# Power Line Trail Planning and Feasibility Study

Submitted to:

Upper Gwynedd Township
Parks and Recreation Department

Submitted by:
Michael Baker International, Inc.

Michael Baker INTERNATIONAL 80 YEARS

pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Michael Baker
INTERNATIONAL

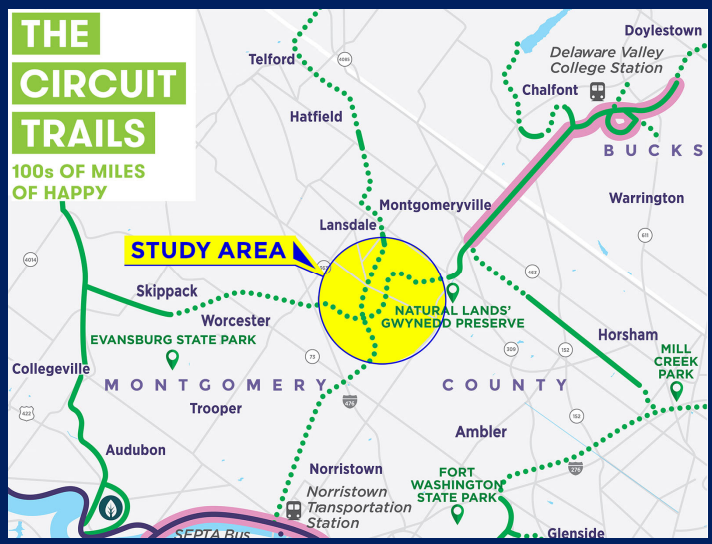
## FINAL REPORT

*Upper Gwynedd Township*
*Montgomery County, PA*

**October 2023**

**Prepared for:**

**Upper Gwynedd Township**





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***Upper Gwynedd Township and Michael Baker International***
***wish to thank***
***the Pennsylvania Department of Conservation and Natural Resources***
***for their generous support of this program.***

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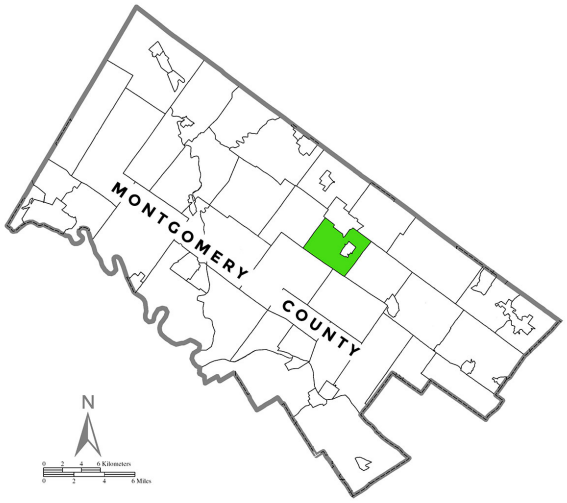



Upper Gwynedd is a first class township (one of 93 in Pennsylvania) located in Montgomery County, Pennsylvania. Montgomery County, containing 487 sq. miles with a population of 860,000, shares its southeast boundary with the City of Philadelphia. Upper Gwynedd Township encompasses 8.1 sq. miles, has a population of 17,100, and is located 28 miles from Center City Philadelphia by highway (50 minutes by commuter train).

Since its incorporation in 1891, and notably during the mid to late twentieth century, much of Upper Gwynedd Township has been developed incrementally as residential subdivisions. Of Upper Gwynedd Township's total area, 56% is currently residential land use to varying degrees of intensity ranging from suburban homes on ½-acre lots to higher densities including townhouses and multi-unit complexes. (The percentage figure includes road rights-of-way within the residential areas). 15% is industrial / light industrial, with Merck pharmaceutical being the largest industry. 5% is institutional, with four of five institutional parcels being retirement communities and the fifth being the Upper Gwynedd Township municipal complex. The 104-acre township-owned tract, in addition to serving as administrative center of government, contains within it Parkside Place park, ball fields, an amphitheater, Nor-Gwyn pool, and one mile of asphalt shared-use path. Of significance to this study is Parkside Place's proximity to the trail study corridor.

Three entities hold significant parcels of preserved open space in the township, two of which are directly relevant to this study. Delaware Valley University's Roth Center for Sustainable Agriculture occupies 240 acres at the northeast corner of the township, with most of the acreage maintained as pasture and cropland. This tract is within the study corridor.

Wissahickon Valley Watershed Association owns parcels of preserved land along Wissahickon Creek totaling 58 acres in Upper Gwynedd Township. WVWA maintains the Green Ribbon Trail, portions of which traverse WVWA properties while other portions occupy township-owned open space. Beginning at Parkside Place, the eight miles of Green Ribbon Trail extending south to WVWA's headquarters in Upper Dublin is an earth-surface footpath suitable only for those on foot, and then only during drier weather. Bicycles are not permitted on the Green Ribbon Trail. Some Green Ribbon Trail segments have been improved by the construction of narrow wooden boardwalks (often by Boy Scouts completing Eagle projects).

Apart from the Green Ribbon Trail, Wissahickon Valley Watershed Association's Dodsworth Run Preserve is a 9 acre site in Upper Gwynedd Township. Sited farther north along the Wissahickon Creek in an area zoned for light industry, it is designed to preserve native species of flora and fauna while encouraging members of the public to hike, bike, walk with strollers, and walk leashed dogs. A 0.3 mile hard surface multi-use trail and a 0.1 mile boardwalk are open daily from dawn until dusk. Dodsworth Run Preserve lies within the study corridor.

*Green Ribbon Trail in Upper Gwynedd Township. Wissahickon Valley Watershed Association prioritizes the preservation of natural conditions adjacent to the creek, including the trail surface*

Natural Lands Trust holds title to the parcels that comprise the 279 acre Gwynedd Preserve, 210 acres of which are situated in the southeast corner of Upper Gwynedd Township. Located outside the study corridor, Gwynedd Preserve's network of footpaths does however connect seamlessly with the Green Ribbon Trail. Responses to this study's questionnaire show that Gwynedd Preserve is a favorite site among those members of the public expressing an interest in trails (more on that in Section 5 of this report).

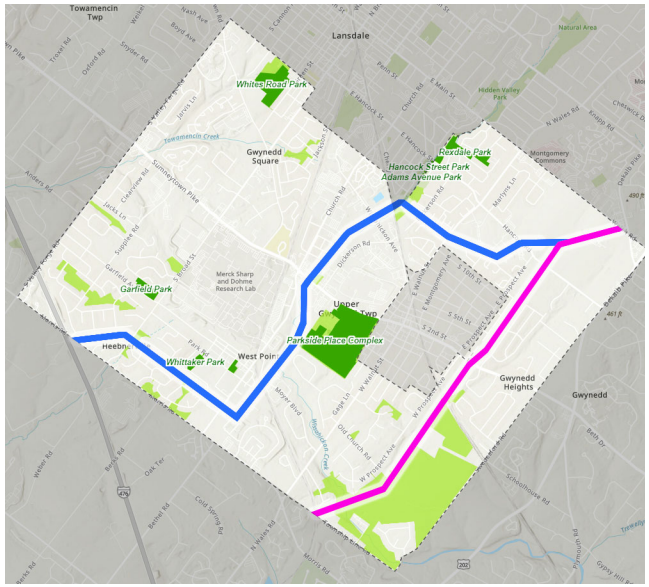
Rights-of-way traversing Upper Gwynedd include those for local, county, and state-owned roads; two active railroads; the Pennsylvania Turnpike Northeast Extension; and of relevance to this study, rights-of-way for long-distance transmission of electric power.

*Wissahickon Valley Watershed Association's Dodsworth Run Preserve. PECO's right-of-way and the Wissahickon Creek are just beyond the tree line. The structure to the left of the trail is a Chimney Swift nesting tower*

Unlike utility corridors such as that of the Williams Transcontinental natural gas pipeline, which utilize *easements* negotiated from private property owners rather than land acquired for the purpose, two long-distance electricity transmission *rights-of-way* traverse Upper Gwynedd Township. The rights-of-way are owned by PECO Energy Company, an entity willing to consider the placement of trails on company property provided specific conditions are met. With a century of piecemeal development having locked up the landscape in many suburban areas (Montgomery County included), continuous electric transmission rights-of-way are one of the few corridors that offer potential as trail alignments. When planning trails, coordinating with a single property owner tends to have a greater chance of success compared to dealing with multiple individual landholders. PECO has been an exemplary partner in this feasibility study's process.

The PECO electric transmission right-of-way that runs parallel to and roughly half a mile inside Upper Gwynedd's eastern boundary was created nearly one hundred years ago. This right-of-way is represented as a magenta line on the map below. In 1927 PECO predecessor Philadelphia Electric Company signed a pioneering agreement with Lehigh Valley's Pennsylvania Power & Light Company and New Jersey's Public Service Electric & Gas to link their distribution networks using state-of-the-art 220,000 volt transmission lines. When the transmission lines were completed four years later, the combined network was capable of balancing peak power load demands, prioritizing economical sources such as hydroelectric over steam (the Conewingo dam would go on-line in 1928), and supplying emergency power in the event of unforeseen equipment failures. This first interconnection was followed over time by others across the continent, culminating locally in the PJM Interconnection which today controls electricity distribution throughout the mid-Atlantic states from a control center in nearby Audubon, PA. Although the original metal lattice support towers have been replaced, the historical significance of this right-of-way -- the first link in what we today refer to as "the grid" -- merits the provision of interpretive signage.

In 1954 Philadelphia Electric Company purchased right-of-way for another transmission corridor in Upper Gwynedd Township. This second PECO right-of-way enters the township near its southwest corner, extends 4.5 miles through the center of the township (serving the PECO substation at Sumneytown Pike at Dickerson Road), before merging with the original 1931 transmission corridor as it exits the northeast corner of the township. This is the blue line on the map at right. With some sections a full 200 feet wide, this is the corridor that has long been proposed by Montgomery County Planning Commission, and by numerous municipal comprehensive plans, as a potential trail alignment.




*This map of Upper Gwynedd Township delineates the route of PECO's 1931 electric transmission right-of-way (represented by the magenta line) and the 1954 electric transmission right-of-way (the blue line)*

## 2) Scope of this Study

The scope of this study includes the following tasks:

- Assess Existing Conditions and Right-of-Way
- Develop Opportunities and Constraints Map
- Trail Alternatives Development and Analysis
- Concept Plan and Cost Estimate
- Public Participation Process
- Implementation Plan for Trail Development
- Township Staff/ Steering Committee Meetings
- Final Study Report

