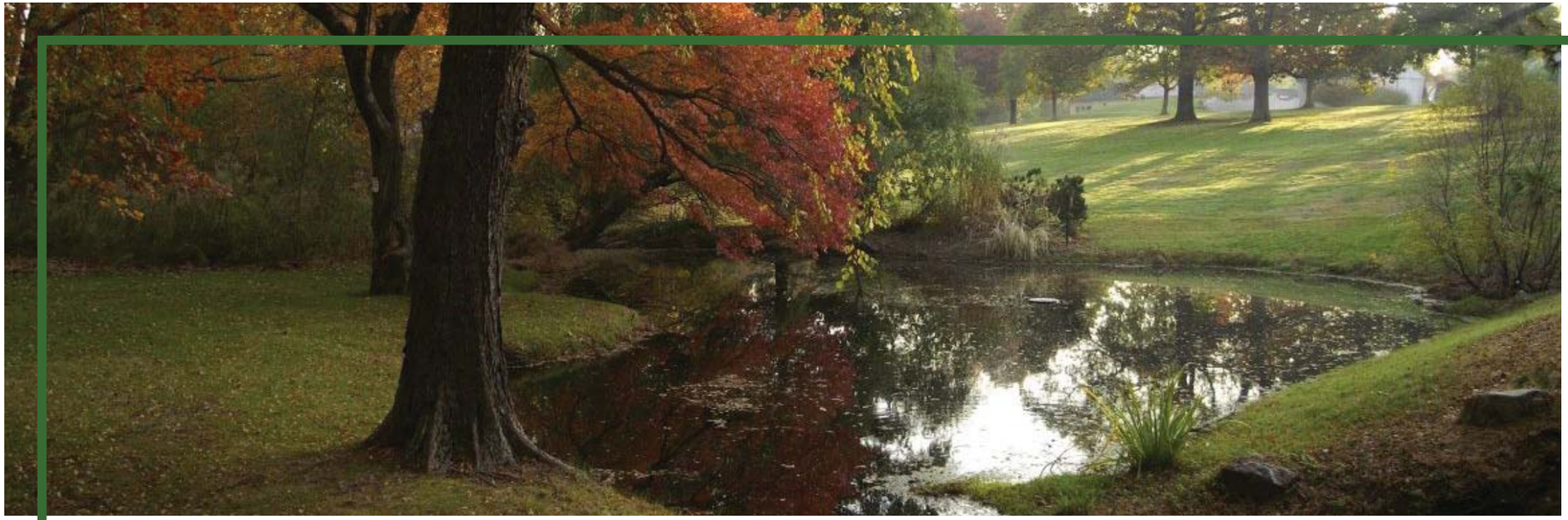

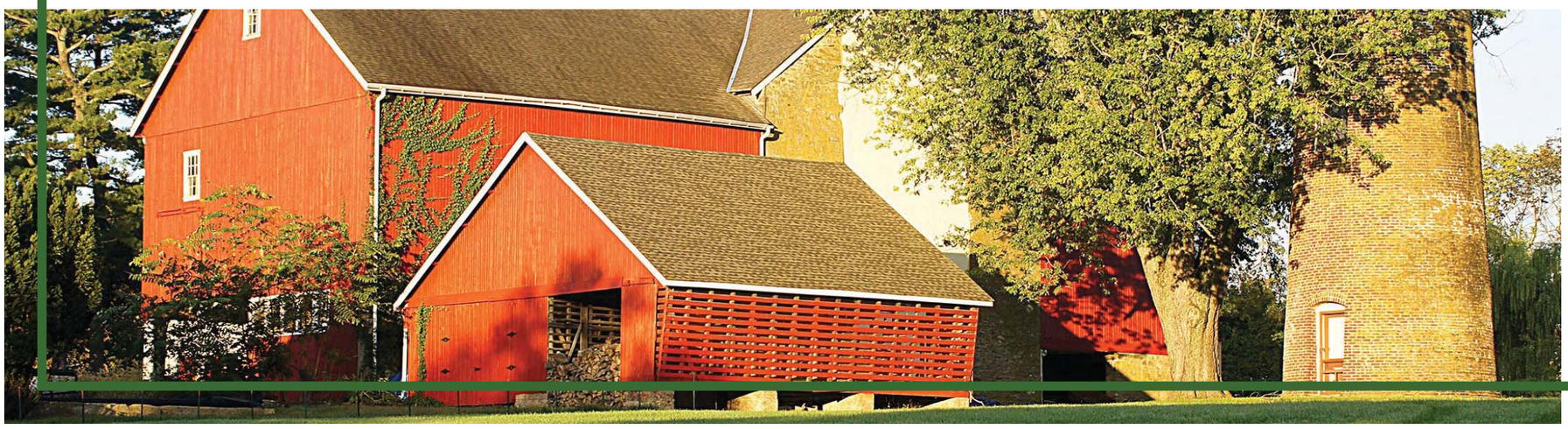

Whitpain Township Walkability Study

October 2019

PREPARED FOR:
Whitpain Township
Board of Supervisors
960 Wentz Road
Blue Bell, PA 19422

PREPARED BY:
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Mechanicsburg, PA 17055
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TABLE OF CONTENTS

EXECUTIVE SUMMARY

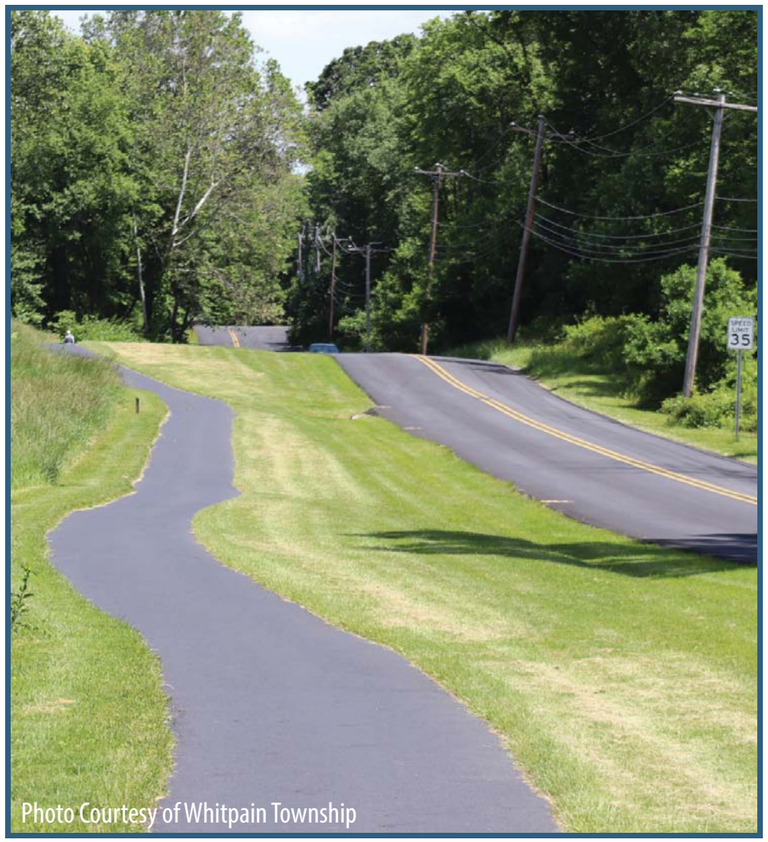


Photo Courtesy of Whitpain Township

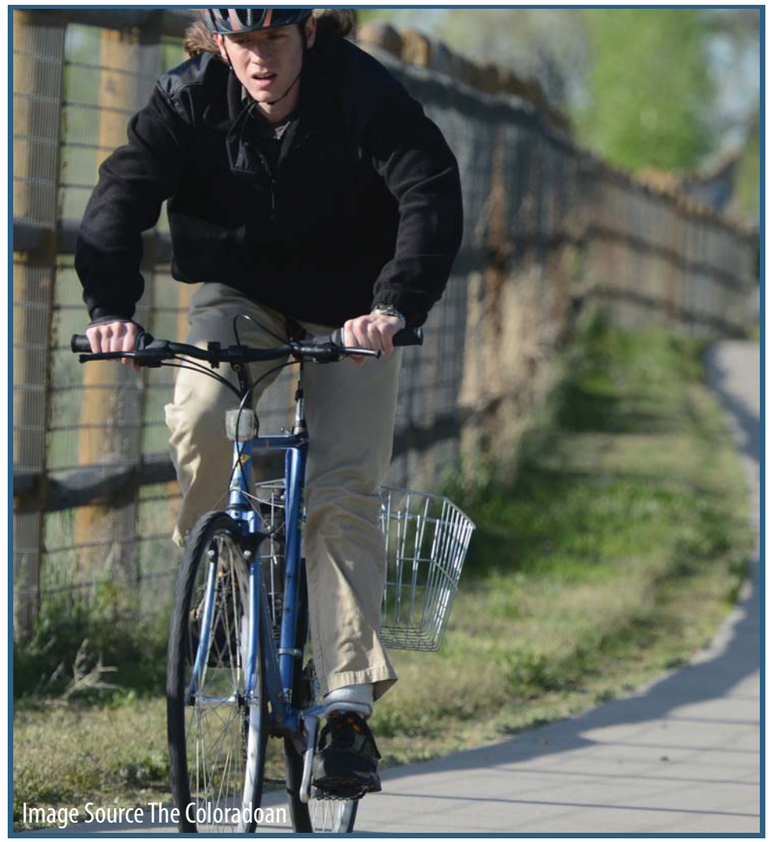


Image Source The Coloradoan

EXECUTIVE SUMMARY

The revised March 2016 Whitpain Township Comprehensive Plan, "Four Villages within a Community" identified, based on resident and concerned citizens survey responses, that the infrastructure improvements within the Township may not be adequately addressing biking and walking opportunities. Pedestrian safety concerns and an interest in transit-oriented development led to development of a walkability study. The study will allow the Township to prioritize sidewalk gaps and pedestrian safety enhancements, identify existing infrastructure deficiencies, evaluate handicap accessibility, and establish an implementation plan.

In order to provide the most accurate study and recommendations, data was collected from all available resources including State, County, and Township resources, as well as field observations and GIS research. Additionally, two public meetings were held to get community input. Studying the existing network allowed designers to see the gaps and missing links within the Township network. The analysis found that the Township had many sidewalks in good condition and several active bike trails. However, these segments were fractured and were missing pieces that would create a Township-wide network.

The design team studied walkability strategies and found that practical, or useful, connectivity that creates a pathway between community anchors is an important element of pedestrian design. The likelihood of pedestrian movements to occur is dependent on how frequently the pedestrian needs to visit a location and the relationship between desirable destinations. According to the Federal Highway Administration, most pedestrians are willing to walk five to ten minutes, or a quarter to a half mile to get to a transit stop. In order to encourage pedestrians to use the developed connections, it is important to design safe and convenient pathways to desired locations that are between a quarter and half mile apart. Whitpain has four villages with denser street blocks and town center district environments where some connectivity exists and is relatively easy to promote. Connecting practicable anchors to one another will make Whitpain Township more walkable community.

To move forward in creating a walkable Whitpain, the first step should be to build upon the planned roadway improvements in the Township and incorporate pedestrian access improvements. Access to community anchors such as transit stops, schools, parks, neighborhoods, and government facilities such as Township Office and Post Office should be emphasized. Village centers should have sidewalks where possible and should be connected to surrounding neighborhoods. Currently, the PennDOT SR 202 Section 61N project does this by adding sidewalk and bike lanes in both directions while improving Dekalb Pike. The following step should be to fix the gaps in sidewalk connectivity, specifically emphasizing the desired projects discussed at the public meetings. Additionally, all fair and poor condition sidewalk areas, which only account for 9% of the sidewalks in the Township, should be updated and should include ADA accessible facilities.

Photo Courtesy of Whitpain Township

WALKABILITY IN WHITPAIN

Whitpain Township requested this study to improve the walkability of the Township and thereby the lives of its residents.

REGIONAL CONTEXT

Photo Source: Free Library of Philadelphia

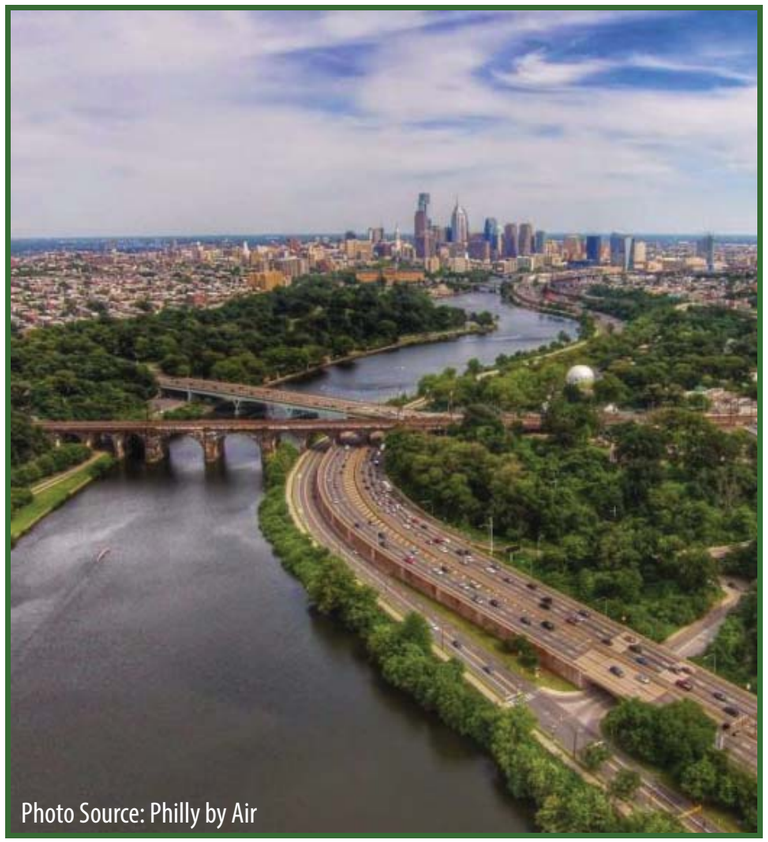


Photo Source: Philly by Air

Photo Source: Google Maps

REGIONAL CONTEXT

Whitpain Township is located Northwest of Philadelphia in central Montgomery County, Pennsylvania. It was founded in 1701 by Quaker settlers and is considered a historic site. The township has a long and rich history including hosting George Washington and the Continental Army in 1777.

Geographically, Whitpain Township is approximately 20 miles from Center City Philadelphia. Additionally, it is 30 miles from Trenton, NJ; 38 miles from Wilmington, DE; 100 miles from New York, NY; and is 150 miles from Washington DC.

LOCAL CONTEXT

Whitpain Township is bordered by eight municipalities and has four historic villages located within its borders. The Township is bordered by Ambler Borough and seven other townships: Lower Gwynedd, Upper Gwynedd, Worcester, East Norriton, Plymouth, Whitemarsh, and Upper Dublin. The four villages are: Centre Square, Blue Bell, Broad Axe, and West Ambler. Each has a history, distinct character, and a commercial center.

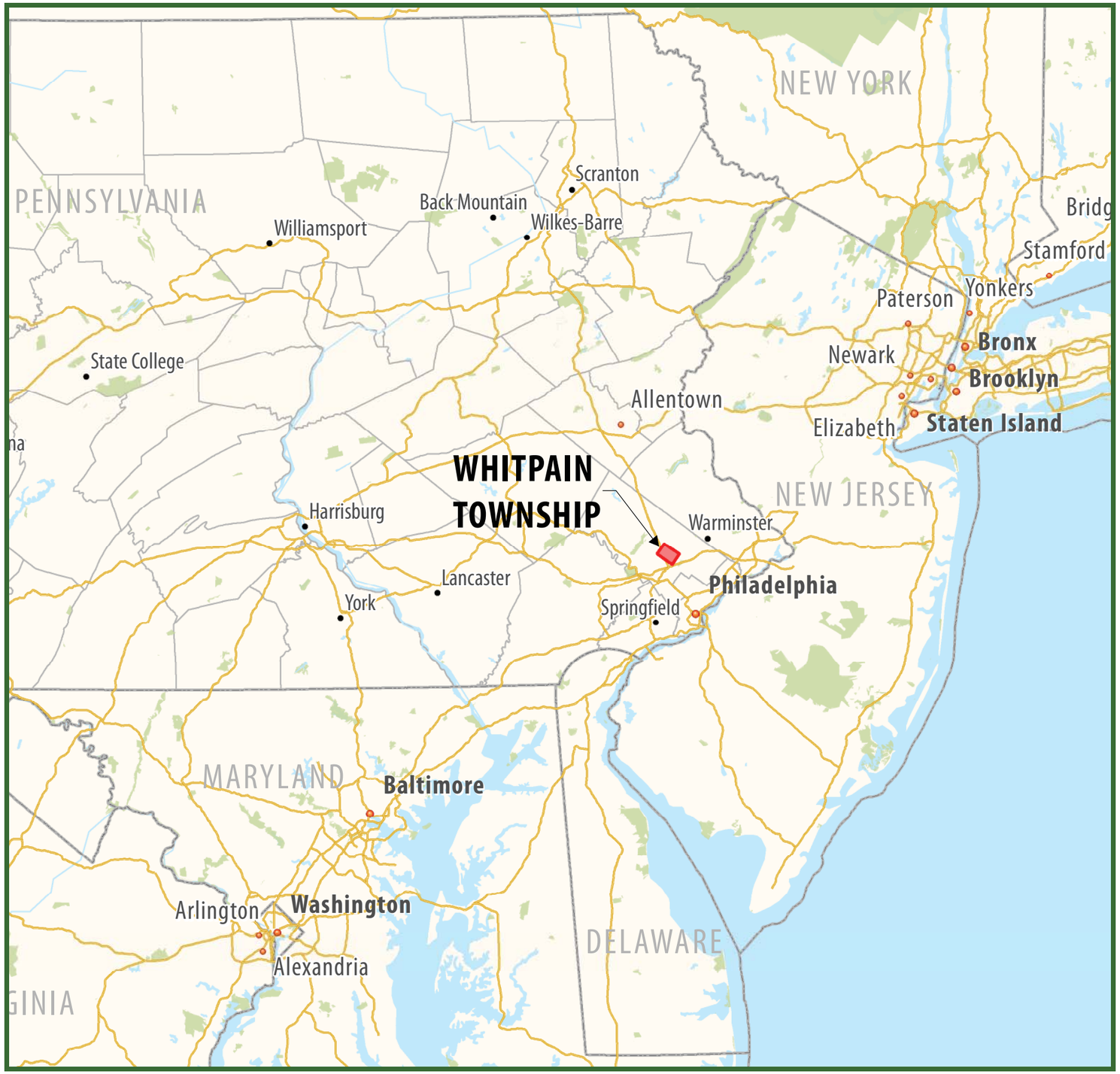
Whitpain Township is roughly 4.5 miles long parallel with PA 73 (Skippack Pike) and 3 miles wide parallel with US 202 (DeKalb Pike). The Township has an approximate land area of 12.9 square miles, has a population approaching 20,000, and has over 6,700 households.

REGIONAL CONNECTIONS

Whitpain Township is well connected to the major highway systems - providing convenient access to different economic centers. The main arterial roads in the township are Route 202 (DeKalb Pike) and Route 73 (Skippack Pike) which connect to the Pennsylvania Turnpike and Route 476.

In addition to car travel, Whitpain Township also has transit options. It is on SEPTA Bus Lines 94, 96, and 98, and is near Ambler and Gwynedd Valley SEPTA rail stations on the Lansdale/Doylestown Line. Additionally, the Wissahickon Green Ribbon Trail and Pennsylvania Bike Route S are regional bicycle trails that go through the township. There are two rail trails, Liberty Bell Trail and Stony Creek Trail, that are planned for the Western side of the Township.

Whitpain Township revised their Township Comprehensive Plan in 2016. The 2016 Plan states that "Transportation in Whitpain has become an important focus for Township officials as segments of roadway infrastructure no longer adequately accommodate the traffic demand. Additionally, existing infrastructure needs to provide facilities for alternative means of transportation such as walking and bicycling."



REGIONAL CONTEXT MAP

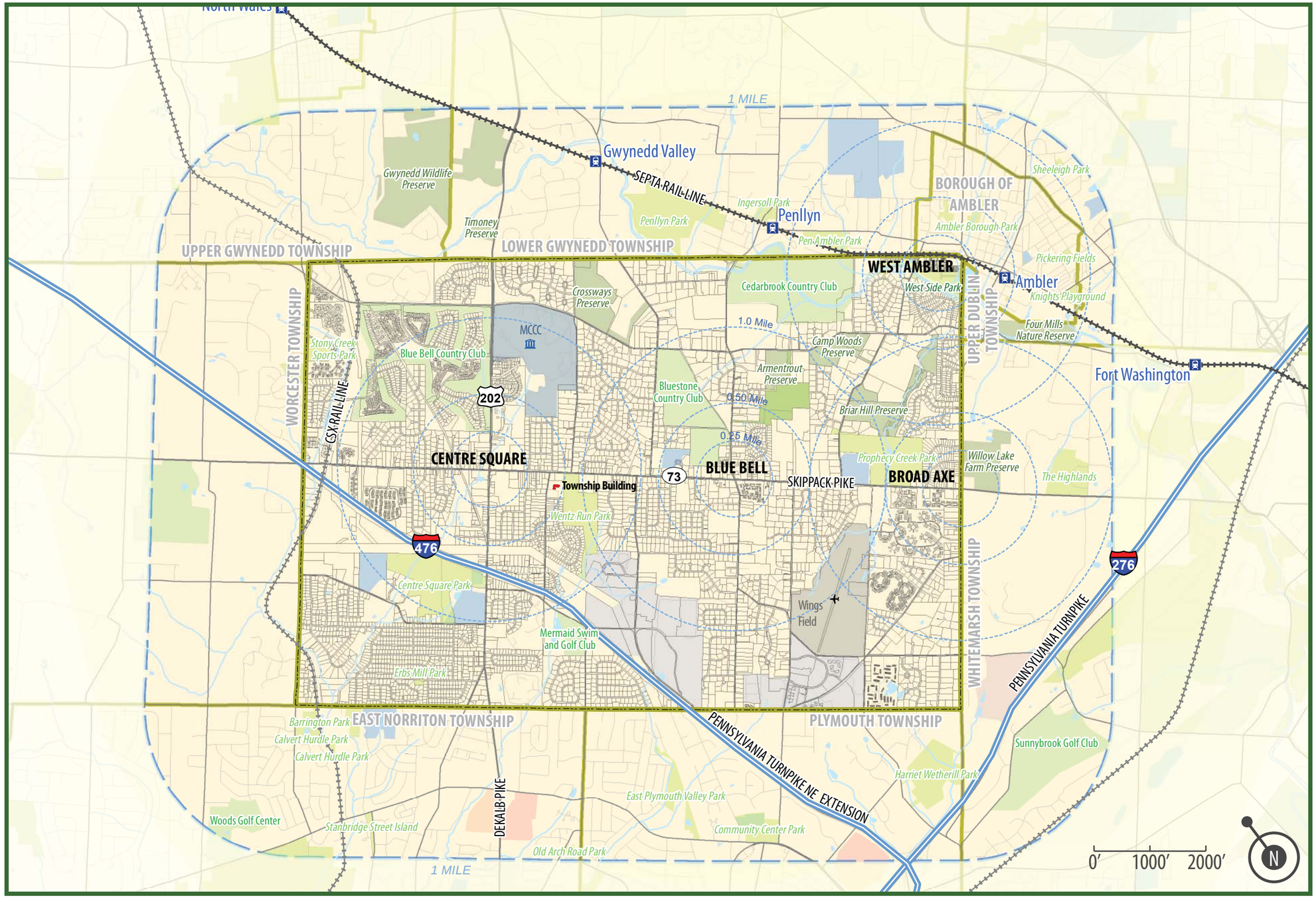
Whitpain Township is located on the East Coast between Washington DC and New York, NY.

LOCAL CONTEXT MAP

Regional Connections

LEGEND

- Interstates
- Major State Roads
- State Roads
- Local Roads
- Streams
- Bodies of Water
- Wildlife Preserve
- Township Park
- Parcels
- Whitpain Boundary
- Municipality Boundary



REGIONAL CONNECTIONS MAP

Whitpain Township is connected internally and externally through local roads and highways. While SEPTA trains do not run through the Township, there are two easily accessible stops nearby. There are also several SEPTA Bus lines that run through Whitpain. Additionally there are state, regional, and local existing and proposed bicycle trails in the area that connect the Township to the greater Philadelphia area.

EXISTING CONDITIONS INVENTORY

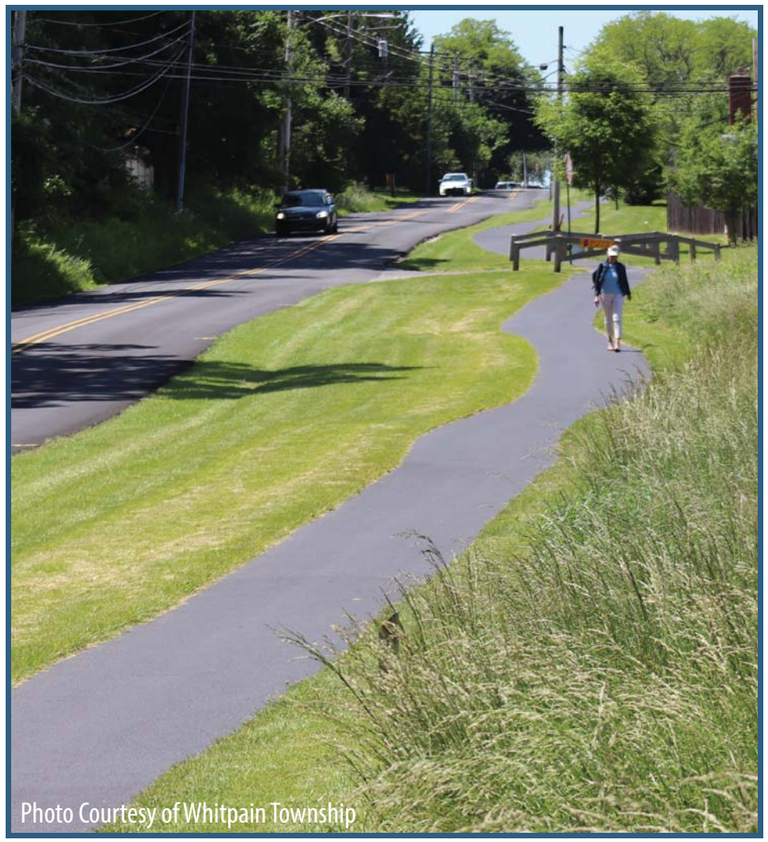


Photo Courtesy of Whitpain Township

Photo Courtesy of Whitpain Township

Photo Courtesy of Whitpain Township

EXISTING CONDITIONS INVENTORY

Data was collected from State, County, and Township resources, as well as field observations and GIS research. Data gathered from fieldwork was added to the existing GIS data provided by the Township, digitizing geographic based spatial features to allow for analysis. The resulting map provides information on existing walks and paths and existing connectivity within the Township.

EXISTING LINKS

ROADWAYS: RESIDENTIAL, COLLECTORS, ARTERIALS & HIGHWAYS

At present, the main form of transportation in Whitpain Township is motorized vehicle. As such, there is an extensive structure of car-oriented streets throughout the township. These roadways form the majority of the transportation network within Whitpain Township as well as throughout the Greater Philadelphia region.

Roads are defined by a street hierarchy that includes: residential or local, collector, arterial, and highway. Residential, or local, roads are small, low-capacity roads that primarily service residential areas. Collector roads are a low-to-moderate capacity roads that connect residential streets to arterial roads. Arterial roads are high capacity roads.

Route 476 (Pennsylvania Turnpike Northeast Extension) is the only highway within Whitpain Township. It provides a connection to Route 276 (Pennsylvania Turnpike) just outside of the Township. Route 202 (DeKalb Pike) and Route 73 (Skippack Pike) are the arterial roads for the Township. Collector roads include Morris Road, Penllyn Blue Bell Pike, and Township Line Road. The remaining roads are considered local.

SIDEWALKS

Within Whitpain Township, sidewalks are primarily located within the state and local road rights-of-way adjacent to vehicular travel lanes(see Existing Sidewalk Map, p. 13). In many instances on collector roads, sidewalks are positioned directly behind the concrete curb as a result of limited corridor width. However, along most of the local roadways, the sidewalks are separated from the vehicular travel lanes by either on-street parking and/or a grass strip. This creates a buffer zone between vehicles and the sidewalk users and is the preferred condition for sidewalks.

MIXED-USE & MULTI-PURPOSE TRAILS

Whitpain Township is connected to several existing and proposed regional multi-purpose trails (refer to map p.15). A mixed-use, multi-purpose, or shared-use path is a recreational and or transportation trail that supports both bicycle and pedestrian activity and is separated from motor vehicular traffic. Mixed-use trails are designed for walking, biking, inline skating, and any other form of non-motorized transportation and are designed to be ADA accessible.

Photo Courtesy of Whitpain Township

INTERSECTION AT CATHCART ROAD & MORRIS ROAD

Whitpain Township has recently updated several intersections to meet current ADA requirements. The intersection of Cathcart Road and Morris Road is an example of an updated intersection. The crosswalk is clearly defined, there are call buttons, and pedestrian signals. Additionally, ADA detectable warning surfaces have been added.

The Wissahickon Trail, also known as the Green Ribbon Preserve trail, connects Philadelphia to Upper Gwynedd. There are currently nearly 20 miles of trail that vary in widths and surface materials.

Pennsylvania Bike Route S is a state-wide trail that runs from the West Virginia border, passes south of Pittsburgh, goes through York and Lancaster, and goes north of Philadelphia to the Delaware River and New Jersey border. In Whitpain Township, PA Bicycle Route S follows Route 73 (Skippack Pike) before going north on School Road.

The Liberty Bell Trail is a 25 mile designed rail trail that will connect East Norriton Township to Quakertown. The trail is categorized as a multi-use trail and has a crushed stone surface.

PEDESTRIAN CROSSINGS: COMPLIANT & DEFICIENT

One of the most important aspects of developing a multi-modal plan is designing how the different forms of transportation interact. Perhaps the most critical interaction for pedestrians is crossing vehicular traffic. Crossings are usually designed with crosswalks and can either be at intersections or mid-block and can be a major impact to pedestrian connectivity. The majority of Whitpain's pedestrian crossings are crosswalks at intersections (see Existing Sidewalk Map, p. 13). However, many of these crossings do not meet current standards with ADA ramps or recommended crosswalk striping.

COMPLIANT CROSSINGS

A compliant crossing is a pedestrian crossing that complies with the applicable requirements in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities. These requirements include design guidelines for curb ramps or blended transitions, and detectable warning surfaces for pedestrian street crossings, medians, and pedestrian refuge islands.

Unmarked crossings are generally located at any intersection where there are no signed pedestrian restrictions to cross the street. Marked crosswalks exist in a controlled intersection location typically at signalized intersections, but can also be located at stop or yield controlled intersections. When a pedestrian crosses the street at an unmarked intersection location, they must yield to road traffic when crossing. These are generally discouraged as they are less safe than marked crossings.

Crosswalks that are marked can be simple and standard parallel white lines typically 6-inch width and providing a 6' walking space. If additional awareness of the pedestrian crosswalk is warranted, the crosswalk lines can be as thick in width as 24" and width between the parallel line markings for the pedestrian path as wide as 10'. These parallel markings can be "well-marked" crossings using diagonal or perpendicular line markings or a combination of the diagonal/ perpendicular lines per Pennsylvania Department of Transportation (PennDOT) Standard Type B and Type C crosswalk markings.

Several signalized intersections in the Township are currently either being upgraded or are part of planned projects. PennDOT projects for SR 202 and SR 3001 are undertaking these signalization upgrades that will consist of providing pedestrian accommodations which include curb ramp upgrades, new pedestrian signals, pushbuttons, and crosswalks.

These intersections include:

- Dekalb Pike and Skippack Pike
- Dekalb Pike and Swede Road
- Dekalb Pike and Jolly Road
- Dekalb Pike and Yost Road
- Dekalb Pike and Montco Community College / Tournament Drive
- Dekalb Pike and Village Square Drive
- Dekalb Pike and Center Square Commons / Wawa Driveway
- Dekalb Pike and Township Line Road
- Township Line Road and North Wales Road
- Township Line Road and Arch Street Road

DEFICIENT CROSSINGS

There are other existing signalized intersections in the Township that are in need of upgrades to properly provide for pedestrian. These intersections should be monitored and upgraded as needed. These intersections include:

- Township Line Road and Union Meeting Road
- Skippack Pike and Walton Road
- Morris Road and School Road
- Skippack Pike and Union Meeting Road
- Norristown Road and Narcissa Road
- Skippack Pike and Cathcart Road
- Union Meeting Road and Harvest Drive
- Jolly Road and Arch Street
- Jolly Road and Wentz Road

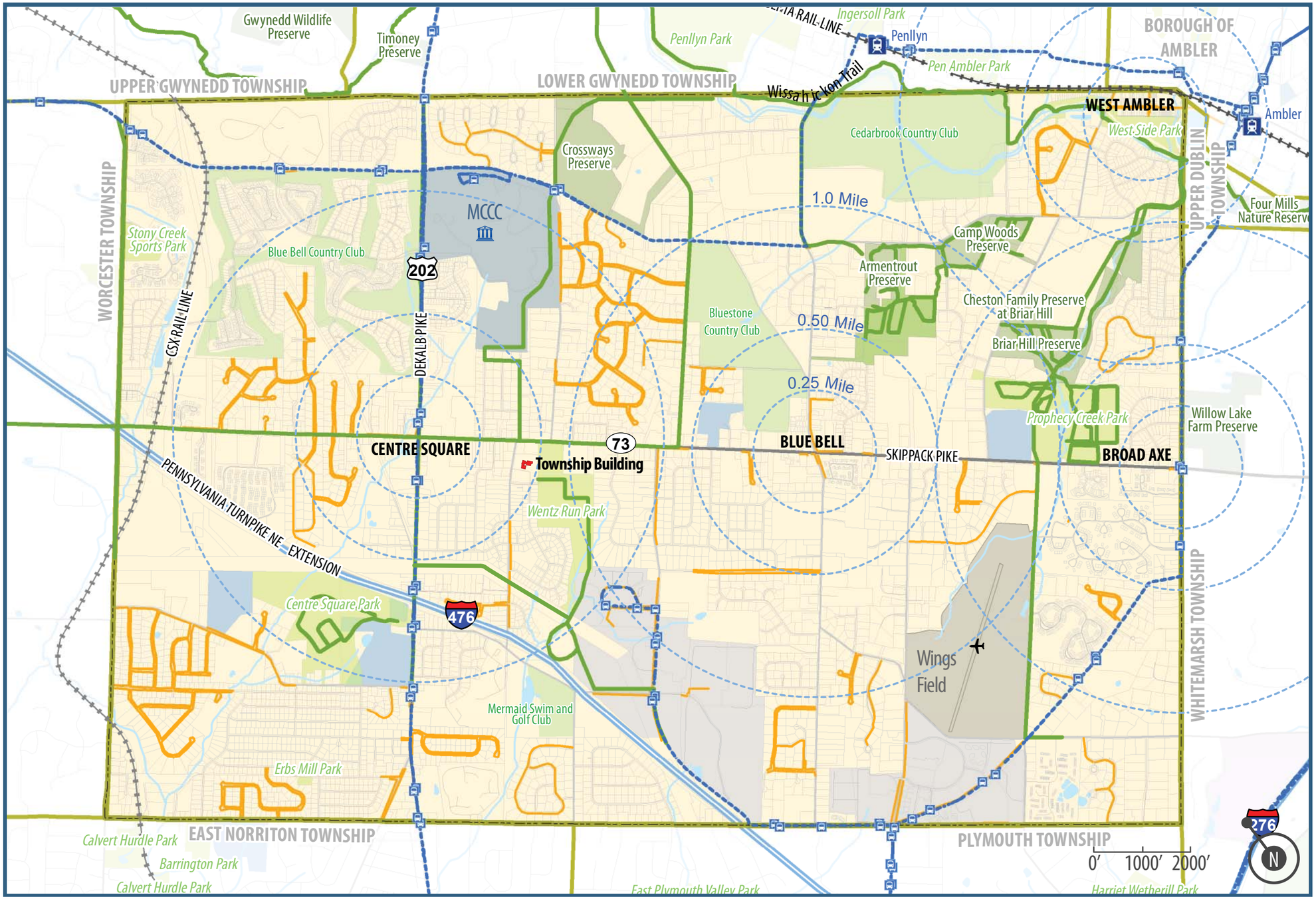
BUS ROUTES & PUBLIC TRANSPORTATION

Whitpain Township has transit options (refer to Existing Transit Map p. 16) in the form of Bus and Train Lines. The Township is on SEPTA Bus Lines 94, 96, and 98, and is near Ambler and Gwynedd Valley stations on the Lansdale/Doylestown Line.

Additionally, Montgomery County Community College (MCCC) has a shuttle that connects its two campuses, Central Campus (Center Square) and West Campus (Pottstown). The shuttle is free to all MCCC students and is wheelchair accessible.

ZONING

Whitpain Township is primarily zoned for residential use with the largest percentage being single-home residential (45%) (see Zoning Map p. 18). Commercial zoning is clustered in the village centers. And office, institutional, and other traffic generating categories are scattered throughout the Township.



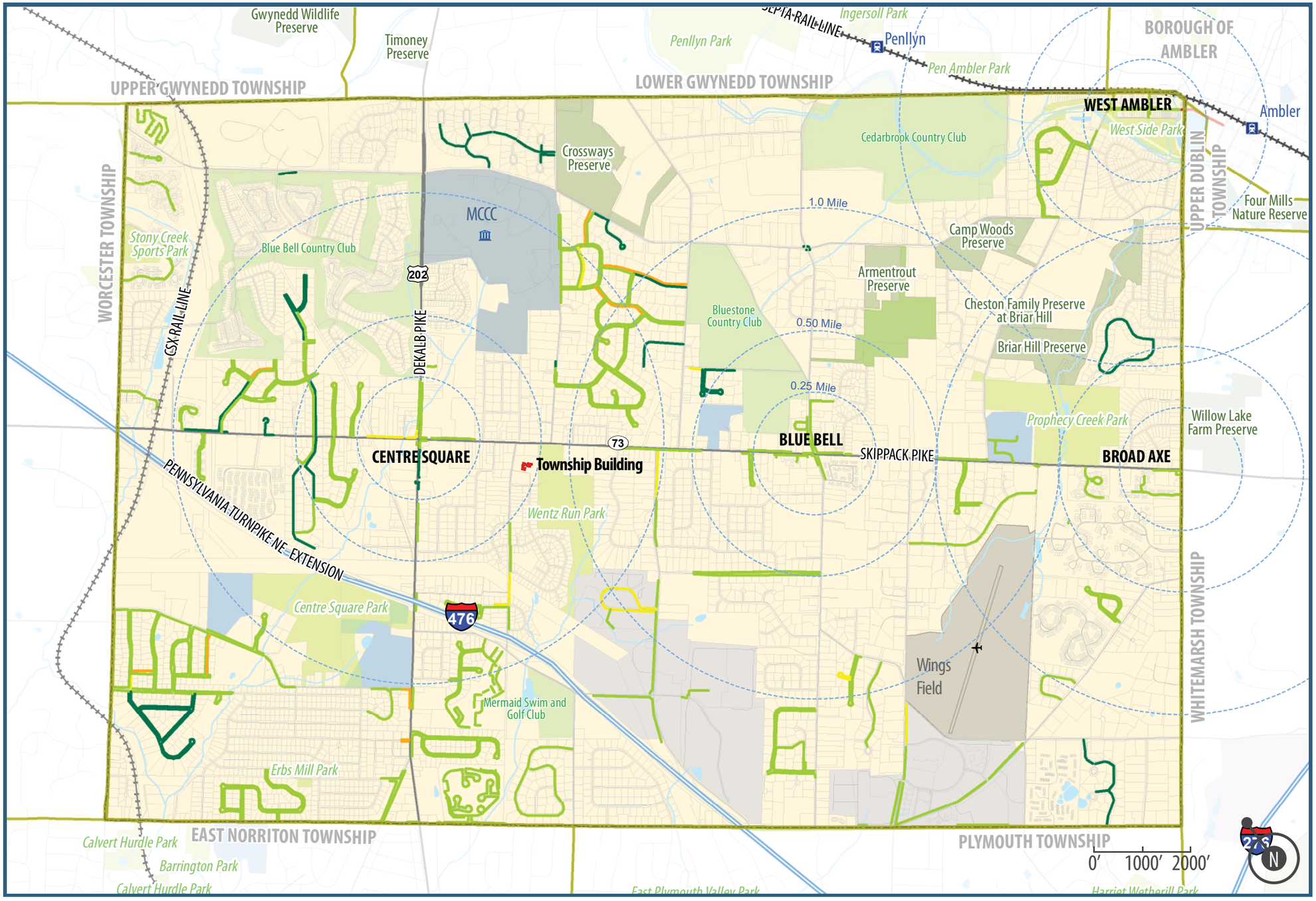
Composite Transportation Map

LEGEND

- SEPTA Regional Stations
- SEPTA Bus Stops
- Trails
- Sidewalks
- Bus Routes
- SEPTA Regional Line
- CSX Rail Line
- Interstates
- Major State Roads
- State Roads
- Local Roads
- Streams
- Bodies of Water
- Wildlife Preserve
- Township Park
- Parcels
- Whitpain Boundary
- Municipality Boundary

COMPOSITE TRANSPORTATION MAP

Whitpain Township offers multi-modal transportation options throughout the township. There is a robust road system that includes local roads and highways. There are some accommodations for alternative forms of transportation. SEPTA has several bus lines in the Township and two nearby train stations. There is a growing trail system that connects bicycle and foot traffic to the larger region. And there is a sidewalk system that is somewhat disconnected.



