Towamencin Township
Sidewalk Connectivity Study

DRAFT April 2023

Table of Contents

Introduction 1

1.1 Plan Goal 2

1.1.1 Plan Objectives 3

1.2 Project Schedule 4

1.3 Project Team 5

1.4 Township Context 6

1.4.1 Regional Context Map 7

1.5 Township History 8

Inventory and Analysis 11

2.1 Data Collection and Methodology 12

2.2 Steering Committee 12

2.3 Public Participation 14

2.4 Outreach 16

2.5 Online Survey 17

2.6 Online Mapping Tool 18

2.7 Demographics 19

2.8 Relevant Planning Documents 20

2.9 Site Reconnaissance 22

2.10 Existing Conditions 24

2.10.1 Land Use 24

2.10.2 Roadways 24

2.10.3 Sidewalks 24

2.10.4 Trails 25

2.10.5 On-Road Bike Routes 26

2.10.6 Public Transportation

2.10.7 Parks and Open Space 26

2.10.8 Schools 26

2.10.9 Institutional Parcels

2.10.10 Housing 26

2.11 Analysis Maps 28

2.11.1 Pedestrian and Cyclist Accident Data (2018-2022) 28

2.11.2 Level of Traffic Stress 29

2.11.3 Barriers to Connectivity 30

2.11.4 STRAVA Run & Bike 31

2.11.5 DCNR Underserved Areas 32

2.12 Radial Service Area Analysis 33

2.12.1 Schools: 34

2.12.2 Parks: 36

2.12.3 Commercial Areas: 38

2.12.4 Public Transportation: 40

Reccomendations 43

3.1 Trail Design Guidelines 44

3.2 Vision Zero 45

3.3 Connectivity Improvement Features 46

3.3.1 Signage 47

3.3.2 ADA Curb Ramps 47

3.3.3 Walkway Surface Types 48

3.4 Proposed Improvements Plans 50

3.5 Improvement Toolbox 55

3.5.1 Sidewalk 56

3.5.2 Crosswalk 58

3.5.3 Multi-Use Trail 60

3.5.4 Side Path 62

3.5.5 Sharrow 64

3.5.6 Bike Lane 66

3.5.7 Trail Bridge 68

3.5.8 Hand-Man 70

3.5.9 Rapid Flashing Beacon 72

3.5.10 Speed Cushion 74

3.5.11 Pedestrian Refuge Island 76

3.5.12 Road Closure 78

3.5.13 Roundabout 80

3.5.14 Pocket Park 82

3.5.15 Connection Out of Township 84

3.6 Themed Connection Routes 86

3.6.1 Collector Route 87

3.6.2 Park Route 88

3.6.3 School Route 89

Implementation 91

4.1 Estimated Costs of Development 92

4.2 Implementation Priorities 105

4.2.1 Towamencin Township Sidewalk Deferral Program 105

4.2.2 Adopt an Official Map 106

4.2.3 Collaboration with Adjacent Municipalities 106

4.3 Potential Funding Sources 107

4.3.1 Pennsylvania Department of Transportation (PennDOT) 107

4.3.2 Office of the Budget 108

4.3.3 Pennsylvania Department of Conservation and Natural Resources (PA DCNR) 108

4.3.4 Commonwealth Financing Agency (CFA) 108

4.3.5 Department of Community and Economic Development (DCED) 109

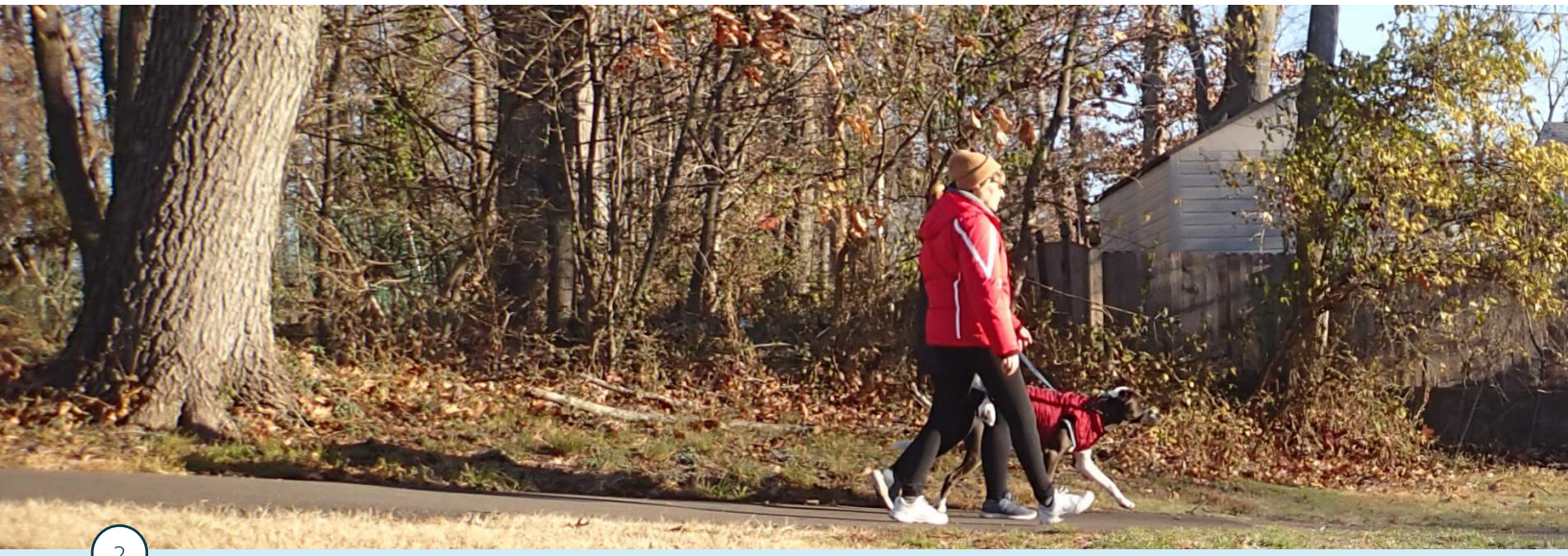
APPENDIX 111

INTRODUCTION

1

1.1 Plan Goal

The vision for Towamencin Township focuses on providing strategic decisions for future sidewalk and trail amenities that will allow the residents to have an accessible, safe, and secure walking and/or biking experience throughout the Township and to connections beyond.



1.1.1 Plan Objectives

- Eliminate or mitigate barriers to destinations by incorporating a network of pedestrian and bike corridors within, and ideally separated from, vehicular traffic.
- Connect pedestrian and bicycle routes to destinations within the Township, while also providing the groundwork for connections to surrounding townships.
- Develop a comprehensive planning document that can support efforts to attract and secure funding for the future implementation of proposed improvements.

1.2 Project Schedule

Project Schedule	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
Task / Event										
Review background data and previous studies										
Site Reconnaissance										
Set up base mapping										
Existing Roadway, Sidewalk & Trail inventory & mapping										
Access ADA accessibility issues / locations										
Create proposed sidewalk & trail plan										
Concept cost estimates for proposed improvements										
Prioritize improvements										
Funding Strategy / Implementation Strategy										
Write and Assemble Sidewalk Connectivity Report										
Issue Draft Report										
30 day draft report review										
Revisions as necessary										
Final Report										
Public Meetings										
Public Mtg #1 - info. Gathering / brainstorming/program-Monday October 10										
Public Meeting #2 - preliminary plan concepts - Thursday Feb 9										
Public Meeting #3 - draft plan - Thursday April 13										
Public Meeting # 4- final plan Thursday June 22										
Meeting with Board of Supervisors - Weds May 10										
Committee Meetings										
Committee Meeting #1 - info. gathering / brainstorming - Monday Oct 3										
Committee Meeting #2 - preliminary plan concepts - Monday December 5										
Committee Meeting #3 - pre-draft plan - Monday March 6										
Committee Meeting # 4-review comments, revisions Monday June 5										
Write and administer public opinion survey										
Set Up and administer Wiki Mapping Interactive mapping tool										
Meeting with Montgomery County Planning (including Meeting minutes)										
Meeting with PennDOT District 6-0 (including meeting minutes)										
Coordination with Township staff										

1.3 Project Team

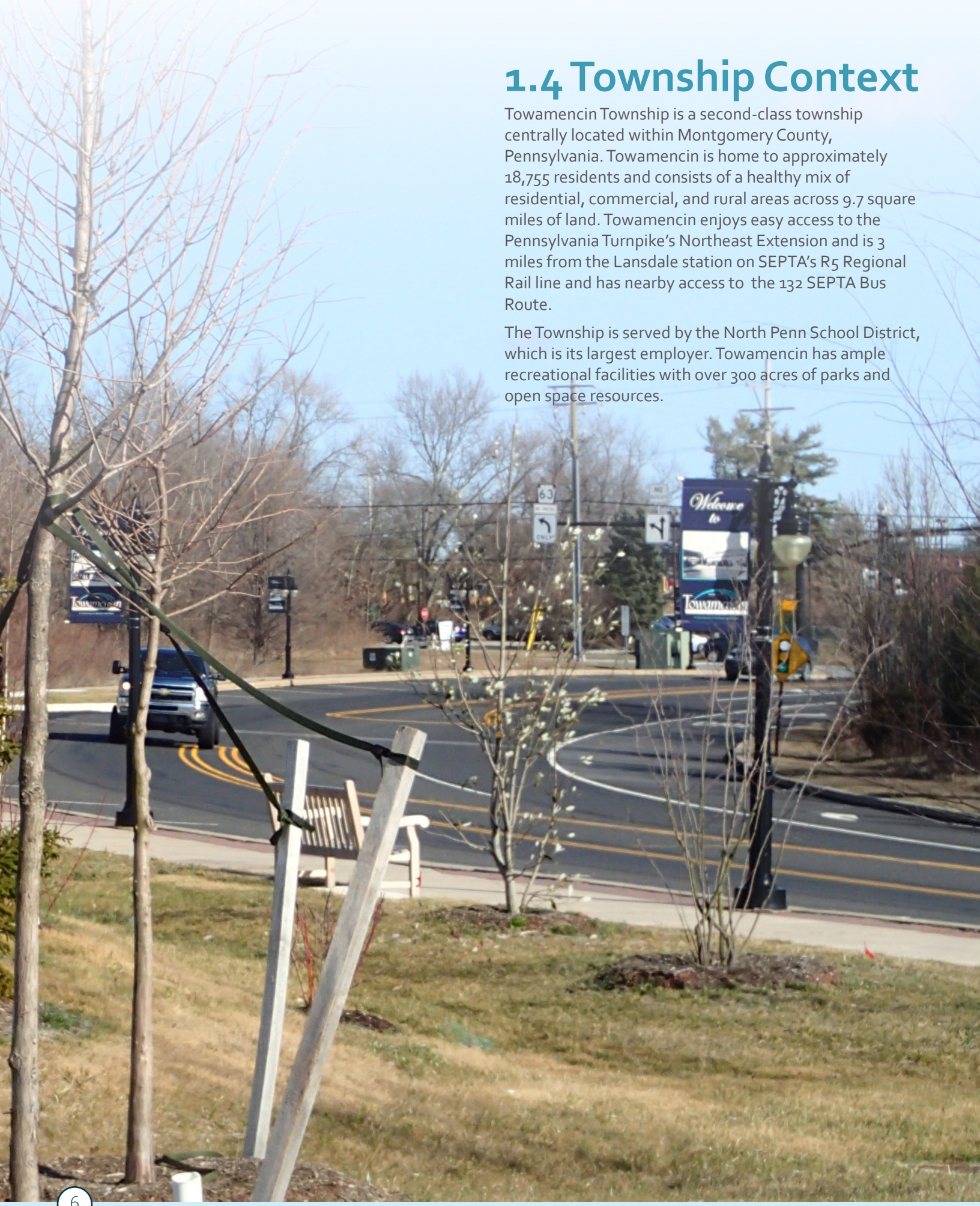
A project team composed of the Committee, Township Staff, and Consultants was formed to guide the planning process. The Committee was made up of Towamencin Township Planning Commission members. Committee insights informed and guided the team throughout the process.

Simone Collins Landscape Architecture (SC) is a planning and design firm with expertise in parks, trails, greenways, and recreational facilities. SC served as the prime consultant and was responsible for overall facility design, public participation, and overall coordination with the Committee, the Township, and project team.

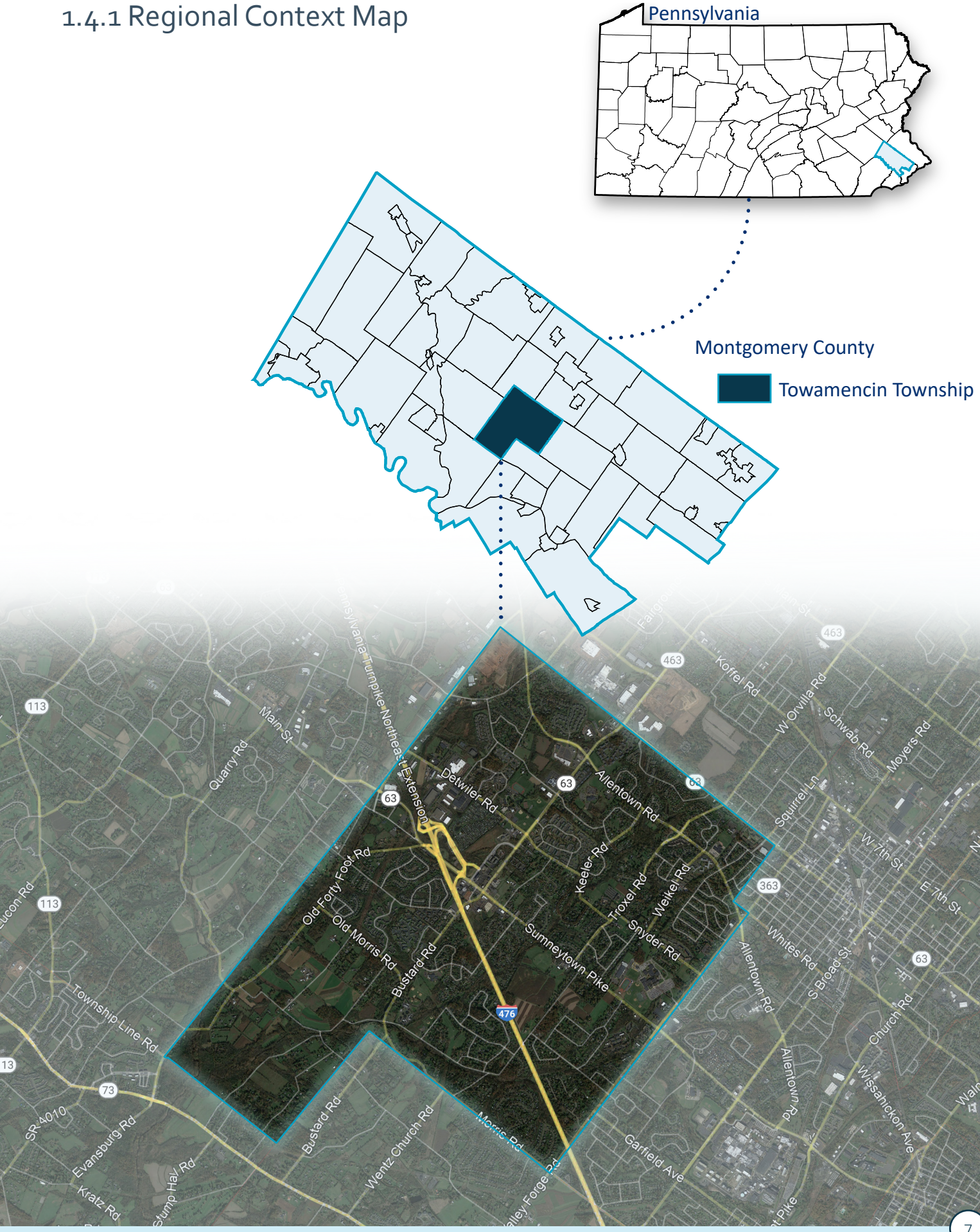
1.4 Township Context

Towamencin Township is a second-class township centrally located within Montgomery County, Pennsylvania. Towamencin is home to approximately 18,755 residents and consists of a healthy mix of residential, commercial, and rural areas across 9.7 square miles of land. Towamencin enjoys easy access to the Pennsylvania Turnpike's Northeast Extension and is 3 miles from the Lansdale station on SEPTA's R5 Regional Rail line and has nearby access to the 132 SEPTA Bus Route.

The Township is served by the North Penn School District, which is its largest employer. Towamencin has ample recreational facilities with over 300 acres of parks and open space resources.



1.4.1 Regional Context Map



1.5 Township History

Towamencin has a rich and well-documented history that dates to before the American Revolution. The original inhabitants of Towamencin were American Indians of the Lenni Lenape tribe, who had a settlement in the southwest section of the Township along the Towamencin Creek.

Late 1600s – Settlers of German, Welsh, and Dutch descent establish themselves in the area to pursue agriculture.

1703 – The first land grant of 1,000 acres was granted by William Penn's Commissioners.

1708 – Edward Morgan purchases 309 acres of the original 1,000 acre land grant. In 1734, his daughter would give birth to Daniel Boone, who would go on to become an American folk hero known for his trailblazing and pioneering efforts.

1728 – Settlers successfully petitioned William Penn's Commissioners for Towamencin to become a Township.

1777 – Towamencin played a role in the Revolutionary War, where soldiers camped and conducted military duties in the northern section of the Township.

1848 – Sumneytown Pike is established as a turnpike.

1855 – The North Pennsylvania Railroad opens the Lansdale/Doylestown line. The Lansdale railroad stop interrupts Kulpsville's (located at the intersection of Sumneytown and Forty Foot Road) economic and social dominance in the North Penn area as commerce and industry activities relocate closer to the new rail line.

1954 – The Pennsylvania Turnpike interchange is constructed, re-establishing Towamencin as a critical transportation link between Philadelphia and the greater Lehigh Valley region.

1974 – Northeast Extension of the PA Turnpike is established as Pennsylvania Route 9.

1996 – Route 9 re-designated as Interstate 476.

1997 – Lansdale Interchange expands increasing toll booths from 4 to 10. This expansion coincided with the opening of the "Blue Route", a non-tolled section of I-476 located further south.

2022 – Towamencin residents vote in favor of establishing a government study commission to explore the possibility of a home rule charter after the Township Board of Supervisors approved the privatization of the Township's sewer system earlier in the year.

INVENTORY AND ANALYSIS

2

2.1 Data Collection and Methodology

Simone Collins organized public participation and outreach through multiple mediums to compile data. This data was carefully managed and analyzed to inform recommendations. Additionally, data from Pennsylvania Spatial Data Access (PASDA), Delaware Valley Regional Planning Commission (DVRPC), and Towamencin Township was used. Meeting minutes, survey responses, and various exhibits can be found in the appendix of this report.

2.2 Steering Committee

- Brett Mackay
- Patricia Younce
- Douglas Leach
- Joseph Vavra
- Matt Chartrand
- Dr. Edward Buonocore
- Nancy Becker
- Dennis McGeehan
- Richard Marino
- Michael Main

Pheasant Hill Rd

2.3 Public Participation

Simone Collins Landscape Architecture coordinated thorough public involvement that included meetings with the public, Township staff, and Towamencin Sidewalk Connectivity Study Committee throughout the planning process. Public participation helped distinguish circulation patterns of challenging locations, destinations, and desired routes in the community through four (4) public meetings, four (4) steering committee meetings, key person interviews (KPIs), an online survey, and an online mapping tool.

Meetings

Committee Meeting #1 – October 10, 2022

- Committee Meeting #1 introduced the Towamencin Sidewalk Connectivity Study to the committee and informed its members on the project and future schedule.

Public Meeting #1 – November 10, 2022

- Public Meeting #1 focused on informing the public about the Towamencin Sidewalk Connectivity Study. A presentation was given which highlighted data collection, inventory of existing conditions, and future improvement tools that can be used to achieve the project's goals. After, a brainstorming workshop was held where participants voiced their ideas and concerns.

Committee Meeting #2 – December 5, 2022

- Committee Meeting #2 focused on the status of the online survey, on-going mapping, and development of the improvement plan. The committee gave input on the progress of the improvement plan and there was discussion around later steps of funding and implementation.

Public Meeting #2 – February 9, 2023

- Public Meeting #2 provided an overview of the existing conditions, data, and inventory, which included the public opinion survey and Wikimap results to date. Then, the presentation focused on

who we are designing for, the basis for connectivity design, and what tools can be used for connectivity improvements. Some preliminary connectivity ideas were discussed.

Committee Meeting #3 – March 6, 2023

- Committee Meeting #3 provided an explanation of how the 'Toolbox' of Improvements can be employed and how it has been applied to the Draft Plan which was presented. The presentation focused on preliminary route concepts, how cost estimates will be formulated and draft priorities for the Plan.

Public Meeting #3 – April 13, 2023

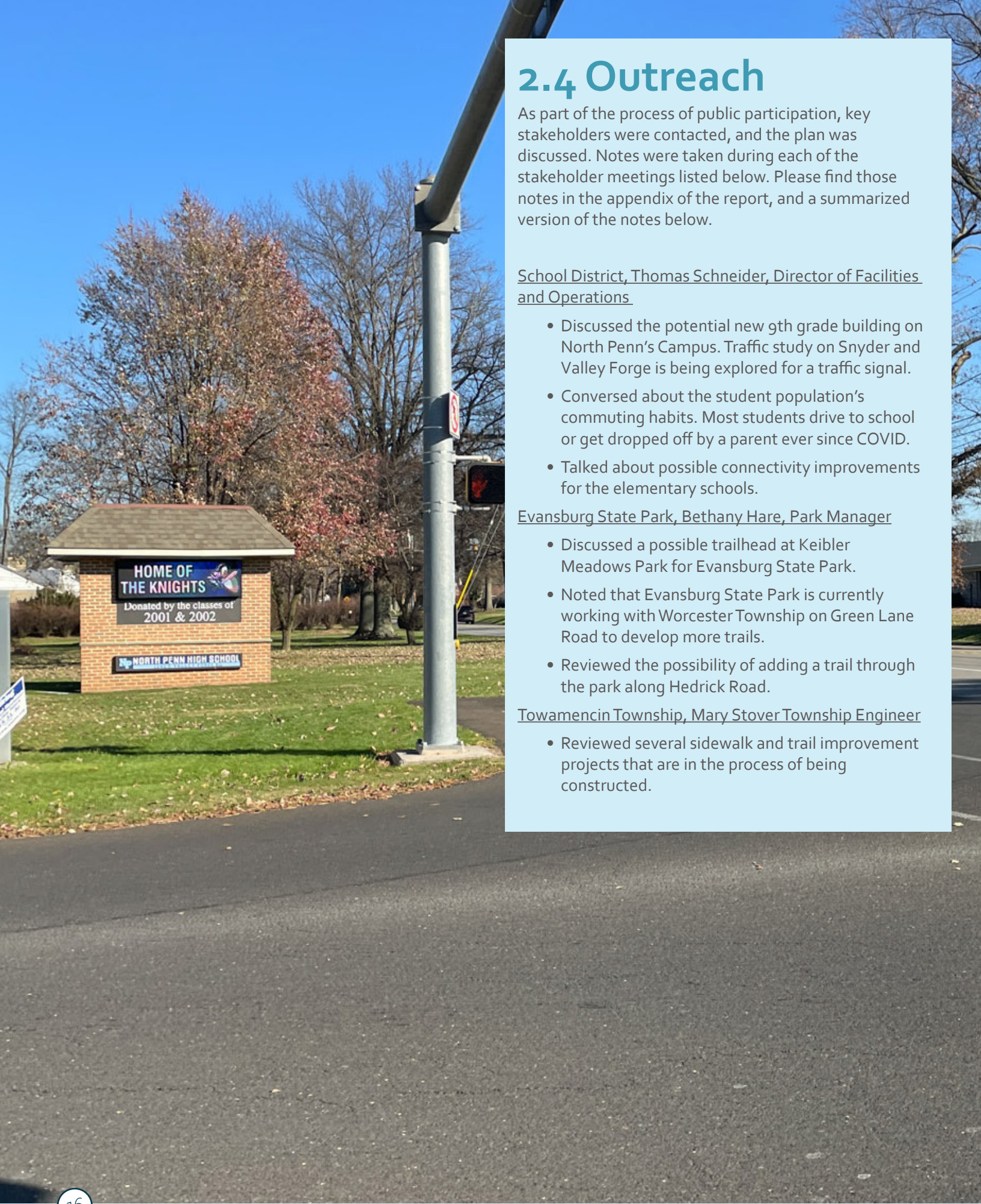
- Public meeting #3 provided a draft plan of reccomendations. The improvement toolbox and route concepts were presented, and a question and answer section ensued after.

Committee Meeting #4 – June 5, 2023

TBD

Public Meeting #4 – June 22, 2023

TBD



2.4 Outreach

As part of the process of public participation, key stakeholders were contacted, and the plan was discussed. Notes were taken during each of the stakeholder meetings listed below. Please find those notes in the appendix of the report, and a summarized version of the notes below.

School District, Thomas Schneider, Director of Facilities and Operations

- Discussed the potential new 9th grade building on North Penn's Campus. Traffic study on Snyder and Valley Forge is being explored for a traffic signal.
- Conversed about the student population's commuting habits. Most students drive to school or get dropped off by a parent ever since COVID.
- Talked about possible connectivity improvements for the elementary schools.

Evansburg State Park, Bethany Hare, Park Manager

- Discussed a possible trailhead at Keibler Meadows Park for Evansburg State Park.
- Noted that Evansburg State Park is currently working with Worcester Township on Green Lane Road to develop more trails.
- Reviewed the possibility of adding a trail through the park along Hedrick Road.

Towamencin Township, Mary Stover Township Engineer

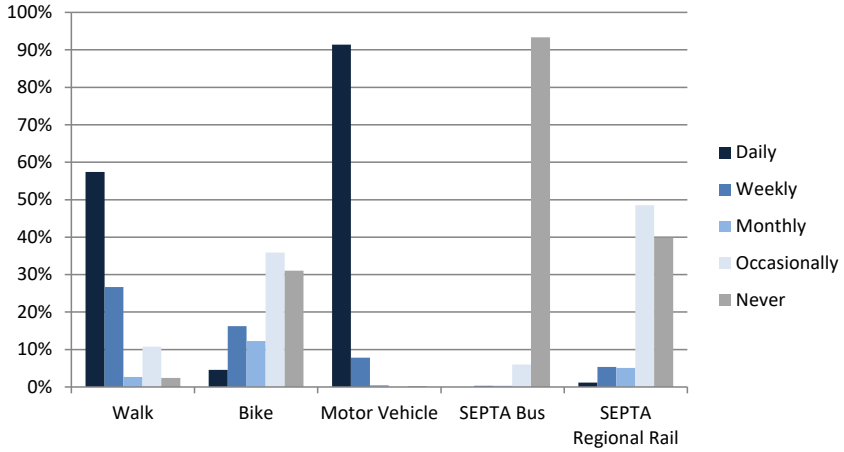
- Reviewed several sidewalk and trail improvement projects that are in the process of being constructed.

2.5 Online Survey

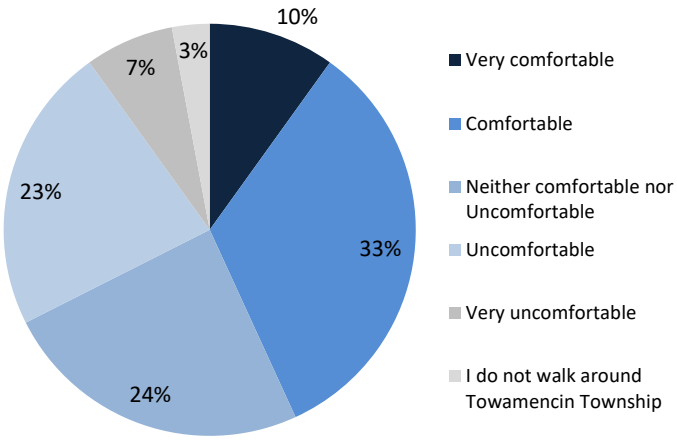
An online survey was conducted between October 2022 - April 2023. A total of 431 responses were received. The public provided responses to questions regarding household demographics, recreational habits, commuting patterns, and more. The survey also allowed users to share their thoughts and ideas related to walkability and bikeability through the Township. A few examples are as follows:

Full response data from the survey can be found in the appendix.

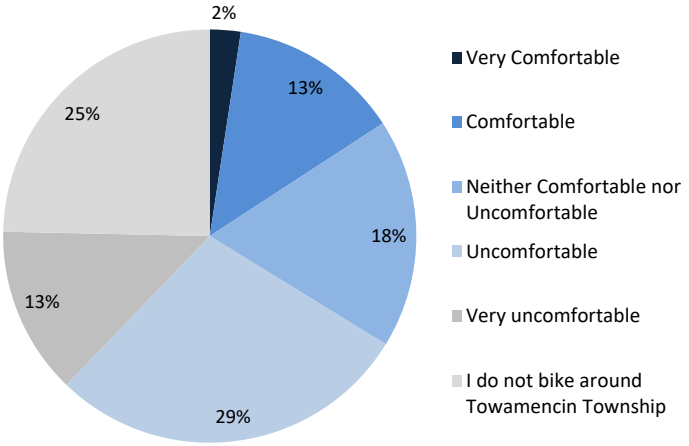
How often do you use the following modes of transportation?



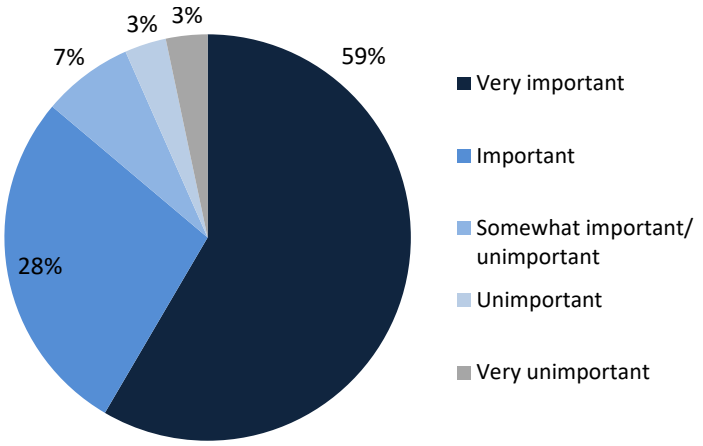
From a perspective of traffic safety, how comfortable do you feel walking in Towamencin Township?



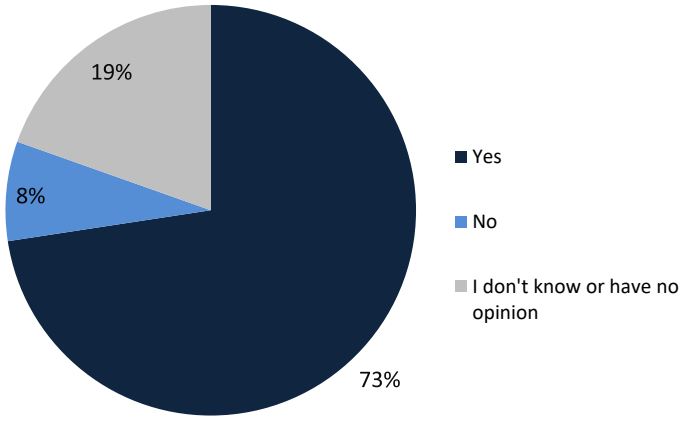
From a perspective of traffic safety, how comfortable do you feel biking in Towamencin Township?



How important are sidewalk connections and trails to the well-being of the community and quality of life in Towamencin Township?



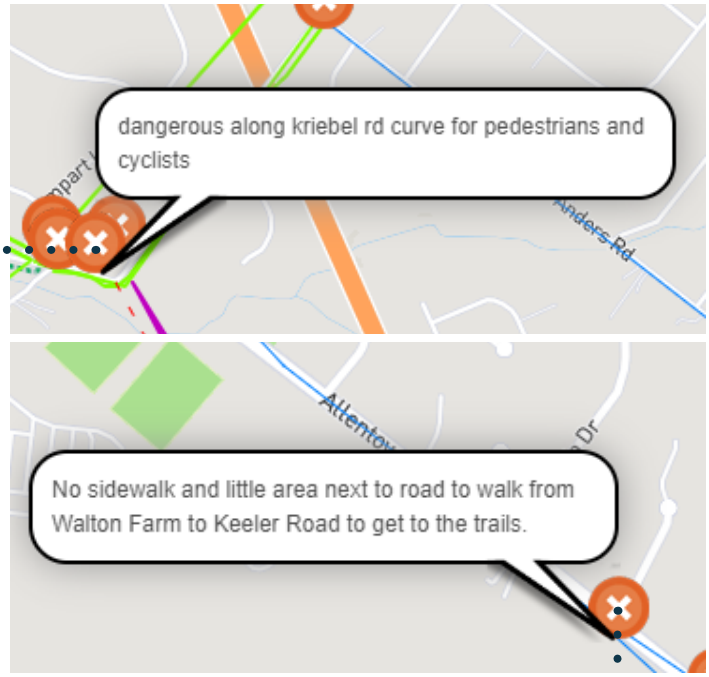
As a motorist I would accept a slightly longer travel time if that meant a safer environment for pedestrians and bicyclists.



2.6 Online Mapping Tool

An online mapping tool – Wikimap – was available from October 2022-April 2023. This map allowed users to place points and lines on a map. Participants could also attach comments and photos to these locations. Some examples can be found below.

Full response data from the Wikimap can be found in the appendix.

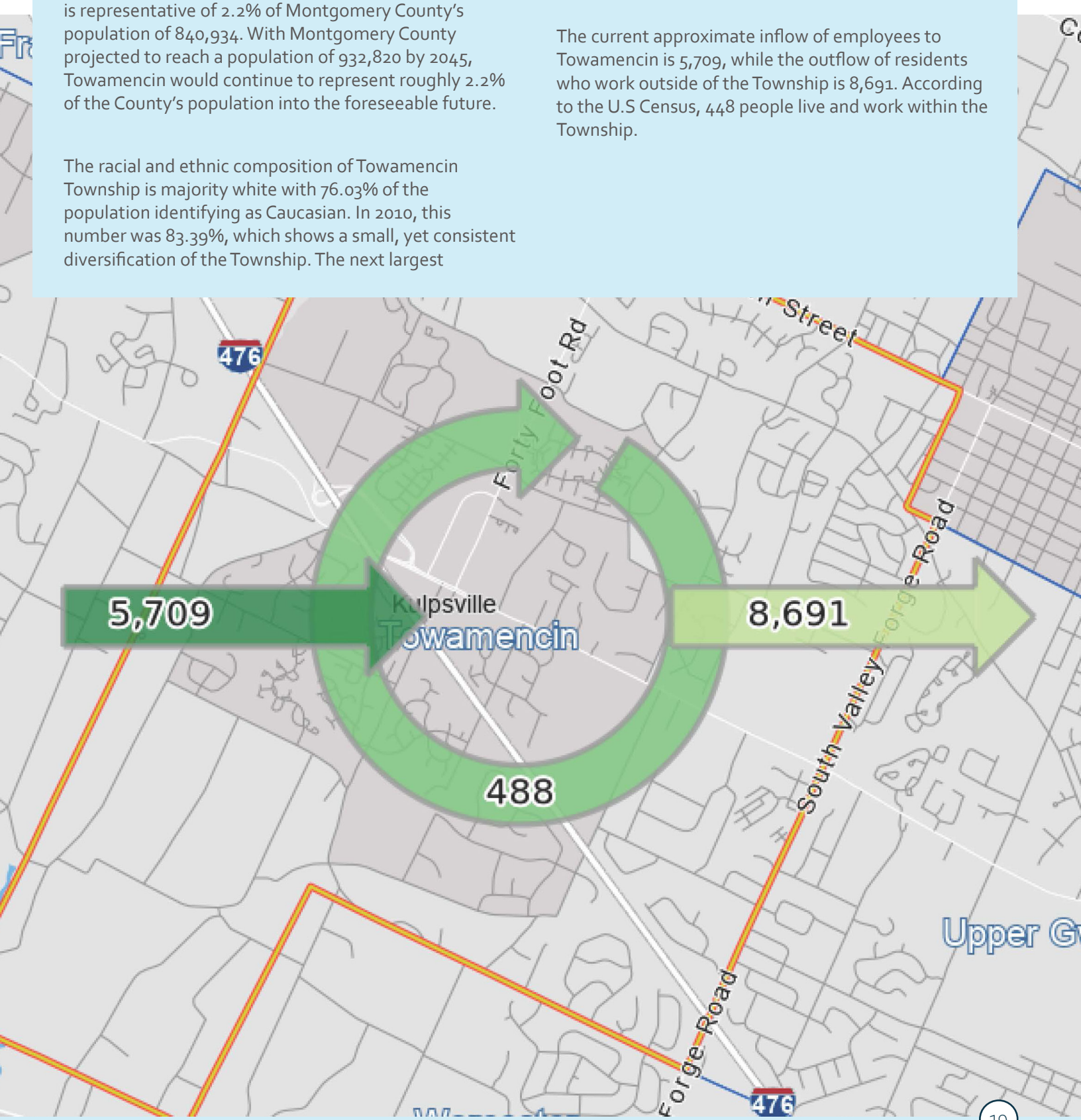


2.7 Demographics

According to the 2020 census, Towamencin Township has a population of 18,755 people. This population shows a 2.6% change from 18,272 in 2015. Towamencin is projected to reach 20,500 residents by 2045. It is representative of 2.2% of Montgomery County's population of 840,934. With Montgomery County projected to reach a population of 932,820 by 2045, Towamencin would continue to represent roughly 2.2% of the County's population into the foreseeable future.

The racial and ethnic composition of Towamencin Township is majority white with 76.03% of the population identifying as Caucasian. In 2010, this number was 83.39%, which shows a small, yet consistent diversification of the Township. The next largest populations of the Township are Asian at 10.99% and African American at 5.38%. In comparison, Montgomery County is 72.18% White, 7.91% Asian, and 9.29% African American.

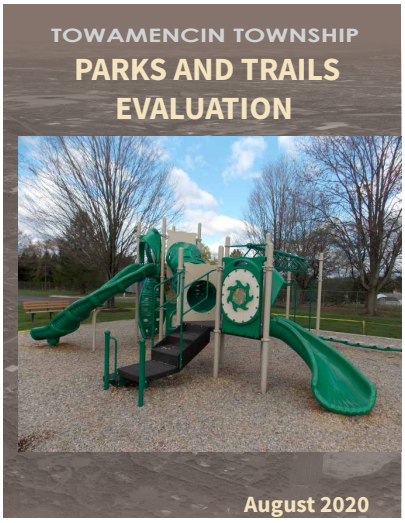
The current approximate inflow of employees to Towamencin is 5,709, while the outflow of residents who work outside of the Township is 8,691. According to the U.S Census, 448 people live and work within the Township.

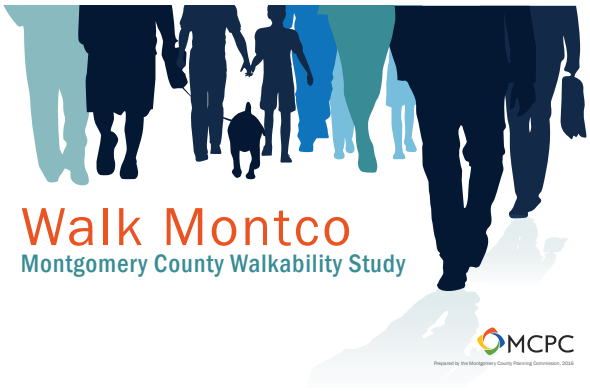


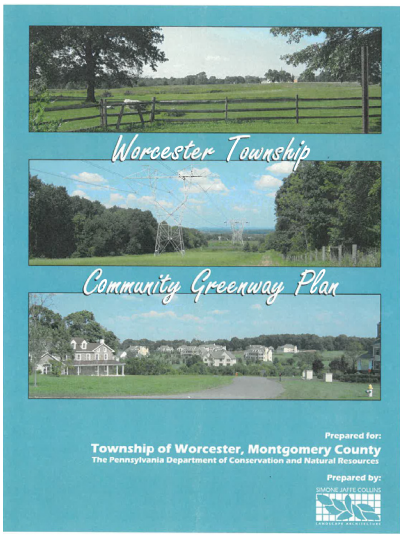
2.8 Relevant Planning Documents

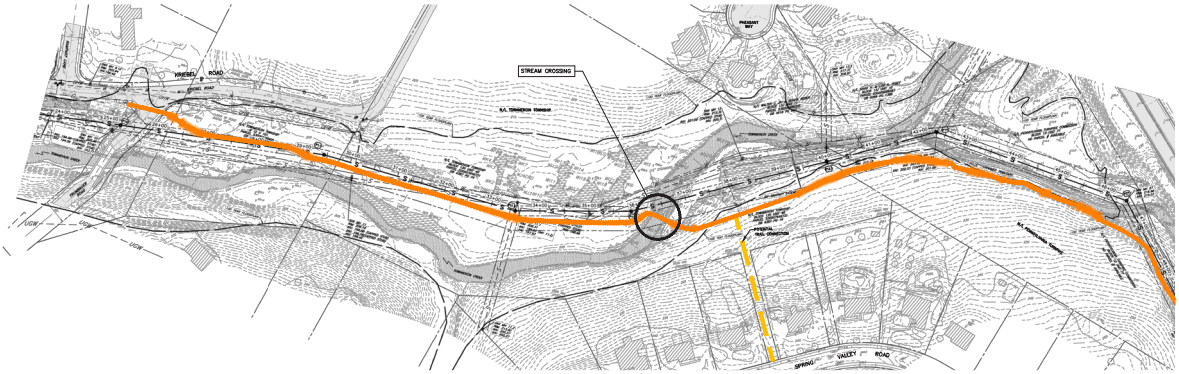
Relevant planning documents often come from the state, county, or township level. They may also be found through planning organizations or the federal government. Below are the planning documents referred to in the preparation of the Towamencin Sidewalk Connectivity Study. Some of these documents are from surrounding communities and were used to understand existing or planned connections possible beyond the limits of Towamencin Township.

- Walk Montco, Montgomery County Planning Commission, 2016
- Bike Montco, Montgomery County Planning Commission, 2018
- Montco Executive 2040 Executive Summary
- Parks and Trails System Evaluation, Simone Collins Landscape Architecture, 2019
- Kriebel Road Fischer Park Trail Plans, Gilmore & Associates, 2022
- Allentown Road Evaluation, McMahon Transportation Engineers & Planners, 2022
- Transportation Impact Study for Proposed 9th Grade Center at North Penn High School, Heinrich & Klein Associates Traffic Engineering & Planning, 2022
- Wambold Road Tract – Phase 2 Plans, STA Civil Engineers & Land Surveyors, 2021
- Core5 at Park 31 Land Development Plans, Cornerstone Consulting Engineers & Architectural
- Worcester Township Community Greenway Plan, Simone Collins, 2004
- Lansdale Borough 2040 Comprehensive Plan, 2020
- Upper Gwynedd Township 2040 Comprehensive Plan, 2021

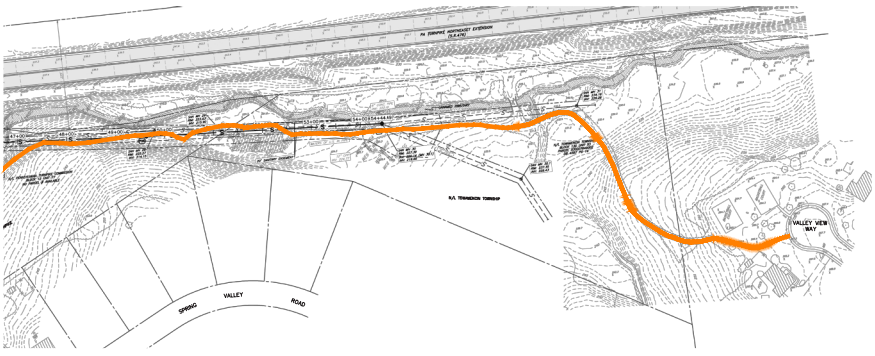








PLAN
STA. 25+00 TO 48+00



PLAN
STA. 48+00 TO VALLEY VIEW WAY

LEGEND:
KRIEBEL ROAD TO VALLEY VIEW WAY TRAIL ROUTE
POTENTIAL TRAIL CONNECTION

TRAIL INFORMATION
APPROXIMATELY 4,000 L.F.
ONE (1) SIGNIFICANT STREAM CROSSING
ONE (1) MINOR WETLAND CROSSING

These Kriebel Road Fischer Park Trail Plans show locations of the partially installed trail, including a stream crossing and a potential trail connection

2.9 Site Reconnaissance

The consultants conducted initial site reconnaissance on foot and by car on October 3rd, 2022. The consultant team spent time on the major roadways and thoroughfares to better understand the pedestrian, bicycle, and vehicular challenges in Towamencin.

The consultant team returned to Towamencin for a second site reconnaissance on December 2nd, 2022. The consultants toured the Township's park and school system by car and on foot to review potential connections. Additional site visits were conducted in the subsequent weeks to check field conditions.