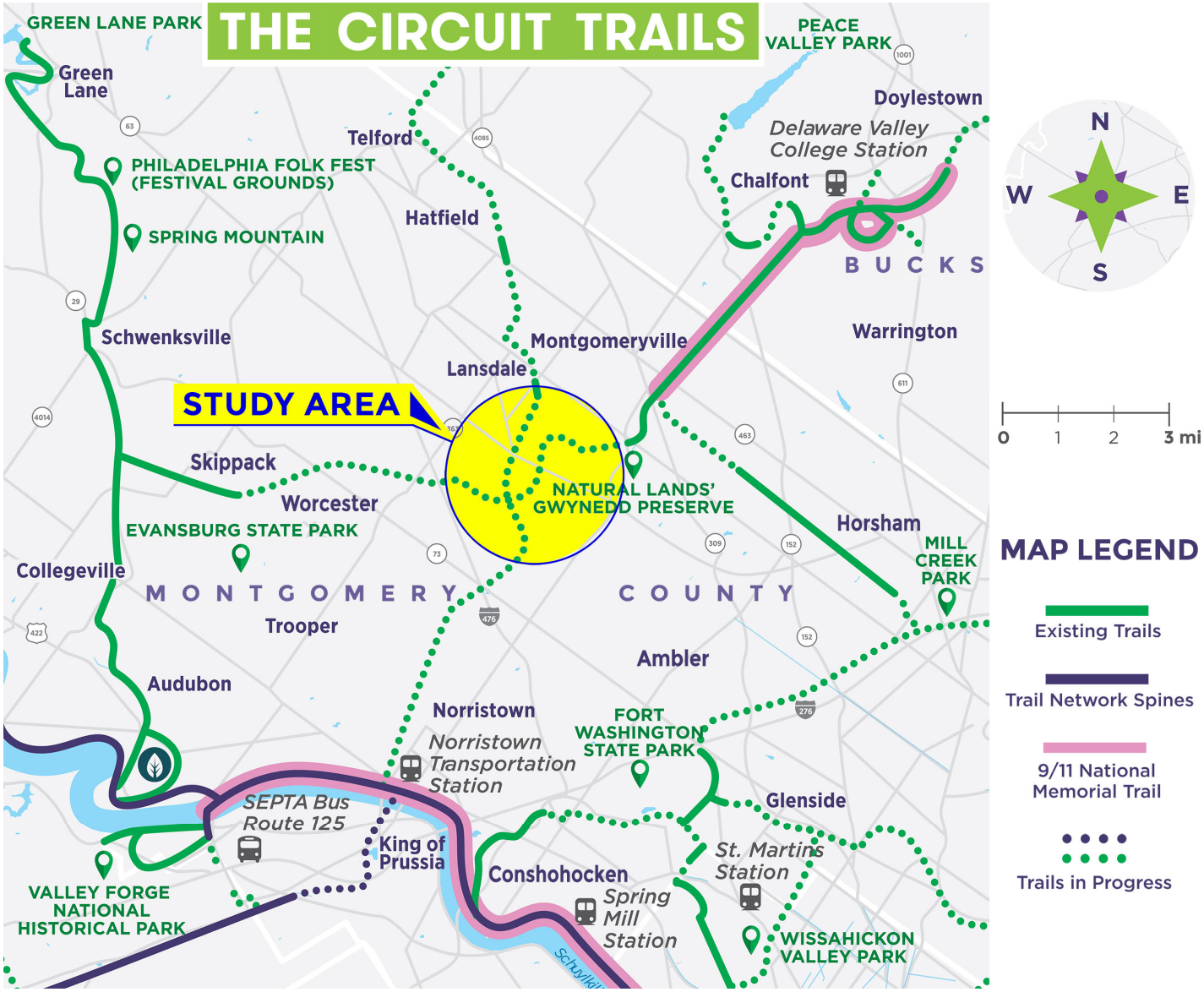
## 3) Regional Context

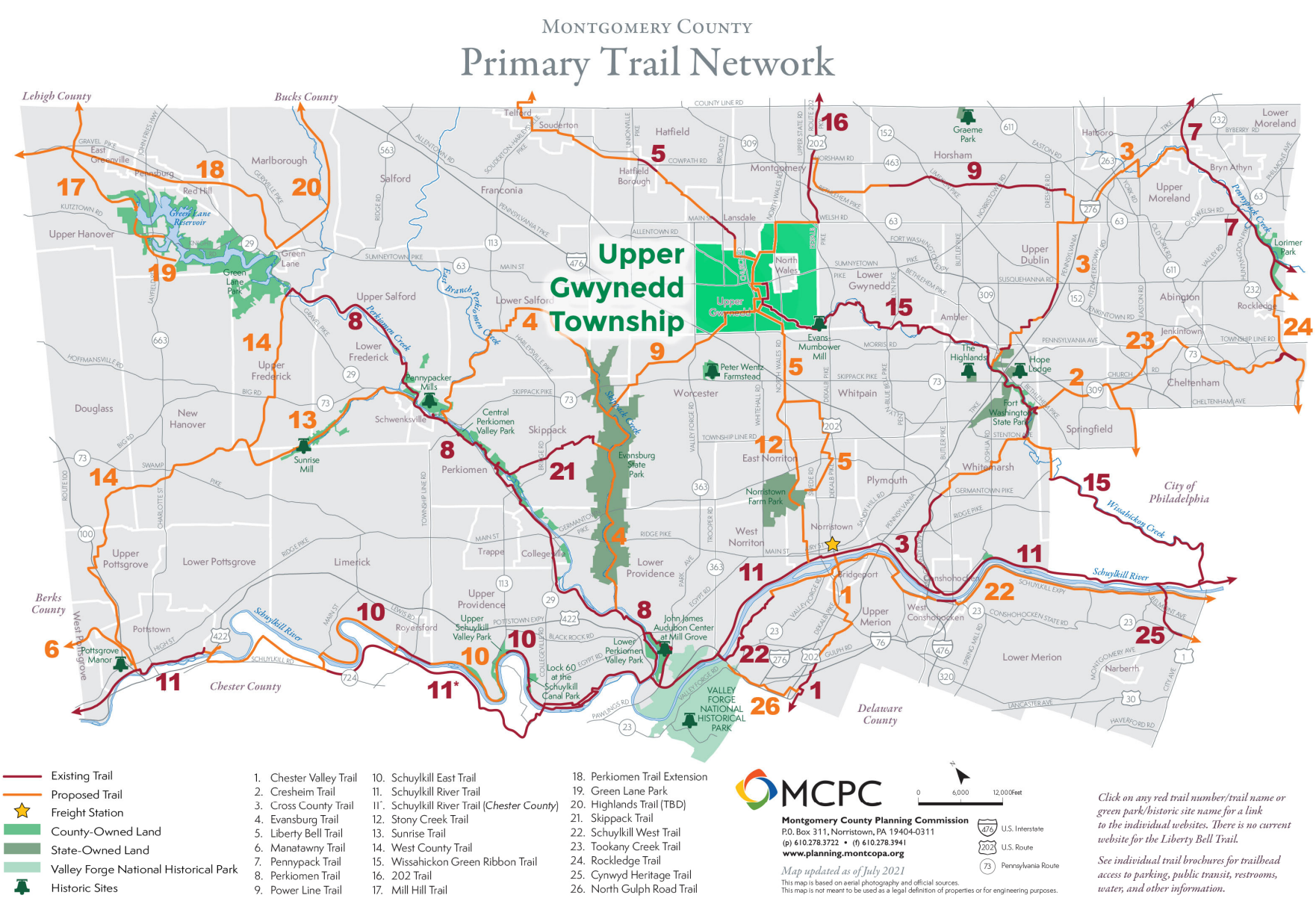
The Power Line Trail is envisioned as an 18-mile-long multi-use trail located in central and eastern Montgomery County.

Seven (7) miles of proposed Power Line Trail alignment traverse Upper Gwynedd Township.

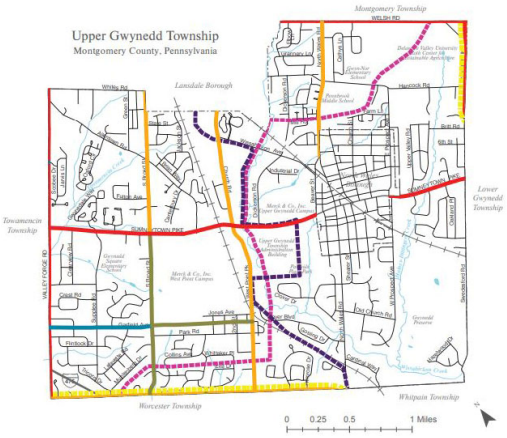
A key link in both The Circuit regional trail system and Montgomery County's Primary Trail network, the Power Line Trail's projected route takes it through five municipalities: Skippack, Worcester, Upper Gwynedd, Montgomery, and Horsham (all townships).

The Power Line Trail's projected western endpoint connects with the Evansburg Trail, which in turn provides access to the Skippack Trail and the Perkiomen Trail. The eastern endpoint connects with the Cross County Trail, the north end of which links with the Pennypack Trail. Near its midpoint, connection is made with the existing 202 Parkway trail and the in-progress Liberty Bell Trail.





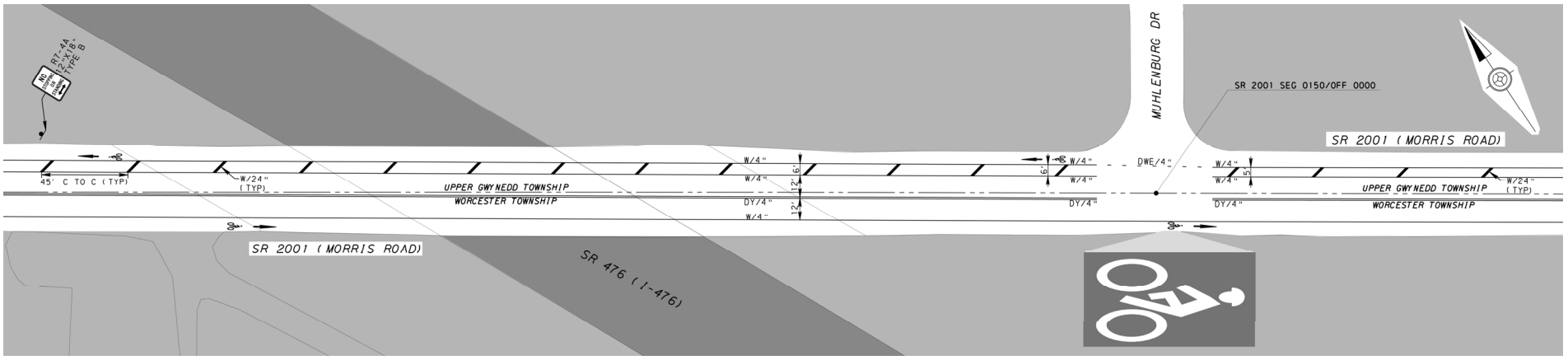

Montgomery County Planning Commission's Primary Trail Network plan envisions Upper Gwynedd Township as a regional trail hub. Six trails radiate outward in all directions. Five of these are planned multi-use trails; one (Green Ribbon Trail) is footpath.




The Power Line Trail, Liberty Bell Trail, and improvements to roadways intended to enhance on-road bicycling are components of Upper Gwynedd Township's Comprehensive Plan. Notably, the recommended improvements to Morris Road have been implemented. Of significance to this study is the fact that the Morris Road bike lanes will connect directly with the proposed Power Line Trail.

As of 2023, the eastern portion of the Power Line Trail is complete: 5 miles of asphalt-surface multi-use trail are open to the public in Horsham Township. The remaining sections of the trail, including the segment in adjacent Montgomery Township, are in various stages of the planning process. This study focuses on determining the feasibility of implementing the 7 miles of Power Line Trail that traverse Upper Gwynedd Township.

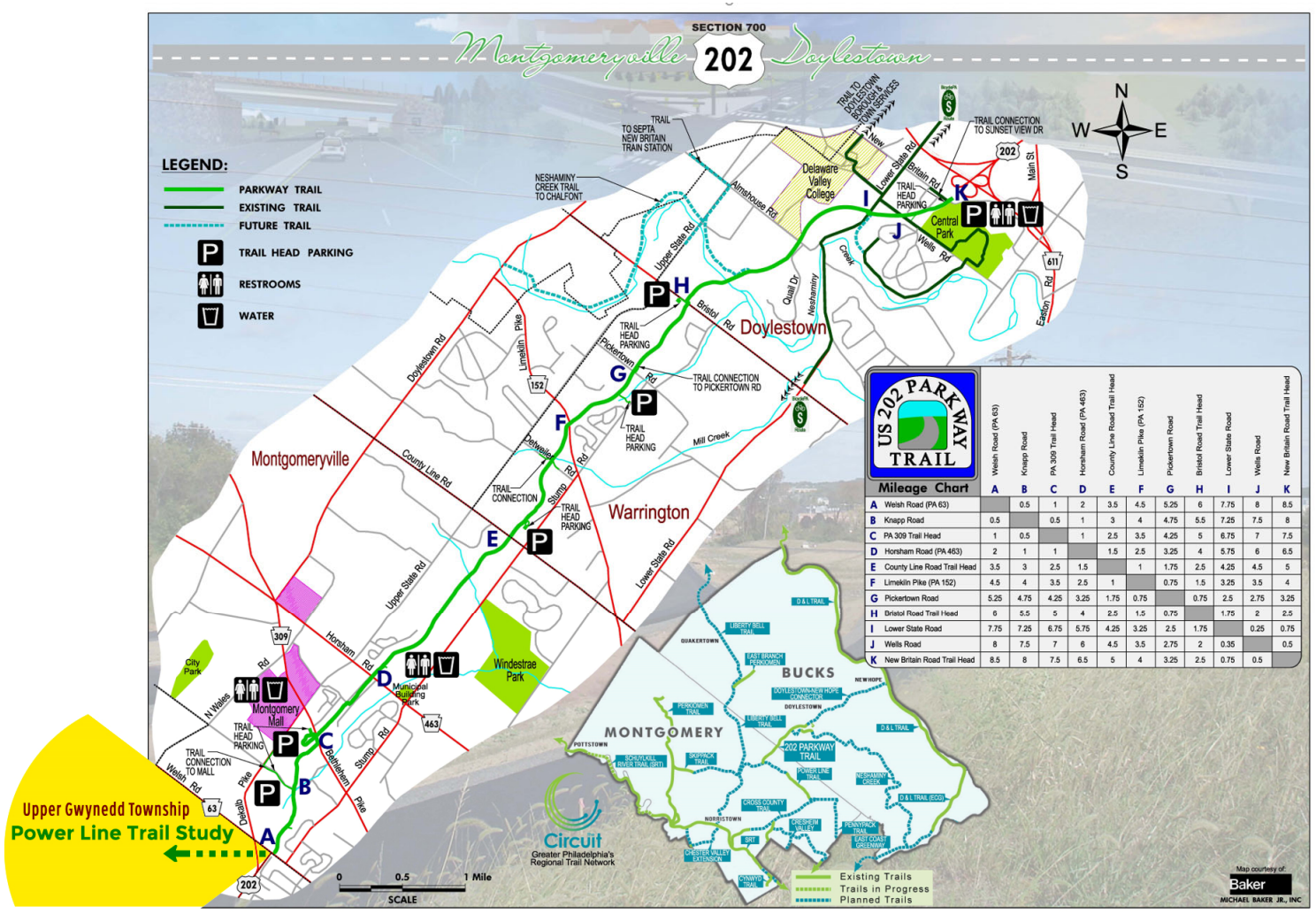
Upper Gwynedd Township contains an array of public parks, preserved open space with public access, and existing trails. Providing further off-road connections to Parkside Place will encourage walking and bicycling to the park, potentially lessening demand for automobile parking. Implementation of the Power Line Trail within the township will provide safer, more inviting infrastructure for alternative transportation to: Whittaker Park, Nor-Gwyn Pool, Dodsworth Run Preserve, Pennbrook Middle School, Gwyn-Nor Elementary School, and ball fields including Ben Hostelly Field, Squires Field, and Nor-Gwyn Baseball Association's fields. The Power Line Trail will offer the same to commuters who currently drive motor vehicles to employment centers such as Merck.