Existing Sidewalk Map

LEGEND

- SEPTA Regional Stations
- SEPTA Regional Lines
- CSX Rail Line
- Interstates
- Major State Roads
- State Roads
- Local Roads
- Streams
- Bodies of Water
- Wildlife Preserve
- Township Park
- Parcels
- Whitpain Boundary
- Municipality Boundary

Sidewalk Condition

- Excellent
- Good
- Fair
- Poor
- Very Poor

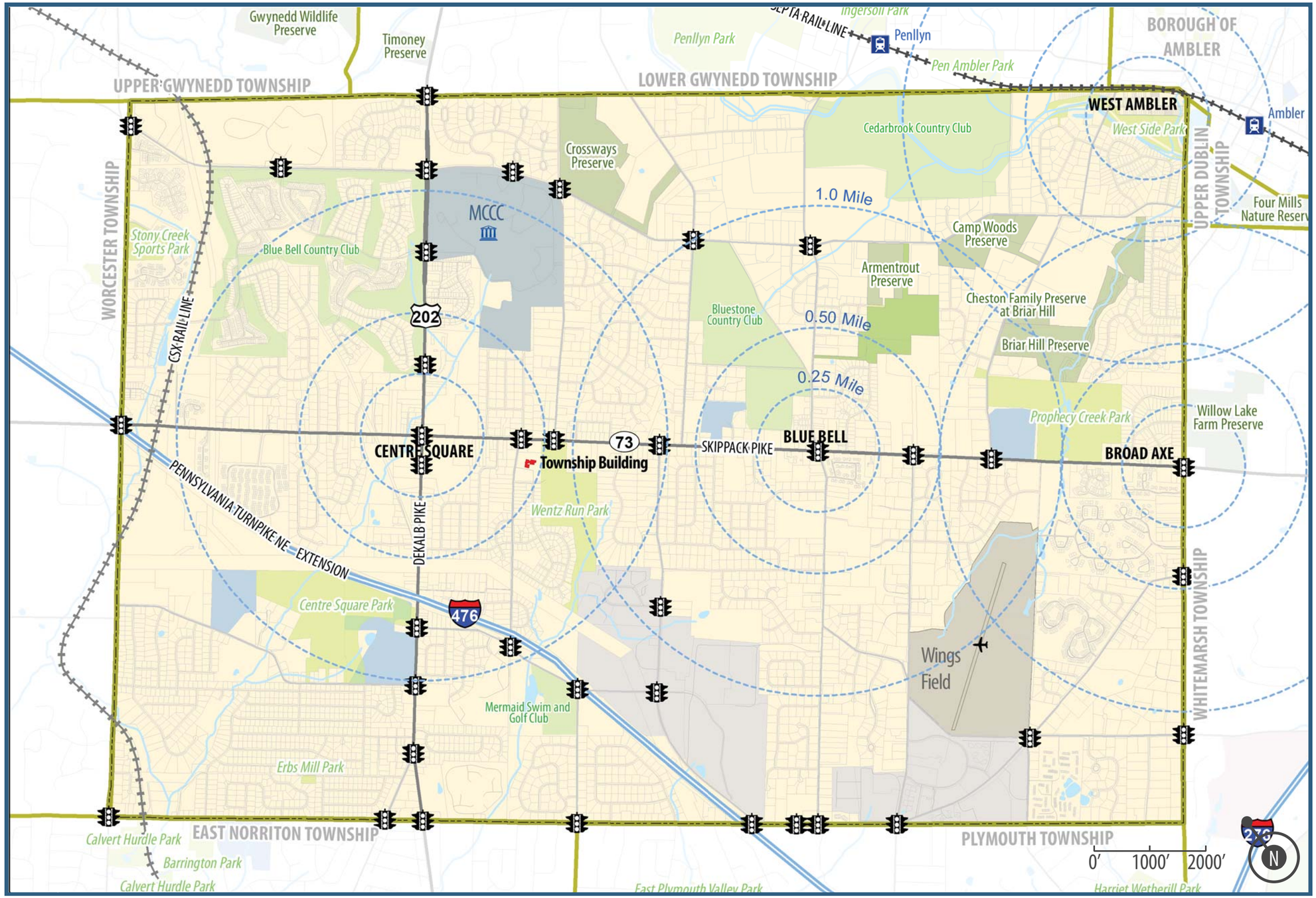
EXISTING SIDEWALK MAP

Many of the local roads within Whitpain Township neighborhoods include sidewalks. They are in mostly good and excellent condition. However, these sidewalks are not connected in a meaningful or township-wide way. There are many marked crossings located along Skippack Pike (PA 73) and Township Line Road. However, there are many intersections that lack markings, proper designation, and ADA requirements.

Existing Traffic Signals Map

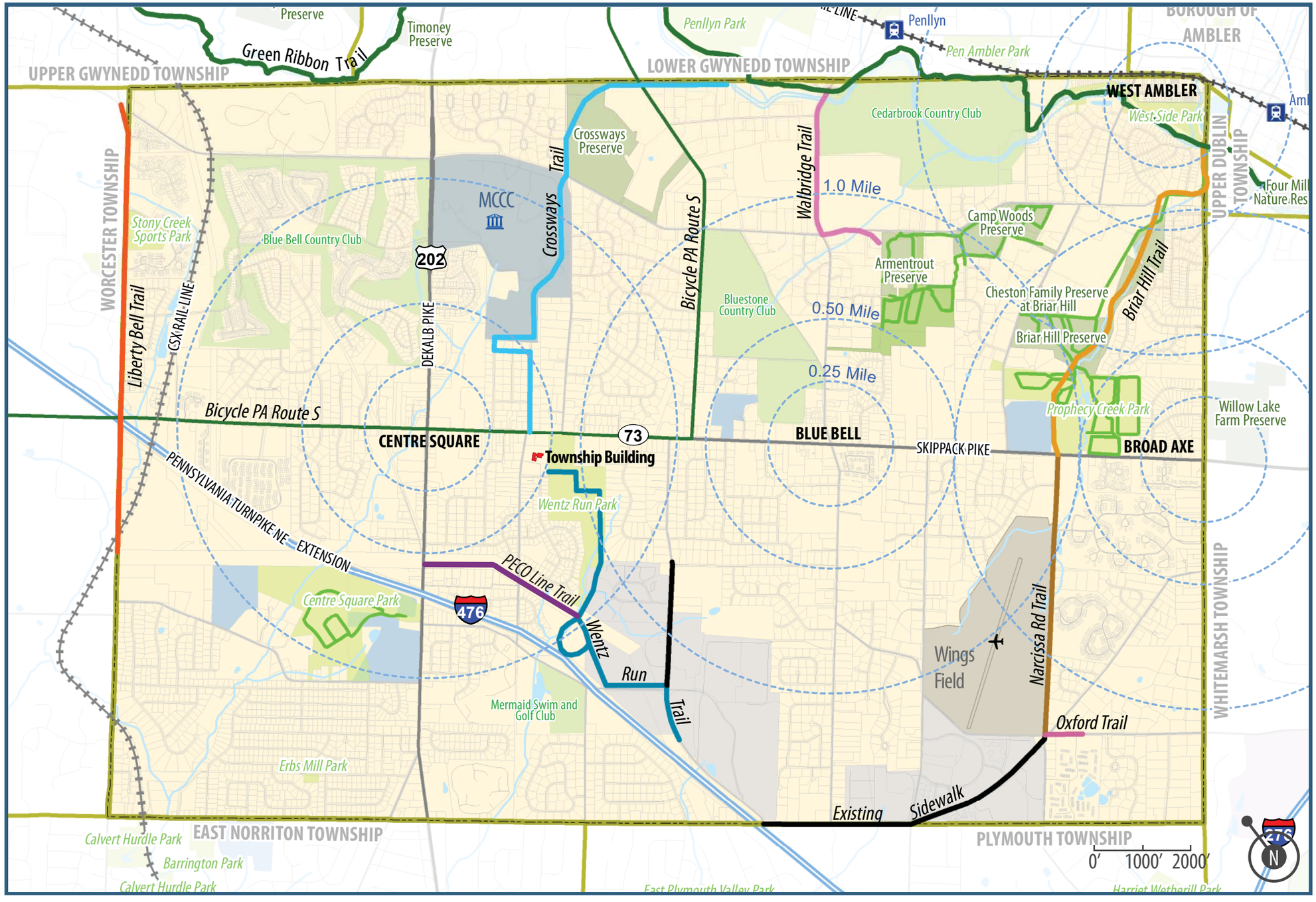
LEGEND

Traffic Signals



EXISTING TRAFFIC SIGNAL MAP

Whitpain Township has both signalized and non-signalized intersections. Intersections with signals are safer for pedestrian crossings.



EXISTING CONDITIONS INVENTORY

Existing Bicycle & Mixed- Use Trail Map

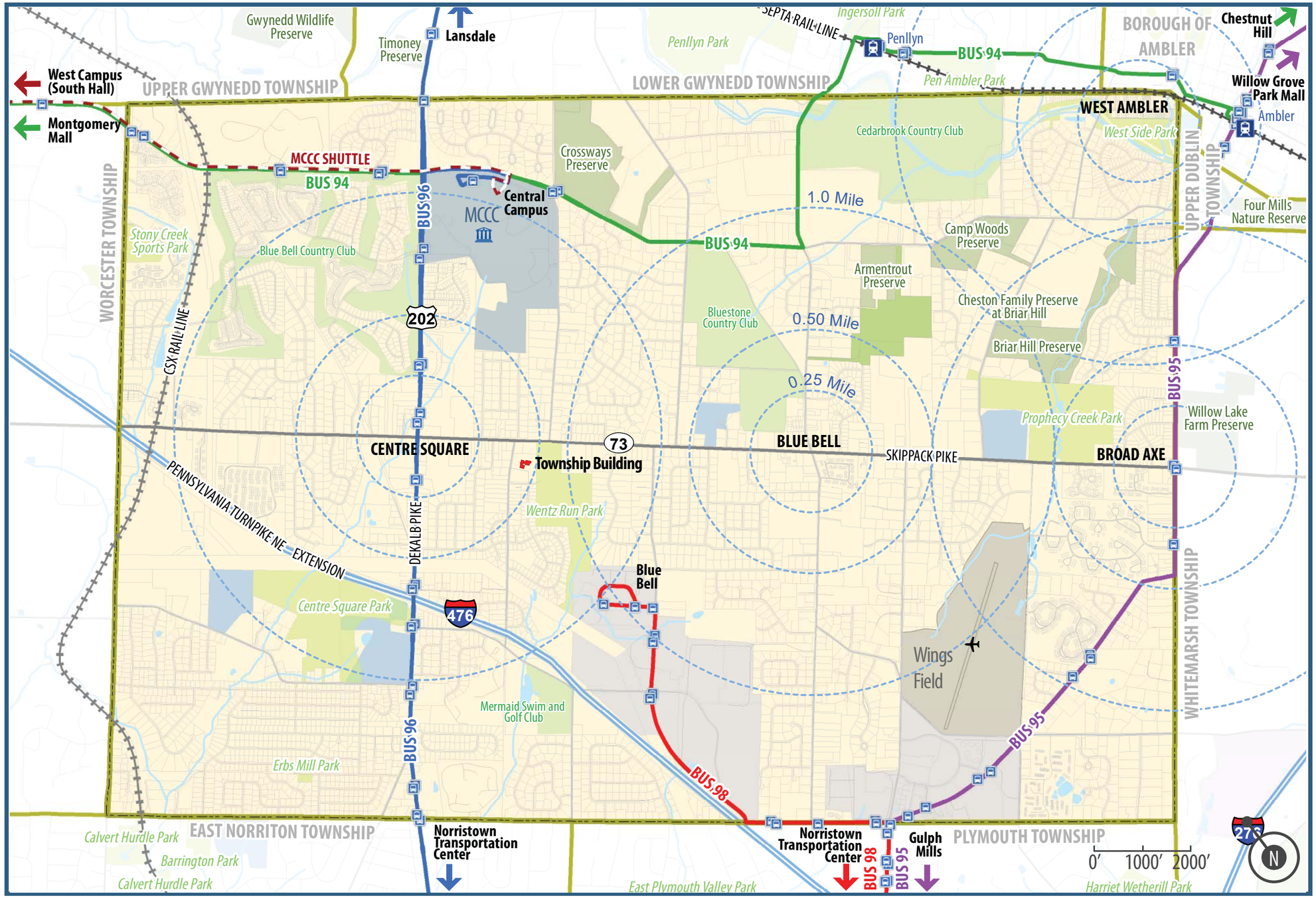
LEGEND

Mixed-Use Trail Map

- Briar Hill Trail
- Crossways Trail
- Green Ribbon Trail
- Liberty Bell Trail (Future Proposed Trail)
- Narcissa Rd Trail
- Oxford Trail
- Walbridge Trail (Future Proposed Trail)
- Wentz Run Trail
- Existing Sidewalk
- Existing Park Trails
- PA Trails
- PECO Line Trail

EXISTING BICYCLE TRAIL MAP

Whitpain Township has existing bicycle and mixed-use paths. Several of these local trails feed into existing regional and state trails. These trails are both shared path on street and separate trails, in a variety of configurations as best suits the area. Mixed-use trails are designed for walking, biking, inline skating, and any other form of non-motorized transportation and are designed to be ADA accessible.



Existing Transit Map

LEGEND

- SEPTA Bus Stops
- SEPTA Regional Stations
- CSX Rail Line
- SEPTA Regional Lines
- Streams
- Bodies of Water
- Township Building
- Wildlife Preserve
- Township Park
- Office Park
- Parcels
- Whitpain Boundary
- Municipality Boundary

Transit Route

- MCCC Campus Shuttle
- Route 94
- Route 95
- Route 96
- Route 98
- Interstates
- Major State Roads
- State Roads
- Local Roads

EXISTING TRANSIT MAP

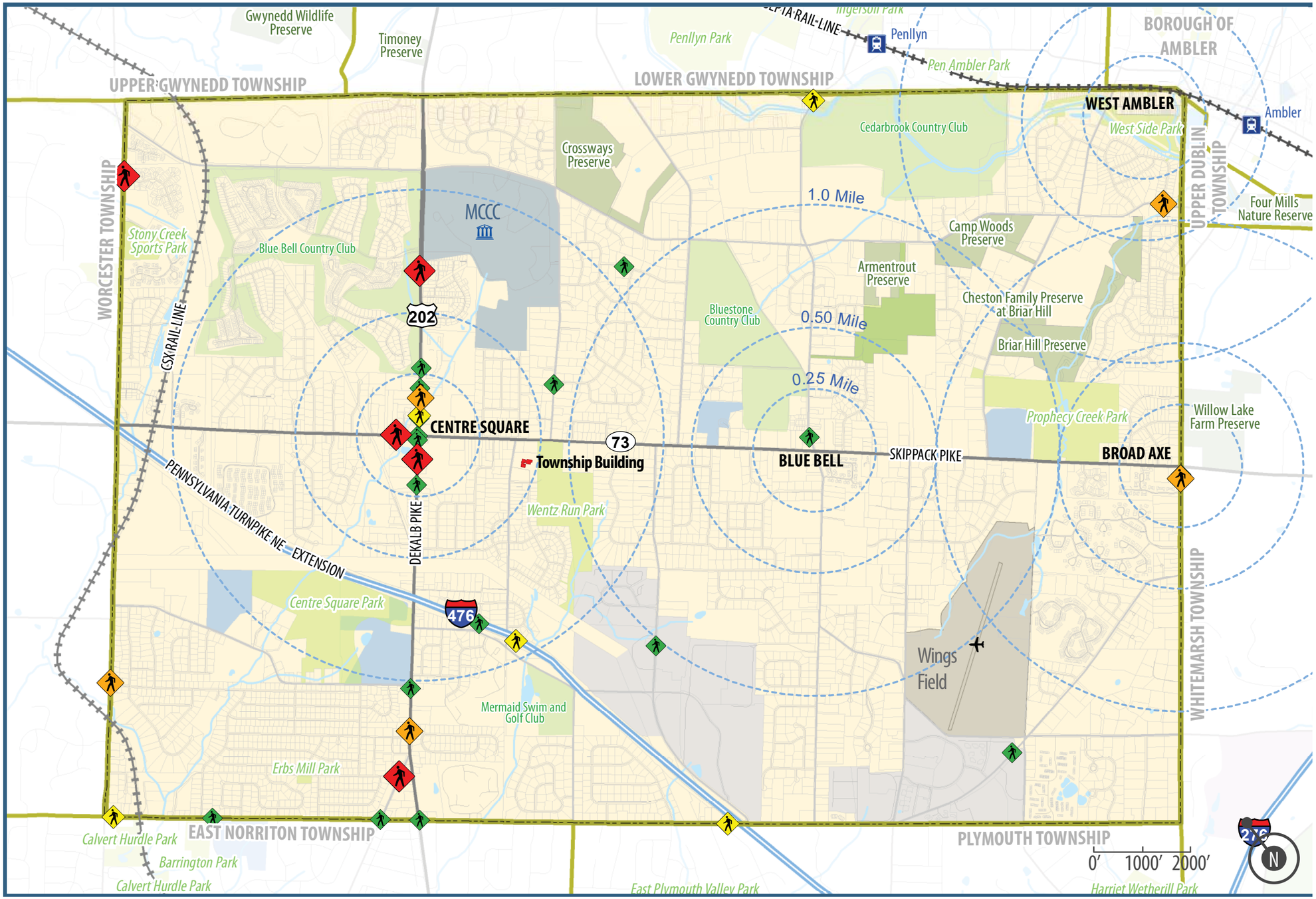
Whitpain Township has several transit options in the form of Bus and Train Lines. The Township is on SEPTA Bus Lines 94, 96, and 98, and is near Ambler and Gwynedd Valley SEPTA rail stations on the Lansdale/Doylestown Line. Additionally, Montgomery County Community College (MCCC) has a private shuttle for students that connects its two campuses, running between Centre Square and Pottstown.

EXISTING CONDITIONS INVENTORY

Pedestrian Incident Map

LEGEND

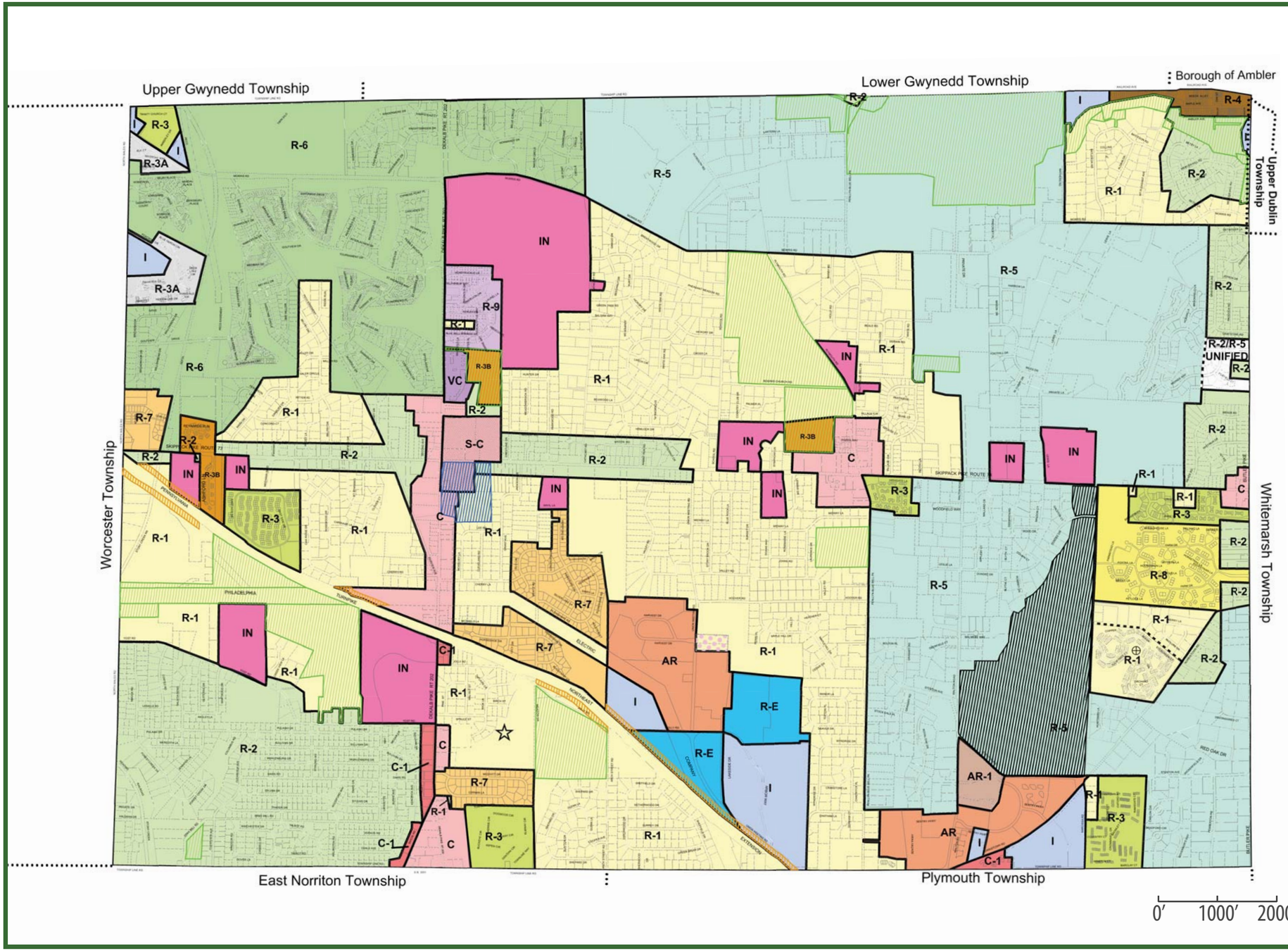
- Serious Injury
- Minor Injury
- Possible Injury
- Unknown Injury



PEDESTRIAN INCIDENT MAP

PennDOT records and reports all vehicle incidents and uploads that information to their GIS Open Portal. The map indicates the pedestrian incidents reported between 2008 and 2017. It should be noted that no fatal pedestrian incidents were reported. The majority of the incidents took place along Dekalb Pike (US 202).

Whitpain Township Zoning Map



LEGEND

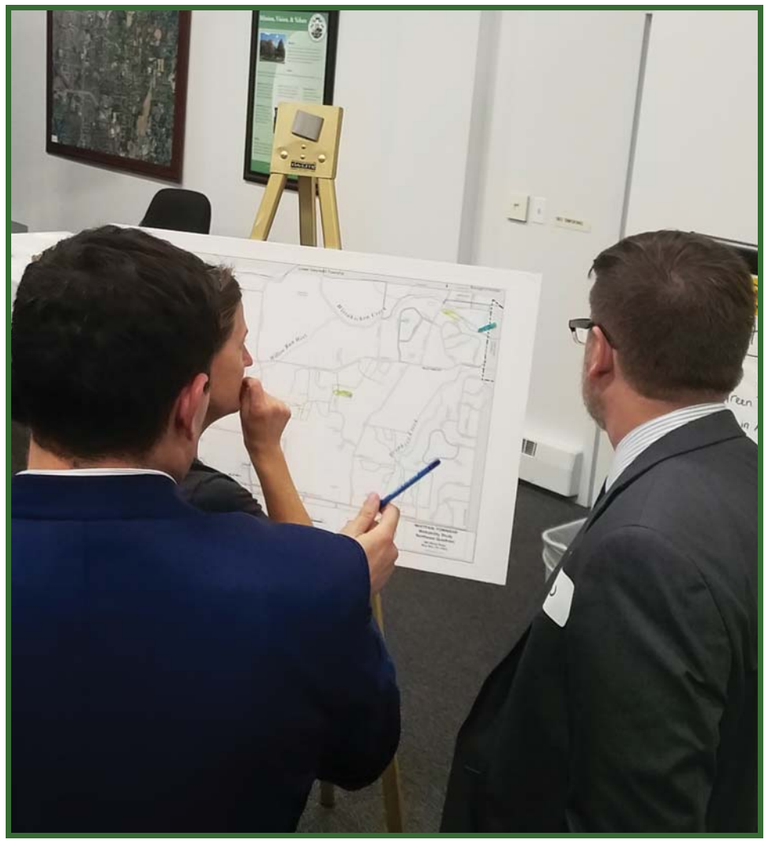
Zoning Districts

- R-1 Residential
- R-2 Residential
- R-3 Multifamily
- R-3A Multifamily
- R-3B Multifamily
- R-4 Village Preservation
- R-5 Agricultural / Rural Residence
- R-6 Agricultural / Rural Residence
- R-7 Residential
- R-8 Residential
- R-9 Residential
- AR Administrative and Research
- AR-1 Administrative and Research
- VC Village Commercial
- R-E Research & Engineering
- C Commercial
- C-1 Commercial
- S-C Shopping Center
- I Limited Industrial
- IN Institutional
- Park & Recreation Overlay District
- Off-Premises Advertising Sign Overlay District
- Community Shopping Center Overlay District
- Airport Overlay District
- Extended Daycare Overlay District

ZONING MAP

Whitpain Township is mostly zoned for residential; the largest percentage of zoning is single family residential (45%). Commercial uses are concentrated in the village centers. Open space, recreation, and agriculture make up about 30% of the Township land usage and are spread out throughout Whitpain.

PUBLIC OUTREACH & STAKEHOLDER/COMMUNITY INPUT



WALKABILITY STUDY PUBLIC INVOLVEMENT PROCESS:

Obtaining feedback from residents, trail users, and road users on the needs regarding accessibility and connectivity of existing sidewalks and trails is very important in gauging the alternative walkability gaps in the existing network. This study highly values the voice of the community when making decisions on improvements connecting neighborhoods, providing safe crossings, linking recreational trails, and extending walking and biking trips. The designers reviewed the Township existing inventory data, and conducted initial stakeholder and trail user interviews during winter and spring of 2018.

Whitpain Township staff kicked off the Walkability Study in January 2018 in order to review deliverable expectations and schedule milestone goals. They also discussed the importance of the local community's participation in the project focus area recommendations. A project status meeting was held on March 15, 2018 to review the course of action on the condition survey of existing sidewalks excluding private roadway facilities.

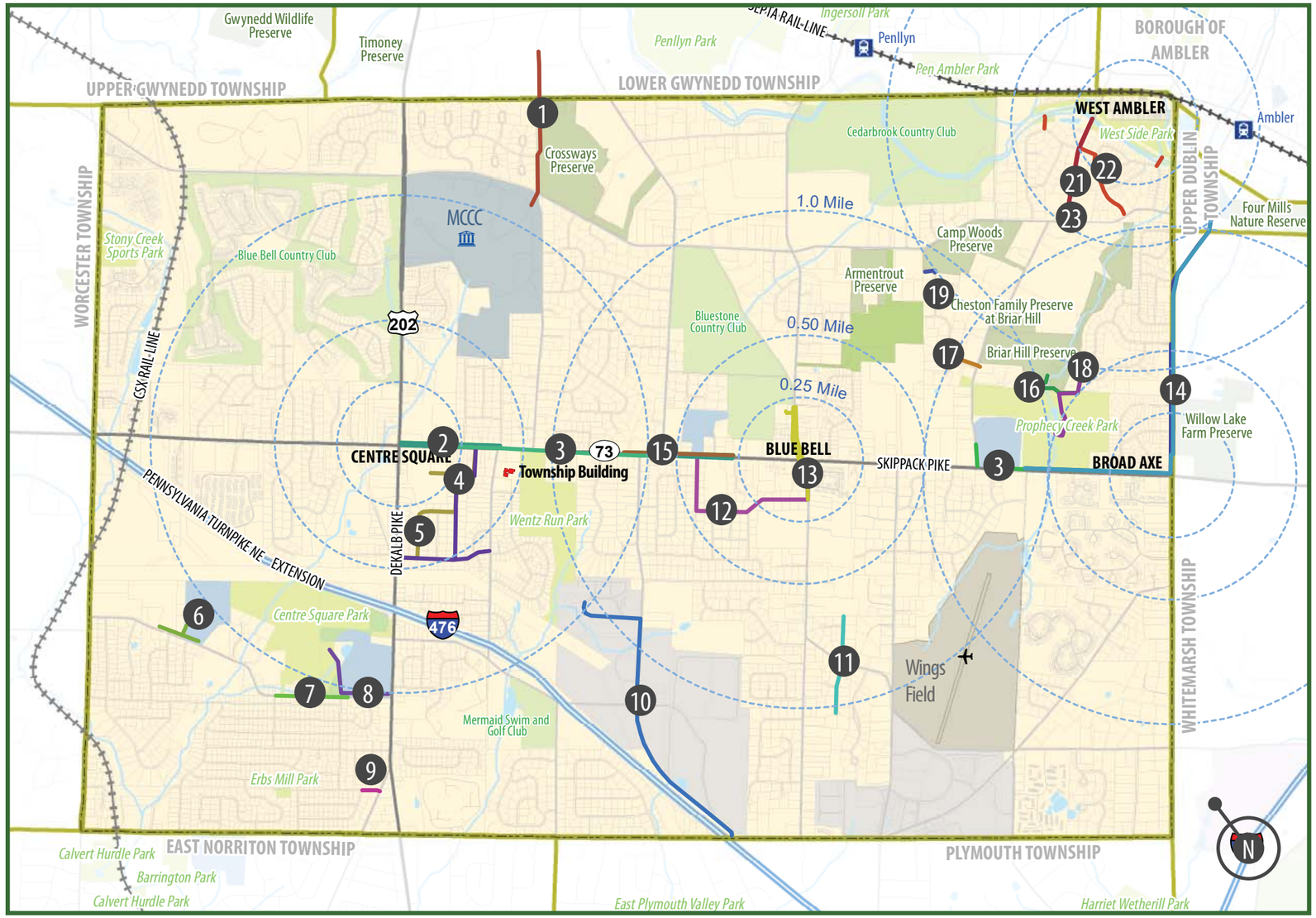
Walkability study public involvement and community workshop meetings were held in May and June of 2018 which allowed interested parties to attend and help identify main connections that are missing and what areas need to be considered based on the existing sidewalk and trail network. Workshop participants included staff from Whitpain Township, AMT, URDC, and residents and business owners. Participants gathered around four different quad maps of the Township that highlighted the parks, trails, and street network of sidewalks, and the attendees pinpointed locations of specific walkability problems and offered possible solutions that were considered while generating project recommendations.

Trail connections from neighborhoods, pedestrian crossing safety, regional trail connectivity, and access to Ambler and the Township's four villages were a common theme heard during these workshop sessions. Safe connections to elementary schools was a primary concern. The public comments obtained during these workshops illustrates the community's desire for a future where walking and biking trips increase due to a more connected transportation system, both along the road and within Township park and open space trails.

In the months following the workshop sessions with the public, the design team utilized the local knowledge of problems, concerns, and possible solutions to build an implementation plan that incorporated the public comments. Site specific improvements and locations are summarized on a Public Involvement map (p.21). The comments received are listed in the Appendix of this report.

WALKABILITY STUDY PUBLIC MEETING

Whitpain Township residents attend a public meeting and share their ideas on how to improve walkability in their community.



LIST OF PROJECTS GENERATED BY PUBLIC OUTREACH

Whitpain Township hosted two public meetings in order to hear public opinion on walkability within the Township. The public listed opportunities to improve their walking experience throughout the Township and expressed their desire for specific connections.

1. **Connect** MCCC to SEPTA Station
2. **Sidewalk** connect Stony Brook to Centre Square
3. **Sidewalk** Along 73 (Skippack Pk)
4. **Connect** Cherry Lane to US 202 (Dekalb Pk) & 73 (Skippack Pk)
5. **Connect** Centre Square Commons
6. **Stony Creek** Elementary School
7. **Connect** Stirling to US 202 Yost Rd
8. **Connect** Saint Helenas
9. **Unsafe Road** Erb's Mill Road at Chalk/Swede
10. **Connect** Union Meeting Road to Wentz Park
11. **Improvements** Granary Road
12. **Connect** South Neighborhoods
13. **Sidewalk** Penllyn-Blue Bell Pk
14. **Trail** from 73 into Ambler Borough
15. **Blue Bell Elementary School** sidewalk access to PA 73
16. **Bridge** over Prophecy Creek
17. **Crossing** at Lewis Lane
18. **Connect** Ridings Way to Prophecy Creek Park
19. **Trail Gap** in Armentrout Trail at Mason Drive
20. **Sidewalks** on Butler Pike/ PA 73 to Ambler
21. **Bike Trail** into Ambler
22. **Sidewalk/Trail** into Ambler
23. **Improvements** Morris Road and Mt. Pleasant Avenue

PUBLIC OUTREACH GENERATED PROJECTS

The residents of Whitpain Township identified 23 opportunities to improve walkability within the Township at two public meetings. They were primarily interested in creating safe routes to elementary schools and tying existing trails into larger networks. Community members also focused on connecting village centers and community anchors into the Township network. Specific requests such as connect Centre Square village and Centre Square to neighborhoods along PA 73 (Skippack Pike) may be incorporated into larger projects.

Workshop findings and potential considerations ultimately will benefit all on-road (bike lanes/crossings), adjacent to road (sidewalk), and off-road (trail) users and improve pedestrian and bicycle safety and access to sidewalk and trails that will result in a more vibrant and sustainable community.

WALKABILITY ANALYSIS

Photo Courtesy of Whitpain Township

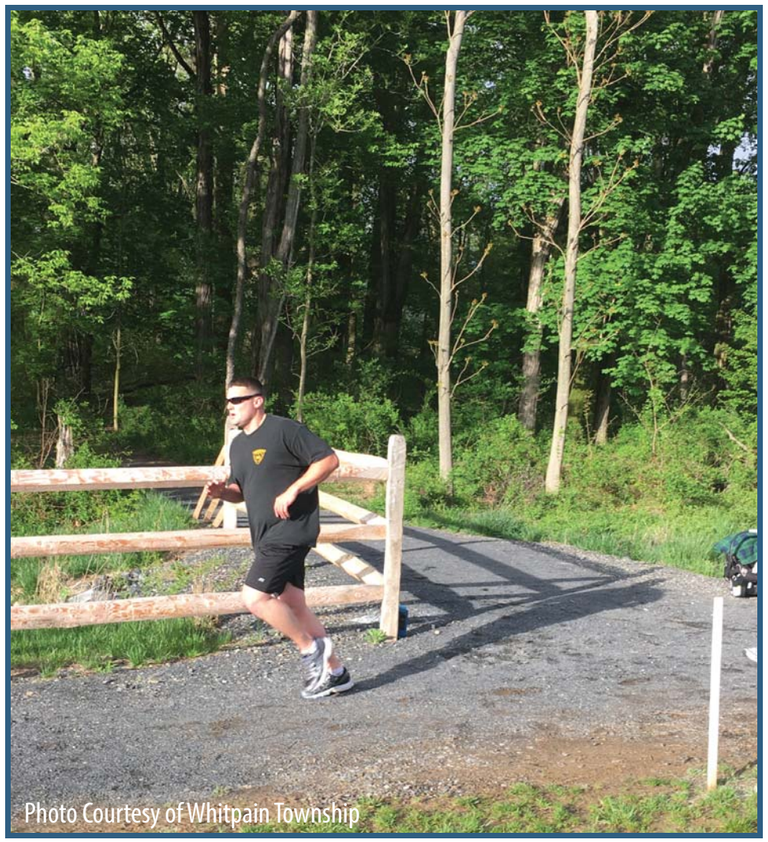


Photo Courtesy of Whitpain Township

WALKABILITY ANALYSIS

WHAT AREAS AND DESTINATIONS ARE GENERATING TRAFFIC?

Whitpain Township is both generating and receiving traffic from other areas. The Township's proximity to Philadelphia, Route 476, and the Pennsylvania Turnpike make it an ideal bedroom community for those looking to travel into the city center. However, the Township also has several large employers that bring commuters into the area.

The United States Census Bureau's 2017 American Community Survey 5-year program estimates that in Whitpain, a resident's average commute to work is 30 minutes, slightly higher than the national average (26.4 min), and 76.6% drove alone on their commute to work. Of the remainder, 8% carpool, 5.4% use public transportation, 2.1% walked, 6.8% worked at home, and 1.1% by other means such as bicycle or ride-share services.

Most area roads are currently two-lanes and have heavy daily traffic, specifically at rush hour. This creates a poor level of service for the traveling population.

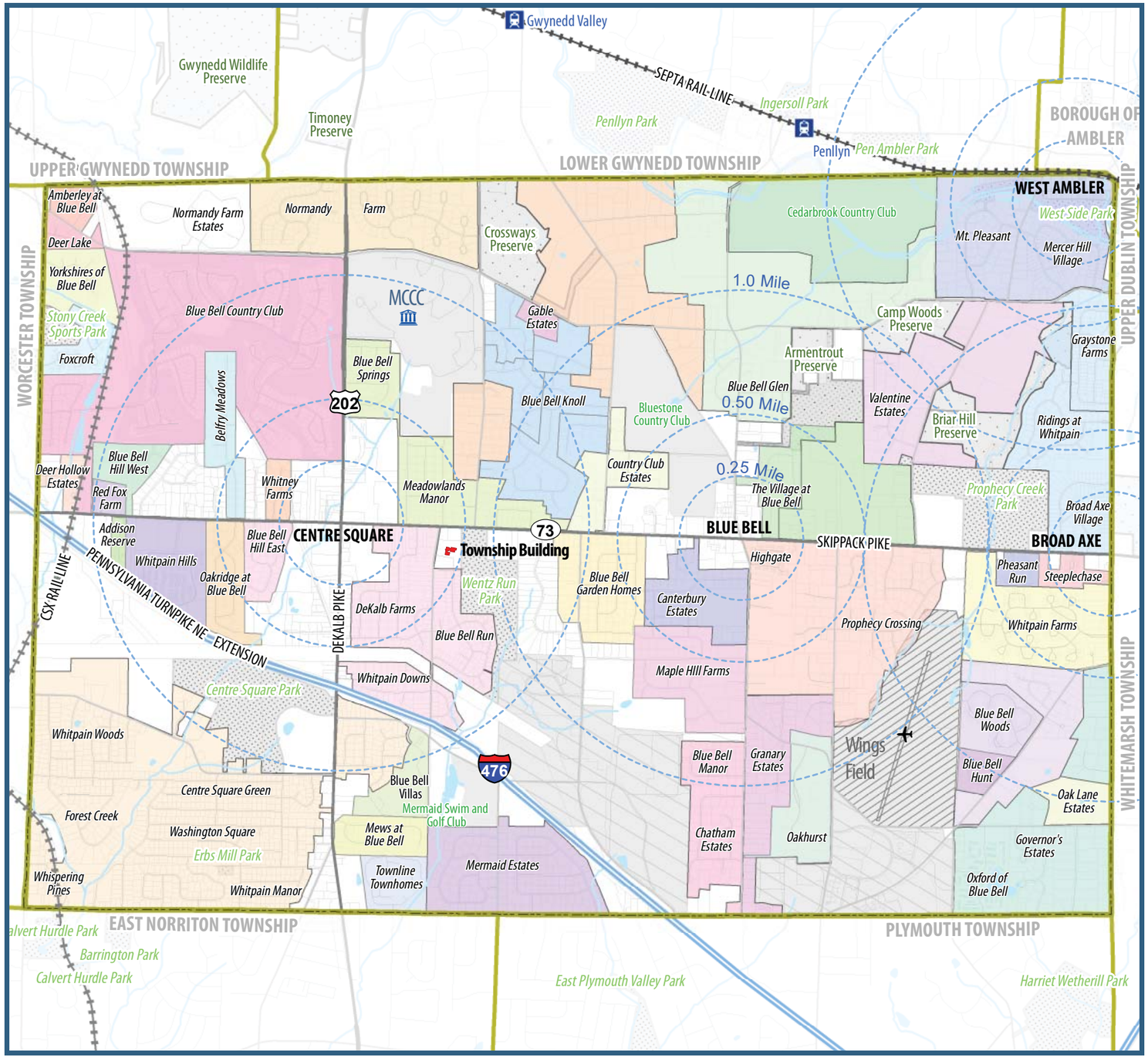
WHAT AREAS AND DESTINATIONS ARE IMPORTANT TO CONNECT?

In addition to connecting residents to village centers, it is important to connect community anchors to one another (refer to Community Anchor Map, p.27). A community anchor is an institution or business that provides support to the community and is frequently visited for its services. They can be government, institutional, religious, and commercial uses. Examples of institutional anchors would be schools, libraries, medical and healthcare providers, and higher education. Commercial anchors would be commercial centers, banks, and office parks. Recreational fields, parks, and historic sites can also be considered anchors.