Important data was recorded on field maps and later used to determine placement of proposed improvements. Many photographs were taken of existing conditions in Towamencin and provided valuable reference during refinement of the draft improvement plan.

2.10 Existing Conditions

Existing conditions provide a basis for further analysis and orients the project. A map of existing conditions can be found on page 27.

2.10.1 Land Use

Towamencin Township is heavily residential, containing several pockets of mixed-use, institutional and commercial uses, as well as several open spaces. The Township parks system is comprised of approximately 215 acres spread over 13 park sites.

There is one large piece of agricultural land left in the Township called Freddy Hills Farm which is located on Sumneytown Pike. Non-motorized connections to these lands should be planned for now since future use of these lands is uncertain.

2.10.2 Roadways

Towamencin Township is bounded by Welsh Road to the north, Morris Road and Hedrick Road to the south, Wambold Road to the west, and South Valley Forge Road to the east.

Forty-foot Road and Bustard Road bisects the Township and runs from Hatfield Township in the north to Worcester Township in the south. Sumneytown Pike also bisects the Township and runs from Upper Gwynedd Township in the east to the I-476 Interstate / Turnpike Ramp located in the westside of the Township. The Pennsylvania Turnpike (I-476) cuts through the center of Township in a southeast direction.

Welsh Road, Wambold Road, Forty Foot Road, Bustard Road, South Valley Forge Road, and Sumneytown Pike (west of Forty Foot Road) are all Pennsylvania Department of Transportation (PennDOT) roads. Other notable thoroughfares and PennDOT roads include Allentown Road, Old Forty Foot Road, and Troxel Road.

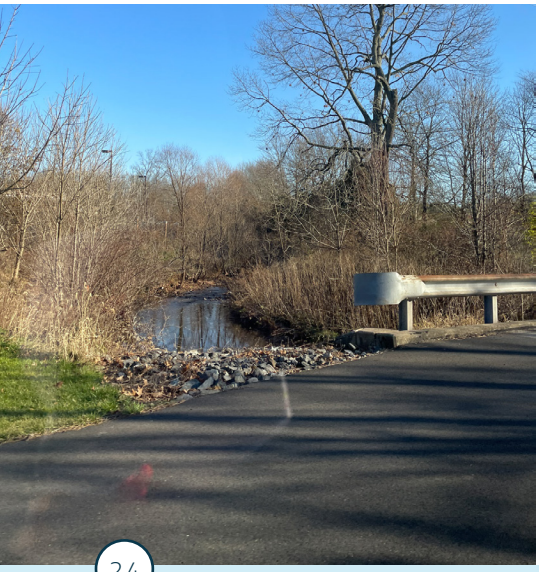
2.10.3 Sidewalks

Towamencin Township possesses a relatively well-developed sidewalk network compared to other suburban townships of similar size. Based on the Delaware Valley Regional Planning Commission (DVRPC) GIS inventory data, the sidewalk network is most complete along the Forty Foot Road corridor and some nearby neighborhoods.

Sidewalk gaps and missing connections to schools, commercial areas, and other destinations exist on the collector roads on the periphery of several of these neighborhoods.

The residential areas most affected by these gaps are those separated off by the major thoroughfares. These areas include, but are not limited to:

- The residences between Sumneytown Pike and I-476;
- The neighborhoods between the Lansdale interchange and Bustard Road;
- The neighborhoods and commercial areas around Allentown Road, Welsh Road, and Forty Foot Road;
- The residences between Allentown Road and Sumneytown Pike.



2.10.4 Trails

The DVRPC inventory map and other GIS inventory also identifies several existing trails within the Township. One of the most popular trails within the Township is the loop trail within Fischer's Park. Other linear trails can be found at Firehouse Park and along a segment of Kriebel Road – between Trumbauer Road and Green Lane Road. Also, there are trails located within two private developments: in the Morgandale development (off of Forty Foot Road) and the commercial office at the intersection Sumneytown Pike and Bustard Road.

Towamencin Township has plans to extend the Kriebel Road Trail (KRT) on both the east and west ends. The side extending east is under construction and will connect into Valley View Way. The plans for extending the trail to the west are set to be built in the near future, and will connect to Green Lane Park and the Municipal Sewer Authority site.

Montgomery County has a planned multiuse trail running through Evansburg State Park, which is ultimately planned to tie into the Perkiomen Trail. This trail has been in the County's plans for decades, however it has seen no progress toward implementation. A portion of this planned trail runs through the south-west corner of the Township, and should be evaluated for proposed connections.

The Liberty Trail is another planned County trail located near the Township. Currently a section of the trail runs in Hatfield Borough, and another section runs through Lansdale Borough. The sections are planned to connect and extend beyond into adjacent townships.

2.10.5 On-Road Bike Routes

The Township has existing on-road and off road biking routes. Existing trails are noted on the proposed improvements plan.

2.10.6 Public Transportation

Currently, the only public transportation within the Township is the 132 SEPTA bus, which runs along Welsh Road, the Township's northern border. The bus connects to Lansdale Borough and Hatfield Borough, via Forty Foot Road.

SEPTA regional rail stations are located within close proximity to Towamencin in Lansdale Borough. The closest stop that would appeal most to Township residents is the Lansdale Regional Rail stop located on Main Street in the borough.

2.10.7 Parks and Open Space

There are seventeen parks or open spaces within Towamencin Township. These parks are in three categories:, Township Parks, Township Open Space, and a State Park. Township parks may have active recreation features such as trails, sports fields, and built facilities. They can be larger community parks such as Fischer's Park, or smaller neighborhood parks such as Drinnon Way Park and Heebner Way Park.

Township Open Space represents designated public space that has more passive uses. Kiebler Meadows Park and the land surrounding the new Kriebel Road Trail are examples of Open Space. The northernmost tip of Evansburg State Park is in the southern portion of Towamencin Township. The park is over 3,000 acres and welcomes hikers, equestrians, and hunters. Currently, there is no formal access into the State Park's trail system from Towamencin Township.

2.10.8 Schools

Towamencin Township is home to six (6) schools. Four (4) of these schools are part of North Penn School District. These include Inglewood Elementary, Nash Elementary, Walton Farm Elementary and North Penn High School. The two remaining schools, Dock Mennonite Academy, and Calvary Baptist are private. Dock Mennonite accommodate grades 9-12 while Calvary Baptist hosts kindergarten through twelfth grade.

2.10.9 Institutional Parcels

The Township has several institutional parcels, such as: the Township municipal building, churches, day care centers, and the North Montco Technical Career Center.

2.10.10 Housing

Most of the housing types in Towamencin are single-family detached homes. The density of the homes gets higher in the central portion of the Township, and the north-east portion that approaches Lansdale Borough.

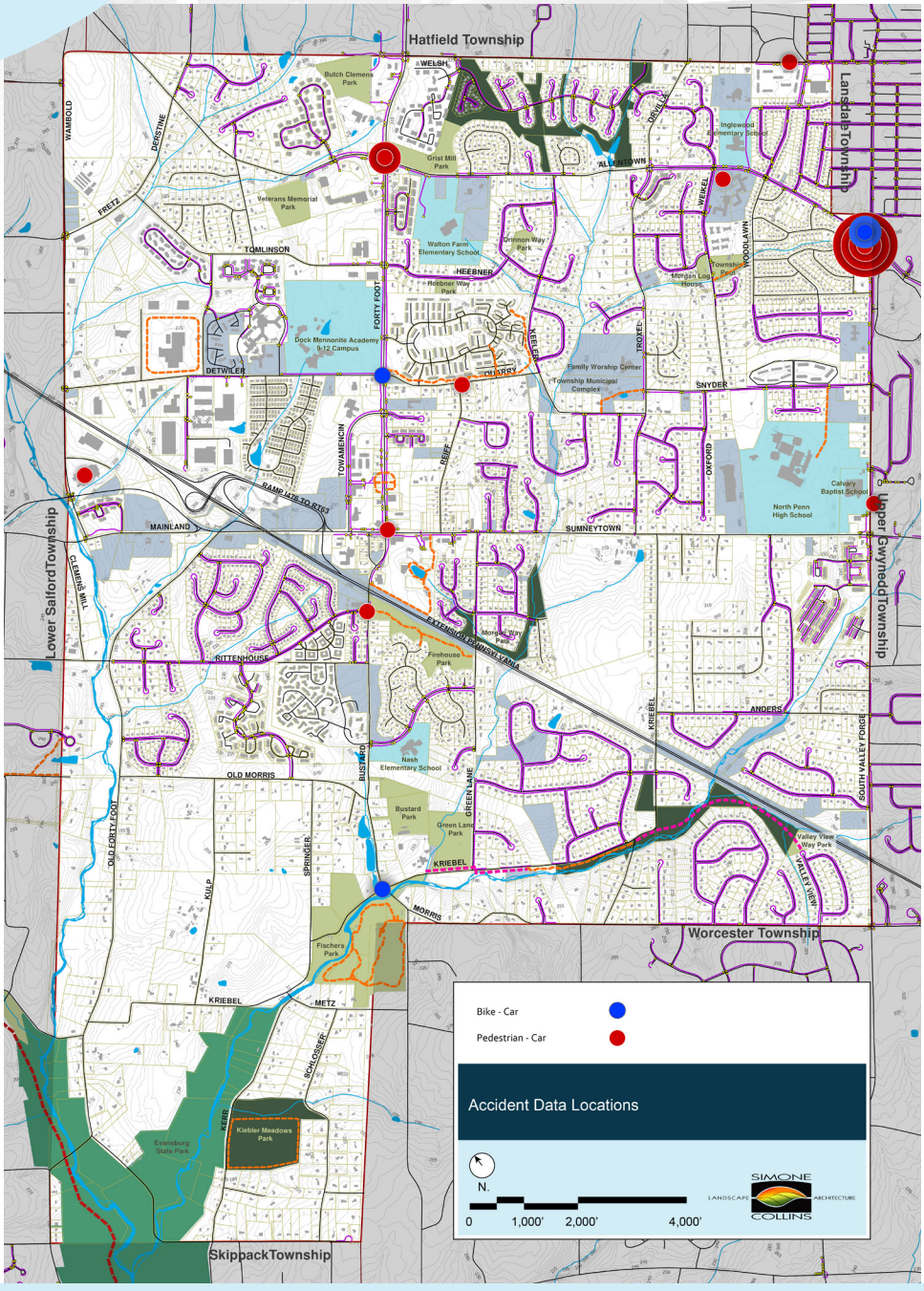
Hatfield Township
Lansdale Township
Lower Salford Township
Upper Gwynedd Township
Worcester Township
Skippack Township
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
DETWILER
FORTY FOOT
HEEBNER
QUARRY
KEELER
ALLENTOWN
ORVILLA
WEIKEL
WOODLAWN
TROXEL
SNYDER
OXFORD
SUMNEYTOWN
TOWAMENCIN
REIFF
RAMP 1476 TO RT63
MAINLAND
CLEMENS MILL
RITTENHOUSE
EXTENSION PENNSYLVANIA
KRIEBEL
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
BUSTARD
GREEN LANE
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Township Pool
Morgan Log House
Inglewood Elementary School
Dock Mennonite Academy 9-12 Campus
Family Worship Center
Township Municipal Complex
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Evansburg State Park
Kibler Meadows Park
Towamencin Township
Connectivity Study
SIMONE COLLINS LANDSCAPE ARCHITECTURE
Township Boundary
Parcel Outline
Sidewalk
Built Trail
Future Trail
Bike Lane
Designated On - Road Route
Side Path
Roadway
Township Open Space
Township Park
State Park
School
Township Owned Parcel
Curb Cut/ADA Ramp
Water Body
Existing Conditions
0
1,000'
2,000'
4,000'
N.

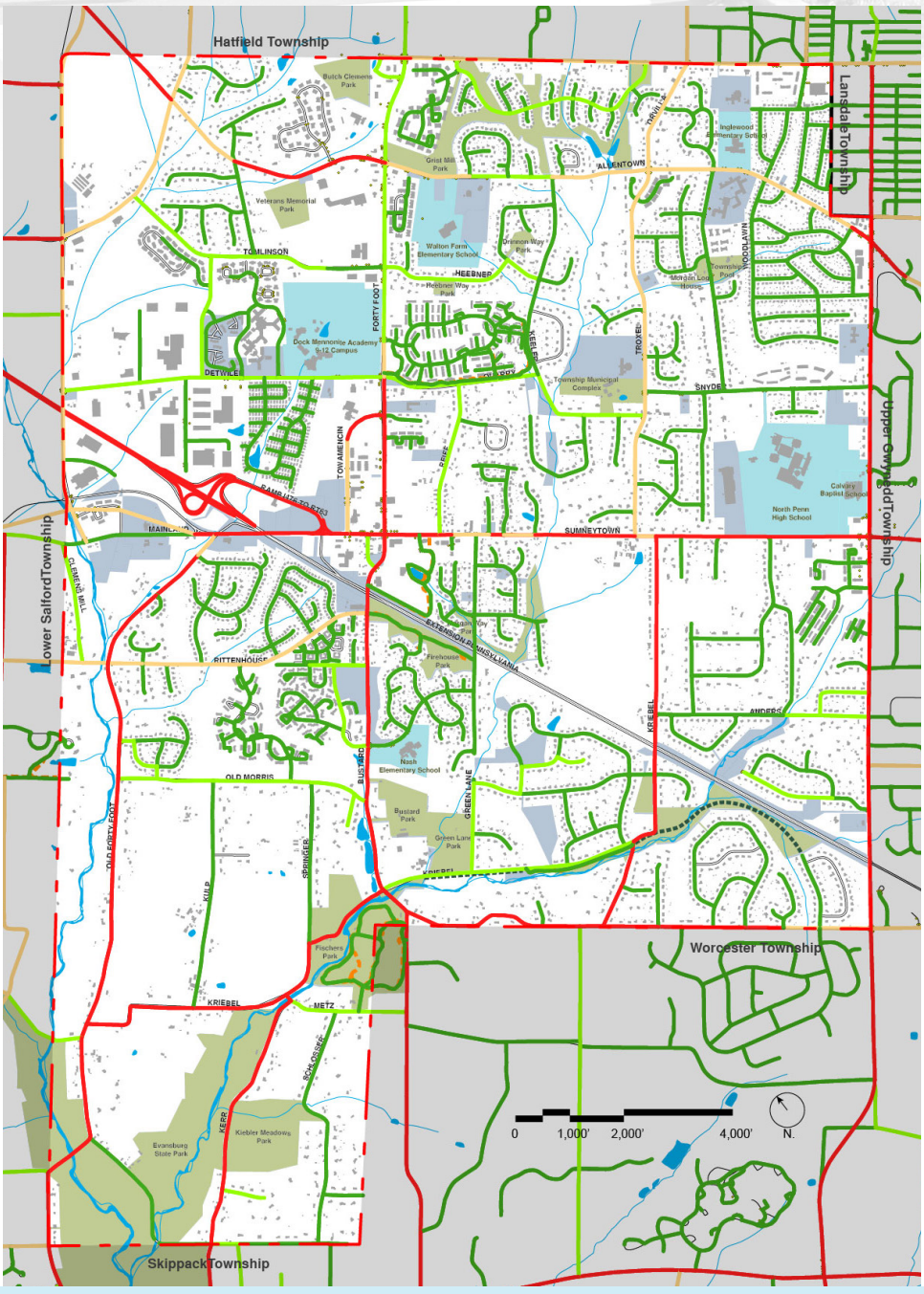
2.11 Analysis Maps

Analysis was conducted based on the Township's existing conditions, public participation, and collected data. The combined information was used to create the following maps, which can be used as planning tools.

2.11.1 Pedestrian and Cyclist Accident Data (2018-2022)

Data from Towamencin Township Police Department showing incidents involving pedestrians and bicyclists is shown in the following map. Accidents involving vehicles and pedestrians are shown in red, while vehicle and bicycle accidents are shown in blue. Each of these locations were scrutinized by the consultant team for potential pedestrian and bicycle safety improvements.





2.11.2 Level of Traffic Stress

The Delaware Valley Regional Planning Commission (DVRPC) developed a tool which measures the level of traffic stress based on number of lanes, vehicle speed, and bicycle facilities. This is used to determine what the estimated experience level of riders should be for specific roads.

The roadways in green are the lowest stress routes (most comfortable) for pedestrians and cyclists, roadways in yellow are mildly stressful, and roadways in red are the most stressful for multi-modal transportation (least comfortable).

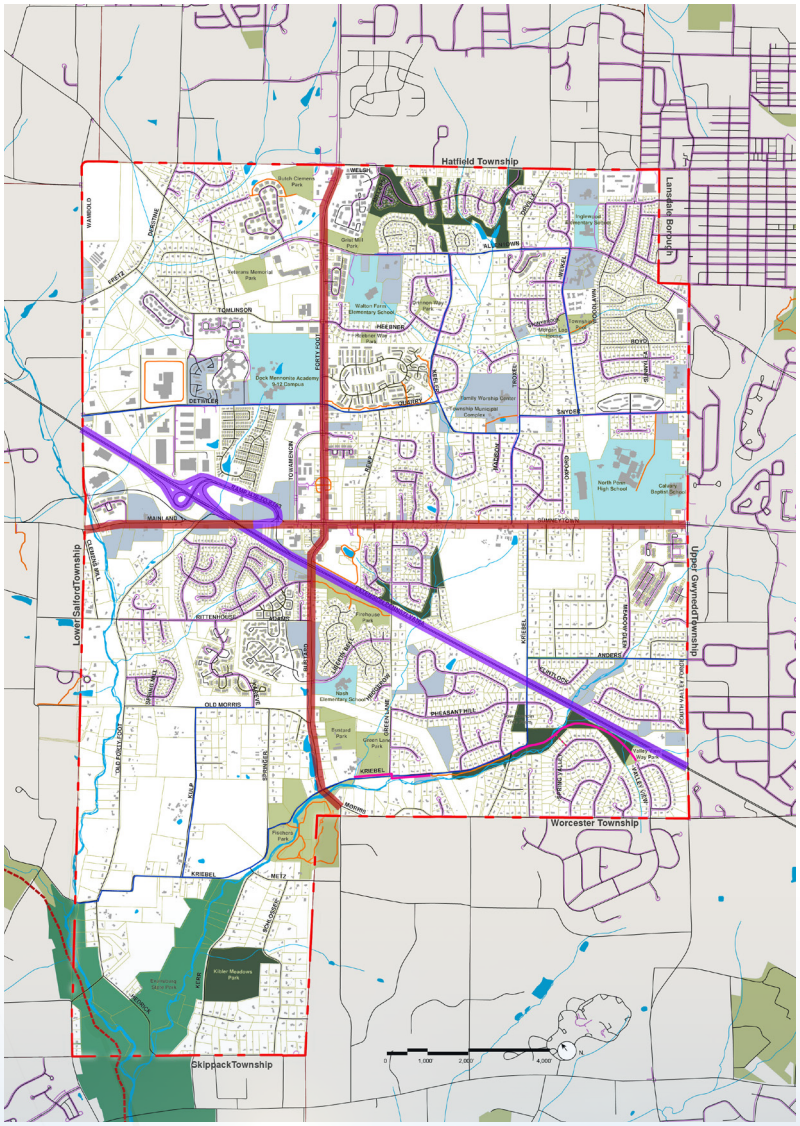
This data was combined with STRAVA data (see page 31), survey results, collision data, and other data to determine routes best suited for pedestrians and cyclists.

2.11.3 Barriers to Connectivity

Major highways, highly-trafficked roads, and waterways are often barriers to connectivity. Based on the opinion survey and the DVRPC level of stress data, several roads in Towamencin Township were identified as "barriers," or roads residents are concerned with pedestrian and/ or bicyclist safety.

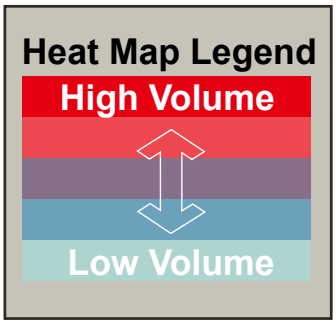
The graphic to the right highlights I-476 in purple as a major barrier that slices the Township in half. The high-trafficked roads that concern residents are highlighted in red and begins to demonstrate how the roads divide the neighborhoods.

The bridges on the graphic show where existing bridges or underpasses are located for vehicles to pass under or over the "barrier" roads or waterways. The wide shoulders on bridges and/or underpasses present opportunities for pedestrian and bicyclist access improvements.

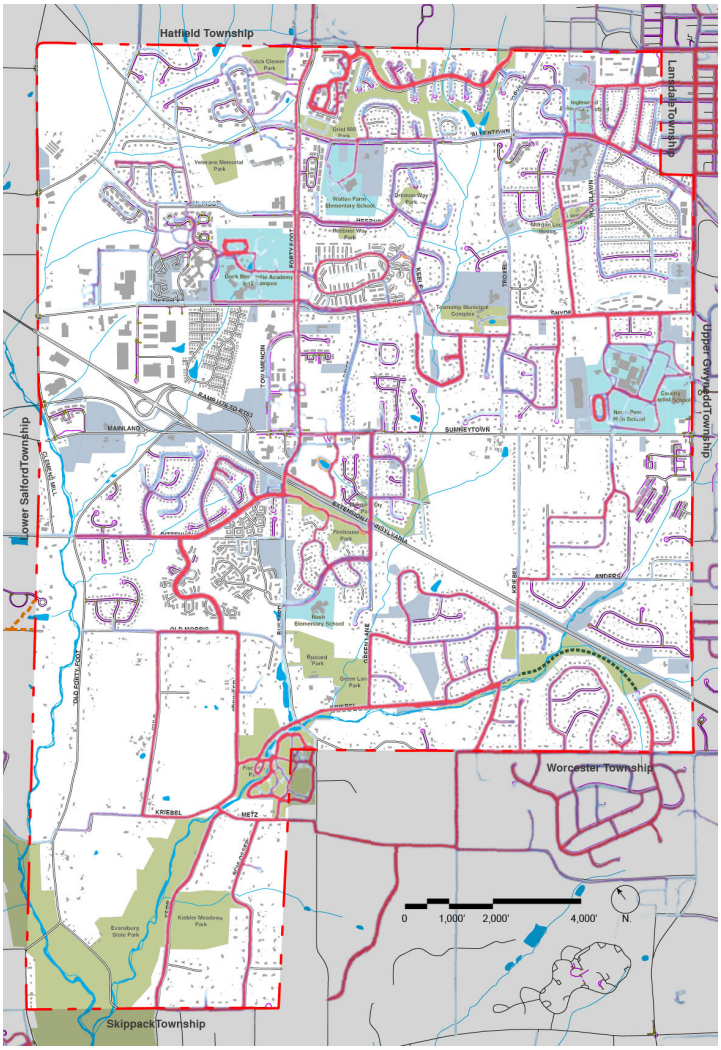


2.11.4 STRAVA Run & Bike

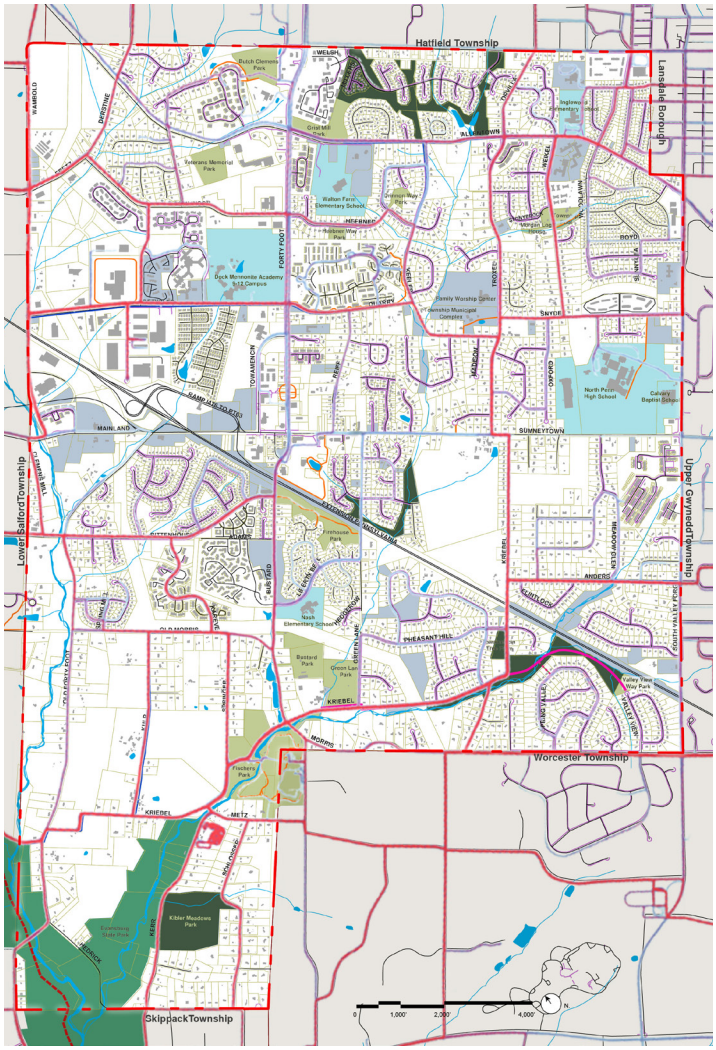
Strava is a social network that athletes use to track exercise. The heatmap below shows use patterns made by aggregated activities, such as running and bicycling, over the last year. The heatmap is updated monthly. Although the data is made up of mostly experienced runners and cyclists, the platform provides insight to the most well-traveled and potentially safest routes to utilize for future pedestrian and bicycle improvements.



Run



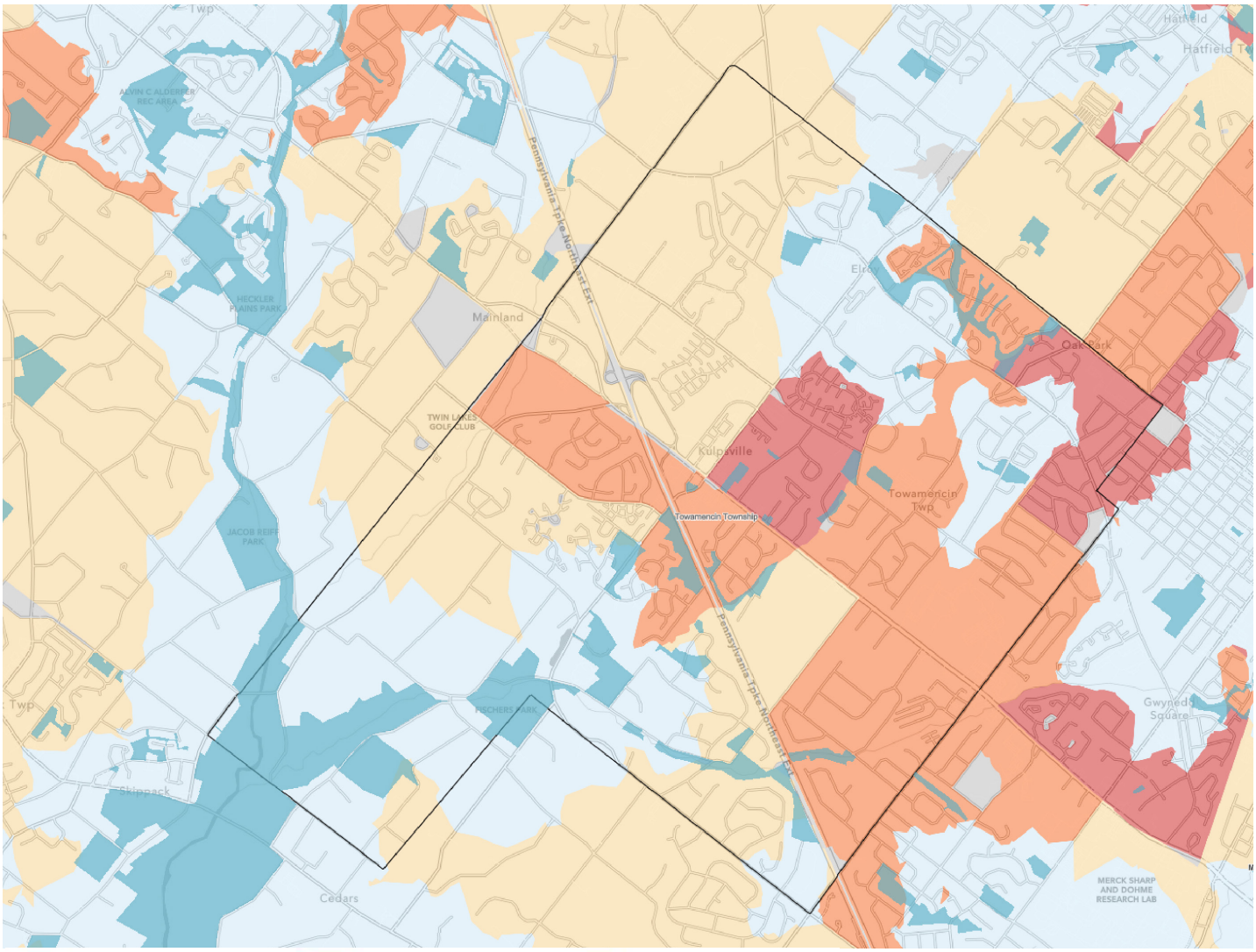
Ride



2.11.5 DCNR Underserved Areas

The Pennsylvania Department of Conservation and Natural Resources (DCNR) provides a tool which illustrates the need for access to parks, trails, and open space. The analysis is based on a 10-minute walk or vehicle ride to these trail and park/open space destinations. While geographic proximity plays a part in travel time, it is important to note that the previously mentioned barriers create longer and often more difficult routes to these destinations.

Please note that the consultant focused on reviewing the underserved areas in orange and red, which represented areas of medium and high need.



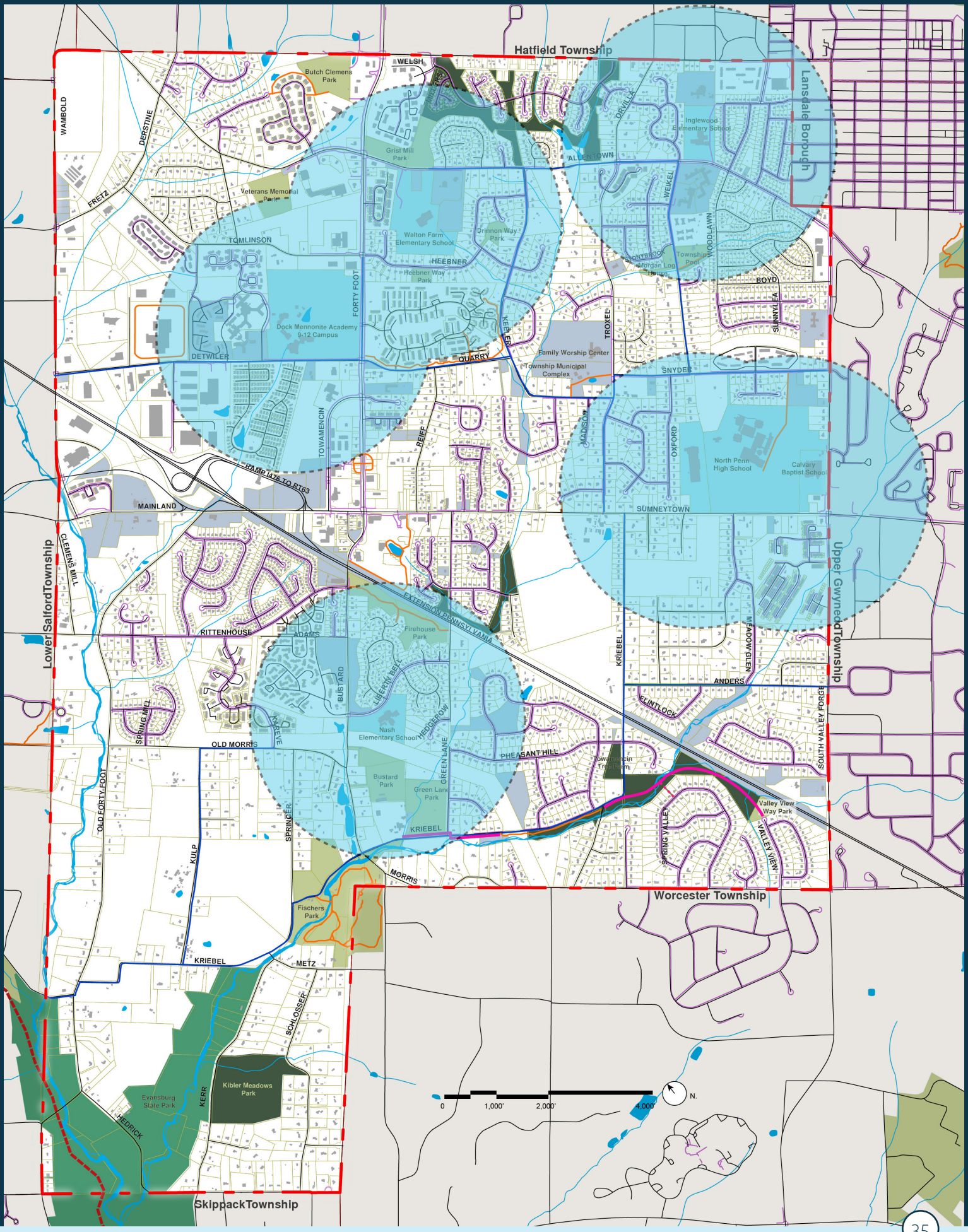
2.12 Radial Service Area Analysis

The following 'service area' graphics display specific radiuses around destination areas: schools, parks, commercial areas, and public transportation. Currently, these destinations exist in isolation with no clear routes connecting residents in Towamencin to them. All roads with the service areas have been analyzed for the best possible improvements to allow residents to walk or bike to a destination efficiently and safely.

2.12.1 Schools:

The service areas represented on the following page show a one-mile radius around school entrance points. This distance shown represents an approximate walking time of 20 minutes, or a 5-minute bike ride. Evaluating the roads within all the service areas allows for a potential safe school route to be defined.

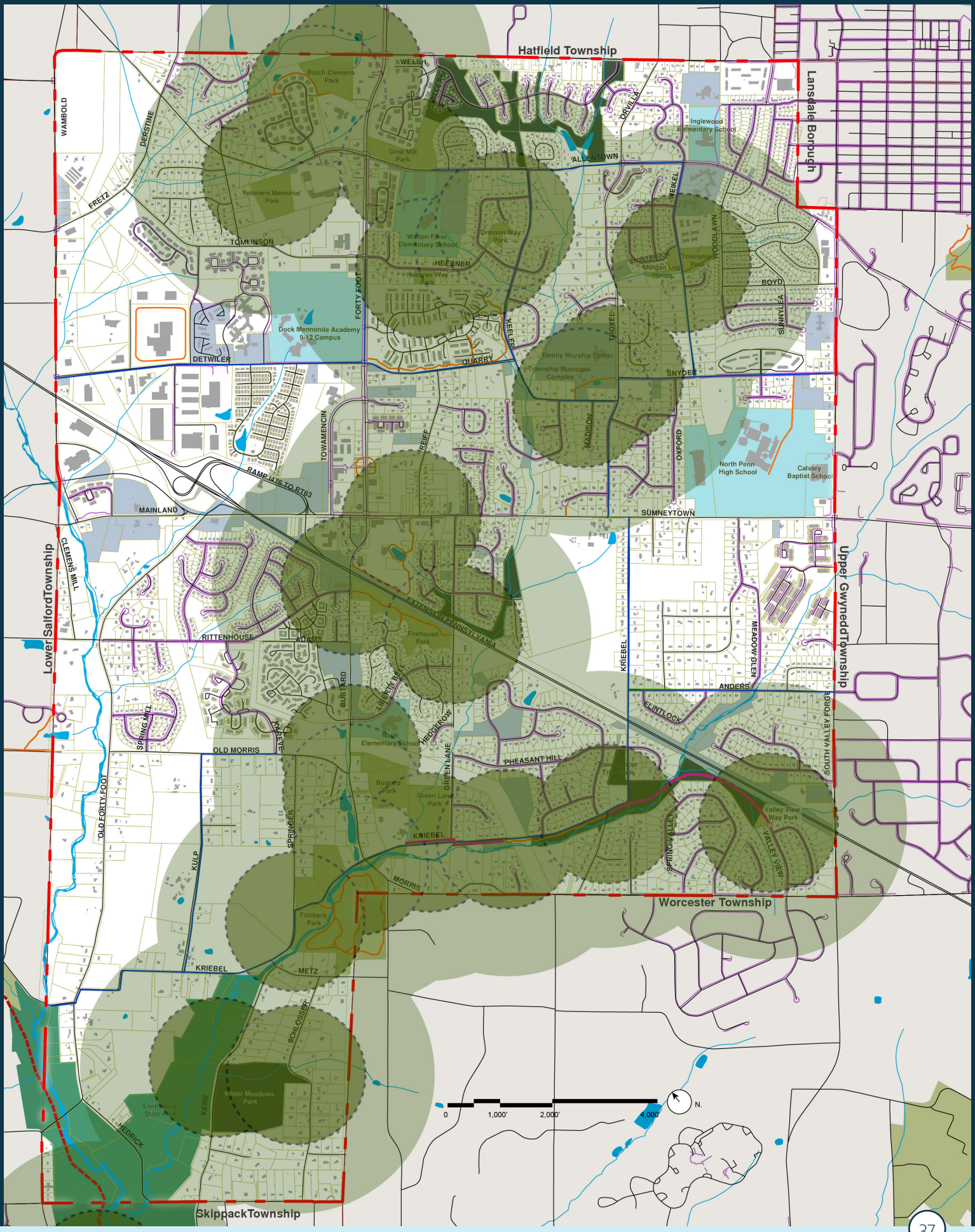
Image Source: North Penn Now


Hatfield Township
Lansdale Borough
Upper Gwynedd Township
Lower Salford Township
Worcester Township
Skippack Township
WELSH
Butch Clemens Park
WAMBOLD
DERSTINE
FRETZ
Veterans Memorial Park
Grist Mill Park
ALLENTOWN
DRYLLA
Inglewood Elementary School
WEIKEL
WOODLAWN
TOMLINSON
Walton Farm Elementary School
Drinnon Way Park
HEEBNER
Heebner Way Park
Township Pool
BOYD
SUNNYLEA
FORTY FOOT
Dock Mennonite Academy 9-12 Campus
DETWILER
KEELER
TROXEL
QUARRY
Family Worship Center
Township Municipal Complex
SNYDER
MADISON
OXFORD
North Penn High School
Calvary Baptist School
TOWAMENCIN
REIFF
RAMP 1476 TO RT63
MAINLAND
SUMNEYTOWN
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
Firehouse Park
KRIEBEL
MEADOW GLEN
ANDERS
FLINTLOCK
SOUTH VALLEY FORGE
LIBERTY BELL
BUSTARD
HEDGEROW
GREEN LANE
SPRING MILL
OLD MORRIS
Nash Elementary School
PHEASANT HILL
Township Municipal Complex
Bustard Park
Green Lane Park
Valley View Way Park
SPRING VALLEY
VALLEY VIEW
OLD FORTY FOOT
KULP
SPRINGER
KRIEBEL
MORRIS
Fischers Park
METZ
SCHLOSSER
Kibler Meadows Park
Evansburg State Park
KERR
HEDRICK
0
1,000'
2,000'
4,000'
N.

2.12.2 Parks:

The darker green symbol in the following map represents a half-mile radius around Township parks. This distance correlates with the DCNR "10-mintue walk" initiative. The surrounding, lighter shade of green shows a one-mile radius, which represents a 20-minute walk or 5-minute bike ride. The purple lines highlight roads that fall within the service area and provide a connection from a park trail entrance to the next intersection or road break.

This representation helps define where connections within the service areas could be made to provide access to and between parks.


Hatfield Township
Lansdale Borough
Upper Gwynedd Township
Lower Salford Township
Worcester Township
Skippack Township
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
ALLENTOWN
ORVILLE
WEIKEL
WOODLAWN
BOYD
TROXEL
SNYDER
MADISON
OXFORD
TOWAMENCIN
REIFF
RAMP PA76 TO RT63
MAINLAND
SUMNEYTOWN
CLEMENS MILL
RITTENHOUSE
EXTENSION PENNSYLVANIA
KRIEBEL
MEADOW GLEN
ANDERS
FLINTLOCK
SOUTH VALLEY FORGE
SPRING MILL
OLD MORRIS
BUSTARD
LIBERTY BELL
HEDGEROW
GREEN LANE
PHEASANT HILL
OLD FORTY FOOT
SPRINGER
KULP
MORRIS
SPRING VALLEY
VALLEY VIEW
METZ
SCHLOSSER
KERR
HEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Inglewood Elementary School
Township Pool
Morgan Log House
Family Worship Center
Township Municipal Complex
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kubler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

2.12.3 Commercial Areas:

The stars on the following map denote general areas where clusters of commercial uses are located within and outside of the Township. A one-mile radius has been set around each of these points, which represents a 20-minute walk, or 5-minute bike ride.