*Plan of existing bike lane pavement markings on Morris Road within the study corridor*

In addition to making valuable connections with proposed / future trails, completion of the Power Line Trail in Upper Gwynedd Township will provide immediate connection with an existing regional trail.

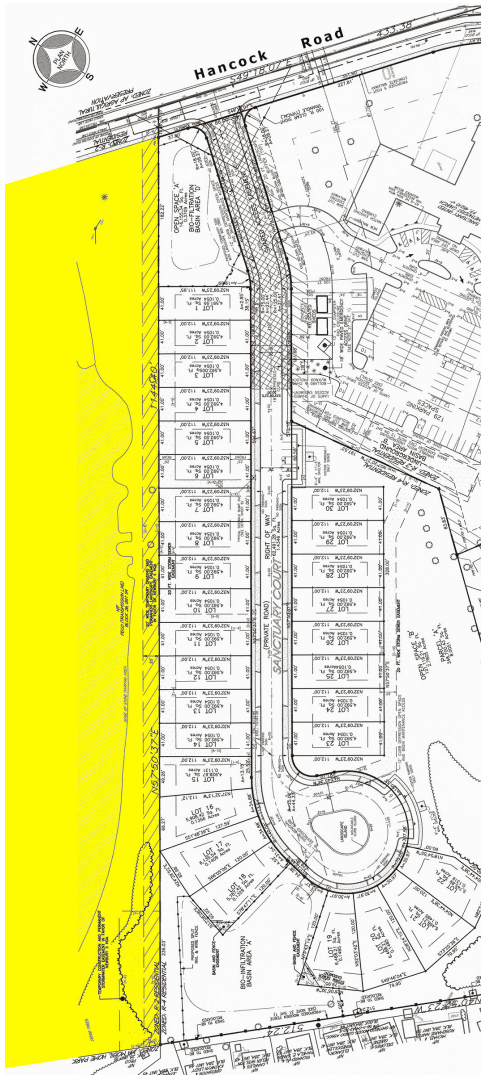
In September 2012, the ribbon was cut on the 202 Parkway Trail. Beginning in Doylestown near Delaware Valley University, this 12 foot wide asphalt multi-use trail continues 12 miles south, crossing from Bucks into Montgomery County, terminating at the northeast corner of Upper Gwynedd Township.

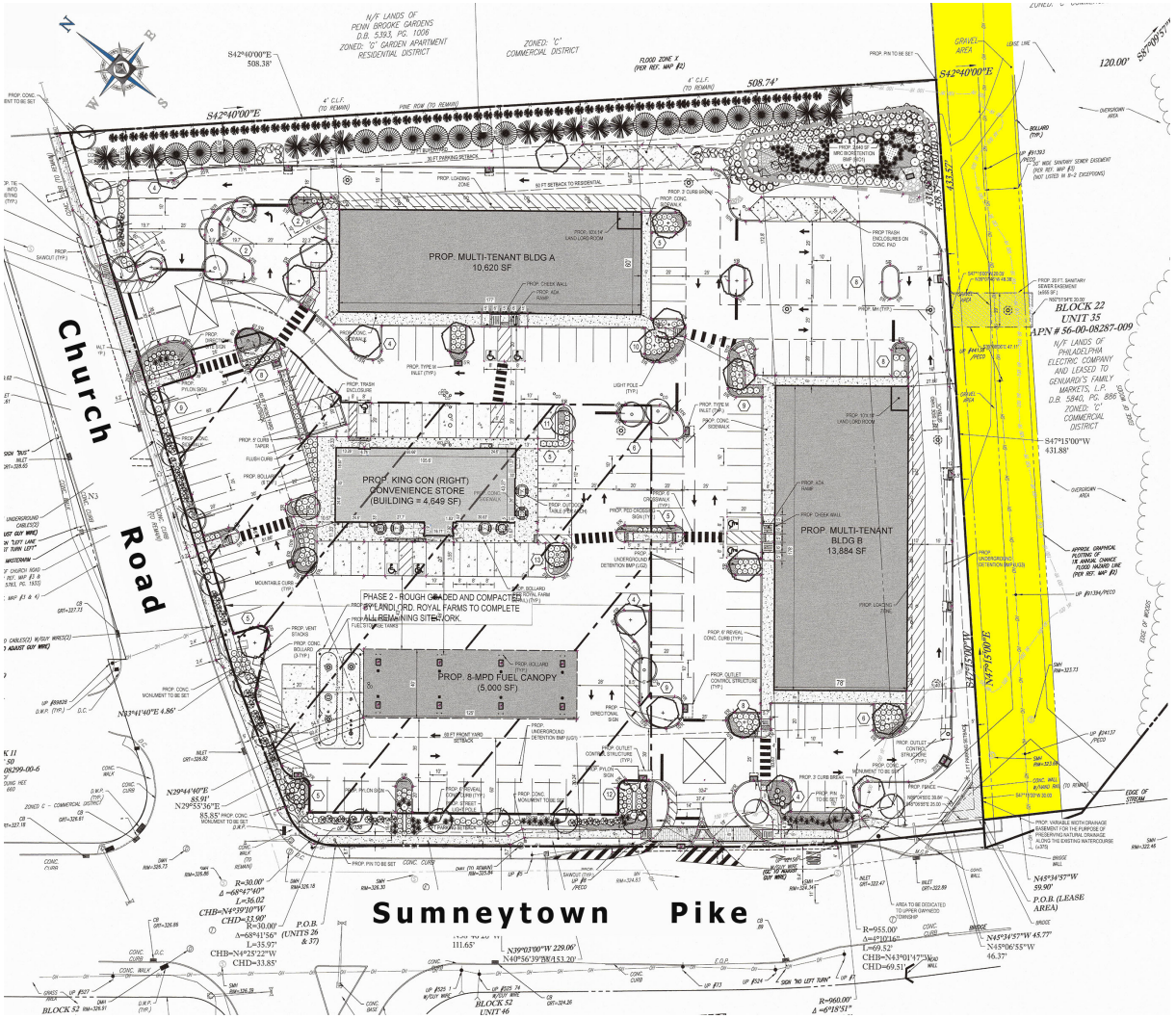



Implementation of the Power Line Trail in Upper Gwynedd, by tying into the existing terminus of the 202 Parkway Trail, will effectively extend that significant regional trail corridor into Upper Gwynedd Township.

Prior planning studies have determined that a portion of the Power Line Trail in Montgomery Township will be co-located with the southern portion of the existing 202 Parkway Trail, forging yet another link in The Circuit network of regional trails.

Private Development: Two development projects are under way within the study corridor, with potential ramifications for this study's recommendations. These include the Royal Farms / Shoppes at Upper Gwynedd commercial center at Church Road / Sumneytown Pike (below right) and the Newbury Phase II residential development on Hancock Road (below left). Adjoining PECO rights-of-way are shaded yellow.



## 4) Trail Alternatives Development and Analysis

This study investigates the feasibility of implementing a 7 mile long multi-use trail within Upper Gwynedd Township, utilizing existing electric transmission rights-of-way owned by Philadelphia Electric (PECO). The study corridor begins in the southwestern corner of the township (intersection of PA Route 363 and Morris Road) and ends at the northeastern corner (intersection of US Route 202 and PA Route 63, which is also the terminus of the existing 202 Parkway Trail). In areas where placement of the trail on the PECO right-of-way may not feasible, alternate routes are identified and evaluated.

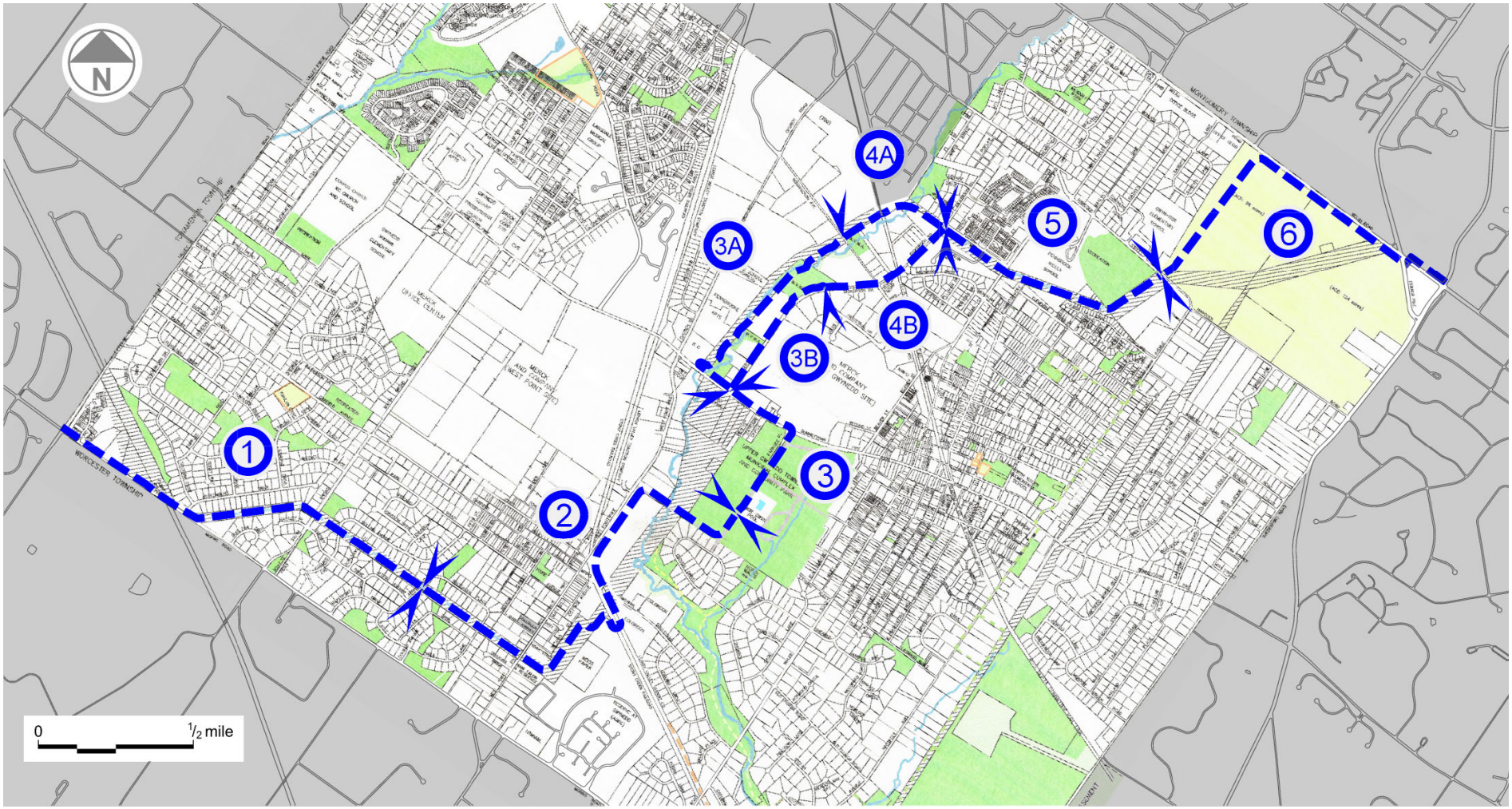
The western and eastern endpoints of the study corridor, located at opposite corners of Upper Gwynedd Township's boundary, correlate with the recommendations of prior planning studies conducted in adjacent municipalities (Worcester Township and Montgomery Township respectively).

In consideration of variations in the character of the study corridor, the 7 mile alignment has been divided into six distinct segments.