It is critical to locate and connect these anchors when developing a walkable Whitpain Township because these are the places that residents want to go, and go frequently. Areas where there are clusters of community anchors should be one of the first areas to be developed with sidewalks and other multi-modal facilities.

Some of the Township's specific anchors highlighted on the map include the following:

- Centre Square Village-(Plaza, Commons, & The Shoppes at Village Square/ Rt 202 Shop District)
- Blue Bell Village and Blue Bell Inn/Panache and village commercial space
- Broad Axe Village - (Shopping Center, Tavern, CVS, and "Village Stores of Blue Bell")
- Prophecy Creek Park and Manor House
- Shady Grove Elementary - Athletic Fields



NEIGHBORHOOD MAP

Whitpain Township is divided into a number of neighborhoods. Some of these neighborhoods are very walkable but are not connected to the greater Township area.

- Narcissa Road Trail
- Montgomery County Community College
- Blue Bell US Postal Service Post Office - 651 E Township Line Rd
- Wentz Run Park and Township Complex
- Centre Square Park/St Helena School Blue Bell
- Whitpain Shopping Center/Whitpain Tavern/Yost Rd & US 202 intersection

Practical, or useful, connectivity that creates a pathway between community anchors is an important element of pedestrian design. Examples of this could include connecting a transit stop to an urgent care doctor/medical care area, or parks to residential developments, or convention center to restaurants, or train station to nearest housing development. The likelihood of pedestrian movements is dependent on how frequently the pedestrian needs to visit a location and the relationship between desirable destinations.

Distance and time are factors in destinations' walkability. An average person's walking speed / distance:
0.25 miles - 5 min walk
0.5 miles - 10 minutes
1 mile - 20 min walk

According to the Federal Highway Administration, most pedestrians are willing to walk five to ten minutes, or a quarter or half mile to get to a transit stop. In order to encourage pedestrians to use the developed connections, it is important to design safe and convenient pathways that are between a quarter and half mile apart.

Whitpain has four villages with denser street blocks and town center district environments where connectivity already exists and walking is relatively easy to promote (see Desired Connections Map, p. 30). These core areas are the beginning of a walkable network for the Township. The village cores are approximately 1.5 miles apart. However, there are many community anchors which could be linked into the existing network by walkable corridors between the villages. Connecting practicable anchors to one another makes Whitpain Township more walkable community.

WALKING SCORE

A "Walk Score" rating is developed and based upon a pedestrian's access to dinning & social events, groceries, shopping, errands, parks, schools, culture & entertainment. It is a walkability index that assigns a numerical walkability score to any area or address in the United States. It does so based on criteria such as proximity to amenities and multi-modal access. Whitpain Township is currently considered a car-dependent area according to the "Walk Score" rating of 45 out of 100 where most errands require a car. However, nearby Ambler Borough has a "Walk Score" rating of 87 out of 100 and is considered very walkable.

"WALK SCORE"	
90–100	**Walker's Paradise** Daily errands do not require a car.
70–89	**Very Walkable** Most errands can be accomplished on foot.
50–69	**Somewhat Walkable** Some errands can be accomplished on foot.
25–49	**Car-Dependent** Most errands require a car.
0–24	**Car-Dependent** Almost all errands require a car.

Bike scores are based on the current infrastructure and measures the area on bike lanes and trails, hills, road connectivity, and destinations. Whitpain Township has a current "Bike Score" of 52 out of 100 which is considered on the high end of a somewhat walkable, yet minimal bike infrastructure.

To verify the "Walk Score" findings, AMT/URDC reviewed additional technology. Using GPS data obtained from the Strava social fitness network, which provides a global heat map of tracked activities, the design team was able to observe the travel paths used by users in Whitpain Township (see Heat Map p.26). This information was used to highlight the heavily used and moderately used routes and paths most pedestrians or bicyclists are currently using in the Township. The GPS data available to the general public is aggregated and anonymized data that can be monitored by the Township as future connections are added to the Townships walking and biking network.

NEIGHBORHOODS IN WHITPAIN TOWNSHIP

Whitpain Township has four village centers and concentrated commercial areas around which the Township is organized (see Neighborhood Map, p. 23). There are also many different residential neighborhoods within the Township boundaries. These neighborhoods vary in home type and size. Many of these individual neighborhoods have developed sidewalk systems for their residents. However, these networks do not connect to a greater pedestrian system nor do they connect to the village centers.

PLANNED DEVELOPMENT & IMPROVEMENTS

PLANNED SIDEWALKS AND CROSSINGS BY OTHERS
Highway improvements for widening US 202 Dekalb Pike are currently under construction, known as SR 202 Section 61N (refer to Planned Development Map p.28). This project proposes to install nearly 10,000 SY of cement concrete sidewalk varying from 5'-0" to 5'-8" in width from Township Line Road to Morris Road primarily along the southeast side of the US 202 Pike and will also provide a 5-foot bike lane in both directions. The highway improvements include a typical section consisting of 4 11' lanes and an 11' center turn lane. In some locations additional turn lanes are provided for right turns into commercial and residential side streets or driveways. Sidewalk on both sides will be installed from S.R. 73 to the Centre Square Village Shoppes.

Along S.R. 73 Skippack Pike, sidewalks are to be installed along the north(east) side approaching US 202, from 700 feet west of 2nd Avenue to 100 feet east of US 202 connecting the Kohl's plaza to the new intersection improvements. These improvements will include curb ramps, crosswalks and pedestrian signal heads/push buttons at each corner of the signalized intersections. Proposed bike lanes will end before Whitney Lane on the west approach of Skippack Pike- bikers will then transition to shared-road path.

This project alone is a multi-modal connection that creates a spine running the length of the Township. A sidewalk that follows the entire length of US 202 would bring many opportunities for pedestrians to link in and move throughout Whitpain. A number of connections can be tied into this unbroken connection to create a walkable network.

ONGOING & RECENTLY COMPLETED TRANSPORTATION PROJECTS

- Pedestrian Improvements at the Intersection of Walton Road, Norristown Road and Township Line Road (5 Points Intersection
- Butler & Skippack Pike Intersection Project
- Skippack Pike and North Wales Road Intersection Improvement Project - Completed in 2015.
- PA Turnpike Widening Project
- Route 202 Widening Project, Section 600, from Johnson Highway to Montgomeryville.
  - Intersection improvements to Arch Street and Township Line Road.
  - Intersection improvements to North Wales and Township Line Road.
- Construct sidewalk & curb ramps at various locations 2016-2017.
  - Cathcart Rd and Morris Rd
  - Narcissa Rd and SR 73
  - Plymouth Rd SR 2016 and Township Line Rd

PLANNED PROJECTS:

- Skippack Pike SR 73 and Union Meeting Road intersection, also including School Road (SR 2016) widening for left turn onto SR 73.
- Jolly Road & Arch Street intersection near NE PTC Overpass bridge.
- Union Meeting/SR 3001 Township Line Road and Jolly Road.
- PA 73 and Penllyn Blue Bell Pike
- Connected Projects (5-Points and 6-Points)
- Walton Rd/Stenton Ave
  - Realignment of western led of Walton Ave and traffic signal
  - Eastern leg of Stenton Ave re-evaluation 6-points project

HIGH-TRAFFIC CORRIDORS

Route 202 (DeKalb Pike) and Route 73 (Skippack Pike) are the primary arterial roads for the Township. As such, they are the main routes for commuters and are congested during peak hours. Collector roads such as Morris Road, Penllyn Blue Bell Pike, and Township Line Road are also heavily used during both peak and off hours as they connect the Township to other surrounding areas (see High Traffic Area Map, p. 29).

These high traffic areas have the potential to become multi-modal corridors. Current projects along Dekalb Pike (US 202) will add bicycle lines and sidewalks throughout the length of the Township. It is hoped that by designing a multi-modal corridor, the amount of car traffic will lessen as users switch to alternative forms of transportation. It is apparent, based on the pedestrian crash data (see map p. 17), that the corridor is currently used by pedestrians. Providing facilities for pedestrians will lessen the number of incidents.

FIELD OBSERVATIONS & QUALITATIVE ANALYSIS

INVENTORY AND EVALUATION OF EXISTING PEDESTRIAN PATH NETWORK

AMT's design team identified features that affect walkability in the Township including sidewalk conditions, gaps in sidewalk continuity, and locations of marked crosswalk locations. As one of the first steps of this project, AMT conducted site visits and developed a sidewalk condition survey by visually observing the sidewalk conditions. It should be noted this survey excluded private roadway facilities and focused on the public sidewalk network along Township and County owned roads and major State Route arterial and collector corridors in the Township. The data collection efforts were conducted in the first quarter of 2018 with the help of a Temple University student intern under the direction of AMT's project manager.

METHODOLOGY

Methodology on sidewalk condition inventory and pedestrian crossing evaluation was as based primarily on observation. The existing sidewalks were evaluated for surface distress and given a condition rating. The distress of sidewalk or visual observed issues were also documented and coded for cracking, deformation, ponding, heaving/uplifts, tree uplifts, and vertical displacement. The sidewalk condition rating was then noted in 5 condition levels of excellent, good, fair, poor, and very poor. A rating of 5 being excellent and 1 being very poor was given to each sidewalk.

ANALYSIS

The presence of physical obstructions and ADA compliant curb ramps were also noted as part of the condition survey of the existing sidewalks in Whitpain Township. It should be noted that a crossing is not considered to be complete unless it meets ADA standards.

Most sidewalk ratings were inventoried as in the good (75% of sidewalks) and excellent level (16%). 5% of the sidewalks were rated as in fair condition, 4% in poor condition, and less than 1% in very poor condition (refer to Existing Sidewalk Map, p. 13).

There were 13 locations of tree root uplifts and six (6) locations of vertical displacements due to settlement or heaving. Surface distress was noted at five (5) existing sidewalk segments and ponding was also observed at two (2) locations. Only three (3) obstruction locations were noted by the field staff.

Approximately 10% of the applicable sidewalk segments had ADA Complaint curb ramps, which is typical of similarly sized suburban municipalities. Of the conforming curb ramps, most were provided in the four village centers of the Township or in the newest of developments and recently installed sidewalks.

OPPORTUNITIES & CONSTRAINTS

There are many opportunities for developing a more walkable Whitpain. Opportunities include building upon the planned roadway improvements in the Township and use those improvements to generate pedestrian access improvements. Access to transit stops, access to schools, access to parks and neighborhoods, and access to government facilities such as Township office and Post Office should be emphasized. The next step would be to fix the gaps, replace the fair and poor condition areas, and make the easy connections first to places people want to go per the feedback at the public outreach meetings. Examples of desired connections include: connect Wentz Road from Horseshoe Dr to Jolly Rd and Jolly Rd to Wentz Run Trail, provide share the road markings on Parkwood Drive, Norwood Road to connect MCCC to SR73, Yost Road from Stirling Way to DeKalb Pike, provide sidewalks on one side of Parkwood Dr to connect MCCC to SR 73, and Yost Rd Sterling Way to Dekalb Pike. Additionally, all improvements should include ADA accessible facilities.

There are several government and non-profit funding sources such as PennVEST and Grants.gov that should be investigated along with institutional and corporate stakeholders (refer to Appendix C for full list). Private stakeholders and walking interest groups can be used to promote infrastructure campaigns.

Constraints within the Township are primarily limited access to highways, airfields, railroad corridors, trails limited to equestrian use, private roads and private developments, country clubs, and golf courses.

WALK SCORE HEAT MAP

Whitpain Township has four village centers that are the most walkable areas in the Township. The only area in the Township found to be "Very Walkable" is actually outside of the Township line in Ambler Borough. Proximity to the four village centers promotes walking.

Walk Score Heat Map

LEGEND

- Very Walkable: 70-89
- Somewhat Walkable: 50-69
- Car Dependant (Mostly): 25-49
- Car Dependant (Totally): 0-24

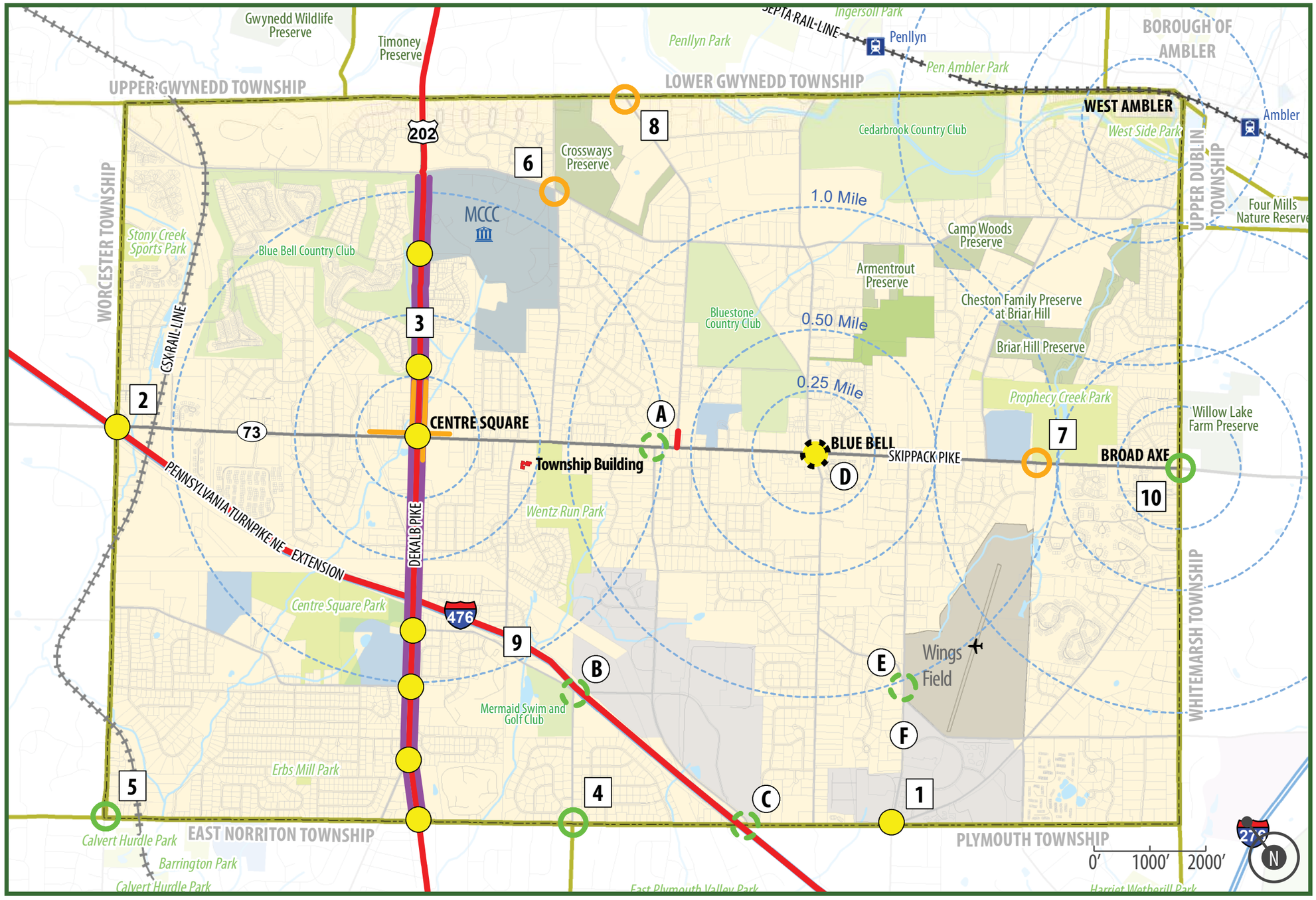
Community Anchor Map

LEGEND

- Employer
- Post Office
- Shopping Plaza
- Golf / Country Club
- Industrial Center / Park
- Cemetery
- Church
- College / University
- Government Office
- Library
- Synagogue
- School

COMMUNITY ANCHOR MAP

Whitpain Township has a number of private and public destinations that bring people into the Township and generate pedestrian traffic. These important destinations can be employers or commercial locations that citizens frequent. Institutional uses such as schools and libraries or recreational uses like parks are also considered to be community anchors.



Planned Development Map

LEGEND

- Planned Traffic Signal Improvement
- Planned Intersection Improvement
- Intersection Improvement
- Sidewalk/Curb Ramp Improvement
- Traffic Signal Upgrade
- Road Widening
- Bike Lane
- Sidewalk Improvement

Ongoing/Recently Completed Transportation Projects

1. Walton Rd, Norristown Rd, & Township Line Rd
2. Skippack Pke (Rte 73) & North Wales Rd
3. Dekalb Pike (Rte 202)
4. Arch Street & Township Line Rd
5. North Wales & Township Line Rd
6. Cathcart Rd & Morris Rd
7. Narcissa Rd & Skippack Pke (Rte 73)
8. Plymouth Rd (SR 2016) & Township Line Rd
9. PA Turnpike Widening
10. W Butler Ave & Skippack Pike (Rte 73)

Planned Projects

- A Skippack Pike (Rte 73) & Union Meeting Rd and School Road widening for Left Turn onto Rte 73
- B Jolly Rd & Arch Street
- C Union Meeting Rd, Township Line Rd, & Jolly Rd
- D Skippack Pike & Penllyn Blue Bell Pike
- E Walton Rd & Stenton Ave
- F Connecting 5 Points & 6 Points

PLANNED DEVELOPMENT MAP

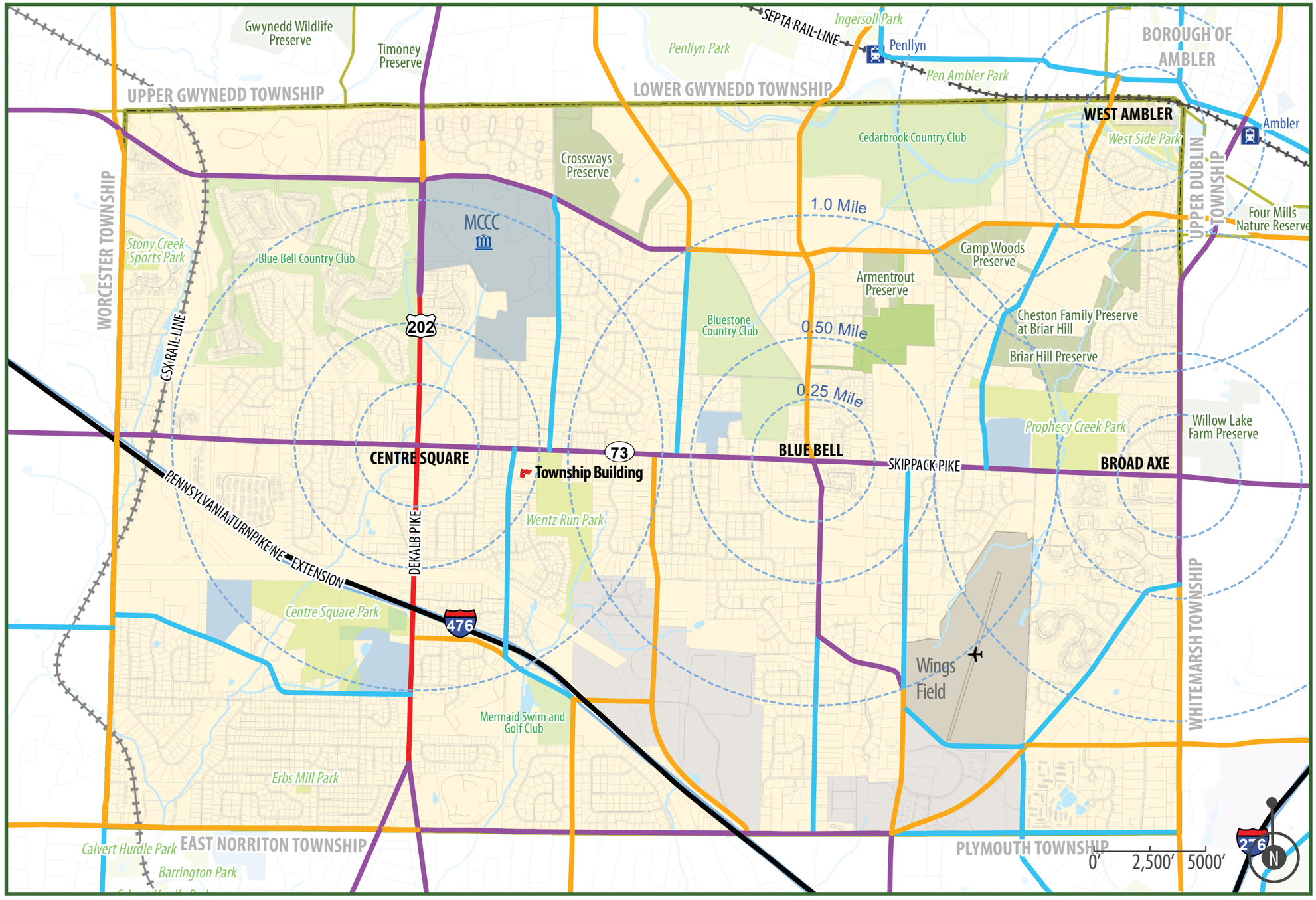
Whitpain Township has a number of planned transportation projects in various stages of completion.

High Traffic Area Map

LEGEND

2017 Annual Average Daily Traffic

- AADT <= 1,000
- AADT 1,001 - 5,000
- AADT 5,001 - 10,000
- AADT 10,001 - 20,000
- AADT 20,001 - 50,000
- AADT 50,001+



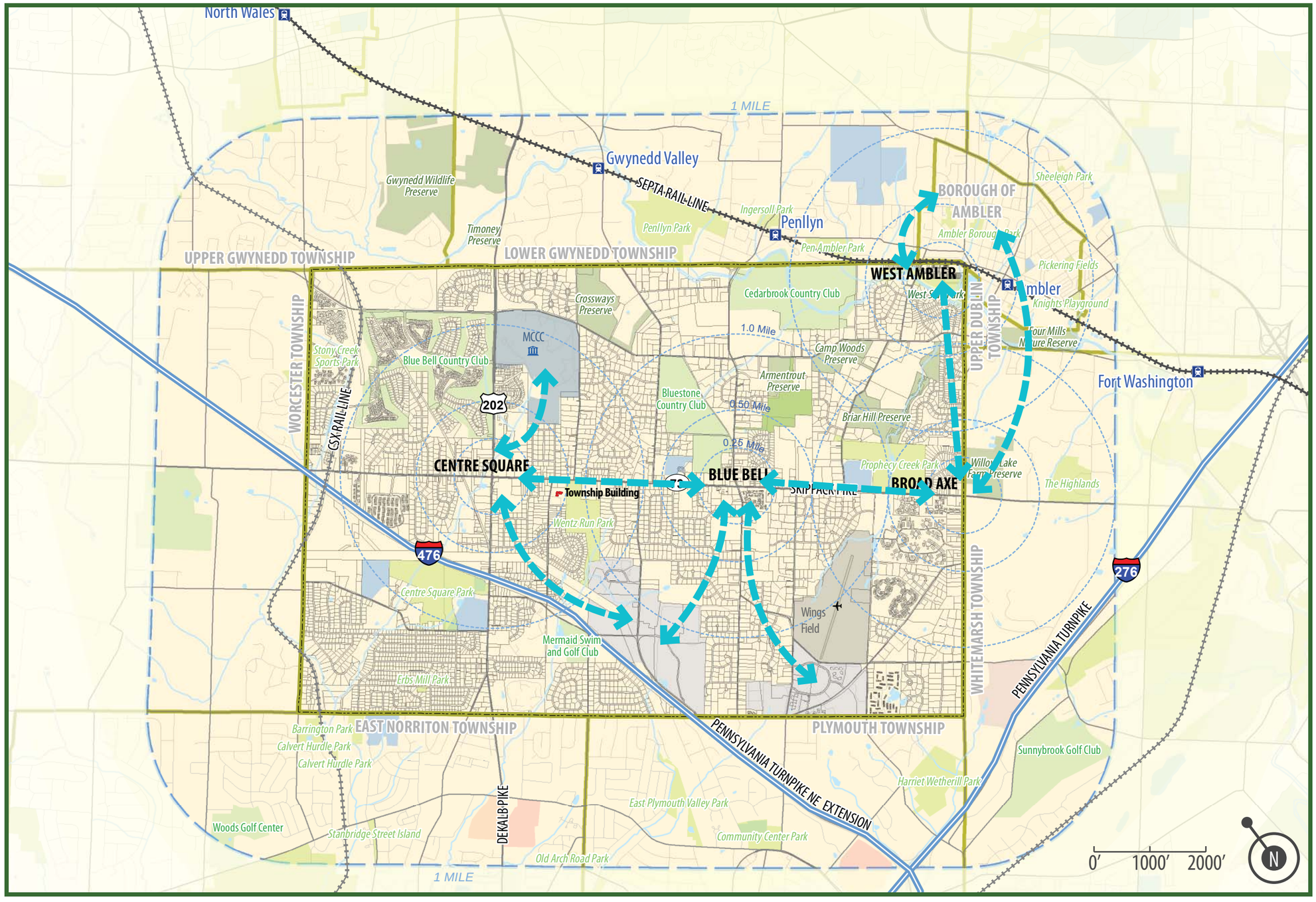
HIGH TRAFFIC AREA MAP - PennDOT

Whitpain Township has several corridors that are used more than others. These roads are important to the Township citizens and visitors who use them regularly. They are also prime candidates for improvement to alleviate congestion and perhaps implement multi-modal design approaches.

Desired Connections

LEGEND

Desired Connection



DESIRED CONNECTIONS

Whitpain Township will focus their walkability efforts on connecting major centers and community anchors. By connecting areas that are most used, the Township will increase the chance of an individual deciding to walk on that particular trip. Whitpain should focus on connecting the Village Centers and major office areas. Most people will consider walking a distance of 0.25 miles. Whitpain should focus on connecting areas that are within 0.5 to 1 mile of each other in order to create the best opportunities for residents to walk.

WALKABILITY CONCEPT

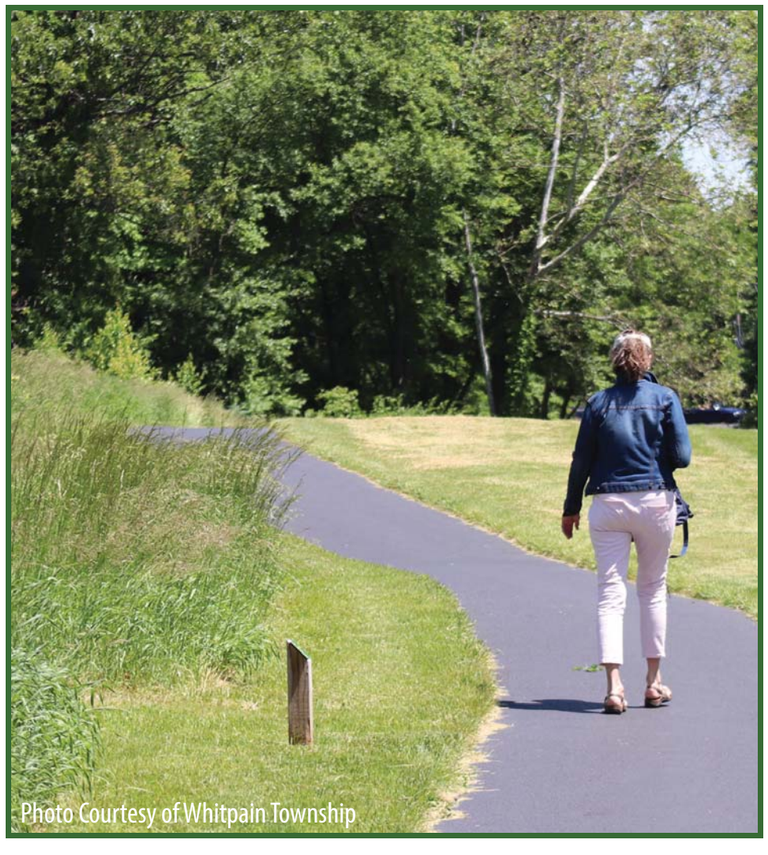


Photo Courtesy of Whitpain Township

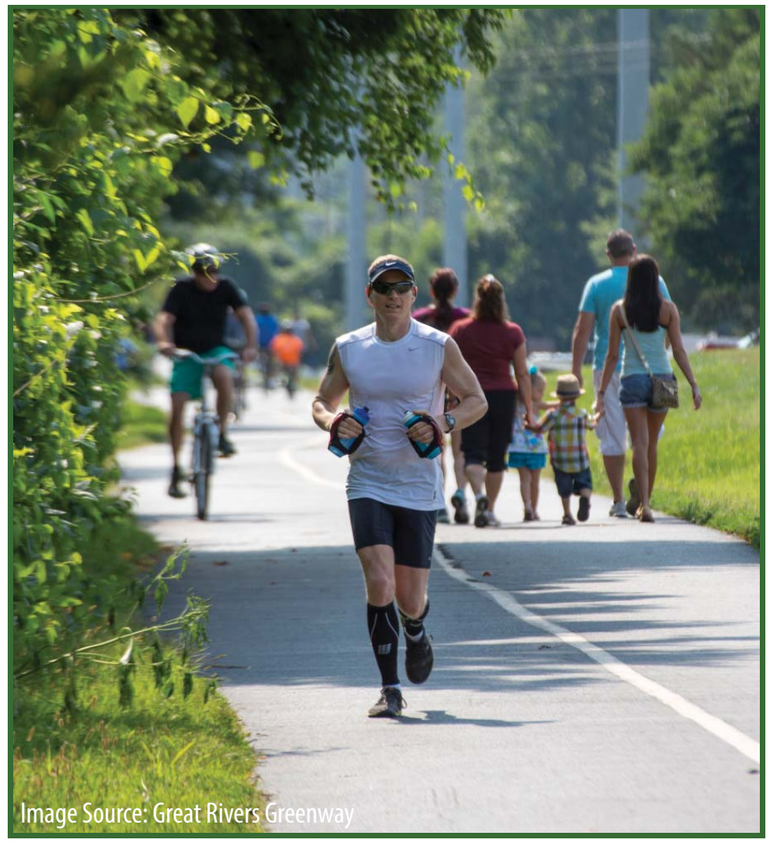


Image Source: Great Rivers Greenway

WALKABILITY CONCEPT

The connections being recommended as part of this walkability study have been developed utilizing the results of the site analysis and investigation, coordination with the project stakeholders and review of proposed improvements underway within the study area.

The recommendations have been divided into focus areas or in some cases critical segments, addressing the Township wide promotion of path connectivity. The goal of these recommendations is to provide an immediate improvement action plan to the pedestrian and bicyclist circulation system within the Township. Connecting safe and accessible pedestrian and bicycle facilities and amenities by new pathways along with upgrades and repairs of existing facilities will make Whitpain more walkable. Although the primary recommendations may address one side of the street in the short-term, a set of secondary recommendations has been included to satisfy a long-term vision of full pedestrian mobility on both the sides of streets identified as necessary to the overall goal of a complete system.

Finally, all sidewalks and trails need to be ADA compliant in order to make the network accessible for all of Whitpain's citizens.

The goals for implementation of a pedestrian only pathway system should include the following:

- 5-foot minimum sidewalks on both sides of major streets (State and Township)
- ADA accessible improvements at every intersection, addressing those deficiencies in curb cuts and truncated domes ramp slopes in accessibility
- A buffer zone between the back of curb and concrete sidewalk.

There are two implementation strategies for a sidewalk behind the curb along a major Township thoroughfare; one option places the sidewalk directly behind the curb (if right-of-way is at a minimum) and the other includes a 2 to 5-foot buffer strip between the curb and sidewalk. The buffer strip scenario is ideal, but in many instances, this pushes the sidewalk outside the existing road right-of-way and may increase project costs. The buffer strip may be grass, hard-scape paver, or landscaped to give a visual cue that the area is intended as a non-walkable surface.

CONNECT COMMUNITY ANCHORS

As previously discussed, connecting important community destinations with safe and close pedestrian facilities will promote walkability to and within the Village cores. Although the major route segments provide some connectivity to the major anchors, gaps in the system result in an unsafe and disjointed pedestrian network. Addressing these gaps is a primary recommendation of this study.

There are four criteria that make a pathway desirable for walking: useful, safe, comfortable, and interesting. Improving any of those factors will improve walkability and increase the number of users.

The village centers with their dense street blocks are an excellent opportunity to promote walkability. Several community anchors exist within close proximity of each other. If they are connected, a visitor could easily park their car and move between anchors on foot.

In addition to providing a sidewalk system, the Township could improve the pathways level of comfort by adding amenities such as benches, public restrooms, patio/picnic tables, landscaping, and street trees. Enhancing the streetscape creates a more pedestrian friendly environment encourages walking when going out to eat, shopping, and running errands.

Parks and open spaces also serve as great community anchors as people travel to them for recreation. Where there are opportunities for recreation and open space, the Township should look to improve connections and make them available to the community.

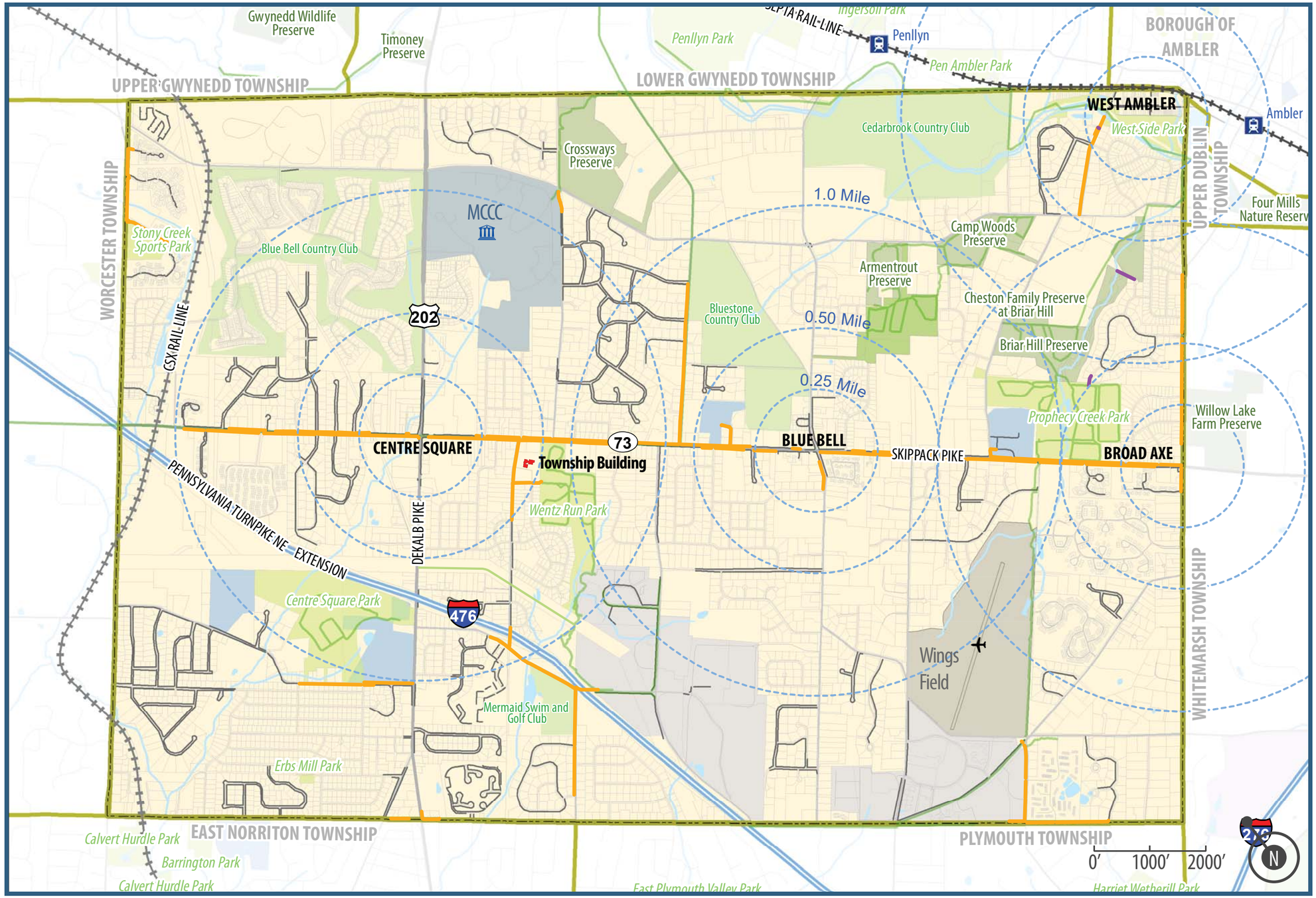
TRANSIT FACILITIES

The Township is fortunate to have 3 transit routes - SEPTA Bus Lines 94, 96, and 98 - in the Township to serve the public with over 20 signed locations of bus stops. The two SEPTA rail stations, Ambler and Gwynedd Valley on the Lansdale/Doylestown Line, are outside of the Township limits but are nearby enough to connect. Rail travel connects Whitpain to the greater Philadelphia area and is an important link that should be considered. Whitpain Township has access to a satisfactory transit system to get around for trips that exceed the average person's walking limits.

In some cases, however, the locations of these transit stops lack proper accommodations and ADA compliant landing zones. ADA compliant bus stops with minimum landing zones and appropriate striping and signage should be provided.

Improving these facilities would make these stops more useful and bring awareness to the actual loading zone location. Making Transit more accessible improves walkability of the community's connections to public spaces and what people consider as their useful walking trips. Transit as an accessible option could make citizens choose it over the personal vehicle.

Photo Source Flying Kite Media



Missing Links Plan

LEGEND

- Sidewalk
- Mixed Use Path
- Existing Trail
- Existing Sidewalk

MISSING LINKS

Whitpain Township has existing pedestrian systems that operate independently of each other. The missing link concept would take those existing systems and tie them into a bigger, township-wide system. This map illustrates the major links that are missing and should be considered first in order to create a united walkable network.