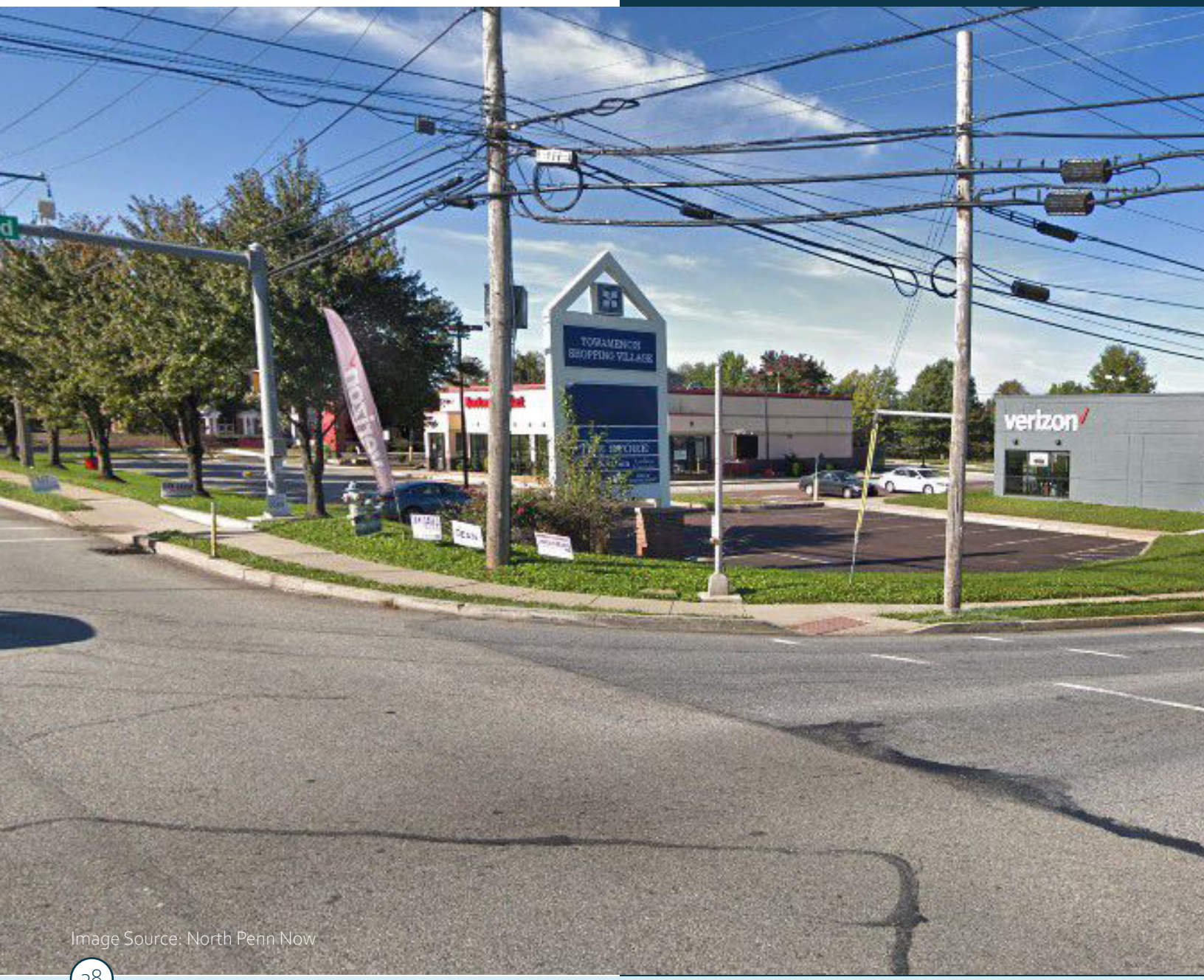
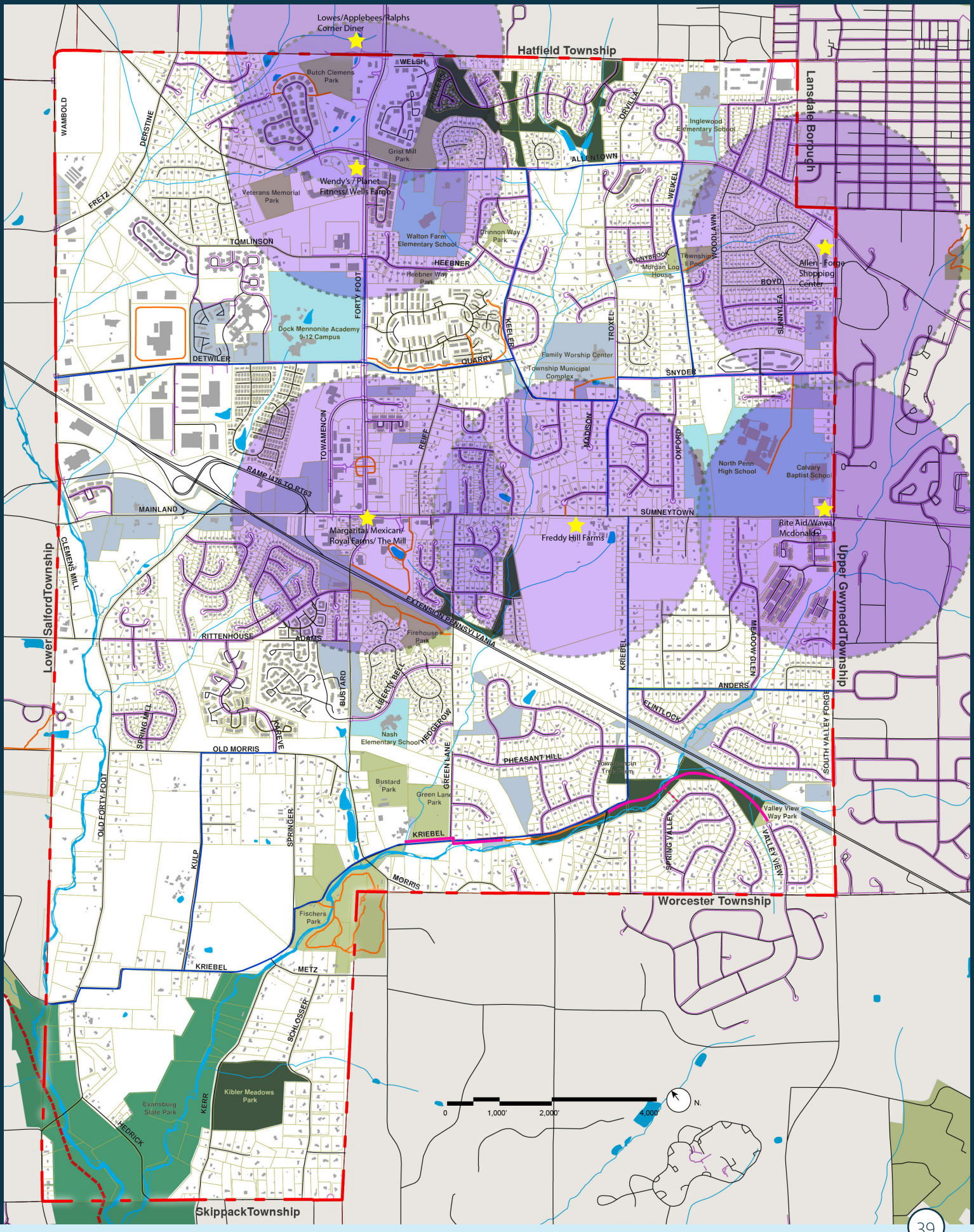


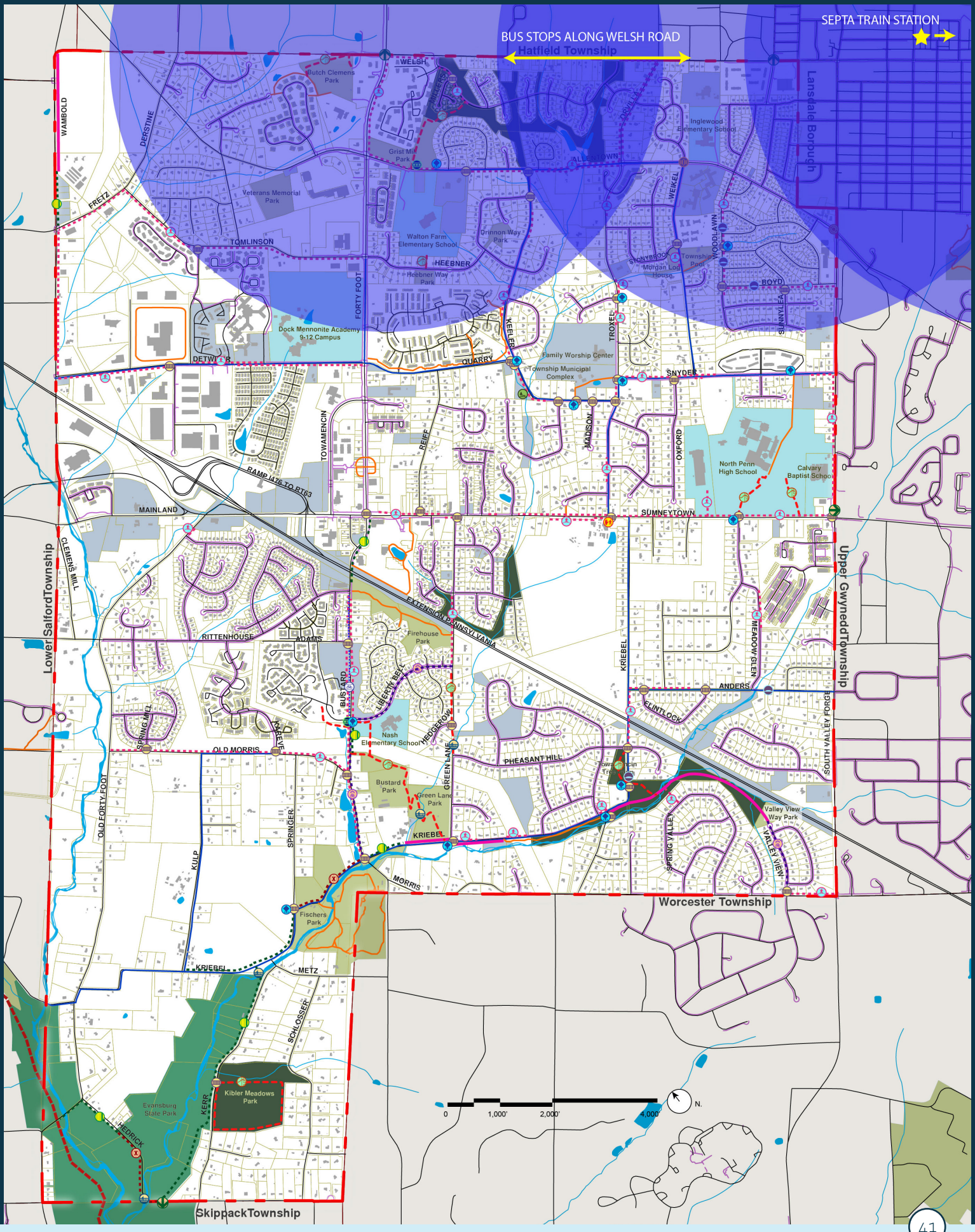
Image Source: North Penn Now


Lowes/Applebees/Ralphs Corner Diner
Hatfield Township
Lansdale Borough
Wendy's / Planet Fitness/ Wells Fargo
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Township Pool
Allen - Forge Shopping Center
Inglewood Elementary School
Dock Mennonite Academy 9-12 Campus
Family Worship Center
Township Municipal Complex
Morgan Log House
North Penn High School
Calvary Baptist School
Rite Aid/Wawa/ Mcdonalds
Margaritas Mexican/ Royal Farms/ The Mill
Freddy Hill Farms
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
Lower Salford Township
Upper Gwynedd Township
Worcester Township
Skippack Township
WELSH
ALLENTOWN
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
SNYDER
SUMNEYTOWN
MAINLAND
RAMP I476 TO RT63
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
OLD MORRIS
PHEASANT HILL
ANDERS
FLINTLOCK
KRIEBEL
METZ
MORRIS
HEDRICK
SCHLOSSER
KERR
KULP
SPRINGER
OLD FORTY FOOT
SPRING MILL
CLEMENS MILL
BUSTARD
GREEN LANE
HEDGEROW
MEADOW GLEN
SOUTH VALLEY FORGE
SPRING VALLEY
VALLEY VIEW
VALLEY VIEW WAY
WOODLAWN
SUNNYLEA
BOYD
OXFORD
MADISON
TROXEL
KEELER
REIFF
TOWAMENCIN
WEIKEL
ORVILLE
FRETZ
DERSTINE
WAMBOLD
0
1,000'
2,000'
4,000'
N.

2.12.4 Public Transportation:

The following map shows a two-mile radius around bus and rail stops, which represents an approximate 30-45 minute walk, or a 10-minute bike ride. The service area on these destinations is set higher than the others because it is a part of the consultant's due diligence to provide multiple forms of transportation to a wider cross section of Township residents. This analysis provides information on which populations would benefit from improvements providing safe routes for travel beyond the Township.

Image Source: Philadelphia Inquirer


BUS STOPS ALONG WELSH ROAD
Hatfield Township
SEPTA TRAIN STATION
Lansdale Borough
Lower Salford Township
Upper Gwynedd Township
Worcester Township
Skippack Township
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
SNYDER
SUMNEYTOWN
ANDERS
MAINLAND
RITTENHOUSE
ADAMS
OLD MORRIS
PHEASANT HILL
KRIEBEL
METZ
MORRIS
SCHLOSSER
KERR
HEDRICK
KULP
SPRINGER
OLD FORTY FOOT
SPRING MILL
CLEMENS MILL
BUSTARD
LIBERTY BELL
HEDGEROW
GREEN LANE
KEELER
TROXEL
MADISON
OXFORD
REIFF
TOWAMENCIN
WEIKEL
DRYDEN
ALLENTOWN
WOODLAWN
BOYD
SUNNYLEA
MEADOW GLEN
FLINTLOCK
SOUTH VALLEY FORGE
SPRING VALLEY
VALLEY VIEW
RAMP 1476 TO RT63
EXTENSION PENNSYLVANIA
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Hebbner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Inglewood Elementary School
Township Pool
Morgan Log House
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

RECOMMENDATIONS

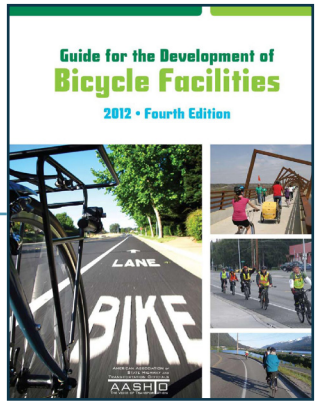
3

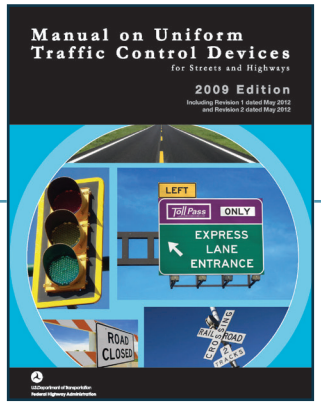
3.1 Trail Design Guidelines

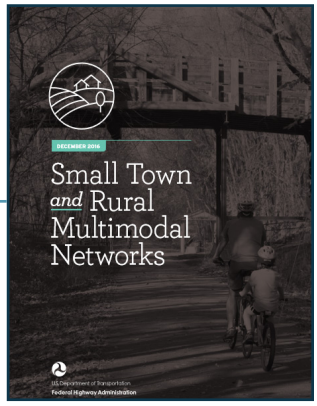
Trails improvements are designed based on standards created to maximize the safety of their users. These standards are developed by national and local organizations. Examples of these standards and manuals can be found below:

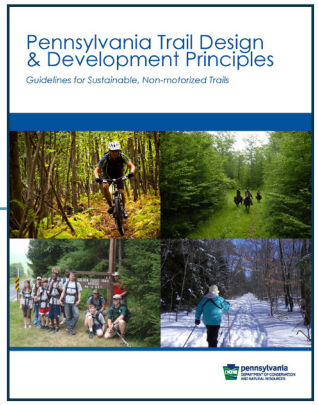
- The American Association of State Highway Transportation Officials (AASHTO)
  - Guide for the Development of Bicycle Facilities
- Federal Highway Administration (FHWA)
  - Manual on Uniform Traffic Control Devices (MUTCD)
  - Small Town and Rural Multimodal Networks
- Department of Natural Resources (DCNR)
  - The Pennsylvania Trail Design and Development Principles
- The National Association of City Transportation Officials (NACTO)
  - Urban Bikeway Design Guide

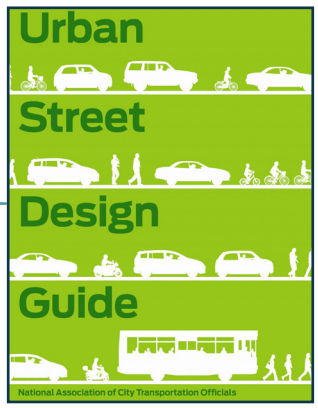
AASHTO and FHWA standards are federally recognized and should be adhered to for all on-road and multi-use trail improvements. DCNR guidelines are recognized at the state level and provide techniques for sustainable design methods that make use of natural systems. NACTO is an association of North American cities and transit agencies formed to ideate on transportation issues. Their standards provide insight into the design of safe and accessible streets.











3.2 Vision Zero

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. First implemented in Sweden in the 1990s, Vision Zero has proved successful across Europe, and is now gaining momentum in American towns and cities. The guidebook provides foundational elements and actionable strategies for any community to incorporate into their transportation network.

VISION ZERØ

3.3 Connectivity Improvement Features

The improvements plan captures all the high-level improvements necessary to help the Township begin to strengthen their multi-modal network. All improvements have applications or features folded into them that must be designed and engineered in order to be implemented correctly. The following applications are not identified as a 'tool' in the improvements plan, but should be recognized as a supporting improvement feature.

3.3.1 Signage

Signage can be provided along the road or trail under many applications and scenarios. Signage informs motorists to watch out for bicyclists on the roadway. MUTCD standards: Share the Road (W11- and W16-1P) signs have been replaced with "Bicyclist May Use Full Lane" (R4-11) signs; Place signs at the beginning of the bike route, roadway intersections, and throughout the segment where deemed required, and at the end of the bike route. There are many other applications where trail signage is necessary and appropriate and should be included when proposed improvements advance to full engineering.

3.3.2 ADA Curb Ramps

An ADA curb ramp is a sloped section through a curb that individuals use to transition up from the street to the sidewalk or vice versa. More specifically, an ADA curb ramp aides as an accessibility route for people with mobility issues. The Americans with Disabilities Act (ADA) has extensive laws, regulations, and standards set for the design and construction of the ramps at intersections.

The ADA curb ramps within the Township are documented and mapped by DVRPC. Based on the data, the Township has an extensive network of existing curb ramps. Through site reconnaissance, some curb ramps in the Township should be re-evaluated based on the current ADA standards.

As the Township begins to implement some of the accessibility tools presented in this document, ADA curb ramps should accompany the design where needed.

3.3.3 Walkway Surface Types

Asphalt Surfaces

Asphalt surfaces provide for the widest variety of trail users including bicyclists, walkers, joggers, wheelchair users, parents with baby strollers, and in-line skaters. Initial installation costs are relatively high (lower than Portland cement concrete however) compared to other trail surface types. However, long-term maintenance costs will remain moderate if properly installed and maintained. Asphalt trails are preferred in flood prone areas. Porous asphalt can also be used in situations where stormwater infiltration or a pervious surface is required. Porous asphalt should not be used in flood prone areas where silt will clog the voids in the pavement.

Concrete Surfaces

Portland cement concrete pavement is the most durable material for trail surfaces but is more expensive than asphalt. Concrete trails are commonly used in urban environments. Advantages of concrete include longer service life, reduced susceptibility to cracking and deformation from roots and weeds, and a more consistent riding surface after years of use and exposure to the elements. The joints in concrete trail treads can degrade the experience of using the path for some wheeled users. In addition, users can see pavement markings more easily on asphalt than on concrete, particularly at night.

Compacted Aggregate Surfaces

Compacted aggregate surfaces, or stone dust trails, can accommodate all trail user types with the exception of in-line skaters. Initial installation costs for this trail surface are relatively low, however long-term maintenance costs increase due to this surface's higher susceptibility to erosion, especially if not properly installed with swales and cross drains. Crushed limestone or sandstone or "Trail Surface Aggregate (TSA) Mix" are typical aggregates used in this situation. A compacted aggregate surface can also serve as base material for an asphalt surface if trail use increases or funds become available for a surfacing upgrade. Compacted aggregate surfaces should be avoided in flood prone areas or on slopes over 3%.

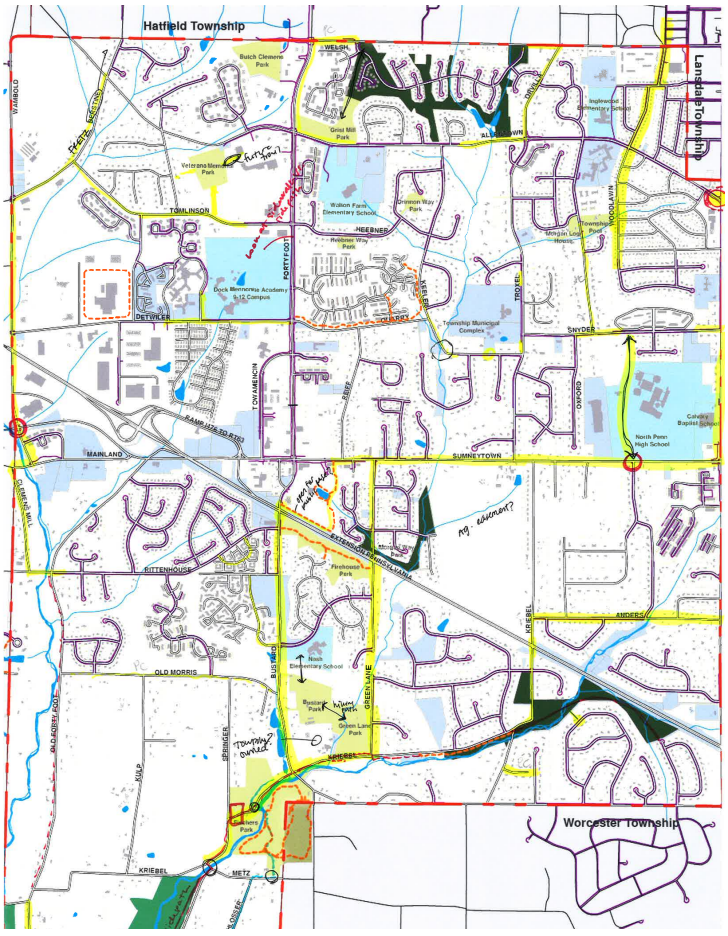
Pavers

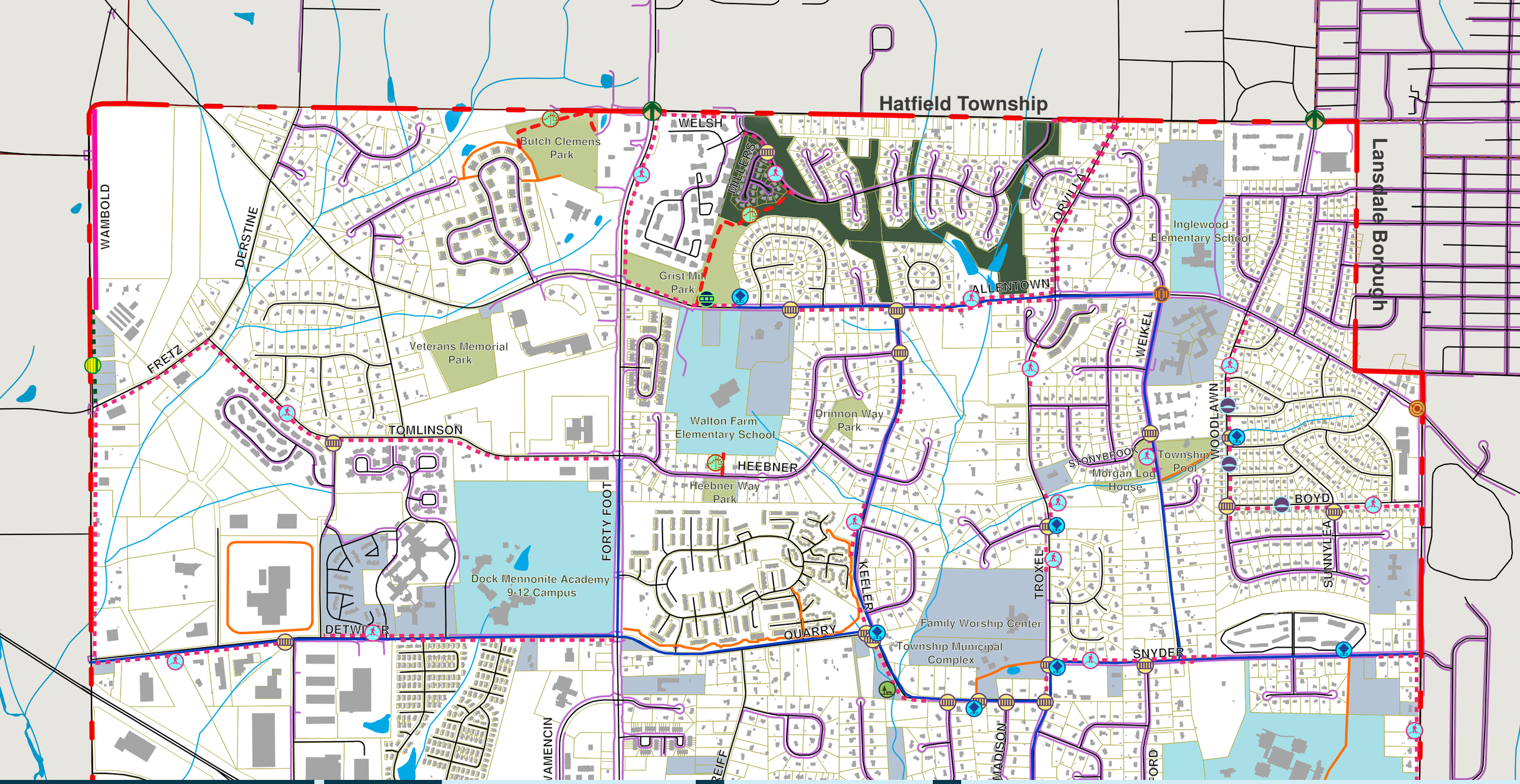
Pavers, composed of clay or concrete, may be a suitable pavement material where the context is of a historic or institutional nature. This material is highly aesthetically pleasing and durable. However, this material is the most expensive type of trail or sidewalk surface and is typically used only in areas of high visibility or in areas of historic significance.

3.4 Proposed Improvements Plans

The proposed improvements plan is divided into three (3) pages with plans drawn at a scale of 1" = 1,000'. These plans illustrate the locations of pedestrian and bicycle improvements in Towamencin. Based upon site analysis, field reconnaissance, and information gathered at committee and public meetings, several guiding principles were established. These are as follows:

- Establish safe connections to the schools.
- Connect to parks, trails, and open space within Towamencin and the surrounding area.
- Establish safe connections across "barriers" such as railroad lines and high-volume roadways.
- Connect to the amenities and services in Towamencin as well as in adjacent municipalities.
- Establish cross-township connections (north/south & east/west) on low-stress or low-traffic volume routes.
- Connect neighborhoods to other destinations in the Township.





Towamencin Township Connectivity Study

N

0 500' 1000' 2000'

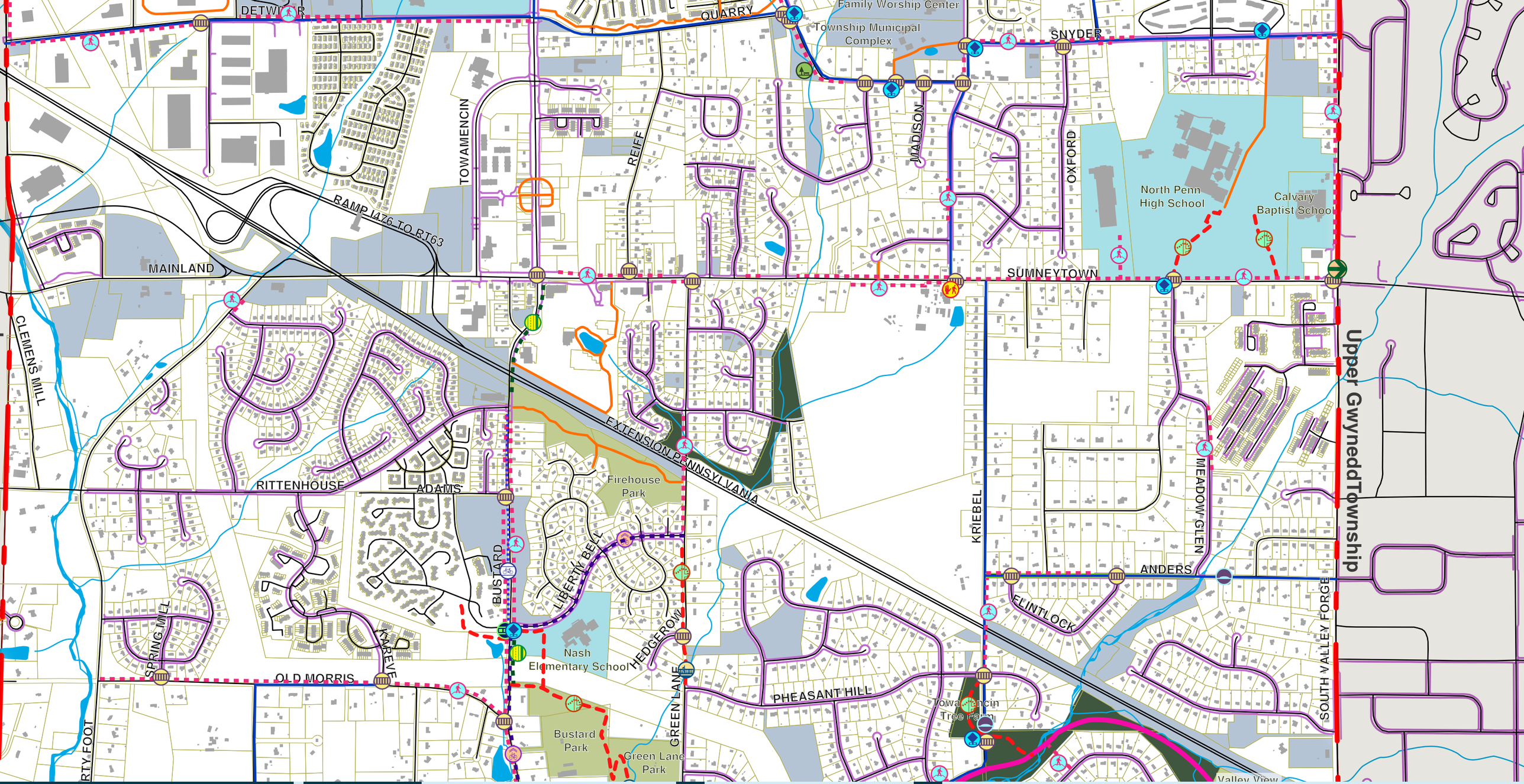
Sheet A
Sheet B
Sheet C

Existing

- State Park
- Township Park
- Open Space
- Institutional
- School
- Existing Sidewalk
- Existing On Road Route
- Existing Trail

Proposed

- Township Trail
- County Trail
- Sidewalk
- Multi-Use Trail
- Side Path
- Sharrow
- Bicycle Lane
- Road/Lane Closure
- Crosswalk
- Decorative Crosswalk
- Speed Cushion
- Rapid Flashing Beacon
- Hand Man
- Pedestrian Refuge Island
- Trail Bridge
- Pocket Park
- Connection to Adjacent Twp
- Roundabout



Towamencin Township
Connectivity Study

52

0 500' 1000' 2000'

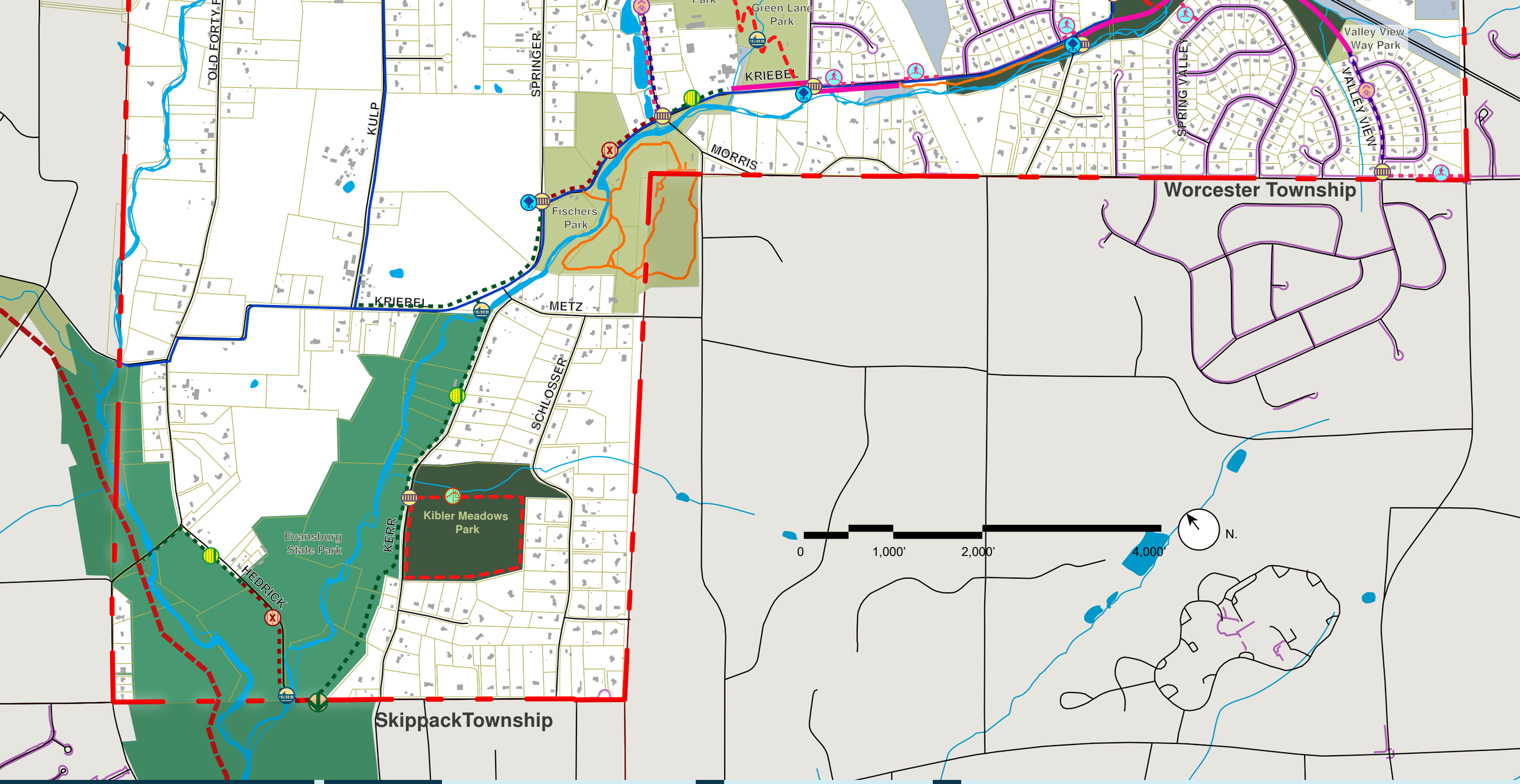
Sheet A
Sheet B
Sheet C

Existing

- State Park
- Township Park
- Open Space
- Institutional
- School
- Existing Sidewalk
- Existing On Road Route
- Existing Trail

Proposed

- Township Trail
- County Trail
- Sidewalk
- Multi-Use Trail
- Side Path
- Sharrow
- Bicycle Lane
- Road/Lane Closure
- Crosswalk
- Decorative Crosswalk
- Speed Cushion
- Rapid Flashing Beacon
- Hand Man
- Pedestrian Refuge Island
- Trail Bridge
- Pocket Park
- Connection to Adjacent Twp
- Roundabout



Towamencin Township Connectivity Study

N

0 500' 1000' 2000'

Sheet A
Sheet B
Sheet C

Existing

- State Park
- Township Park
- Open Space
- Institutional
- School
- Existing Sidewalk
- Existing On Road Route
- Existing Trail

Proposed

- Township Trail
- County Trail
- Sidewalk
- Multi-Use Trail
- Side Path
- Sharrow
- Bicycle Lane
- Road/Lane Closure
- Crosswalk
- Decorative Crosswalk
- Speed Cushion
- Rapid Flashing Beacon
- Hand Man
- Pedestrian Refuge Island
- Trail Bridge
- Pocket Park
- Connection to Adjacent Twp
- Roundabout

Fisher's
Park
TOWAMENCIN
TOWNSHIP
Please Drive Carefully!
15

3.5 Improvement Toolbox

A list of needed connectivity improvements for Towamencin Township was developed. These improvements adhere to the previously described design standards and include off-road and on-road recommendations. The following section of this report will provide information on each toolbox item.

3.5.1 Sidewalk

Sidewalks are the basic transportation network for pedestrians in any village or town, and probably the most familiar 'improvement tool' to residents.

Typically, sidewalks are a minimum of five feet wide, constructed of concrete, and located parallel and adjacent to a roadway.

Sidewalks allow pedestrians to safely move and access home, work, school, transit stops, parks, places of worship, and any other desired destinations. The existing sidewalk infrastructure has been expanded to connect to other areas in the Township. Proposed locations of new sidewalks are based on site reconnaissance, sidewalk inventory completed by the consultants, and input from committee and public meetings.

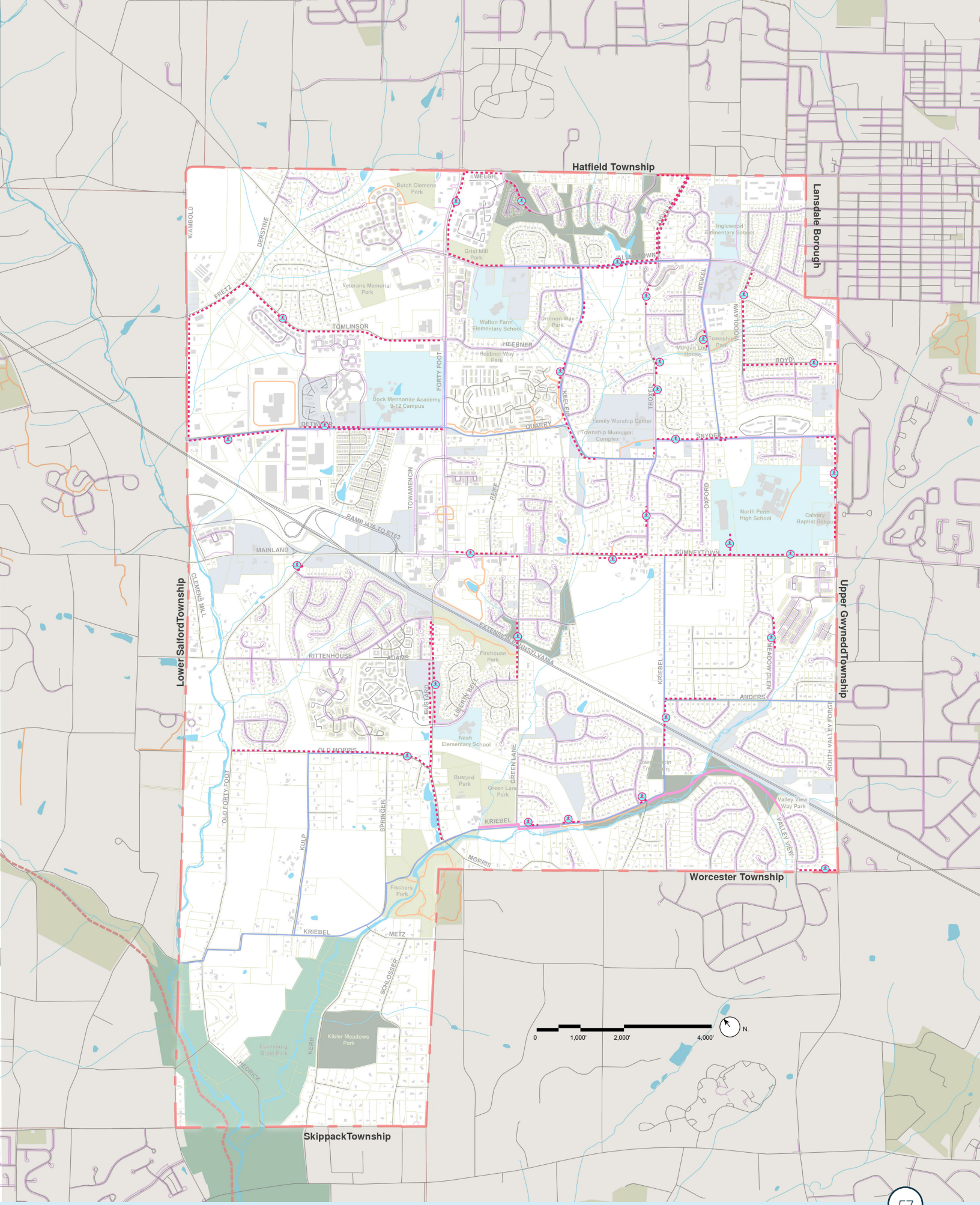
TOOL METRICS

68,680 linear feet of new sidewalk

Equivalent to 13 miles

DESIGN GUIDELINES

Typically, sidewalks are a minimum of five feet wide, constructed of concrete, and located immediately adjacent to a roadway.


Hatfield Township
Lansdale Borough
Upper GwyneddTownship
Lower SalfordTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
QUARRY
KEELER
TROXEL
WEIKEL
WOODLAWN
BOYD
SNYDER
SUMNEYTOWN
OXFORD
REIFF
TOWAMENCIN
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
RITTENHOUSE
ADAMS
EXTENSION
PENNSYLVANIA
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
BUSTARD
LIBERTY BELL
GREEN LANE
OLD FORTY FOOT
OLD MORRIS
SPRINGER
KULP
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Grinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Township Pool
Morgan Log House
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.2 Crosswalk

Similar to sidewalks, crosswalks are proposed to benefit the largest number of residents and establish safe travel corridors to and from the destinations of Towamencin.

Crosswalks can be delineated in several ways. The continental crosswalks ("piano keys or "zebra stripes") are the most common type and highly visible crosswalks and are generally preferred by PennDOT and most regulatory agencies. The "keys" or "stripes" can be contained (or not) by another thick white stripe parallel to the direction of pedestrian traffic. Continental crosswalks are generally constructed of thermoplastic materials that are applied onto the surface of asphalt paving and are highly durable, generally with an effective life span of up to ten years (dependent on traffic). In recent years, thermoplastic materials have been preferred to pavers placed in crosswalks since pavers become loose are subject to damage from snowplows.

When used on state roads, PennDOT engineers must be consulted to approve of decorative crosswalks as some engineers note that decorative crosswalks may potentially distract drivers. The decision to allow or not allow a decorative crosswalk on a state road includes levels of traffic or level or service at an intersection, accident history, posted speed limit and other contextual considerations.

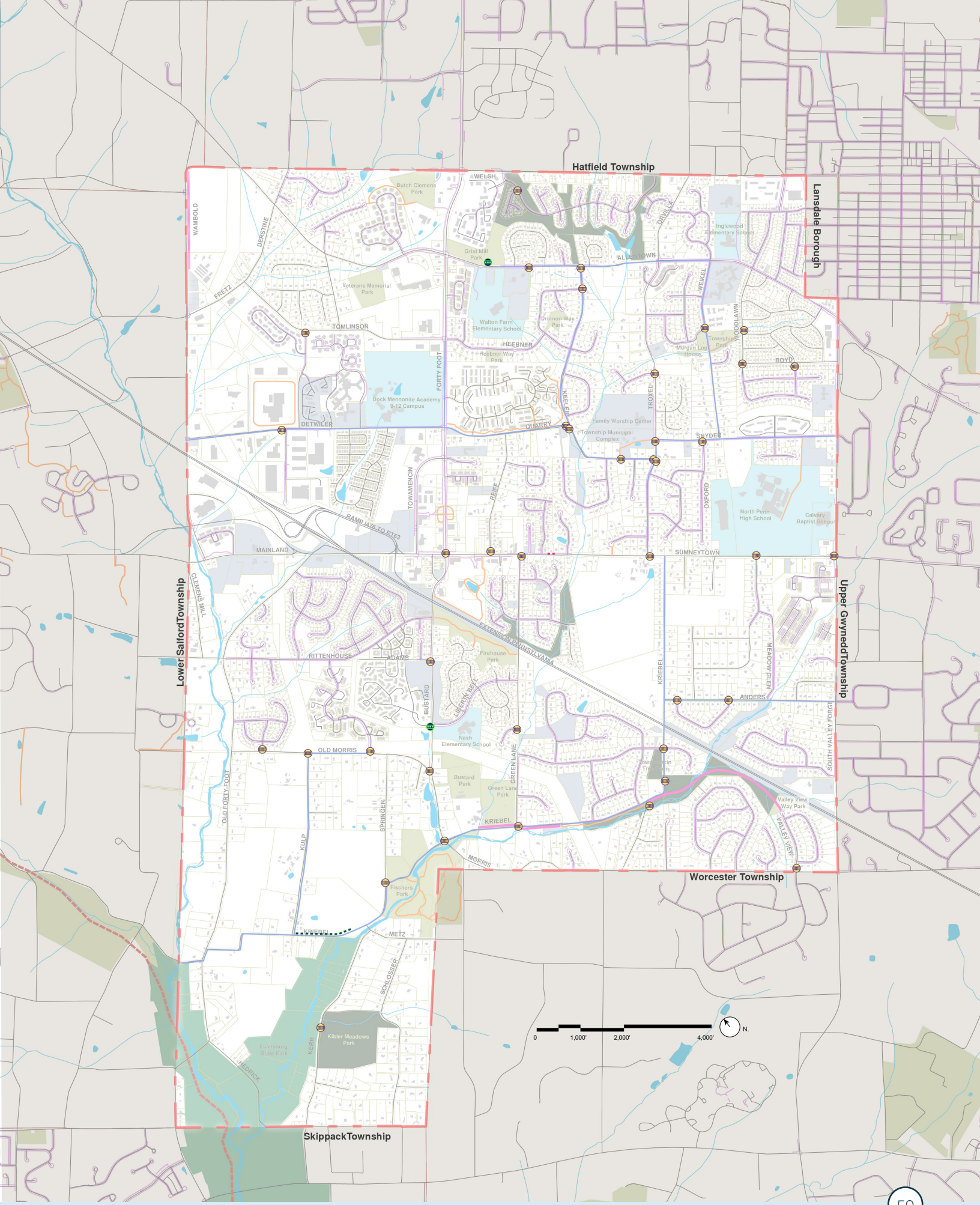
Similar to sidewalks, crosswalks are proposed to benefit the largest number of residents and establish safe travel corridors to and from the destinations of Towamencin.

DESIGN GUIDELINES

- Crosswalks must contain parallel white stripes
- Generally constructed using thermoplastic materials

TOOL METRICS

43 locations proposed in plan


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
ALLENTOWN
HEEBNER
TOMLINSON
DETWILER
QUARRY
SNYDER
BOYD
MAINLAND
SUMNEYTOWN
RITTENHOUSE
OLD MORRIS
KRIEBEL
ANDERS
METZ
MORRIS
WAMBOLD
DERSTINE
FRETZ
FORTY FOOT
TOWAMENCIN
REIFF
KEELER
TROXEL
OXFORD
WOODLAWN
WEKEL
ORVILLE
CLEMENS MILL
ADAMS
BUSTARD
LIBERTY BELL
GREEN LANE
SPRINGER
KULP
OLD FORTY FOOT
SCHLOSSER
KERR
HEDRICK
MEADOW GLEN
SOUTH VALLEY FORGE
VALLEY VIEW
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Morgan Log House
Township Pool
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
RAMP I476 TO RT63
EXTENSION PENNSYLVANIA
0
1,000'
2,000'
4,000'
N.

3.5.3 Multi-Use Trail

Multi-use trails, also referred to as multi-modal or shared use trails, provide a safe and distinct route for pedestrians and similar user groups.

These trails are generally a minimum of 10 feet in width and may be designed at widths of up to 14 feet for high-volume routes. In rare instances where space is limited, trails may be installed at an 8-foot width. Such trails can be paved with asphalt or stone dust / stone screenings.

The Towamencin Township Connectivity Study includes multi-use trails at multiple parks, open space, and school areas. Many of the multi-use trails connect into existing trail infrastructure in order to expand on the existing network.

In Grist Mill Park, a multi-use trail is proposed to promote a more formal connection between the park and the adjacent residents to the northeast. connecting to the adjacent residential area to its northeast. In Butch Clemens Park, a trail is proposed which connects to an existing trail in the residential area on Pleasant Valley Drive. A loop trail is proposed in Kibler Meadows Park, near Evansburg State Park.

