a local effort to champion the project from start to finish. Community groups and local advocacy organizations can provide a push to action, but local municipalities play a key role in securing funding for capital improvements. Municipalities should work to identify opportunities to fund and construct the improvements identified in this document. The land development approval process can be used as a vehicle to construct capital improvements. However, larger improvements will take

a commitment of funding to construct. Contemporary funding opportunities to implement complete street improvements are available from a variety of sources and include:

- Federal Highway Administration: Transportation Alternatives Program (TAP)
- PA Commonwealth Finance Authority: Multimodal Transportation Fund
- PA Department of Transportation (PennDOT): Multimodal Transportation Fund
- PennDOT: Automated Red Light Enforcement Program (ARLE)
- PA Department of Community & Economic Development (DCEd): Greenways, Trails and Recreation Program

The Chester County Planning Commission can assist municipalities in identifying the appropriate funding opportunities for capital improvements.

Municipalities were not required to take any official action in regards to this document unless they desired to. Instead, this document and the recommendations that it contains should be used as a reference or tool to incorporate Complete Street policies and capital improvements into municipal comprehensive planning efforts and municipal ordinance revisions.

## Sample resolution

### Preamble/ Whereas Clauses

- The preamble to a complete streets resolution should contain factual findings that support the municipality's need to pass the resolution based on the goals of the municipality.
- These statements should be specific to the needs and desires of each municipality.
- It should contain information that documents the need for complete streets in the community.
- An example statement:  
"WHEREAS, (Municipality) wishes to ensure that all users of the transportation system in (Municipality) are able to travel safely and conveniently on all roadways within (Municipality); and"

### A Resolution Setting Forth (Municipality)'s Commitment to Complete Streets

NOW, THEREFORE, LET IT BE RESOLVED that (*adopting body of Municipality*) hereby recognizes the importance of creating Complete Streets that enable safe travel by all users, including people walking, people on bicycles, people using public transportation and people driving automobiles, (*insert significant local users if desired, e.g. agriculture vehicles, emergency vehicles, freight, horses, Amish buggies, etc.*) and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

BE IT FURTHER RESOLVED that (*insert appropriate departments or committees*) should make Complete Streets practices a routine part of everyday operations, should approach every transportation project and program as an opportunity to improve public (*and private*) streets and the transportation network for all users, and should work in coordination with other departments, agencies, and jurisdictions to achieve Complete Streets.

BE IT FURTHER RESOLVED that (*insert appropriate department or staff*) should evaluate how well the streets and transportation network of (Municipality) are serving each category of users.

BE IT FURTHER RESOLVED that the head of each affected department should report back to the (adopting body) (at a determined interval) regarding: the steps taken to implement this Resolution, additional steps planned, and any desired actions that would need to be taken by (adopting body) or other agencies or departments to implement the steps taken or planned.

BE IT FURTHER RESOLVED that (Municipality) should consider requiring incorporation of Complete Streets concepts into the approval processes for any construction, reconstruction, retrofit, maintenance, alteration, or repair of streets, bridges, or other portions of the transportation network.

BE IT FURTHER RESOLVED that (*insert appropriate committee or appointed or elected board*) should consider requiring Complete Streets be incorporated into the land development review and approval process via ordinance for all land development proposals that have a significant impact on the communities transportation infrastructure in (Municipality).

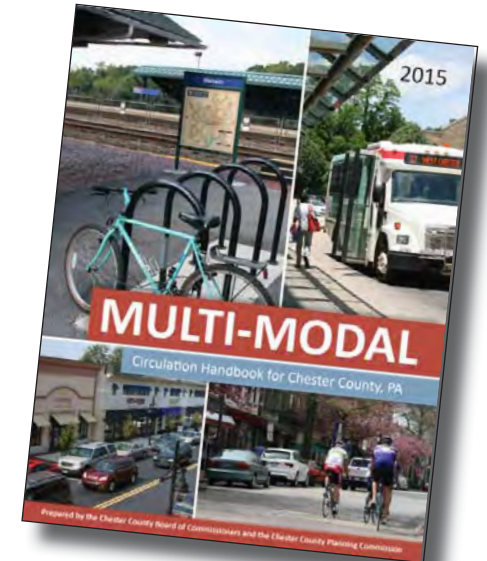
# Additional Resources

While the majority of Baltimore Pike is owned and maintained by PennDOT, municipalities control land use decisions. It is this relationship that impacts the character of the roadway and determines whether or not it is a complete street. Therefore, the local community plays a vital role in making decisions that impact the safety of all people who use the roadway. Municipalities have a role to fill to promote the general welfare of the community. The resources listed here are just a sampling of the tools that communities can use to implement complete streets.



## Multimodal Handbook for Chester County

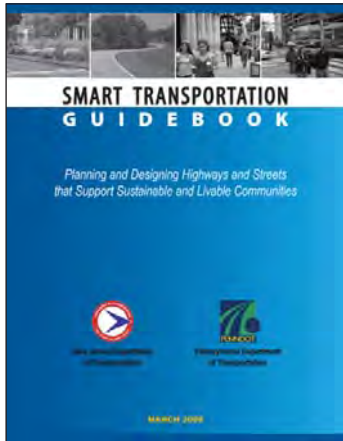
Chester County's [Multimodal Handbook](#) is a resource for municipalities and developers to guide the development and construction of transportation facilities in Chester County. It includes guidelines for the design of transportation facilities as well as case studies that illustrate how various design elements may be implemented through the land development process. The Multimodal Handbook is available in print and via a web application on the Chester County Planning Commission website.



## SEPTA Bus Stop Design Guidelines

The Southeastern Pennsylvania Transportation Authority (SEPTA) with assistance from the Delaware Valley Regional Planning Commission developed the [SEPTA Bus Stop Design Guidelines](#) in 2012. The document provides consistent guidelines for the construction of bus stops throughout the region. The design standards put forth in the Guidelines are intended to foster the installation of bus stops that can best serve the community. According to the Guidelines, *"A high-quality transit stop is one that is well connected to the neighborhood or community it serves, accommodates the needs of all transit passengers safely and comfortably, and permits efficient and cost-effective transit operations."* While Baltimore Pike currently is served by TMACC's SCCOOT bus service and is not served by SEPTA, the design principles still apply to this corridor.





### Smart Transportation Guidebook

Developed jointly by PennDOT and NJDOT, the **Smart Transportation Guidebook** provides a context sensitive approach to roadway planning and design. It is an effort to implement better transportation and land use decisions that lead to projects and programs that support a community's goals and objectives, are affordable, and can be implemented in reasonable timeframes.

### AASHTO Guidelines

The American Association of State Highway Transportation Officials (AASHTO) sets technical standards for planning, design, and construction of transportation facilities. Those standards are published in various guides. Both the **Guide for the Planning, Design, and Operation of Pedestrian Facilities** and the **Guide for the Development of Bicycle Facilities** are especially pertinent to the recommendations made in this document.



### Lancaster County Complete Streets Guidebook

The **Lancaster County Complete Streets Guidebook** was created to help municipalities implement complete streets on local roadways. It outlines a process for municipalities to follow to ensure the right approach is taken for each street in their community.

### Complete Streets Local Policy Workbook

The **Complete Streets Local Policy Workbook** is a guide for developing comprehensive complete streets policies. The guide outlines ten elements that make up a comprehensive complete streets policy.