PEDESTRIAN & BICYCLE TYPOLOGIES

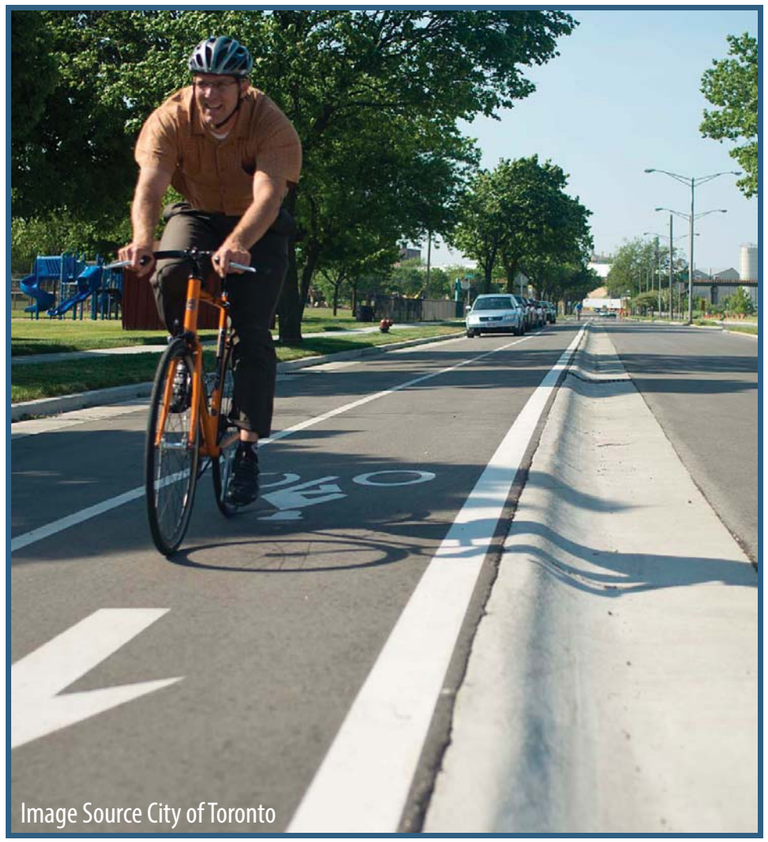


Image Source City of Toronto

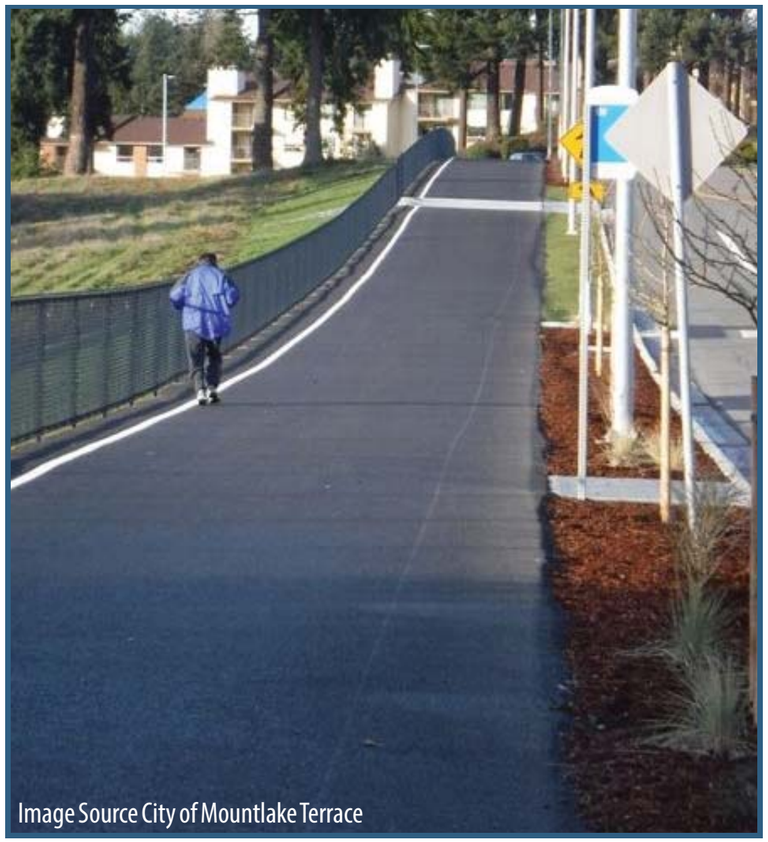
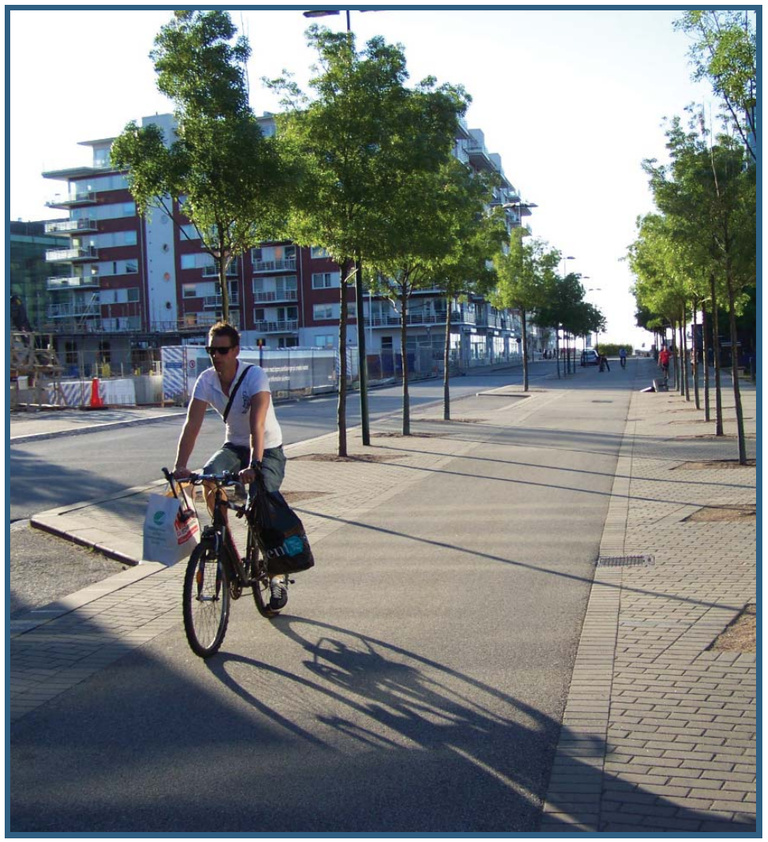


Image Source City of Mountlake Terrace



PEDESTRIAN & BICYCLE TYPOLOGIES

When considering how to make Whitpain Township more walkable, there are many different types of facilities to be considered. Luckily, the many options make it easy to tailor the designs to each specific area.

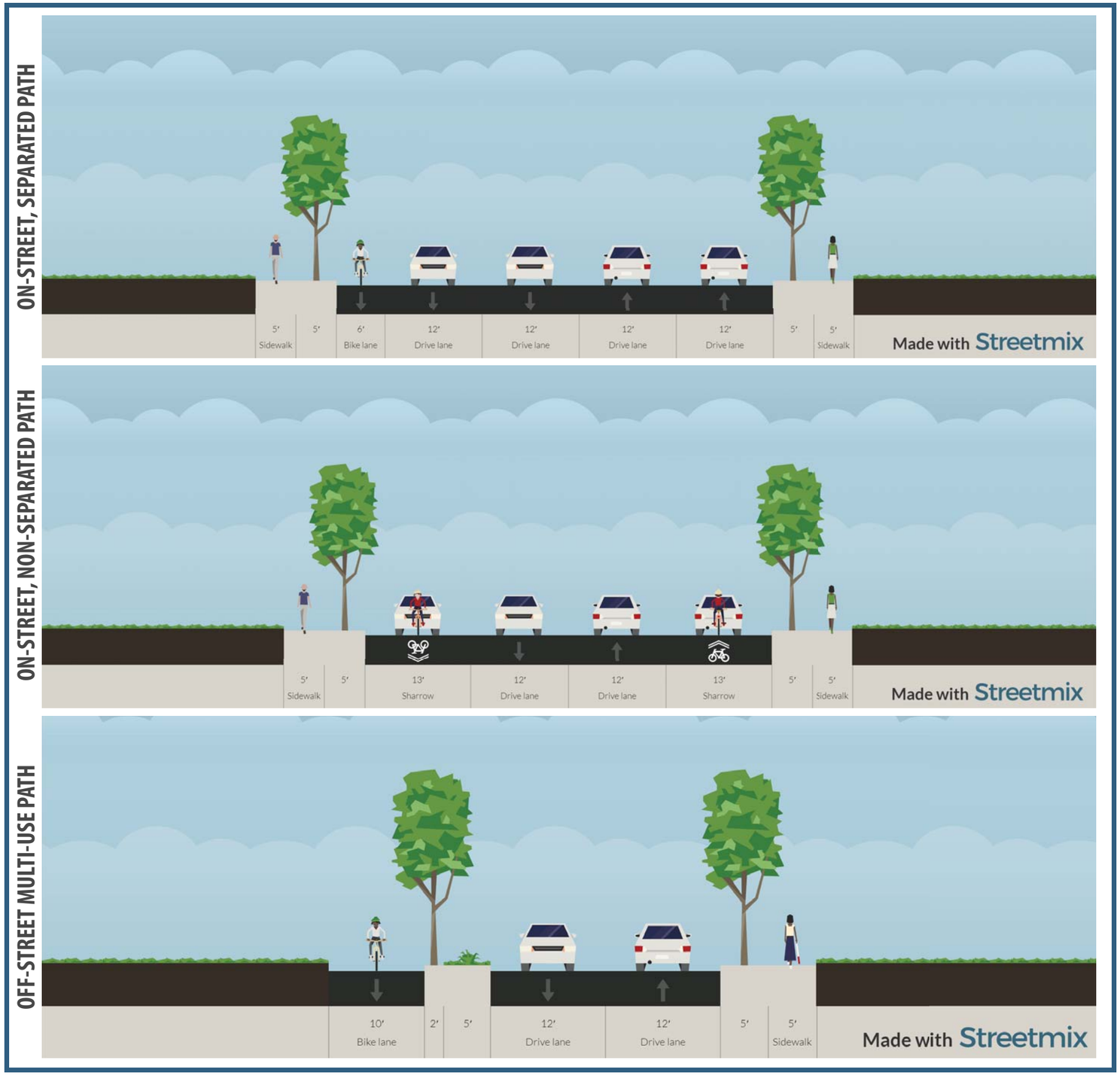
MULTI-PURPOSE TRANSPORTATION TRAILS

Providing safe pedestrian routes running parallel and along the Township Roads and State Routes will help transform the Township into a more sustainable transportation system, but linear roadway improvements are only a small part of a safe pedestrian network. Additional multi-modal features and connections to the surrounding residential communities, parks, and social/ commercial spaces are needed to generate a complete walkable pedestrian network. AMT/URDC investigated the potential for additional multi-use trail connections that build upon the existing network of trails and pathways to meet the needs of both pedestrians and bicyclists.

The standards for multi-use trails can differ greatly based on the types of expected uses, the topography of the proposed alignments, and the entities responsible for perpetual maintenance. It is also important to note that the funding source may dictate the overall size and scale of trail design. At the federal level, shared-use trail design is moving towards new guidelines by AASHTO to promote proper design principles for urban and high-volume paths that may require the minimum paths widths to be 14 feet. Based on discussions with the Township, this study and report recommend a minimum trail design width of 8 feet, with the desirable width at 10 feet.

If portions of the trail were to be considered for dedication, the trail must be constructed in accordance with local design standards, which for Whitpain Township require a trail easement 20' wide, 4 inches of bituminous material, with a minimum trail surface 10' in width. For the purpose of this study, the following minimum design requirements are recommended:

- 10' preferred width and 8' minimum width.
- Trail surface material to be asphalt and include approach aprons at all road crossings (minimize material 'tracking' onto roadways and allow for trail pavement markings at conflict areas).
- ADA accessible (2% maximum) cross slope and vertical alignment grades less than 8.33% and avoid long steep grades. 5% trail slopes are preferred and may be required depending on funding source.



MULTI-MODAL DESIGN OPTIONS

Whitpain Township has many options when it comes to integrating bicycle and pedestrian facilities into roadway configurations.

ON-STREET, SEPARATED

Protected Bike Lanes or separated multi-use paths should be a preferred alternative in any bike network where speeds are in excess of 35 mph. A bike lane is a designated street lane for bicycles; there is a painted line and bicycle symbol. These lanes are not physically separated from the roadway. An example of separation is a cycle track, which is a facility exclusively used by bicycles; they are physically removed from the street by space or barriers.

ON-STREET, NON-SEPARATED

Often, it is difficult to find space within the right of way for a full bike lane. A roadway can be designated as a bicycle route. This is shown through the use of signs and sharrow symbols that alert drivers to the presence of bicycles on that street.

OFF-STREET

Separated multi-use paths are paved trails that run parallel to a roadway, but are physically separated from the road, usually by a curb and planting.

MULTI-PURPOSE RECREATIONAL TRAILS

Multi-use paths that are used primarily for recreation also make up the multi-modal network. These trails are usually located within a recreational land use and don't normally move users to community anchors. While they may connect into the regional network, connection and efficiency are not their primary goal.

COLLECTOR SIDEWALKS

Collector sidewalks are sidewalks that function like connector roads; they often run parallel to collector roads. These sidewalks form the major connections within the walkability network. Whitpain Township is installing one collector sidewalk in the SR 202 Section 61N project.

PennDOT and Municipality Requirements:

- The regulating entities within the study area dictate minimum requirements for pedestrian pathways and the recommendation contained within meet those requirements. Whitpain Township's adopted Zoning Ordinance states that sidewalks are to be a minimum 5 foot width. PennDOT typically relies on the ADA guidelines to establish minimum sidewalk widths.
- The ADA guidelines consider the minimum width of a pedestrian accessible route to be 48 inches (4 feet); however, to accommodate passing along a route PennDOT often considers the minimum width to be 60 inches (5 feet). If sidewalk were proposed to be 4 feet, 5'x5' passing areas are required every 200 feet to meet ADA standards. Four-foot sidewalks should only be proposed in limited spaces or where physical constraints are unavoidable.

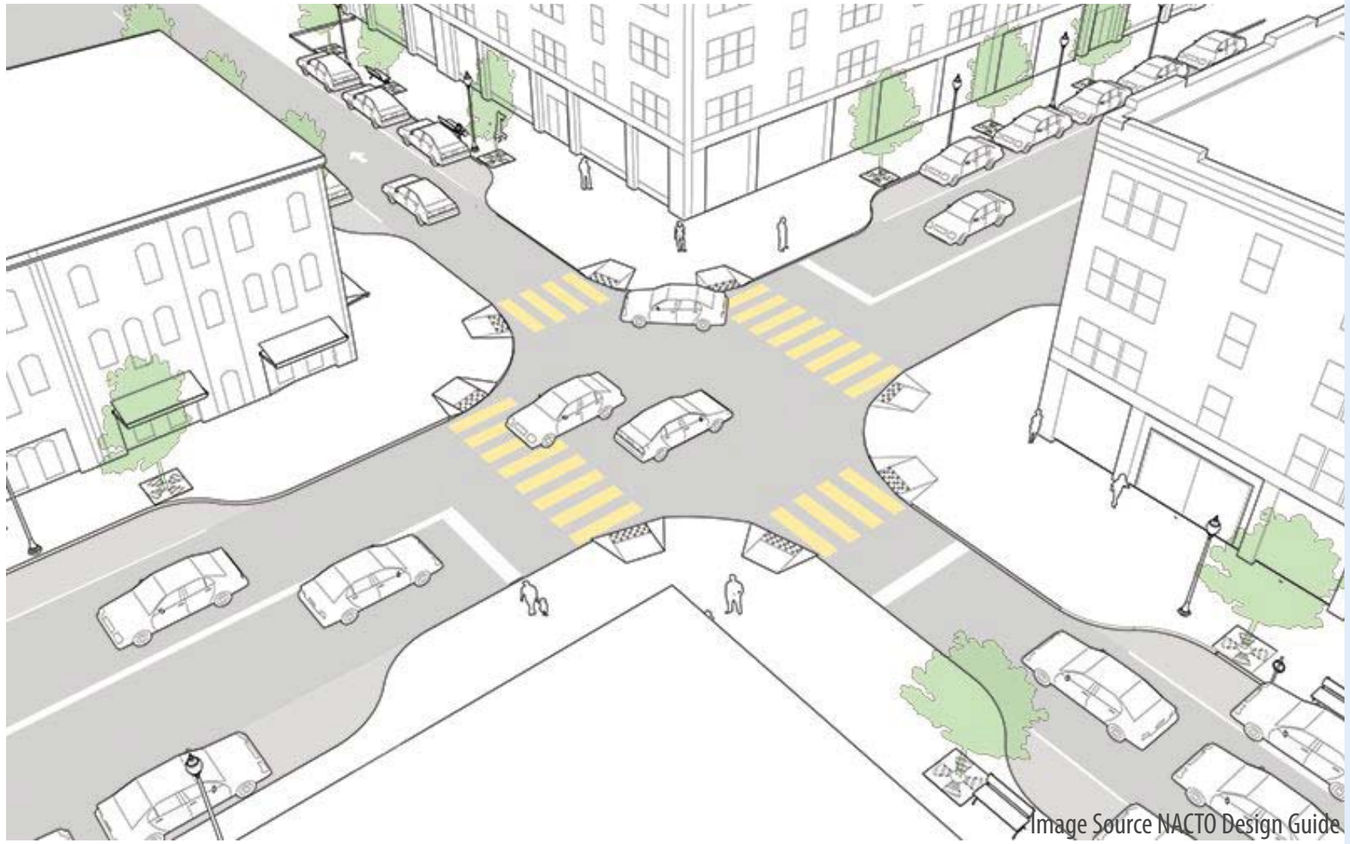


Image Source NACTO Design Guide

NACTO RECOMMENDATIONS FOR INTERSECTIONS

NACTO (National Association of city Transportation Officials) recommends highly visible crosswalk markings that are at least the width of the walkway for all pedestrian crossings. They should be closely aligned to the walking pathway and have ramps that meet ADA standards. The crossings should be kept as short as possible and should be directly in the driver's field of vision.

LOCAL/RESIDENTIAL SIDEWALKS

For streets with low volume, low speed, and few lanes, sidewalks are note always necessary. Typically, these low volume streets are found in a neighborhood or community residential areas. These low volume local roads don't warrant sidewalks due to the lack of pedestrian and passenger vehicle interactions and traffic conditions allowing for minimal conflict.

It should be noted that Whitpain Township requires a minimum of 4' wide sidewalks in residential areas and a 5' minimum in non-residential.

INTERSECTIONS

Intersections pose a problem for pedestrians and walkability. The street breaks up the movement of the pedestrian and crossings can be dangerous. The level of danger depends upon the type of road being crossed.

NACTO guidelines for urban street design note that on streets with low volume, low speed, and few lanes, such as for a neighborhood or community residential street, marked crosswalks are not always necessary. These low volume local road or low volume road facilities don't warrant much attention due to the lack of pedestrian and passenger vehicle interactions and traffic conditions allow for minimal conflict. However, NACTO guidance recommends, that if these streets connect with "schools, parks, plazas, senior centers, and transit stops, hospitals, (community college) campuses, and public (libraries and local governmental) buildings, marked crosswalks may be beneficial regardless of traffic conditions.

If higher volumes and higher speeds or more lanes are present in existing conditions, marked crosswalks should be installed at typical intersections where pedestrian activity is observed or projected to occur. If there is a high potential for pedestrian activity mid-block or at unmarked and uncontrolled crossings, the practice of discouraging the movement by leaving it unmarked is not a valid safety measure. It creates an unsafe environment and may encourage unsafe crossings to occur at random. As part of this walkability study there are several identifiable locations in the Township where uncontrolled crossings could be enhanced with a mid-block crossing.

When intersections are reconfigured or designed, it is most important to alert motorists to the possible presence of pedestrian activity. This can be done in several ways such as enhanced and painted crosswalks, moving the pedestrians out from behind any parked on-street cars, and improving sight distance with the use of advanced warning with lighting, flashing beacons, and additional signage. If deemed necessary, pedestrian movements should be controlled through signalization.

Another important consideration is the distance and time that pedestrians have to walk to across the roadway. Long crosswalks over 50 feet should be discouraged unless pedestrian refuge is provided with center median islands and curb extensions. These refuges play an important part for pedestrian safety on high speed and high volume roadways.

The ease of movement from sidewalk to crosswalk street level is also a requirement as curb ramps facilitate this transition. Consideration of raised crosswalks and ADA compliant transitions provides a continuity that is a natural extension of the pedestrian path.

"Safe Transportation for Everyone Pedestrian" (STEP) is a slogan and campaign established by FHWA's Office of Safety which identifies that a majority of pedestrian deaths and injury occur at uncontrolled crossing locations such as mid-block or un-signalized intersections. These locations can be inadequate, insufficient, or inconvenient to the demands of pedestrian crossing activity and the STEP program promotes cost effective countermeasures to address this pedestrian problem.

The 5 major countermeasures are as follows:

1. Reduce vehicle speeds.
2. Road Diets can reduce the number of travel lanes or turn lanes and overall number of vehicular conflict lanes pedestrians need to cross and create space for bike and pedestrian facilities such as refuge islands, bike lanes, additional sidewalk width and buffer zones.
3. Pedestrian crossing/refuge islands allow pedestrians with a safer place to cross both at the start of their crossing, midpoint, and end of crossing movements and also provide a visual queue on the potential presence of pedestrian activity to motorists.
4. Raised crosswalks can serve as a traffic calming measure helping keep speeds down on residential streets and in parking lots.
5. Crosswalk visibility enhancements such as intersection or crossing lighting, enhanced signage and pavement markings can help drivers see pedestrians especially at night.

MID-BLOCK CROSSINGS

Intersections have the benefit of being expected by drivers. Mid-block crossings can be dangerous for pedestrians if cars are not properly alerted to their existence. Signs and lights are preferred. Additionally, the crossing should be as short as possible. Bump outs provide the dual benefit of shortening the crossing and providing traffic calming and are recommended for all mid-block crossings.

Image Source Federal Highway Administration

WAYFINDING & SIGNAGE

WAYFINDING AND SIGNAGE

Wayfinding is a key component for increasing walkability of a community. When an individual is walking through an unfamiliar environment, they become more comfortable when the information needed to access that environment is provided in a thoughtful, structured fashion. Wayfinding helps people orient themselves in the community and navigate from place to place. Wayfinding systems may include a variety of tools (both physical and virtual) that provide a predictable and consistent way for people to find their way around.

Primary objectives of Whitpain Township's wayfinding system for walkability include:

- Establishing a shared sense of place within the community.
- Orienting pedestrians with a system that is both logical and intuitive.
- Increasing accessibility to key destinations and frequently used areas within the community.

The wayfinding system design should clearly communicate to users where they are in relation to other nearby destinations through a common design. The goal is to develop a dependable and standardized wayfinding plan that identifies appropriate wayfinding types, messaging, locations, and uniform design for signs, and development of mobile-friendly (internet and smartphone) wayfinding components.

Whitpain's wayfinding sign system should identify the following:

- Gateways leading into the Township
- Entrances to the Villages within the Township
- Directions to specific destinations in the Township
- Mapping for overall Township orientation

The above items would be identified through various components and types of signs.

Wayfinding Sign Types

The components of Whitpain Township's wayfinding sign system were designed individually for optimal functionality while complementing each other to create a unified wayfinding sign program to encourage walkability.

Sign types to be installed include:

Township Gateway Signs (TG): Signs that welcome visitors and distinguish municipal edges or entries.

Village Gateway Signs (VG): Signs that welcome visitors and identify the entrances to the three villages of Center Square, Blue Bell and Broad Axe.

VARIETY OF WHITPAIN TOWNSHIP SIGNAGE TYPES

Whitpain Township Wayfinding Sign System will be in a variety of types but have a unified aesthetic.

Village Banners (VB): Banners which identify and help create a sense of place for each of the three villages of Center Square, Blue Bell and Broad Axe.

Pedestrian Directional Signs (PD): Signs to orient and direct individuals on foot throughout the Township along sidewalks. Pedestrian Directional signs will be both two dimensional (2D) and three dimensional (3D).

Trailhead Signs (TH): Directional signs geared specifically for the entry points to trails and paths that are not traditional sidewalks and may vary in surface material. These trails and paths are often used for recreation and may include many types of users such as pedestrians, bicyclists and equestrians.

Trail Directional Signs (TD): Directional signs geared specifically for trails and paths that are not traditional sidewalks and may vary in surface material. These trails and paths are often used for recreation and may include many types of users such as pedestrians, bicyclists, and equestrians.

QR Code Signs (QR): These small signs or stickers would be placed on the above sign types, either on the sign or signposts, for use by mobile devices that could scan the codes providing additional information and /or a link to the Township's web site.

GUIDELINES

TG - Township Gateway Signs

OBJECTIVES

- Create a memorable and welcoming gateway into the Township that is attractive to both visitors and residents
- Sign should be clearly legible for motorists and pedestrians

RATIONALE

Township Gateway signs would capitalize on sites at key entry points into Whitpain Township to create an identifiable entry and welcoming first impression. As the first element of the wayfinding system passed when entering the Township, the gateway uses color and graphic style to set the stage for the family of signs which follow it.

LOCATIONS

Signs would be installed at the Township's boundary at nine main entry points along:

- Skippack Pike (SR 73) at both North Wales Road and Butler Pike
- Dekalb Pike (SR202) at both Township Line Roads
- Morris Road at both North Wales Road and Butler Pike
- Penlyn-Blue Bell Pike at both Township Line Roads
- Mount Pleasant Avenue

In the future, additional entry points may also be considered such as at Yost Road, Swede Road, Walton Road, Narcissa Road, Stenton Road, Norristown Road, Cathcart Road, and others when deemed needed.

The warm, inviting message of "WELCOME TO WHITPAIN TOWNSHIP – Founded 1701" and the Township seal located at the top. No text should be less than four inches.

MATERIAL

Either a metal plate sign or a high-density polypropylene sign board with carved letters should be mounted on two decorative signposts.

VG - Village Gateway Signs

OBJECTIVES

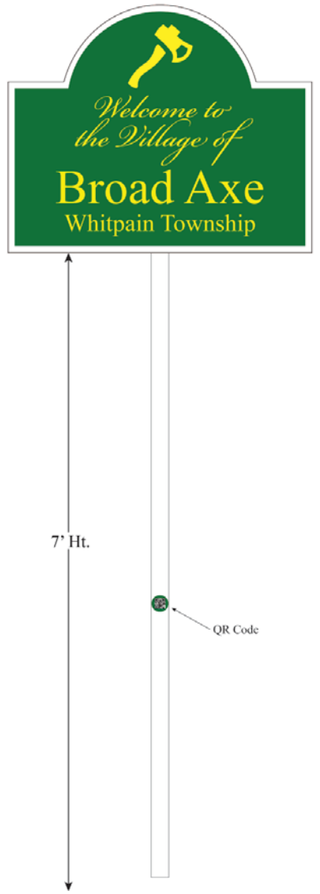
- Create a memorable and welcoming gateway into each of the three villages located in the Township that is attractive to both visitors and residents
- Sign should be clearly legible for motorists and pedestrians

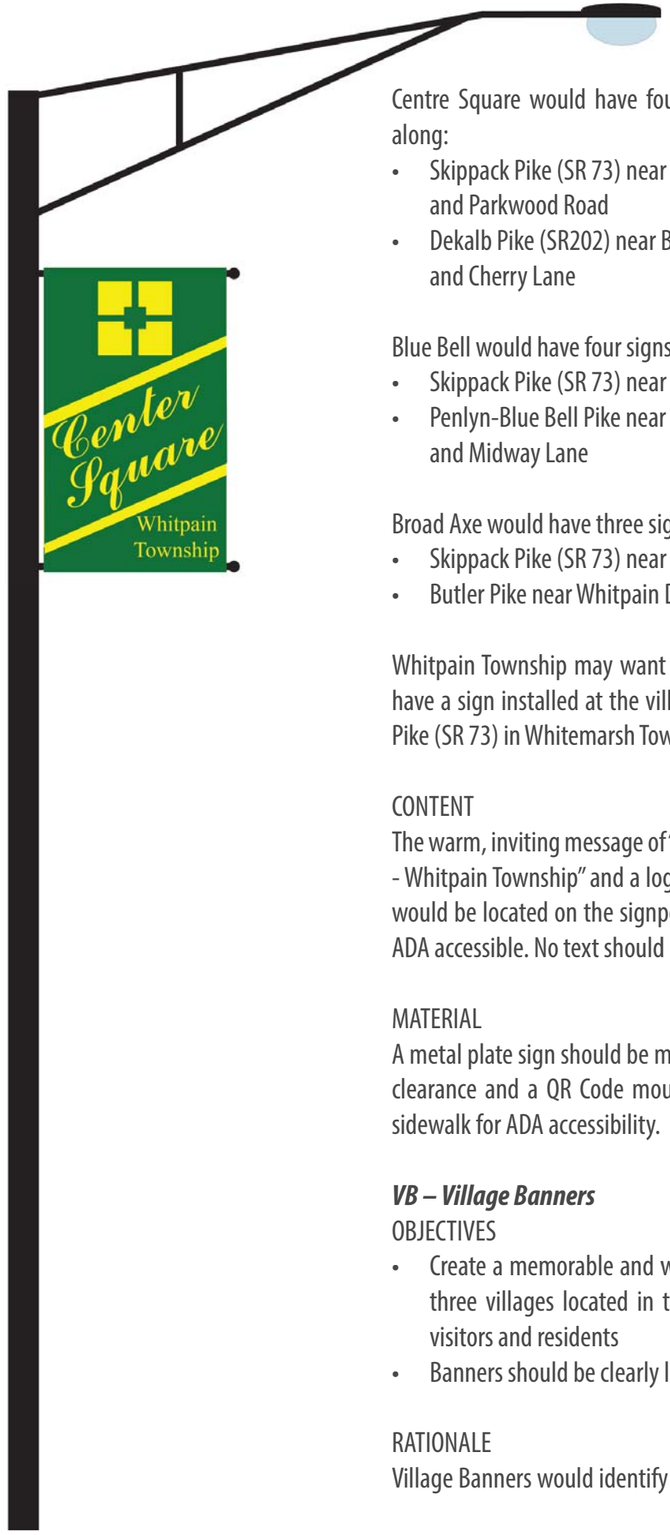
RATIONALE

Village Gateway signs would mark key entry points into the villages of Centre Square, Blue Bell, and Broad Axe within Whitpain Township. The signs would create an identifiable entry into each of the three villages and help to develop a sense of place. As the second-tier gateway sign type of the wayfinding system, the signs would continue use of color and graphic style developed for the Township Gateway sign.

LOCATIONS

Signs would be installed at the Village borders.





Centre Square would have four signs at entries from each direction along:

- Skippack Pike (SR 73) near Whitney Drive and Parkwood Road
- Dekalb Pike (SR202) near Blue Bell Springs Drive and Cherry Lane

Blue Bell would have four signs at entries from each direction along:

- Skippack Pike (SR 73) near Lenmar Drive and Walton Road
- Penlyn-Blue Bell Pike near Plymouth Road and Midway Lane

Broad Axe would have three signs at entries along:

- Skippack Pike (SR 73) near Meade Road
- Butler Pike near Whitpain Drive and Split trail Lane

Whitpain Township may want to work with Whitemarsh Township to have a sign installed at the village entry to Broad Axe along Skippack Pike (SR 73) in Whitemarsh Township.

CONTENT

The warm, inviting message of "Welcome to the Village of _____ - Whitpain Township" and a logo for each village at the top. A QR Code would be located on the signpost at a height of 48 inches, so as to be ADA accessible. No text should be less than three inches.

MATERIAL

A metal plate sign should be mounted on a signpost with a seven-foot clearance and a QR Code mounted at 48 inches within reach of the sidewalk for ADA accessibility.

VB – Village Banners

OBJECTIVES

- Create a memorable and welcoming sense of place in each of the three villages located in the Township that is attractive to both visitors and residents
- Banners should be clearly legible for motorists and pedestrians

RATIONALE

Village Banners would identify all three village areas villages of Centre Square, Blue Bell, and Broad Axe within Whitpain Township. The banners would create a sense of place in each of the three villages. The banners would continue use of color and graphic style developed for the Village Gateway signs.

LOCATIONS

Signs would be installed in the villages on existing utility and Street light poles (with the approval of the pole owners). Banners would be located along:

- Skippack Pike (SR 73)
- Dekalb Pike (SR202)

CONTENT

The message would state the village name and Whitpain Township and a logo for each village at the top. No text should be less than three inches.

MATERIAL

Banners should be of a durable material and mounted on existing utility or street light poles.

PD - Pedestrian Directional Signs

OBJECTIVES

- Create pedestrian directional signs to orient and guide pedestrians to key destinations in the Township
- Provide distances to destinations
- Signs are intended for pedestrians/not motorists
- QR Codes on posts would provide additional information

RATIONALE

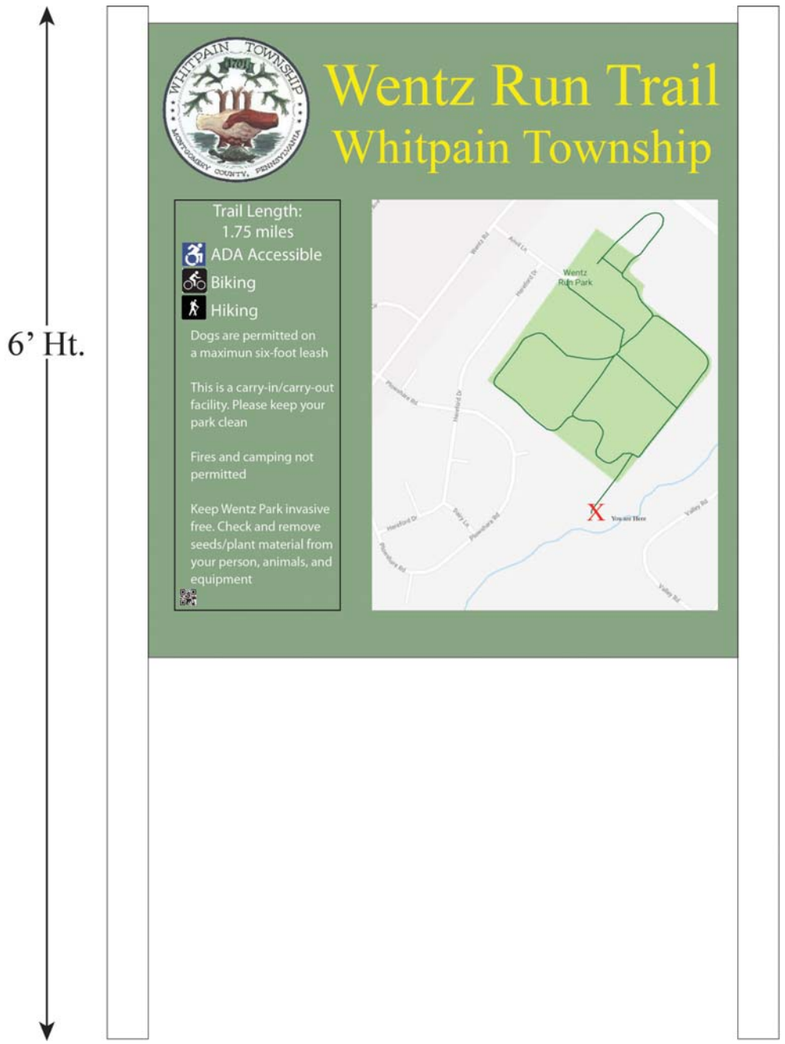
Double sided signs clearly point pedestrians toward upcoming destinations and changes in direction. Distances provide valuable information to judge location on route and travel time. Both 2-D and 3-D signs would be used. The signs would aid pedestrians trying to walk to schools, parks, trails, and other destinations. The signs would continue use of color and graphic style developed for the Village Gateway signs.

LOCATIONS

Signs would be installed along sidewalks at key locations. These signs are primarily intended for use along sidewalks in the Township.

CONTENT
Primary directional destinations with distances would be provided. Text should be three inches or larger.

MATERIAL
Metal signs on single post with a seven-foot clearance and a QR Code mounted at 48 inches within reach of the sidewalk for ADA accessibility.



TH - Trailhead Signs

OBJECTIVES
- Provide a sign that orients trail users to a trail system or trail at points of entry to a park or trail
- Note types of uses permitted on the trail such as dogs on leashes, bicycling, equestrians, etc.
- Note which trails or portions of trails are ADA accessible
- Provide distances to destinations
- State important rules or regulations regulating use
- Signs are intended for pedestrians/not motorists
- QR Codes would provide additional information

RATIONALE
These signs would orient and provide important information at entrances to park trail systems and trails. The signs would aid pedestrians and other users to find their way where road signs and other landmarks may not be visible. The signs would continue use of color and graphic style developed for the Village Gateway signs.

LOCATIONS
Signs would be installed at the entrances trail systems and trails.

CONTENT
A map showing trail or trail system with destinations with distances would be provided. Additional information on types of users permitted, ADA accessibility and other key info would be shown. A QR Code would be located on sign to provide access to more detailed information.

MATERIAL
High Pressure Laminate sign panel in metal frame on posts. Sign height is six foot and a QR Code located at 48 inches within reach of the trail surface for ADA accessibility.

TD - Trail Directional Signs

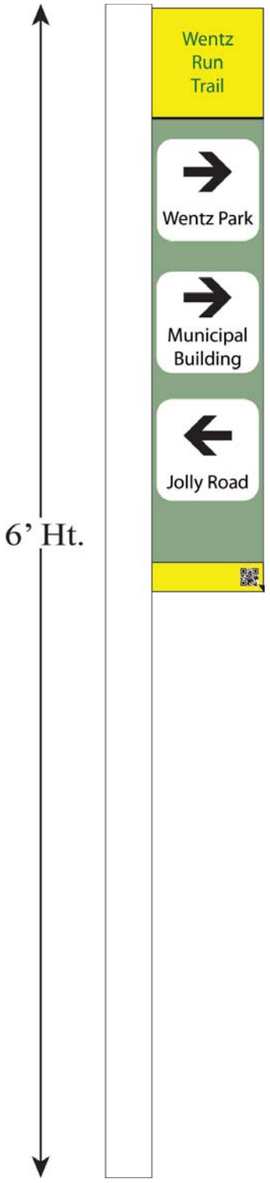
OBJECTIVES
- Create directional signs to orient and guide trail users to key destinations in the Township
- Provide distances to destinations
- Signs are intended for trail users
- QR Codes on posts would provide additional information

RATIONALE
Double sided signs clearly point trail users toward upcoming destinations and changes in direction. The signs are deliberately simple so as not to distract trail users from their experience. QR Codes would provide additional information. The signs would continue use of color and graphic style developed for the Village Gateway signs.

LOCATIONS
Signs would be installed along trails at key locations such as Intersecting pathways or a fork in the trail. These signs are primarily intended for trail users in the Township.

CONTENT
Primary directional destinations (not to exceed three) would be provided. Trail name would be located at the top and a QR Code at the bottom.

MATERIAL
Metal signs on six-foot post with a QR Code mounted at 48 inches within reach of the sidewalk for ADA accessibility.



QR – QR CODES

OBJECTIVES

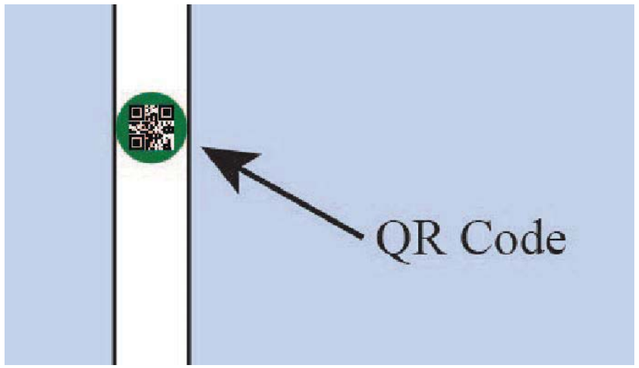
- To provide more detailed information on pedestrian routes through mobile devices
- Connect to existing Township website and data base
- QR Codes are intended for pedestrians and trail users

RATIONALE

QR Codes provide an easy way to access additional information that typically isn't found on wayfinding signs, will not fit on the sign or information that is expected to change simply by scanning the code. This might include interpretive information or information on a trail closure or expansion. The digital information can easily be revised and updated without manufacturing new signs.

LOCATIONS

QR Codes would be located on VG, PD, TH, and TD type signs and signposts.



CONTENT

QR Codes would consist of a code easily scanned by mobile devices. This would connect users to digital information that can easily be updated and added to. This provides the Township with the ability to provide more detailed information and even post temporary information.

MATERIAL

QR Codes could small metal signs or stickers that could easily be added to the posts of VG and PD type signs. TH and TD type signs would have the QR Code printed directly on the sign. QR Codes should located at 48 inches within reach of the sidewalk or trail for ADA accessibility.

NEW SIGNS IN THE FUTURE

New destinations and connections mean new signs. As Whitpain Township evolves over time, new destinations and walkable routes may emerge as a result of planning efforts, new destinations may be established, existing destinations may grow in prominence, or circulation may change for pedestrians. The wayfinding program is designed to be easily expanded with existing signs that can be updated in a cost-effective manner.

FUTURE VEHICULAR WAYFINDING SIGNS

Whitpain Township in the future should consider extending wayfinding to the many vehicles that utilize and pass through the Township. Vehicular wayfinding signs should be designed to complement the existing signage while meeting MUTCD standards and PennDOT requirements.

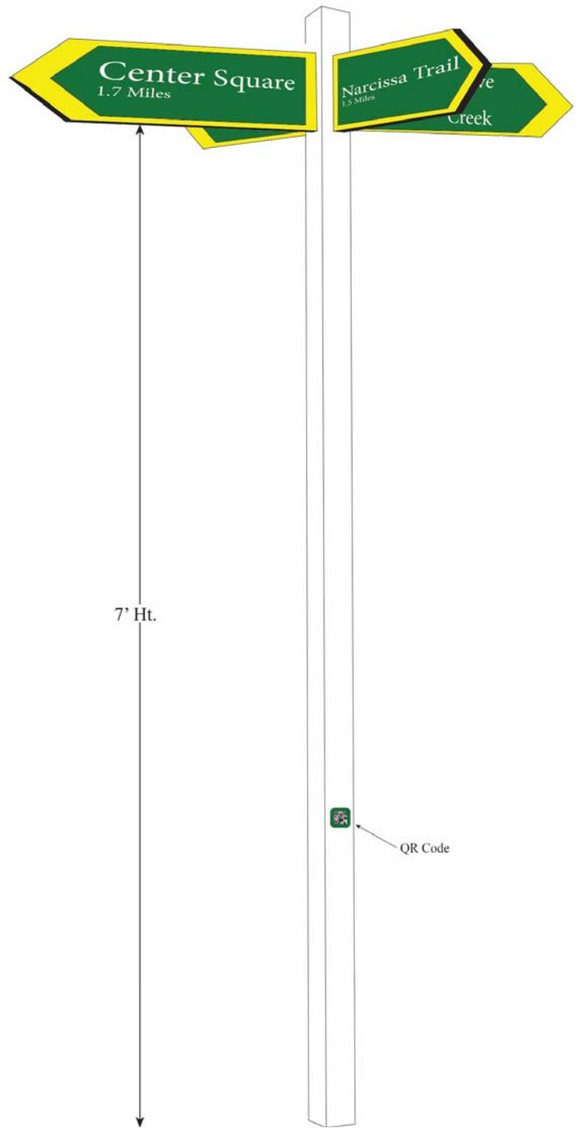
SIGN MAINTENANCE

Regular maintenance of signage should be part of any Wayfinding system plan. Signs are highly visible, and their maintenance or lack of maintenance leaves the visitor with a positive or negative impression about the community and walking infrastructure. Well-maintained signs convey a sense of pride and reduce vandalism while poorly maintained signs may contribute to a diminished user experience, including disorientation.