These are:

| Segment | from | to | Mileage |
|---|---|---|---|
| 1 | Morris Road / Valley Forge Road | Whittaker Park (Armstrong Drive) | 1.3 |
| 2 | Whittaker Park (Armstrong Drive) | Parkside Place | 1.7 |
| 3 | Parkside Place | Sumneytown Pike / Dickerson Road | 0.6 |
| 3A | Sumneytown Pike / Dickerson Road | Wissahickon Avenue | 0.8 |
| 4 | Wissahickon Avenue | Mill Road | 0.4 |
| 5 | Mill Road | Hancock Road | 0.8 |
| 6 | Hancock Road | US 202 / Route 63 | 1.4 |
| | | | 7.0 |

A map delineating the study corridor segments, and the points where one segment ends and another begins, can be found on the following page.




*This map labels the study corridor segments and the points at which one segment ends and another begins*

Extensive field views, analysis of aerial photography, examination of tax parcel records, and thorough background research a were conducted to determine terrain features, adjacent land uses, ownership patterns, and potential environmental issues that may have a bearing on the selection of a recommended alignment. Each segment of the corridor was evaluated to determine the most appropriate trail facility and most feasible approach for its implementation. The American Association of State Highway and Transportation Officials' *Guide for the Development of Bicycle Facilities* categorizes the various types of bicycle facilities, outlining the contexts that determine the appropriateness of each. The selection of a facility should be based on factors including the ability of the users, specific corridor conditions, and facility cost. Descriptions of bicycle facility types follow.

**Shared Roadway (No Bikeway Designation):** This facility represents the majority of existing bicycle travel in the United States. Some street systems provide efficient bicycle travel and do not require the use of additional signing and striping. In other instances, it would be inappropriate to designate a certain route a bikeway because the roadways are not suitable for bicycling. In some cases, such as residential areas, the bicycle demand is not high enough to warrant a bikeway designation. Rural highways that are used for intercity and recreational travel should only be designated as a bikeway where there is a need for enhanced continuity with other bicycle routes.

**Signed/Marked Shared Roadway:** This facility is designated by bike route signs, Bikes May Use Full Lane signs and/or shared lane markings (i.e. sharrows) along an existing roadway and has two purposes. One purpose is to provide continuity to other bicycle facilities, such as bike lanes. Another purpose is to designate preferred routes through high-demand corridors. These routes are implied to be more advantageous than alternate routes to bicyclists. Therefore, responsible agencies should ensure that these routes are adequate and well maintained for the needs of bicyclists. The special signing and pavement markings also makes drivers aware of the presence of bicyclists.

Example of a Shared Roadway using shared lane markings and signage. Source: NAACTO

As indicated in the NAACTO guide, shared Lane Markings (SLMs), or "sharrows," are road markings used to indicate a shared lane environment for bicycles and automobiles. Among other benefits shared lane markings reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning, and may be configured to offer directional and wayfinding guidance. The shared lane marking is a pavement marking with a variety of uses to support a complete bikeway network; it is not a facility type and should not be considered a substitute for bike lanes, cycle tracks, or other separation treatments where these types of facilities are otherwise warranted or space permits. The MUTCD outlines guidance for shared lane markings in section 9C.07.

**Bicycle Boulevards:**

A Bicycle Boulevard is a road or street that is ideal for bicyclist transport through specialized road treatment such as traffic calming and speed reduction, way finding signage and pavement markings, and intersection crossing treatments. The following identifies some of the specific treatments that can be used to create bicycle boulevards:

<u>Signage</u>

- Identification Signs
- Way-finding Signs

- Warning Signs
-

Prioritize Bicycle Travel on Bicycle Boulevard

- Pavement Markings
- Stop/Yield Signs

Intersection Treatment

- Bicycle Boxes/Advanced Stop Bar
- Bicycle Activated Signals
- High Visibility Raised Crossing Islands

Traffic Calming

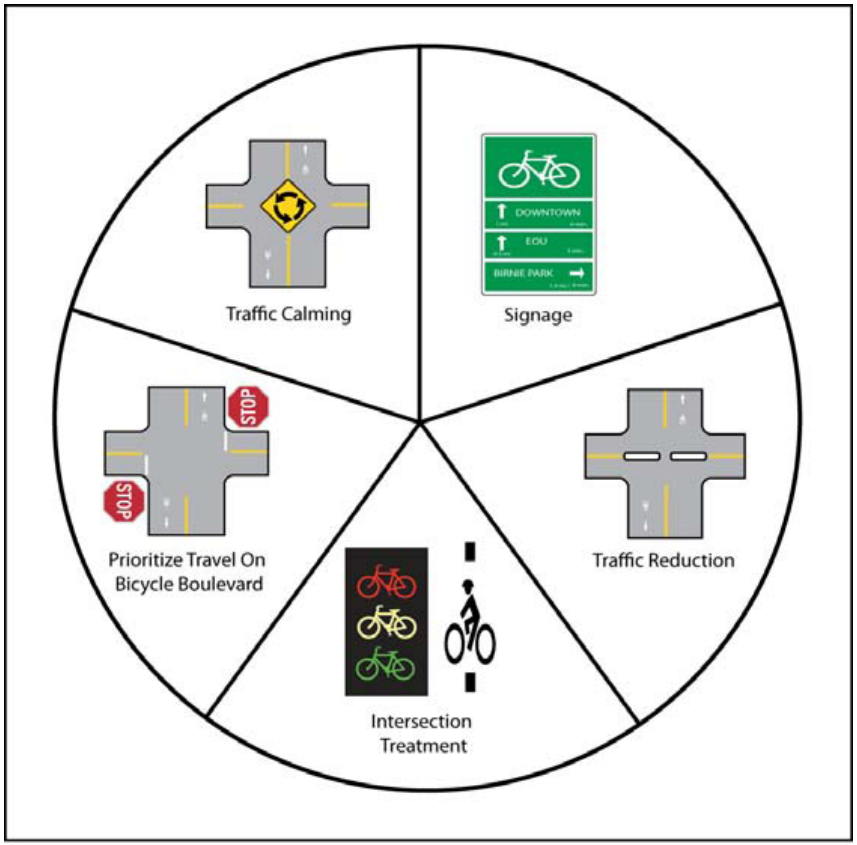
- Roundabouts
- Speed Tables
- Painted and Patterned Surfaces
- Chicanes
- Curb Extensions
- Residential Speed Limit
- Advisory Bicycle Lane
- Contraflow Bicycle Lane

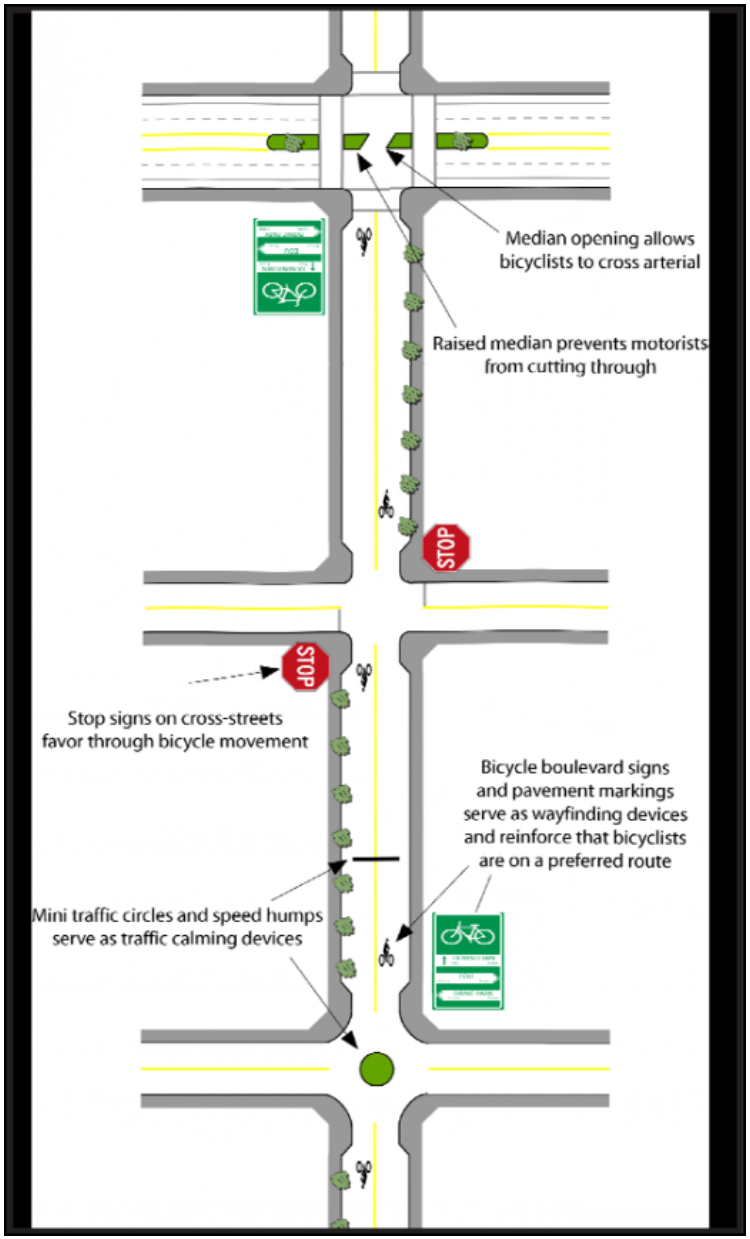
Traffic Reduction

- Non-Motorized Only Crossings
- Partial Non-Motorized Only Crossings



A combination of the above treatments can enhance specific roadways as designated bicycle boulevards. The above treatments are typically used at regular intervals along a roadway corridor, as depicted in the figures on the following page.




Example of Bike Lane

**Bicycle Lane:** This facility's purpose is to enhance conditions for bicyclists on the streets through the use of appropriate pavement markings and signing. Bike lanes are used in areas where there is both a high bicycle demand and distinct needs that can be served by using them. Bike lanes delineate the right-of-way for bicyclists and motorists, separating the traffic and increasing the capacity of highways with mixed traffic. Bike lanes also provide an adequate area for bicyclists where there is insufficient space on the roadway for comfortable riding. For effective bike lanes, bicycle-safe drainage inlet grates should be used, pavement surfaces should be smooth, and traffic signals should be responsive to bicyclists. Regular maintenance should be a top priority to ensure potholes, broken glass, debris, or other impediments do not create a hazard for bicyclists.

**Shared Use Path:** This facility consists of any independent trail on a separate alignment specifically designed for pedestrians and bicyclists. Shared use paths (SUP) are often constructed along rivers, ocean fronts, canals, utility rights-of-way, former or active railroad rights-of-way, within college campuses, within and between parks, or as part of a planned development. Shared use paths offer opportunities not provided by road systems, such as recreation or a direct commute. A shared use path is designed with the safety of all users in mind. This includes bicyclists, joggers, pedestrians, dog walkers, people with baby strollers, people with disabilities, roller bladers, etc.

Example of Shared Use Path

It is important that the proposed facility does not encourage or require bicyclists or motorists to operate in a manner that is different from the rules of the road. The needs of both bicyclists and motorists must be considered in the selection of the facility. Continuity of the overall system should be taken into consideration in the selection of the facility. Alternating segments of shared use path and bike lanes may result in street crossings at the end of the segments or wrong-way bicycle travel beyond the limits of the path due to the inconvenience of crossing the street. Sidewalks should be used in limited circumstances, such as along bridges or in areas of sporadic bicycle use. Any considerable difference in height between the sidewalk and roadway should be protected by a suitable barrier.

Example of Independent Trail Bridge

**Bicycle/Pedestrian Bridges and Crossings:** Crossings of waterways, roadways and other obstacles can be some of the most difficult and costly portions of a trail project due to design, permitting and construction issues. Crossings of waterways can be complicated by the need for various types of permits from state and county agencies. These permits can vary from a minor application showing a sketch of the crossing to permits that required in-depth hydraulic models, reports and coordination with the Federal Emergency Management Agency (FEMA) to determine flood plain impacts. The following are several methods that are typically used on trail projects for waterway crossings: ford, low flow pipe culverts, metal/concrete box or arch culvert, pre-fabricated bridge (various materials) and custom designed bridge.

**Trail Segment Analysis**

Because much of the alignment of this trail is within the PECO electric transmission corridor, close coordination was conducted with PECO to ensure that the trail location and configuration would be suitable to PECO. Coordination meetings were conducted in 2021-2022, with several iterations of the trail plan completed based on PECO's review comments. As a result PECO agreed to the trail location, and to language modifications to the legal agreement requested by the Township. In November 2022 PECO issued the finalized license agreement. See Appendix B for coordination meeting minutes, copies of correspondence, and the approved license agreement.

The following discussion explains the trail features of and anticipated design/construction issues for each segment. The narrative begins at the southwest corner of the Township at the border with Worcester Township / Towamencin Township and progresses northeastward toward the 202 Parkway Trail. A 12-sheet plan set detailing the proposed trail alignment, including segments and alternates, is included in Appendix A.