For school areas, a trail is proposed on the Walton Farm Elementary School property, connecting to sidewalks on Heebner Way. North Penn High School has two proposed multi-use trails connecting sidewalks from improvements on Bridal Path Road and the existing school sidewalk. The example pictured below shows a multi-use trail which connects Nash Elementary School to Bustard Park and Green Lane Park. This segment also contains a small loop trail.

For open space areas, a multi-use trail is proposed through the Towamencin Township Tree Farm along Kriebel Road. This trail then crosses Kriebel Road and proceeds south towards the future segment (Phase 1) of the Kriebel Road Trail, providing adjacent residencies a connection to the new Township amenity.

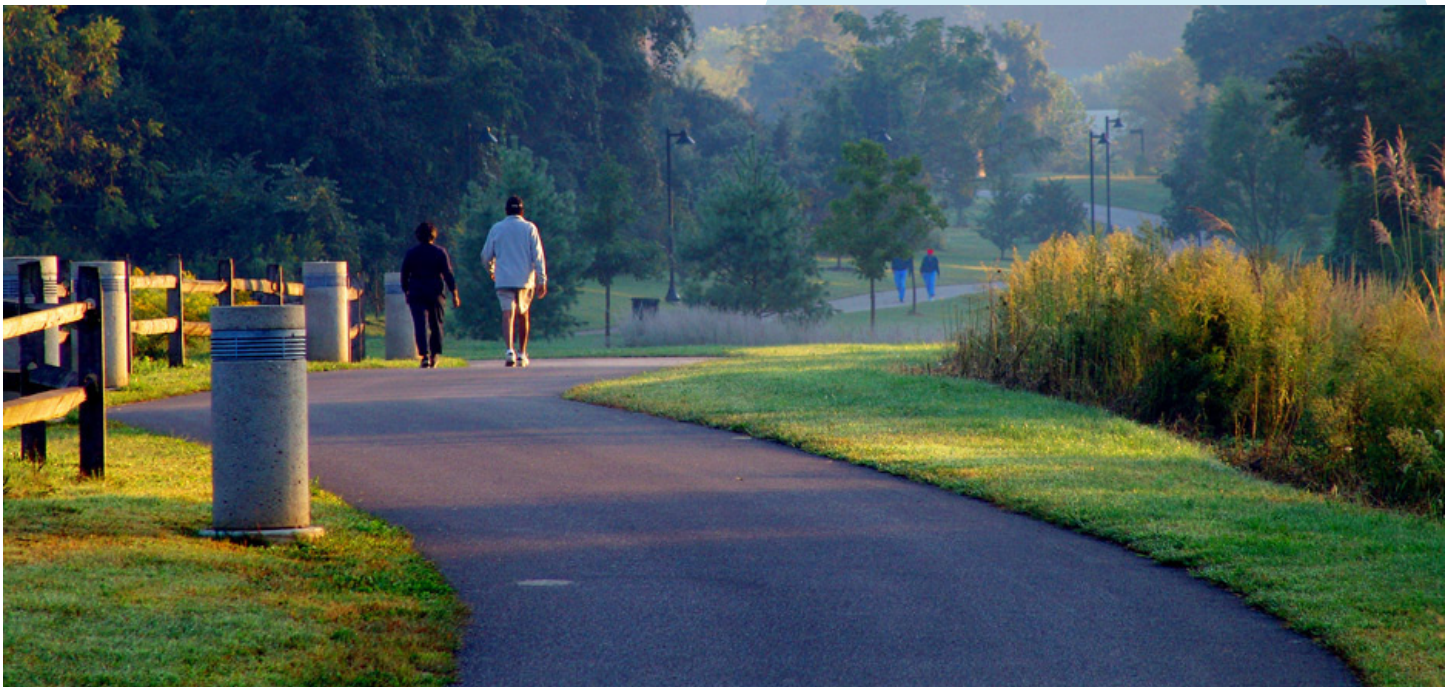
TOOL METRICS

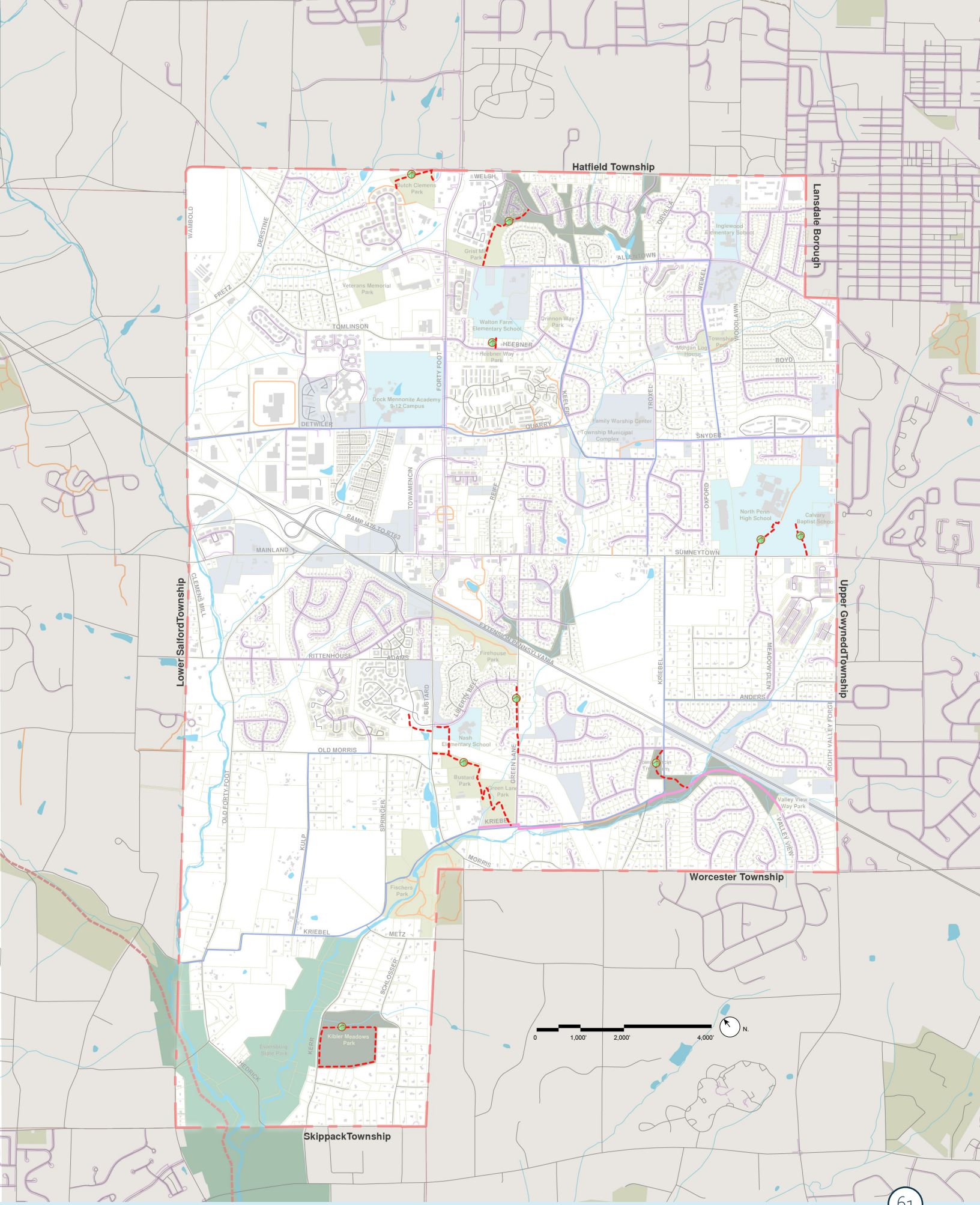
12,750 linear feet of new multi-used trails

Equivalent to 2.4 miles

DESIGN GUIDELINES

8'-14' Depending on existing conditions




Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
ORVILLE
WOODLAWN
BOYD
SNYDER
ALLENTOWN
OXFORD
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
Dock Mennonite Academy 9-12 Campus
Walton Farm Elementary School
Township Municipal Complex
North Penn High School
Nash Elementary School
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.4 Side Path

A side path can encourage bicycling and walking in areas where high-volume traffic and/or high-speed traffic might otherwise discourage such activity.

A side path is a multi-use trail located immediately adjacent and parallel to a roadway. These trails require a 5' setback from the cartway if no barrier is present. Side paths are anywhere from 5' to 8' in width and are often constructed from asphalt. A side path can encourage bicycling and walking in areas where high-volume traffic and/or high-speed traffic might otherwise discourage such activity.

A side path is recommended along Bustard Road from the intersection of Sumneytown Pike to the entrance of Firehouse Park. A side path can be found from the intersection of Liberty Bell Drive and the entrance to Bustard Park further south on Bustard Road.

The Kriebel Road Trail project, which is currently under construction, ends at Green Lane Park along Kriebel Road. This connectivity study recommends a side path continuation of this trail, west to Bustard Road.

Other trail and sidewalk projects are being developed along Wambold Road, as noted on the Improvements Plan. To prevent the improvements from sitting in isolation, the Plan proposes extending a side path south to Fretz Road, which would then connect to proposed sidewalks along Fretz Road and Wambold Road.

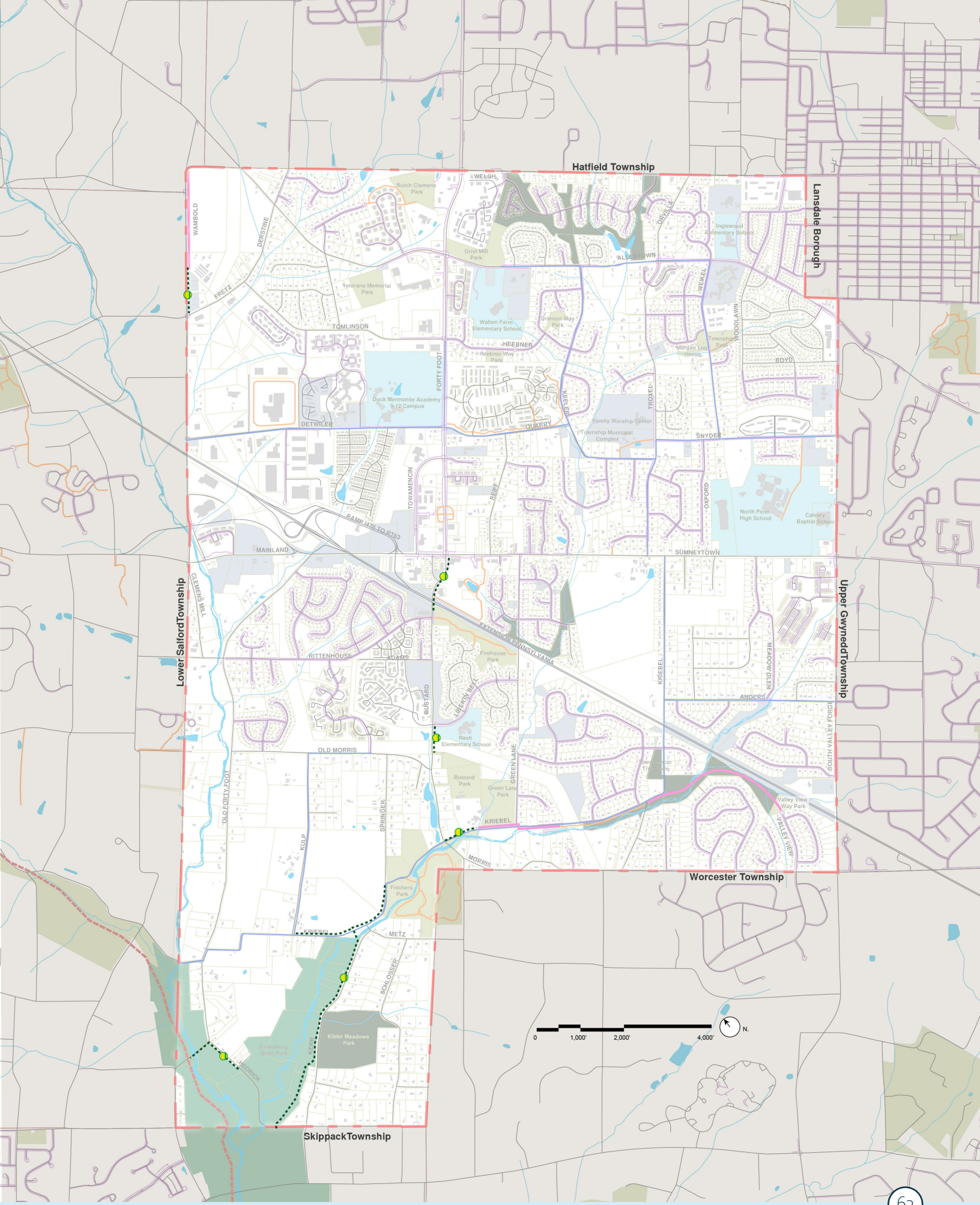
DESIGN GUIDELINES

- 5'-8' in Width
- Require 5' setback from cartway if no barrier is present

TOOL METRICS

4,500 linear feet proposed in plan

Equivalent to 0.85 mile


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
ORVILLE
WOODLAWN
BOYD
SNYDER
OXFORD
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
EXTENSION PENNSYLVANIA
SUMNEYTOWN
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
OLD MORRIS
OLD FORTY FOOT
KULP
SPRINGER
GREEN LANE
MORRIS
METZ
SCHLOSSER
KERR
FEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Inglewood Elementary School
Township Park
Morgan Log House
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.5 Sharrow

These pavement markings represent a bicyclist and directional arrows and are designed to alert motorists to the presence of cyclists.

The term "sharrow" refers to the concept of sharing the cartway between bicycle and vehicular traffic. These pavement markings represent a bicyclist and directional arrows and are designed to alert motorists to the presence of cyclists. The guidelines for sharrows include:

In the Towamencin Connectivity Study, sharrows are proposed along Liberty Bell Drive near Nash Elementary School. This section is already a dedicated school zone with other precautionary signage and a 25 mile per hour speed limit. The on-road addition of sharrows would guide cyclists to other trail destinations such as the proposed multi-use trail between Bustard Park and Green Lane Park.

Sharrows are also located on the plan along Bustard Road from its intersection with Liberty Bell Drive to its intersection with Kriebel Road.

TOOL METRICS

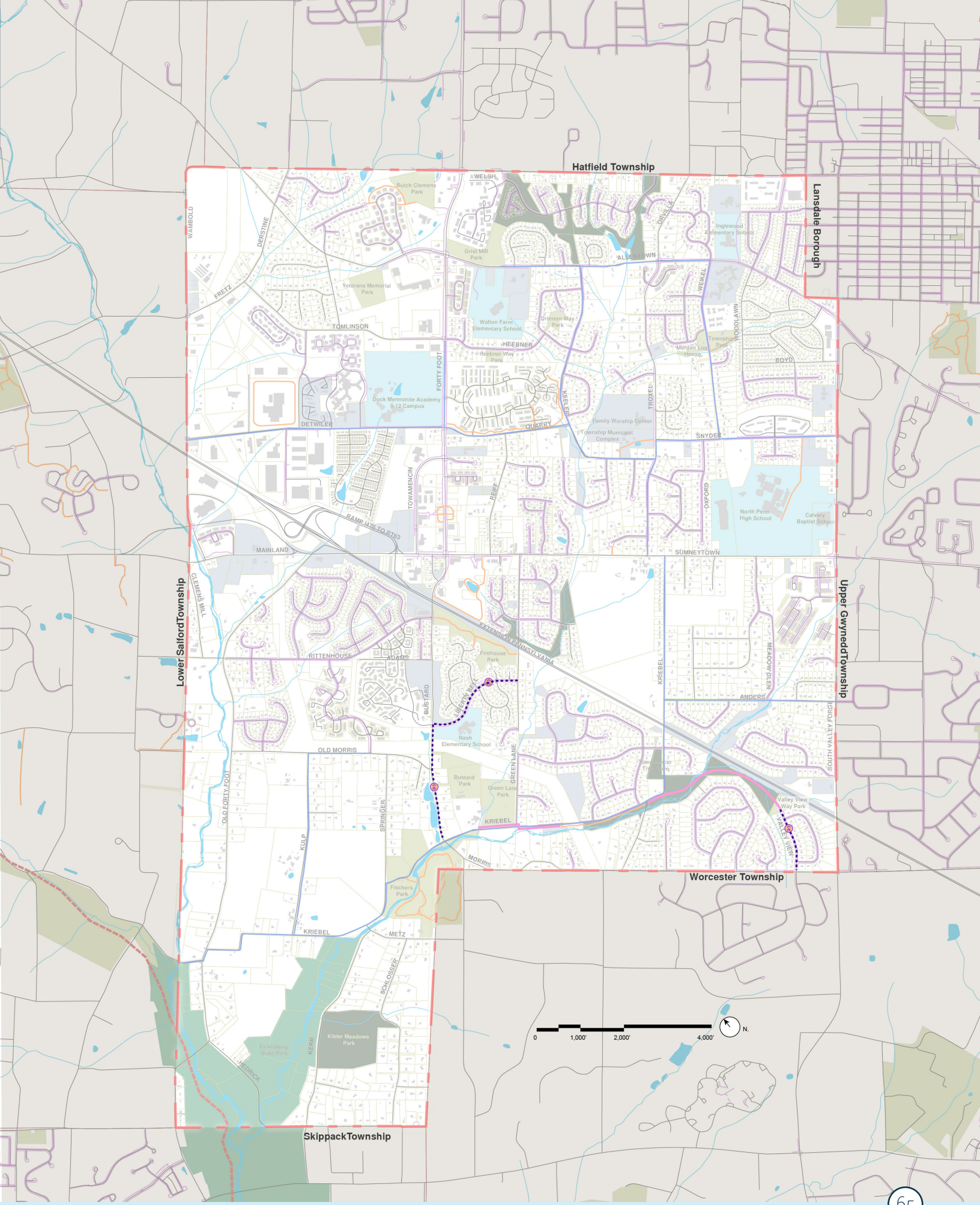
5,000 linear feet of "Share the Road"

Equivalent to 1 mile

Total of 21 Sharrow Markings

DESIGN GUIDELINES

- Not to be used on roads with posted speed limits more than 35 mph.
- Placed at intersections and at intervals not greater than 250'.
- The striping position on cartway with parallel parking should be 11' from face of curb or edge of travel way.
- The striping position on cartway with no parking should be 4' from face of curb or edge of travel way.
- Sharrows are accompanied by signage. Guidelines from the MUTCD for signage are as follows:
- Signage informs motorists to watch out for bicyclists on the roadway.
- Bicyclist May Use Full Lane (MUTCD R4-11) signs.
- Place signs at the beginning of the bike route, roadway intersections, and throughout the segment where deemed required.


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WERKEL
WOODLAWN
BOYD
SNYDER
OXFORD
REIFF
TOWAMENCIN
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BUSTARD
GREEN LANE
KRIEBEL
ANDERS
MEADOW GLEN
SOUTH VALLEY FORGE
VALLEY VIEW
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Morgan Log House
Township Park
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.6 Bike Lane

Bike lanes enable cyclists to ride at a comfortable speed without interference from traffic conditions.

Bicycle lanes are designed to create corridors of increased safety, separated from motorists using pavement markings, striping, and signage. Bike lanes enable cyclists to ride at a comfortable speed without interference from traffic conditions.

When evaluating potential bike lanes, wide shoulders on a roadway should be prioritized.

Large shoulders along Bustard Road are an opportunity to harness more dedicated bicycle lanes in Towamencin Township. Beginning at Rittenhouse Road and continuing to Adams Road, the cartway shoulder is 12' wide and is only on the west side of Bustard Road. It is recommended that this 12' shoulder be redistributed as two 5' bike lanes with 1' buffers for each.

After this intersection, from Adams Road to Liberty Bell Drive, the 12' shoulders can be found on both sides of the road. It is recommended that the 24' be redistributed as two 5' foot bike lanes with 2' buffers on either side of the road. The remaining 10' shall be a remaining shoulder on the west side of the road. See the graphic below for the existing versus proposed conditions of the roadway.

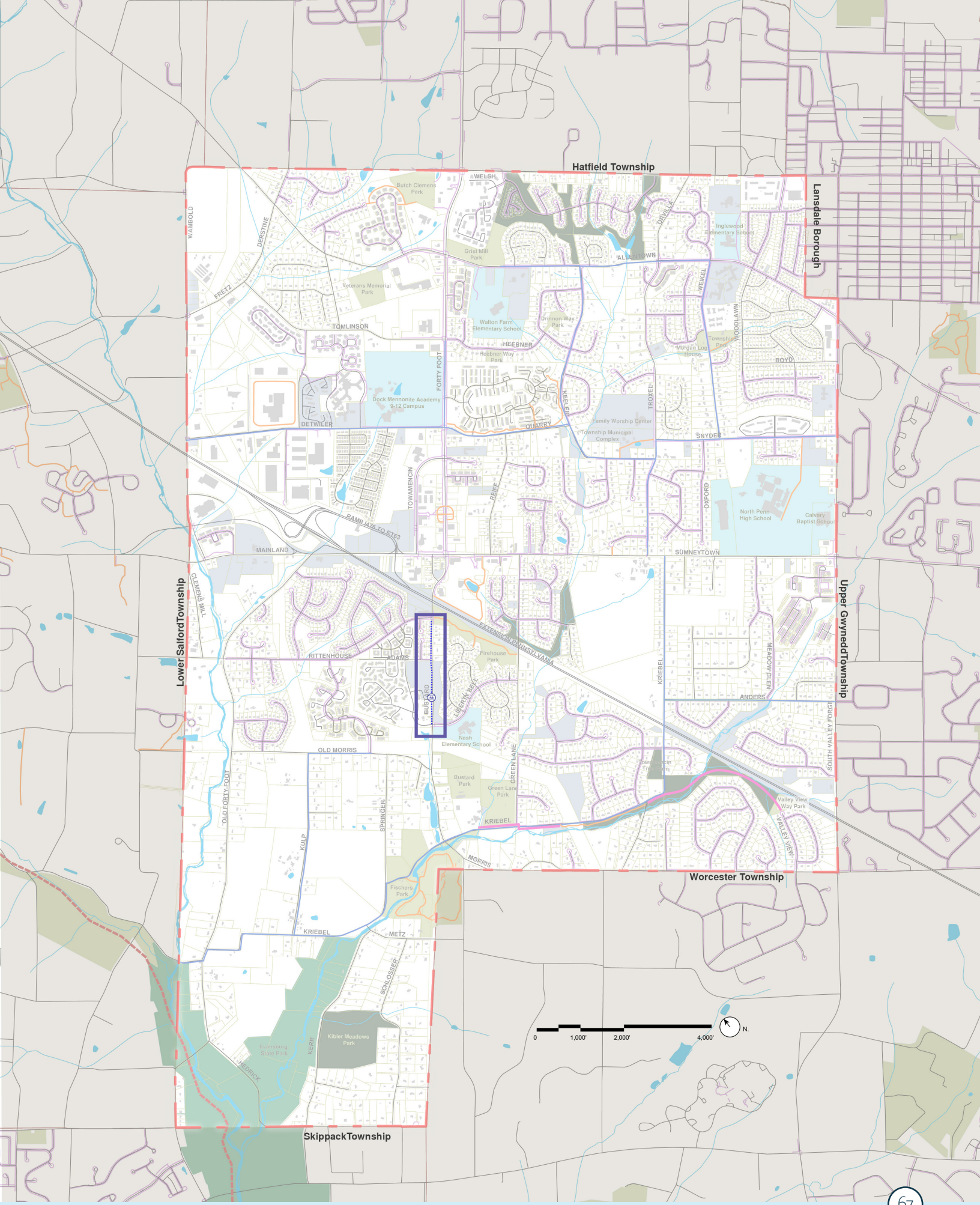
TOOL METRICS

5,000 linear feet of bike lanes

Equivalent to 1 mile

DESIGN GUIDELINES

- Bike lanes should be provided on both sides of two-way streets.
- Bike Lane Widths without Parking: 4' minimum (not adjacent to curb) and 5' minimum (adjacent to curb or other obstacles).
- Bike Lane Widths with Parallel Parking: 5' minimum to 7' (wider bike lanes are recommended adjacent to parking areas to reduce conflict with opening vehicle doors).
- Bike lanes should be placed between the parking lane and travel lane (this applies to diagonal and parallel parking).
- Storm Drains and Utility Covers: Bike lanes should be wide enough to accommodate bicyclists swerving to avoid obstructions.
- Bike Lane Striping: 4" to 6" solid white line (dotted lines are optional at major driveways and intersections, solid lines should be continued at all minor driveways).
- Pavement Marking: Bike Lane Symbols (MUTCD 9C - 3).
- Bike Lane Signage: Bike Lane (MUTCD R3-17) placed at periodic intervals with either Ahead (MUTCD R3-17aP) or Ends (MUTCD R3-17bP) where appropriate.


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
WOODLAWN
BOYD
SNYDER
OXFORD
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BLISS RD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
KRIEBEL
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
SUMNEYTOWN
ANDERS
MEADOW GLEN
SOUTH VALLEY FORGE
VALLEY VIEW
ALLENTOWN
ORVILLE
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Family Worship Center
Township Municipal Complex
Township Park
Morgan Log House
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.7 Trail Bridge

Trail Bridges are used for pedestrians and bicyclists to traverse site obstacles such as streams or steep elevation.

While these bridges are often prefabricated, their application costs are based on site conditions.

There are 4 locations within the connectivity study where trail bridges are proposed.

Kriebel Road and Metz Road

A recommended side path going north from Kibler Meadows Park on Kerr Road eventually reaches a barrier at Towamencin Creek. While there is a vehicular bridge on Metz Road, it does not provide enough space for pedestrians and cyclists to safely cross. A trail bridge is recommended to the west side of the existing bridge.

Bustard Park and Green Lane Park

The recommended multi-use trail that winds through Bustard Park eventually approaches a tributary crossing through Green Lane Park. In order to complete the connection between the two parks, a trail bridge is recommended.

Green Lane Road

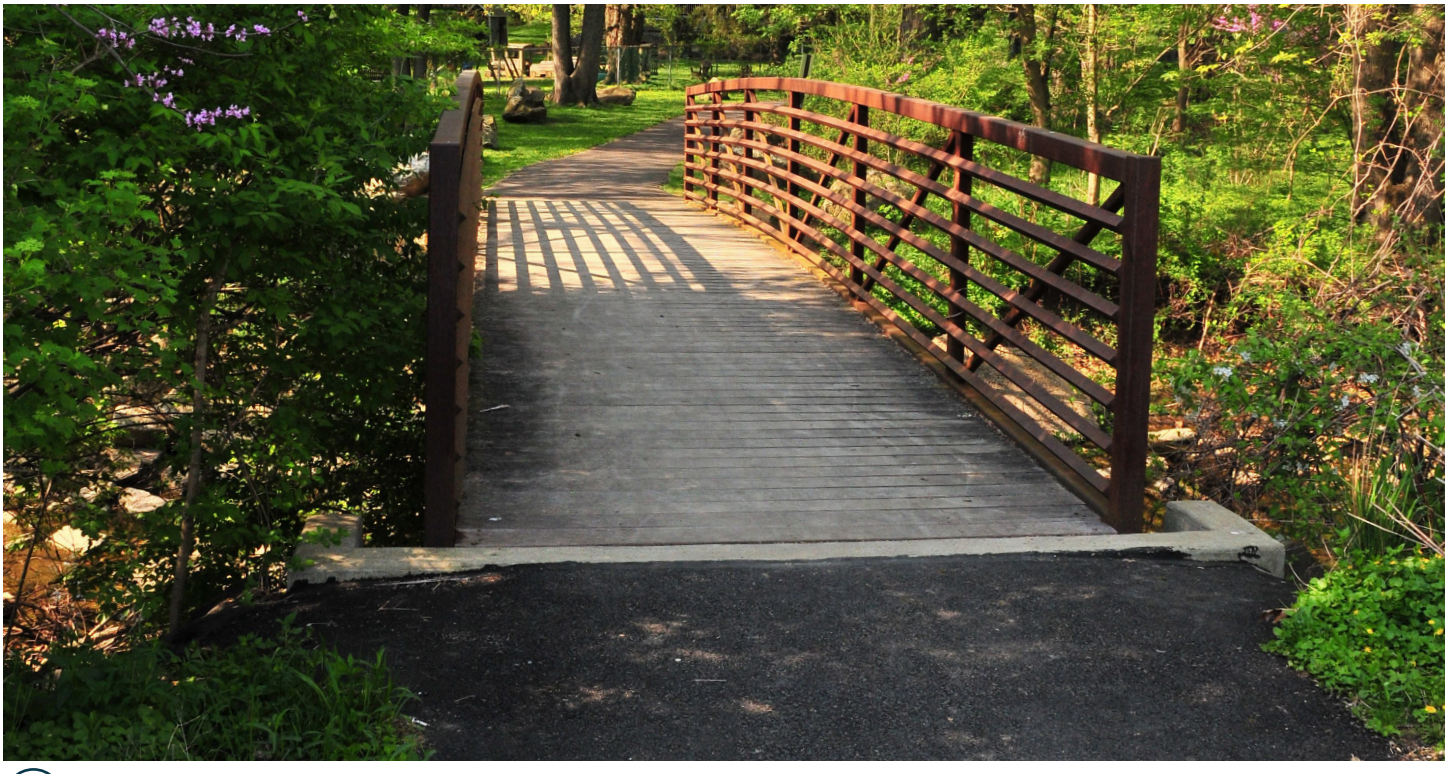
Currently, the portion of Green Lane Road south of the Turnpike is segmented by a small tributary. A recommended side path travels down along the northern half to the dead end of Green Lane Road. A recommended trail bridge will link the proposed side path with an existing sidewalk.

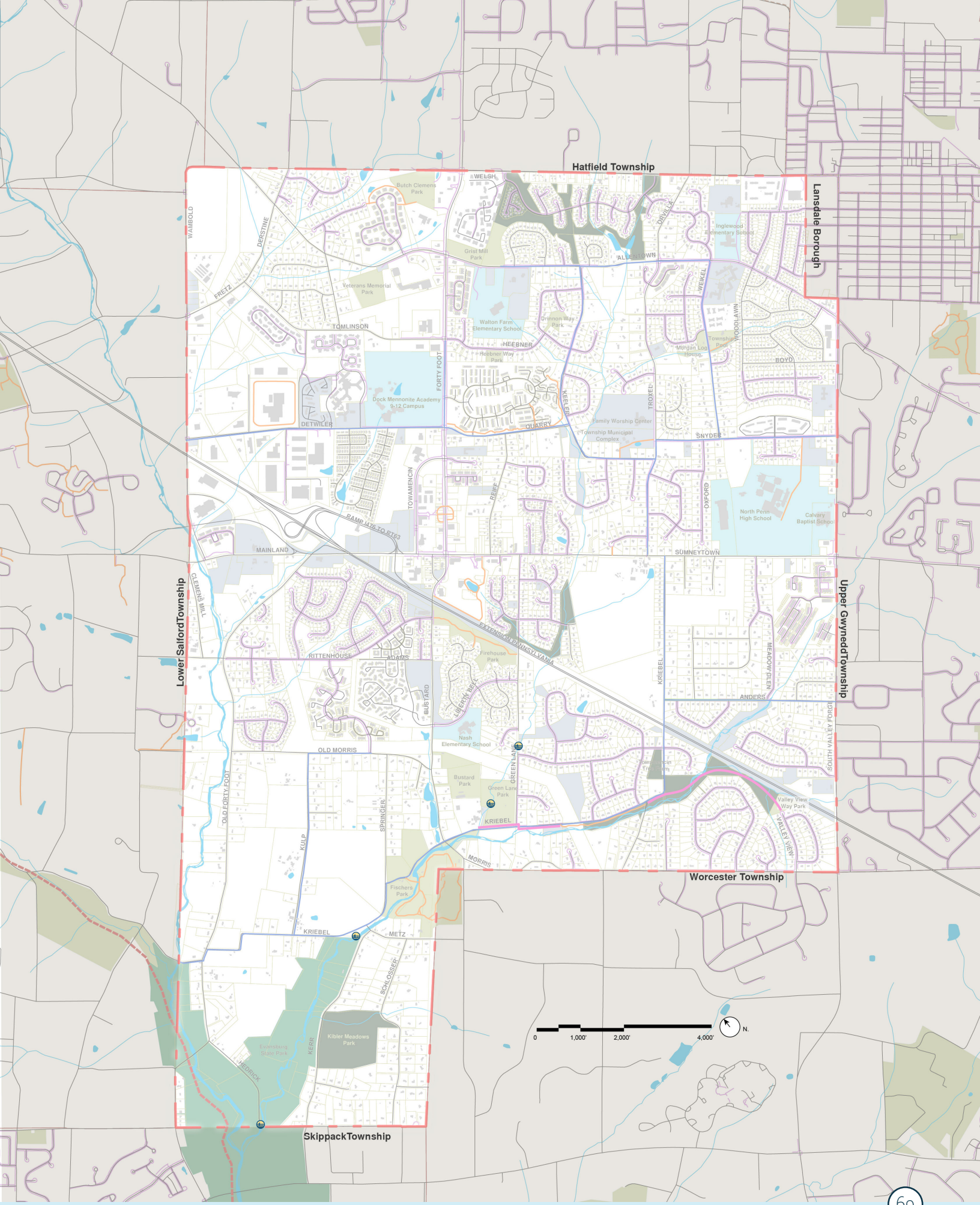
Hedrick Road in Evansburg State Park

Currently, the segment of Hedrick Road within Evansburg State Park is not accessible to the public because the existing bridge over Towamencin Creek is deemed structurally unsound. In order to incorporate this segment of Hedrick Road (see the Road Closure improvement), while connecting to the other proposed features, a trail bridge is recommended to replace the existing bridge.

TOOL METRICS

4 new trail bridgs




Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
ALLENTOWN
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
WOODLAWN
BOYD
SNYDER
OXFORD
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
SUMNEYTOWN
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
VALLEY VIEW
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Hebbner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Township Pool
Morgan Log House
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.8 Hand-Man

Similar to sidewalks, crosswalks are proposed to benefit the largest number of residents and establish safe travel corridors to and from the destinations of Towamencin.

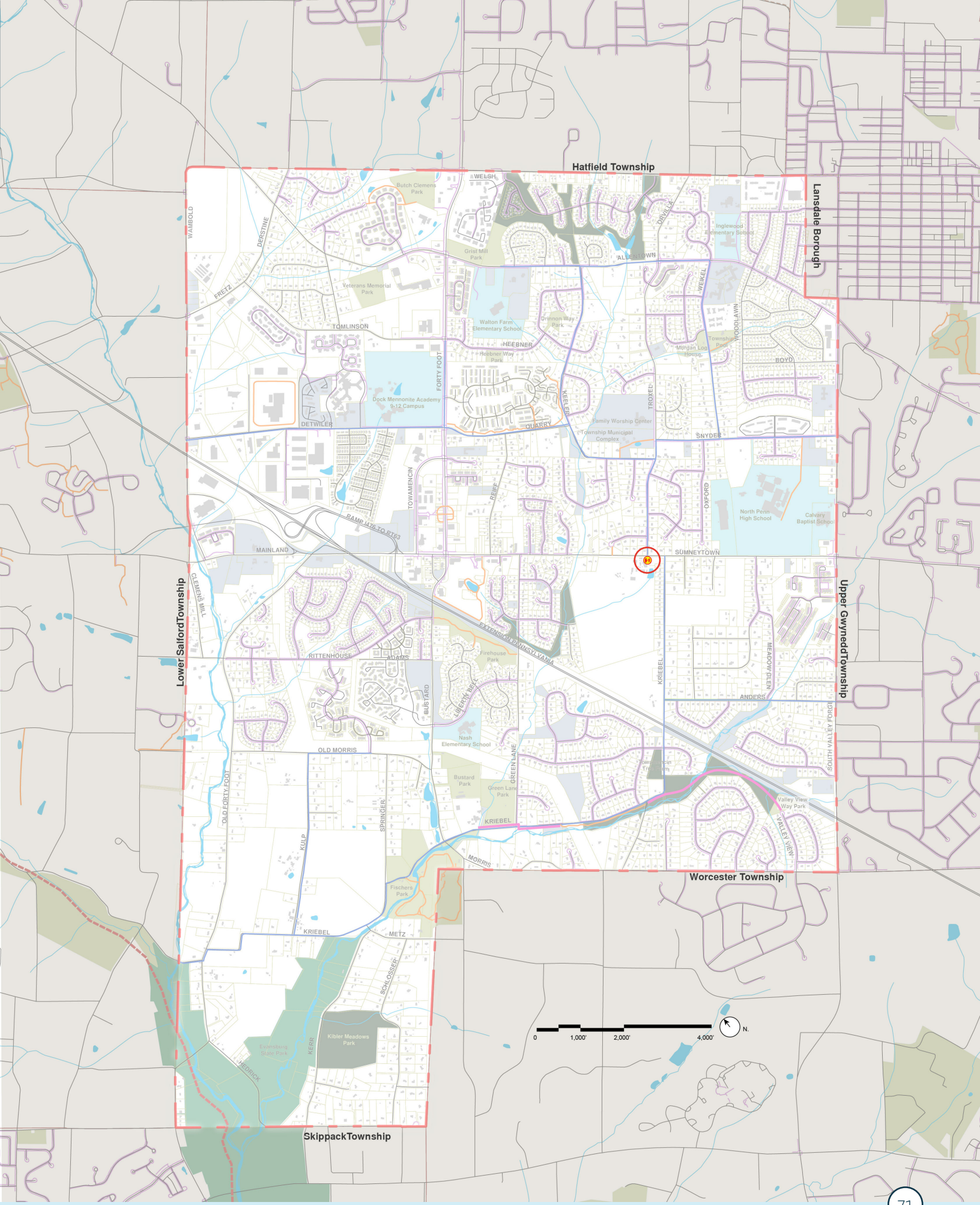
Hand/Man pedestrian crossing indicators are well-suited for signalized intersections. These indicators alert pedestrians when and for how long it is safe to cross.

The MUTCD (Manual on Uniform Traffic Control Devices) states that an "upraised hand" or "don't walk" signal informs pedestrians they cannot enter the street at that moment. A numbered countdown will appear as the signal prepares to change. A steady "walking man" indicates when it is safe for pedestrians to cross the street.

Hand/Man signals are funded by PennDOT for PennDOT roads.

TOOL METRICS

1 new hand/man


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
SNYDER
OXFORD
WOODLAWN
BOYD
WEKEL
ALLENTOWN
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
SUMNEYTOWN
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Morgan Log House
Township Park
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.9 Rapid Flashing Beacon

These beacons alert motorists to the presence of pedestrians or cyclists crossing the street.

Rapid flashing beacons are traffic devices used at non-signalized intersections or at mid-block pedestrian crossings. These beacons alert motorists to the presence of pedestrians or cyclists crossing the street.

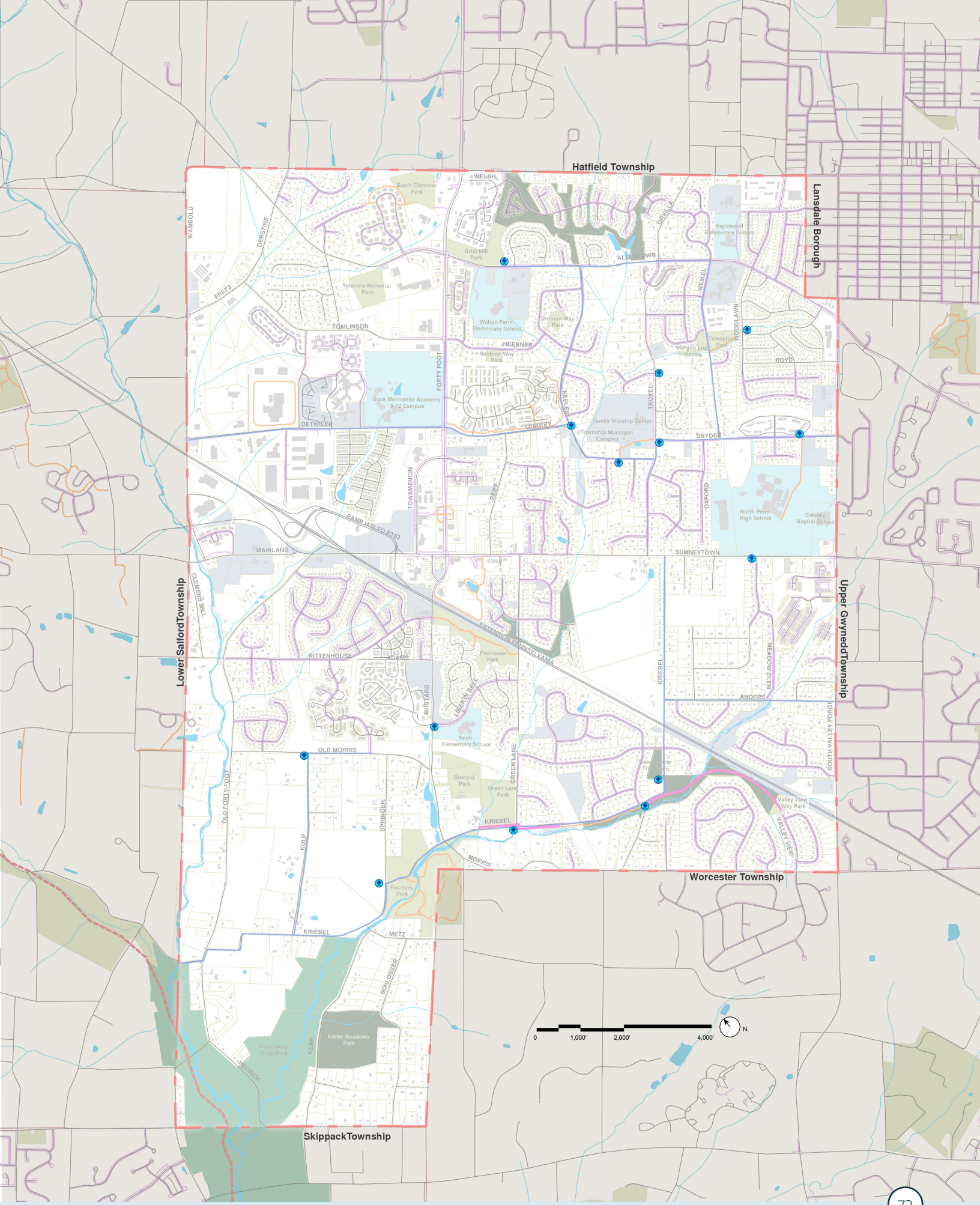
Rapid flashing beacons can be activated in a number of ways. Users may press a button to activate the light. Beacons may include cameras that detect the presence of a pedestrian/cyclist about to go through an intersection. Beacons may include infra-red heat sensing devices that sense body heat and activate the beacon.

Rapid flashing beacons are used in the Township to safely get the pedestrian / cyclist from one side of the road to a destination point, without them having to travel up to a roadway intersection to cross.

TOOL METRICS

14 new rapid flashing beacon locations

Image: Texas A&M Transportation Institute


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
SkippackTownship
Worcester Township
WELSH
ALLENTOWN
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
WOODLAWN
BOYD
SNYDER
OXFORD
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
KULP
SPRINGER
GREEN LANE
KRIEBEL
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
SUMNEYTOWN
ANDERS
MEADOW GLEN
SOUTH VALLEY FORGE
VALLEY VIEW
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Family Worship Center
Township Municipal Complex
Township Park
Morgan Log House
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.10 Speed Cushion

Speed tables are traffic control devices that can have specific design speeds and may be combined with crosswalks for greater pedestrian visibility.