The following guidelines are recommended:

- Maintain a record of all signage, including location, type of sign, and photo.
- Inspect signs regularly, especially after each winter season, for weathering and visibility.
- Repair or replace damaged or missing signs as soon as possible.
- Secure loose or tilting signs in an upright position.
- Clear vegetation from around signs to maintain visibility.
- For signs mounted on living trees, loosen fasteners as necessary to accommodate growth of the tree.
- Review signage content to ensure continued relevance and accuracy.
- Obsolete, damaged, or surplus signs should be reused or recycled whenever possible.

When signs have been weathered or otherwise damaged or destroyed, consider the reasons for the damage. If weather or natural events damaged the sign, consider stronger materials, a different location, or a different system for mounting the signs. If the sign is damaged by water or decay, consider applying a sealer or preservative (assuring compatibility with color, aesthetics, and environmentally sustainable practices) or replacing the sign with a more water-resistant material.



RECOMMENDED PROJECTS FOR IMPLEMENTATION

Photo Courtesy of Whitpain Township

Photo Courtesy of Whitpain Township

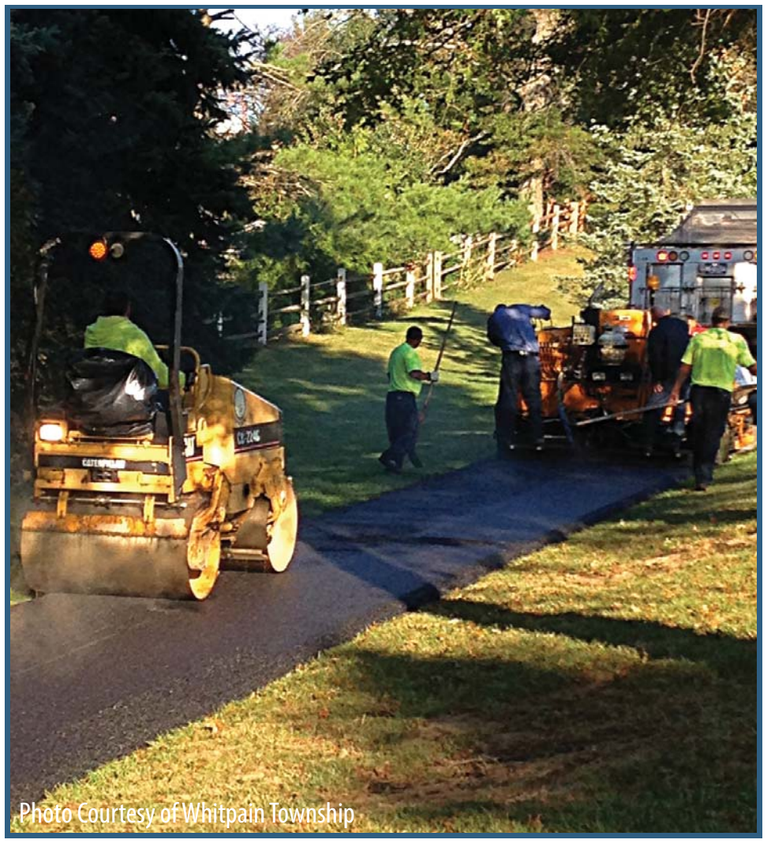


Photo Courtesy of Whitpain Township

PROJECT PRIORITY MATRIX

In order to properly evaluate the importance of projects in Whitpain Township, a priority matrix was created to assess each project. The projects were selected from the public meeting feedback and suggestions. Potential projects were appraised based on community need, safety evaluations, environmental considerations, and future growth potential. Each category was given a rating from 0 (not considered) to 5 (very high importance) and totals were tallied to show overall project rating. Additionally, each project was rated on feasibility, magnitude, urgency, and strategic importance.

It was through this process that the top ten recommended projects were selected. These projects are believed to be the most important to Township walkability and the easiest to implement.

SCALE:
5- Very High
4- High
3- Moderate
2- Low
1- Very Low
0-Not considered (N/A)

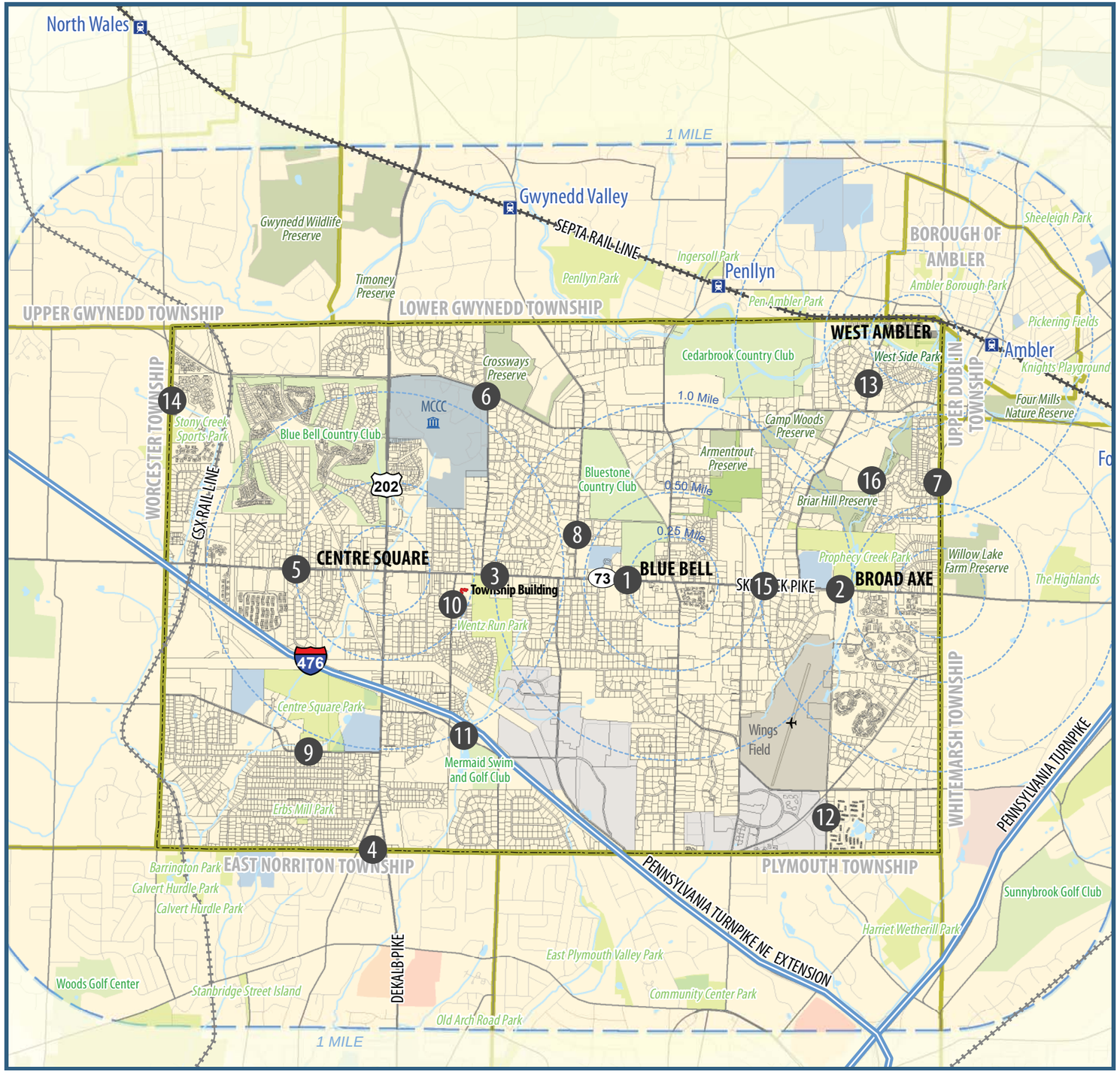
		SRTS Blue Bell Elementary School / Blue Bell Village Connections	SRTS Shady Grove Elementary School / Broad Axe Village Connections	Skippack Pike (SR 73)	Township Line Road Connection	Centre Square / Skippack Pike (SR 73)	Cathcart Road & Morris Road Intersection	Bulter Pike / Broad Axe Village Connections	School Road / SRTS Blue Bell Elementary School	Yost Road/SRTS	Wentz Run Park / Wentz Road	Jolly Road and Arch Street Road / Mermaid Swim and Golf Club	Narcissa Road	Mt Pleasant Avenue	Stony Creek Sports Park / N. Wales Road	Skippack Pike (SR 73)	Prophecy Creek Park Connections
	ID#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Strategic Importance		5	5	5	5	5	2	3	3	4	4	3	2	1	2	3	1
Urgency		5	3	4	4	3	3	3	2	3	3	4	2	1	2	2	1
Magnitude of Cost (0-High Cost/5-Low Cost)		1	1	1	2	1	5	2	2	3	3	2	2	2	3	4	3
Feasibility		2	2	3	5	3	5	3	3	4	4	4	3	4	5	2	3
Safe Routes to Schools		5	5	1	0	0	0	0	5	4	0	0	0	0	0	2	0
Purpose + Need	Connect to Open and Recreational Spaces	3	5	5	0	1	5	0	0	4	5	5	2	1	5	2	5
	Connection to Commerical or Community Anchor	4	4	4	5	5	5	4	1	2	5	0	3	3	2	3	0
	Connection to Village Center	5	5	4	0	5	3	4	1	1	0	0	0	4	0	2	0
	Connection to Schools	5	5	2	0	0	2	2	4	5	0	0	0	0	0	3	0
	Completing Missing Link (existing disconnect)	3	3	4	5	5	5	2	2	3	4	4	0	4	4	3	0
	Public Meeting Request	5	5	5	0	4	2	5	4	2	3	2	1	5	0	3	5
	Neighborhood Connectivity	4	4	4	5	5	3	4	5	3	5	4	3	4	5	3	3
Traffic Operations and Safety	Improves Safety at Intersections	4	4	3	5	3	0	3	4	3	3	4	5	3	4	3	0
	Improves Roadway Crossing	4	4	3	5	5	0	2	4	2	3	4	5	3	0	2	0
	Children's Safety	5	5	1	0	0	0	0	5	4	0	3	0	0	0	2	0
Right-of-Way	Do Not Need to Aquire Easement	3	3	3	5	4	5	3	3	3	4	3	3	4	5	3	2
	Stays within Right of Way	4	4	4	5	5	5	5	4	2	4	4	3	4	5	3	2
Train + Transit Connectivity	Safe Routes to Transit Stops	0	5	5	5	5	3	5	0	3	0	0	5	0	3	0	0
	Safet Routes to Train Stations	0	0	0	2	0	3	4	0	0	0	0	0	1	0	0	0
	Transit Stop Improvement	0	0	0	3	0	1	2	0	0	0	0	5	0	0	0	0
	Connects to Commuter Trail	5	4	5	0	4	5	3	5	3	2	3	5	5	4	2	2
	TOTAL	**72**	**76**	**66**	**61**	**63**	**62**	**59**	**57**	**58**	**52**	**49**	**49**	**49**	**49**	**47**	**27**

RECOMMENDED PROJECTS FOR IMPLEMENTATION

Recommended projects were generated by studying the existing networks, locating community anchors, and listening to community input gathered at the public meetings. Data was collected from all available resources including: State, County, and Township resources, as well as field observations and GIS research. By studying the existing network, the design team was able to see the gaps and missing links within the Township network.

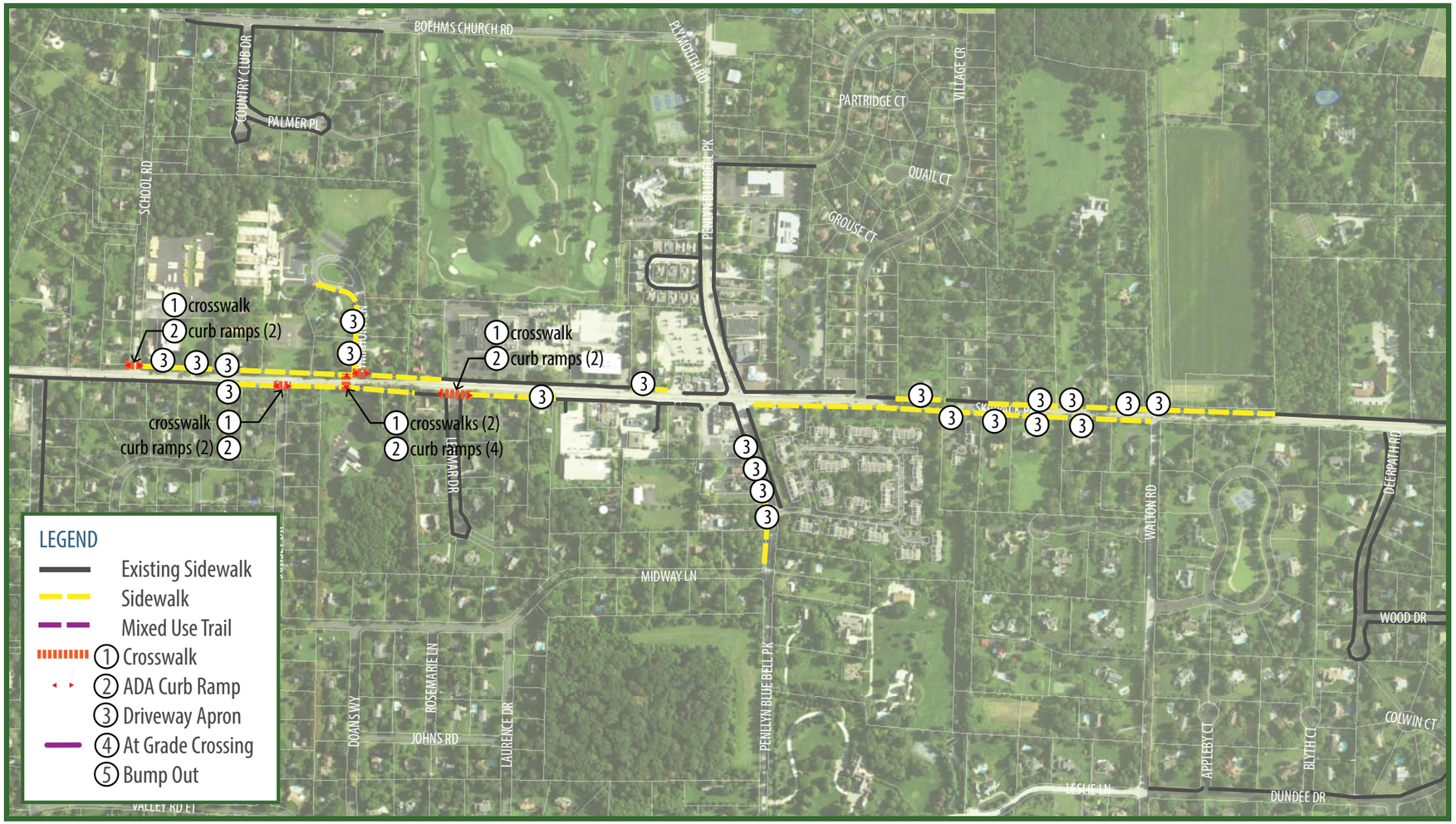
Projects were prioritized by proximity to already planned roadway improvements, village centers, and community anchors and community input. The goal of this study is to connect the gaps in sidewalk connectivity, specifically emphasizing the desired projects discussed at the public meetings. First projects were selected because they build upon the planned roadway improvements in the Township that are generating pedestrian access improvements. Access to community anchors such as transit stops, schools, parks and neighborhoods, government facilities such as Township office and Post Office were emphasized. Village centers generally have sidewalks in and around commercial development. The design team focused on connecting this network to surrounding neighborhoods. Additionally, all fair and poor condition sidewalk areas should be updated and should include ADA accessible facilities.

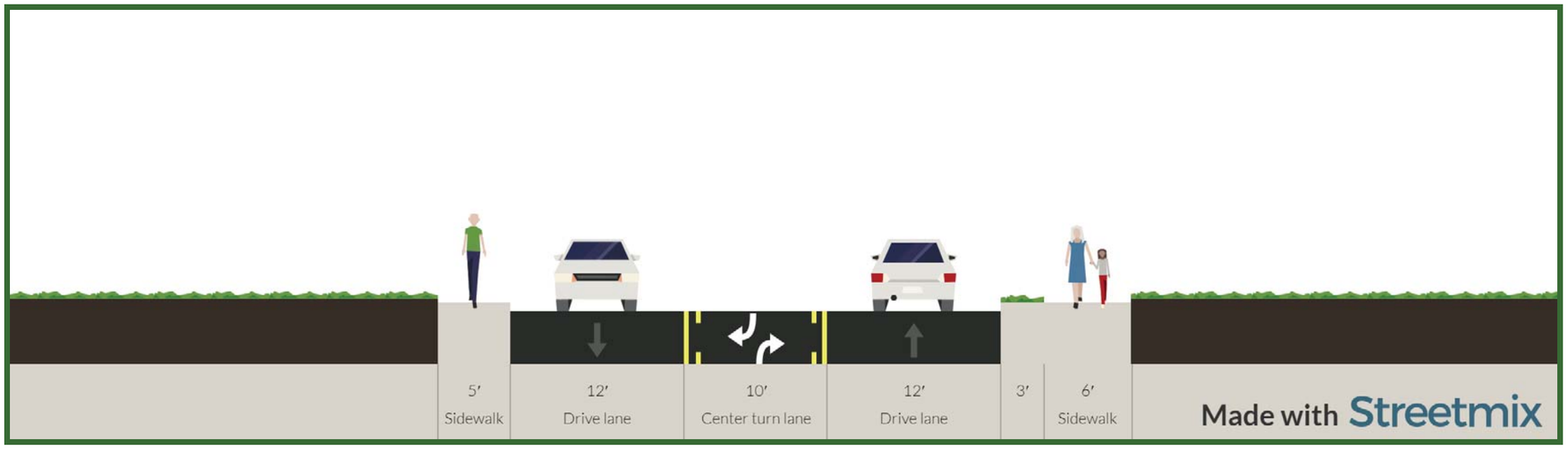
1. **Project 1 -** SRTS - Blue Bell Elementary School / Blue Bell Village Connections
2. **Project 2 -** SRTS - Shady Grove Elementary School/Broad Axe Village Connections
3. **Project 3 -** Skippack Pike (SR 73)
4. **Project 4 -** Township Line Road Connection
5. **Project 5 -** Centre Square / Skippack Pike (SR 73)
6. **Project 6 -** Cathcart Road and Morris Road Intersection
7. **Project 7 -** Butler Pike / Broad Axe Village Connections
8. **Project 8 -** School Road / Safe Routes to School - Blue Bell Elementary School
9. **Project 9 -** Yost Road / Safe Routes to School
10. **Project 10 -** Wentz Run Park / Wentz Road
11. **Project 11 -** Jolly Road and Arch Street Rd / Mermaid Swim and Golf Club
12. **Project 12 -** Narcissa Road
13. **Project 13 -** Mt Pleasant Avenue
14. **Project 14 -** Stony Creek Sports Park / N. Wales Road
15. **Project 15 -** Skippack Pike (SR 73)
16. **Project 16 -** Prophecy Creek Park Connections



RECOMMENDED PROJECT LOCATIONS

Through analysis of existing conditions and public opinion, these projects were selected in order to promote walkability within Whitpain.





Project 1 –Safe Routes to School Blue Bell Elementary School / Blue Bell Village Connections

This project centers around the Blue Bell Village and Skippack Pike (SR 73) intersection with Penllyn-Blue Bell Pike. There are two primary focuses of this project. The first is to provide a Safe Routes to School (SRTS) for Blue Bell Elementary School. The primary goal of the SRTS program is to get more children bicycling and walking to school safely and on an everyday basis. This will be accomplished by adding sidewalks and a push button or presence mid-block crossing at the intersection of Symphony Drive with Skippack Pike (SR 73). The second priority of this project will be to connect all the existing segments of sidewalk in Blue Bell Village Center; many businesses have sidewalk in front of them, but they do not fully connect the village center to the surrounding residential areas.

COST ESTIMATE

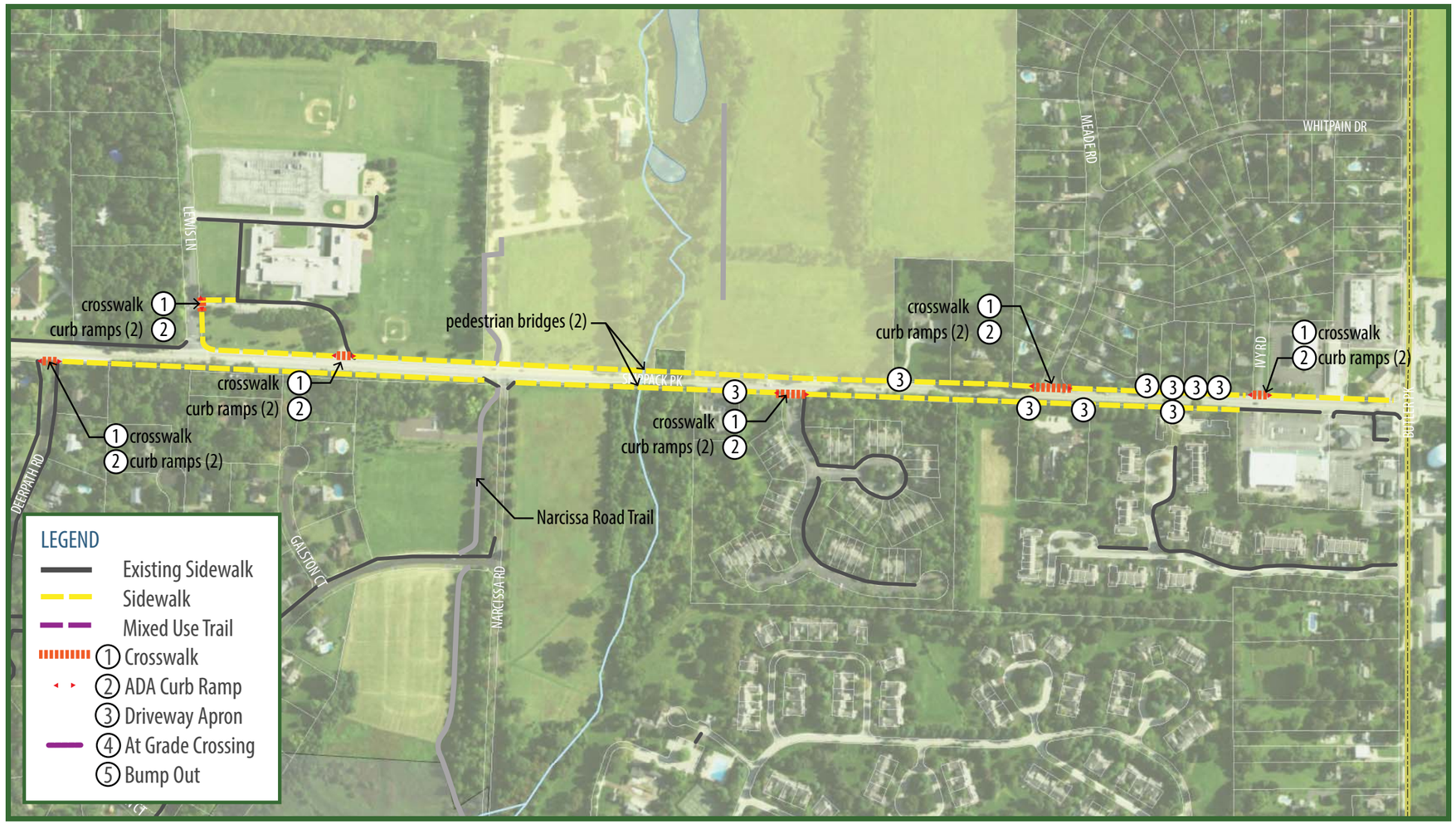
Clearing & Grubbing	$26,529
Sidewalk Excavation	$41,594
Hauling	$29,710
4" Concrete Sidewalk	$256,800
6" No. 2A Subbase	$53,500
Crosswalks	$2,500
Curb Ramps	$15,000
Driveway Aprons	$31,500
Engineering & Design	$68,570
Erosion & Sediment Control	$27,428
Maintenance & Protection of Traffic	$13,714
Mobilization (8% of above)	$36,571
Contingency (15%)	$68,570
ESTIMATED TOTAL	**$671,987**
*Escalation (3% per year)	$20,160

PROJECT #1 PLAN (TOP LEFT)

Safe Pedestrian connection is the basis for Safe Routes to School. Its goal is to provide amenities that promote walking and bicycling to school. Adding this large portion of sidewalk along Skippack Pike will increase the walkability along this corridor and create an east-west connection for pedestrians.

PROJECT #1 SECTION (BOTTOM LEFT)

Sidewalks will be present on both sides of SR 73 and there will be a mid-block crossing to promote safe crossings.



Project 2 - Safe Routes to School Shady Grove Elementary School (SGES) / Broad Axe Village Connections

SGES has existing connections to the Prophecy Park Trail and the Narcissa Trail, however there is a disconnect in the sidewalk network which needs to be remedied. Recommendations in this project include connecting the existing sidewalk segments as well as improvements at existing crosswalk locations, curb ramps, sidewalks, and signs alerting motorists and providing increases awareness of school children who are novice road user pedestrians and bicyclists using these new facilities. Additionally, this project creates a connection for neighborhoods adjacent to the Broad Axe Village along SR 73 (Skippack Pike) to access the length of the corridor.

COST ESTIMATE

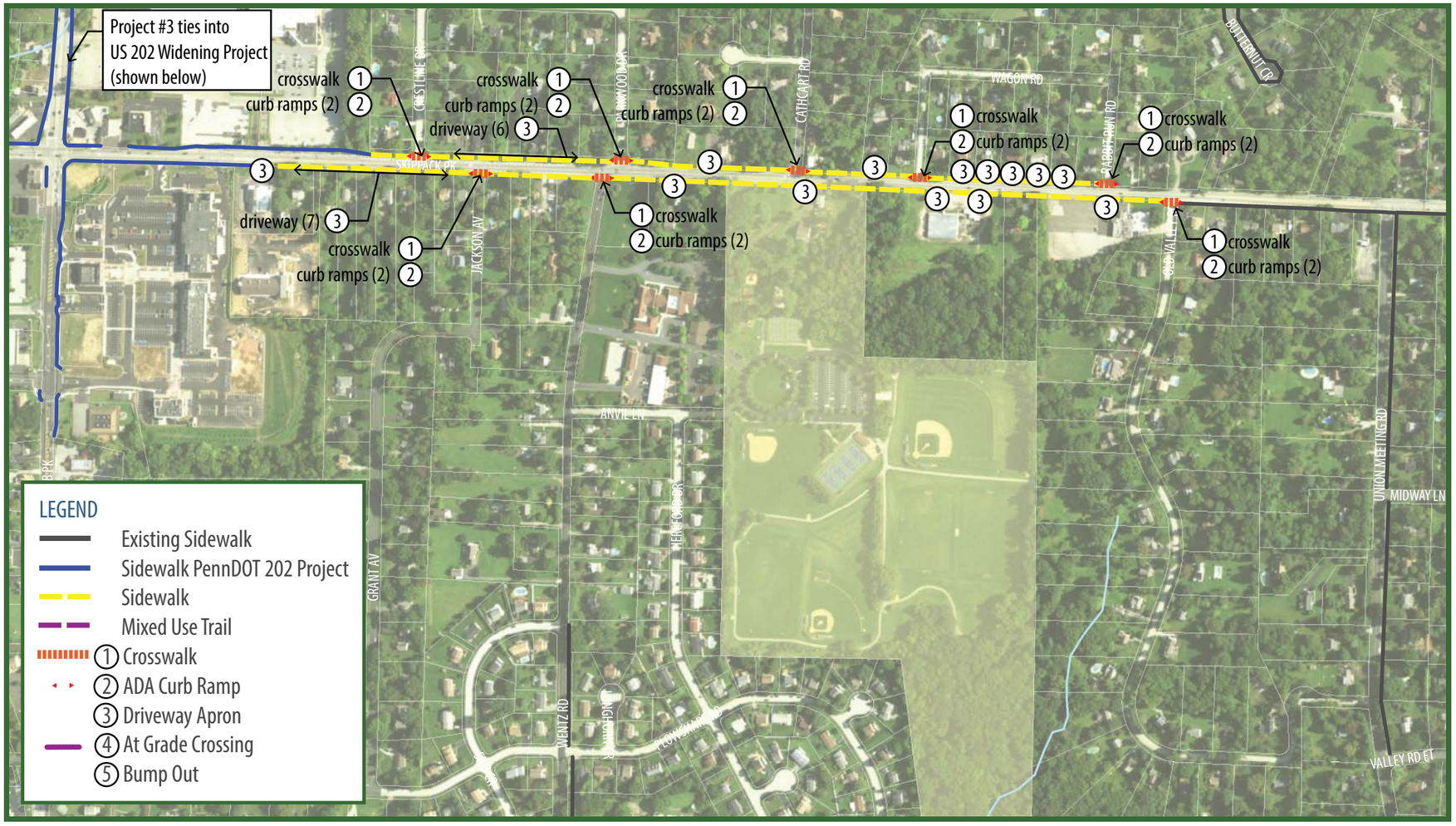
Clearing & Grubbing	$27,335
Sidewalk Excavation	$42,858
Hauling	$30,613
4" Concrete Sidewalk	$264,600
6" No. 2A Subbase	$55,125
Crosswalks	$3,000
Curb Ramps	$18,000
Driveways	$15,000
Pedestrian Bridges (2)	$91,200
Engineering & Design	$82,160
Erosion & Sediment Control	$32,864
Maintenance & Protection of Traffic	$16,432
Mobilization (8% of above)	$43,818
Contingency (15%)	$82,160
ESTIMATED TOTAL	**$805,164**
*Escalation (3% per year)	$24,155

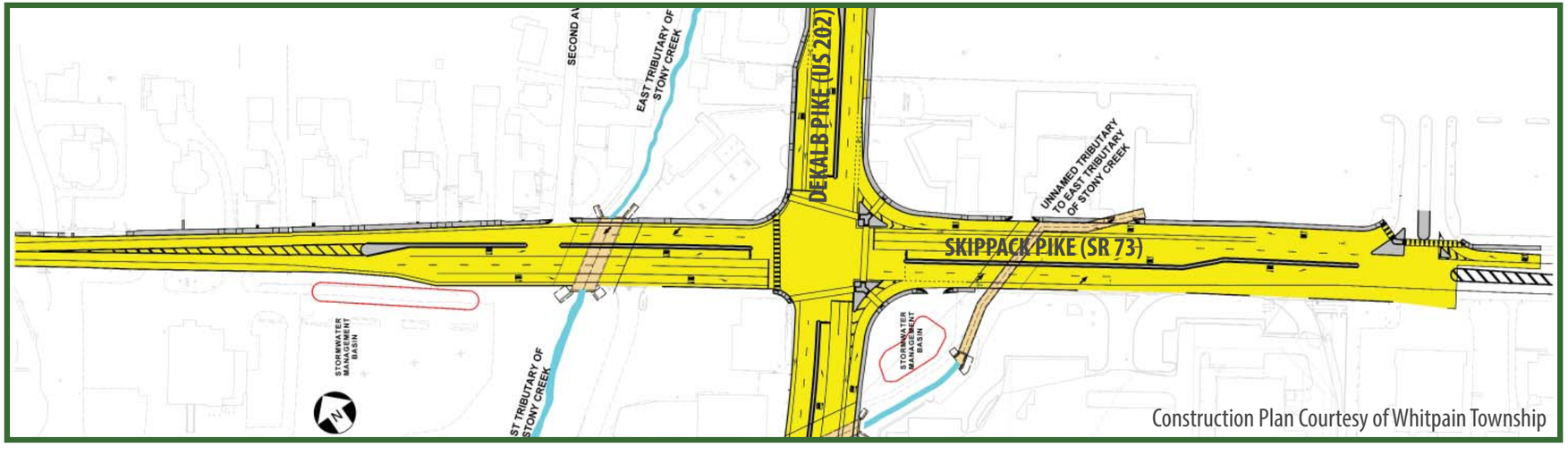
PROJECT 2 PLAN (TOP LEFT)

Creating Safe Routes to Schools is a priority for Whitpain Township. This project would add sidewalks to connect the internal sidewalks of the school to external sidewalks and associated neighborhoods. It would also add to the Skippack Pike corridor.

RENDERING (BOTTOM LEFT)

Shady Grove Elementary School has internal sidewalks that will be connected to sidewalks that run along Skippack Pike.





Construction Plan Courtesy of Whitpain Township

Project 3 - Skippack Pike (SR 73)

SR 73 (Skippack Pike) is one of the major east-west connections in Whitpain for both cars and bicycles. The existing road has wide shoulders that will be turned into sidewalks. Ideally, the new road section will feature sidewalks on both sides, buffers, and bike lanes. The sidewalks will tie into the new sidewalks along Dekalb Pike (SR 202) and Centre Square Commons. The improvements will go from Route 476 to Wentz Run Park in order to connect as many neighborhoods to the commercial and recreational centers.

COST ESTIMATE

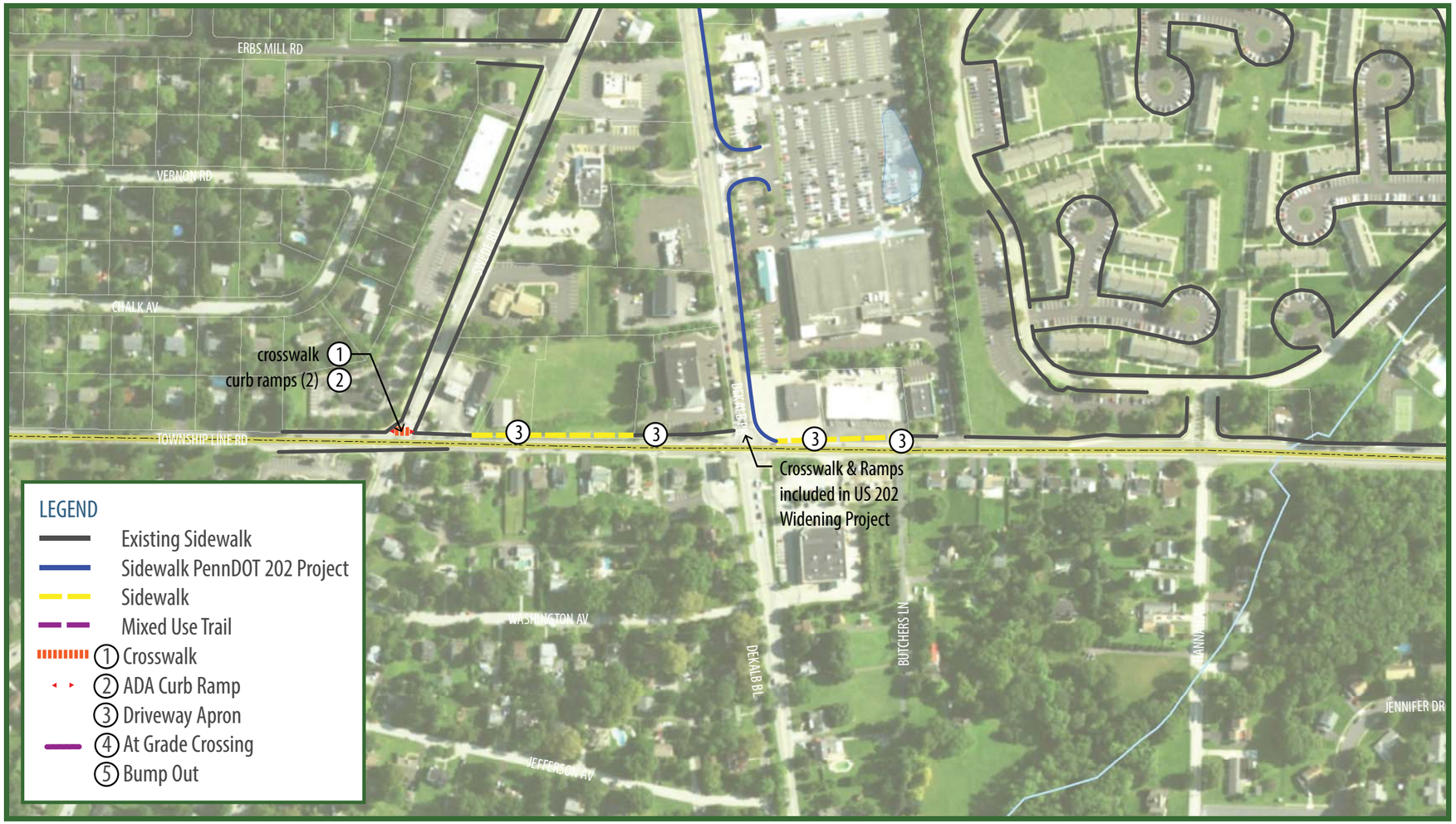
Clearing & Grubbing	$20,572
Sidewalk Excavation	$32,254
Hauling	$23,039
4" Concrete Sidewalk	$199,133
6" No. 2A Subbase	$41,486
Crosswalk	$4,000
Curb Ramp	$24,000
Driveway Apron	$39,000
Engineering & Design	$57,523
Erosion & Sediment Control	$23,009
Maintenance & Protection of Traffic	$11,505
Mobilization (8% of above)	$30,679
Contingency (15%)	$57,523
ESTIMATED TOTAL	**$563,721**
*Escalation (3% per year)	$16,912

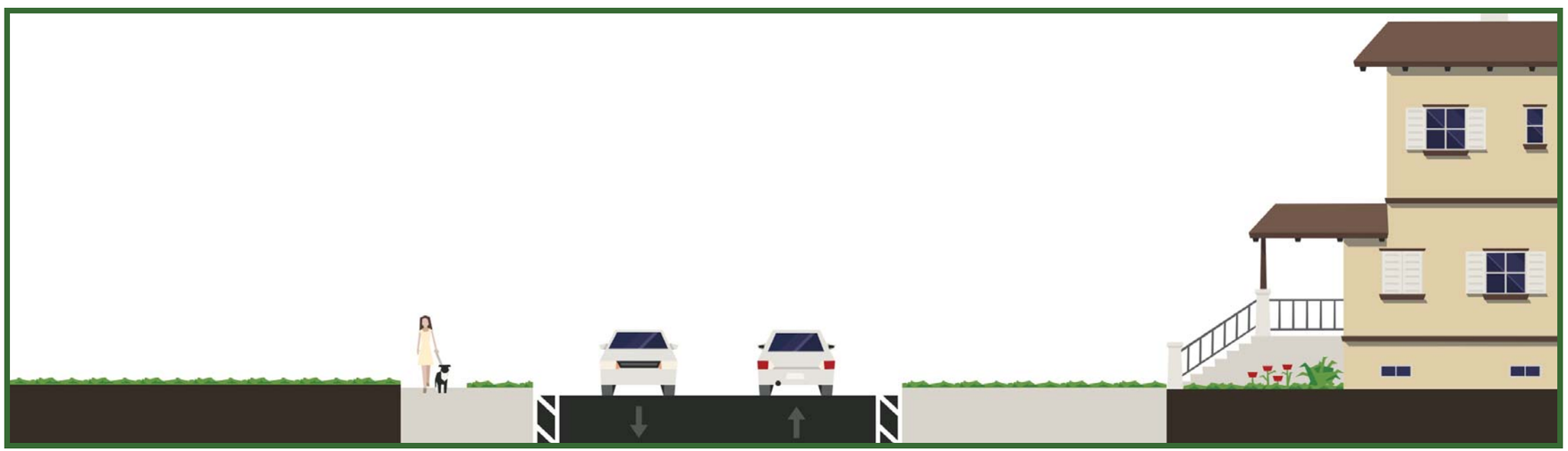
PROJECT PLAN #3 (TOP LEFT)

Whitpain Township will tie into the US 202 Widening Project at Centre Square and Dekalb Pike (US 202) through the corridor being created on Skippack Pike (SR 73).

US 202 Widening Project (BOTTOM LEFT)

PennDOT Widening Project is currently under construction and will provide a North-South connection for pedestrians and cyclists. It intersects with Skippack Pike (SR 73) at Centre Square.





Project 4 – Township Line Road Connection

At the corner of Dekalb Pike (US 202) and Township Line Road is a shopping center featuring a grocery store. There is an almost complete pedestrian connection along Township Line Road that is being improved by the PennDOT US 202 Widening Project. This project provides crosswalks and ADA ramps across Dekalb Pike. However, the existing conditions have missed one small segment and this project will provide that connection. This project includes installing sidewalk between Swede Road and Dekalb Pike on the one lot that lacks it and the corner lots East of the intersection. The east segment could be problematic as the right of way is currently being used for parking. Additionally, the crossing at Swede Road needs to be improved.