**Segment 1: Morris Road / Valley Forge Road intersection to Whitaker Park *1.3 miles***

The trail concept is that of an asphalt surface 10 foot wide shared-use path to accommodate walking and bicycling. Where the path is located along roadways a minimum 5 foot wide landscaped / grass buffer will separate the trail from the roadway.

At the signalized intersection of Morris Road / Valley Forge Road, both state highways, signal improvements will add upgrades including crosswalks, countdown timers, and ADA ramps for trail crossings. It is anticipated that a future connection in the form of a side path along the west side of Valley Forge Road (PA Route 363) will extend southwest into Worcester Township.

A 10' wide trail is proposed along the north side of Morris Road (SR 2001) from Valley Forge Road to Muhlenberg Drive, a distance of ½ mile. The shared-use path will replace or widen existing sidewalks and will include a 5' grass buffer to the curb line to meet AASHTO requirements. On-road bike lanes are present on Morris Road, enhancing bicycle access in this area. At the Morris Road bridge over I-476 (PA Turnpike), the bike lane and 6' wide painted buffer will be analyzed during detailed design for potential conversion into a structure-mounted barrier separated trail. Once over the bridge, the shared-use side path will cross residential Muhlenberg Drive at the stop-controlled intersection with Morris Road. A short distance beyond Muhlenberg Drive the trail will leave the roadside and enter the PECO corridor.

*Power Line Trail Segment 1 would parallel the north side of Morris Road between Valley Forge Road and Muhlenberg Drive*

Within the PECO corridor, the multi-use trail will be placed close to and parallel with the northern property line of the right-of-way. This placement is required by PECO as a condition of granting the license agreement for the trail. PECO requires that the trail be restricted to the edges of the right-of-way because such a placement minimizes

interference and minimizes potential risks at those times when the electric transmission facilities are being maintained. High tension electric wires and support towers require replacement at intervals, part of a maintenance program designed to ensure continuity of service. Placing the trail at the edge of the corridor rather than in the middle serves both the requirement of uninterrupted power flow through the grid and the responsibility to minimize potential hazards to trail users.

*Power Line Trail alignment within the PECO right-of-way. PECO requests the trail be placed on the north edge of the right-of-way (left in photo)*

In the ¾ mile between Morris Road and Armstrong Drive, the multi-use trail will encounter four crossings. The first crossing is with an existing concrete path that links residential neighborhoods on opposite sides of the PECO corridor (Hartley Place to the south and Stirling Dive / Muhlenberg Drive to the north). Signage and pavement markings will alert pedestrians and trail users to one another's presence. The second crossing is of S. Broad Street (a local collector road). Warning signs and pavement markings will be required. Although sight lines appear adequate here, the potential need for high level safety improvements such as curb bump-outs to shorten the crossing distance, LED warning signs, or rectangular rapid flashing beacon (RRFB) signals will be evaluated during final design. The third and fourth crossings are that of the trail with residential township streets Collins Avenue and Armstrong Avenue, respectively. Signage and pavement markings will be required at these crossings.

The Armstrong Drive trail crossing is a short distance (400 feet) from Whitaker Park. Sidewalks and low volume residential streets provide readily accessible connection between the trail and the park.

**Segment 2: Whitaker Park to Parkside Place Park *1.3 miles***

Segment 2 continues the shared-use path within the PECO right-of-way for another ¾ mile; crosses the Stony Creek Branch, a single-track active freight line owned by SEPTA; runs as a side path along West Point Pike from Moyer Boulevard north; and co-locates with an existing shared-use path to enter Parkside Place park.

The first three crossings to be encountered are that of Eagle Lane, West Point Pike, and Oak Street. Eagle Lane and Oak Street are local township streets, the crossings of which warrant pavement markings and signage. West Point Pike is a county-maintained highway, which crossing will require detailed analysis during final design. RRFB signals may be appropriate here.

As with Segment 1, PECO did grant permission for a trail within this utility right-of-way provided the trail is placed along the northern property line. As the trail approaches the Stony Creek Branch railroad, the trail alignment crosses to the opposite side of the PECO corridor in order to work its way toward an existing underpass beneath the railroad tracks. For a distance of 250 feet, the trail would be placed within the SEPTA railroad right-of-

way along the base of the railroad embankment. Preferable to an at-grade crossing of the tracks, this narrow underpass has not been used in many years. This study recommends that the underpass be inspected and any necessary repairs made so that it may serve as a trail facility.

*With SEPTA's permission, the trail may utilize this unused farm road underpass located ½ mile south of West Point Pike*

Once through the underpass, the trail turns north and runs within another utility corridor owned by PECO. After a distance of ½ mile, West Point Pike is reached. About half of the proposed alignment between the underpass and West Point Pike may be subject to a development project now under consideration. If this development occurs, that portion of the trail will be completed by the developer.

Upon reaching West Point Pike, Segment 2 turns northeast and parallels the east curb line the road. Depending on the width of the road right-of-way, a strip easement may be needed from Merck. The existing concrete sidewalk would be widened or replaced with an asphalt surface shared use path. Moyer Boulevard, a local collector road, would be crossed at its stop-controlled "T" intersection with West Point Pike. Pavement markings and warning signage would alert motorists and trail users of one another's presence. Design of this crossing needs to consider how best to minimize the hazard caused by motor vehicles turning from West Point Pike onto Moyer Boulevard. This is because southbound traffic turning left may need to pause (if and when opposing northbound traffic is present), and northbound traffic turning onto Moyer Boulevard may sweep around the right-hand turn without stopping.

*Existing trail bridge over Wissahickon Creek between West Point Pike and Parkside Place*

A quarter mile north of Moyer Boulevard, at a point opposite Merck Entrance 5A, the proposed alignment turns east away from West Point Pike and utilizes an existing trail. For a distance of 500 feet from West Point Pike to a narrow trail bridge across Wissahickon Creek, the existing path is paved with asphalt. Once across the bridge, the path narrows and the surface changes to crushed stone for a distance of 230 feet. The full-width asphalt shared-use path then resumes, and continues for a ¼ mile into Parkside Place at a point adjacent to Nor-Gwyn Pool. Public comments received during the study process describe unsafe conditions, including flooding and accumulation of mud, along the crushed-stone segment of the path followed by requests that these issues be corrected by paving this 230-foot stretch with asphalt. Wissahickon Valley Watershed Association's Green Ribbon Trail footpath connects to the existing shared-use path at the crushed stone section of the path. Any work in this area will require close coordination with WVWA, as the organization prioritizes the preservation of natural conditions adjacent to the Green Ribbon Trail, including in this area.

**Segment 3: Parkside Place to Wissahickon Avenue *1.4 miles***

Beginning in Parkside Place adjacent to Nor-Gwyn Pool, for a distance of 700 feet the existing sidewalk will be replaced with trail, or the sidewalk widened, north to a crossing of a roadway once referred to as Center Street. This crossing, which provides motor vehicle access to 45 parking spaces, should be revised to include wider ADA curb ramps, signage, and revised pavement markings. From Center Street northward, 550 feet of existing asphalt trail will serve as the Power Line Trail. The 250 foot long sidewalk that crosses another parking lot access roadway before reaching the signalized intersection of Parkside Place and Sumneytown Pike will be replaced or widened. As with Center Street, the driveway crossing should be enhanced with signage and pavement markings.

*Segment 3 places the Power Line Trail on this alignment through Parkside Place. Nor-Gwyn Pool is on the right*

At the Sumneytown Pike and Parkside Place intersection, improvements will be made to add crosswalks, countdown timers, ADA ramps and other enhancements as needed to upgrade the signal for the trail crossings.

Once across Sumneytown Pike, the trail will turn west and run as a side path along the north side of Sumneytown Pike. Between Parkside Place and Dickerson Road, a quarter mile of concrete sidewalk will be and widened or replaced. Driveway and crosswalk improvements will be needed at three private driveways that provide vehicular access to businesses.

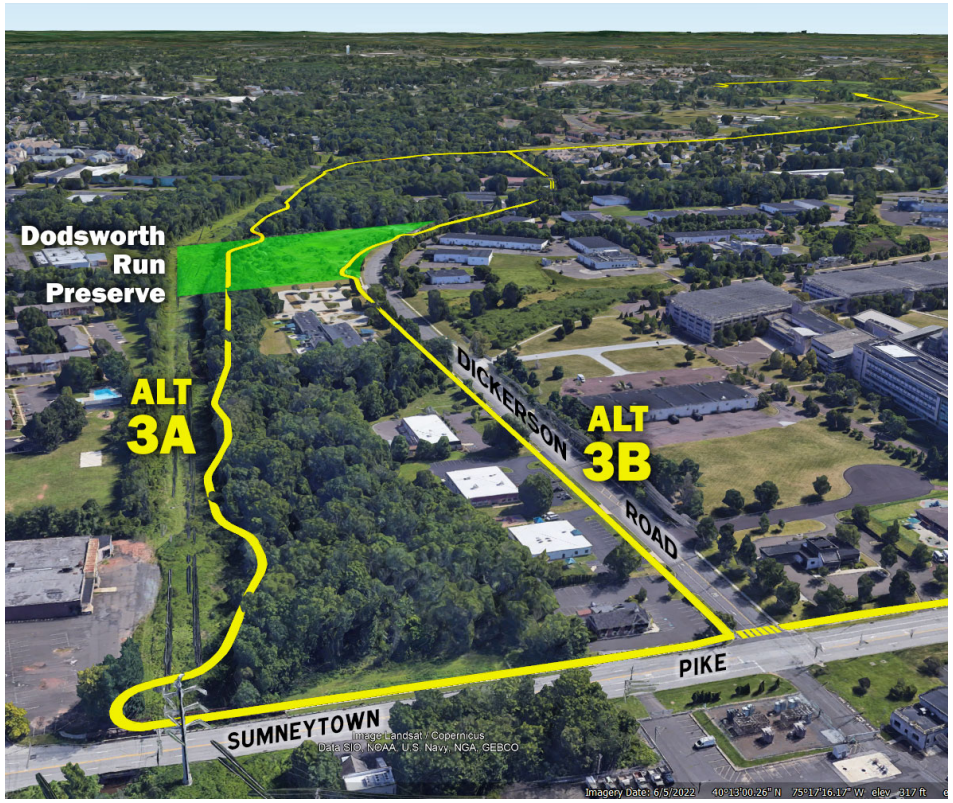
*Segment 3 replaces the sidewalk on the north side of Sumneytown Pike with a shared-use side path. Signage and pavement markings will be placed at driveway entrances*

The trail will cross Dickerson Road at the signalized T-intersection of Dickerson Road and Sumneytown Pike. This signal includes push button-actuated pedestrian signals. After crossing Dickerson Road, two alternates present themselves. Alternate 3A is a ¾ mile off-road shared-use path that follows the banks of the Wissahickon Creek from Sumneytown Pike to Wissahickon Avenue, utilizing the PECO power line corridor. Alternate 3B is a slightly shorter side path along Dickerson Road, traversing a business park / light industrial area. Both alternates provide access to Wissahickon Valley Watershed Association's Dodsworth Run Preserve.

Descriptions of Alternates 3A and 3B follow.

**Alternate 3A: Sumneytown Pike to Wissahickon Avenue along the banks of the Wissahickon Creek**

500 feet west of Dickerson Road, the existing pedestrian bridge on the north side of Sumneytown Pike will carry the trail over the Wissahickon Creek. Replacement of this pedestrian bridge and the parallel roadway bridge is currently under design. The Sumneytown Pike bridge replacement project will remove both the trail and the roadway bridge, replacing them with a single new structure with a fixed barrier on the north side to separate motor vehicles from trail users. Once across the Wissahickon, Alternate 3A turns north within PECO right-of-way and follows the west bank of the Wissahickon. The PECO corridor shares a property line with Parc at West Point, a 250-unit apartment complex. If owners AION Management are amenable, a short paved connection would afford residents easy access to the Power Line Trail.




*Alternate 3A occupies the PECO right-of-way along the banks of the Wissahickon Creek. Alternate 3B widens the concrete sidewalk along Dickerson Road*

At a point approximately 1000 feet north of Sumneytown Pike, a new trail bridge will take the trail from the west to the east bank of the creek. At a point 1000 feet north of the bridge, the trail temporarily leaves the PECO right-of-way, continuing along the west bank of the creek within WVWA's Dodsworth Run Preserve. Here connection is made with the shared-use paths that loop within the Preserve. Continuing north from the Preserve, a second trail bridge will be required owing to the serpentine course of the creek in this area.

Trail Segment 3A ends at Wissahickon Avenue where connections to the existing sidewalk network will be made. Warning signs and pavement marking improvements will be installed at Wissahickon Avenue to accommodate a safe trail crossing. The need for high level safety improvements such as LED impeded warning signs or rectangular rapid flashing beacon signals will be evaluated during final design at higher volume / higher speed road crossings such as this one. It is here that connection will be made with the proposed Liberty Bell Trail which is planned to proceed west along Wissahickon Avenue toward Lansdale and points north.