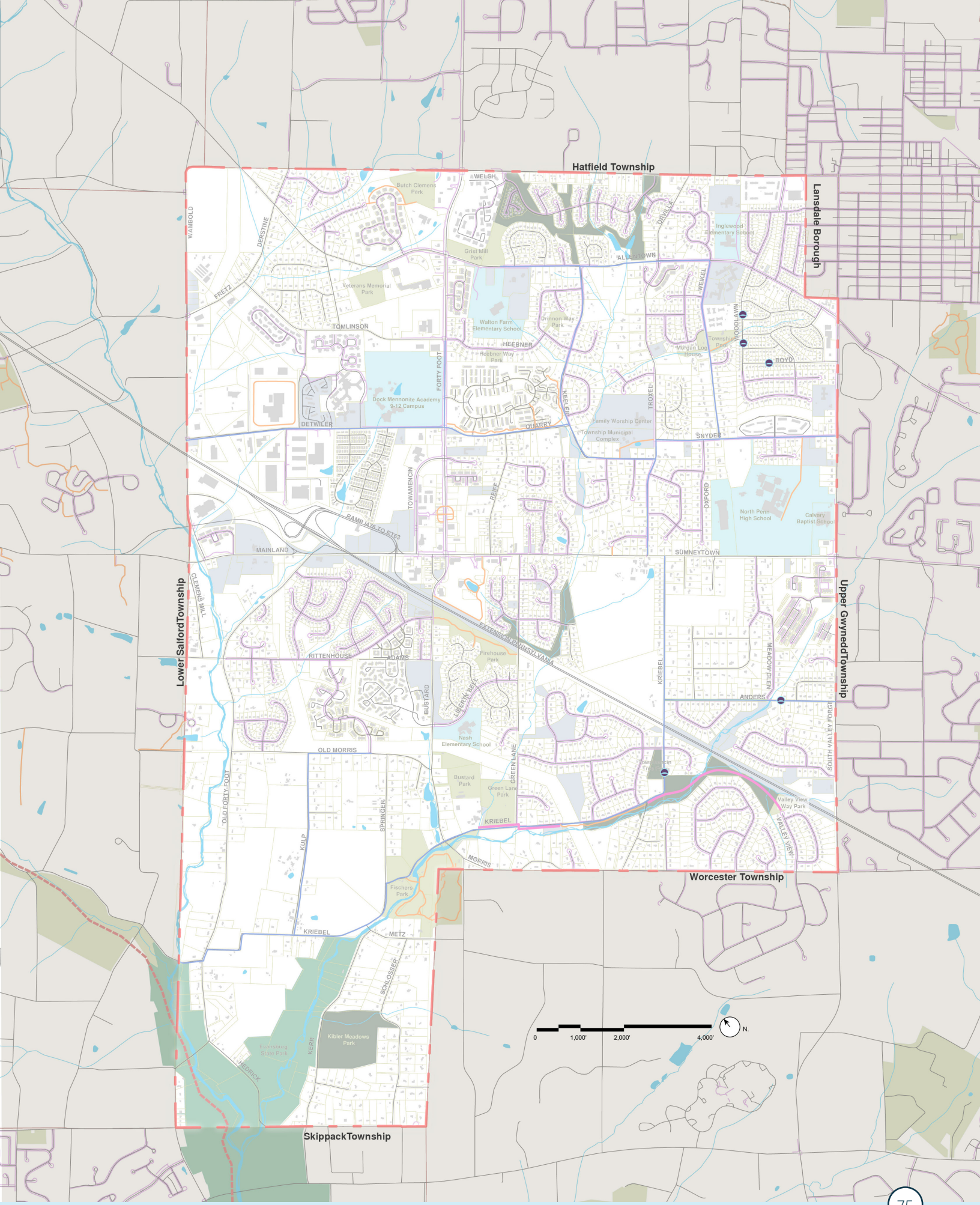
Speed cushions are mounted on the road and slow the movement of vehicular traffic while allowing bicycles and first responders to travel unimpeded.

Speed tables are traffic control devices that can have specific design speeds and may be combined with crosswalks for greater pedestrian visibility. Speed cushions are effective traffic calming measures that may be appropriate in the areas around Towamencin Township parks and neighborhood streets.

Public participants have expressed concern about vehicles speeding down their neighborhood streets. The consultant plans on providing recommendations for speed cushions at strategic locations along Township-owned or local roads. These locations include areas that approach intersections where a high amount of foot traffic is expected, such as the intersection leading up to the Towamencin Township Pool, and the location of the multiuse trail crossing over from the Towamencin Tree farm to the Kriebel Road Trail Open Space.

TOOL METRICS

5 new speed cushion locations


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
ALLENTOWN
TOMLINSON
HEEBNER
DETWILER
QUARRY
SNYDER
SUMNEYTOWN
MAINLAND
RITTENHOUSE
OLD MORRIS
KRIEBEL
METZ
MORRIS
ANDERS
BOYD
WOODLAWN
WAMBOLD
DERSTINE
FRETZ
FORTY FOOT
OLD FORTY FOOT
KULP
SPRINGER
SCHLOSSER
KERR
HEDRICK
CLEMENS MILL
TOWAMENCIN
REIFF
KEELER
TROXEL
OXFORD
WEKEL
ORVILLE
MEADOW GLEN
SOUTH VALLEY FORGE
VALLEY VIEW
GREEN LANE
LIBERTY BELL
BUSTARD
ADAMS
RAMP I476 TO RT63
EXTENSION PENNSYLVANIA
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Township Pool
Morgan Log House
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.11 Pedestrian Refuge Island

Similar to sidewalks, crosswalks are proposed to benefit the largest number of residents and establish safe travel corridors to and from the destinations of Towamencin.

A pedestrian refuge island is a pedestrian safety device that is used between lanes of opposing traffic. This provides pedestrians a place of "refuge" to pause or rest when crossing busy or wide streets. Pedestrian refuge islands can take many forms - from basic islands to large expanses of pavement seen in larger urban settings. Pedestrian refuge islands may be combined with stormwater management solutions.

Pedestrian refuge islands should be at least 6 feet wide but have a preferred width of 8'–10'.

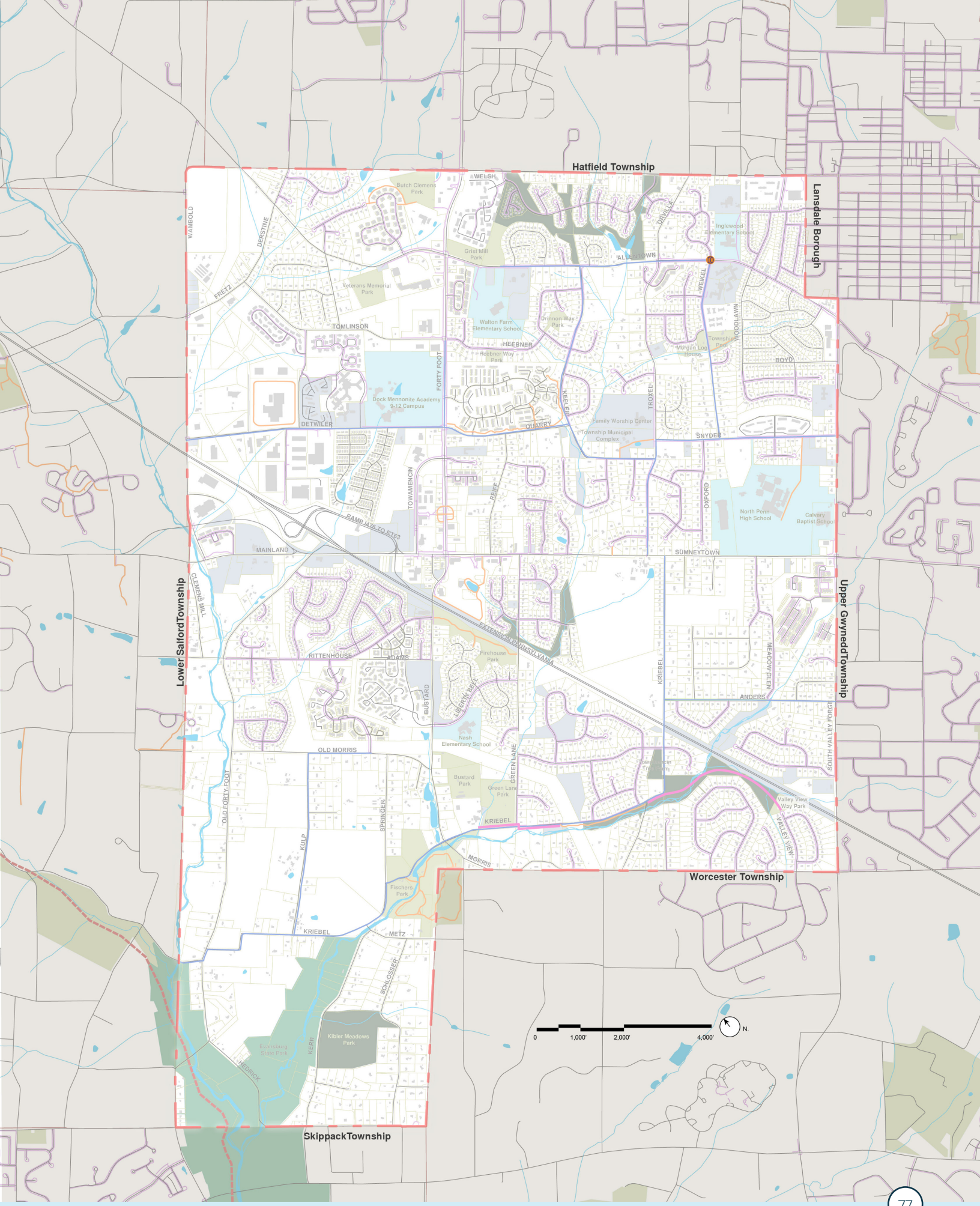
The width of Allentown Road presents the opportunity to incorporate the toolbox item in front of Inglewood Elementary School. This recommendation will create safer access to the school, especially for the neighborhoods directly south of the Elementary school.

TOOL METRICS

1 new pedestrian refuge island location

DESIGN GUIDELINES

- 6' wide minimum
- 8'-10' wide preferred


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
ORVILLE
WOODLAWN
BOYD
SNYDER
OXFORD
REIFF
TOWAMENCIN
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
EXTENSION PENNSYLVANIA
ALLENTOWN
SUMNEYTOWN
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Hebbner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Morgan Log House
Township Park
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.12 Road Closure

Road closures have become a popular planning tool to provide opportunities for active forms of transportation and ensure safe physical activity outside.

The Road Closure tool cuts off access to vehicular use to focus on making room for people to safely bike and walk. Road closures have become a popular planning tool to provide opportunities for active forms of transportation and ensure safe physical activity outside.

Although the tool puts the pedestrian on the pedestal, the design of the tool should take into account the accessibility of emergency vehicles.

Kriebel Road Segment within Fischer's Park

The recommendation would be applied at the stretch of Kriebel Road between Springer Road and Bustard Road that runs through to Fischer's Park. The narrow segment of road poses a safety risk for pedestrians accessing the park by foot or bicycle. The road closure has been mentioned in the 'Trails and Parks Evaluation' and is being proposed again in this report to reinforce a stronger network of paths. The improvement will not only add to the growing network of proposed trails within the Township, but also add to the park's current walking path route. This closure will also make the intersection of Bustard and Kriebel safer since a lane of traffic is essentially eliminated.

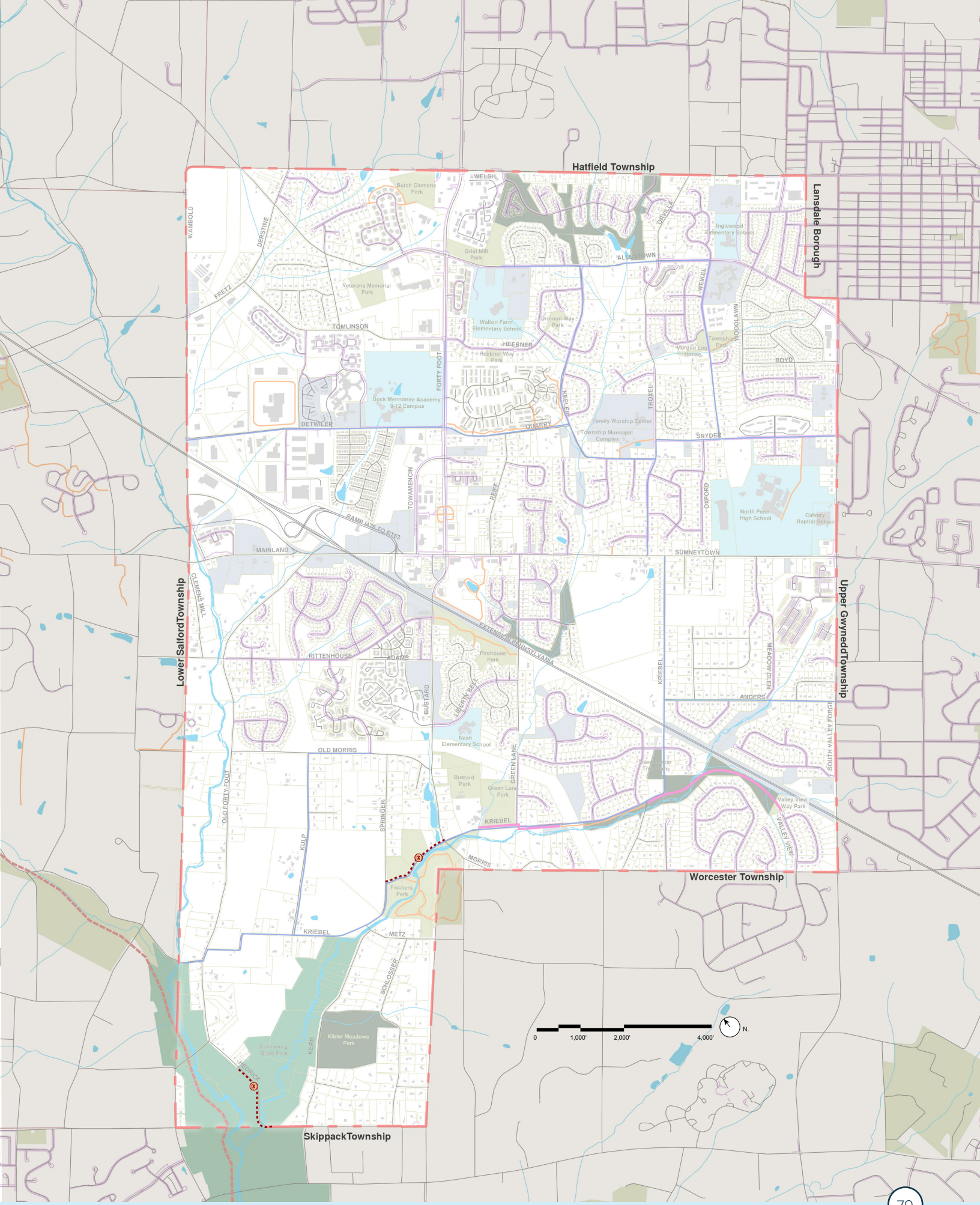
Hedrick Road Segment within Evansburg State Park

Under current conditions, the stretch of Hedrick Road that falls within Evansburg State Park is closed off to the public. The road was closed in the 1980's because the bridge spanning the Towamencin Creek was deemed no longer safe for vehicles or pedestrians. If the bridge were to ever be restored or redesigned (see Trail Bridge for proposed improvement), the road is recommended to remain closed off to vehicles, for only pedestrians and bicyclists use through the park. The segment of road will contribute to the Evansburg State Park trail network.

TOOL METRICS

3,200 linear feet of closed road

Equivalent to 0.6 mile


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
WOODLAWN
BOYD
SNYDER
ALLENTOWN
ORVILLE
TOWAMENCIN
REIFF
OXFORD
RAMP I476 TO RT63
MAINLAND
SUMNEYTOWN
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
OLD MORRIS
OLD FORTY FOOT
KULP
SPRINGER
GREEN LANE
MORRIS
VALLEY VIEW
METZ
SCHLOSSER
KERR
HETRICK
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Grinnon Way Park
Heebner Way Park
Township Park
Morgan Log House
Inglewood Elementary School
Dock Mennonite Academy 9-12 Campus
Family Worship Center
Township Municipal Complex
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.13 Roundabout

Roundabouts are a traffic calming device for not only vehicles, but also for pedestrians to cross the road.

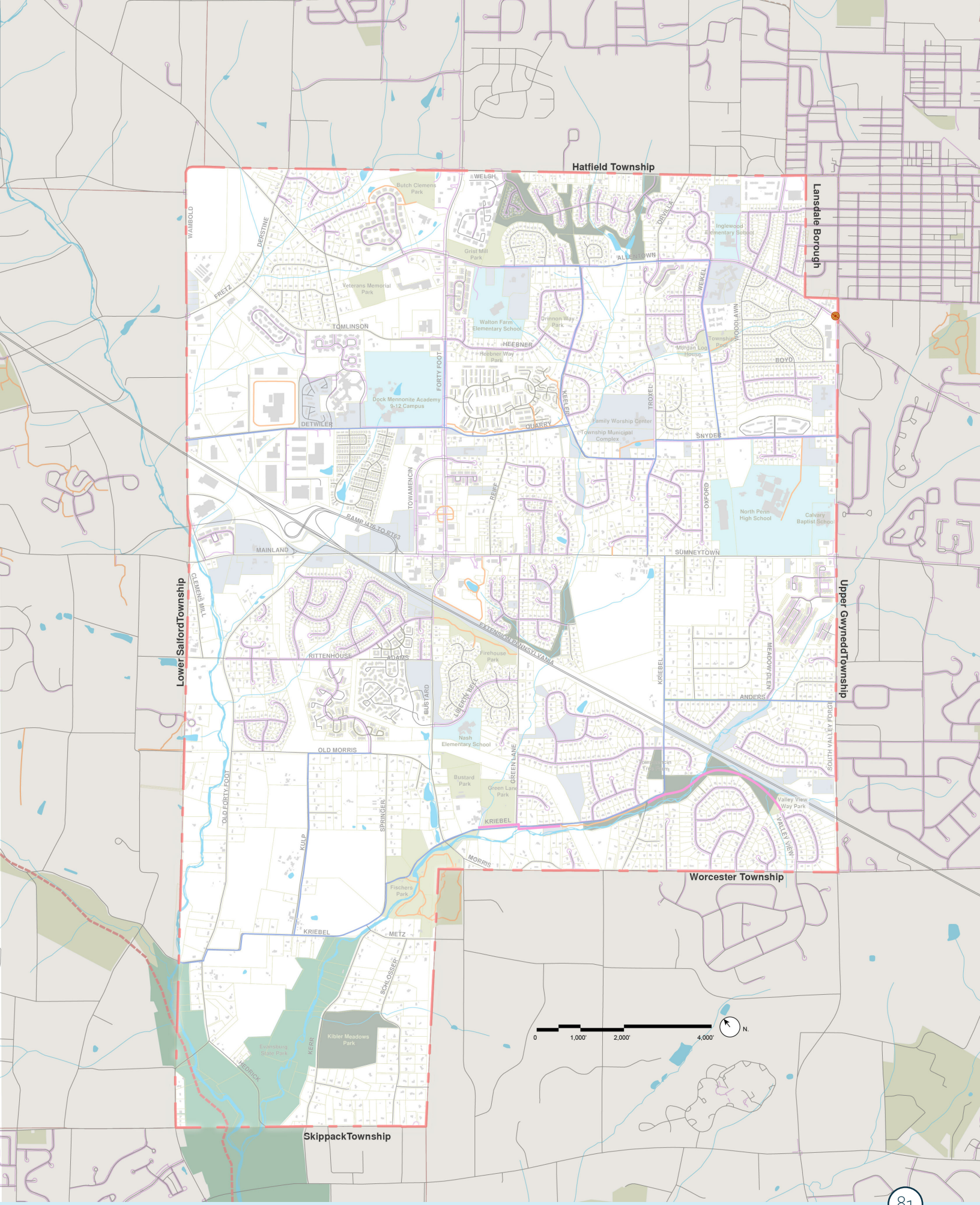
A roundabout is a type of circular intersection in which three or more roads join and directs traffic to flow in one direction around a central island.

Roundabouts are a traffic calming device for not only vehicles, but also for pedestrians to cross the road. The flow of traffic exiting the roundabout comes from one direction, instead of possibly three, which simplifies the pedestrian's sightlines. Slower traffic enables better visual engagement between the driver and the pedestrian.

There is one roundabout recommended within the Township – at the intersection of South Valley Forge Road and Allentown Road. The collected accident data and conversations during public meetings helped identify the crossroads as the most challenging intersection within the Township.

TOOL METRICS

1 new roundabout location


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
WEKEL
WOODLAWN
BOYD
SNYDER
OXFORD
ALLENTOWN
ORVILLE
TOWAMENCIN
REIFF
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
VALLEY VIEW
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
SUMNEYTOWN
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Pool
Morgan Log House
Family Worship Center
Township Municipal Complex
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.14 Pocket Park

The functions of a pocket park can vary from a small event space or play areas for children, to a space for relaxing, meeting friends, or taking lunch breaks.

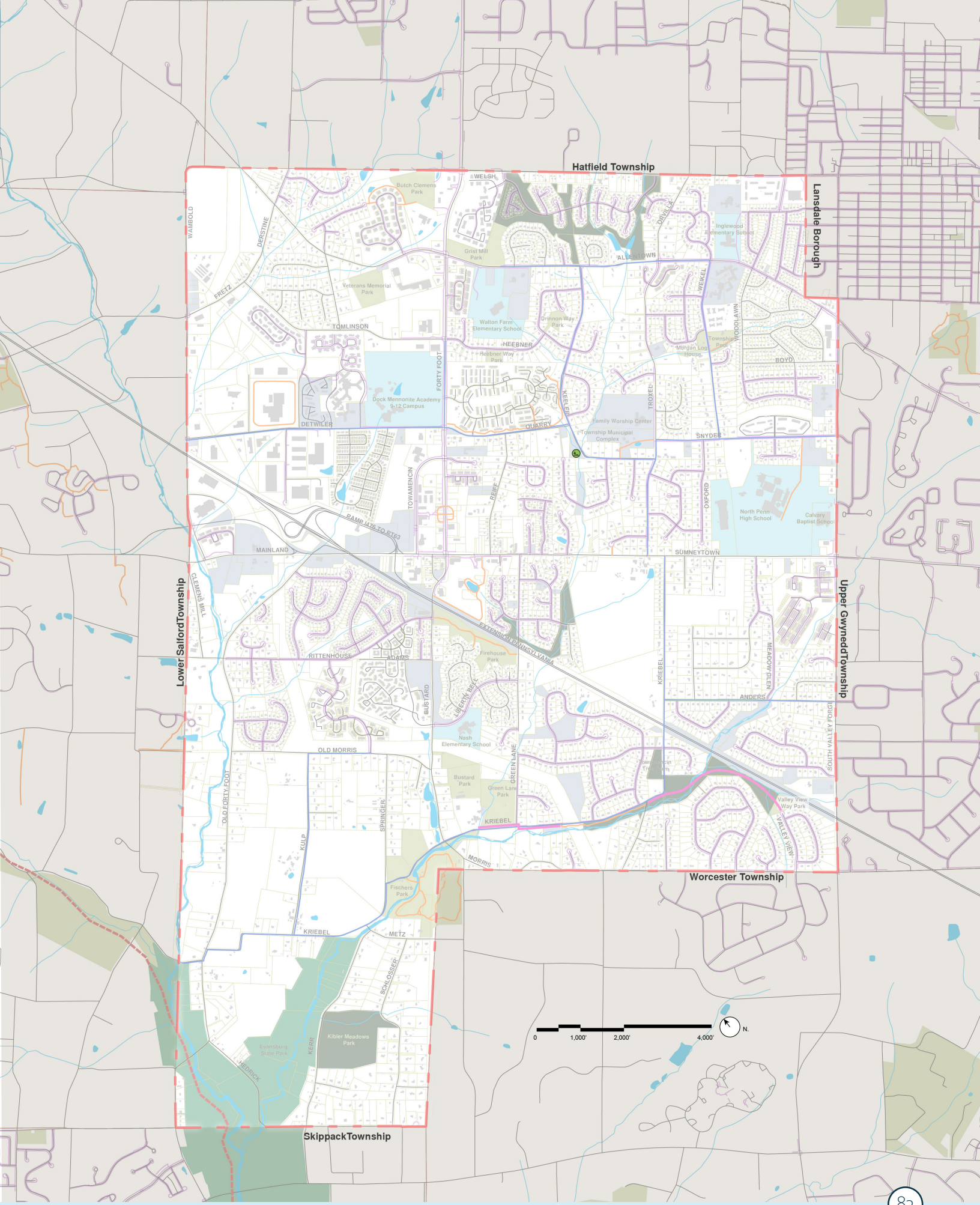
A pocket park is a small park or open space accessible to the public. The functions of a pocket park can vary from a small event space or play areas for children, to a space for relaxing, meeting friends, or taking lunch breaks.

In this instance, the recommended pocket park can be a refuge or sitting area along the sidewalk on Keeler Road.

TOOL METRICS

1 new pocket park location

Approximatly 9 acres


Hatfield Township
Lansdale Borough
Lower SalfordTownship
Upper GwyneddTownship
Worcester Township
SkippackTownship
WELSH
WAMBOLD
DERSTINE
FRETZ
TOMLINSON
HEEBNER
FORTY FOOT
DETWILER
QUARRY
KEELER
TROXEL
SNYDER
BOYD
WOODLAWN
WEKEL
ORVILLE
ALLENTOWN
OXFORD
REIFF
TOWAMENCIN
RAMP I476 TO RT63
MAINLAND
CLEMENS MILL
EXTENSION PENNSYLVANIA
SUMNEYTOWN
KRIEBEL
MEADOW GLEN
ANDERS
SOUTH VALLEY FORGE
RITTENHOUSE
ADAMS
BUSTARD
LIBERTY BELL
OLD MORRIS
OLD FORTY FOOT
SPRINGER
KULP
GREEN LANE
MORRIS
METZ
SCHLOSSER
KERR
HEDRICK
VALLEY VIEW
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Hebbner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Morgan Log House
Township Park
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.5.15 Connection Out of Township

Identifies the best corridors to connect pedestrians into neighboring municipalities, which in turn can influence neighboring municipalities to further their own connectivity projects.

The 'Connection Out of Township' toolbox item is not tangible like the rest of the toolbox items. Incorporating wayfinding or signage might be a way to incorporate the tool into the landscape, but not needed for the use of this planning document. Instead, the icon calls out the best corridor connections between the improvements recommended in the Plan to popular destinations in other surrounding townships. The tool identifies where collaboration between two townships might be needed to ensure an improvement is completed to a destination.

Connection to Hatfield Township

The connection to Hatfield Township is identified at the intersection of Forty Foot Road and Welsh Road. This junction leads the way for township residents to access Ralphs Corner Shopping Center and Hatfield Pointe Shopping Mall, which were identified as a key destinations by the community.

Connection to Lansdale Borough

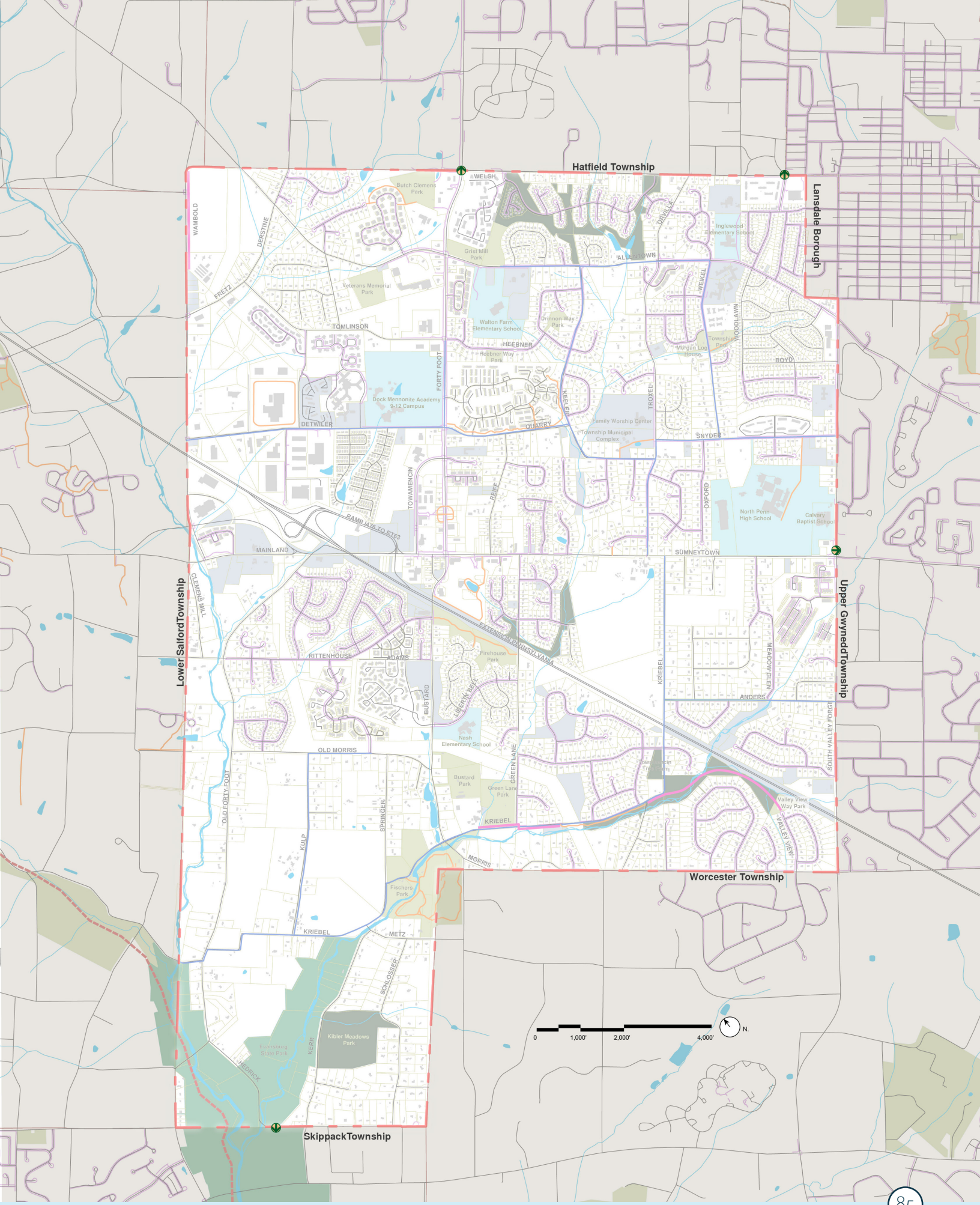
Lansdale Borough is the densest municipality surrounding Towamencin Township – filled with a variety of shops, bars, and restaurants. Some major destinations located within Lansdale Borough are the SEPTA regional stop and the Liberty Bell Trail. A connection between the two municipalities is identified at the intersection of S Valley Road and Columbia Road as an important access point for Towamencin Township residents to access the two destinations. The improvements along Woodlawn Road strengthen that connection for accessibility.

Connection to Upper Gwynedd Township

The connection to Upper Gwynedd Township is identified at the intersection S Valley Road and Sumneytown Pike. The community identified the Wawa located right outside of the Township as a destination point. The improvements proposed along Sumneytown Pike for Towamencin Township should continue into Upper Gwynedd to allow each of the township residents to access the amenity.

Connection to Skippack Township

The connection to Skippack Township is identified within the Evansburg State Park trail system. The side path proposed alongside the State Park will enable and strengthen the connection between the two townships, and open each township up to a larger network of trails throughout the State Park.


Hatfield Township
Lansdale Borough
Upper GwyneddTownship
Worcester Township
SkippackTownship
Lower SalfordTownship
WELSH
ALLENTOWN
TOMLINSON
HEEBNER
DETWILER
QUARRY
SNYDER
SUMNEYTOWN
MAINLAND
RITTENHOUSE
OLD MORRIS
KRIEBEL
METZ
MORRIS
ANDERS
BOYD
WAMBOLD
DERSTINE
FRETZ
FORTY FOOT
TOWAMENCIN
REIFF
KEELER
TROXEL
OXFORD
WOODLAWN
WEKEL
ORVILLE
CLEMENS MILL
ADAMS
BUSTARD
LIBERTY BELL
GREEN LANE
SPRINGER
KULP
OLD FORTY FOOT
SCHLOSSER
KERR
HEDRICK
MEADOW GLEN
SOUTH VALLEY FORGE
VALLEY VIEW
RAMP I476 TO RT63
EXTENSION PENNSYLVANIA
Butch Clemens Park
Grist Mill Park
Veterans Memorial Park
Walton Farm Elementary School
Drinnon Way Park
Heebner Way Park
Dock Mennonite Academy 9-12 Campus
Township Municipal Complex
Family Worship Center
Morgan Log House
Township Park
Inglewood Elementary School
North Penn High School
Calvary Baptist School
Firehouse Park
Nash Elementary School
Bustard Park
Green Lane Park
Valley View Way Park
Fischers Park
Kibler Meadows Park
Evansburg State Park
0
1,000'
2,000'
4,000'
N.

3.6 Themed Connection Routes

The following pages delineate several themed routes that can be used by pedestrians and cyclists to access the parks & open space, schools, and amenities within Towamencin and beyond. These routes take users across multiple improvement facilities, including sidewalks, side paths, and multi-use trails. These identified routes can also help out users to walk, jog or bike a specific distance. Additionally, they can give a particular mobility improvement an identity when seeking grant funding.

Out of each of the routes, the committee members had encouraged prioritizing improvements along the School Connection Route.

Township Collector Connection Route

The purpose of this route is to explore the opportunity to connect all directions or quadrants of the Township together. More specifically, looking at the major thoroughfares: like Forty Foot Road, Bustard Road, and Sumneytown Pike, to be re-envisioned as multi-modal passages.

This route has been divided into three corridors for phasing efforts:

- The Bustard Road Corridor: from the intersection of Sumneytown Pike, down to the intersection of Kriebel Road, then along Kriebel to the intersection of Springer.
- Evansburg State Park Corridor: from the intersection of Springer Road and Kriebel Road to along the edge of Evansburg State Park, then along Hedrick Road to Old Forty Foot Road. Then along a short segment of Old Forty Foot Road, until it connects into the planned county trail.
- Sumneytown Pike Corridor: from the intersection of Bustard Road to South Valley Forge Road.

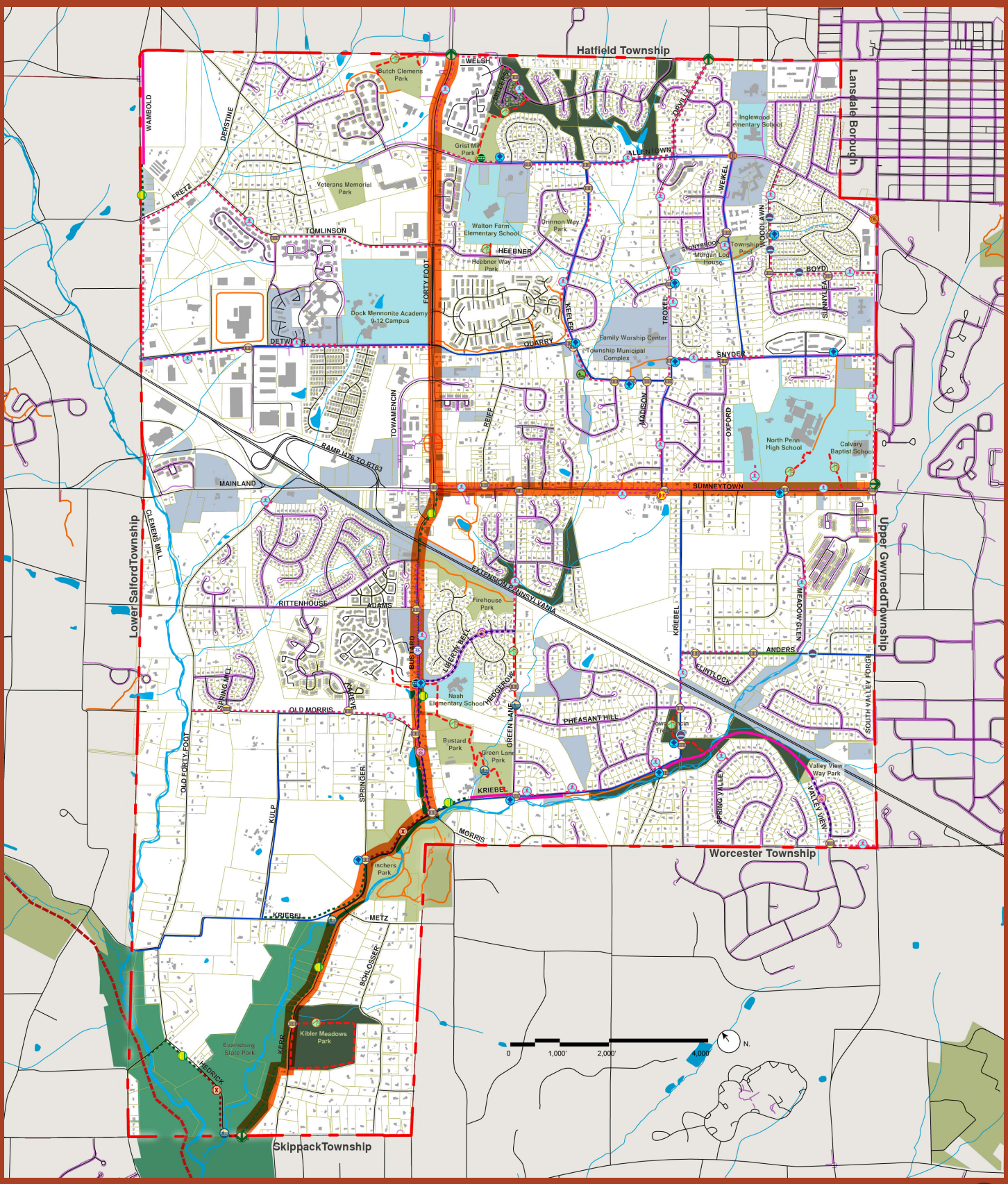
School Connection Route

There are six schools in Towamencin Township. The purpose of the route is to provide safer connections for children and parents to walk or bike to school. A high concentration of 'toolbox' improvements can be found along these routes; such as, crosswalks, bike lanes, decorative crossings and side paths.

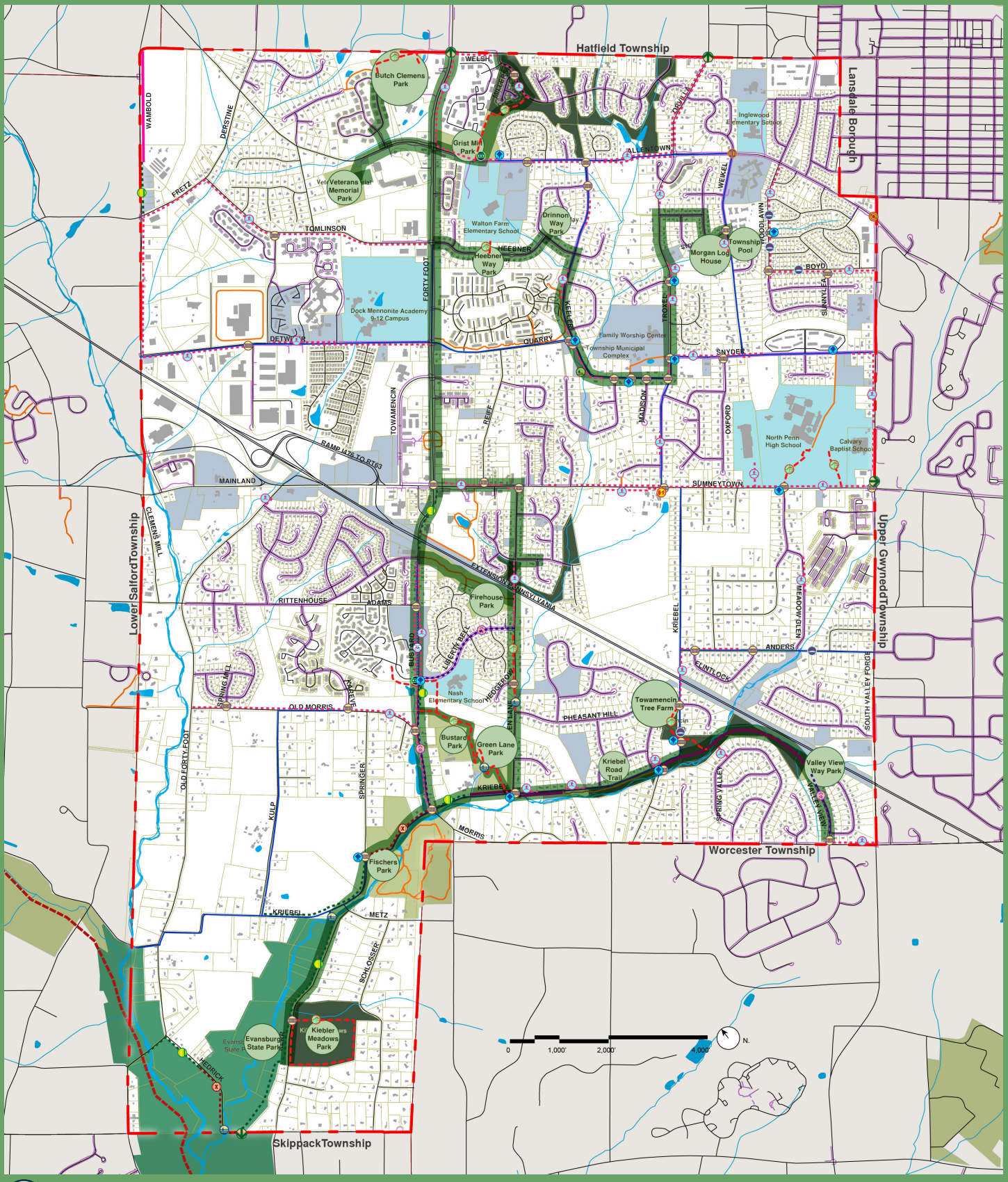
Park Connection Route

The purpose of this route is to easily connect neighboring residents to parks. The plan utilizes the existing pathways within the parks and stitches them together with proposed and existing infrastructure outside of the parks to form a greater network of trails. Ultimately, all improvements will connect all the parks within the Township together.

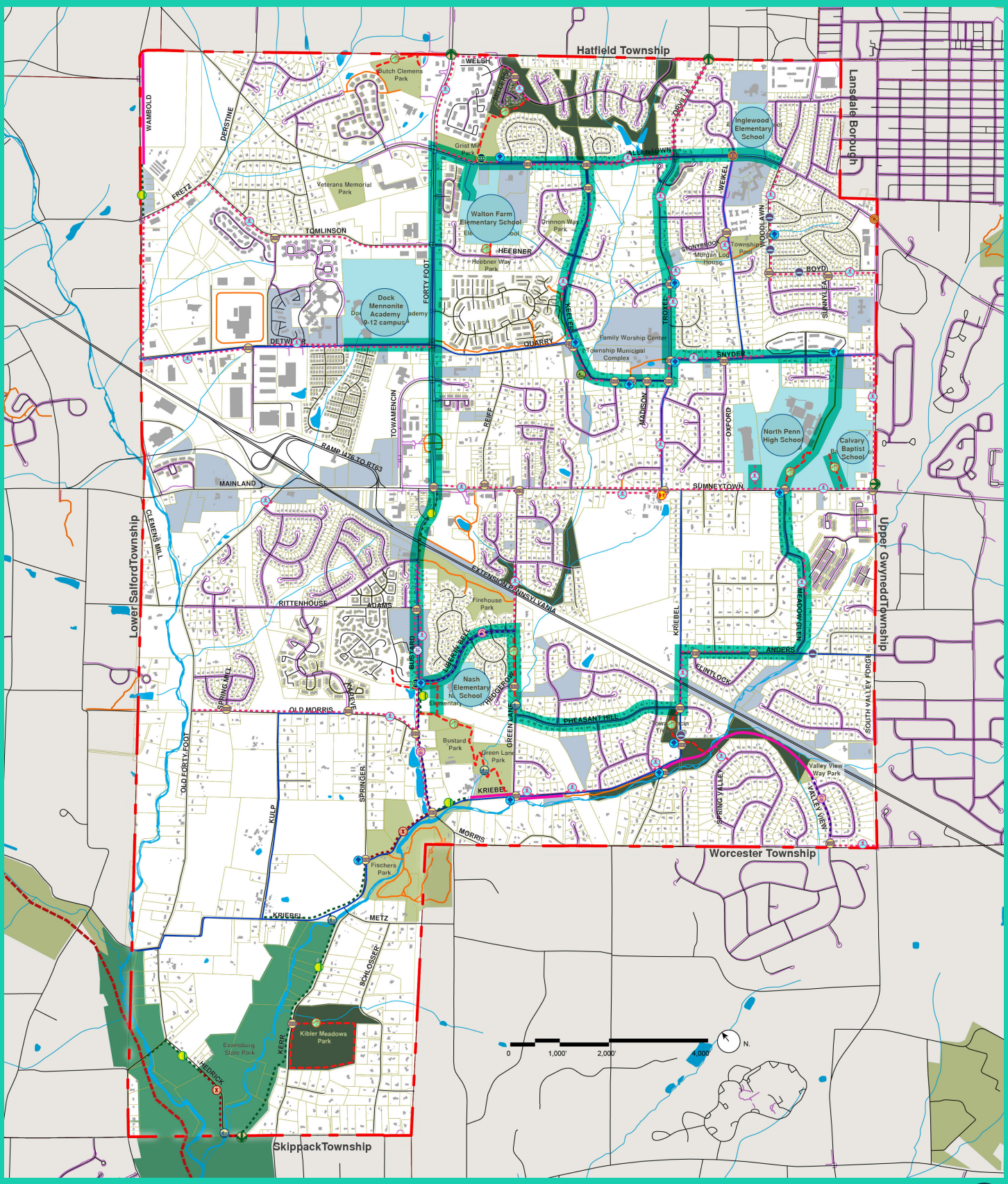
3.6.1 Collector Route



3.6.2 Park Route



3.6.3 School Route



IMPLEMENTATION

4

4.1 Estimated Costs of Development

These figures provide a rough estimate to implement all proposed improvements within this plan. Final and more detailed costs will require specification per project.

All projects would not be completed at the same time, and would be approached individually and strategically depending on available grant and funding sources.