COST ESTIMATE

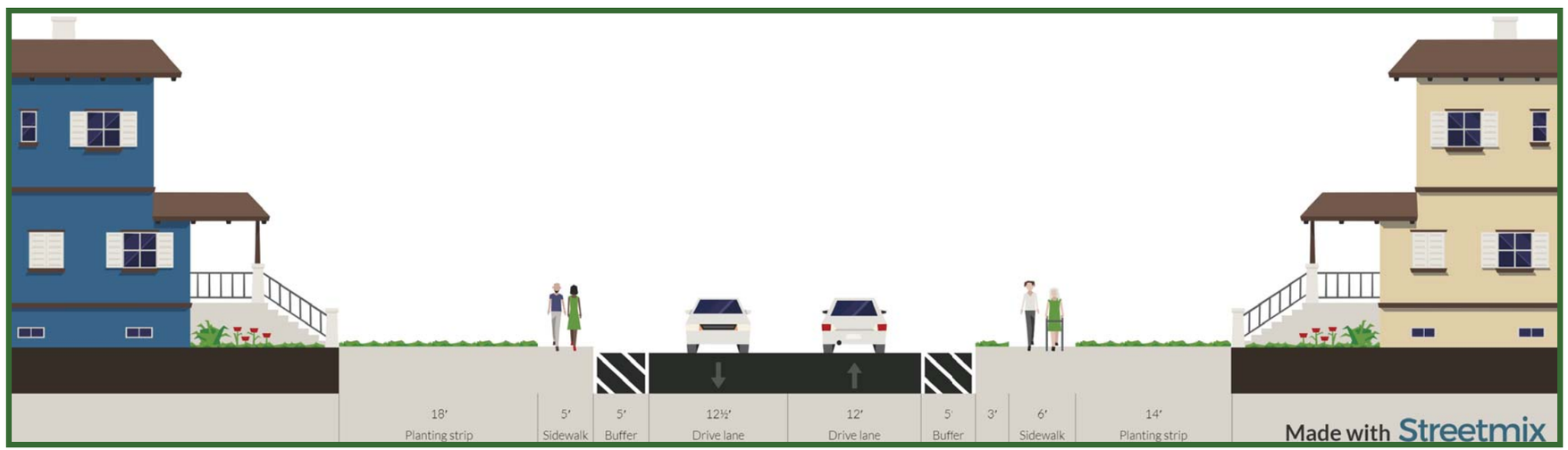
Clearing & Grubbing	$2,493
Sidewalk Excavation	$3,909
Hauling	$2,792
4" Concrete Sidewalk	$24,133
6" No. 2A Subbase	$5,028
Crosswalks	$500
Curb Ramps	$3,000
Driveway Aprons	$7,500
Engineering & Design	$7,403
Erosion & Sediment Control	$2,961
Maintenance & Protection of Traffic	$1,481
Mobilization (8% of above)	$3,948
Contingency (15%)	$7,403
ESTIMATED TOTAL	**$72,552**
*Escalation (3% per year)	$2,177

PROJECT #4 PLAN (TOP LEFT)

Project #4 focuses on correcting a missing link along Township Line Road. It will allow people from Western residential neighborhoods to walk along Township Line Road to the community anchor, a commercial center that features a grocery store.

PROJECT SECTION (BOTTOM LEFT)

Sidewalk will be added to the lots without it between Swede Road and Dekalb Pike (US 202). It will match the existing sidewalk and buffer space that exists on the other lots.



Project 5 - Centre Square/ Skippack Pike (SR73)

Ideally, the new road section will feature sidewalks on both sides, buffers, and bike lanes. The sidewalks will tie into the new sidewalks along Dekalb Pike (SR 202) and Centre Square Commons. The improvements will connect many neighborhoods to the commercial and recreational centers of the area.

COST ESTIMATE

Clearing & Grubbing	$25,162
Sidewalk Excavation	$39,451
Hauling	$28,179
4" Concrete Sidewalk	$243,567
6" No. 2A Subbase	$50,743
Crosswalks	$4,500
Curb Ramps	$28,500
Driveway Aprons	$48,000
Engineering & Design	$70,215
Erosion & Sediment Control	$28,086
Maintenance & Protection of Traffic	$14,043
Mobilization (8% of above)	$37,448
Contingency (15%)	$70,215
ESTIMATED TOTAL	**$688,110**
*Escalation (3% per year)	$20,643

PROJECT #5 PLAN (TOP LEFT)

Whitpain Township residents would like connection to the village centers from residential areas. Adding this large portion of sidewalk along Skippack Pike will increase the walkability along this corridor and create an east-west connection for pedestrians that ties residents to community anchors.

ROAD SECTION (BOTTOM LEFT)

Skippack Pike (SR 73) in this area runs primarily between residential neighborhoods. Ideally, sidewalks would be installed on both sides of the street.

Photo Courtesy of Whitpain Township

Project 6 – Cathcart Road and Morris Road Intersection

This project adds a short section of sidewalk along Cathcart Road to connect the existing sidewalk to the new crossings at Morris Road. Additionally, by completing this sidewalk, it allows connection for residents along Cathcart Road to the Crossways Trail. It also provides connection for neighborhood residents to the campus of Montgomery Community College.

COST ESTIMATE

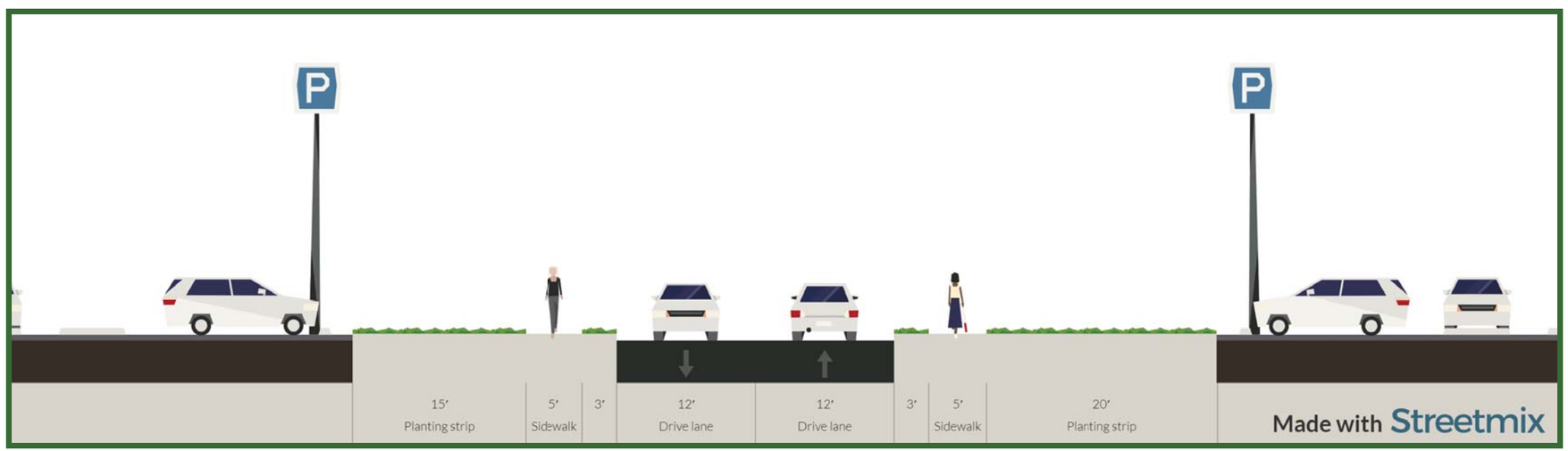
Clearing & Grubbing	$1,501
Sidewalk Excavation	$2,354
Hauling	$1,681
4" Concrete Sidewalk	$14,533
6" No. 2A Subbase	$3,028
Driveway Aprons	$1,500
Engineering & Design	$3,690
Erosion & Sediment Control	$1,476
Maintenance & Protection of Traffic	$738
Mobilization (8% of above)	$1,968
Contingency (15%)	$3,690
ESTIMATED TOTAL	**$36,159**
*Escalation (3% per year)	$1,085

PROJECT #5 PLAN (TOP LEFT)

Sidewalk exists South of the intersection and within surrounding neighborhoods. This stretch of sidewalk is missing and this project will add the connection.

INTERSECTION OF CATHCART ROAD AND MORRIS ROAD (BOTTOM LEFT)

Whitpain Township has already updated the intersection of Cathcart Road and Morris Road. It has provided a crossing, push-button signal, and ADA compliant design to connect the Crossways Trail.



Project 7 – Butler Pike / Broad Axe Village Connection

This project creates a connection for neighborhoods along Butler Pike to the Broad Axe Village center. This project recommends the installation of sidewalks on one side of Butler Pike to connect Ridings Way (Ridings at Whitpain development) with the commercial shopping center area within the Broad Axe Village. Additionally, this project could be extended to connect Broad Axe Village to Ambler Borough along Butler Pike.

COST ESTIMATE

Clearing & Grubbing	$13,292
Sidewalk Excavation	$20,840
Hauling	$14,886
4" Concrete Sidewalk	$128,667
6" No. 2A Subbase	$26,806
Crosswalks	$2,500
Curb Ramps	$15,000
Driveway Aprons	$27,000
Pedestrian Bridge	$45,600
Engineering & Design	$44,189
Erosion & Sediment Control	$17,675
Maintenance & Protection of Traffic	$8,838
Mobilization (8% of above)	$23,567
Contingency (15%)	$44,189
ESTIMATED TOTAL	**$433,048**
*Escalation (3% per year)	$12,991

PROJECT #7 PLAN (TOP LEFT)

Whitpain Township residents would like connection to the village centers. Project #7 involves adding sidewalk along the western side of Butler Avenue. The eastern side and most of the village center already has sidewalks associated with commercial development that need to be connected.

SECTION OF BUTLER AVENUE (BOTTOM LEFT)

Butler Avenue in Broad Axe is a commercial area for the first block north of Skippack Pike. Sidewalks should be on most sides of the streets to create a walkable village center.

Project 8 – School Road / Blue Bell Elementary Safe Routes to School

This project provides sidewalks along one side of School Road. It will run between Morris Road and Skippack Pike (SR73) and may require a short pedestrian bridge. This sidewalk will provide a connection for the neighborhoods along the road to the school and the Skippack Pike corridor.

COST ESTIMATE

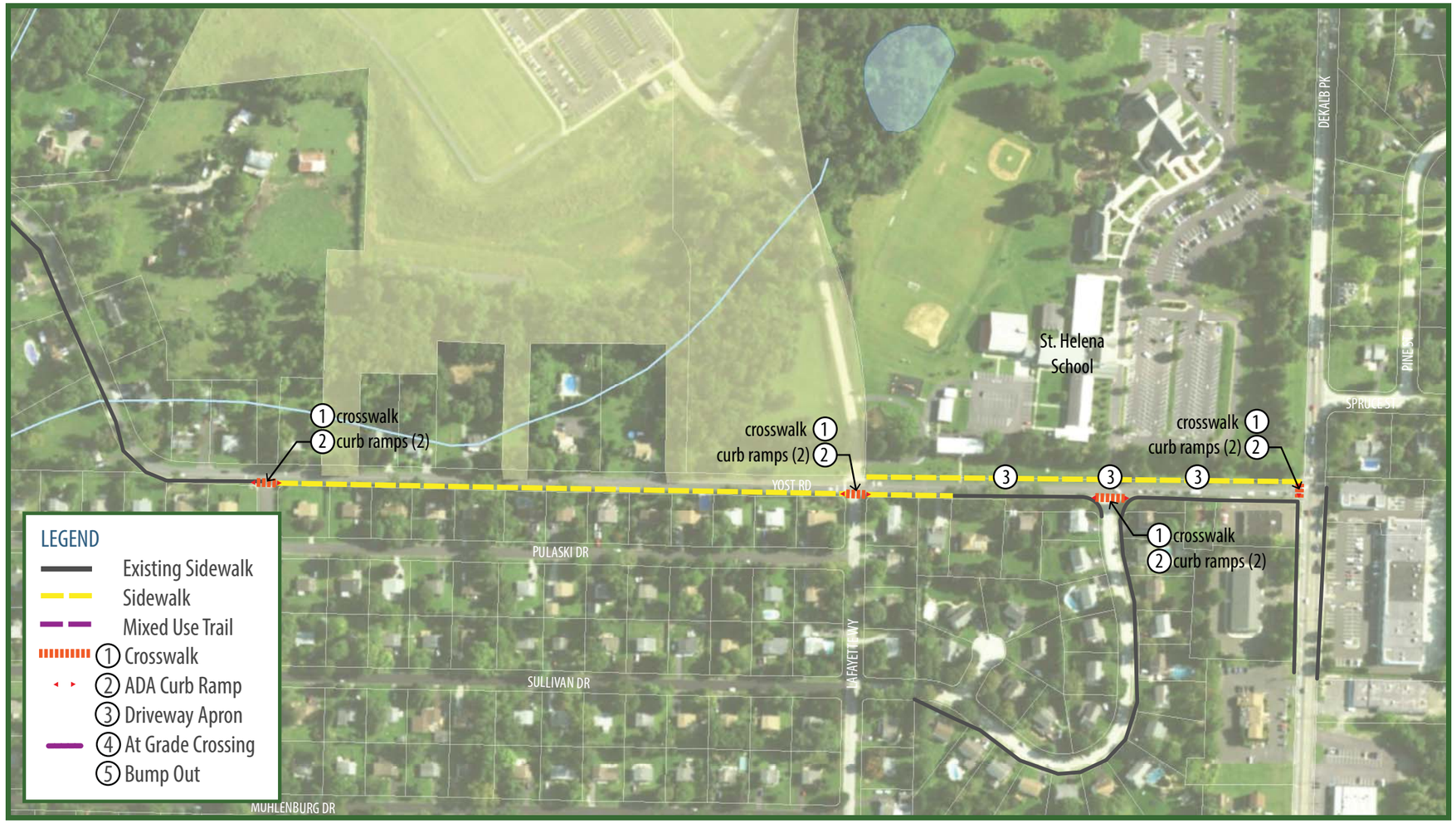
Clearing & Grubbing	$16,677
Sidewalk Excavation	$26,148
Hauling	$18,677
4" Concrete Sidewalk	$161,433
6" No. 2A Subbase	$33,632
Crosswalks	$2,500
Curb Ramps	$15,000
Driveway Aprons	$27,000
Signage	$840
Engineering & Design	$49,861
Erosion & Sediment Control	$19,944
Maintenance & Protection of Traffic	$9,972
Mobilization (8% of above)	$26,593
Contingency (15%)	$49,861
ESTIMATED TOTAL	**$488,638**
*Escalation (3% per year)	$14,659

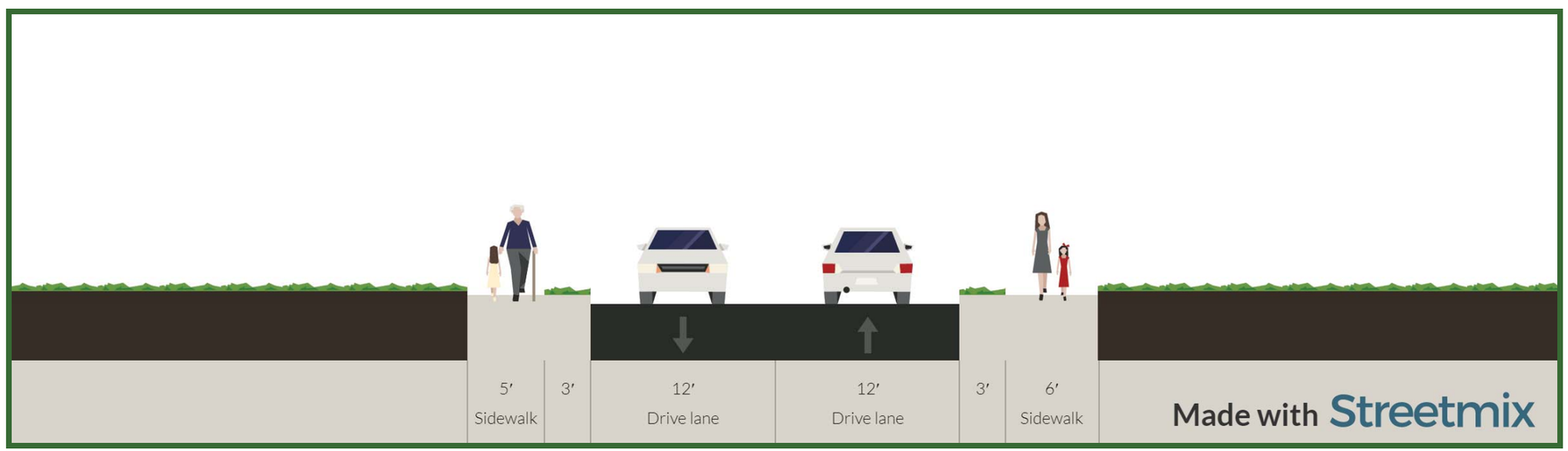
PROJECT #8 PLAN (TOP LEFT)

Sidewalks will connect residential neighborhoods along School Road to Skippack Pike (SR 73). This will allow residents of these neighborhoods to walk with their children to Blue Bell Elementary School.

SCHOOL ROAD SECTION (BOTTOM LEFT)

Sidewalk will be added along most of School Road to connect Pheasant Meadow Road and Skippack Pike (SR 73).





Project 9 – Yost Road / Safe Routes to School

This project provides sidewalks along Yost Road to connect Centre Square Green and Washington Square neighborhoods with the Centre Square Park and Dekalb Pike US 202 sidewalks. Additionally, sidewalks along Yost Road will provide a SRTS opportunity for Stoney Creek Elementary School and St Helena School. Warning signs and crosswalk markings for Yost Road are also improvements necessary at Whitwood Dr, Sterling Way, and Lafayette Way.

COST ESTIMATE

Clearing & Grubbing	$8,867
Sidewalk Excavation	$13,903
Hauling	$9,930
4" Concrete Sidewalk	$85,833
6" No. 2A Subbase	$17,882
Crosswalks	$2,000
Curb Ramps	$12,000
Driveway Aprons	$4,500
Engineering & Design	$23,237
Erosion & Sediment Control	$9,295
Maintenance & Protection of Traffic	$4,647
Mobilization (8% of above)	$12,393
Contingency (15%)	$23,237
ESTIMATED TOTAL	**$227,726**
*Escalation (3% per year)	$6,832

PROJECT #9 PLAN (TOP LEFT)

Sidewalks will connect St Helena School to existing sidewalk in front of Stoney Creek Elementary School.

YOST ROAD SECTION (BOTTOM LEFT)

Sidewalk will be added where it is missing along the length of Yost Road on the South side and along St Helena's School.


Photo Courtesy of Whitpain Township

Project 10 – Wentz Run Park / Wentz Road

This project adds sidewalks along the Eastern side of Wentz Road. This sidewalk ties into the existing sidewalk that stops across from Silo Road and continues up to Skippack Pike (SR 73). This sidewalk will provide pedestrian connection along all of Wentz Road and allow residents access to the Skippack Pike Corridor. Additionally, sidewalk is proposed along one side of Anvil Lane to provide a safe connection into the park and connect to that sidewalk system.

COST ESTIMATE

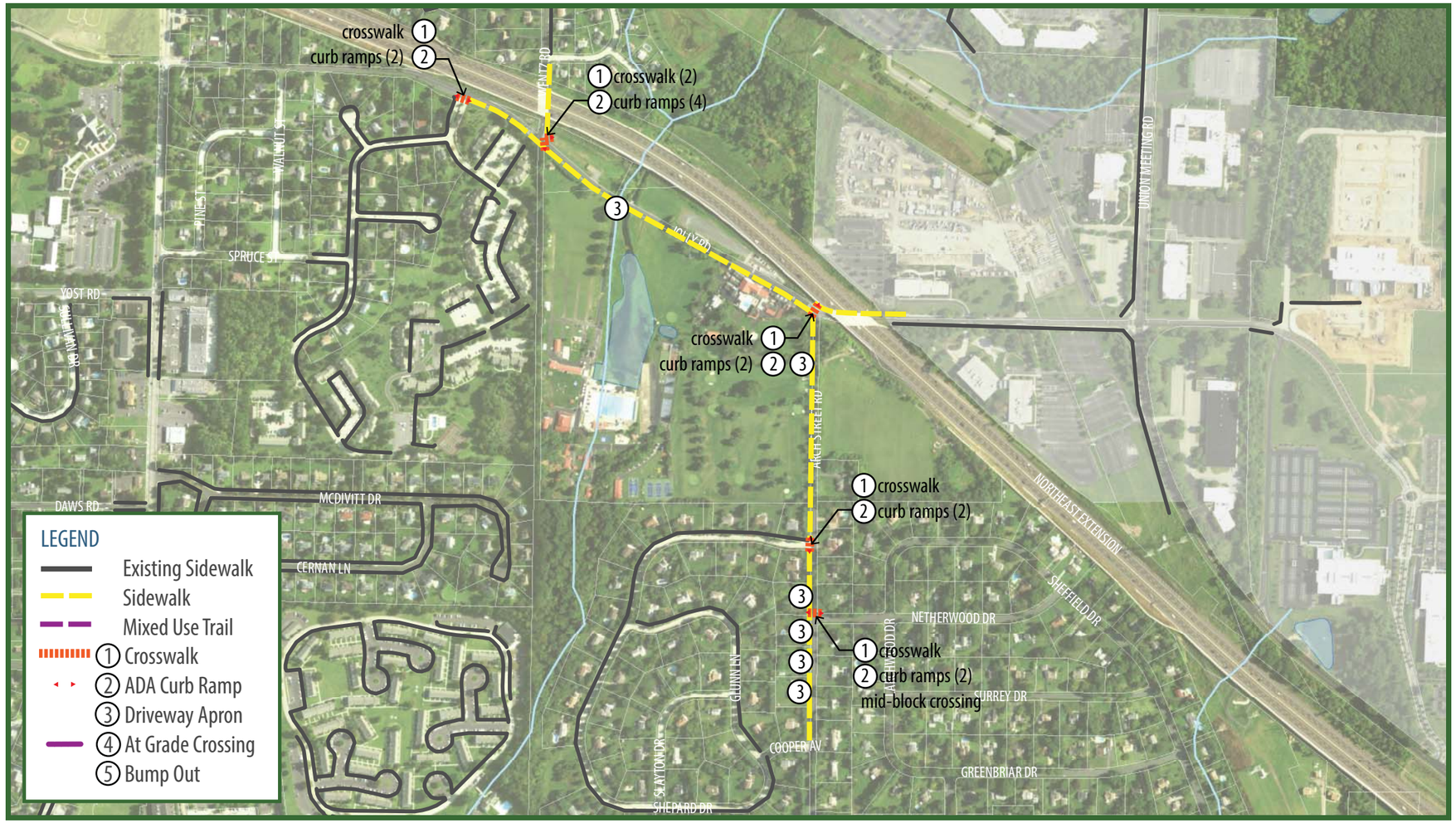
Clearing & Grubbing	$6,508
Sidewalk Excavation	$10,204
Hauling	$7,289
4" Concrete Sidewalk	$63,000
6" No. 2A Subbase	$13,125
Crosswalks	$1,000
Curb Ramps	$6,000
Driveway Aprons	$19,500
Engineering & Design	$18,994
Erosion & Sediment Control	$7,598
Maintenance & Protection of Traffic	$3,799
Mobilization (8% of above)	$10,130
Contingency (15%)	$18,994
ESTIMATED TOTAL	**$186,141**
*Escalation (3% per year)	$5,584

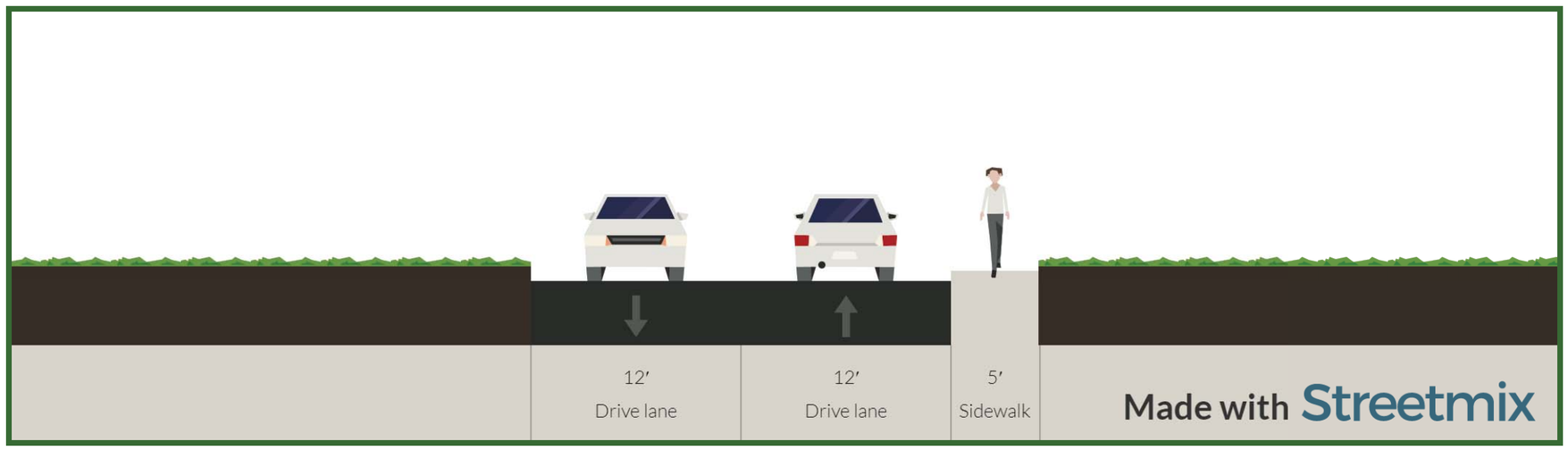
PROJECT MAP (TOP LEFT)

Project #10 connects neighborhoods South of Skippack Pike (SR 73) to the main road. This sidewalk segment completes a North-South connection that goes down to Jolly Road.

WENTZ RUN PARK (BOTTOM LEFT)

Wentz Run Park provides the surrounding area with recreational opportunities. A sidewalk connection along Anvil Lane to Wentz Road will create a walkable connection to the park.





Project 11 - Jolly Road and Arch Street Road / Mermaid Swim and Golf Club

This project connects Jolly Road new sidewalk to the existing sidewalk in the ARK Development down to Arch Street Rd. And it extends Wentz Road existing sidewalk down to Jolly Road where it crosses over at a new crosswalk. Arch Street Road is also proposed to have sidewalk added from Cooper Avenue to Jolly Road along the Mermaid Lake recreational parcel to connect all of the nearby neighborhoods to the park. A midblock crossing, possibly with signal, will be placed at Netherwood Drive to connect that side of the road to the park.

COST ESTIMATE

Clearing & Grubbing	$18,092
Sidewalk Excavation	$28,367
Hauling	$20,262
4" Concrete Sidewalk	$175,133
6" No. 2A Subbase	$36,486
Crosswalks	$3,000
Curb Ramps	$18,000
Driveway Aprons	$9,000
Engineering & Design	$46,377
Erosion & Sediment Control	$18,551
Maintenance & Protection of Traffic	$9,275
Mobilization (8% of above)	$24,734
Contingency (15%)	$46,377
ESTIMATED TOTAL	**$454,495**
*Escalation (3% per year)	$13,635

PROJECT #11 PLAN (TOP LEFT)

Jolly Road connects much of the Township by car but provides little pedestrian accommodation. Adding sidewalk along one side of the road will increase pedestrian connection and safety.

JOLLY ROAD SECTION (BOTTOM LEFT)

Section Along Jolly Road shows the proposed sidewalk. There is not much room in the corridor, so the preferred option of buffer between sidewalk and roadway may not be possible.

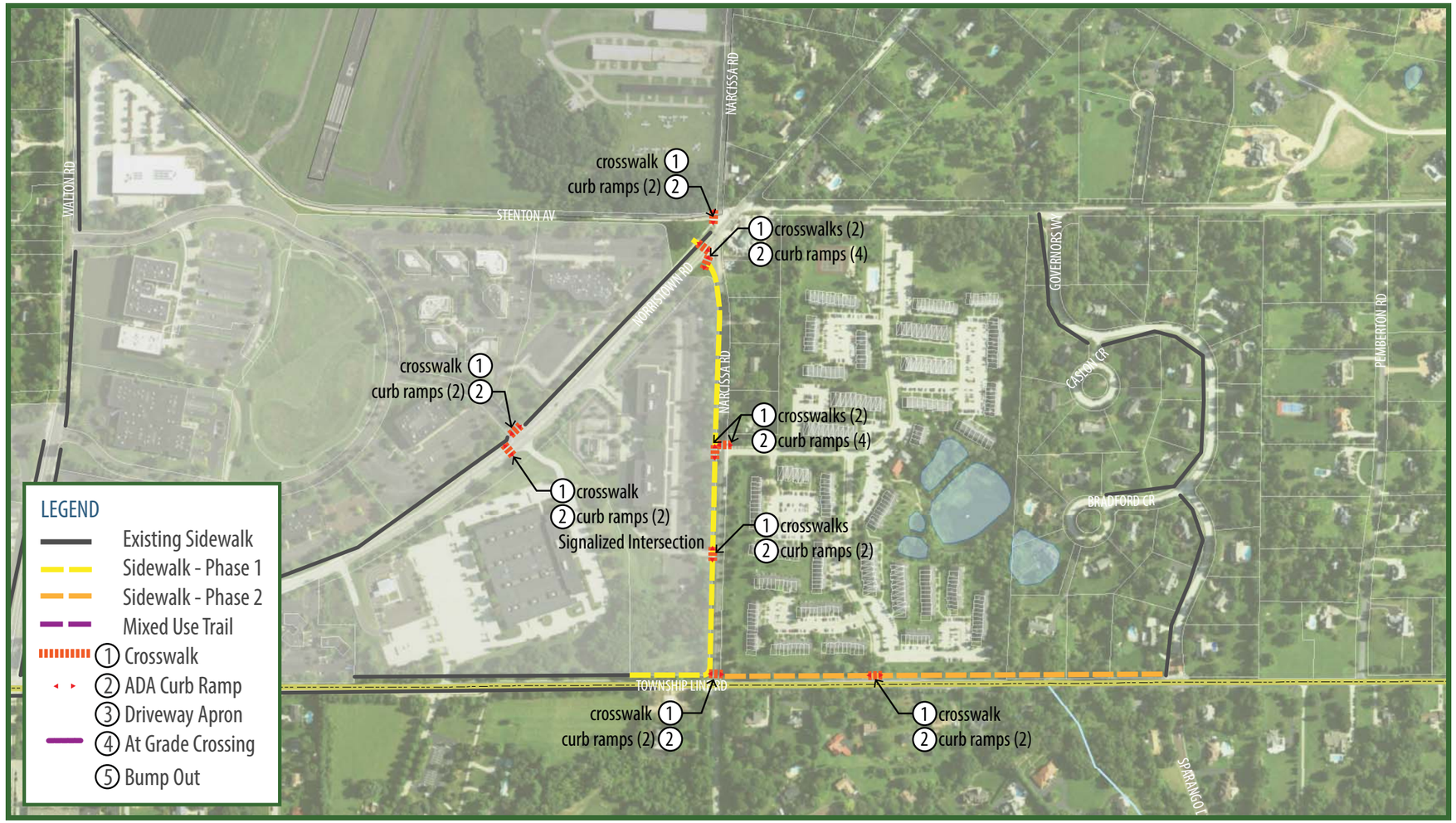



Photo Courtesy of Whitpain Township

Project 12 - Narcissa Road

This project includes adding sidewalk along Township Line Road and Narcissa Road. These additions will connect residential areas to office and commercial uses. Sidewalk is also proposed to connect from Sentry Parkway to the Six Points intersection to provide the connection to the southern limits of the Wings Air Field Trail. A connection to the Narcissa Road Trail will also be made at Six Points. A mid-block crossing with signal is proposed on Norristown Road to connect the existing sidewalks at the bus stops. Since this is a long section of road without a crossing, connecting these transit stops will benefit walkability. However, since it is a busy road, an investigation into adding a traffic signal should be completed. New signal permits crossings are currently under construction to provide additional safety at the Six Points intersection. Improvements at this intersection will allow connection to the Narcissa Road Trail.

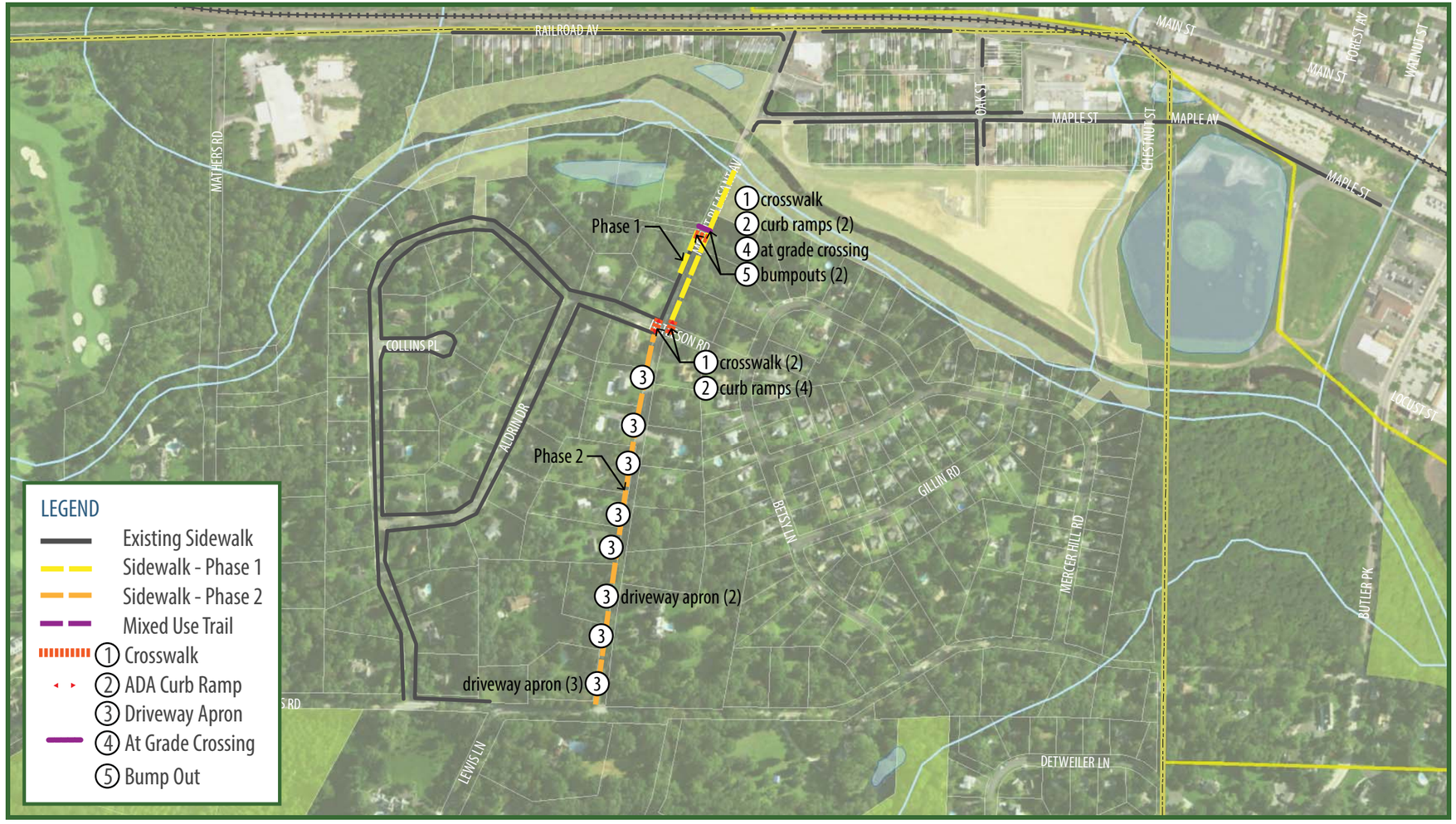
COST ESTIMATE	PHASE 1	PHASE 2
Clearing & Grubbing	$6,446	$5,882
Sidewalk Excavation	$10,107	$9,222
Hauling	$7,219	$6,587
4" Concrete Sidewalk	$62,400	$56,933
6" No. 2A Subbase	$13,000	$11,861
Crosswalks	$4,000	$1,000
Curb Ramps	$24,000	$6,000
Signalization	$50,000	$0
Engineering & Design	$26,576	$14,623
Erosion & Sediment Control	$10,630	$5,849
Maintenance & Protection of Traffic	$5,315	$2,925
Mobilization (8% of above)	$14,174	$7,799
Contingency (15%)	$26,576	$14,623
ESTIMATED TOTAL	**$260,444**	**$143,302**
*Escalation (3% per year)	$7,813	$4,299

PROJECT #12 PLAN (TOP LEFT)

Narcissa Road connects a number of residential neighborhoods and office parks. By adding a connection at Six Points, this project also provides connection to the Narcissa Road Trail.

RENDERING (BOTTOM LEFT)

Narcissa Road Trail is a multi-modal trail that can be tied into at Six Points intersection.



Project 13 - Mt Pleasant Avenue

Mt. Pleasant Avenue provides better connections for Mercer Hill Village and Batleson Road neighborhoods to West Ambler Village and the Borough of Ambler. This project builds upon existing structures including the intersection of Mt. Pleasant Avenue and Batleson Road and the sidewalk on the bridge going over Wissahickon Creek. The bridge sidewalk ties into Maple Street's sidewalks and the sidewalks of Ambler Borough. Additionally, an at grade crossing will be designed for the Wissahickon Trail. This project includes sidewalk, ADA ramps, crosswalks, and an at grade crossing.

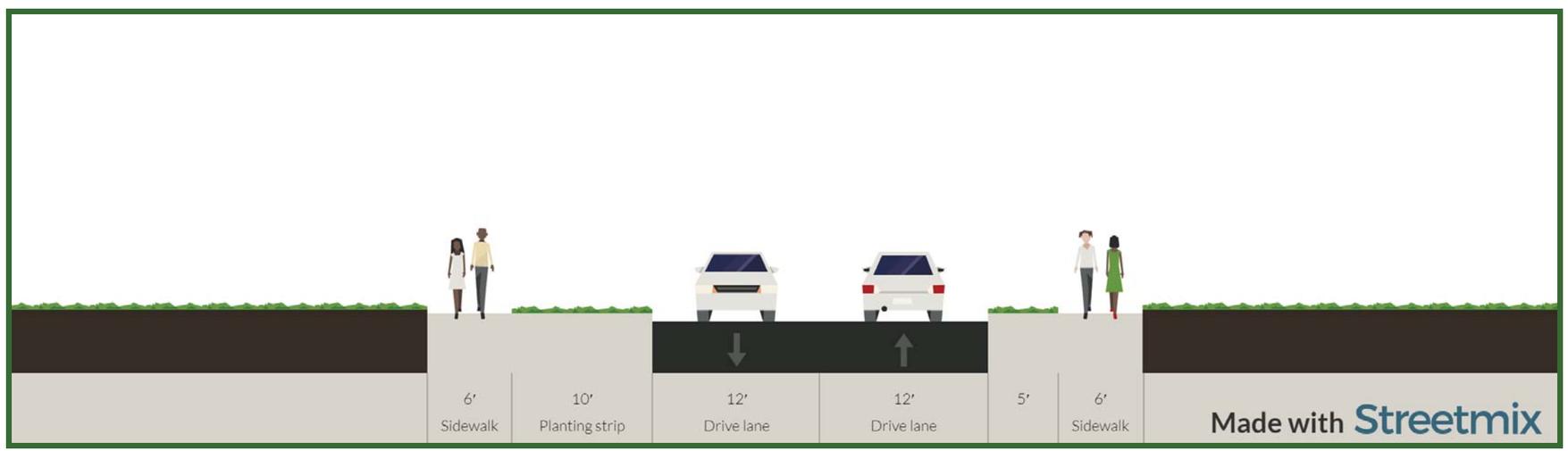
COST ESTIMATE	PHASE 1	PHASE 2
Clearing & Grubbing	$2,734	$5,179
Sidewalk Excavation	$4,287	$8,120
Hauling	$3,062	$5,800
4" Concrete Sidewalk	$26,467	$50,133
6" No. 2A Subbase	$5,514	$10,444
At Grade Crossing	$500	$0
Crosswalk	$1,500	$0
Curb Ramp	$9,000	$0
Driveway Apron	$0	$16,500
Bump Out	$30,000	$0
Signage	$840	$0
Engineering & Design	$12,586	$14,427
Erosion & Sediment Control	$5,034	$5,771
Maintenance & Protection of Traffic	$2,517	$2,885
Mobilization (8% of above)	$6,712	$7,694
Contingency (15%)	$12,586	$14,427
ESTIMATED TOTAL	**$123,338**	**$141,380**
*Escalation (3% per year)	$3,700	$4,241

PROJECT PLAN #13 (TOP LEFT)

Whitpain Township residents would like a safer pedestrian route to Ambler Borough.

VIEW UP MT PLEASANT AVE (BOTTOM LEFT)

There are existing sidewalk portions along Mt. Pleasant Ave. This project will connect them to create a walkable corridor.



Project 14 – Stony Creek Sports Park / N. Wales Road

This project creates a connection for adjacent neighborhoods to the Stony Creek Sports Park. This project recommends the installation of sidewalks on the Whitpain Township side of N. Wales Road to connect Yorkshires of Blue Bell to the sports park. Additionally, this project would connect the residences along Foxcroft Drive to the sports park.

COST ESTIMATE

Clearing & Grubbing	$8,867
Trail Excavation	$13,903
Hauling	$9,930
4" Concrete Sidewalk	$85,833
6" No. 2A Subbase	$17,882
Crosswalks	$1,000
Curb Ramps	$6,000
Engineering & Design	$21,512
Erosion & Sediment Control	$8,605
Maintenance & Protection of Traffic	$4,302
Mobilization (8% of above)	$11,473
Contingency (15%)	$21,512
ESTIMATED TOTAL	**$210,821**
*Escalation (3% per year)	$6,325

PROJECT #14 PLAN (TOP LEFT)

Project #14 focuses on connecting nearby neighborhoods to the Stony Creek Sports Park. These neighborhoods have internal sidewalks. By providing a sidewalk along N. Wales Road, a walkable connection is made to the park.