**Alternate 3B: Sumneytown Pike to Wissahickon Avenue on Dickerson Road sidewalk**

Rather than implement a multi-use trail along Wissahickon Creek, Alternate 3B widens the existing sidewalk along Dickerson Road. No connection can be made with the 250 unit Parc at West Point apartment complex. Eight driveway entrances to businesses will require painted crosswalks and warning signage. A 200 foot wide driveway apron to a roofing supply warehouse should be redesigned to minimize potential for collisions there.

**The north ends of Alternates 3A and 3B** are both located along Wissahickon Avenue: 3B at Dickerson Road; 3A at a point 1000 feet west of the intersection. Alternate 3A meets the south end of Alternate 4A while Alternate 3B meets the south end of Alternate 4B. Segment 4 is described in detail in the next section. Of relevance here is the fact that recommendation of / selection of Alternate 3A does not necessarily correlate with selection of 4A, nor does selection of 3B correlate with 4B. The most feasible scenario may recommend 3B and 4A, or 3A and 4B. The latter is in fact what this study recommends, for reasons that will be explained.

Scenarios that combine 3B with 4A, or 3A with 4B, will require a connection between these segments' endpoints. This may be accomplished by placing a new 1000 foot long shared-use side path along Wissahickon Avenue. Both the north and south side of the road were considered.

While there is sufficient space for a side path on the south side of Wissahickon Avenue, solutions will need to be found for two issues. The first is how best to cross Wissahickon Creek. A new trail bridge may be erected alongside Wissahickon Avenue. Or the deck of the existing Wissahickon Avenue bridge may be modified to create space for the trail. This would involve tapering / shifting the travel lanes and adding a fixed barrier between the eastbound lane and the area set aside for the trail. The existing bridge's generous 38 foot wide curb-to-curb width makes this feasible. The second issue is the likely need to negotiate a trail easement with the private property owner on the south side of Wissahickon Avenue (see photo below). Determination of the precise right-of-way width of Wissahickon Avenue is a task for the final design process, but it is unlikely that the right-of-way is adequate for a side path.

Placing the side path on the north side of Wissahickon Avenue would encounter the same right-of-way problem. However, instead of negotiating with one commercial property owner, it would be necessary to negotiate with three homeowners. Because the three dwellings were built with their front doors close to the road, implementing the trail here would take away approximately half the depth of their front yards. For this reason a multi-use trail on the side of the road opposite the houses is more feasible.

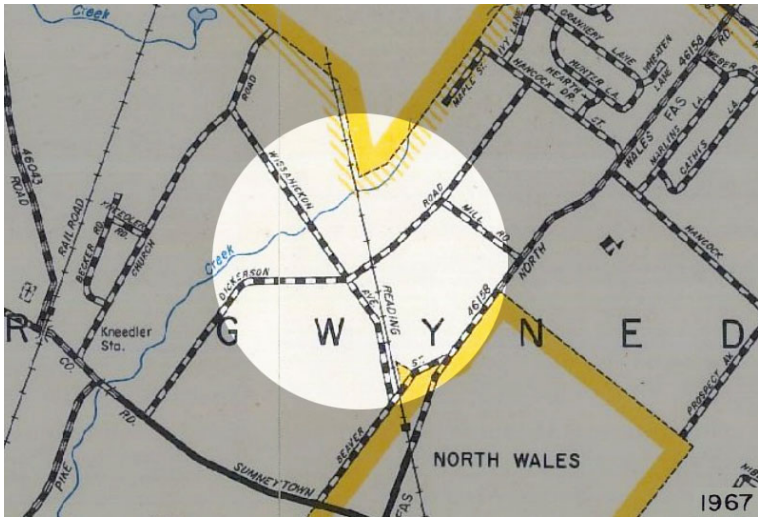
By way of background, this row of three residences was once a row of eight. Five houses here were condemned and torn down in the 1970s as part of the right-of-way acquisition for PennDOT's North Penn Expressway. Planned as an extension of the Route 309 Expressway from its endpoint in Lower Gwynedd to the Kulpsville Turnpike Interchange in Towamencin, the highway design placed interchanges at Church Road, Dickerson Road, and North Wales Road. After the project was cancelled, the hundreds of properties that the commonwealth had taken by eminent domain were sold, with several along the north side of Wissahickon Avenue being acquired by WVWA. An interpretive sign explaining this consequential chapter of local history may be of interest to trail users.

*A shared-use side path on the south side of Wissahickon Avenue would require negotiation of a trail easement. Yellow shading indicates a possible alignment for this connector trail*

**Segment 4** is the portion of Power Line Trail alignment between Wissahickon Avenue and the intersection of Mill Road / Dickerson Road. While relatively short (approximately 0.4 mile) the planning and design of this segment is faced with the issue of how best to get the trail past the double-track SEPTA Lansdale Doylestown railroad line. Built in the 1850s as the North Penn Railroad (from which this region derives its name), this is a double-track railroad that sees both freight and frequent commuter train service. Currently there are no crossings within the trail study area. The nearest crossings, both at-grade, are that of Church Road and Beaver Street, each about ½ mile distant. Wissahickon Creek flows through a small stone arch just outside the PECO corridor. The earth embankment supporting the railroad here is 20 feet high.

*The existing stone arch beneath the SEPTA Lansdale-Doylestown line cannot accommodate a shared-use path*

Solutions that would take the trail beneath the railroad or cross the tracks at grade were identified and evaluated. Keeping the trail within the PECO right-of-way limits available options, due to the height of the railroad embankment. There are occasions where a trail may be tucked under an existing bridge or within an archway that has excess capacity. In this case, examination of the nearby arch containing the Wissahickon Creek reveals that the opening is too small, ruling out that solution. An alignment that would slope the trail up to the railroad and back down again in order to effect an at-grade crossing is not feasible, particularly if steepness is limited to that allowed by ADA. A feasible, albeit costly solution is to bore a new tunnel beneath the railroad embankment. This solution has been implemented in similar circumstances as part of other trail projects in the region. Because the embankment was created by placing soil and broken stone excavated elsewhere during the railroad's construction, the tunnel boring process will likely not encounter bedrock. Alternate 4A uses the tunnel boring method.




*This 1967 Pennsylvania Department of Highways map shows the Dickerson Road grade crossing in addition to grade crossings at Church Road, Beaver Street, and Walnut Street*

Alternate 4B detours away from the PECO right-of-way, returning to it on the other side of the railroad in order to reach a more level railroad crossing point. At the present time, Dickerson Road exists as two isolated segments, located north and south of the railroad. Before the 1980s, Dickerson Road crossed the SEPTA railroad at an at-grade crossing. Because Dickerson Road traffic volumes were relatively low, the Dickerson Road grade crossing was closed and traffic detoured to nearby crossings, the nearest being Beaver Street in North Wales borough. The concept of opening a grade crossing for trail users on SEPTA tracks does have precedent and is explored as Alternate 4B.

Descriptions of Alternates 4A and 4B follow.

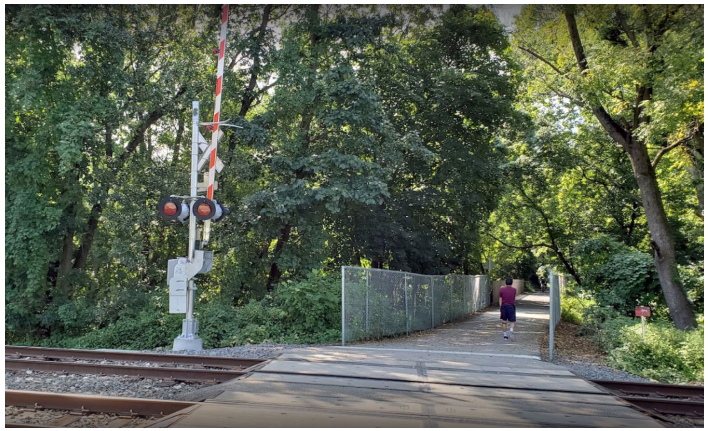
**Alternate 4A Wissahickon Avenue to Mill Road through new tunnel *0.4 miles***

After crossing Wissahickon Avenue, the 200 foot wide PECO right-of-way continues north. 800 feet north of Wissahickon Avenue, the electric transmission wires span over the double-track SEPTA Lansdale Doylestown railroad line. The tracks here are atop a 20 foot high earthen embankment, this being a significant obstacle to any trail located in this portion of the corridor. The SEPTA railroad right-of-way pre-dates the PECO property, so coordination with SEPTA will be necessary. One solution that has proven successful elsewhere is the boring of a large-diameter culvert through the earthen fill supporting a railroad. A nearby, successful implementation of this concept is the 2019 opening of the D&L Trail in Falls Township, Bucks County where the multi-use trail passes beneath active Conrail tracks through a new tunnel bored for the purpose. Boring a tunnel requires that several criteria must be met, among them that the existing embankment must be of sufficient height to ensure a specified depth of undisturbed soil above the culvert so that the weight of trains passing overhead is distributed satisfactorily. Closer examination to determine of the feasibility of this approach, in close coordination with SEPTA, will be part of the design engineering process.


*Segment 4 Alternate A would take the trail under the SEPTA Lansdale Doylestown Line by boring a new culvert through the embankment. This solution was successfully implemented in 2019 in Bucks County, allowing the D&L Trail (above) to pass beneath active Conrail freight tracks*

**Alternate 4B Wissahickon Avenue to Mill Road over re-opened grade crossing *0.3 miles***

The location of the now-closed Dickerson Road grade crossing of SEPTA's Lansdale Doylestown line is approximately 1000 feet south of the point where the PECO right-of-way intersects with the railroad. Traffic on Dickerson Road crossed the double-track railroad at grade here until the crossing was closed circa 1980. Today the remnant pieces of Dickerson Road closest to the railroad see very little traffic. Were SEPTA to be convinced that this crossing could be reopened safely, not for motor vehicles but for trail users, application could be made to the state PUC to re-open the crossing. There is recent precedent for this locally. In 2015, SEPTA allowed the establishment of an at-grade crossing for Montgomery County's Pennypack Trail in Lower Moreland Township. Like the Lansdale Doylestown Line, SEPTA's West Trenton line is a double-track railroad that sees a high volume of commuter train service as well as freight trains. Both railroads are straight (tangent) for a long distance on both approaches to the trail crossings, resulting in good sight lines. A Power Line Trail grade crossing at Dickerson Road should base its design (fences, warning lights, gates) on that of the Pennypack Trail crossing.



*The Pennypack Trail crossing of SEPTA's West Trenton railroad is similar to the grade crossing proposed for the Power Line Trail*

Given the potential engineering challenges and costs associated with boring a tunnel beneath SEPTA's Lansdale Doylestown line, this study recommends that the Dickerson Road grade crossing be pursued (Alternate 4B rather than 4A). This however is not to imply that either concept is without potential drawbacks. Because either one would of necessity require the involvement of various SEPTA departments, including real estate, planning, and operations, and ultimately the approval of the general manager, this recommendation may well be revisited and reevaluated at a later date.

**Segment 5 Mill Road / Dickerson Road to Hancock Road *0.8 miles***

Segment 5 of Power Line Trail follows the PECO electric transmission right-of-way ¾ of a mile from the intersection of Mill Road / Dickerson Road, to Hancock Road at the PECO right-of-way (750 feet northwest of the intersection of Hancock Road / Prospect Avenue).

The first quarter mile, from Dickerson Road to North Wales Road, is placed within the PECO right-of-way, tight against its northern boundary per PECO's preference, making the trail function as essentially a side path of Mill Road. Pavement markings and warning signs will be placed where Arbour Court, the driveway to Mill Run condominiums, crosses the shared-use path.

The trail will cross North Wales Road (SR 2010) at the intersection with Mill Road. Curb to curb width of North Wales Road here is 40 feet. Pavement markings, advance warning signs, and RRFB amber warning signals are recommended at this crossing.

The ½ mile of trail alignment from North Wales Road to Hancock Road is entirely within PECO property and there are no road crossings. North Penn School District property borders the north side of this PECO right-of-way. The school district parcels include Pennbrook Middle School and several ball fields utilized by youth leagues. The recommended trail alignment runs just inside the north edge of the PECO property, with the final 1000 feet of Segment 5 trail placed in the wide lawn that separates the ball field complex from a gravel parking area.