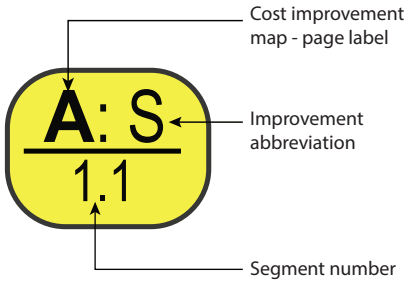
Costs for development were established based on unit costs from construction projects of similar scope and scale and reflect prevailing wage rates that are required for publicly bid construction projects. The probable cost of development is estimated at $ 7,379,800. See below the Cost Summary sheet that provides summarized costs of each Cost Improvement Map, which includes estimated mobilization, erosion and sediment control, and stormwater allowance costs (estimated at 7% of the total site improvements); design and engineering fees (estimated at 15% of the total site improvements); and a construction contingency (estimated at 10% of the total site improvements).

The Cost Improvement Maps provide a comprehensive graphic to review the cost effort associated with creating the Improvements Plans (as seen on page 51-53). Similar to the Improvements Plans, the Cost Improvements Map is divided into (3) three pages – labeled A, B, or C – with plans drawn at a scale of 1" = 1000'.

The yellow labels provide a unique identification number for each tool that coordinates with the itemized cost estimate. The unique identification number is broken down into three parts: sheet letter, improvement abbreviation, and road segment number.

The sheet number can be found on each of the three maps labeled A, B, or C – with 'A' starting at the northern most part of the Township. Next, for brevity, the improvement identified on the plan has been assigned an abbreviation. The improvement abbreviations can be found in the blue box below. Lastly, the labels occur at the beginning/end of each road segment that intersects with another street. Each of these segments will be assigned a number. If the segment is continuous, the number will continue to the tenths.

See the diagram below that graphically describes how to reach each label.



Improvement Abbreviations

BL = Bike Lane

CW = Crosswalk

DEC = Decorative Crosswalk

HM = Handman

MUT = Multi-use Trail

P = Pocket Park

PRI = Pedestrian Refuge Island

R = Roundabout

RC = Road Closure

RFB = Rapid Flashing Beacon

S = Sidewalk

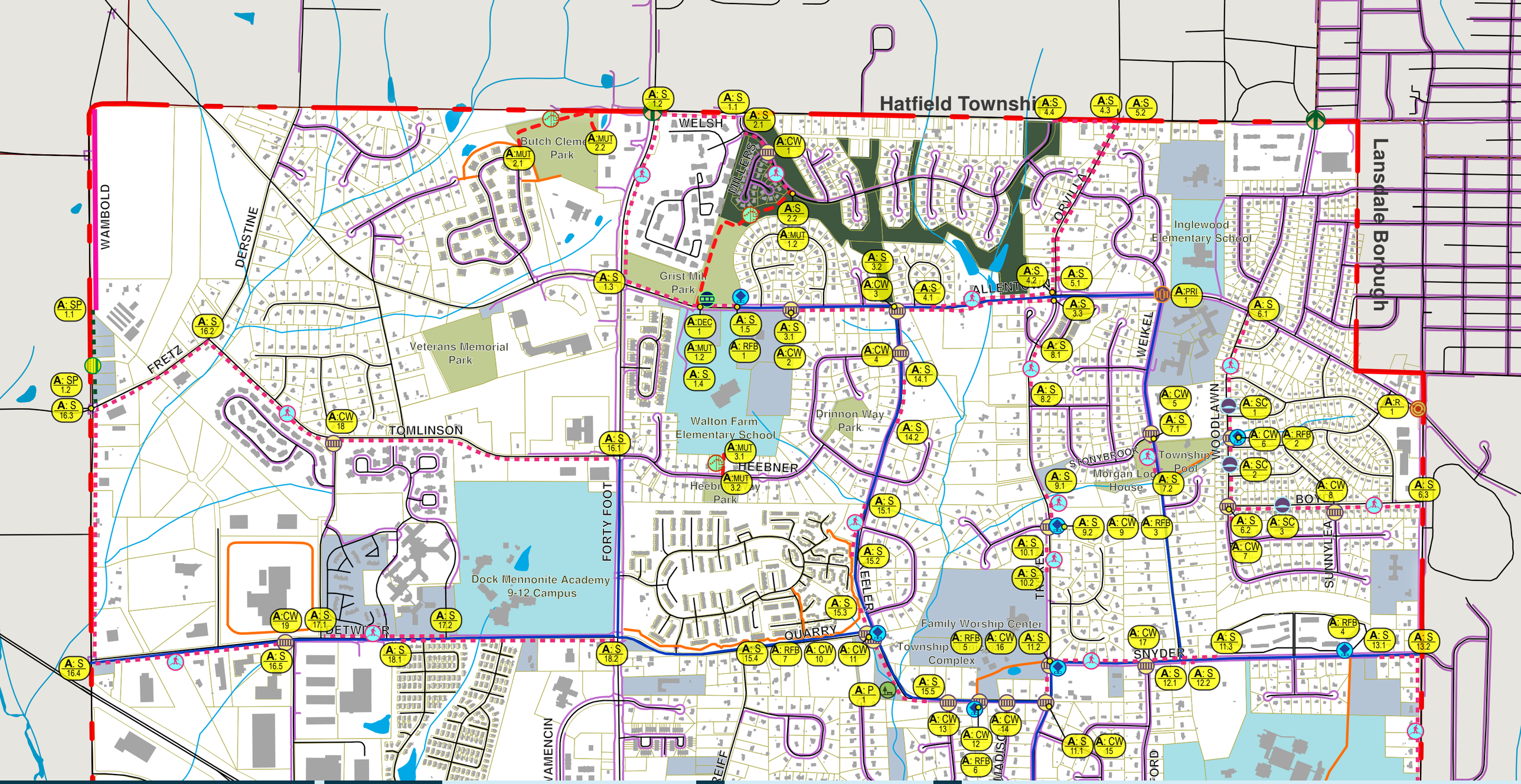
SC = Speed Cushion

SP = Side Path

SR = Sharrows

TB = Pedestrian Trail Bridge

Towamencin Connectivity Study Cost Summary			
Cost Improvement Map - A			
A: * / X.X	Total Proposed Site Improvements	$	2,217,794
	Mobilization, E&S, Stormwater Allowances	$	155,400
	Construction Contingency (10%)	$	221,800
	Design & Engineering (15%)	$	332,700
	Estimated Costs	**$**	**2,927,700**
Cost Improvement Map - B			
B: * / X.X	Total Proposed Site Improvements	$	1,766,959
	Mobilization, E&S, Stormwater Allowances	$	123,900
	Construction Contingency (10%)	$	176,700
	Design & Engineering (15%)	$	265,100
	Estimated Costs	**$**	**2,332,700**
Cost Improvement Map - C			
C: * / X.X	Total Proposed Site Improvements	$	1,605,330
	Mobilization, E&S, Stormwater Allowances	$	112,600
	Construction Contingency (10%)	$	160,600
	Design & Engineering (15%)	$	240,800
	Estimated Costs	**$**	**2,119,400**
	Total Project Cost	**$**	**7,379,800**



Towamencin Township Connectivity Study

N

0 500' 1000' 2000'

Sheet A
Sheet B
Sheet C

Cost improvement map - page label

A: S 1.1

Improvement abbreviation

Segment number

Existing

- State Park
- Township Park
- Open Space
- Institutional
- School
- Existing Sidewalk
- Existing On Road Route
- Existing Trail

Proposed

- Township Trail
- County Trail
- Sidewalk
- Multi-Use Trail
- Side Path
- Sharrow
- Bicycle Lane
- Road/Lane Closure
- Crosswalk
- Decorative Crosswalk
- Speed Cushion
- Rapid Flashing Beacon
- Hand Man
- Pedestrian Refuge Island
- Trail Bridge
- Pocket Park
- Connection to Adjacent Twp
- Roundabout

Cost Improvement Map A

SubTotal: $ 2,217,794.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Sidewalk (5' Wide)	A: S		(Pg XXX)	42365	LF		$ 14.60	$ 618,529.00
	A: S1.1 - S1.2	Welsh Road	South Side of Welsh Road from Grist Mill Drive to Forty Foot Road	900	LF			$ 13,140.00
	A: S1.2 - S1.3	Forty Foot Road	East side of Forty Foot Road Between Welsh Road and Allentown Road	1900	LF			$ 27,740.00
	A: S1.3 - S1.4	Allentown Road	North Side of Allentown Road Between Forty Foot Road and Walton Farm Elementary School	750	LF			$ 10,950.00
	A: S1.4 - S1.5	Allentown Road	From Walton Farm Elementary School to End of sidewalk gap	600	LF			$ 8,760.00
	A: S2.1 - S2.2	Grist Mill Drive	South side of road from Jacobs Hall Lane to proposed Grist Mill Park Trail	950	LF			$ 13,870.00
	A: S3.1 - S3.2	Allentown Road	South side of Allentown Road from sidewalk gap to Keeler Road	1100	LF			$ 16,060.00
	A: S3.2 - S3.3	Allentown Road	South side of Allentown Road from Keeler Road to Troxel Road	1700	LF			$ 24,820.00
	A: S4.1 - S4.2	Allentown Road	North side of Allentown Road from sidewalk gap to Orvilla Road	1350	LF			$ 19,710.00
	A: S4.2 - S4.3	Orvilla Road	West side of road from Allentown Road to Township Boundary on Welsh Road	2100	LF			$ 30,660.00
	A: S4.3 - S4.4	Welsh Road	South side of road from Orvilla Road to Grist Mill Drive	660	LF			$ 9,636.00
	A: S5.1 - S5.2	Orvilla Road	East side of road from Allentown Road to township boundary on Welsh Road	2100	LF			$ 30,660.00
	A: S6.1 - S6.2	Woodlawn Drive	East side of road from Allentown Road to Boyd Avenue	2150	LF			$ 31,390.00
	A: S6.2 - S6.3	Boyd Avenue	Woodlawn Drive to Township Boundary on South Valley Forge Road	2100	LF			$ 30,660.00
	A: S7.1 - S7.2	Weikel Road	front of Morgan Log House	430	LF			$ 6,278.00
	A: S8.1 - S8.2	Troxel Road	East side of road from West Hampton Way to Sidewalk Gap	430	LF			$ 6,278.00
	A: S9.1 - S9.2	Troxel Road	East Side of road from sidewalk gap to Carriage Way	300	LF			$ 4,380.00
	A: S10.1 - S10.2	Troxel Road	West side of road sidewalk gap	300	LF			$ 4,380.00
	A: S11.1- S11.2	Troxel Road	East side of road from Keeler Road to Snyder Road	250	LF			$ 3,650.00
	A: S11.2 - S11.3	Snyder Road	North Side of road from Troxel Road to sidewalk gap	1840	LF			$ 26,864.00
	A: S12.1 - S12.2	Snyder Road	South side of road sidewalk gap	100	LF			$ 1,460.00
	A: S13.1 - S13.2	Snyder Road	South side of road from sidewalk gap to Township Boundary on Valley Forge Road	450	LF			$ 6,570.00
	A: S13.2 - S13.3	South Valley Forge Road	West side of road from Snyder Road to Sidewalk Gap	2300	LF			$ 33,580.00
	A: S14.1 - S14.2	Keeler Road	East side of road Sidewalk Gap near Drinnon Way Park	550	LF			$ 8,030.00
	A: S15.1 - S15.2	Keeler Road	West side of road sidewalk gap to existing trail	680	LF			$ 9,928.00
	A: S15.2 - S15.3	Keeler Road	use existing trail	650	LF		N/A	N/A
	A: S15.3 - S15.4	Keeler Road	West side of road from Existing Trail to Intersection of Quarry Road and keeler Road	185	LF			$ 2,701.00
	A: S15.4 - S15.5	Keeler Road	West side of road from Quarry Road to sidewalk gap	1000	LF			$ 14,600.00
	A: S16.1 - S16.2	Tomlinson	South side of road from Forty Foot Road to Fretz Road	5000	LF			$ 73,000.00
	A: S16.2 - S16.3	Fretz Road	South side of road from Tomlinson Road to Wambold Road	1440	LF			$ 21,024.00
	A: S16.3 - S16.4	Wambold Road	West side of road from Fretz Road to Detwiler Road	2700	LF			$ 39,420.00
	A: S16.4 - S16.5	Detwiler Road	South Side of Road from Wambold Road to Gehman Road	2200	LF			$ 32,120.00
	A: S17.1 - S17.2	Detwiler Road	North side of road from Gehman Road to Woods Drive	1350	LF			$ 19,710.00
	A: S18.1- S18.2	Detwiler Road	South side of road from sidewalk gap to Forty Foot Road	2500	LF			$ 36,500.00

Improvement Type	Segment Label	Intersection	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Crosswalk (Note: crosswalk costs will vary based on number of ADA curb ramps needed)	A: CW		(Pg XXX)	18	EA		$ 1,125.00	$ 237,375.00
	A: CW 1	Grist Mill Drive and Millers Way	South/West side of Grist Mill Drive	1	EA			$ 1,125.00
	A: CW 2	Allentown Road and Private Drive at Presentation of Our Lord Ukrainian Catholic Church	South side of Allentown Road *Requires (2) curb ramps	1	EA			$ 19,125.00

	A: CW 3	Allentown Road and Keeler Road	South side of Allentown road *Requires (1) curb ramps	1	EA			$ 10,125.00
	A: CW 4	Keeler Road and Tennis Circle	West side of Keeler Road	1	EA			$ 1,125.00
	A: CW 5	Weikel Road and Stonybrook Lane	West side of Weikel road, *requires (2) curb	1	EA			$ 19,125.00
	A: CW 6	Woodlawn Drive Crossing	West side of Woodlawn Drive, *requires (1) curb ramp	1	EA			$ 10,125.00
	A: CW 7	Woodlawn Drive and Boyd Avenue	East side of Woodlawn Drive *Requires (2) curb	1	EA			$ 19,125.00
	A: CW 8	Boyd Avenue and Sunnylea Road	South side of Boyd Avenue *Requires (2)	1	EA			$ 19,125.00
	A: CW 9	Troxel Road and Carriage Way	East side of Troxel Road	1	EA			$ 1,125.00
	A: CW 10	Keeler Road and Quarry Road	West side of Keeler Road *Requires (2) curb	1	EA			$ 19,125.00
	A: CW 11	Keeler Road	Crosses Keeler Road with flashing beacon	1	EA			$ 19,125.00
	A: CW 12	Keeler Road	Crossing Keeler Road with Flashing Beacon *Requires (1) curb ramp	1	EA			$ 10,125.00
	A: CW 13	Keeler Road and Michael Way	South side of Keeler Road *Requires (2) updated curb ramps	1	EA			$ 19,125.00
	A: CW 14	Keeler Road and Madison Way	South side of Keeler Road	1	EA			$ 1,125.00
	A: CW 15	Troxel Road and Keeler Way	East side of Street *Requires (2) curb	1	EA			$ 19,125.00
	A: CW 16	Troxel Road	Crossing Troxel from entrance of Township Building *Requires (1) curb ramp	1	EA			$ 10,125.00
	A: CW 17	Snyder Road	South side of road Curb ramps May require updates to meet	1	EA			$ 1,125.00
	A: CW 18	Tomlinson Road and Gehman Road	South side of road *Requires (2) curb	1	EA			$ 19,125.00
	A: CW 19	Detwiler Road ad Gehman Road	South side of road *Requires (2) curb	1	EA			$ 19,125.00

Improvement Type	Segment Label	Intersection Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Decorative Crosswalk	A: DEC		(Pg XXX)	1	EA		$ 2,250.00	$ 20,250.00
	A: DEC 1	Allentown Road and Entranace of Grist Mill Park	North Side of Allentown at Entrance of Grist Mill Park	1	EA			$ 20,250.00

Improvement Type	Segment Label	Location/Adjacent Street	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Multi-Use Trail (10' Wide)	A: MUT		(Pg XXX)	3550	LF		$ 69.60	$ 247,080.00
	A: MUT 1.1 - 1.2	N/A	Through Grist Mill Park to Grist Mill Drive	1800	LF			$ 125,280.00
	A: MUT 2.1 - 2.2	N/A	From exsitng trail in residential development through Butch Clemens Park	1300	LF			$ 90,480.00
	A: MUT 3.1 -3.2	N/A	From Walton Farm Elementary to Heebner Way	450	LF			$ 31,320.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Roundabout	A: R		(Pg XXX)	1	EA		$ 750,000.00	$ 750,000.00
	A: R 1	South Valley Forge Road	Intersection of Allentown Road and South Valley Forge Road	1	EA			$ 750,000.00

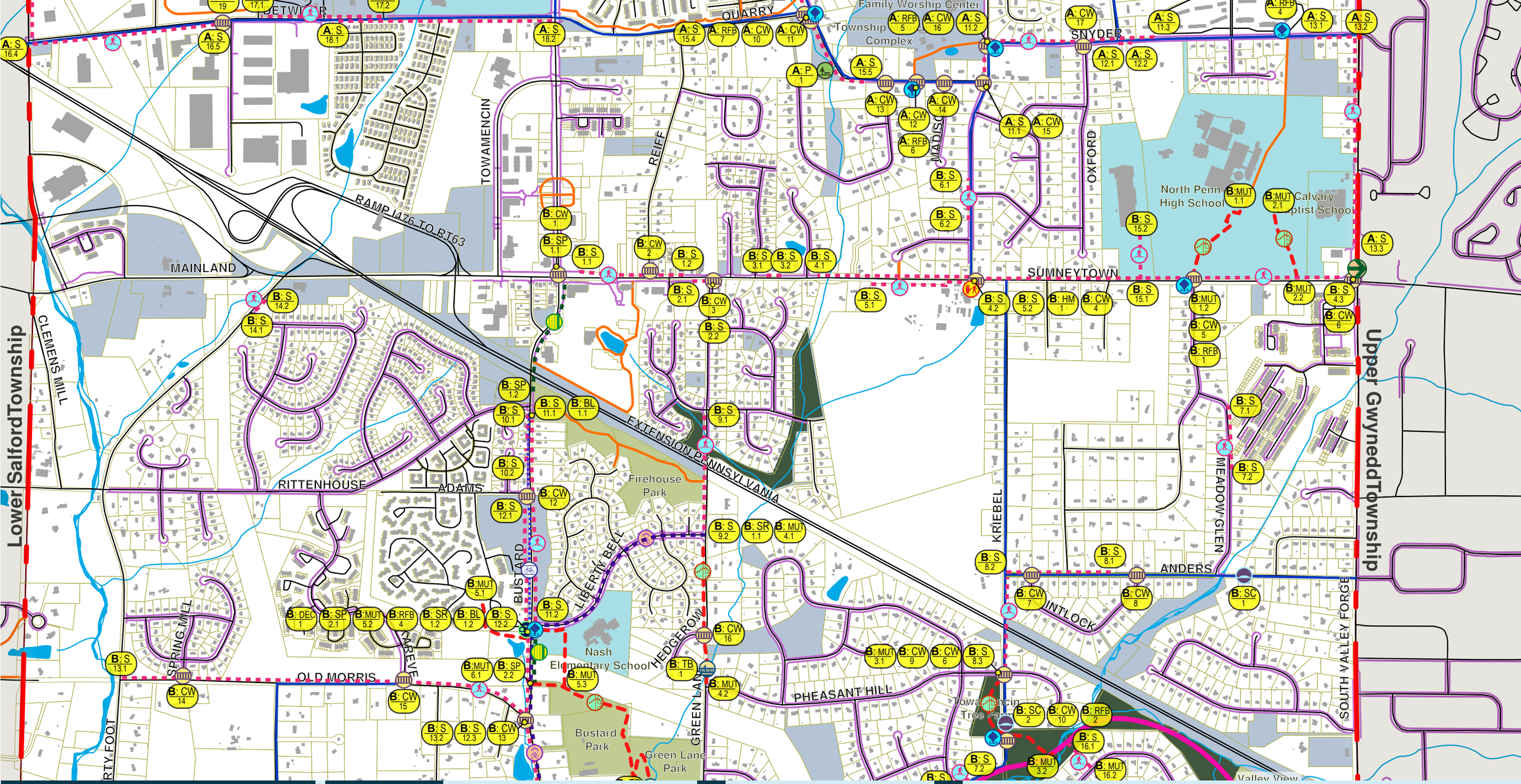
Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Rapid Flashing Beacon	A: RFB		(Pg XXX)	7	EA		$ 30,000.00	$ 210,000.00
	A: RFB 1	Allentown Road	Near entrance to Grist Mill Park	1	EA			$ 30,000.00
	A: RFB 2	Woodlawn Road	Near Township Pool	1	EA			$ 30,000.00
	A: RFB 3	Troxel Road	North of Family Worship Center	1	EA			$ 30,000.00
	A: RFB 4	Snyder Road	North of North Penn High School	1	EA			$ 30,000.00
	A: RFB 5	Troxel Road	Eastern Entrance to Township Municipal Complex	1	EA			$ 30,000.00
	A: RFB 6	Keeler Road	Southern Entrance to Township Municipal Complex	1	EA			$ 30,000.00
	A: RFB 7	Keeler Road	Crossing Keeler Road from Quarry Road	1	EA			$ 30,000.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Pedestrian Refuge Island	A: PRI		(Pg XXX)		EA		$ 20,000.00	$ 20,000.00
	A: PRI 1	Allentown Road	Near Entrance to Inglewood Elementary	1	EA			$ 20,000.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Speed Cushion	A: SC		(Pg XXX)	3	EA		$ 4,000.00	$ 12,000.00
	A: SC1	Woodlawn Road	North of Township Pool	1				$ 4,000.00
	A: SC2	Woodlawn Road	South of Township Pool	1				$ 4,000.00
	A: SC3	Boyd Avenue	Road and Sunnylea Road	1				$ 4,000.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Pocket Park	A: P		(Pg XXX)	1	EA		$ 26,000.00	$ 26,000.00
	A: P 1	Keeler Road	Between Quarry Road and Michael Way	1	EA			$ 26,000.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Side Path (10' Wide)	A: SP		(Pg XXX)	1100	LF		$ 69.60	$ 76,560.00
	A: SP 1.1 - SP 1.2	Wambold Road	East Side of road from Schoolhouse Road to Fretz Road.	1100				$ 76,560.00



Towamencin TOWNSHIP Connectivity Study

N

0 500' 1000' 2000'

Sheet A
Sheet B
Sheet C

Cost improvement map - page label

B: S 1.1

Improvement abbreviation

Segment number

Existing

- State Park
- Township Park
- Open Space
- Institutional
- School
- Existing Sidewalk
- Existing On Road Route
- Existing Trail

Proposed

- Township Trail
- County Trail
- Sidewalk
- Multi-Use Trail
- Side Path
- Sharrow
- Bicycle Lane
- Road/Lane Closure
- Crosswalk
- Decorative Crosswalk
- Speed Cushion
- Rapid Flashing Beacon
- Hand Man
- Pedestrian Refuge Island
- Trail Bridge
- Pocket Park
- Connection to Adjacent Twp
- Roundabout

Cost Improvement Map B

SubTotal: $ 1,766,959.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Sidewalk (5' Wide)	B: S			24765	LF		$ 14.60	$ 366,679.00
	B: S1.1 - S1.2	Sumenytown Pike	North side of road from sidewalk gap near Forty Foot Road to sidewalk gap	1,140	LF			$ 16,644.00
	B: S2.1 - S2.2	Sumenytown Pike	South side of raod, sidewalk gap east of Green Lane Road	150	LF			$ 2,190.00
	B: S3.1 - S3.2	Sumenytown Pike	North side of road , idewalk Gap between Green Lane Road and Troxel Road	100	LF			$ 1,460.00
	B: S4.1 - S4.2	Sumenytown Pike	North side of road from sidewalk gap to Troxel Road	1700	LF			$ 24,820.00
	B: S4.2 - S4.3	Sumenytown Pike	North side of Road from Troxel Road to Township Boundary on South Valley Forge	4100	LF			$ 59,860.00
	B: S5.1 - S5.2	Sumenytown Pike	South side of road from Troxel Road to Freddy Hill Farms property Boundary	1100	LF			$ 16,060.00
	B: S6.1 - S6.2	Troxel Road	West side of road, sidewalk gap	475	LF			$ 6,935.00
	B: S7.1 - S7.2	Meadow Glen Drive	East side of road sidewalk gap	700	LF			$ 10,220.00
	B: S8.1 - S8.2	Anders Road	North side of road from sidewalk gap t intersection with Kriebel Road	1200	LF			$ 17,520.00
	B: S8.2 - S8.3	Kriebel Road	East side of road from Anders Road to entrance of Towamencin Tree farm	1100	LF			$ 16,060.00
	B: S9.1 - S9.2	Green Lane Road	West side of road from over Turnpike extension to Liberty Bell Drive	1300	LF			$ 18,980.00
	B: S10.1 - S10.2	Bustard Road	West side of road from Rittenhouse Road to sidewalk gap (reaches to EX sidewalk)	500	LF			$ 7,300.00
	B: S11.1 - S11.2	Bustard Road	East side of road from Rittenhouse Road to Liberty Bell Drive	2300	LF			$ 33,580.00
	B: S12.1 - S12.2	Bustard Road	West side of road from Adams Road to Liberty Bell Drive	1400	LF			$ 20,440.00
	B: S12.2 - S12.3	Bustard Road	West side of road from Liberty Bell Drive to Old Morris Road	900	LF			$ 13,140.00
	B: S12.3 - S12.4	Bustard Road	West side of road from Old Morris Road to Kriebel Road	1700	LF			$ 24,820.00
	B: S13.1 - S13.2	Old Morris Road	North Side of road from Old Forty Foot Road to Bustard Road	4600	LF			$ 67,160.00
	B: S14.1 - S14.2	Old Forty Foot Road	Sidewalk gap North of Rittenhouse Road	300	LF			$ 4,380.00
	B: S15.1 - S15.2	N/A	North Penn VoTech School	350	LF			$ 5,110.00
	B: S16.1 - S16.2	N/A	Between	400	LF			$ 5,840.00

Improvement Type	Segment Label	Intersection	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Crosswalk	B: CW			19	EA		$ 1,125.00	$ 156,375.00
	B: CW 1	Forty Food Road and Sumneytown Pike	All intersections (Currently have lines, need stripes)	4	EA			$ 4,500.00
	B: CW 2	Sumneytown Pike and Reiff Road	North Side of Sumneytown Pike corssing Reiff Road	1	EA			$ 1,125.00
	B: CW 3	Sumneytown Pike and Green Lane Road	South side of Sumneytown Pike crossing Green Lane Road	1	EA			$ 1,125.00
	B: CW 4	Sumneytown Pike and Troxel Road	Crossing Sumneytown Pike (North to South) *requires (2) new Curb	1	EA			$ 19,125.00

	B: CW 5	Sumneytown Pike and Trail crossing to North Penn	Crossing Sumneytown Pike (North to South) *requires (1) new Curb Ramp on School Side	1	EA			$ 10,125.00
	B: CW 6	South Valley Forge Road and Sumneytown Pike	East side of South Valley Forge, crossing Sumneytown Pike Currently has lines, add stripes	1	EA			$ 1,125.00
	B: CW 7	Anders Road and Flintlock Circle	South side of Anders Road crossing Flinlock Circle	1	EA			$ 1,125.00
	B: CW 8	Anders Road and Flintlock Circle	South side of Anders Road crossing Flinlock Circle	1	EA			$ 1,125.00
	B: CW 9	Kriebel Road and Pheasant Hill	West side of Kriebel Road, crossing Pheasant Hill Road into Towamencin Tree Farm	1	EA			$ 1,125.00
	B: CW 10	Kriebel Road Midblock Crossing	Crosses Kriebel with flashing beacon to Township open space connecting to Kriebel Road Trail *Requires (2) curb ramps	1	EA			$ 19,125.00
	B: CW 11	Kriebel Road Midblock Crossing	Crosses Kriebel to trail with flashing beacon *Requries (2) curb ramps	1	EA			$ 19,125.00
	B: CW 12	Bustard Road and Adams Road	West side of Bustard Road crossing Adams Road *Requires (2) curb ramps	1	EA			$ 19,125.00
	B: CW 13	Old Morris Road and Bustard Road	West side of Bustard Road crossing Old Morris Road	1	EA			$ 19,125.00
	B: CW 14	Old Morris Road and Spring Mill Way	North Side of Old Morris Road crossing Spring Mill	1	EA			$ 19,125.00
			North Side of					

Improvement Type	Segment Label	Location/Adjacent Street	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Multi-Use Trail (10' Wide)	B: MUT		(Pg XXX)	9200			$ 69.60	$ 640,320.00
	B:MUT 1.1 - B: MUT 1.2	Sumneytown Pike	North Penn High School Trail	1000	LF			$ 69,600.00
	B:MUT 2.1 - B: MUT 2.2	Sumneytown Pike	North Penn High School Trail	800	LF			$ 55,680.00
	B:MUT 3.1 - B: MUT 3.2	Kriebel Road	From Pheasant Hill to Kriebel Road Trail through Towamencin Tree Farm	1300	LF			$ 90,480.00
	B:MUT 4.1 - B: MUT 4.2	Green Lane Road	From Liberty Bell Drive to Pheasant Hill through Right Of Way easement	1600	LF			$ 111,360.00
	B: MUT 5.1 - B: MUT 5.2	Near Bustard Road	From Residential to Bustard Road	700	LF			$ 48,720.00
	B: MUT 5.2 - B: MUT 5.3	Near Bustard Road	From Bustard Road through Nash Elementary into Bustard Park	800	LF			$ 55,680.00
	B: MUT 6.1 - B: MUT 6.2	Near Bustard Road	Through Bustard Park and Green Lane Park	3000	LF			$ 208,800.00

Improvement Type	Segment Label	Location/Adjacent Street	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Side Path (10' Wide)	B: SP		(Pg XXX)	1100	LF		$ 69.60	$ 76,560.00
	B: SP 1.1 - SP 1.2	Bustard Road		700	LF			$ 48,720.00
	B: SP 2.1 - SP 2.2	Bustard Road		400	LF			$ 27,840.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Sharrows	B: SR		(Pg XXX)	21	EA		$ 275.00	$ 5,775.00
	B: SR 1.1 - 1.2	Liberty Bell Drive	Between Green Lane Road and Bustard Road	10	EA			$ 2,750.00
	B: SR 1.2 - 1.3	Bustard Road	Between Liberty Bell Drive and Kriebel Road	11	EA			$ 3,025.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Bike Lanes	B: BL		(Pg XXX)	5000	LF		$ 1.50	$ 7,500.00
	B: BL 1.1 - BL 1.2	Forty Foot Road	West Side of Road	2500	LF			$ 3,750.00
	B: BL 1.1 - BL 1.2	Forty Foot Road	East Side of road	2500	LF			$ 3,750.00

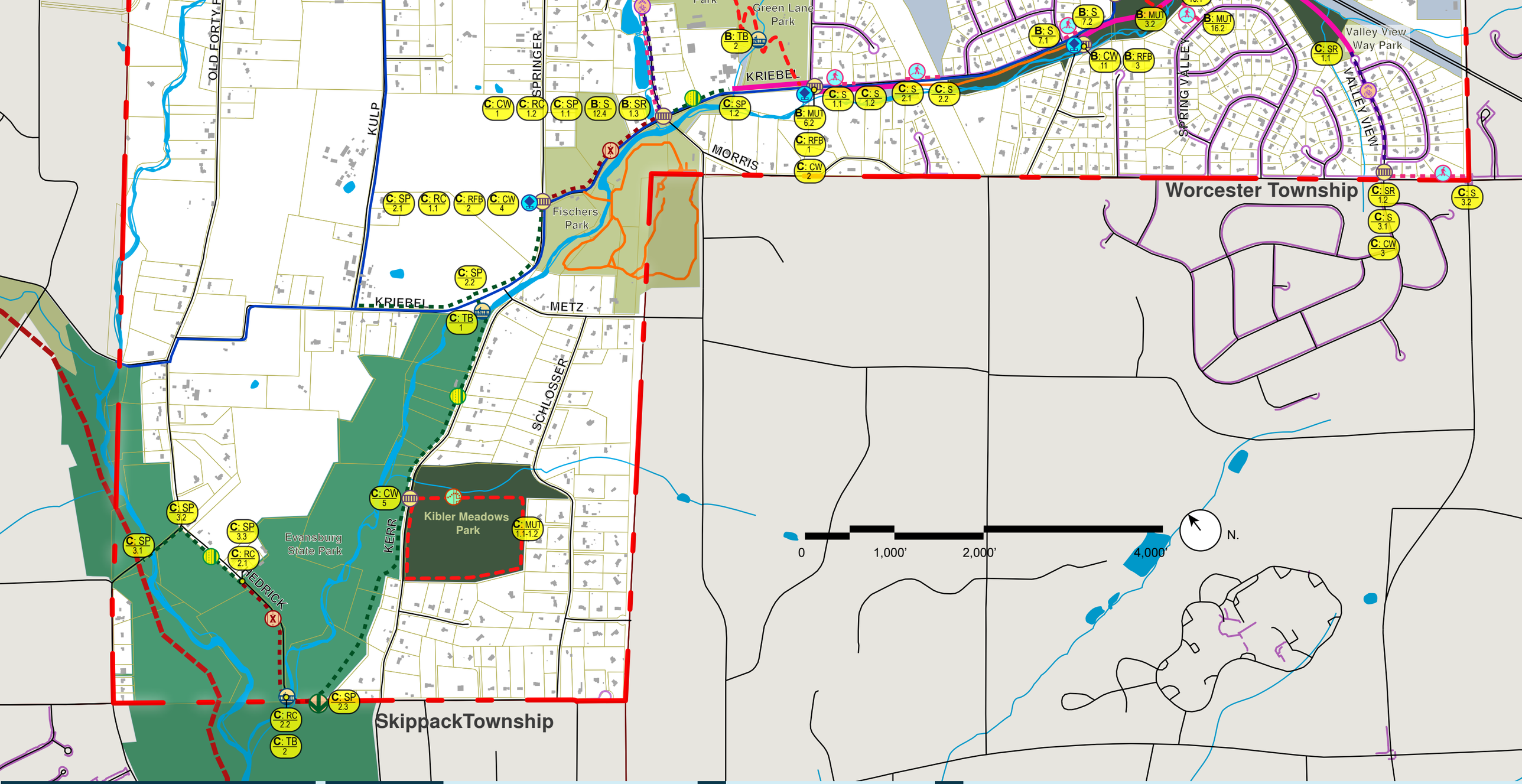
Improvement Type	Segment Label	Area/Connecting Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Pedestrian Trail Bridge	B: TB		(Pg XXX)		EA		$ 250,000.00	$ 500,000.00
	B: TB 1	Green Lane Rd.	Crosses creek north of Green Lane Park in Right of Way easement	1	EA			$ 250,000.00
	B: TB 2	Green Lane Park	Crosses Creek within Green Lane Park	1	EA			$ 250,000.00

Improvement Type	Segment Label	Intersection	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Decorative Crosswalk	B: DEC		(Pg XXX)	1	EA		$ 2,250.00	$ 2,250.00
		Bustard Road and Liberty Bell Drive	Crosses Bustard Road - Entrance to Nash Elementary	1	EA			$ 2,250.00

Improvement Type	Segment Label	Intersection Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Hand Man	B: HM		(Pg XXX)	1	EA		$ 3,500.00	$ 3,500.00
	B: HM1	Sumneytown Pike and Troxel Road	South side of Sumneytown Pike at proposed sidewalk location	1	EA			$ 3,500.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Speed Cushion	B: SC		(Pg XXX)	2	EA		$ 4,000.00	$ 8,000.00
	B: SC1	Anders Road		1				$ 4,000.00
	B: SC2	Kriebel Road		1				$ 4,000.00

Kilder Meadow
TOWAMENCIN TOWNSHIP



Towamencin Township
Connectivity Study

N

0 500' 1000' 2000'

Sheet A
Sheet B
Sheet C

C: S 1.1
- Cost improvement map - page label
- Improvement abbreviation
- Segment number

Existing

- State Park
- Township Park
- Open Space
- Institutional
- School
- Existing Sidewalk
- Existing On Road Route
- Existing Trail

Proposed

- Township Trail
- County Trail
- Sidewalk
- Multi-Use Trail
- Side Path
- Sharrow
- Bicycle Lane
- Road/Lane Closure
- Crosswalk
- Decorative Crosswalk
- Speed Cushion
- Rapid Flashing Beacon
- Hand Man
- Pedestrian Refuge Island
- Trail Bridge
- Pocket Park
- Connection to Adjacent Twp
- Roundabout

Cost Improvement Map C

Sub Total:	$ 1,605,330.00

Improvement Map C

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Sidewalk (5' Wide)	C: S		(Pg XXX)	1,550	LF		$14.60	$ 22,630.00
	C: S1.1 - S1.2	Kriebel Rd.	North side of road from Green Lane Road to sidewalk gap	270	LF			$ 3,942.00
	C: S2.1 - S2.2	Kriebel Rd.	North side of road sidewalk gap	430	LF			$ 6,278.00
	C: S3.1 - S3.2	Morris Rd.	from Valley View Way to South Valley Forge Road	850	LF			$ 12,410.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Multi-Use Trail (10' Wide)	C: MUT		(Pg XXX)	4300	LF		$69.60	$299,280.00
	C:MUT1.1 - MUT 1.2	N/A	Kibler Meadows Loop	4300	LF			$ 299,280.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Side Path (10' Wide)	C: SP		(Pg XXX)	3200	LF		$ 69.60	$ 605,520.00
	C: SP 1.1 - SP 1.2	Kriebel Road	From Bustard Road to Kriebel Road Trail	800	LF			$ 55,680.00
	C: SP 2.1 - SP 2.2	Kriebel Road		1200	LF			$ 83,520.00
	C: SP 2.2 - SP 2.3	Kerr Road		4750	LF			$ 330,600.00
	C: SP 3.1 - 3.2	Old Forty Foot Road		950	LF			$ 66,120.00
	C: SP 3.2 - 3.3	Hedrick Road		1000	LF			$ 69,600.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Road Closure	C: RC		(Pg XXX)	3200	LF		N/A	$ 6,000.00
	C: RC 1.1 - RC 1.2	Kriebel Road	Close road between Springer Road and Bustard Road. Barriers & Signage	1700	LF		3000	3000
	C: RC 2.1 - RC 2.2	Hedrick Road	Paint Trail on Hedrick Road	1500	LF		N/A	3000

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Pedestrian Trail Bridge	C: TB		(Pg XXX)	2	EA		$ 250,000.00	$ 500,000.00
	C: TB 1	Metz Road		1	EA			$ 250,000.00
	C: TB 2	Hedrick Road		1	EA			$ 250,000.00

Improvement Type	Segment Label	Intersection	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Crosswalk	C: CW		(Pg XXX)	5	EA		$ 5,250.00	$ 26,250.00
	C: CW 1			1	EA			$ 5,250.00
	C: CW 2			1	EA			$ 5,250.00
	C: CW 3			1	EA			$ 5,250.00
	C: CW 4			1	EA			$ 5,250.00
	C: CW 5			1	EA			$ 5,250.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Rapid Flashing Beacon	C: RFB		(Pg XXX)	7	EA		$ 30,000.00	$ 150,000.00
	C: RFB 1			1	EA			$ 30,000.00
	C: RFB 2			1	EA			$ 30,000.00
	C: RFB 3			1	EA			$ 30,000.00
	C: RFB 4			1	EA			$ 30,000.00
	C: RFB 5			1	EA			$ 30,000.00

Improvement Type	Segment Label	Street Name	Description	Estimated Quantity	Unit	Priority	Unit Cost	Total Cost
Sharrows	C: SR		(Pg XXX)		EA		$ 275.00	$ 1,650.00
	C: SR 1.1 - 1.2	Valley View Drive		6	EA			$ 1,650.00

4.2 Implementation Priorities

The recommendation plan for Towamencin Township includes a large quantity of improvements. It is important to note that implementation priorities can change based on available opportunities. For instance, if a landowner donates a section of property, or an applicable grant becomes available, the sections of the plan affected should take priority.

The high priority items in this plan are labeled "1" in the cost estimate. These items focus on connecting populations where Interstate 476 creates barriers in the Township. These locations include:

- Bustard Road near Firehouse Park
- Green Lane Road Underpass
- Kriebel Road near the Towamencin Tree Farm Park

Other high priority items include low challenge recommendations that are simple to achieve, such as:

- All crosswalk locations
- Sharrow routes along Liberty Bell Drive and Bustard Road
- Signage along routes

Improvements categorized as priority "2" in the cost estimate include those that focus on connecting school routes. Improvements on Allentown Road and Snyder Road are examples which allow for neighboring residents to readily access schools such as North Penn High School and Inglewood Elementary. Improvements on Forty Foot Road and Bustard Road accommodate schools such as Walton Farm Elementary, Dock Mennonite 9-12 Campus, and Walton Farm Elementary School.

The following items are labeled "3" in the priority column of the cost estimate. These recommendations focus on improvements along collector routes. These include:

- Bustard Road Corridor
- Evansburg State Park Corridor
- Sumneytown Pike Sidewalk corridor

Improvements categorized as priority "4" in the cost estimate focus on connecting parks within the Township. These improvements are primarily concentrated on the north-south connection of Forty Foot Road and Bustard Road. They also focus on connections to the new Kriebel Road Trail.

4.2.1 Towamencin Township Sidewalk Deferral Program

The Township has some data about sidewalk installation deferrals that have been granted through the land development process. However, escrow fees are not collected from applicants when these deferrals are made. As a result, these deferrals are not enforced, and the sidewalks never get constructed.

This study recommends that the Township pass an ordinance requiring payment of a fee in lieu of sidewalk construction if there are any sidewalk deferrals in order that these important pedestrian facilities are constructed.

4.2.2 Adopt an Official Map

An Official Map is both an ordinance and a map on which a municipality can express its interest in possibly acquiring land to construct public improvements. These improvements can include roads, trails, parks and open space, stormwater management facilities and other public improvements. This plan recommends that the Township adopt an Official Map for the purpose of including improvements recommended by this plan on that map. The Township's adoption of an Official Map creates a planning basis for the trail and sidewalk improvements proposed in the Connectivity Study, it does not, however commit the municipality to acquire the land to build these improvements. Additionally, private developers can play a limited role in the implementation of these proposed improvements as they can build them, as shown on the Offical Map, during the land development process.

For information about the Official Map please go to: https://conservationtools.org/guides/60-official-map and https://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20703.pdf

4.2.3 Collaboration with Adjacent Municipalities

Where planned connectivity improvements abut or connect to facilities in neighboring municipalities, Towamencin Township should seek to work with these neighbors on grants and/or construction projects to advance these improvements. Many grant programs rank multi-municipal planning and construction funding applications higher than single community requests.

4.3 Potential Funding Sources

4.3.1 Pennsylvania Department of Transportation (PennDOT)

Transportation Alternatives (TA) Set-Aside

The Transportation Alternatives Set-Aside Program (TA Set-Aside) is a Federal highway and transit funds set-aside under the Surface Transportation Program (STP) for community-based "non-traditional" projects designed to strengthen the cultural, aesthetic, and environmental aspects of the nation's intermodal transportation system. The program seeks to provide funding for projects such as construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.

Non-motorized forms of transportation include sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990. There is a minimum award of $500,000 for construction projects. There is a maximum award of $1,000,000, although higher awards can be justified for "exceptional" projects. No applicant match is required.

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

Multimodal Transportation Fund (MTF)

The Multimodal Transportation Fund (MTF) was created in 2013 when the Pennsylvania State Legislature passed and the Governor signed Act 89. This dedicated fund can be used for "projects that coordinate local land use with transportation assets to enhance existing communities" as well as "Projects related to streetscape, lighting, sidewalks and pedestrian safety." Grants are available for projects with a total cost of $100,000 or more. Grants will not normally exceed $3,000,000. Consideration will be given to projects with costs over $3,000,000 should they significantly impact PennDOT's goal of creating jobs and leveraging private investment.

Additional information is available online at: https://www.penndot.gov/ProjectAndPrograms/MultimodalProgram/Pages/default.aspx

Safe Routes to School (SRTS)

Administered through TA Set-Aside, SRTS is a national and international movement to create safe, convenient and healthy opportunities for children to walk and bicycle to school. The program encourages children to walk and bicycle to school, helping to reverse an alarming decrease in students' physical activity and an associated increase in childhood obesity. Eligible activities include new or reconstructed sidewalks or walkways, pedestrian and bicycle signs or signals, transportation projects that achieve ADA compliance, such as curb ramps, bike parking facilities or bus bike racks, shared use paths, side paths, trails that serve a transportation purpose, crossing improvements, and traffic realignments, road diets, or intersection changes.

For more information, visit https://www.penndot.gov/TravelInPA/Safety/SchoolResourcesAndPrograms/SafeRoutesToSchool/Pages/default.aspx

4.3.2 Office of the Budget

Redevelopment Assistance Capital Program (RACP)

The Redevelopment Assistance Capital Program (RACP) is a grant program administered by the Office of the Budget for the acquisition and construction of regional economic, cultural, civic, recreational, and historical improvement projects. RACP projects are state-funded projects that cannot obtain primary funding under other state programs. A RACP project must have a total cost of at least $1,000,000. At least 50% of the project cost must be match (non-state) participation.