PROJECT SECTION (BOTTOM LEFT)

Sidewalk will be designed and installed on the Whitpain side of N. Wales Road. There is existing sidewalk on the Worcester Township side.


Image from Google Maps

Project 15 – Skippack Pike (SR 73)

Skippack Pike (SR73) is one of the major east-west connections in Whitpain for both cars and bicycles. The existing road has wide shoulders that will be turned into sidewalks on at least one side and will feature buffers and bike lanes if possible. This is the final segment of Skippack Pike to complete the walkability of the corridor within the Township and connects Blue Bell to Broad Axe.

COST ESTIMATE

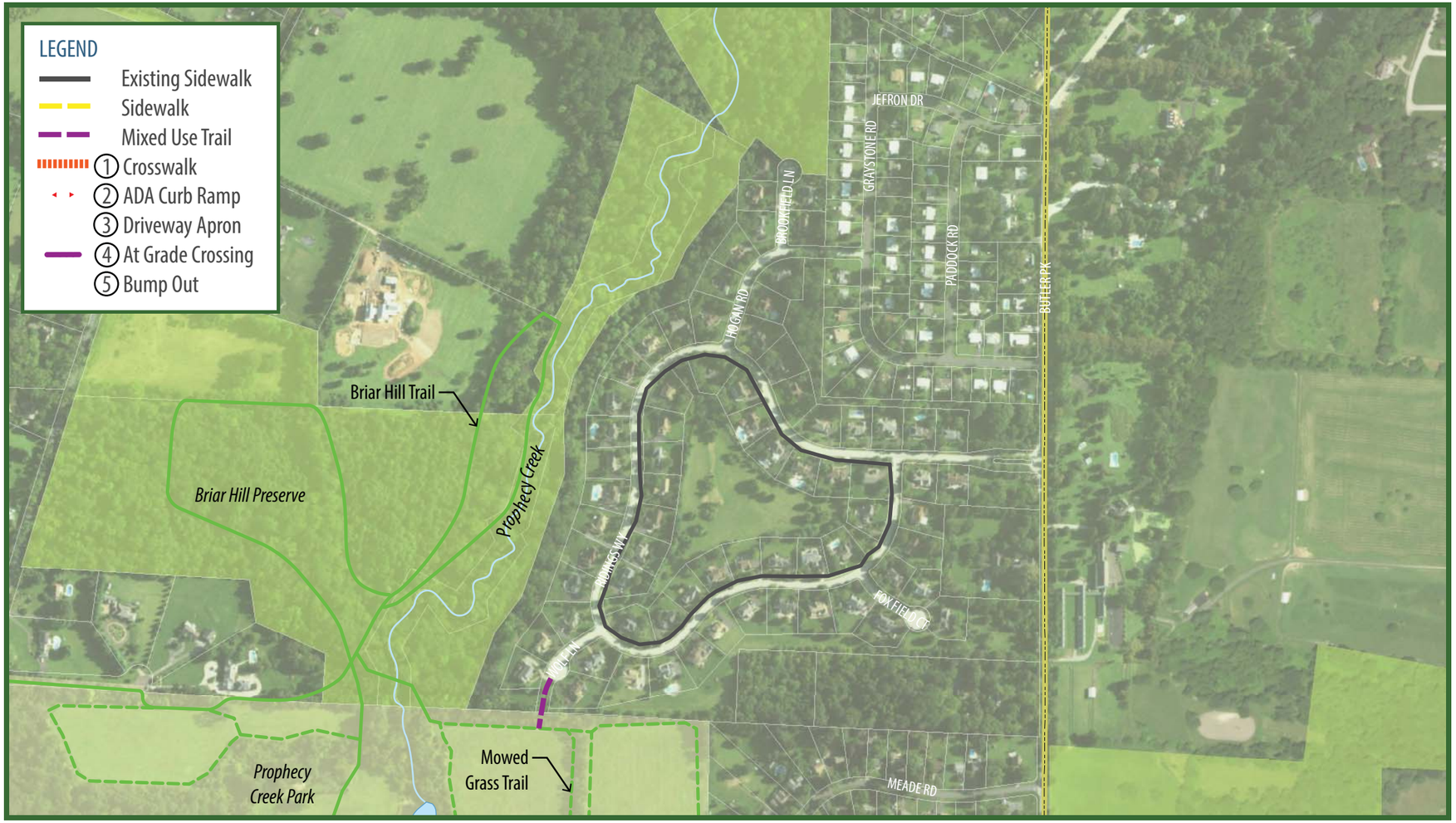
Clearing & Grubbing	$3,781
Sidewalk Excavation	$5,928
Hauling	$4,234
4" Concrete Sidewalk	$36,600
6" No. 2A Subbase	$7,625
Crosswalks	$1,000
Curb Ramps	$6,000
Engineering & Design	$9,775
Erosion & Sediment Control	$3,910
Maintenance & Protection of Traffic	$1,955
Mobilization (8% of above)	$5,213
Contingency (15%)	$9,775
ESTIMATED TOTAL	**$95,798**
*Escalation (3% per year)	$2,874

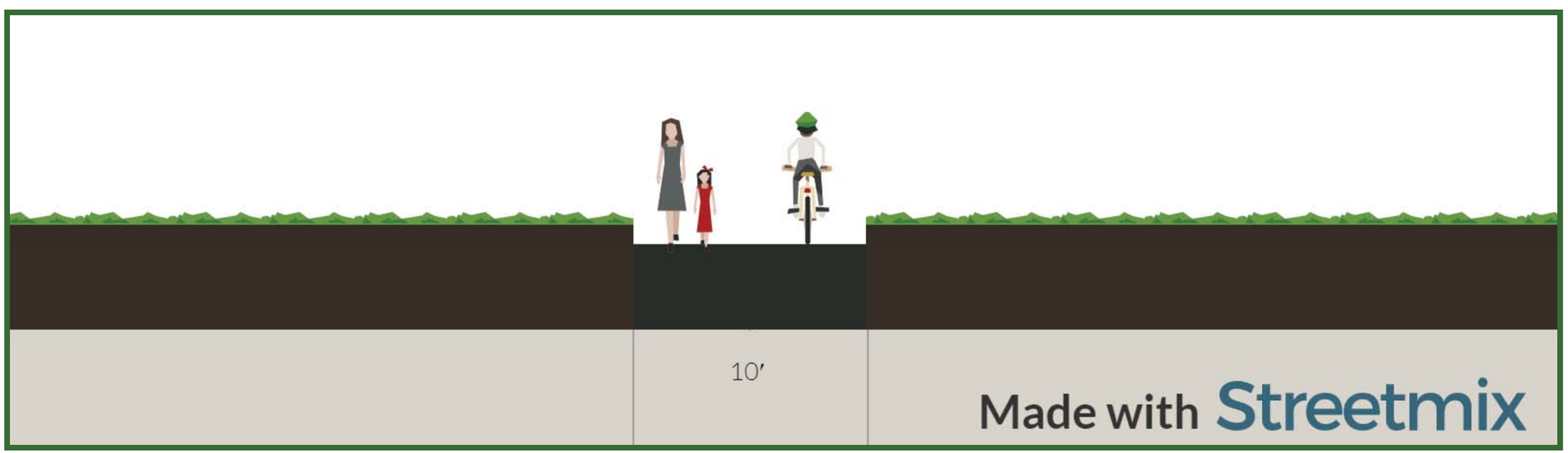
PROJECT #15 PLAN (TOP LEFT)

Project #15 adds the final section of sidewalk along Skippack Pike (SR 73). This is the final piece in creating a east-west pedestrian corridor.

EXISTING CONDITIONS (BOTTOM LEFT)

Sidewalk connection would promote pedestrian movement in this area. As it is, Skippack Pike (SR 73) in this area there very little space for safe pedestrian movement.





Project 16 - Prophecy Creek Park Connections

This walkability improvement project creates neighborhood connections to nature preserves, open spaces, and park areas along Prophecy Creek. The Ridings at Whitpain, Graystone Farms, and Mercer Hill Village Annex developments will have access to Prophecy Creek by proposed trail connections of Wolf Lane in storm/sanitary sewer easements leading into Briar Hill existing trail system. This connection will be a shared use trail at a minimum of 8' wide but preferably 10'.

COST ESTIMATE

Clearing & Grubbing	$1,439
Trail Excavation	$2,257
Hauling	$1,612
3" - Asphalt	$7,250
6" - No. 2A Subbase	$2,560
Geotextile	$697
Signage	$420
Engineering & Design	$2,435
Erosion & Sediment Control	$974
Maintenance & Protection of Traffic	$487
Mobilization (8% of above)	$1,299
Contingency (15%)	$2,435
ESTIMATED TOTAL	**$23,865**
*Escalation (3% per year)	$716

PROJECT #16 PLAN (TOP LEFT)

Project #16 focuses on connecting neighborhoods to existing trails. This will allow residents more access to open and recreational spaces within the Township.

PROJECT SECTION (BOTTOM LEFT)

Shared-use paths should be at least 10 feet wide. However, if that is not possible, 8 feet is acceptable.

PROJECT IMPLEMENTATION

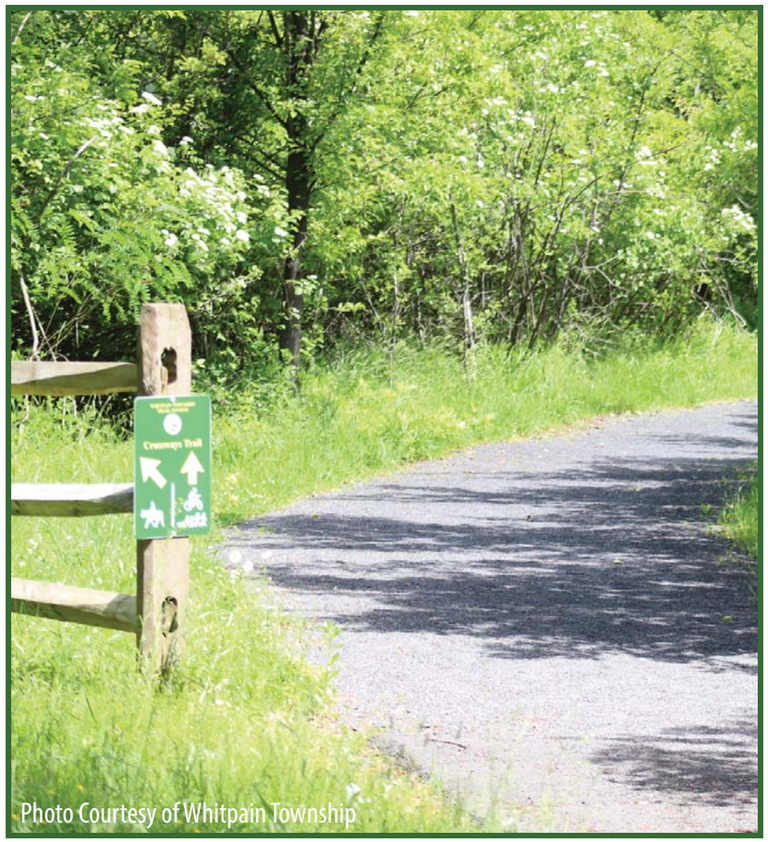


Photo Courtesy of Whitpain Township

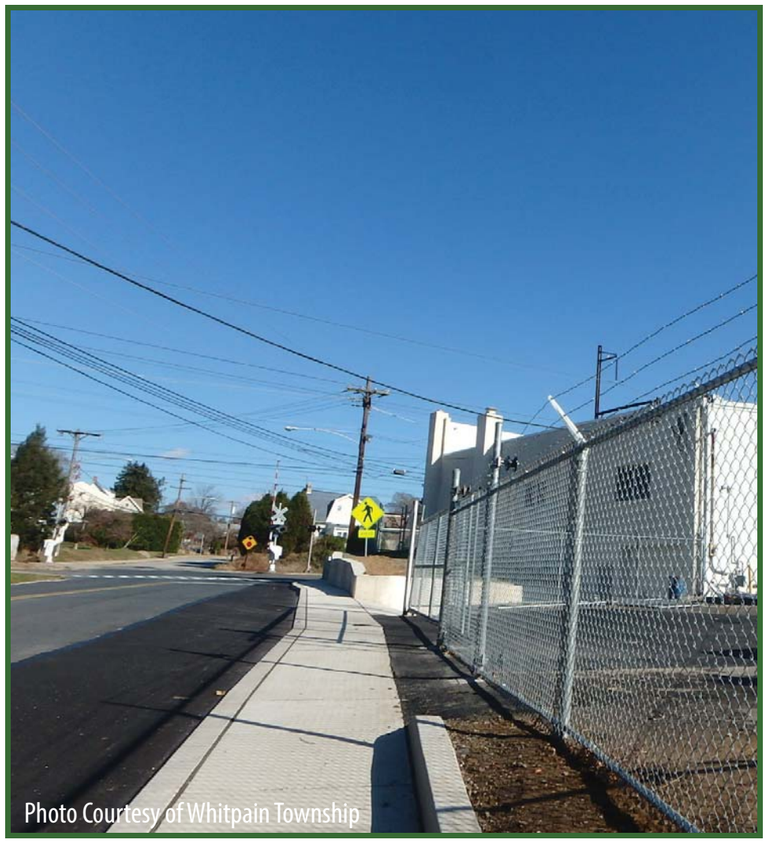


Photo Courtesy of Whitpain Township


Photo Courtesy of Whitpain Township

PROJECT IMPLEMENTATION & FUNDING

As the Township moves forward, selecting which recommended project to construct, funding options will become a primary concern. There are a number of public and private grants available.

The Township General Fund serves as the primary funding source for improvements to sidewalks, trails, and multi-modal transportation infrastructure. Fortunately, additional grants are available including:

- DCED Multimodal Transportation Fund (MTF)
- DCED Greenways, Trails and Recreation Program
- PennDOT Transportation Alternatives Program (TAP)
- PennDOT BOMO, ARLE, GLP, and PA's SHSP
- DVRPC Congestion, Mitigation, Air Quality (CMAQ)
- DCNR Community Conservation Partnerships Program (C2P2)
- Safe Routes to School Program (SRTS)
- Transportation and Community Development Initiative (TCDI)
- The Keystone Fund, helped fund 300+ Trails and Paths; https://keystonefund.org/recreation/

MULTIMODAL TRANSPORTATION ADDITIONAL FUNDING OPPORTUNITIES

Multimodal Transportation Fund – Act 89 authorizes state funding through the Multimodal Transportation Fund for aviation, freight and passenger rail, public transit, ports and waterways, highway/bridge, and bike and pedestrian projects. The program provides financial assistance to municipalities, councils of governments, businesses, economic development organizations, public transportation agencies, rail/freight and ports. Eligible projects are those that coordinate local land use with transportation assets to enhance existing communities; projects that relate to streetscape, lighting, sidewalk enhancement, and pedestrian safety; projects that improve connectivity or utilization of existing transportation assets; and projects related to transit-oriented development. Local match from eligible sources in the amount of 30 percent of the grant award must be provided in order to receive funding. Grants are available for projects with a total cost of $100,000 or more. Grants will not exceed $3 million. Application Deadline – Application deadlines vary and are available on the PennDOT website Contact – David J. Bratina, 717-705-1230. Email: djbratina@pa.gov

Pennsylvania Transportation Alternatives Program (TAP) – The Pennsylvania Transportation Alternatives Program provides funding for programs and projects defined as transportation alternatives including bicycle and pedestrian facilities, safe routes to schools, and trail projects that serve a transportation purpose such as trails that connect to schools, parks or other public areas. There is an 80/20 cost share for shovel-ready projects, and PennDOT will pay for 100 percent of right-of-way acquisition costs. Applicants pay for any pre-construction costs but these upfront costs may be eligible for Department of Conservation and Natural Resource (DCNR) funding. PennDOT's website provides program guidance, the eligibility determination form and an application. For questions on eligibility for DCNR funding contact your DCNR Bureau of Recreation and Conservation regional advisor.

Automated Red Light Enforcement (ARLE) Funding Program – In October 2010, PennDOT established as identified within the Pennsylvania Vehicle Code [75 Pa.C.S.§§3116(1)(2), 3117(m)(2), and 3117(m)(2.1)], an Enhancement Grant Program also known as the ARLE Funding Program. Details regarding the ARLE Funding Program can be found in the Pennsylvania Code (Title 67; Chapter 233; Transportation Enhancement Grants from Automated Red Light Enforcement System Revenues). The ARLE Funding Program is focused to low-cost safety and mobility improvements. May – Pennsylvania Bulletin announcement specifying the acceptance of applications between June 1 and June 30. Applicants are required to obtain the latest electronic grant application and fill out appropriately. Additional ARLE Funding Program information can be found at: http://www.dot.state.pa.us/signals Program Email Address – RA-PDSIGNALFUNDING@pa.gov Contact – Daniel Farley, 717-783-0333. Email: dfarley@pa.gov

Green Light-Go (GLG) Funding Program – The Green Light-Go: Pennsylvania's Municipal Signal Partnership Program (Green Light-Go Program) is designed to improve safety and mobility by reducing congestion and improving efficiency of existing traffic signals on highways. The program is a competitive application and reimbursement grant program in which projects are managed by applicants unless otherwise determined by the department. Applications by municipalities, counties or planning organizations for the GLG Funding Program requiring a 20 percent match using regional, state, federal, municipal or private funds can be used except for those associated with the Transportation Improvement Program (TIP). Annual program announced in the Pennsylvania Bulletin specifying the acceptance of applications. Applicants are required to obtain the latest electronic grant application and fill out appropriately.

Greenways, Trails & Recreation Program (GTRP) – Act 13 of 2012 established the Marcellus Legacy Fund and allocates funds to the CFA for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, river conservation, parks and beautification projects using the GTRP.

CURRENT WHITPAIN SPONSORS

The following private associations and businesses currently sponsor Whitpain Township events:

- LivelyArts Series - Montgomery County Community College
- Ardent Credit Union
- Chambers Associates, Inc.
- Whitpain Township Parks & Recreation
- Montgomery County Community College
- Whitpain Police Association
- PECO
- Professional Data Solutions
- Blue Bell Country Club
- Patitucci Wealth Management
- Chick-fil-A
- Sesame Rockwood Camps
- MidAtlantic Construction
- Univest
- Republic Services
- Weichert Realtors
- Baird
- Foley Hillsley Group
- McCaffrey's Food Markets
- P.J. Whelihan's Pub and Restaurant
- American Heritage Federal Credit Union
- McMahon Transportation Engineers & Planners
- TD Bank
- Rothman Institute
- Citadel
- GSI Concrete
- Anthony's Coal Fired Pizza

#	PROJECT DESCRIPTION	APPROX. DISTANCE	POTENTIAL FUNDING SOURCES	CONSTRUCTION COST	DESIGN COST	TOTAL COST
1	Safe Routes to School - Blue Bell Elementary School / Blue Bell Village Connections	7,704' 1.46 (mi)	Safe Routes to School Program (SRTS), CVS Caremark Community Grants, National Recreation and Park Association (NRPA), Grants.gov, Deutsche Bank Americas Foundation	$457,134	$68,570	$671,987
2	Safe Routes to School - Shady Grove Elementary School / Broad Axe Village Connections	7,938' 1.50 (mi)	Safe Routes to School Program (SRTS), CVS Caremark Community Grants, Grants.gov, Pennsylvania Department of Environmental Protection (DEP) – Environmental Education	$547,730	$82,160	$805,164
3	Skippack Pike	6,499' 1.23 (mi)	PennDOT Transportation Alternatives (TAP), Grants.gov, Pennsylvania Infrastructure Investment Authority (PENNVEST); Green Infrastructure Projects	$383,484	$57,523	$563,721
4	Township Line Road Connection	913' 0.17 (mi)	Grants.gov, DCED Multimodal Transportation Fund (MTF), PennDOT Transportation Alternatives Program (TAP), Multimodal Transportation Fund - Act 89	$49,355	$7,403	$72,552
5	Centre Square / Skippack Pike (SR 73)	7,307' 1.38 (mi)	Pennsylvania Department of Conversation and Natural Resources (DCNR) –TreeVitalize, Grants.gov, Pennsylvania Infrastructure Investment Authority (PENNVEST); Green Infrastructure Projects	$468,102	$70,215	$688,110
6	Cathcart Road and Morris Road Intersection	436' 0.08 (mi)	Greenways, Trails & Recreation Program (GTRP), DCED Multimodal Transportation Fund (MTF), PennDOT Transportation Alternatives Program (TAP), Multimodal Transportation Fund - Act 89	$24,598	$3,690	$36,159
7	Butler Pike / Broad Axe Village Connection	3,860' 0.73 (mi)	Pennsylvania Infrastructure Investment Authority (PENNVEST); Green Infrastructure Projects, Grants.gov, PennDOT Transportation Alternatives Program (TAP)	$294,591	$44,189	$433,048
8	School Road / Blue Bell Elementary Safe Routes to School	4,843' 0.92 (mi)	Safe Routes to School Program (SRTS), CVS Caremark Community Grants, National Recreation and Park Association (NRPA), Grants.gov, Deutsche Bank Americas Foundation	$332,407	$49,861	$488,638
9	Yost Road / Safe Routes to School	2,575' 0.49 (mi)	Safe Routes to School Program (SRTS), CVS Caremark Community Grants, Grants.gov, National Recreation and Park Association (NRPA), Pennsylvania Department of Conversation and Natural Resources (DCNR) – Community Conservation Partnerships Program (C2P2), Pennsylvania Department of Environmental Protection (DEP) – Environmental Education	$154,915	$23,237	$227,726
10	Wentz Run Park / Wentz Road	2,220' 0.42 (mi)	National Recreation and Park Association (NRPA), Pennsylvania Department of Conversation and Natural Resources (DCNR) – Community Conservation Partnerships Program, Greenways, Trails & Recreation Program (GTRP)	$126,626	$18,994	$186,141
11	Jolly Road and Arch Street Road / Mermaid Swim and Golf Club	5,254' 1.00 (mi)	PennDOT Transportation Alternatives Program (TAP), Grants.gov, DCED Multimodal Transportation Fund (MTF)	$309,180	$46,377	$454,495
12	Narcissa Road	3,580' 0.68 (mi)	PennDOT Transportation Alternatives Program (TAP), Grants.gov, DCED Multimodal Transportation Fund (MTF), Multimodal Transportation Fund - Act 89	$274,657	$41,199	$403,746
	Phase 1	1,872'		$177,173	$26,576	$260,444
	Phase 2	1,708'		$97,484	$14,623	$143,302
13	Mt. Pleasant Avenue	2,298' 0.44 (mi)	National Recreation and Park Association (NRPA), Grants.gov, Recreational Trails Program (administered by PA DCNR through the Community Conservation Partnerships Program C2P2), PennDOT Transportation Alternatives Program (TAP)	$180,081	$27,012	$264,719
	Phase 1	794'		$83,904	$12,586	$123,338
	Phase 2	1,504'		$96,177	$14,427	$141,380
14	Stony Creek Sports Park / N. Wales Road	2,575' 0.49 (mi)	National Recreation and Park Association (NRPA), Pennsylvania Department of Conversation and Natural Resources (DCNR) – Community Conservation Partnerships	$143,415	$21,512	$210,821
15	Skippack Pike (SR 73)	1,098' 0.21 (mi)	PennDOT Transportation Alternatives Program (TAP), Grants.gov, Pennsylvania Infrastructure Investment Authority (PENNVEST); Green Infrastructure Projects	$65,169	$9,775	$95,798
16	Prophecy Creek Park Connections	620' 0.12 (mi)	National Recreation and Park Association (NRPA), Grants.gov, Pennsylvania Department of Conversation and Natural Resources (DCNR) – Community Conservation Partnerships Program (C2P2)	$97,047	$14,557	$142,659
	Phase 1	209'		$16,235	$2,435	$23,865
	Phase 2	411'		$80,812	$12,122	$118,793
			TOTAL COST	$2,658,710	$398,807	$3,908,304

APPENDICES

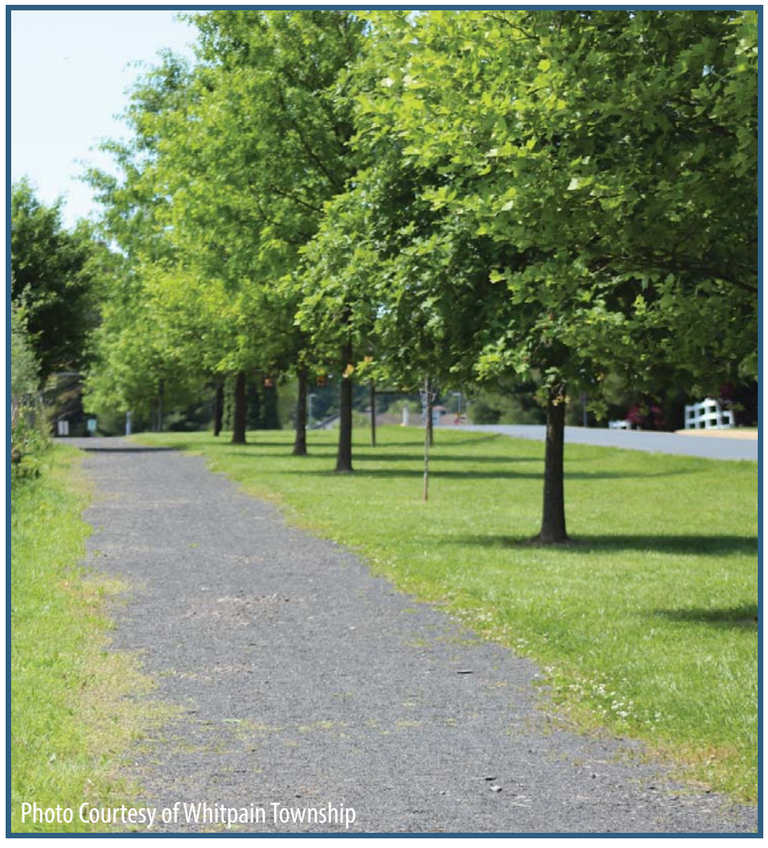


Photo Courtesy of Whitpain Township

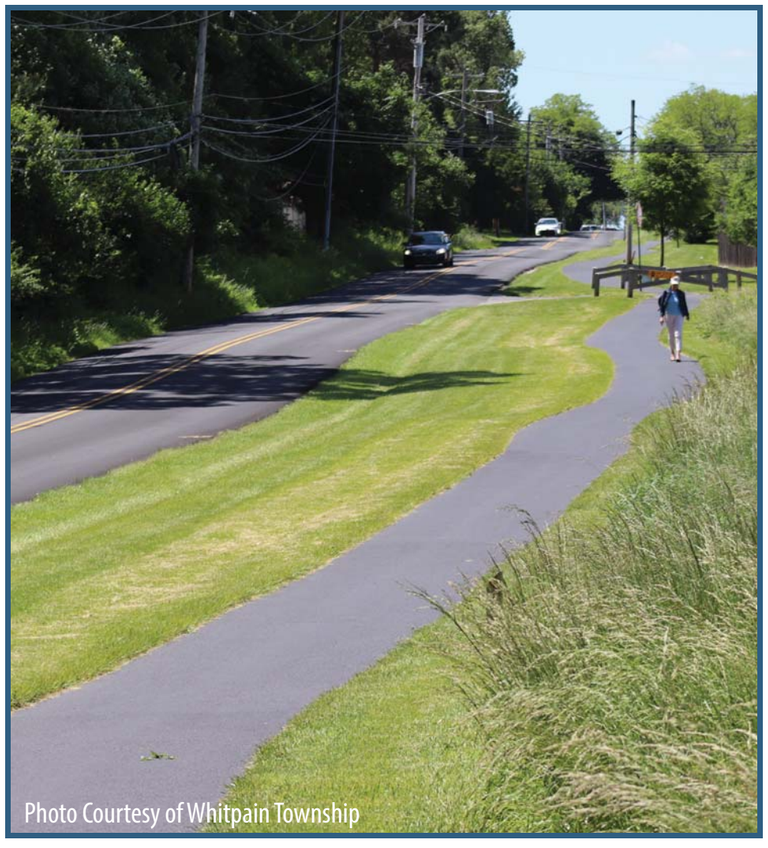


Photo Courtesy of Whitpain Township

Photo Courtesy of Whitpain Township

APPENDIX A:
PUBLIC MEETING AGENDA, DISPLAYS, COMMENTS

APPENDIX A: PUBLIC MEETING AGENDA

What are your concerns/issues as they relate to Walkability in Whitpain Township?

- Safety
- Connectivity
- Roadway crossings
- Surface issues
- Blockages
- Etc.

Which destinations do you/your family like to visit via walking/hiking/biking?

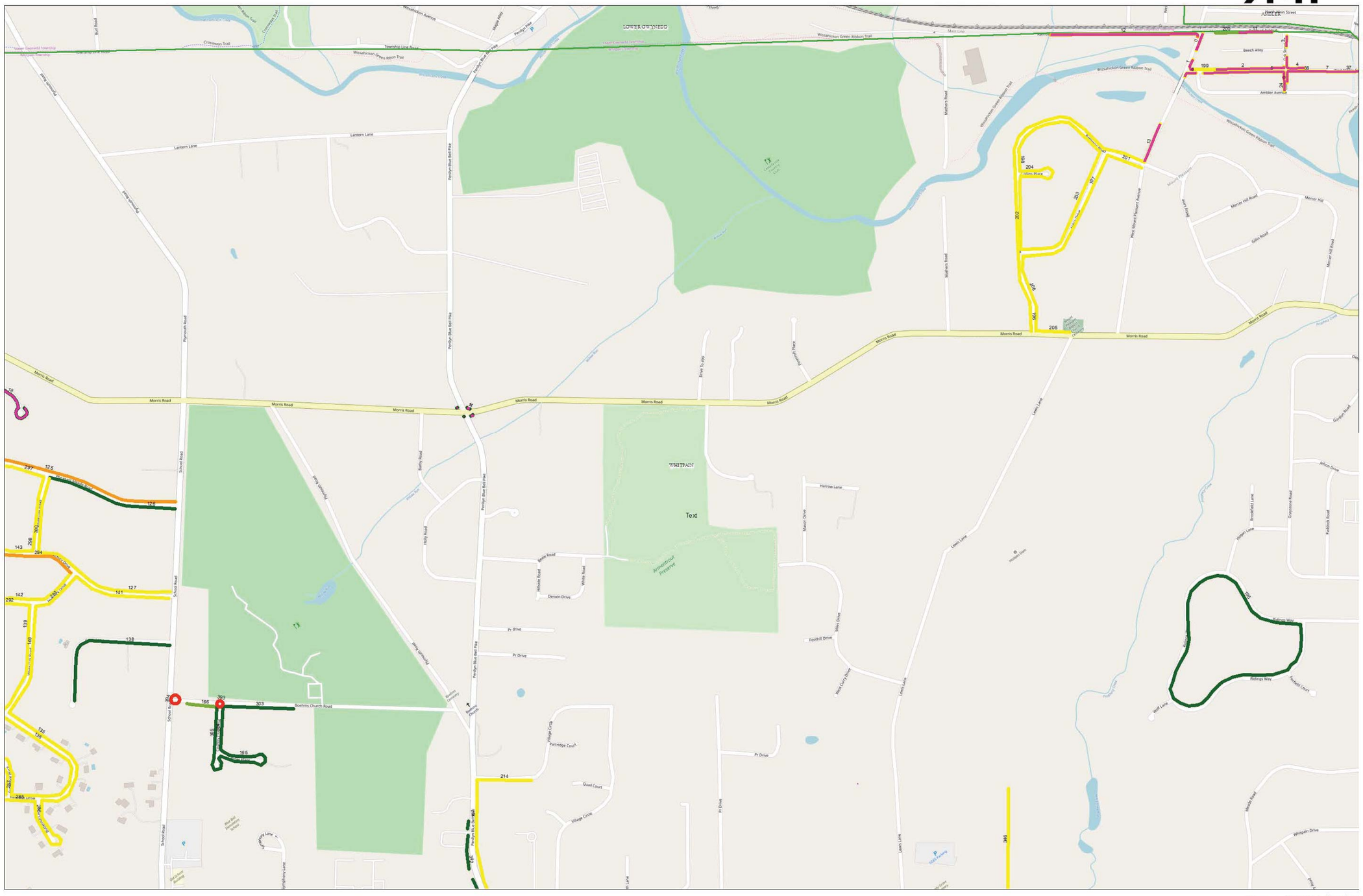
What areas do you see for opportunities to add walking features (i.e. sidewalks and trails)?

What areas/routes do you typically traverse in the Township via walking/biking/hiking?

AMT

NORTHEAST QUADRANT

Whitpain Township Existing Condition



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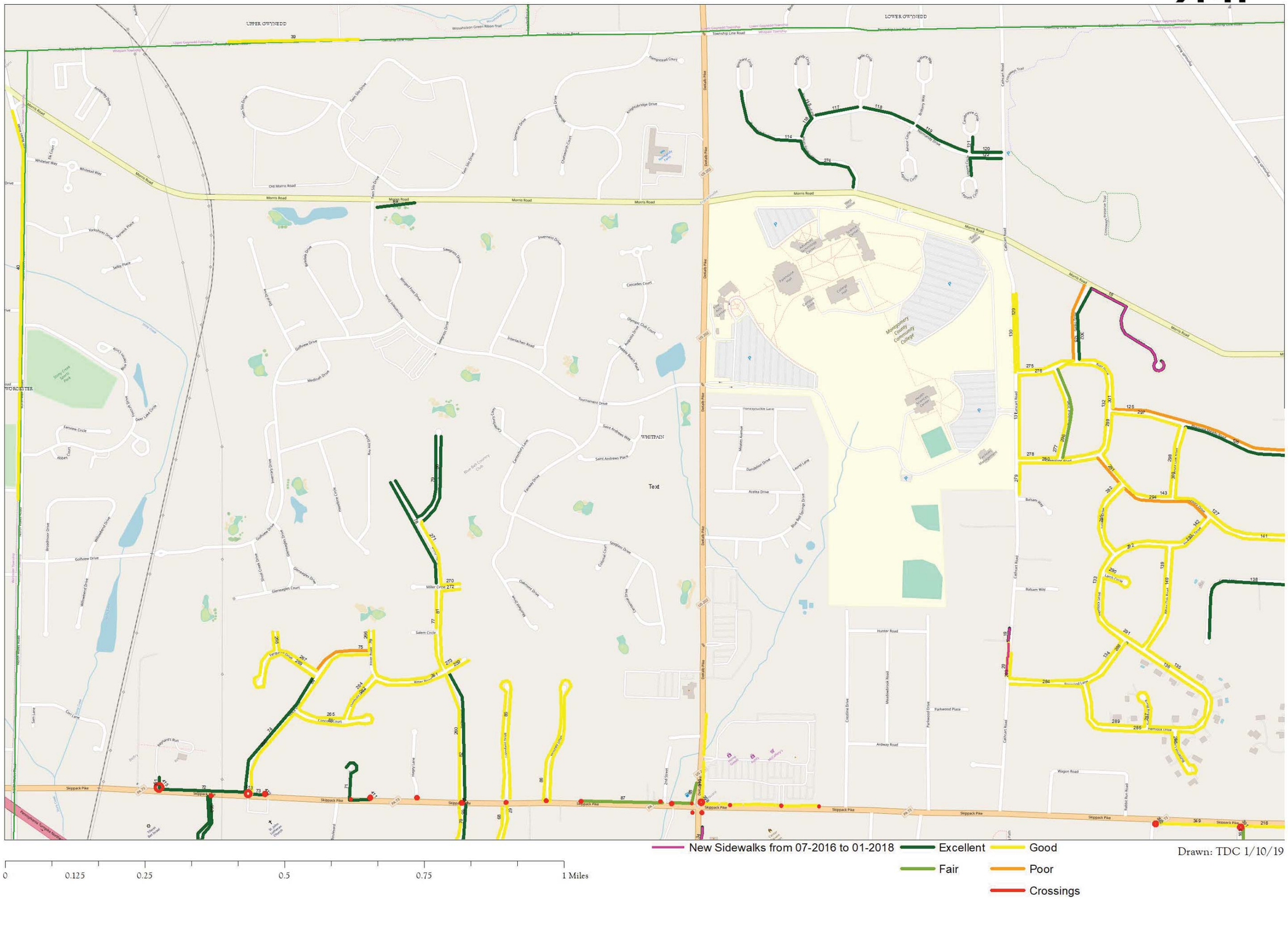
AMT

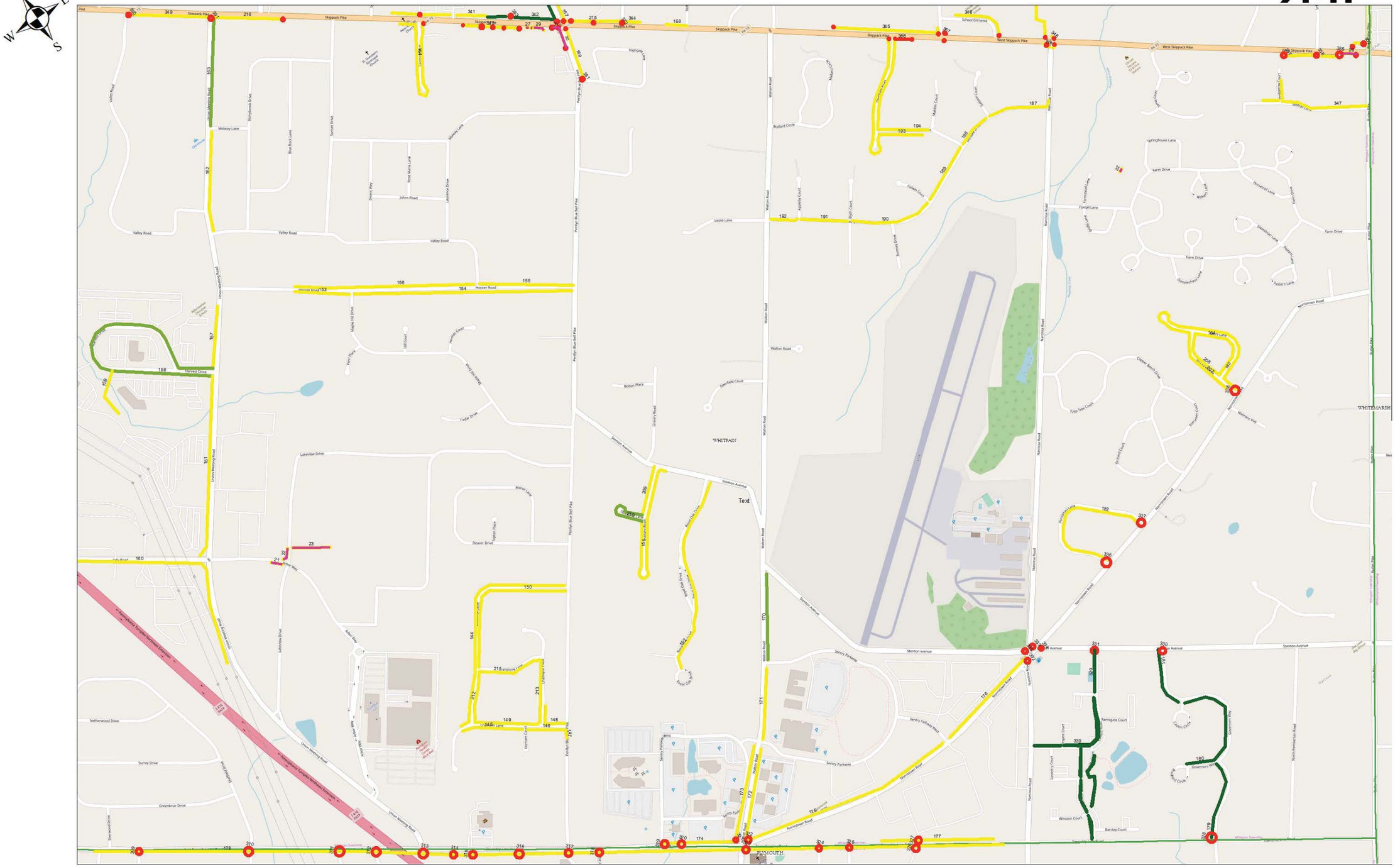
NORTHWEST QUADRANT

Whitpain Township Existing Condition



SOUTHEAST QUADRANT

Whitpain Township Existing Condition



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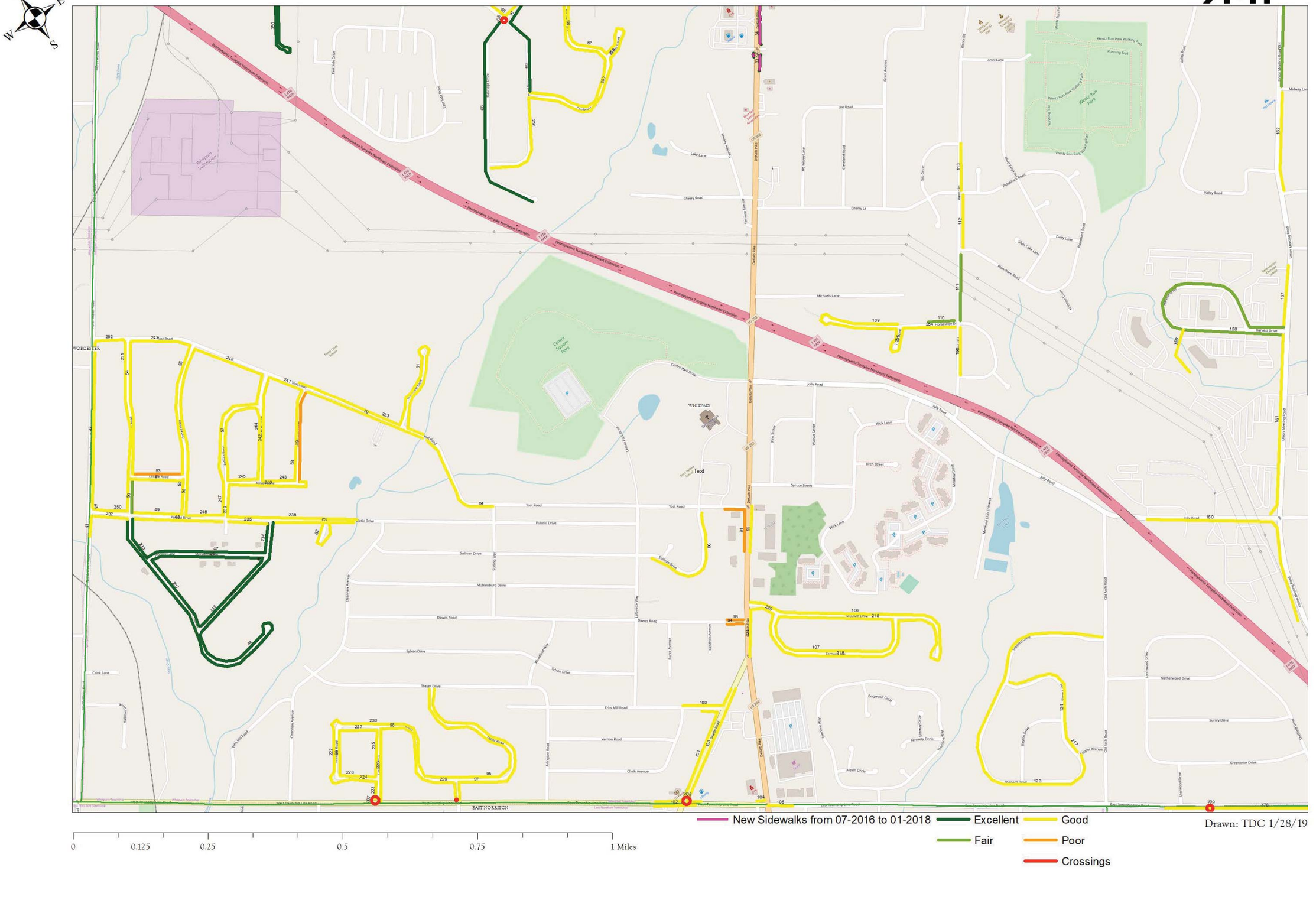
SOUTHWEST QUADRANT

Whitpain Township Existing Condition



SOUTHEAST

- Connect Union Meeting Road to Wertz Park via Core Connector Trail
- Enforce dog rules via lease law
- Sidewalks along PA 73 – Elementary Schools, Parks, Commercial Areas (Wentz/Prophecy)
- Sidewalk/Trail access to Ambler Borough
- Crossing at Stenton Avenue
- Neighborhoods South of Skippack to Library
- Access to Center Square
- School sidewalk system
- PA 73 sidewalk facilities
- PA 73 to Ambler Borough Connectivity
- Prefer Trail on Eastern side of PA 73 as it leaves Broad Ave. Village... (Shady Grove side)
- Keep up Great maintenance on Narcissus Trail! Use it a lot
- Interest in Bike trail into Ambler Borough
- Treat Poison Ivy along Narcissus Trail

NORTHEAST

- Sidewalks on Butler Pike
- Blue Bell Elementary – walking access on PA 73
- Shady Grove Elementary
- Trail from PA 73 into Ambler Borough
- Bridge over Prophecy Creek
- Connect Ridings Way to Prophecy Creek Park
- Connect Prophecy Creek Park along Lewis Lane to Camp Wood Trail
- Mt. Pleasant – Batleson to Township line
- Green Ribbon Trail – gravel surface/maintenance
- Gap in Armentrout Trail @ Mason Drive/Permission Only
- Need Access to Ambler Borough
- Sidewalk along Penlyn-Blue Bell Pike
- Connection across Lewis Lane
- Trail maintenance Plan
- Flood Plain influence on trails

SOUTHWEST

- Connectivity between Center Square to Saint Helenas
- Cherry Lane Connection to Wertz Run Road US 202 & PA 73
- Buffer Zones on new Southwest Segments
- Prioritize sidewalks on major routes US 202 & PA 73
- Typical sections with street trees
- Sidewalks not needed on all streets
- Erb's Mill Road @ Chalk/Swede – tight cartway/unsafe
- Yost Road – Connect Stirling to US 202
- Security & Lightning on all Proposed trail system
- Connect Parks to all Neighborhoods
- PA 202 to be widening – keep a buffer for a trail
- Lines too angular – multi use bike lanes
- Path around Manor House needs a bridge to cross drainage/wet areas
- Eliminate sidewalk gaps

NORTHWEST

- Sidewalk along Skippack from Stony Brook to Centre Square Commons
- No sidewalks on Major Roads PA 73
- No pedestrian access to Center Square from nearby neighborhoods – safety concern
- Non-Contiguous sidewalks along PA 73
- US 202 widening including sidewalk east side and bike lane
- Connect College to train station

WHAT ARE CONCERN/ISSUES RELATING TO WALKABILITY IN WHITPAIN TOWNSHIP?