*PECO right-of-way adjacent to North Penn School District property. This view looks north toward Hancock Road*

**Segment 6 Hancock Road to US 202 / PA Route 63 *1.4 miles***

The trail will cross Hancock Road at to the driveway entrance to the Nor-Gwyn Baseball & Softball Complex. Because Hancock Road is a township road that motorists tend to use as a convenient alternative to Welsh Road, this trail crossing should include pavement markings, advance warning signs, and RRFB signals. North of Hancock Road, the trail alignment enters an agricultural parcel owned by Delaware Valley University. The Roth Center for Sustainable Agriculture leases a large portion this parcel to individuals who farm it. At a coordination meeting between township officials and Delaware Valley University personnel, it was made clear that permission for the trail will be contingent on the trail alignment following the edges of the property, in an effort to minimize potential adverse impacts on the farmed areas. Continuous split rail fencing will be installed to

prevent trail users from entering the farm fields. The trail route will follow a circuitous (and picturesque) course along the west edge of the farm fields, north to Welsh Road (PA Route 63).

*This photograph looks west on Welsh Road at the intersection with Bell Run Boulevard. The trail alignment from Hancock Road reaches Welsh Road at this point and turns east, then following the south side (left side) of Welsh Road to Dekalb Pike. Upgrades to this traffic signal would enable connection to shopping and residential neighborhoods in adjacent Montgomery Township*

This point on the south side of Welsh Road, which serves as the boundary between Upper Gwynedd Township and Montgomery Township, is opposite the signalized intersection of Welsh Road and Bell Run Boulevard. Bell Run Boulevard is a Montgomery Township-owned road that provides access to several contiguous shopping centers, including a diner and fast food outlet; and The Villages at Gwynedd Pointe, a large condominium community. These represent potentially significant trail user destinations and origin points in adjacent Montgomery Township. A short (20 foot) trail spur to the intersection, and the upgrading of this signal to include crosswalks and pedestrian countdown timers, would enable this valuable intermunicipal connection.

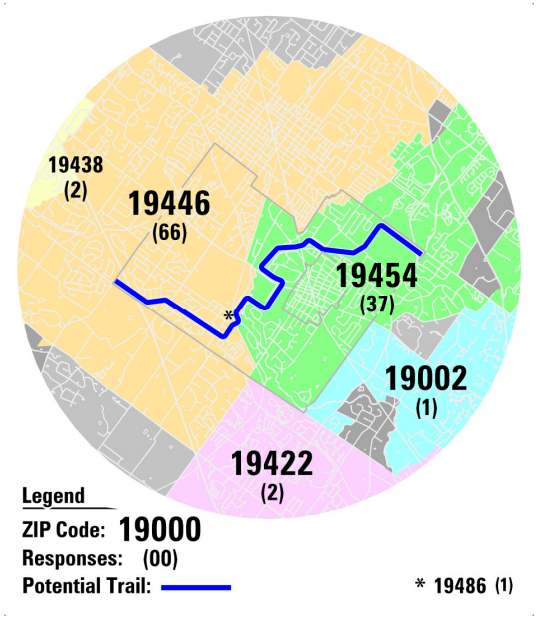
From the Welsh Road / Bell Run Road intersection, the trail continues east and, for a distance of ½ mile, parallel to the south edge of Welsh Road. A minimum five feet of buffer space will be maintained between the roadway and the trail, and preferably more, as conditions allow. The shared-use side path on the south side of Welsh Road ends at the signalized intersection of Welsh Road and Dekalb Pike. Coordination with PennDOT will likely be necessary, as the trail corridor falls partly within PennDOT right-of-way and partly on Roth Farm property for which an easement will need to be negotiated.

Improvements to the Welsh Road / Dekalb Pike traffic signal are recommended to accommodate the trail crossing from the west side to the east side of Dekalb Pike, and crossing from the south side to the north side of Welsh Road. Placing the trail on the north side of Welsh Road rather than the south avoids the trail crossing busy entrances / exits from the Wawa gas station/convenience store. The trail will widen (or replace) the existing sidewalk on the north side of Welsh Road crossing three commercial driveways. Signage and pavement marking improvements will be installed at these driveways as needed. After a distance of 900 feet, this segment of the Power Line Trail will connect to the existing signalized intersection at the 202 Parkway and Welsh Road, thereby forging this important connection to the 12 mile long 202 Parkway Trail.

*Power Line Trail would replace 900 feet of sidewalk on north side of Welsh Road between 202 Parkway and Dekalb Pike*

## 5) Public Participation Process

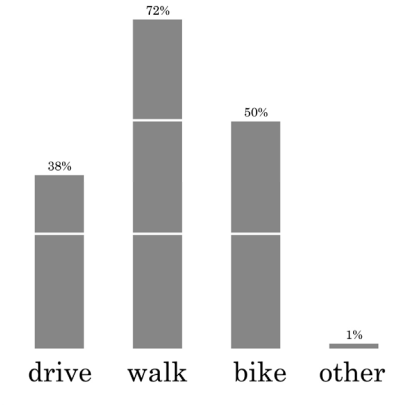
Upper Gwynedd Township informed residents about this study in the triannual township newsletter that is distributed to every address in the township, on the township web page, and via social media channels. A web address was provided where those interested could learn about the project and leave feedback.




Members of the public were invited to complete an on-line questionnaire. Participants were asked to fill in their zip code; which mode they would use to access the trail e.g., walk, bike, drive; what other trails they use; whether there are school-age children in their household; and whether or not they bicycle on roads open to motor vehicle traffic.

118 individuals participated in the on-line survey. Addresses in Upper Gwynedd Township are divided between zip codes 19486, 19454, and 19446; the latter two include areas adjacent to Upper Gwynedd. 104 of the survey respondents (88%) reported residing in one of those three zip codes.

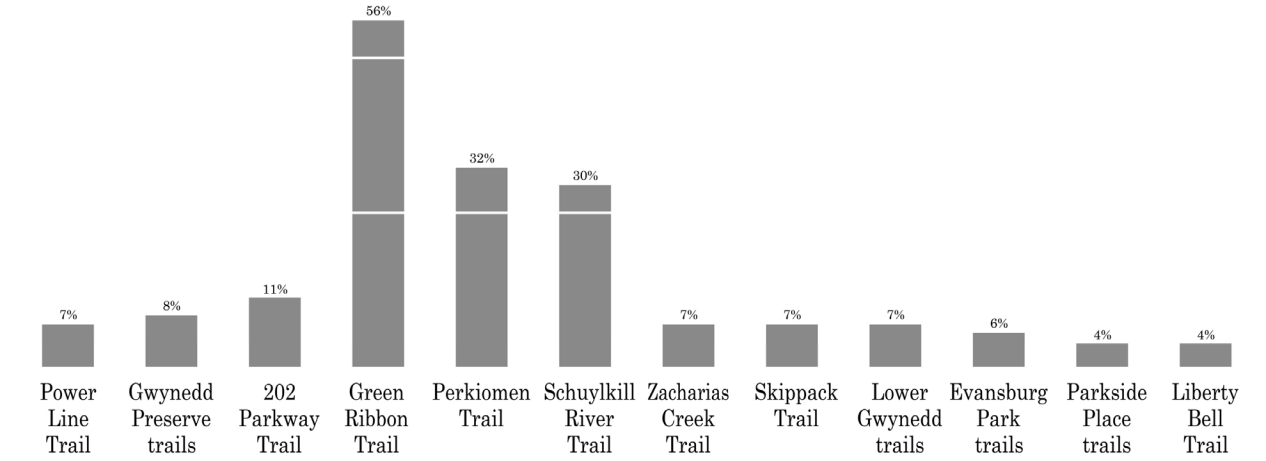
Of the respondents who answered the query regarding whether or not they rode bicycles on roads (in addition to trails), responses were close to evenly split. 54% responded that they did cycle on both trails and roads, while 46% responded that they cycled on trails only (not roads). These results imply that implementation of the Power Line Trail would enable a considerable number of residents to bicycle in Upper Gwynedd Township where they otherwise might not.




Determining how a multi-use trail is likely to be accessed is a key factor in the planning and design processes. The survey posed this question, allowing respondents to choose more than one mode. All but three respondents answered. Nearly three-quarters (72%) indicated that they would walk to the trail. Half (50%) would bicycle to the trail. Slightly over one-third (38%) indicated that they would drive to the trail by car. One respondent chose "other accessible mode." That a high percentage of respondents indicate a desire to walk to the trail attests to the merit of placing a multi-use trail in this corridor. The Power Line Trail as envisioned would tap into existing sidewalk networks, thereby extending their range while connecting neighborhoods that are otherwise auto-dependent. This question's responses are illustrated by the bar graph at left.

Of the respondents who answered the question regarding having school-age children in their households, 35% responded that they did, and 65% reported that they did not. That fully one-third of the respondents have school-age children in their households lends support to the idea that the Power Line Trail should be designed in a way that makes it suitable for all ages and abilities.

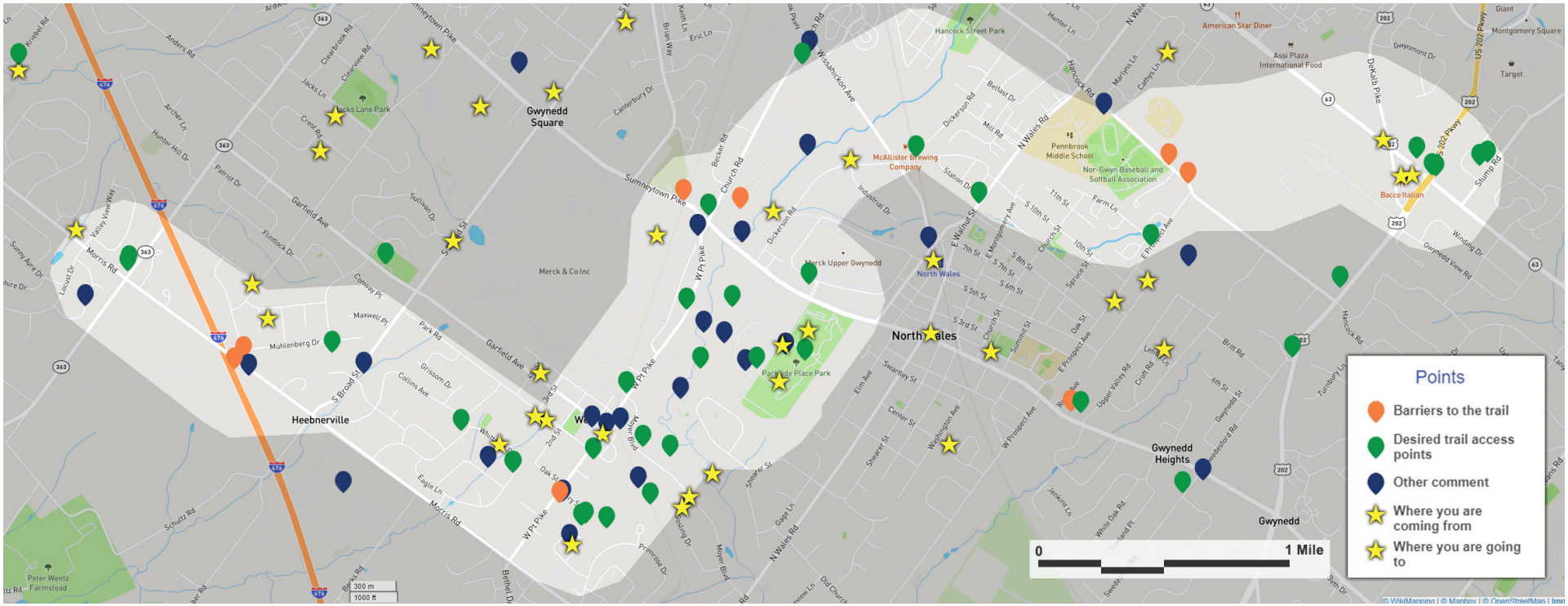
Seventy-one respondents listed the trails that they currently use. The number of trails ranged between one and six trails, with the majority listing just one or two. Forty respondents (56%) reported using the Green Ribbon Trail, which is an earth-surface footpath. The distribution of responses mentioning twelve nearby trails is illustrated in the table below.




Aside from the Green Ribbon Trail which traverses the southern portion of the Township, the more distant Perkiomen and Schuylkill River Trails are clear favorites among the respondents. Neither the Perkiomen nor the Schuylkill can be reached from Upper Gwynedd by trail; they can only be reached by road (either by mounting a bicycle on an auto and driving there, or on-road cycling by those willing to "share the road" with motor vehicle traffic). The Power Line Trail is listed because a portion of it is open, two townships away (in Horsham Township). The relatively low number of respondents reporting use of the Liberty Bell Trail may be due to the fact that aside from isolated segments in Lansdale and Hatfield, Liberty Bell Trail has not yet progressed beyond the planning stage.