For more information, visit https://www.budget.pa.gov/Programs/RACP/Pages/Main%20Page.aspx

4.3.3 Pennsylvania Department of Conservation and Natural Resources (PA DCNR)

Community Conservation Partnership Program (C2P2)

The Community Recreation and Conservation Program through the PA DCNR Community Conservation Partnership Program (C2P2) provides funding to municipalities and authorized nonprofit organizations for recreation, park, trail and conservation projects. These include planning for feasibility studies, trail studies, conservation plans, master site development plans, and comprehensive recreation park and open space and greenway plans. In addition to planning efforts, the program provides funding for land acquisition for active or passive parks, trails and conservation purposes, and construction and rehabilitation of parks, trails, and recreation facilities. Most of these projects require a 50% match, which can include a combination of cash and/or non-cash values.

Recreational Trails Program

The Pennsylvania Recreational Trails Program, also through the C2P2 Program, awards grants to federal and state agencies, local governments, non-profit and for-profit organizations to assist with the construction, renovation and maintenance of trails and related facilities for both motorized and non-motorized recreational trail use, the purchase or lease of equipment for trail maintenance and construction and the development of educational materials and programs. These grants require a minimum 20% match, which can include a combination of cash and/or non-cash values.

More information on this program can be found at the DCNR website: http://www.dcnr.state.pa.us/brc/grants/indexgrantsinstruct.aspx

4.3.4 Commonwealth Financing Agency (CFA)

Greenways, Trails and Recreation Program (GTRP)

Administered through the Department of Economic Development (DCED), the Greenways, Trails and Recreation Program (GTRP) provides funding for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects. The program awards up to $250,000 per project to eligible applicants and requires a local match of 15% of the total project cost. Funding from DCED for "sidewalk" connections will need to be categorized as multi-use trails. Some of the recommended sidewalk gap improvements may fit within a "trail" designation.

For more information, visit https://dced.pa.gov/programs/greenways-trails-and-recreation-program-gtrp/

DCED Multimodal Transportation Fund (MTF)

The DCED Multimodal Transportation Fund provides grants that 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. Grants are available for projects with a total cost of $100,000 or more and grants shall not exceed $3,000,000 for any project. The CFA will consider grant requests over $3,000,000 for projects that will significantly impact the financial assistance under the Multimodal Transportation Fund. They shall be matched by local funding in an amount not less than 30% of the non-federal share of the project costs.

For more information, visit https://dced.pa.gov/programs/multimodal-transportation-fund

4.3.5 Department of Community and Economic Development (DCED)

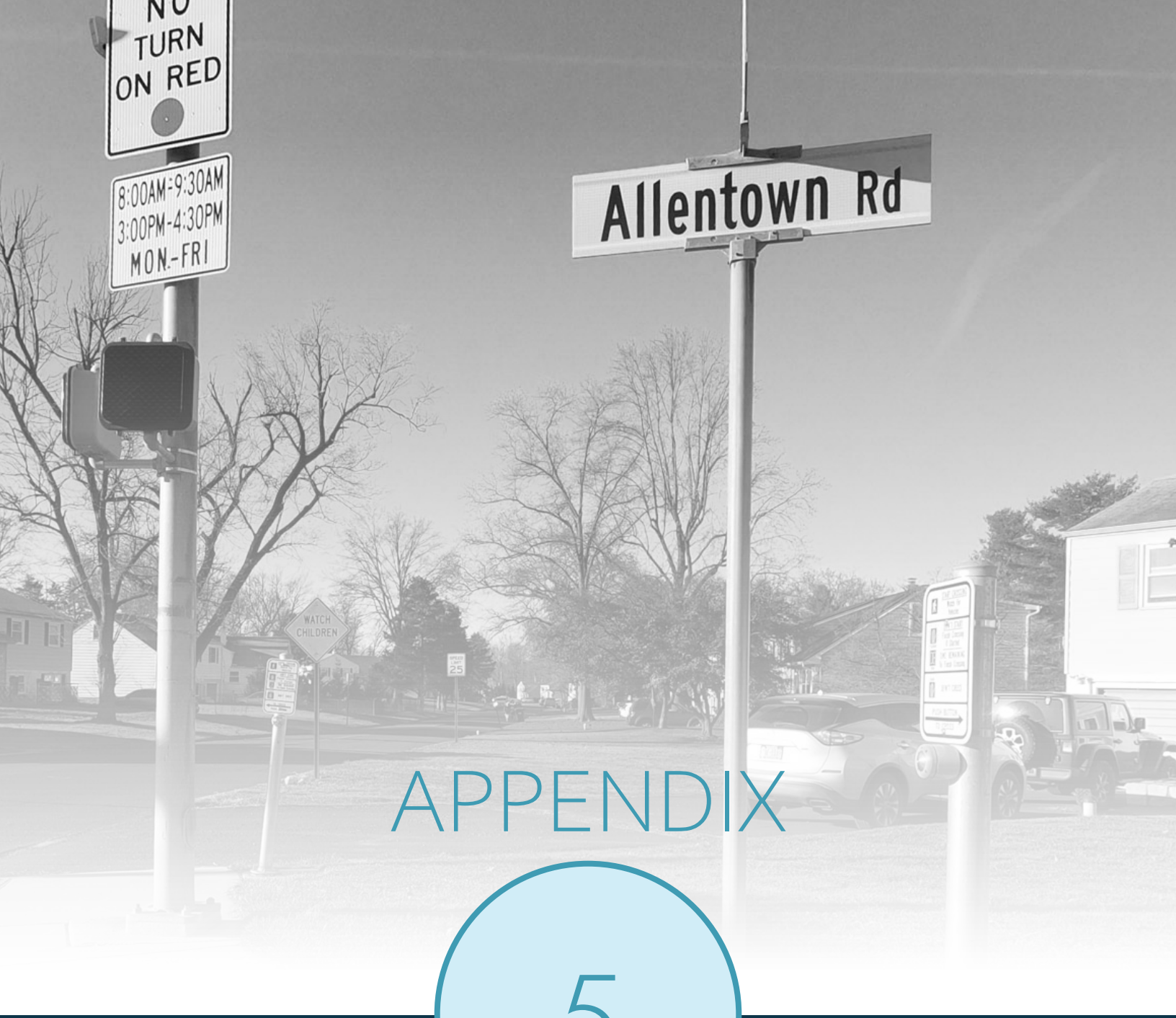
Keystone Communities Program (KCP)

The Keystone Communities (KC) program is designed to encourage the creation of partnerships between the public and private sectors that jointly support local initiatives such as the growth and stability of neighborhoods and communities; social and economic diversity; and a strong and secure quality of life. The program allows communities to tailor the assistance to meet the needs of its specific revitalization effort.

Communities may wish to consider designation through the KC program as a Keystone Main Street, Keystone Elm Street, Keystone Enterprise Zone, or Keystone Community. Designation is an opportunity for targeted investment and development including the identification of specific needs for investment and/or development and the design and implementation of a strategy to address those needs.

For more information, visit https://dced.pa.gov/programs/keystone-communities-program-kcp/

152


NO
TURN
ON RED
8:00AM-9:30AM
3:00PM-4:30PM
MON.-FRI
Allentown Rd
WATCH
CHILDREN

APPENDIX

5

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING NOTES

Project:	**Towamencin Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Rd Lansdale, PA 19446**	Meeting Date/ Time:	**10.10.2022 7:00 – 8:30 pm**
Re:	**Committee Meeting #1**	Issue Date:	**10.20.2022**

ATTENDENCE:

See attached attendance list.

DELIVERABLES:

- Committee #1 Meeting Presentation
- Committee #1 Meeting Notes
- Revised Public Opinion Survey

GENERAL NOTES:

Presentation:

Peter Simone (PS) provided an overview of the project scope, schedule, existing conditions, and data. PS then presented who we are designing for, the basis for connectivity design, and is the tools that can be used for connectivity improvements. PS continued to explain how the public meetings will be conducted and our next steps for the project and public outreach.

Discussion/ Comments/ Questions:

1. Matt Chartrand (MC) said a Dock Mennonite resident was killed last year at the intersection of Allentown Road and Forty Foot Road. The School has come to Planning Commission asking for a study like this.
   - PS thanked for sharing, asked what other schools and destinations we need to hear from further. Also stated purpose of Wikimapping tool and explained “Vision Zero” and “Complete Streets” initiatives.

2. Patricia K. Younce (PY) expressed a concern about not retrofitting every neighborhood without sidewalks - with sidewalks - after PS mentioned that the SC would not be proposing sidewalks

everywhere where they are not present. PS noted that our goal will be to make important connections, but not to add sidewalks in every location, since this would be cost prohibitive.

3. PS noted that PECO is no longer allowing trails on PECO ROWs. MC asked why PECO isn't allowing trails on high voltage right of ways? PS stated PECO has not disclosed that information. PS thinks it may be to reserve these ROWs for future utilities.

4. PY asked how the survey questions are going to be presented.
   - PS answered with Survey Monkey. There will be a URL and QR Code provided to the Township to distribute to the residents.

5. PY asked to add a question that asks, "which areas of the township do you feel the least comfortable walking or biking in?"
   - Joseph Vara (JV) continued with asking to provide a follow up question to number 8 as well: "if you don't use trails, why not?" As well as follow up to questions 9 and 10.

6. PY mentioned that there was discussion with SEPTA about potentially providing a route to the Culinary Institute when it was built.
   - PS speculated if the village develops further, there is a possibility of a bus route from village to the Lansdale train station.

7. MC asked if we should reduce the number of questions and/or prioritize the "hotter topics" to hold people's attention. Mentioned their goal is to get as many people to answer as possible.
   - PS said it is a good concern and varies based on the Township and the dynamic of the community. Said that we cannot predict responses, but we could make a version that boils it down and send it out to committee. Emma Haley (EH) noted that we can change survey monkey settings to skip certain questions based on responses and demographics.

8. MC mentioned it would be nice if responses had some contact info. PS responded that people can voluntarily add their contact info.
   - Dennis McGeehan (DM) asked if there can be a question where you ask which street the respondent lives on. PS agreed to incorporate that question.

9. PY asked how we can reach out to as many Towamencin residents as possible.
   - PS answered that we try to reach out to schools to publish our project info into their newsletters and website; however, sometimes schools do not allow it, but we can make attempts. We can try to get it out to Towamencin Youth Association (TYA).

10. Dr. Ed Buonocore asked to just print physical copies and put at the polling place – Incentive to keep it short and simple. PS said the information we are looking for takes a commitment of 10 minutes and that it cannot be any briefer. Then stated that we could send out postcards that has the QR code to the survey.
    - PY added that we could put them out at restaurants and other public locations.

11. PY mentioned she sees a group of bicyclists that ride on their lunch around the Township – not sure if it is a group through a certain employer.
    - PS said we will investigate that and look into the 'Bike Coalition' branch groups; like Lansdale – Cycling Club could be a Key Person Interview.

12. Nancy Becker asked PS to send out the presentation to the Planning Commission. PS agreed to.

13. MC mentioned there is a "box" between Sumneytown Pike, Forty Foot Road, Allentown Road, and South Valley Forge then asked how state or county roads could affect the process of getting sidewalks/trails to be implemented.
    - PS answered it is circumstantial but could be a good thing. District 6 is progressive. They can be helpful in getting funding.

14. PY mentioned that Lower Salford received a grant for sidewalks to connect retail areas and some residents were upset about it.
    - PS responded that in every community there is some pushback by some groups, and it is not unusual – it is important to listen to those disagreements earnestly.

15. NB added people seem to be more receptive to trails.

16. Richard Marino (RM) said Weikel Road residents recently had a debate over putting in a sidewalk as asphalt vs concrete, because if it is concrete, the resident must maintain the path.
    - PS said that he has not seen anything in the ordinance about that. Sidewalks can be asphalt or concrete. Generally, trails and sidewalks have more differences than material. Potentially something to investigate. Trails not addressed in SALDO.

17. RM mentioned the missing sidewalk on Snyder is going to be connected; however, they are not putting sidewalks in front of Morgan Log House.

18. PY mentioned we could add sidewalks on Troxel to connect kids from developments to Freddy Hill and other destinations.

19. RM added that priorities will be important, particularly due to how long these types of projects take.

20. PS mentioned Clemens Park is a good example of connectivity to destinations that could utilize safety improvements (connections into commercial area / Wawa).

Next Steps

Finalize survey questions

Public meeting #1 on 11/10/2022

This report represents the Professional's summation of the proceedings and is not a transcript. Unless written notice of any correction or clarification is received by the Professional within ten days of issue, the report shall be considered factually correct and shall become part of the official project record.

Sincerely,

SIMONE COLLINS, INC.
LANDSCAPE ARCHITECTURE

Bryce Brucker

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING AGENDA

Project:	**Towamencin Township Sidewalk Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Road Lansdale, PA 19446**	Meeting Date Time:	**10.10.2022 7:00pm – 8:30pm**
Re:	**Committee Meeting #1: Kick off, Protocols, Goals**		

ITEMS:

1. **Team Introductions**
2. **Project Scope**
3. **Project Schedule**
4. **Data & Inventory**
5. **Trails 101 – Users and Design Guidelines**
6. **Public Opinion Survey**
7. **Next Steps**

COMMITTEE MEMBERS:

MEMBER	ORGANIZATION
Brett H. MacKay	Planning Commission, Chairman
Patricia Younce	Planning Commission, Vice Chairman
Douglas Leach	Planning Commission
Joseph Vavra	Planning Commission
Matt Chartrand	Planning Commission
Dr. Edward Buonocore	Planning Commission
Nancy Becker	Planning Commission
Dennis McGeehan	Planning Commission
Richard Marino	Planning Commission, Board Liaison

TOWNSHIP REPRESENTATIVES:

MEMBER	ORGANIZATION
Dennis Carney	Interim Township Manager
Colleen Ehrle	Executive Assistant
Brett MacKay	Planning Commission, Chairman
Mary Stover	Township Engineer
George DiPersio	Interim Zoning Officer
Carolyn Shisler	Zoning and Code Enforcement Department

PROJECT SCHEDULE:

MEETING	PURPOSE	DATE	TIME
Committee Meeting #1	Project overview, initial site analysis, brainstorming	Monday, October 10, 2022	7:00 - 8:30 PM
Public Opinion Survey/ Wikimapping Period	Public Opinion Survey/ Wikimapping	Thursday, November 10, 2022 – Thursday, April 13, 2023	
Public Meeting #1	Project Overview / Public Brainstorming	Thursday, November 10, 2022	7:00 - 8:30 PM
Committee Meeting #2	Review Public Meeting/survey, analysis process, initial concepts	Monday, December 5, 2022	7:00 - 8:30 PM
Public Meeting #2	Analysis / Concepts	Thursday, February 9, 2023	7:00 - 8:30 PM
Committee Meeting #3	Concept refinement, draft plan overview	Monday, March 6, 2023	7:00 - 8:30 PM
Public Meeting #3	Draft Plan Presentation	Thursday, April 13, 2023	7:00 - 8:30 PM
Public Review Period	45-Day Draft Plan Review	Thursday, April 13, 2023 – Monday, May 29, 2023	
Board of Supervisors Meeting	Review Draft Plan	Wednesday, May 10, 2023	7:00 - 8:30 PM
Committee Meeting #4	Review comments and make revisions	Monday, June 5th, 2023	7:00 - 8:30 PM
Public Meeting #4	Present final plan	Thursday, June 22, 2023	7:00 - 8:30 PM

PROJECT TEAM

FIRM / TEAM MEMBER	EMAIL
Simone Collins Landscape Architecture	
Peter Simone, Principal in Charge	psimone@simonecollins.com
Emma Haley, Project Manager	ehaley@simonecollins.com
Geoff Creary, Project Landscape Architect	gcreary@simonecollins.com
Bryce Brucker, Project Landscape Architect	bbrucker@simonecollins.com

May 18, 2022

Mr. Don Delamater
Township Manager
Towamencin Township
1090 Troxel Road
Lansdale, PA 19446
610 368 7602
ddelamater@towamencin.org

Re: Proposal - Sidewalk Connectivity Study
SC project # 22041.00

Simone Collins Landscape Architecture (SC) is pleased to submit this proposal for a sidewalk and trail connectivity study update for Towamencin Township. The proposed project context and scope of work is proposed as follows:

Project Context

As the Township continues to grow non-motorized transportation – specifically, walking and biking – have become increasingly important to the high quality of life that Township residents desire and have come to expect. A recent inventory by the Delaware Regional Planning Commission (DVRPC) of existing Township sidewalks and handicapped ramps shows that a sizable portion of the Township lacks accessible sidewalk connections.

In 2020, the Township completed an evaluation of its many parks and developed recommendations for improvements to those facilities. This study also updated the current status of the Township Trails Master Plan, making some suggestions for new trails and updating the status of the trails plan.

As the Township continues to plan and building new sidewalks and trails, it needs to make strategic decisions of what sidewalks and trails are priorities to construct. It is a reasonable assumption that not every Township Road can or should have a sidewalk or trail. Cumulative costs for these facilities would be far too great.

The purpose of this Connectivity Study is to decide where new sidewalks and trails are most needed and which of those facilities are the highest priority. Once these decisions are made, the Township should consider embarking on a systematic implementation of this connectivity system with funding from a variety of state and federal sources. Implementation of this

119 E. LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW.SIMONECOLLINS.COM

connectivity system will require years and this plan is the first step to a more connected Township.

Scope of Services

1. Inventory of existing and proposed sidewalks and trails in the Township including connecting sidewalks and trails in surrounding municipalities.
2. Field reconnaissance to verify data where needed including observing existing conditions as necessary at specific locations.
3. Collect police report / accident data involving motor vehicles and motor vehicles and pedestrians or cyclists.
4. Confer with the Township Traffic Engineer as needed.
5. Meet and coordinate the work with Township Staff as needed.
6. Meet with County Planning Commission Staff to review preliminary connectivity recommendations.
7. Confer with PennDOT District 6-0 for any connectivity issues regarding State roads.
8. If the Township appoints a Connectivity Study Committee of interested citizens, work with the committee over four meetings to assist SC in identifying problem areas, connectivity destinations, and suggested solutions in creating better non-motorized connections in the Township.
9. Prepare and conduct four public meetings to gather input and to present study recommendations.
10. Attend Board of Supervisor meetings to present report findings and recommendations.
11. Write and administer a web-based public opinion poll to determine resident attitudes and needs regarding non-motorized connectivity in the Township. Based on our work in other municipalities we believe that there will be great interest in this Township initiative.
12. Create a web-based, interactive wiki-mapping tool where residents can draw on an interactive map and make suggestions for specific sidewalks and trails to enhance connectivity to destinations in the community.
13. Prepare project mapping to illustrate locations of proposed connectivity facilities.
14. Prepare cost estimates for proposed improvements
15. Prepare recommended project priorities with a proposed phasing plan for implementation.
16. List various funding sources for grants to pay for connectivity improvements. Create a five-year plan for funding.
17. Create a narrative report summarizing all information including the inventory of existing conditions, proposed needs, recommended improvements, cost estimates and all other information.

Project Schedule

This project will take approximately ten (10) months to complete. SC will prepare a formal project schedule at the initiation of work.

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING NOTES

Project:	**Towamencin Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Rd Lansdale, PA 19446**	Meeting Date/ Time:	**11.10.2022 7:00 – 8:30 pm**
Re:	**Public Meeting #1**	Issue Date:	**11.15.2022**

ATTENDENCE:

See attached attendance list.

DELIVERABLES:

- Public Meeting #1 Presentation
- Public Meeting #1 Meeting Notes
- Public Meeting #1 Sign-in Sheets
- Public Meeting #1 Agenda
- Public Meeting #1 Recording

GENERAL NOTES:

Presentation:

Peter Simone (PS) provided an introduction and overview of the project scope, and schedule. Emma Haley (EH) presented existing conditions, existing data, and inventory. Bryce Brucker (BB) then presented who we are designing for, the basis for connectivity design, and what is used for connectivity improvements. PS then facilitated the public input process and explained our next steps for the project and public outreach.

Discussion/ Comments/ Questions:

- One attendee asked if we would look at surrounding municipal trails and was curious if trails would make more people pass through their communities.
    - PS responded that the focus of the study is not to create a regional trail like the Schuylkill River Trail, however we will certainly be looking at connections to regional trails. He continued to say that we will be in contact with members of the community who can provide information on these topics, such as local bike shops.

    - In response, A attendee stated that there is a plan for a county trail that has been proposed to which PS responded stating that it doesn't go through Towamencin. He suggested its possible connection with Evansburg State Park.
- One attendee was wondering if sidewalk connections to gyms were being considered in the study. The resident frequents to Planet Fitness gym at Sumneytown Pike and Allentown Road and would like sidewalks provided to it.
    - PS emphasized that they should utilize the Wikimap tool or put a locator dot on the physical map after the presentation.
- One attendee was curious if there was a place to access trail plans the Township is currently planning on implementing.
    - PS responded that they could visit the Towamencin website and access this presentation to see existing township planned trails map. He emphasized that these plans may need to change due to PECO high voltage R.O.W's now being off limits for trail proposals.
- One attendee stated that trails should connect all parks in the Township and the parks should become trailheads to this system.
    - PS agreed and used Fischer Park as an example of a destination that could be connected to the Kriebel Road trail.
- One attendee asked how we prioritize the improvements recommended.
- PS responded and explained that the survey results aren't a polling system, and that prioritization is based on funding opportunities and what becomes the most feasible to implement based on those opportunities. One attendee asked if there was a way to assign weight to safety issues in the report.
    - PS explained that we will consider data that is existing, however, traffic studies are not part of the scope. PS emphasized that we would refer to safety issues with careful language.
- One attendee was concerned that the only way to get to the new Veterans Memorial Park is by car.
    - PS explained that we will consider this in the study.
- One attendee emphasized the importance of working Kriebel Road Trail into plan.
    - PS reiterated this idea and explained that the Kriebel Trail would be a good jumping off point for funding strategies.
- One attendee was curious if we could access data from trackers such as Garmin and Apple.
    - PS explained that we have Strava data, but we will look for more information on other sources.
- One attendee was curious how we can deemphasize the automobile in general. How far do people feel comfortable walking?
    - PS stated that this is an ongoing process that requires dynamic social change. EH referenced the DCNR mapping tool that shows pedestrian access to open space and trails which states that pedestrians are generally comfortable with walking 10 minutes.
- One attendee asked if there were any unused trolly or rail lines that could be used in the township.
    - PS stated that there are not unused lines within the Township boundary, however there are some in Lansdale and Hatfield. He also emphasized the Perkiomen Trail as a case study for this method.

- One attendee suggested linking historical sites with a trail.
    - PS agreed this was an interesting concept. Added that smart phone technology could be used to create themed walks / trails. He also stated the themes in general are effective.
- One attendee asked if funding would be from grants.
    - PS stated that grants are effective for many parts of trail projects. Some improvements such as sidewalks may have to be funded in part by the township.
- One attendee noted that there are sidewalks that have been deferred when the developments were approved. Money has been escrowed by the Township to pay for these sidewalks. These should be inventoried to determine where they exist. The township could go ahead and build these.
    - PS explained that we will ask the township to try and develop an inventory of these deferred walkways.
- One attendee was asked if lighting would be considered where new sidewalks are being proposed for the project.
    - PS responded that many non-commuter trails are often not lighted, however, challenging intersections will certainly be considered for lighting improvements.
- One attendee suggested going after environmental and health grants, potentially through Jefferson or Penn College.
    - PS agreed with this idea and used Pottstown as a case study where Pottstown Hospital awarded a grant to the Borough to help build the current bike trail system.
- One attendee asked if there were any known “desire paths” where pedestrians have created their own route that we could look at.
    - PS explained that the audience are the experts and to let us know where these locations might be. In response, another attendee explained that their son uses the North Penn High School sports fields, and cuts through Forge Gates Apartments to get to Weikel Rd. leading to the community pool.

Next Steps – Public Meeting #2 on 2/9/2023

The next steps include making the survey and Wikimap ”live”. PS mentioned that we are hoping to get at least 300 responses. SC will begin to compile and analyze data to develop preliminary routes.

This report represents the Professional’s summation of the proceedings and is not a transcript. Unless written notice of any correction or clarification is received by the Professional within ten days of issue, the report shall be considered factually correct and shall become part of the official project record.

Sincerely,

Bryce Brucker

SIMONE COLLINS, INC.

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING AGENDA

Project:	**Sidewalk Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building** **1090 Troxel Rd, Lansdale, PA 19446**	Meeting Date Time:	**11.10.2022** **7:00pm – 8:30pm**
Re:	**Public Meeting #1: Plan Overview & Brainstorming**		

ITEMS:

1. **Team Introduction**
2. **Project Scope**
3. **Project Schedule**
4. **Existing Data & Inventory**
5. **Trails 101 – users, design guidelines**
6. **Public input**
7. **Next Steps**
8. **Discussion**

Next Steps:

Take the Public Opinion Survey:

SCAN ME

https://qrco.de/Towamencin-Survey

Draw on the WikiMap:

SCAN ME

https://qrco.de/Towamencin-Wikimap

Next Public Meeting:

Public Meeting #2:

Initial Concepts / Recommendations

Thursday, February 9, 2023

7:00 PM – 8:30 PM

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

PROJECT TEAM

FIRM / TEAM MEMBER	PHONE / EMAIL
Simone Collins Landscape Architecture	610-239-7601
Pete Simone, Principal in Charge	wcollins@simonecollins.com
Emma Haley, Staff Landscape Architect	ehaley@simonecollins.com
Geoff Creary, Project Landscape Architect	gcreary@simonecollins.com
Bryce Brucker, Project Landscape Architect	bbrucker@simonecollins.com

PROJECT SCHEDULE:

MEETING	PURPOSE	DATE	TIME
Committee Meeting #1	Project overview, initial site analysis, brainstorming	Monday, October 10, 2022	7:00 - 8:30 PM
Public Opinion Survey/ Wikimapping Period	Public Opinion Survey/ Wikimapping	Thursday, November 10, 2022 – Thursday, April 13, 2023	
Public Meeting #1	**Project Overview / Public Brainstorming**	**Thursday, November 10, 2022**	**7:00 - 8:30 PM**
Committee Meeting #2	Review Public Meeting/survey, analysis process, initial concepts	Monday, December 5, 2022	7:00 - 8:30 PM
Public Meeting #2	**Analysis / Concepts**	**Thursday, February 9, 2023**	**7:00 - 8:30 PM**
Committee Meeting #3	Concept refinement, draft plan overview	Monday, March 6, 2023	7:00 - 8:30 PM
Public Meeting #3	**Draft Plan Presentation**	**Thursday, April 13, 2023**	**7:00 - 8:30 PM**
Public Review Period	45-Day Draft Plan Review	Thursday, April 13, 2023 – Monday, May 29, 2023	
Board of Supervisors Meeting	Review Draft Plan	Wednesday, May 10, 2023	7:00 - 8:30 PM

COMMITTEE MEMBERS:

MEMBER	
Dennis Carney	Interim Township Manager
Colleen Ehrle	Executive Assistant
Brett MacKay	Planning Commission, Chairman
Mary Stover	Township Engineer
George DiPersio	Interim Zoning Officer
Carolyn Shisler	Zoning and Code Enforcement Department

MEETING SIGN-IN SHEET

Project:	**Towamencin Sidewalk Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Building**	Date:	**11.10.2022**
Topic:	**Public Meeting 1 – Project Background & Brainstorming**	Time:	**7:00-8:30 PM**

NAME	STREET ADDRESS	EMAIL
1. Walt & Bonnie Weber	[redacted]	[redacted]
2. Joe Meehan		
3. Dennis McSeeker		
4. Patrick McKeever		
5. Kristin Warner		
6. Nancy Becker		
7. Jennifer MacNair		
8. Joyce A Snyder		
9. Carter LeBrocq		
10. Brett Mackey		
11. Rich Marino		
12. Benjamin P Hutchison		

Please check box if you would you like to receive Project Updates and Meeting Reminders.

NAME	STREET ADDRESS	EMAIL
13. JOE VAVRA	[redacted]	☐
14.		☐
15.		☐
16.		☐
17.		☐
18.		☐
19.		☐
20.		☐
21.		☐
22.		☐
23.		☐
24.		☐
25.		☐
26.		☐
27.		☐
28.		☐
29.		☐

Please check box if you would you like to receive Project Updates and Meeting Reminders.

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING NOTES

Project:	**Towamencin Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Rd Lansdale, PA 19446**	Meeting Date/ Time:	**12.05.2022 7:00 – 8:30 pm**
Re:	**Committee Meeting #2**	Issue Date:	**12.07.2022**

ATTENDENCE:

See attached attendance list.

DELIVERABLES:

- Committee Meeting #2 Presentation
- Committee Meeting #2 Notes
- Send Draft Public Meeting #2 Presentation (first week of February)
- Send Committee link to Township Parks Evaluation and Recommendations Report
- Send the survey URL

GENERAL NOTES:

Presentation:

Peter Simone (PS) provided an overview of the first public meeting presentation and conversation with the attendees. Emma Haley (EH) presented the survey monkey and Wikimap results to date and stated the results trends will likely not change much but will continue to be monitored for the next several months. PS then walked through several site observation photos and described areas where improvements could be located and went through completed base mapping. EH presented the layers of analysis that is being evaluated for connectivity improvement based on service areas. PS continued with explaining the different 'tools' within the "improvement toolbox" that will be considered for the plan recommendations and how they work. PS concluded the presentation with the preliminary concepts of improvements throughout the Township.

Discussion:

- Request meeting minutes from Carolyn Shissler

- Pete suggested to send the parks evaluation plan to Planning Commission for review as it relates to the connectivity plan.
- Patricia stated that she would like to see a trail all the way down Bustard Road to connect the parks. Pete responded that we are moving forward with that concept and think it will be possible to do.
- Pete offered to send the link to an article of traffic accidents going down in Europe but remaining the same in the United States. The Exceptionally American Problem of Rising Roadway Deaths https://www.nytimes.com/2022/11/27/upshot/road-deaths-pedestrians-cyclists.html?smid=nytcore-ios-share&referringSource=articleShare
- Nancy pointed out on slide 71 that the title should read "Kibler Meadows."
- SC needs to add Nash School to analysis mapping.
- Matt suggested to change the color of the "barrier roads" so that the Strava data would be more readable.
- At the beginning of the improvement slides, Pete stated these are just preliminary and will be worked through before the public meeting #2. He then followed up with offering to send the improvement plans to Mary Stover's and McMann's office for an opinion before the public meeting in February.
- Ed suggested to look at improvements along Morris Road. Then mentioned that proposing sidewalks on the Worchester Township side of the road would be physically easier.
- Pete mentioned that we need to notify adjoining municipalities of the Towamencin plan for coordination and (possibly) collaboration purposes.
- Pete described proposing a trail through North Penn High School to connect between Snyder Road and Sumneytown Pike. Matt mentioned that the High School might be planning to build a 9th grade building center behind the building where bus pick up is held, and that the plan for the trail should get in front of the school district before they move forward with the plan. SC needs to contact the School District to make them aware of this plan and possible improvements around the high school.
- After Pete suggested converting the intersection of Valley Forge and Allentown to a roundabout, Pat had mentioned how many successful roundabouts there are in Pennsylvania.
    - Pete followed up with stating roundabout require minimal maintenance efforts (no traffic lights to take care of) and create safety improvements.
    - Joe said route 73 and 29 Is a good example of a roundabout.
    - SC to follow up with McMahon Associations (Chad Dixon)
- Pat is concerned about getting more responses from the survey. Pete reassured her that the amount we have so far (124) is really good; however, it would be great to get more. Some suggestions for sending (by township) the postcard/flyer include:
    - Township newsletter
    - E-News letter
    - Wawa
    - Emails
    - Condominium associations/ HOAs (example: Jacob woods)
    - **Bike stores (SC will reach out)**
    - Running company
    - **SEPTA (SC will reach out)**

- Matt asked if there a cut off for comments. Pete said beginning of April, when the draft plan is presented.
    - Pat was curious if there could be sidewalks on both sides of Troxel Road that connects to the intersection of Sumneytown Pike and asked how much it would be. PS said it might be $50K to do build because of the retaining walls needed but is ultimately worth it to make that connection to Freddy Hill Farms.
- Pete asked about the list of deferred sidewalks and suggested that SC will need to look at LD plan. Carolyn responded that they are working on it, and that they don't have past 5yrs, but have a list greater than 10yrs.
- Matt said it would be good to have a mid-block crossing where the fire easement comes out onto Sumneytown Pike from the cul-de-sac of Cheswold Drive to cross over into Freddy Hill Farms. SC to examine.
- Ed asked how does the Township decide when and how much money to spend on the project? PS used a recent project, Chadds Ford, as an example, and explained SC was able to grants totaling $3.1M for the project. Funding opportunities are through PennDot, DCNR, DCED and other sources.
    - Ed followed up with the question if it reasonable to think construction will start by 2023. Pete said, no, the grant process will take more than a year and you will want to leverage the Township's money through the grant process.
- Matt asked if we would identify the easier vs. harder lifts of the improvements and funding. Pete said yes, SC will prioritize recommended improvements

Next Steps:

- Send Public Meeting presentation to the PC the first week of February to review improvements.
- Send the survey URL to the PC.

Public meeting #2 will be held on 02/09/2023

This report represents the Professional's summation of the proceedings and is not a transcript. Unless written notice of any correction or clarification is received by the Professional within ten days of issue, the report shall be considered factually correct and shall become part of the official project record.

Sincerely,

SIMONE COLLINS, INC.
LANDSCAPE ARCHITECTURE

Emma Haley

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING AGENDA

Project:	**Towamencin Township Sidewalk Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Road Lansdale, PA 19446**	Meeting Date Time:	**12.05.2022 7:00pm – 8:30pm**
Re:	**Committee Meeting #2: Review Public Meeting/survey, analysis process, initial concepts**		

ITEMS:

1. **Team Introduction**
2. **Project Meeting Update**
3. **Survey Monkey & WikiMap Results to Date**
4. **Site Visit Observations**
5. **Base Mapping**
6. **Analysis Mapping**
7. **Preliminary Concepts: Application of Improvement 'Toolbox'**
8. **Discussion**
9. **Next Steps**

COMMITTEE MEMBERS:

MEMBER	ORGANIZATION
Brett H. MacKay	Planning Commission, Chairman
Patricia Younce	Planning Commission, Vice Chairman
Douglas Leach	Planning Commission
Joseph Vavra	Planning Commission
Matt Chartrand	Planning Commission
Dr. Edward Buonocore	Planning Commission
Nancy Becker	Planning Commission
Dennis McGeehan	Planning Commission
Richard Marino	Planning Commission, Board Liaison

TOWNSHIP REPRESENTATIVES:

MEMBER	ORGANIZATION
Dennis Carney	Interim Township Manager
Colleen Ehrle	Executive Assistant
Brett MacKay	Planning Commission, Chairman
Mary Stover	Township Engineer
George DiPersio	Interim Zoning Officer
Carolyn Shisler	Zoning and Code Enforcement Department

PROJECT SCHEDULE:

MEETING	PURPOSE	DATE	TIME
Committee Meeting #1	Project overview, initial site analysis, brainstorming	Monday, October 10, 2022	7:00 - 8:30 PM
Public Opinion Survey/ Wikimapping Period	Public Opinion Survey/ Wikimapping	Thursday, November 10, 2022 – Thursday, April 13, 2023	
Public Meeting #1	Project Overview / Public Brainstorming	Thursday, November 10, 2022	7:00 - 8:30 PM
Committee Meeting #2	Review Public Meeting/survey, analysis process, initial concepts	Monday, December 5, 2022	7:00 - 8:30 PM
Public Meeting #2	Analysis / Concepts	Thursday, February 9, 2023	7:00 - 8:30 PM
Committee Meeting #3	Concept refinement, draft plan overview	Monday, March 6, 2023	7:00 - 8:30 PM
Public Meeting #3	Draft Plan Presentation	Thursday, April 13, 2023	7:00 - 8:30 PM
Public Review Period	45-Day Draft Plan Review	Thursday, April 13, 2023 – Monday, May 29, 2023	
Board of Supervisors Meeting	Review Draft Plan	Wednesday, May 10, 2023	7:00 - 8:30 PM
Committee Meeting #4	Review comments and make revisions	Monday, June 5th, 2023	7:00 - 8:30 PM
Public Meeting #4	Present final plan	Thursday, June 22, 2023	7:00 - 8:30 PM

PROJECT TEAM

FIRM / TEAM MEMBER	EMAIL
Simone Collins Landscape Architecture	
Peter Simone, Principal in Charge	psimone@simonecollins.com
Emma Haley, Project Manager	ehaley@simonecollins.com
Geoff Creary, Project Landscape Architect	gcreary@simonecollins.com
Bryce Brucker, Project Landscape Architect	bbrucker@simonecollins.com

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING AGENDA

Project:	**Towamencin Township Sidewalk Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Road Lansdale, PA 19446**	Meeting Date Time:	**3.6.2023 7:00pm – 8:30pm**
Re:	**Committee Meeting #3: Concept Refinement, Draft Plan Overview**		

ITEMS:

1. **Team Introduction**
2. **Update: Public Input**
3. **'Toolbox' & Application Review**
4. **Draft Routes Concepts**
5. **Preliminary Cost Estimate**
6. **Discussion**
7. **Next Steps**

COMMITTEE MEMBERS:

MEMBER	ORGANIZATION
Brett H. MacKay	Planning Commission, Chairman
Patricia Younce	Planning Commission, Vice Chairman
Douglas Leach	Planning Commission
Joseph Vavra	Planning Commission
Matt Chartrand	Planning Commission
Dr. Edward Buonocore	Planning Commission
Nancy Becker	Planning Commission
Dennis McGeehan	Planning Commission
Richard Marino	Planning Commission, Board Liaison

TOWNSHIP REPRESENTATIVES:

MEMBER	ORGANIZATION
David Kraynik	Township Manager
Colleen Ehrle	Executive Assistant
Brett MacKay	Planning Commission, Chairman
Mary Stover	Township Engineer
George DiPersio	Interim Zoning Officer
Carolyn Shisler	Zoning and Code Enforcement Department

PROJECT SCHEDULE:

MEETING	PURPOSE	DATE	TIME
Committee Meeting #1	Project overview, initial site analysis, brainstorming	Monday, October 10, 2022	7:00 - 8:30 PM
Public Opinion Survey/ Wikimapping Period	Public Opinion Survey/ Wikimapping	Thursday, November 10, 2022 – Thursday, April 13, 2023	
Public Meeting #1	Project Overview / Public Brainstorming	Thursday, November 10, 2022	7:00 - 8:30 PM
Committee Meeting #2	Review Public Meeting/survey, analysis process, initial concepts	Monday, December 5, 2022	7:00 - 8:30 PM
Public Meeting #2	Analysis / Concepts	Thursday, February 9, 2023	7:00 - 8:30 PM
Committee Meeting #3	Concept refinement, draft plan overview	Monday, March 6, 2023	7:00 - 8:30 PM
Public Meeting #3	Draft Plan Presentation	Thursday, April 13, 2023	7:00 - 8:30 PM
Public Review Period	45-Day Draft Plan Review	Thursday, April 13, 2023 – Monday, May 29, 2023	
Board of Supervisors Meeting	Review Draft Plan	Wednesday, May 10, 2023	7:00 - 8:30 PM
Committee Meeting #4	Review comments and make revisions	Monday, June 5th, 2023	7:00 - 8:30 PM
Public Meeting #4	Present final plan	Thursday, June 22, 2023	7:00 - 8:30 PM

PROJECT TEAM

FIRM / TEAM MEMBER	EMAIL
Simone Collins Landscape Architecture	
Peter Simone, Principal in Charge	psimone@simonecollins.com
Emma Haley, Project Manager	ehaley@simonecollins.com
Geoff Creary, Project Landscape Architect	gcreary@simonecollins.com
Bryce Brucker, Project Landscape Architect	bbrucker@simonecollins.com

KPI MEETING NOTES

Project:	**Towamencin Connectivity Study**	Project No.:	**22041.10**
Location:	**Online**	Meeting Date/ Time:	**1.27.2023 10:30 AM – 11;30 AM**
Re:	**North Penn KPI**	Issue Date:	**1.30.2023**

ATTENDENCE:

North Penn School District – Thomas Schneider (TS)

Simone Collins – Peter Simone (PS), Emma Haley (EH), Bryce Brucker (BB)

DELIVERABLES:

- Draft plan to Thomas Schneider

GENERAL NOTES:

Presentation:

Simone Collins gave a brief overview of the current improvements proposed around North Penn School District properties including North Penn High School, Walton Farms Elementary, Nash Elementary, and Inglewood Elementary.

North Penn High School

- TS informed SC team that the fill pile in the southeast of the site will remain for the foreseeable future.
- Potential of a new building on North Penn Campus for 9th grade.
    - Architect – Shrader Group
    - Making decision around April
- TS said that there is minimal pedestrian and bicycle use on Snyder.
- North Penn owns the radio station property to the northwest of the high school, as well as the property to the northeast with the sports fields.
    - They may also take the transportation facilities west of the high school, off site.
- There are currently no biking initiatives/clubs at the school district.
    - Parents insist on having their kids drive to school.
- TS agrees that Snyder Rd may become more important in the future.
- A traffic study by Heinrich and Klein is being performed.
    - Potential traffic signal at Snyder and Valley Forge.

    - TS to send copy of the plan. (TS sent 1/30/23)
- There has been some desire to turn Sumneytown pike to 5 lanes.
- Potential roundabout at Troxel and Snyder.
- Depending on the master plan decision, any of the play fields can be altered to accommodate a walking path off of Sumneytown Pike, except Crawford Stadium.
    - In 5-6 months the School Board will have a better idea as to what they are doing.
- There is an environmental club at the school who would have interest in this type of project.
- Bus ridership is down significantly since COVID.

Walton Farms Elementary

- North Penn owns lot south of the school property that has a connection to Heebner Way.

Nash Elementary

- Field along Bustard Road has been discussed as a new sports/play field location.
    - Talked about 2 months ago with Joe and Township Engineer.
    - Planning on providing a draft agreement for shared use (between the school district and township).
- School code allows 1.5-mile walking for elementary students and 2 miles for upper classmen.

Inglewood Elementary

- People use the neighboring sidewalks in the area, North and East of the school.
- Look at intersections of;
    - Weikel and Allen
    - Woodlawn and Allen

Next Steps

- Acquire traffic study draft from Thomas
- Talk to Chad Dixon about PennDOT information

This report represents the Professional's summation of the proceedings and is not a transcript. Unless written notice of any correction or clarification is received by the Professional within ten days of issue, the report shall be considered factually correct and shall become part of the official project record.

Sincerely,

Bryce Brucker
SIMONE COLLINS, INC.
LANDSCAPE ARCHITECTURE

KPI MEETING NOTES

Project:	**Towamencin Connectivity Study**	Project No.:	**22041.10**
Location:	**Online**	Meeting Date/ Time:	**2.7.2023** **1:00 PM – 1:30 PM**
Re:	**Evansburg State Park KPI**	Issue Date:	**2.7.2023**

ATTENDENCE:

Evansburg State Park – Bethany Hare (BH)

Simone Collins – Peter Simone (PS), Emma Haley (EH), Geoff Creary (GC)

DELIVERABLES:

- Send Draft plan and MontCo Trail Network to Bethany Hare

GENERAL NOTES:

Presentation:

Simone Collins gave a brief overview of the improvements proposed around Keibler Meadows Park and on Kerr Road that connects to Fischer's Park. Then also talked about potentially making Keibler Meadows Park a potential trail head for accessing Evansburg State Park.

- BH asked where the path would go after it travels down Kerr to Hedrick and stops at Forty Foot.
    - PS noted that we would hope to connect it to any existing or proposed trails the park has in that location.
- PS asked if there are any existing master plans of the park.
    - BH said there is always a 'plan' for the park; however they do not consider it a master plan. The park resource/planning department review the plan every 3-4 years and evaluate what the park needs.
- BH is open to discussing more about new trails in the park. She explain the trails would have to go through an R-3 Resource review to make sure critical resources are protected.
    - Pete said he was familiar with the process.
- BH explained that Evansburg State Park is currently working with Worcester Township on Green Lane Road to develop more trails there; however, the township has been the

one to spear head the addition of trails and came up with all the money/funding and team to support the project.

- BH added that PennDot is planning to replace the bridge going over W. Skippack Pike with in the park. They are working with them to get a possible multiuse trail alongside the bridge.
- GC asked if there were any remaining residents on the Park property?
    - BH said there is one left within the Towamencin Township area, and they are currently on a lease with the Park.
- BH asked when this plan would be implemented?
    - PS mentioned that it could take years for this to come to fruition.

This report represents the Professional's summation of the proceedings and is not a transcript. Unless written notice of any correction or clarification is received by the Professional within ten days of issue, the report shall be considered factually correct and shall become part of the official project record.