SAFETY

- The Township has many older roads with no shoulders, making safety a major concern. Many roads cannot be used by pedestrians or are difficult to use, even crossing those are dangerous. Examples are Morris Road, Lewis Lane, and MT. Pleasant Road.
- Many of the existing walkways do not connect, so it is possible to have a nice stroll, but often not to reach a destination such as Ambler Borough, the train station, or a store.
- The High School, Middle school, and one Elementary School are in lower Gwynedd Township. If students walk home after school, once they reach Whitpain Township there are no sidewalks or trails for them to use. Some students walk on the road going to Mt. Pleasant, which is not safe given the speed of the cars and lack of shoulders on the road.
- Stenton Avenue from Granary Road-It's difficult to cross the street here visibility issues. It's also impossible to safely walk/bike along Stenton Ave here.
- Penllyn Pike from Township Line Road near Post office up to the trail near the Middle School could use a safety path for walkers and bikes. If the road was widened and lanes shifted there could be room for the path.
- A more secure means of access to Ambler Borough along Morris and continuing to Butler Pike.
- Enforcement of speed limits in residential areas would make walking more safe.
- No pedestrian access signs were recently posted at the intersection of Butler Pike and Morris Road. There are points of interest(businesses, SEPTA rail station, ect.) along Butler Pike.
- It would be great to walk/ride bikes into Ambler Borough, when you get close to Morris Road there is little to no shoulder and a blind curve coming from Ambler Borough.

DESTINATIONS

- My neighborhood is less than a mile from Ambler Borough, a town with restaurants, a movie theater, a food store and hardware store. It is difficult to walk into town. The Green Ribbon Trail runs along the creek and allows access to Butler Pike, it is often muddy, and full of poison ivy near the roads. Lower Gwyneed Township has a great system of off-road trails which leed all the way to SpringHouse. It would be nice to connect those trails.
- Like to get to Wentz Run and Prophecy Creek. WaWa and Dunkin Donuts.
- We have used the Green Ribbon Trail and Schulkyill River Trail to walk and run to Conshohocken/Mount Airy/Masnyunk/Phildelphia often.
- We typically walk into Amber Borough.
- We travel outside the township for biking-roads around our house are not safe for biking and the Green Ribbon trail does not permit biking.
- Better access for walkers/bikers for train commuters.

OPPORTUNITIES

- Trail or sidewalks along Butler Pike from Broad Axe Village into Ambler Borough.
- Trail connecting Broad Axe Village to Prophecy Creek Park.
- Improve/Maintain the Green Ribbon Trail behind Mercer Hill Village
- Construct a sidewalk along Morris Road between Mercer Hill Road and Butler Pike.
- Construct a sidewalk along Butler Pike from Morris Road to Ambler Borough's sidewalk.
- Complete the sidewalk along Mt. Pleasant Ave from Battleston to Ambler Borough.
- Connect the Green Ribbon Trail to Prophecy Creek.
- There is a short sidewalk on Mt. Pleasant near the train tracks. It would be wonderful to extend it down Mt. Pleasant.
- Completing a path on Penllyn Pike would give access to Lower Gywneed trail system and to schools/fields. This could complement a sidewalk the way along Skippack that would get you to the new Centre Square shops.
- A safe route to Ambler Borough. Butler Pike is narrow at Morris.
- Connect to Green Ribbon Trail from Narcissa Road Trail. Currently ends in Prophecy Creek Park.
- Connecting down to Plymouth Township along Walton Road would be nice. The sidewalk ends near the Overpass Bridge. If you could get through there, you could walk to the Mall and to Greater Plymouth Community Center, and trails.
- Signage for waking/equestrian trails would be fantastic and would encourage more use.
- I often go to Ambler Borough to take the train to Center City, I will not walk after dark due to danger of walking on Mt. Pleasant.

WHAT AREAS/ROUTES DO YOU TYPICALLY TRAVERSE IN THE TOWNSHIP VIA WALKING/BIKING/HIKING

- Mercer Hill Road to Ambler Borough via Green Ribbon Trail, Morris Road, or Mount Pleasant, use to access train to City.
- Mercer Hill Village and Battleston Village for walking.
- Additional lengths of the Green Ribbon Trail-during warm weather.
- Armentrout Preserve.
- Whitpain Township Parks.

APPENDIX A: KEY AREA INTERVIEWS

Office/Employment Centers

- Currently few people walk or bike to work, most drive
- Bus Shelters would aid those who use public transportation
- More “Lunch Time Walkers”
- Some Centers are better connected internally than others. Few are well connected to neighborhoods.

Commercial Centers

- Currently few people walk or bike to work, most drive
- Bus Shelters would aid those who use public transportation
- Need for more ADA Van accessible parking spaces was expressed

Montco Community College

- Strong desire to integrate pedestrian and bicycle connections

Wissahickon School District

- Few Children Walk
- High School and Middle School are outside of Township
- Elementary Schools (3 in Township)
    - Walk radius is technically ½ mile, however most take bus or are driven by parents.
    - Stony Creek Elementary School – best and safest connections. No major roads to cross.
    - Blue Bell and Shady Grove are both located along eastside of Skippack Pike (SR 73) and school district does not want to encourage crossings.
    - Blue Bell Elementary School – improving connections along School Rd may help nearby neighborhoods be more walkable.
    - Shady Grove Elementary School is least connected. Trail along Lewis Rd/Prophecy Creek would better connect some residents.

Wissahickon Watershed Association

- Priority is connecting to Green Ribbon Trail

Horseways

- Equestrian Trails are still important in community
- Parking for horse trailers, horse watering stations and places to tie horses at trailheads are needed.

Generally ADA curb ramps and connection need to be made throughout the community.

Skippack Pike (SR 73) should be a priority corridor for connecting community. County considers it a priority. It is a major spine running through the middle of the community and runs through/by:

- Villages of Centre Square and Blue Bell,
- Blue Bell and Shady Grove Elementary Schools,
- Township Building,
- Wentz Park and Prophecy Creek Park,
- Narcissa Rd Trail entrance
- Wissahickon Valley Public Library,
- Wissahickon Valley Historical Society
- Churches

APPENDIX B:
DETAILED & SUMMARY COST ESTIMATES

Summary of TOTAL Costs (Design and Construction)

SEGMENT	DESCRIPTION	Length MILEAGE	Length LINEAR FEET	Cost CONSTRUCTION	Cost DESIGN	Cost TOTAL COST
1	Safe Routes to School - Blue Bell Elementary School / Blue Bell Village Connections	1.46	7704	$457,134	$68,570	$671,987
2	Safe Routes to School - Shady Grove Elementary School / Broad Axe Village Connections	1.50	7938	$547,730	$82,160	$805,164
3	Skippack Pike	1.23	6,499	$383,484	$57,523	$563,721
4	Township Line Road Connection	0.17	913	$49,355	$7,403	$72,552
5	Centre Square / Skippack Pike (SR 73)	1.38	7,307	$468,102	$70,215	$688,110
6	Cathcart Road and Morris Road Intersection	0.08	436	$24,598	$3,690	$36,159
7	Butler Pike / Broad Axe Village Connection	0.73	3860	$294,591	$44,189	$433,048
8	School Road / Blue Bell Elementary Safe Routes to School	0.92	4,843	$332,407	$49,861	$488,638
9	Yost Road / Safe Routes to School	0.49	2,575	$154,915	$23,237	$227,726
10	Wentz Run Park / Wentz Road	0.42	2220	$126,626	$18,994	$186,141
11	Jolly Road and Arch Street Road / Mermaid Swim and Golf Club	1.00	5,254	$309,180	$46,377	$454,495
12	Narcissa Road	0.68	3580	$274,657	$41,199	$403,746
	Phase 1	0.35	1872	$177,173	$26,576	$260,444
	Phase 2	0.32	1708	$97,484	$14,623	$143,302
13	Mt. Pleasant Avenue	0.44	2298	$180,081	$27,012	$264,719
	Phase 1	0.15	794	$83,904	$12,586	$123,338
	Phase 2	0.28	1504	$96,177	$14,427	$141,380
14	Stony Creek Sports Park / N. Wales Road	0.49	2575	$143,415	$21,512	$210,821
15	Skippack Pike (SR 73)	0.21	1098	$65,169	$9,775	$95,798
16	Prophecy Creek Park Connections	0.12	620	$97,047	$14,557	$142,659
	Phase 1	0.04	209	$16,235	$2,435	$23,865
	Phase 2	0.08	411	$80,812	$12,122	$118,793
		TOTAL COST		$2,658,710	$398,807	$3,908,304

NOTE: Quantities have been rounded.

PROJECT 1 — Safe Routes to School - Blue Bell Elementary School / Blue Bell Village Connections

DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	1.768595	AC	$15,000.00	$26,529	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	4,280	SY	$60.00	$256,800	
6" No. 2A Subbase	4,280	SY	$12.50	$53,500	
Class 1B Excavation (10" depth)	1,188.4	CY	$35.00	$41,594	
Hauling	1,188.4	CY	$25.00	$29,710	
Road Crossing					
Crosswalk	5	EA	$500.00	$2,500	Striping
Curb Ramp with Detectable Warning Surface	10	EA	$1,500.00	$15,000	
Driveway Apron	21	EA	$1,500.00	$31,500	
Construction Materials Total				$457,134	
Engineering and Design[1]	15%			$68,570	
Erosion and Sediment Control[1]	6%			$27,428	
Maintenance and Protection of Traffic[1]	3%			$13,714	
Mobilization[1]	8%			$36,571	
Contingency[1]	15%			$68,570	
			TOTAL	$671,987	
Escalation[2]	3%			$20,160	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 2 — Safe Routes to School - Shady Grove Elementary School / Broad Axe Village Connections

DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	1.82	AC	$15,000.00	$27,335	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	4,410	SY	$60.00	$264,600	
6" No. 2A Subbase	4,410	SY	$12.50	$55,125	
Class 1B Excavation (10" depth)	1,224.5	CY	$35.00	$42,858	
Hauling	1,224.5	CY	$25.00	$30,613	
Road Crossing					
Crosswalk	6	EA	$500.00	$3,000	Striping
Curb Ramp with Detectable Warning Surface	12	EA	$1,500.00	$18,000	
Driveway Apron	10	EA	$1,500.00	$15,000	
Pedestrian Bridge[3]					
Footing Concrete	16	CY	$1,000.00	$16,000	
Substructure Concrete for Bridge	2	LS	$10,000.00	$20,000	
Prefabricated Bridge Structure	2	LS	$20,000.00	$40,000	
Contingency	20%			$15,200	
Construction Materials Total				$547,730	
Engineering and Design[1]	15%			$82,160	
Erosion and Sediment Control[1]	6%			$32,864	
Maintenance and Protection of Traffic[1]	3%			$16,432	
Mobilization[1]	8%			$43,818	
Contingency[1]	15%			$82,160	
			TOTAL	$805,164	
Escalation[2]	3%			$24,155	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up
[4]Bridge is based on typical construction, Structural engineer required to provide design and full cost estimate

PROJECT 3	Skippack Pike (SR 73)				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	1.37	AC	$15,000.00	$20,572	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	3,319	SY	$60.00	$199,133	
6" No. 2A Subbase	3,319	SY	$12.50	$41,486	
Class 1B Excavation (10" depth)	921.5	CY	$35.00	$32,254	
Hauling	921.5	CY	$25.00	$23,039	
Road Crossing					
Crosswalk	8	EA	$500.00	$4,000	Striping
Curb Ramp with Detectable Warning Surface	16	EA	$1,500.00	$24,000	
Driveway Apron	26	EA	$1,500.00	$39,000	
Construction Materials Total				$383,484	
Engineering and Design[1]	15%			$57,523	
Erosion and Sediment Control[1]	6%			$23,009	
Maintenance and Protection of Traffic[1]	3%			$11,505	
Mobilization[1]	8%			$30,679	
Contingency[1]	15%			$57,523	
			TOTAL	$563,721	
Escalation[2]	3%			$16,912	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 4	Township Line Road Connection				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.17	AC	$15,000.00	$2,493	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	402	SY	$60.00	$24,133	
6" No. 2A Subbase	402	SY	$12.50	$5,028	
Class 1B Excavation (10" depth)	111.7	CY	$35.00	$3,909	
Hauling	111.7	CY	$25.00	$2,792	
Road Crossing					
Crosswalk	1	EA	$500.00	$500	Striping
Curb Ramp with Detectable Warning Surface	2	EA	$1,500.00	$3,000	
Driveway Apron	5	EA	$1,500.00	$7,500	
Construction Materials Total				$49,355	
Engineering and Design[1]	15%			$7,403	
Erosion and Sediment Control[1]	6%			$2,961	
Maintenance and Protection of Traffic[1]	3%			$1,481	
Mobilization[1]	8%			$3,948	
Contingency[1]	15%			$7,403	
			TOTAL	$72,552	
Escalation[2]	3%			$2,177	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 5	Centre Square / Skippack Pike (SR 73)				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	1.68	AC	$15,000.00	$25,162	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	4,059	SY	$60.00	$243,567	
6" No. 2A Subbase	4,059	SY	$12.50	$50,743	
Class 1B Excavation (10" depth)	1,127.2	CY	$35.00	$39,451	
Hauling	1,127.2	CY	$25.00	$28,179	
Road Crossing					
Crosswalk	9	EA	$500.00	$4,500	Striping
Curb Ramp with Detectable Warning Surface	19	EA	$1,500.00	$28,500	
Driveway Apron	32	EA	$1,500.00	$48,000	
Construction Materials Total				$468,102	
Engineering and Design[1]	15%			$70,215	
Erosion and Sediment Control[1]	6%			$28,086	
Maintenance and Protection of Traffic[1]	3%			$14,043	
Mobilization[1]	8%			$37,448	
Contingency[1]	15%			$70,215	
			TOTAL	$688,110	
Escalation[2]	3%			$20,643	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 6	Cathcart Road and Morris Road Intersection				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.10	AC	$15,000.00	$1,501	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	242	SY	$60.00	$14,533	
6" No. 2A Subbase	242	SY	$12.50	$3,028	
Class 1B Excavation (10" depth)	67.3	CY	$35.00	$2,354	
Hauling	67.3	CY	$25.00	$1,681	
Road Crossing					
Driveway Apron	1	EA	$1,500.00	$1,500	
Construction Materials Total				$24,598	
Engineering and Design[1]	15%			$3,690	
Erosion and Sediment Control[1]	6%			$1,476	
Maintenance and Protection of Traffic[1]	3%			$738	
Mobilization[1]	8%			$1,968	
Contingency[1]	15%			$3,690	
			TOTAL	$36,159	
Escalation[2]	3%			$1,085	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 7	Butler Pike / Broad Axe Village Connections				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.89	AC	$15,000.00	$13,292	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	2,144	SY	$60.00	$128,667	
6" No. 2A Subbase	2,144	SY	$12.50	$26,806	
Class 1B Excavation (10" depth)	595.4	CY	$35.00	$20,840	
Hauling	595.4	CY	$25.00	$14,886	
Road Crossing					
Crosswalk	5	EA	$500.00	$2,500	Striping
Curb Ramp with Detectable Warning Surface	10	EA	$1,500.00	$15,000	
Driveway Apron	18	EA	$1,500.00	$27,000	
Pedestrian Bridge[3]					
Footing Concrete	8	CY	$1,000.00	$8,000	
Substructure Concrete for Bridge	1	LS	$10,000.00	$10,000	
Prefabricated Bridge Structure	1	LS	$20,000.00	$20,000	
Contingency	20%			$7,600	
Construction Materials Total				$294,591	
Engineering and Design[1]	15%			$44,189	
Erosion and Sediment Control[1]	6%			$17,675	
Maintenance and Protection of Traffic[1]	3%			$8,838	
Mobilization[1]	8%			$23,567	
Contingency[1]	15%			$44,189	
			TOTAL	$433,048	
Escalation[2]	3%			$12,991	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 8	School Road / Safe Routes to School - Blue Bell Elementary School				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	1.11	AC	$15,000.00	$16,677	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	2,691	SY	$60.00	$161,433	
6" No. 2A Subbase	2,691	SY	$12.50	$33,632	
Class 1B Excavation (10" depth)	747.1	CY	$35.00	$26,148	
Hauling	747.1	CY	$25.00	$18,677	
Road Crossing					
Crosswalk	5	EA	$500.00	$2,500	Striping
Curb Ramp with Detectable Warning Surface	10	EA	$1,500.00	$15,000	
Driveway Apron	18	EA	$1,500.00	$27,000	
Signage, Post Mounted Type B	2	EA	$420.00	$840	
Construction Materials Total				$332,407	
Engineering and Design[1]	15%			$49,861	
Erosion and Sediment Control[1]	6%			$19,944	
Maintenance and Protection of Traffic[1]	3%			$9,972	
Mobilization[1]	8%			$26,593	
Contingency[1]	15%			$49,861	
			TOTAL	$488,638	
Escalation[2]	3%			$14,659	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 9	Yost Road / Safe Routes to School				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.59	AC	$15,000.00	$8,867	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	1,431	SY	$60.00	$85,833	
6" No. 2A Subbase	1,431	SY	$12.50	$17,882	
Class 1B Excavation (10" depth)	397.2	CY	$35.00	$13,903	
Hauling	397.2	CY	$25.00	$9,930	
Road Crossing					
Crosswalk	4	EA	$500.00	$2,000	Striping
Curb Ramp with Detectable Warning Surface	8	EA	$1,500.00	$12,000	
Driveway Apron	3	EA	$1,500.00	$4,500	
Construction Materials Total				$154,915	
Engineering and Design[1]	15%			$23,237	
Erosion and Sediment Control[1]	6%			$9,295	
Maintenance and Protection of Traffic[1]	3%			$4,647	
Mobilization[1]	8%			$12,393	
Contingency[1]	15%			$23,237	
			TOTAL	$227,726	
Escalation[2]	3%			$6,832	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 10	Wentz Run Park / Wentz Road				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.43	AC	$15,000.00	$6,508	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	1,050	SY	$60.00	$63,000	
6" No. 2A Subbase	1,050	SY	$12.50	$13,125	
Class 1B Excavation (10" depth)	291.6	CY	$35.00	$10,204	
Hauling	291.6	CY	$25.00	$7,289	
Road Crossing					
Crosswalk	2	EA	$500.00	$1,000	Striping
Curb Ramp with Detectable Warning Surface	4	EA	$1,500.00	$6,000	
Driveway Apron	13	EA	$1,500.00	$19,500	
Construction Materials Total				$126,626	
Engineering and Design[1]	15%			$18,994	
Erosion and Sediment Control[1]	6%			$7,598	
Maintenance and Protection of Traffic[1]	3%			$3,799	
Mobilization[1]	8%			$10,130	
Contingency[1]	15%			$18,994	
			TOTAL	$186,141	
Escalation[2]	3%			$5,584	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 11	Jolly Road and Arch Street Road / Mermaid Swim and Golf Club				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	1.21	AC	$15,000.00	$18,092	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	2,919	SY	$60.00	$175,133	
6" No. 2A Subbase	2,919	SY	$12.50	$36,486	
Class 1B Excavation (10" depth)	810.5	CY	$35.00	$28,367	
Hauling	810.5	CY	$25.00	$20,262	
Road Crossing					
Crosswalk	6	EA	$500.00	$3,000	Striping
Curb Ramp with Detectable Warning Surface	12	EA	$1,500.00	$18,000	
Driveway Apron	6	EA	$1,500.00	$9,000	
Signage, Post Mounted Type B	2	EA	$420.00	$840	
Construction Materials Total				$309,180	
Engineering and Design[1]	15%			$46,377	
Erosion and Sediment Control[1]	6%			$18,551	
Maintenance and Protection of Traffic[1]	3%			$9,275	
Mobilization[1]	8%			$24,734	
Contingency[1]	15%			$46,377	
			TOTAL	$454,495	
Escalation[2]	3%			$13,635	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 12 - PHASE 1	Narcissa Road				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.43	AC	$15,000.00	$6,446	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	1,040	SY	$60.00	$62,400	
6" No. 2A Subbase	1,040	SY	$12.50	$13,000	
Class 1B Excavation (10" depth)	288.8	CY	$35.00	$10,107	
Hauling	288.8	CY	$25.00	$7,219	
Road Crossing					
Crosswalk	8	EA	$500.00	$4,000	Striping
Curb Ramp with Detectable Warning Surface	16	EA	$1,500.00	$24,000	
Signalization	1	EA	$50,000.00	$50,000	
Construction Materials Total				$177,173	
Engineering and Design[1]	15%			$26,576	
Erosion and Sediment Control[1]	6%			$10,630	
Maintenance and Protection of Traffic[1]	3%			$5,315	
Mobilization[1]	8%			$14,174	
Contingency[1]	15%			$26,576	
			TOTAL	$260,444	
Escalation[2]	3%			$7,813	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 12 - PHASE 2	Narcissa Road				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.39	AC	$15,000.00	$5,882	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	949	SY	$60.00	$56,933	
6" No. 2A Subbase	949	SY	$12.50	$11,861	
Class 1B Excavation (10" depth)	263.5	CY	$35.00	$9,222	
Hauling	263.5	CY	$25.00	$6,587	
Road Crossing					
Crosswalk	2	EA	$500.00	$1,000	Striping
Curb Ramp with Detectable Warning Surface	4	EA	$1,500.00	$6,000	
Construction Materials Total				$97,484	
Engineering and Design[1]	15%			$14,623	
Erosion and Sediment Control[1]	6%			$5,849	
Maintenance and Protection of Traffic[1]	3%			$2,925	
Mobilization[1]	8%			$7,799	
Contingency[1]	15%			$14,623	
			TOTAL	$143,302	
Escalation[2]	3%			$4,299	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 13 - PHASE 1	Mt Pleasant Avenue				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.18	AC	$15,000.00	$2,734	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	441	SY	$60.00	$26,467	
6" No. 2A Subbase	441	SY	$12.50	$5,514	
Class 1B Excavation (10" depth)	122.5	CY	$35.00	$4,287	
Hauling	122.5	CY	$25.00	$3,062	
Road Crossing					
At Grade Crossing for Trail	1	EA	$500.00	$500	Striping
Crosswalk	3	EA	$500.00	$1,500	Striping
Curb Ramp with Detectable Warning Surface	6	EA	$1,500.00	$9,000	
Bump out	2	EA	$15,000.00	$30,000	
Signage, Post Mounted Type B	2	EA	$420.00	$840	
Construction Materials Total				$83,904	
Engineering and Design[1]	15%			$12,586	
Erosion and Sediment Control[1]	6%			$5,034	
Maintenance and Protection of Traffic[1]	3%			$2,517	
Mobilization[1]	8%			$6,712	
Contingency[1]	15%			$12,586	
			TOTAL	$123,338	
Escalation[2]	3%			$3,700	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 13 - PHASE 2	Mt Pleasant Avenue				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.35	AC	$15,000.00	$5,179	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	836	SY	$60.00	$50,133	
6" No. 2A Subbase	836	SY	$12.50	$10,444	
Class 1B Excavation (10" depth)	232.0	CY	$35.00	$8,120	
Hauling	232.0	CY	$25.00	$5,800	
Road Crossing					
Driveway Apron	11	EA	$1,500.00	$16,500	
Construction Materials Total				$96,177	
Engineering and Design[1]	15%			$14,427	
Erosion and Sediment Control[1]	6%			$5,771	
Maintenance and Protection of Traffic[1]	3%			$2,885	
Mobilization[1]	8%			$7,694	
Contingency[1]	15%			$14,427	
			TOTAL	$141,380	
Escalation[2]	3%			$4,241	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 14	Stony Creek Sports Park / N. Wales Road				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.59	AC	$15,000.00	$8,867	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	1,431	SY	$60.00	$85,833	
6" No. 2A Subbase	1,431	SY	$12.50	$17,882	
Class 1B Excavation (10" depth)	397.2	CY	$35.00	$13,903	
Hauling	397.2	CY	$25.00	$9,930	
Road Crossing					
Crosswalk	2	EA	$500.00	$1,000	Striping
Curb Ramp with Detectable Warning Surface	4	EA	$1,500.00	$6,000	
Construction Materials Total				$143,415	
Engineering and Design[1]	15%			$21,512	
Erosion and Sediment Control[1]	6%			$8,605	
Maintenance and Protection of Traffic[1]	3%			$4,302	
Mobilization[1]	8%			$11,473	
Contingency[1]	15%			$21,512	
			TOTAL	$210,821	
Escalation[2]	3%			$6,325	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 15	Skippack Pike (SR 73)				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.25	AC	$15,000.00	$3,781	10' width cleared
Sidewalk					Assumes a 5' Sidewalk
4" Concrete Sidewalk	610	SY	$60.00	$36,600	
6" No. 2A Subbase	610	SY	$12.50	$7,625	
Class 1B Excavation (10" depth)	169.4	CY	$35.00	$5,928	
Hauling	169.4	CY	$25.00	$4,234	
Road Crossing					
Crosswalk	2	EA	$500.00	$1,000	Striping
Curb Ramp with Detectable Warning Surface	4	EA	$1,500.00	$6,000	
Construction Materials Total				$65,169	
Engineering and Design[1]	15%			$9,775	
Erosion and Sediment Control[1]	6%			$3,910	
Maintenance and Protection of Traffic[1]	3%			$1,955	
Mobilization[1]	8%			$5,213	
Contingency[1]	15%			$9,775	
			TOTAL	$95,798	
Escalation[2]	3%			$2,874	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

PROJECT 16	Prophecy Creek Park Connections				
DESCRIPTION	QTY	UNIT	UNIT COST	SUBTOTAL	COMMENTS
Clearing and Grubbing	0.10	AC	$15,000.00	$1,439	20' width cleared
Multi-Use Trail					Assumes a 10' Trail
3" - #10 Crushed Limestone	39.2	TON	$185.00	$7,250	
6" - No. 2A Subbase	51.2	TON	$50.00	$2,560	
Geotextile	232	SY	$3.00	$697	
Class 1B Excavation (10" depth)	64.5	CY	$35.00	$2,257	
Hauling	64.5	CY	$25.00	$1,612	
Trailhead Ammenities					
Signage, Post Mounted Type B	1	EA	$420.00	$420	24"x36", regulatory at parking area
Construction Materials Total				$16,235	
Engineering and Design[1]	15%			$2,435	
Erosion and Sediment Control[1]	6%			$974	
Maintenance and Protection of Traffic[1]	3%			$487	
Mobilization[1]	8%			$1,299	
Contingency[1]	15%			$2,435	
			TOTAL	$23,865	
Escalation[2]	3%			$716	

NOTES:
[1]Percentages used are based on Industry standards
[2]Per Year after report
[3]Quantities and Subtotal Numbers have been rounded up

APPENDIX C: POTENTIAL FUNDING SOURCES

Grant / Program Name	Description	Website Address
Council on Foundations	The Council on Foundations is a national nonprofit association of approximately 2,000 grant making foundations and corporations.	http://www.cof.org/
CVS Caremark Community Grants	Program awards grants up to $5,000 to nonprofit organizations for programs targeting children with disabilities; programs focusing on health and rehabilitation services; and public schools promoting a greater level of inclusion in student activities and extracurricular programs, and initiatives that give greater access to physical movement and play.	http://info.cvscaremark.com/community/our-impact/community-grants
Foundation Center	A database of foundations and other funding sources.	http://foundationcenter.org/
Grants.gov	Provides information on hundreds of federal grants that can be used to support a variety of programs.	http://www.grants.gov/
National Recreation and Park Association (NRPA)	NRPA provides education for professionals and the public on the essential nature of parks and recreation and advocates for increased national funding for parks and recreation through federal grants and initiatives.	www.nrpa.org
National Tree Trust	The mission of the National Tree Trust is to promote healthy communities by providing resources that educate and empower people to grow and care for urban and community forests.	http://www.nationaltreetrust.org/
PA CleanWays	A non-profit organization that helps communities take action against illegal dumping and littering.	http://www.pacleanways.org/
Pennsylvania Department of Conversation and Natural Resources (DCNR) – Community Conservation Partnerships Program (C2P2)	C2P2 grants are open to local / county governments and non-profit organizations to assist with recreation projects; three basic types: planning, acquisition and development. Includes grants for community recreation, land trusts, rails-to-trails, rivers conservation, snowmobile/ATV, heritage areas, land and water conservation fund, and recreational trails.	http://www.dcnr.state.pa.us/brc/grants/
Pennsylvania Department of Conversation and Natural Resources (DCNR) – TreeVitalize	TreeVitalize is a public-private partnership to help restore tree cover, educate citizens about planting trees as an act of caring for our environment, and build capacity among local governments to understand, protect and restore their urban trees.	http://www.treevitalize.net/index.aspx

WHITPAIN WALKABILITY STUDY
FUNDING SOURCES

Grant / Program Name	Description	Website Address
Pennsylvania Department of Environmental Protection (DEP) – Environmental Education	School districts, private schools, nonprofit groups and county conservation districts may apply for funding to develop new or expand current environmental education programming. This program is a reimbursement program with a 20 percent matching funds component, with certain exceptions.	http://www.depweb.state.pa.us/enved/cwp/view.asp?a=3&q=473224
Pennsylvania Department of Labor and Industry – PA Conservation Corps Program	Offers grants to municipalities for conservation, recreation, historic preservation, graffiti removal and repair of vandalism. Funds may be used to purchase materials and services.	http://www.portal.state.pa.us/portal/server.pt/community/pennsylvania_conservation_corps/10573/project_grants/599288
Pennsylvania Fish and Boat Commission (PFBC)	The Commission has a number of grant programs that provide funding in support of fishing, boating and aquatic resource conservation; including the Boating Facility Grant Program, the Boating Infrastructure Grant Program, and the Coldwater Heritage Partnership.	http://www.fish.state.pa.us/grants.htm
Pennsylvania Humanities Council	Humanities Grants foster collaborative learning through public programs. Examples of humanities projects include discussion groups exploring books or films, workshops, walking tours, panel discussions, exhibitions with interpretive programs, and craft demonstrations integrating conversations about the craft.	http://www.pahumanities.org/resources/grants.php
Pennsylvania Infrastructure Investment Authority (PENNVEST); Green Infrastructure Projects	PENNVEST actively funds Green Initiatives that promote and encourage environmental responsibility in our communities that are creative and innovative with green solutions for water quality management.	http://www.portal.state.pa.us/portal/server.pt/community/programs/9322/green_initiatives/541807
Recreational Trails Program (administered by PA DCNR through the Community Conservation Partnerships Program C2P2)	This program provides funding to states to make grants for trail and trail-related projects. Funding to this program is provided to the Commonwealth through the Federal Highway Administration (FHWA) and the Intermodal Surface Transportation Act (ISTEA) of 1991 which included the Symms National Recreational Trails Act (NRTA), and the National Highway System Designation Act of 1995 (NHS Act). The program can be used the purchase trail maintenance equipment. Note: This program is one of the only to fund trail maintenance.	http://www.fhwa.dot.gov/environment/rectrails/
Deutsche Bank Americas Foundation	$2,500 Environmental Sustainability Grant is used to purchase trail markers	American Discovery Trail Society (800) 663-2387 or adtsociety@aol.com

WHITPAIN WALKABILITY STUDY
FUNDING SOURCES

Funding Opportunities for Sidewalks, Trails, and local Multi-modal transportation infrastructure.

- The Township General Fund

Grants

- DCED Multimodal Transportation Fund (MTF)
- DCED Greenways, Trails and Recreation Program
- PennDOT Transportation Alternatives Program (TAP)
- PennDOT BOMO, ARLE, GLP, and PA's SHSP
- DVRPC Congestion, Mitigation, Air Quality (CMAQ)
- DCNR Community Conservation Partnerships Program (C2P2)
- Safe Routes to School Program (SRTS)
- Transportation and Community Development Initiative (TCDI)
- The Keystone Fund, helped fund 300+ Trails and Paths; https://keystonefund.org/recreation/

MULTIMODAL TRANSPORTATION ADDITONAL FUNDING OPPORTUNTIES

Multimodal Transportation Fund – Act 89 authorizes state funding through the Multimodal Transportation Fund for aviation, freight and passenger rail, public transit, ports and waterways, highway/bridge, and bike and pedestrian projects. The program provides financial assistance to municipalities, councils of governments, businesses, economic development organizations, public transportation agencies, rail/freight and ports. Eligible projects are those that coordinate local land use with transportation assets to enhance existing communities; projects that relate to streetscape, lighting, sidewalk enhancement, and pedestrian safety; projects that improve connectivity or utilization of existing transportation assets; and projects related to transit-oriented development. Local match from eligible sources in the amount of 30 percent of the grant award must be provided in order to receive funding. Grants are available for projects with a total cost of $100,000 or more. Grants will not exceed $3 million. Application Deadline – Application deadlines vary and are available on the PennDOT website Contact – David J. Bratina, 717-705-1230. Email: djbratina@pa.gov

Pennsylvania Transportation Alternatives Program (TAP) – The Pennsylvania Transportation Alternatives Program provides funding for programs and projects defined as transportation alternatives including bicycle and pedestrian facilities, safe routes to schools, and trail projects that serve a transportation purpose such as trails that connect to schools, parks or other public areas. There is an 80/20 cost share for shovel-ready projects, and PennDOT will pay for 100 percent of right-of-way acquisition costs. Applicants pay for any pre-construction costs but these upfront costs may be eligible for Department of Conservation and Natural

Resource (DCNR) funding. PennDOT's website provides program guidance, the eligibility determination form and an application. For questions on eligibility for DCNR funding contact your DCNR Bureau of Recreation and Conservation regional advisor.

Automated Red Light Enforcement (ARLE) Funding Program – In October 2010, PennDOT established as identified within the Pennsylvania Vehicle Code [75 Pa.C.S.§§3116(1)(2), 3117(m)(2), and 3117(m)(2.1)], an Enhancement Grant Program also known as the ARLE Funding Program. Details regarding the ARLE Funding Program can be found in the Pennsylvania Code (Title 67; Chapter 233; Transportation Enhancement Grants from Automated Red Light Enforcement System Revenues). The ARLE Funding Program is focused to low-cost safety and mobility improvements. May – Pennsylvania Bulletin announcement specifying the acceptance of applications between June 1 and June 30. Applicants are required to obtain the latest electronic grant application and fill out appropriately. Additional ARLE Funding Program information can be found at: http://www.dot.state.pa.us/signals Program Email Address – RA-PDSIGNALFUNDING@pa.gov Contact – Daniel Farley, 717-783-0333. Email: dfarley@pa.gov

Green Light-Go (GLG) Funding Program – The Green Light-Go: Pennsylvania's Municipal Signal Partnership Program (Green Light-Go Program) is designed to improve safety and mobility by reducing congestion and improving efficiency of existing traffic signals on highways. The program is a competitive application and reimbursement grant program in which projects are managed by applicants unless otherwise determined by the department. Applications by municipalities, counties or planning organizations for the GLG Funding Program requiring a 20 percent match using regional, state, federal, municipal or private funds can be used except for those associated with the Transportation Improvement Program (TIP). Annual program announced in the Pennsylvania Bulletin specifying the acceptance of applications. Applicants are required to obtain the latest electronic grant application and fill out appropriately.

Greenways, Trails & Recreation Program (GTRP) – Act 13 of 2012 established the Marcellus Legacy Fund and allocates funds to the CFA for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, river conservation, parks and beautification projects using the GTRP.