Completion of the Power Line Trail in Upper Gwynedd Township will provide direct connection with the 202 Parkway Trail, Green Ribbon Trail, and Parkside Place trails. Longer term, connection will also be made with planned extensions of the Power Line Trail (Montgomery Township), Zacharias Creek Trail (Worcester Township), and the Liberty Bell Trail (Upper Gwynedd Township). These extensions will in turn bridge gaps in The Circuit regional trail network, ultimately providing uninterrupted access between Upper Gwynedd Township and long-distance trails and greenways including the Perkiomen Trail and Schuylkill River Trail. The completion of gaps in the trail network may encourage the cyclists who mount their bicycles on their cars (which they drive to trailhead parking lots) to leave the cars at home and ride their bicycles to the trails instead.

The public was invited to view an on-line map of the Power Line Trail study corridor. Those interested were encouraged to mark up the map and to leave their comments and concerns regarding the idea of placing a multi-use trail in the corridor.




Forty-four individuals contributed content to the map of the potential trail corridor (see above). The contributions were made by placing points on the map, each point representing one of five categories:

| Number of points placed on map | Additional comments | Point Category |
|---|---|---|
| 34 | 4 | Desired trail access points |
| 19 | 4 | Where you are coming from |
| 30 | 2 | Where you are going to |
| 6 | | Barriers to the trail |
| 24 | 3 | Other comments |
| 113 | 13 | Totals |

The on-line map provided individuals with the opportunity to comment on the points they added, as well as to comment on points submitted by others. The 113 points, along with the 13 additional comments made by the contributors, are tabulated in a table included in Appendix D.

The comments received were overwhelmingly positive, with many offering suggestions on how best to implement the trail. Concerns relating to busy road crossings were raised, followed up by suggestions to enhance safety (e.g., provision of warning signage and signals). Respondents also raised the issue of the trail crossing active railroad tracks, emphasizing the need to ameliorate potential hazards.

Three respondents submitted comments flatly opposed to the placement of this trail in this corridor. One listed traffic safety issues characterized as having no solution; one expressed concern over perceived loss of privacy; and one admitted that they do not use any of the existing trails in the surrounding area, concluding "enough is enough."

Seven comments indicated desire to create a link between the *Reserve at Gwynedd*, a 400 unit 55+ gated community, and the proposed Power Line Trail. Sample comment: "There are many walkers at the *Reserve at Gwynedd*. The power lines border the Reserve. it would be great to have access at this point." *Reserve at Gwynedd* shares a property line with the PECO right-of-way that the Power Line Trail will occupy, and another property line with the SEPTA-owned Stony Creek Branch railroad. A connection from *Reserve at Gwynedd* to this study's recommended Power Line Trail alignment would allow a short (½ mile) walk to the village of West Point. Parkside Place and the Upper Gwynedd municipal complex are located a further ¾ mile along the proposed trail. One responder cautioned that because *Reserve at Gwynedd* is a gated community, any link to the trail may need to be placed on adjacent publicly accessible areas rather than linking directly into the private community.

Several comments were submitted regarding the condition of the existing multi-use trail that links West Point Pike and Parkside Place. Commenters indicated that persistent water flowing over the path leaves the surface covered with ice during winter, and with slick mud at other times. This study proposes the co-location of a portion of the Power Line Trail on this segment of existing trail. Survey of this area to investigate conditions, and determine a remedy for the drainage problem, is recommended.

*Survey respondents requested that a solution be found to correct ongoing drainage problems along the existing shared-use path between West Point Pike and Parkside Place*

Upper Gwynedd Township mailed letters to households located along the prospective trail corridor notifying residents of the study's goals, presenting the tentative trail alignment, and offering to meet in person to hear their comments and concerns. Twenty households requested meetings during which they shared their reactions to the study's recommendations. A summary of these meetings is provided in Appendix D of this report.

## 6) Right of Way Analysis

The bulk of the Power Line Trail alignment is within right-of-way owned by PECO. In November 2022, PECO and Upper Gwynedd Township agreed to the terms of a license agreement for those segments of the trail that will be constructed on PECO property.

As the Power Line Trail enters Upper Gwynedd Township from the east, the first property owner encountered is Delaware Valley University. The university owns the 240 acre Roth Center for Sustainable Agriculture, also known as the Roth Farm. The university has expressed willingness to grant a trail easement, on the conditions that the trail stays along the edges of university property, and a continuous split-rail fence be erected. (An initial concept had the trail follow PECO electric transmission lines as they cross diagonally through the farm property, but the university rejected this.) A trail easement will need to be negotiated with the university for the portion of the trail alignment that connects Welsh Road (SR 63) and Hancock Road. A trail easement will likely be necessary for the 0.6 miles of trail that will follow the edge of the Roth Farm property adjacent to Welsh Road (SR 63). The amount of state highway right-of-way available for the trail, the use of which will reduce the amount of trail easement needed, will be determined during design.

In general, in those cases where it's necessary to gain control of the trail alignment by acquiring right of way, or negotiating easements or other agreements in order to construct linear projects such as this, the following well-established methods may be utilized:

1. **Easement:** One of the least costly and most effective methods for acquiring the legal permission to open a trail to cross a property is through a permanent easement agreement. The easement agreement is a legal document that modifies the property owner's deed to allow the use of a portion of their property for the construction of the trail, and the permanent use of that portion of the property by trail users. Typically, the municipality, county, or other agency would be responsible for maintenance and liability issues related to the trail within the easement.

2. **Lease Agreement:** This type of document is similar to an easement, except that a specific time frame is stipulated. There are cases where a property owner has long range plans for their property, and may not wish to have a permanent easement attached to their deed. However, these agreements often stipulate relatively long time periods such as 10 to 20 years or more, are typically renewable, and can function just as well as permanent easements.

3. **Fee Simple Purchase:** A more costly and potentially time-consuming alternative is the outright purchase of properties, or portions of properties. If easements or other agreements cannot be agreed upon, an agency may negotiate a land purchase for the trail. This process can be complicated by disagreements over property appraisals, questions of property ownership, the need for right of way plans, and modifications to deeds. That said, this process is commonly used on transportation projects, and may be used for multi-use trail projects as well.

# 7) Implementation Plan

This table outlines the order in which the trail segments may feasibly be constructed.

| Segment | Description | Cost | Recommended Funding Source(s) |
|---|---|---|---|
| 3A | Sumneytown Pike to Wissahickon Avenue | $950,430 | DCED / DCNR / TASA |
| 5 | Mill Road to Hancock Road | $967,271 | DCED / DCNR |
| 6 | Hancock Road to US 202 / Route 63 | $1,233,018 | DCED / DCNR / TASA |
| 4 | Wissahickon Avenue | $327,182 | DCED / DCNR / TASA |
| 4B | Wissahickon Avenue to Mill Road | $750,347 | DCED / DCNR / TASA |
| 3 | Parkside Place to Sumneytown Pike / Dickerson Road | $493,915 | DCED / DCNR |
| 2 | Whittaker Park to Parkside Place | $1,350,756 | DCED / DCNR |
| 1 | Morris Road / Valley Forge Road to Whittaker Park | $1,721,760 | DCED / DCNR / TASA |

A detailed preliminary cost estimate, broken down by segment, is included in Appendix C.

The current plan is to design and construct Segment 3A, followed by Segment 5. These segments include relatively few potential obstructions and fewer concerns from adjacent neighbors. Then, with more local support from the community, the link between these first two segments will be designed and built, and the connection to the 202 Parkway will be pursued. With that accomplished, the trail will be connected into Parkside Place, the main destination for residents in the community. Later phases will extend the trail south from Parkside Place, ultimately reaching the township line where connection can be made with future trail projects in Worcester and Towamencin Townships.

A list of potential trail funding options follows.

## Funding Options:

Securing adequate funding for the design and construction of these types of projects can be a challenge. The following is a list of possible funding sources for this project:

Pennsylvania Transportation Alternatives Program

The Transportation Alternatives Set-Aside (TASA) provides funding for projects and activities defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation, trails that serve a transportation purpose, and safe routes to school projects.

https://www.penndot.gov/ProjectAndPrograms/Planning/Pages/Transportation%20Alternatives%20Set-Aside%20-%20Surface%20Trans.%20Block%20Grant%20Program.aspx

DCED Act 13 Grants: Greenways, Trails and Recreation Program (GTRP)

Act 13 of 2012 establishes the Marcellus Legacy Fund and allocates funds to the Commonwealth Financing Authority (the "Authority") for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects using the Greenways, Trails and Recreation Program (GTRP).

http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/greenways-trails-and-recreation-program-gtrp

DCED Multimodal Transportation Fund

The Multimodal Transportation Fund provides grants to encourage economic development and ensure that a safe and reliable system of transportation is available to the residents of the commonwealth. Funds may be used for the development, rehabilitation and enhancement of transportation assets to existing communities, streetscape, lighting, sidewalk enhancement, pedestrian safety, connectivity of transportation assets and transit-oriented development.

https://dced.pa.gov/programs/multimodal-transportation-fund/

PennDOT Multimodal Transportation

Act 89 also established a dedicated Multimodal Transportation Fund that stabilizes funding for ports and rail freight, increases aviation investments, establishes dedicated funding for bicycle and pedestrian improvements, and allows targeted funding for priority investments in any mode.

https://www.penndot.gov/ProjectAndPrograms/MultimodalProgram/Pages/default.aspx

PENNDOT – Surface Transportation Program

The Twelve Year Transportation Program (as required by Act 120 of Pennsylvania State Law and its amendments) targets the Commonwealth's improvement efforts in all major transportation modes: highways, bridges, aviation, rail and transit. Transportation projects that focus on improving safety, enhancing mobility, moving goods and preserving the existing system are key to achieving the Department's goals and objectives. The Division will continue to focus on incorporating the philosophy of the most current Federal and State Regulations in the continuous update of the Program; this includes the tie-in of planning requirements for Transportation Improvement Plans (TIPs), and the all encompassing State TIP (STIP). This program also involves the preparation of comprehensive information packages for key Department staff, the State Transportation Commission (STC), and elected state and federal legislators and officials. These packages facilitate and communicate the development of a transportation system responsive to the needs of the Commonwealth, monitors progress on key programs and projects, and aids in resolving outstanding Transportation Program issues. Staff and support services are also provided to the STC and other Program Center functions to prepare improvement programs which maintain and enhance the existing transportation system.

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

http://www.dvrpc.org/TIP/

Robert Wood Johnson Foundation

Robert Wood Johnson Foundation

The mission of the Robert Wood Johnson Foundation is to improve the health and health care of all Americans. Our goal is clear: To help our society transform itself for the better.

Website: http://www.rwjf.org/grants/

William Penn Foundation

The William Penn Foundation, founded in 1945 by Otto and Phoebe Haas, is dedicated to improving the quality of life in eastern Pennsylvania through efforts that foster rich cultural expression, strengthen children's futures, and deepen connections to nature and community. In partnership with others, the Foundation works to advance a vital, just, and caring community.

WILLIAM PENN FOUNDATION

http://www.williampennfoundation.org/Grants.aspx

National Parks Service – Trails Assistance Program

The Rivers, Trails, and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA supports community-led natural resource conservation and outdoor recreation projects. RTCA staff provides technical assistance to communities so they can conserve rivers, preserve open space, and develop trails and greenways.

Website: http://www.nps.gov/ncrc/programs/rtca/

PA Department of Conservation and Natural Resources – Keystone Grant Program and Recreational Trails Program

Established on July 1, 1995, the Pennsylvania Department of Conservation and Natural Resources is charged with maintaining and preserving the 117 state parks; managing the 2.1 million acres of state forest land; providing information on the state's ecological and geologic resources; and establishing community conservation partnerships with grants and technical assistance to benefit rivers, trails, greenways, local parks and recreation, regional heritage parks, open space and natural areas.

Local governments, county governments and non-profit organizations can apply for Community Conservation Partnerships Program (C2P2) funding to assist them with addressing their recreation and conservation needs as well as supporting economically beneficial recreational tourism initiatives.

Website: https://www.dcnr.pa.gov/Communities/Grants/TrailGrants/Pages/default.aspx

Contact:

Jean Lynch| Regional Advisor: 610-892-3903  email: jealynch@pa.gov

Local Sources

The following local funding sources may also be available:

- County, City, Borough and Township funds
- Private sponsorships, local fund raisers, etc.
- County Open Space funds

# Next Steps

The next steps in bringing this study's findings into active use include:

- Explore Grant Opportunities for Engineering Design and Construction Funding
- Complete Engineering Design
- Complete Project Construction

Regular coordination with stakeholders will be necessary to advance the implementation of the Power Line Trail as envisioned by this study. Stakeholders include Upper Gwynedd Township, PennDOT, Montgomery County, PECO, SEPTA, and Delaware Valley University. Continued outreach to the local community will ensure that open lines of communication are maintained so that public feedback is received, and progress updates issued. In collaboration with the steering committee members, funding sources will be explored with the goal of completing this important project for Upper Gwynedd Township.


*In this aerial view looking north-west, the open corridor is the PECO electric transmission right-of-way, with Pennbrook Middle School on the right*