Sincerely,

Emma Haley
SIMONE COLLINS, INC.
LANDSCAPE ARCHITECTURE

SIMONE COLLINS
LANDSCAPE ARCHITECTURE
119 EAST LAFAYETTE STREET NORRISTOWN, PA 19401
PHONE: 610.239.7601 FAX: 610.239.7606
WWW. SIMONECOLLINS.COM

MEETING NOTES

Project:	**Towamencin Connectivity Study**	Project No.:	**22041.10**
Location:	**Towamencin Township Office Building 1090 Troxel Rd Lansdale, PA 19446**	Meeting Date/ Time:	**3.6.2023 8:30 – 9:00 pm**
Re:	**Committee Meeting #3**	Issue Date:	**3.10.2022**

ATTENDENCE:

Committee Members: Brett Mackay, Douglas Leach, Joseph Vavra, Matt Chartrand, Dr. Edward Buonocore, Nancy Becker, Dennis McGeehan, Michael Main, Richard Marino, Mary Stover

Simone Collins: Peter Simone, Geoff Creary, Emma Haley

DELIVERABLES:

- Committee Meeting #3 Presentation
- Committee Meeting #3 Notes
- Updated Draft Plan

GENERAL NOTES:

Presentation:

Peter Simone provided an update of the public input which included information on the survey results, Wikimap results, interviews, and comments on the Draft Plan. Geoff Creary went on to explain how the 'Toolbox' of Improvements works and how it has been applied to the Draft Plan. Geoff presented the first draft route concept – the Township Collector Route – and showed how the route can connect most, if not all, the neighborhoods within the Township together. Emma Haley (EH) continued to present the remaining two route connects – the School Connection Route and the Park Connection Route. She also presented the layout of the cost estimate and draft priorities for the Plan.

Discussion:

- Brett M., Nancy B., and Matt C. commended SC for their great work on the Connectivity Study so far.

- Matt C. would like the 'School Route' concept to be prioritized higher on the list so that residents can access schools safely.
- Nancy B. agrees with the crosswalk being proposed at Bridle Path Drive and Sumneytown Pike. She explained that the improvement is much needed for those residents to cross the road safely.
- Brett M. said he would like to prioritize finding partners that will assist the Township in funding and pursuing the school connectivity improvements.
- Dennis M. asked what improvement the Township could expect to see implemented first.
    - Pete explained how implementation could work. Sidewalk improvements would include crosswalks and perhaps rapid flashing beacons. However, depending on the funding available at the time, the improvements and priorities at particular locations could shift in timing.
- Nancy B. mentioned that the Fire Company is concerned about closing Kriebel Road to vehicular access.
    - Pete explained that emergency access always considered in any designed trail, and the closure would not prevent them from reaching the one residence located on the west end of the street.
- Edward B asked if there has ever been a cross walk that you installed that was unsafe?
    - Geoff said no and explained that we work with engineers to make sure they are designed safely.
- Pete added during the conversation that no acquisition costs for ROW will be included in the cost estimate.
- Michael M. asked about how the rapid flashing beacon would fit in these residential areas, and if they would become a nuisance?
    - Pete explained that the rapid flashing beacon has evolved from constantly flashing lights to a user actuated system that only flashes when a button is pressed, or a sensor is activated. Then, it will only flash for the amount of time it typically takes a person to cross the street.

Next Steps:

- Refine the Plan
- Complete a draft cost estimate
- Revise Priorities List
- Updated Draft Plan will be posted on the Township's website on April 13th for a 45-day Draft Plan Public Review

Public meeting #3 will be held on 04.13.2023.

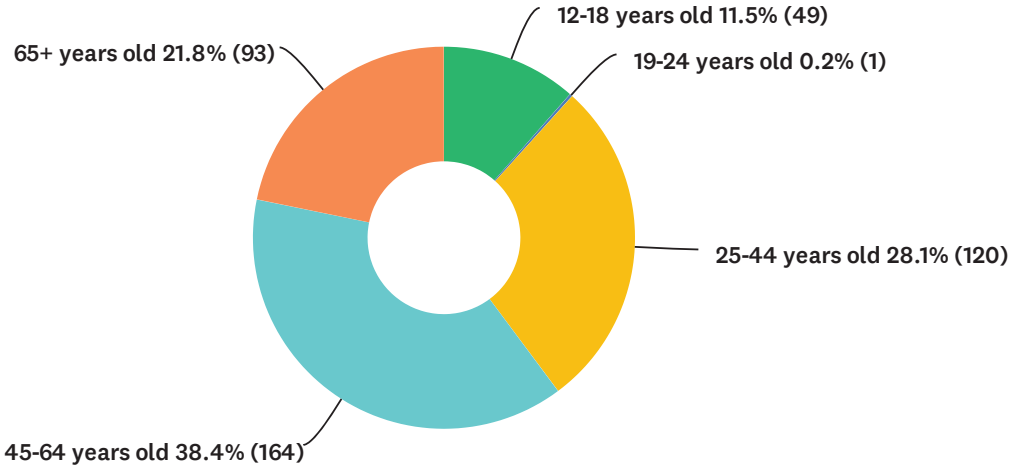
This report represents the Professional's summation of the proceedings and is not a transcript. Unless written notice of any correction or clarification is received by the Professional within ten days of issue, the report shall be considered factually correct and shall become part of the official project record.

Sincerely,

Emma Haley
SIMONE COLLINS, INC.
LANDSCAPE ARCHITECTURE

Q1 What is your age?

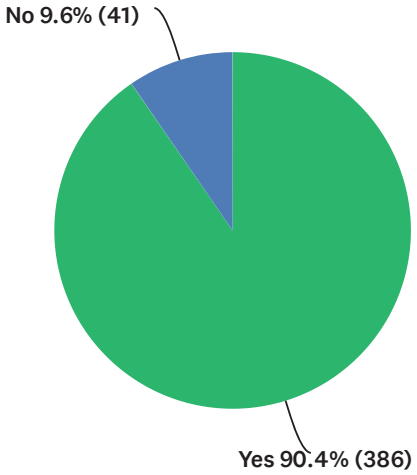
Answered: 427 Skipped: 4



ANSWER CHOICES	RESPONSES	
12-18 years old	11.5%	49
19-24 years old	0.2%	1
25-44 years old	28.1%	120
45-64 years old	38.4%	164
65+ years old	21.8%	93
TOTAL		427

Q2 Are you a resident of Towamencin Township?

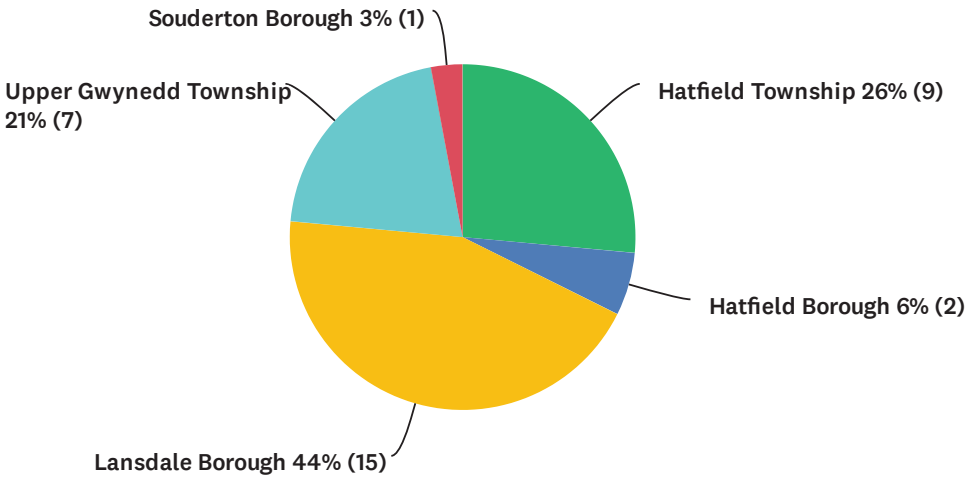
Answered: 427 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	90.4%	386
No	9.6%	41
TOTAL		427

Q3 What municipality do you live in?

Answered: 34 Skipped: 397

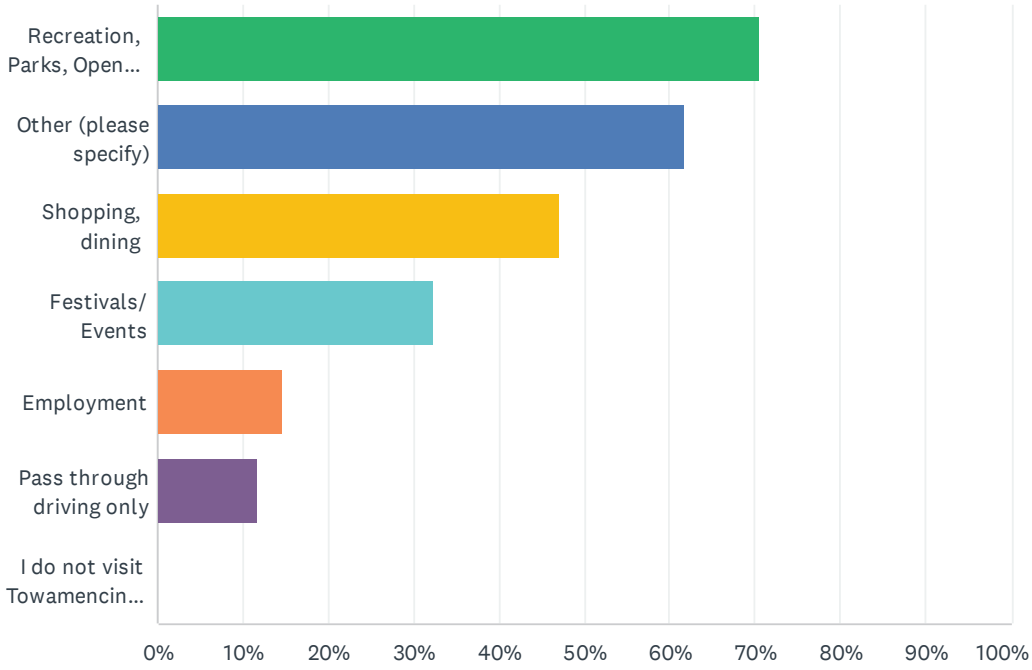


ANSWER CHOICES	RESPONSES	
Hatfield Township	26%	9
Hatfield Borough	6%	2
Lansdale Borough	44%	15
Upper Gwynedd Township	21%	7
Worcester Township	0%	0
Skippack Township	0%	0
Lower Salford Township	0%	0
Franconia Township	0%	0
Souderton Borough	3%	1
TOTAL		34

#	OTHER (PLEASE SPECIFY)	DATE
1	Clarksville, TN	12/30/2022 7:46 PM
2	montgomery township	12/15/2022 1:42 PM
3	Montgomery township	12/15/2022 7:06 AM

Q4 If you are not a resident of Towamencin, what is the primary reason you visit? Please choose all that apply.

Answered: 34 Skipped: 397



ANSWER CHOICES	RESPONSES	
Recreation, Parks, Open Space	70.59%	24
Other (please specify)	61.76%	21
Shopping, dining	47.06%	16
Festivals/ Events	32.35%	11
Employment	14.71%	5
Pass through driving only	11.76%	4
I do not visit Towamencin Township	0.00%	0
Total Respondents: 34		

#	OTHER (PLEASE SPECIFY)	DATE
1	former towamencin resident, visit friends	4/11/2023 8:40 PM
2	Pass through while biking	2/9/2023 8:54 PM
3	Pass through, biking and driving	2/9/2023 7:54 PM
4	Visit family friends	12/30/2022 7:46 PM
5	Visit friends who live in the township.	12/30/2022 11:22 AM
6	school nphs	12/22/2022 12:07 PM

7	School	12/16/2022 7:40 PM
8	School	12/16/2022 7:35 AM
9	School	12/15/2022 9:41 PM
10	school	12/15/2022 3:46 PM
11	school	12/15/2022 3:12 PM
12	school	12/15/2022 1:42 PM
13	school	12/15/2022 11:54 AM
14	School	12/15/2022 10:52 AM
15	Friends	12/15/2022 8:50 AM
16	school	12/15/2022 8:26 AM
17	School	12/15/2022 8:18 AM
18	School	12/15/2022 7:21 AM
19	School	12/15/2022 7:20 AM
20	I attend North Penn High School	12/15/2022 7:06 AM
21	School	12/15/2022 7:05 AM

Q5 What street do you live on within the Township? (No address is needed.)

Answered: 365 Skipped: 66

#	RESPONSES	DATE
1	Pheasant hill road	4/13/2023 7:24 PM
2	Troxel Rd	4/13/2023 3:30 PM
3	Heebner Way	4/13/2023 2:44 PM
4	Springer Road	4/13/2023 10:02 AM
5	Saratoga Lane	4/13/2023 9:38 AM
6	Spring Valley Rd	4/13/2023 9:30 AM
7	Sumneytown Pike	4/13/2023 8:58 AM
8	Saratoga lane	4/12/2023 9:11 PM
9	Spring valley road	4/12/2023 9:03 PM
10	Liberty Bell Drive	4/12/2023 8:46 PM
11	Kriebel	4/12/2023 6:45 PM
12	Michael Way	4/12/2023 6:40 PM
13	Orchard Lane	4/12/2023 6:02 PM
14	Spring Valley Rd	4/12/2023 3:35 PM
15	Spring Valley Rd	4/12/2023 3:30 PM
16	Spring Valley Road	4/12/2023 3:27 PM
17	Derstine rd	4/12/2023 3:13 PM
18	Bremen rd	4/12/2023 2:59 PM
19	Abbey Ln	4/12/2023 2:33 PM
20	Springer Rd.	4/12/2023 2:05 PM
21	coventry way	4/12/2023 1:33 PM
22	Woodlawn Dr	4/12/2023 1:24 PM
23	Saratoga Way	4/12/2023 12:59 PM
24	Boyd Ave	4/12/2023 12:42 PM
25	Heritage Dr	4/12/2023 12:30 PM
26	Sterling Way	4/12/2023 12:09 PM
27	Stratton Drive	4/12/2023 11:53 AM
28	Rampart Ln	4/12/2023 11:47 AM
29	Sunny Ayr way	4/12/2023 9:47 AM
30	Hedrick Road	4/12/2023 9:08 AM
31	Madison Way	4/12/2023 5:17 AM

32	Snyder Rd	4/12/2023 12:04 AM
33	Troxel Road	4/11/2023 10:24 PM
34	Saratoga way	4/11/2023 9:51 PM
35	Ardwick Ter	4/11/2023 8:08 PM
36	Knollbrook Dr	4/11/2023 7:34 PM
37	Greenwood Ct	4/11/2023 7:22 PM
38	Spring Valley Rd	4/11/2023 6:58 PM
39	Knollbrook Drive	4/11/2023 6:35 PM
40	Pheasant Hill	4/11/2023 5:51 PM
41	Kerr	4/11/2023 5:36 PM
42	Militia Dr.	4/11/2023 5:34 PM
43	2000 Kriebel Rd	4/11/2023 4:30 PM
44	Green Bank Way	4/11/2023 4:26 PM
45	Conestoga lane	4/11/2023 4:10 PM
46	Robin	4/11/2023 3:37 PM
47	Spring Valley	4/11/2023 3:33 PM
48	Spring valley rd	4/11/2023 3:17 PM
49	Printer Way	4/11/2023 3:16 PM
50	Spring Valley Road	4/11/2023 3:09 PM
51	Spring valley rd	4/11/2023 2:56 PM
52	Norwood court	4/11/2023 2:49 PM
53	Lisa Lane	4/11/2023 2:08 PM
54	Rampart Lane	4/11/2023 1:57 PM
55	Devonshire CT	4/11/2023 1:38 PM
56	Finch Run	4/11/2023 1:37 PM
57	Lisa Lane	4/11/2023 1:12 PM
58	Pleasant Valley Drive	4/11/2023 1:01 PM
59	Jefferson Ct Lansdale	4/11/2023 12:57 PM
60	Anders Rd	4/11/2023 12:55 PM
61	Old Forty Foot	4/7/2023 8:19 AM
62	Jamestown Ct	4/7/2023 5:28 AM
63	Clarella Court	4/7/2023 5:12 AM
64	Pross Road	4/6/2023 10:15 PM
65	Forty Foot Road	4/6/2023 3:56 PM
66	Hillock Court	4/6/2023 3:40 PM
67	Mark Drive	4/6/2023 12:21 PM
68	Heebner Way	4/5/2023 12:29 PM
69	Printer Way	4/5/2023 10:51 AM

70	Churchill Ct	4/4/2023 4:58 PM
71	Saratoga way	4/4/2023 4:02 PM
72	Sherwood Way	4/4/2023 3:54 PM
73	Conestoga Lane	4/4/2023 3:18 PM
74	Ivywood Way	4/4/2023 2:48 PM
75	Pioneer Rd	4/4/2023 2:36 PM
76	Stonybrook Lane	4/4/2023 2:33 PM
77	Wagon Wheel	4/4/2023 1:41 PM
78	Fretz Rd	4/4/2023 1:30 PM
79	131 Oxford Road	4/3/2023 3:43 PM
80	Pheasant Hill Road	4/2/2023 12:34 PM
81	Henning Way	4/2/2023 8:58 AM
82	Conestoga Lane	4/1/2023 9:29 AM
83	Dutchmans circle	4/1/2023 8:09 AM
84	1798 Meadow Glen Drive	3/31/2023 9:12 PM
85	Printer Way	3/31/2023 7:39 PM
86	Dutchmans cir	3/31/2023 6:27 PM
87	Parkview dr	3/31/2023 6:23 PM
88	Erie Drive	3/31/2023 5:35 PM
89	MORRIS RD	3/31/2023 4:58 PM
90	Continental dr	3/31/2023 4:55 PM
91	Michael Way	3/31/2023 4:48 PM
92	Rampart Ln	3/31/2023 4:42 PM
93	Rampart lane	3/31/2023 4:36 PM
94	Staley circle	3/31/2023 3:26 PM
95	Mark Drive	3/27/2023 12:10 PM
96	Oxford Rd	3/27/2023 11:34 AM
97	131 Oxford Road	3/26/2023 8:00 PM
98	Fairbourne	3/26/2023 11:30 AM
99	Flintlock Circle	3/25/2023 10:19 AM
100	Dock Drive	3/24/2023 9:33 PM
101	Oxford	3/24/2023 8:00 PM
102	Morgandale Drive	3/24/2023 5:25 PM
103	Dock drive	3/24/2023 5:23 PM
104	Westhampton Way	3/24/2023 4:39 PM
105	Troxel Rd.	2/27/2023 12:02 PM
106	green lane rd	2/20/2023 8:09 PM
107	Green Lane Rd	2/20/2023 8:08 PM

108	Village Way	2/19/2023 5:20 PM
109	Saratoga Way	2/19/2023 2:58 AM
110	Robin Drive	2/18/2023 9:03 PM
111	Kriebel	2/18/2023 8:56 AM
112	Militia	2/17/2023 8:48 PM
113	Madison Way	2/17/2023 6:15 PM
114	Ide Drive	2/17/2023 6:10 PM
115	Green Bank Way	2/17/2023 5:47 PM
116	Bremen	2/17/2023 4:27 PM
117	wambold road	2/17/2023 4:16 PM
118	Buckboard	2/17/2023 2:33 PM
119	Saw mill way	2/17/2023 2:21 PM
120	Sailmaker Way	2/16/2023 11:03 AM
121	robin drive	2/15/2023 8:00 PM
122	Tennis circle	2/13/2023 2:13 PM
123	Spring valley rd	2/11/2023 9:36 AM
124	Carriage Way	2/10/2023 3:02 PM
125	Old Forty Foot Road	2/10/2023 12:51 PM
126	Christopher Court	2/10/2023 9:49 AM
127	Old forty foot road	2/9/2023 8:44 PM
128	Springer	2/9/2023 7:23 PM
129	Rampart lane	2/9/2023 6:01 PM
130	Saratoga Lane	2/9/2023 6:00 PM
131	Staley Circle	2/9/2023 5:12 PM
132	Old Forty Foot Road	2/9/2023 5:00 PM
133	Ide dr	2/9/2023 4:20 PM
134	Weikel Road	2/9/2023 4:15 PM
135	Sunny Ayr Way	2/9/2023 6:28 AM
136	Militia Drive	2/8/2023 2:16 PM
137	Susan Drive	2/7/2023 1:08 PM
138	Pheasant hill rd	2/7/2023 8:28 AM
139	Tennis Circle	2/7/2023 7:39 AM
140	Trumbauer Road	2/7/2023 6:21 AM
141	Hickory Way	2/6/2023 11:37 PM
142	Hickory Way	2/6/2023 11:30 PM
143	Old morris rd	2/6/2023 10:17 PM
144	Frye	2/6/2023 9:48 PM
145	Rampart	2/6/2023 7:29 PM

146	Rampart lane	2/6/2023 7:27 PM
147	Archer Lane	2/6/2023 3:57 PM
148	Sailmaker Way	2/6/2023 3:23 PM
149	Hillside	2/6/2023 12:48 PM
150	Dorchester Way	2/6/2023 9:48 AM
151	Knollbrook drive	2/6/2023 9:27 AM
152	Bremen Road	2/6/2023 9:11 AM
153	Creek Way	2/6/2023 9:03 AM
154	Keeler Rd.	2/5/2023 6:11 PM
155	Maxwell Court	2/3/2023 5:17 PM
156	Sumneytown Pike	2/3/2023 3:40 PM
157	Maxwell court	2/3/2023 1:37 PM
158	Spring Valley RD	2/2/2023 11:21 AM
159	Pheasant Hill Way	2/2/2023 8:19 AM
160	Boyd	2/1/2023 7:36 PM
161	Springer Road	2/1/2023 6:10 PM
162	Woodlawn Drive	2/1/2023 5:28 PM
163	Hickory Court in Timber Creek Condominium	2/1/2023 4:50 PM
164	Cardinal way	2/1/2023 2:35 PM
165	Bustard Rd	2/1/2023 2:34 PM
166	Linden Way	2/1/2023 1:04 PM
167	Forty Foot Road	2/1/2023 12:15 PM
168	Tapestry way	2/1/2023 12:09 PM
169	Valley View way	2/1/2023 12:00 PM
170	Troxel Rd.	2/1/2023 11:25 AM
171	Kerr Rd	2/1/2023 11:21 AM
172	abbey ln	2/1/2023 11:06 AM
173	Old Dutch Way	1/28/2023 11:25 AM
174	Susan Drive	1/27/2023 2:48 AM
175	Reinert Road	1/25/2023 12:18 PM
176	Bishopwood Blvd	1/24/2023 8:21 AM
177	Wellington	1/23/2023 8:03 PM
178	Green bank way	1/23/2023 6:20 PM
179	Pleasant Valley Drive	1/23/2023 6:09 PM
180	Winding Road	1/23/2023 5:44 PM
181	Troxel Rd	1/23/2023 5:02 PM
182	Stonebridge circle	1/23/2023 4:14 PM
183	Troxel Road	1/23/2023 4:11 PM

184	Boyd Avenue	1/23/2023 4:05 PM
185	Mulberry Court	1/23/2023 4:01 PM
186	Liberty Bell	1/23/2023 3:58 PM
187	Old Morris Rd	1/23/2023 3:52 PM
188	Robin Drive	1/23/2023 3:52 PM
189	Providence Ct	1/15/2023 3:26 PM
190	Boyd	1/12/2023 1:52 PM
191	liberty bell	1/9/2023 8:43 AM
192	Pioneer road	1/8/2023 2:30 PM
193	Morris Road	1/7/2023 6:31 AM
194	Tailor Way	1/6/2023 11:15 AM
195	Buttonwood	1/5/2023 8:34 PM
196	Painter Way	1/5/2023 2:57 PM
197	bremen road	1/5/2023 9:30 AM
198	Tinsmith Way	1/5/2023 8:58 AM
199	Steven Lane	1/4/2023 9:17 PM
200	Sumneytown Pike	1/4/2023 8:09 PM
201	Bainbridge Dr	1/4/2023 7:41 PM
202	Tanglewood Way	1/4/2023 7:14 PM
203	Jamestown Ct	1/4/2023 6:32 PM
204	Michael Way	1/4/2023 6:10 PM
205	Old Dutch Way	1/4/2023 5:29 PM
206	Sherwood Way	1/4/2023 5:00 PM
207	Woodlawn Drive	1/4/2023 4:50 PM
208	Victoria Court	1/4/2023 4:42 PM
209	Deerfield Dr	1/4/2023 4:41 PM
210	Krieble Rd	1/4/2023 4:40 PM
211	Spring Mill Way	1/4/2023 4:23 PM
212	Saint Andrews	1/4/2023 4:17 PM
213	Tennis way	1/4/2023 4:10 PM
214	Orchard Ln	1/4/2023 4:08 PM
215	Ide Drive	1/4/2023 3:58 PM
216	Rampart	1/4/2023 3:46 PM
217	Trumbauer Road	1/4/2023 3:40 PM
218	Oakplace CT E	1/4/2023 3:33 PM
219	Wagon Wheel	1/4/2023 3:31 PM
220	Old Morris Road	1/4/2023 3:21 PM
221	Cheswold Dr.	1/4/2023 3:19 PM

222	Pioneer Rd	1/4/2023 3:19 PM
223	Pheasant Hill Rd	1/2/2023 1:50 AM
224	Washington Ave	12/30/2022 4:56 PM
225	Clearbrook rd	12/30/2022 11:56 AM
226	Bremen rd	12/30/2022 9:43 AM
227	Pioneer Rd	12/28/2022 6:16 PM
228	Sumneytown Pike	12/21/2022 9:29 AM
229	Saw Mill Way	12/18/2022 6:43 PM
230	Kriebel Rd	12/17/2022 3:55 PM
231	Powderhorn Dr.	12/16/2022 12:11 PM
232	Michael Way	12/15/2022 8:48 PM
233	Ryans Run / Morris Rd	12/15/2022 4:48 PM
234	Steven Lane	12/15/2022 12:06 PM
235	S Towamencin Ave	12/15/2022 11:37 AM
236	Tweed Way	12/15/2022 11:13 AM
237	Monroe Drive	12/15/2022 8:21 AM
238	erie dr	12/15/2022 7:06 AM
239	Pheasant hill way	12/10/2022 5:51 AM
240	Bustard Road	12/6/2022 10:45 AM
241	Old Forde Way	12/4/2022 11:36 AM
242	Concord Place	12/4/2022 8:48 AM
243	Spring Meadow Ln	12/3/2022 11:17 AM
244	Kriebel Road	12/1/2022 9:52 PM
245	Pross road	12/1/2022 7:48 PM
246	Misty Meadow	12/1/2022 5:39 PM
247	CARRIAGE WAY	12/1/2022 11:13 AM
248	Pheasant hill way	11/30/2022 7:03 PM
249	516 LAMPLIGHTER WAY	11/30/2022 6:25 PM
250	Pheasant Hill Way	11/30/2022 9:34 AM
251	Pheasant Hill Way	11/30/2022 9:03 AM
252	Pheasant hill way	11/29/2022 8:39 PM
253	Pheasant Hill Way	11/29/2022 7:20 PM
254	Pheasant Hill Way	11/29/2022 4:48 PM
255	pheasant hill way, lansdale pa	11/29/2022 4:36 PM
256	Pheasant Hill Way	11/29/2022 3:08 PM
257	Metz road	11/29/2022 10:48 AM
258	Mainland Square Drive	11/28/2022 7:55 PM
259	Lisa Lane	11/28/2022 6:29 PM

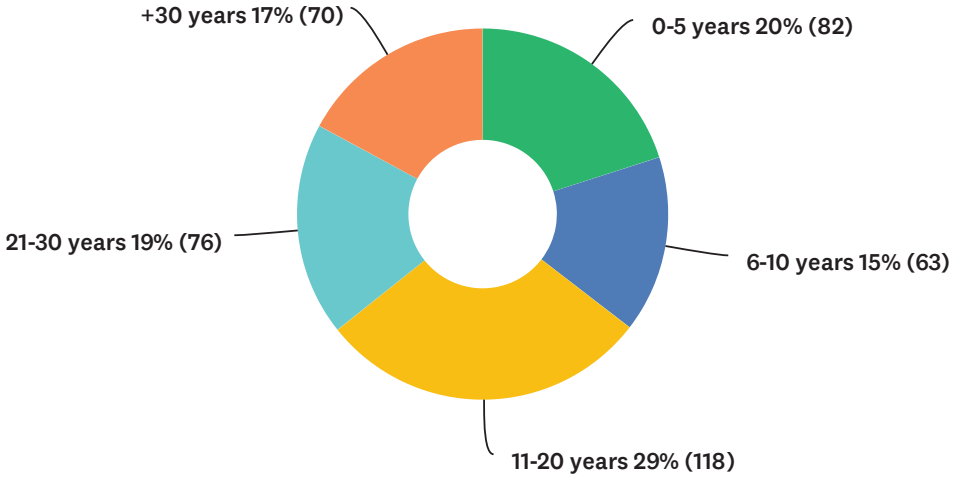
260	Kriebel	11/28/2022 1:05 PM
261	Towamencin Ave	11/27/2022 9:19 PM
262	Metz rd	11/27/2022 11:11 AM
263	Valley View Way	11/26/2022 9:39 PM
264	Mark Drive	11/25/2022 9:54 PM
265	Hedrick Road	11/25/2022 5:29 PM
266	Rampart Ln	11/25/2022 4:18 PM
267	2000 Kriebel Rd	11/24/2022 10:29 AM
268	Weikel Road	11/24/2022 8:29 AM
269	Meadow Glen Drive	11/23/2022 10:58 PM
270	Finch Run	11/23/2022 7:16 PM
271	Finch Run	11/23/2022 7:10 PM
272	Walnut Lane	11/23/2022 6:58 PM
273	Freedom Circle	11/23/2022 6:12 PM
274	Bromley Drive	11/23/2022 3:10 PM
275	Spring Valley Road	11/23/2022 11:27 AM
276	OLD DUTCH Rd	11/23/2022 11:17 AM
277	Painter Way	11/23/2022 10:35 AM
278	Trumbauer Rd	11/23/2022 7:21 AM
279	Green Bank Way	11/22/2022 8:11 PM
280	Quarry	11/22/2022 5:55 PM
281	Oxford Road	11/22/2022 5:34 PM
282	Ivywood way	11/22/2022 4:30 PM
283	Coventry Way	11/22/2022 2:51 PM
284	Clemens Road	11/22/2022 1:04 PM
285	Spring Valley Rd	11/22/2022 7:22 AM
286	Sunnylea Road	11/22/2022 7:19 AM
287	Knollbrook Drive	11/21/2022 8:36 PM
288	Anders Road	11/21/2022 7:32 PM
289	Hillside	11/21/2022 7:30 PM
290	Jack’s Circle	11/21/2022 6:16 PM
291	Anders Rd	11/21/2022 5:59 PM
292	Anders Rd	11/21/2022 5:22 PM
293	Hedgerow Way	11/21/2022 5:07 PM
294	Woodlawn Drive	11/21/2022 4:51 PM
295	Weikel Road	11/21/2022 2:55 PM
296	Avalon Way	11/20/2022 1:16 PM
297	Pheasant Hill Way	11/18/2022 11:17 AM

298	RAMPART LANE	11/16/2022 6:11 PM
299	Pheasant Hill Way	11/16/2022 12:52 PM
300	Rampart Lane	11/14/2022 8:39 PM
301	Schlosser rd	11/14/2022 8:35 AM
302	Kriebel Road	11/13/2022 9:03 PM
303	Old Dutch Way	11/13/2022 4:46 PM
304	Conestoga Lane	11/13/2022 10:54 AM
305	Kriebel	11/13/2022 6:52 AM
306	Trumbauer	11/12/2022 4:31 PM
307	Ridgewood Wat	11/12/2022 8:29 AM
308	Candlewood way	11/11/2022 11:07 PM
309	Federal Ct	11/11/2022 11:05 PM
310	Federal Ct	11/11/2022 10:23 PM
311	Rampart Lane	11/11/2022 8:41 PM
312	Parkview	11/11/2022 7:44 PM
313	Steven Lane	11/11/2022 7:41 PM
314	Pheasant Hill Rd.	11/11/2022 6:21 PM
315	Revere Drive	11/11/2022 5:56 PM
316	Federal Court	11/11/2022 5:29 PM
317	Federal ct	11/11/2022 4:36 PM
318	Trumbauer Road	11/11/2022 2:55 PM
319	Trumbauer Road	11/11/2022 2:42 PM
320	Michael Way	11/11/2022 2:42 PM
321	Trumbauer Rd	11/11/2022 2:41 PM
322	Woodlawn	11/11/2022 2:14 PM
323	Hamilton Drive	11/11/2022 1:30 PM
324	Militia Dr	11/11/2022 1:09 PM
325	Thorndale dr	11/11/2022 12:57 PM
326	Old morris rd	11/11/2022 12:09 PM
327	Militia drive	11/11/2022 11:27 AM
328	Independence Drive	11/11/2022 9:54 AM
329	Constitution Rd	11/11/2022 9:44 AM
330	Snyder Rd	11/11/2022 8:35 AM
331	Specht place	11/11/2022 8:16 AM
332	Towamencin Condos	11/11/2022 6:34 AM
333	Old Forty Foot Road	11/11/2022 12:48 AM
334	Anders	11/10/2022 10:51 PM
335	Sumneytown pike	11/10/2022 10:41 PM

336	Central Dr	11/10/2022 10:38 PM
337	Morgan Way	11/10/2022 10:31 PM
338	Dock Dr	11/10/2022 10:19 PM
339	Yeakel Way	11/10/2022 10:06 PM
340	Painter Way	11/10/2022 10:04 PM
341	Dager Cir	11/10/2022 9:25 PM
342	Shipwrighter way	11/10/2022 9:25 PM
343	Deerfield drive	11/10/2022 9:24 PM
344	Rampart Lane	11/10/2022 9:13 PM
345	Red oak way	11/10/2022 9:04 PM
346	Green bank way	11/10/2022 9:00 PM
347	Anders	11/10/2022 8:59 PM
348	Snyder rd	11/10/2022 8:40 PM
349	Candlewood	11/10/2022 8:27 PM
350	Allentown road	11/10/2022 8:20 PM
351	Jacks circle	11/10/2022 8:20 PM
352	Cardinal Way	11/10/2022 7:45 PM
353	Kriebel	11/10/2022 7:38 PM
354	Cardinal Way	11/10/2022 7:25 PM
355	Cambridge Way	11/10/2022 6:52 PM
356	Weikel Rd	11/10/2022 4:08 PM
357	Saw mill way	11/10/2022 3:28 PM
358	Pickwick	11/10/2022 3:22 PM
359	Valley View Way	11/10/2022 2:56 PM
360	Finch Run	11/10/2022 2:54 PM
361	Woodlawn	11/10/2022 2:36 PM
362	Sunny Ayr Way	11/10/2022 2:02 PM
363	Springside way	11/10/2022 1:20 PM
364	Kulp	11/10/2022 12:45 PM
365	Concord Place	11/10/2022 12:31 PM

Q6 How many years have you lived at your current address?

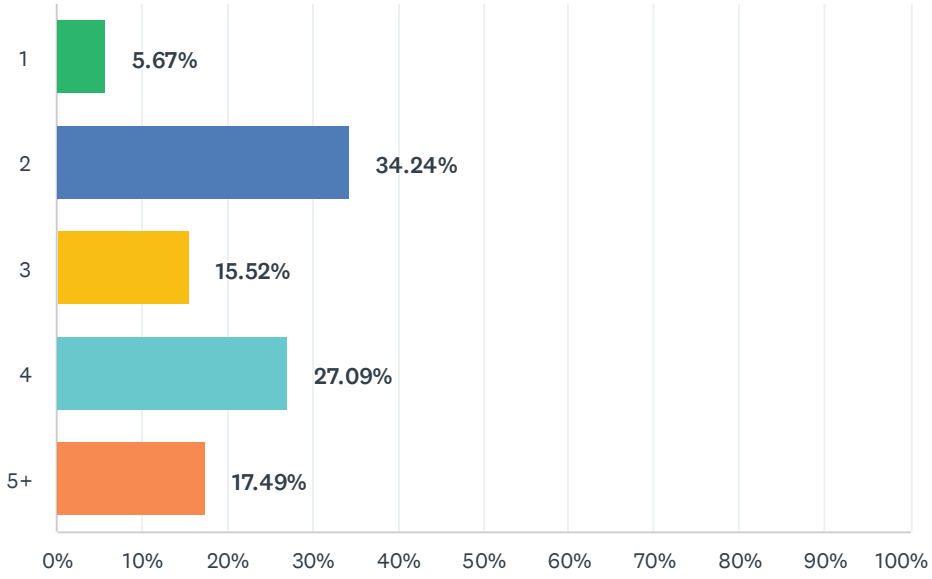
Answered: 409 Skipped: 22



ANSWER CHOICES	RESPONSES	
0-5 years	20%	82
6-10 years	15%	63
11-20 years	29%	118
21-30 years	19%	76
+30 years	17%	70
TOTAL		409

Q7 How many people currently live in your household?

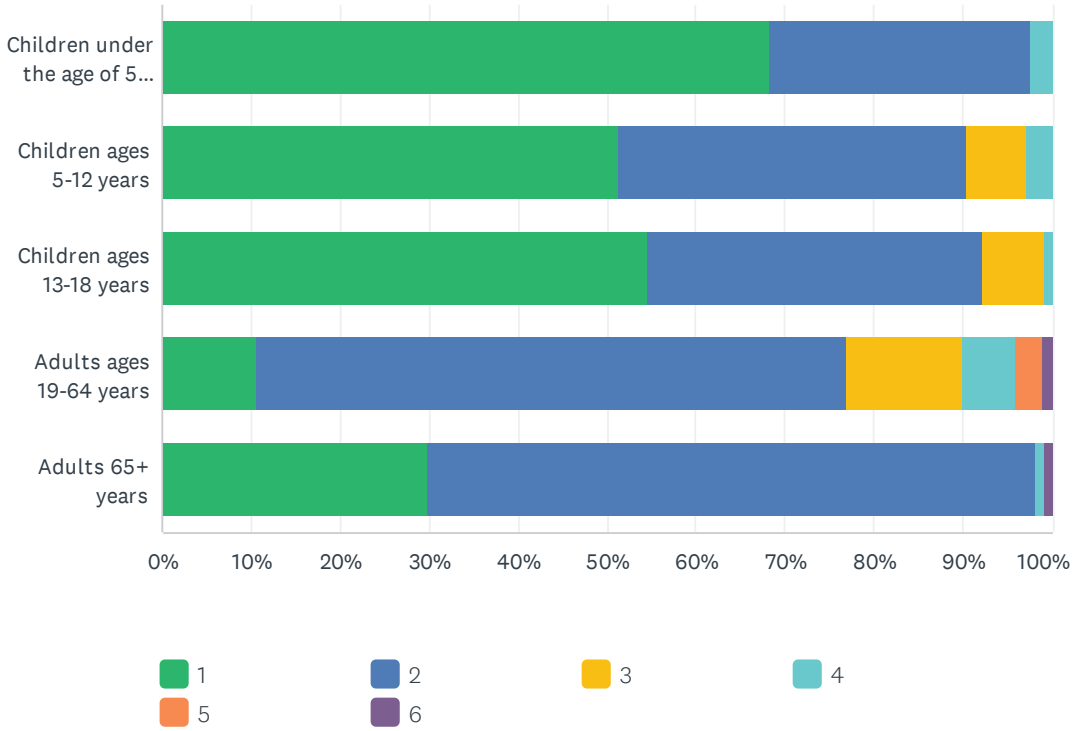
Answered: 406 Skipped: 25



ANSWER CHOICES	RESPONSES	
1	5.67%	23
2	34.24%	139
3	15.52%	63
4	27.09%	110
5+	17.49%	71
TOTAL		406

Q8 What age groups currently live in your household? Please indicate number in each category.

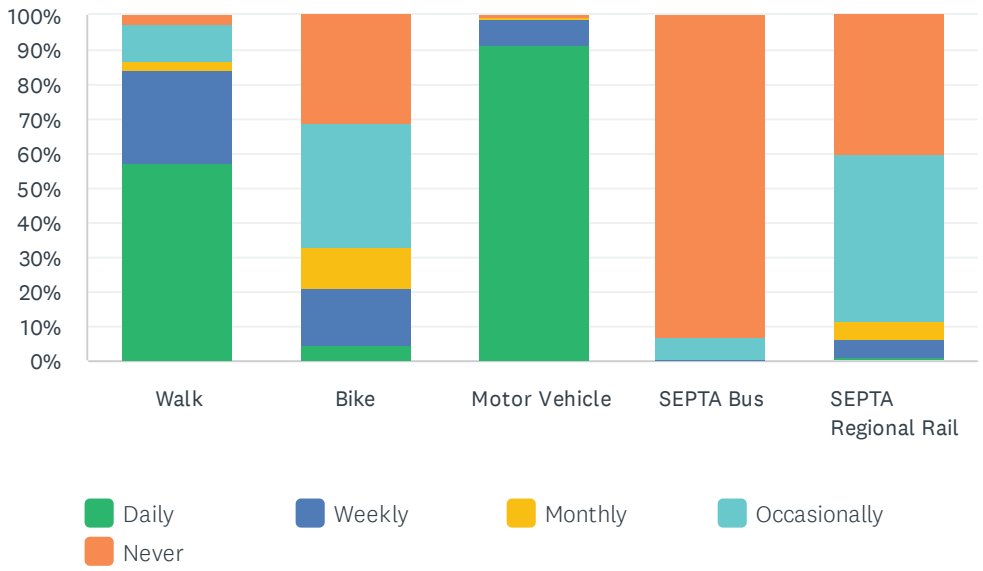
Answered: 404 Skipped: 27



	1	2	3	4	5	6	TOTAL
Children under the age of 5 years	68.29% 28	29.27% 12	0.00% 0	2.44% 1	0.00% 0	0.00% 0	41
Children ages 5-12 years	51.43% 54	39.05% 41	6.67% 7	2.86% 3	0.00% 0	0.00% 0	105
Children ages 13-18 years	54.70% 64	37.61% 44	6.84% 8	0.85% 1	0.00% 0	0.00% 0	117
Adults ages 19-64 years	10.73% 34	66.25% 210	12.93% 41	5.99% 19	3.15% 10	0.95% 3	317
Adults 65+ years	29.82% 34	68.42% 78	0.00% 0	0.88% 1	0.00% 0	0.88% 1	114

Q9 How often do you use the following modes of transportation?

Answered: 381 Skipped: 50

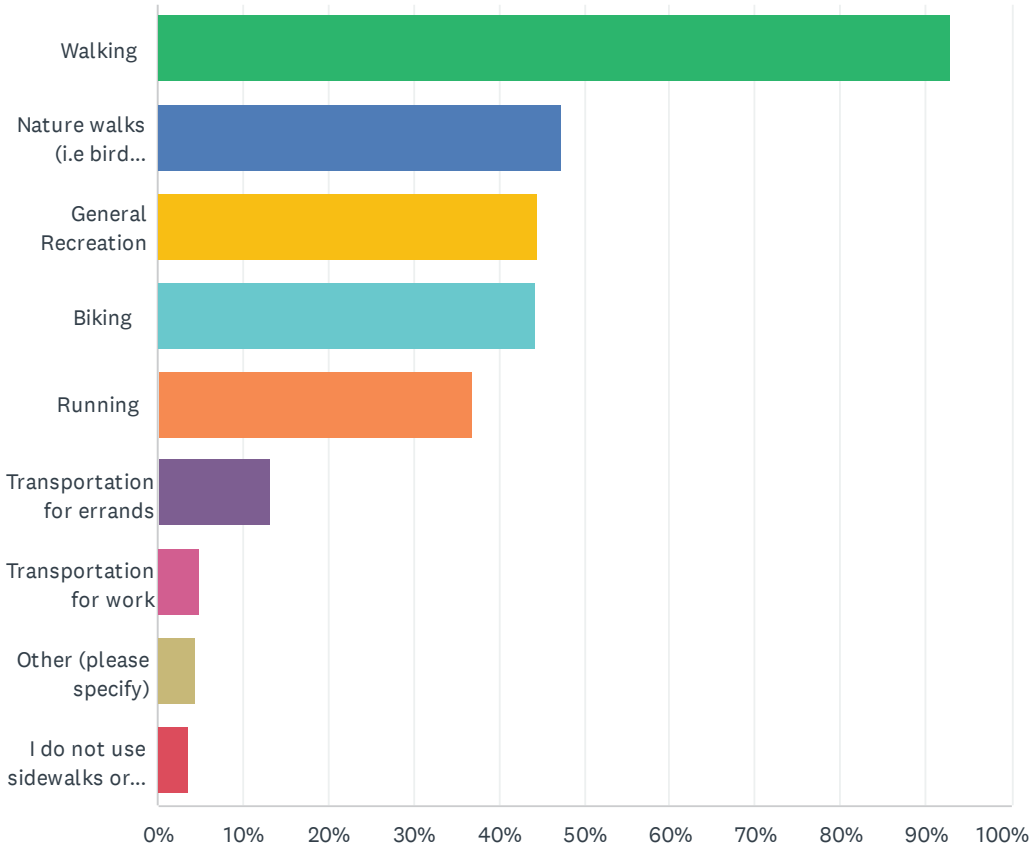


	DAILY	WEEKLY	MONTHLY	OCCASIONALLY	NEVER	TOTAL
Walk	57.41% 213	26.68% 99	2.70% 10	10.78% 40	2.43% 9	371
Bike	4.56% 16	16.24% 57	12.25% 43	35.90% 126	31.05% 109	351
Motor Vehicle	91.40% 340	7.80% 29	0.54% 2	0.00% 0	0.27% 1	372
SEPTA Bus	0.00% 0	0.32% 1	0.32% 1	5.99% 19	93.38% 296	317
SEPTA Regional Rail	1.19% 4	5.36% 18	5.06% 17	48.51% 163	39.88% 134	336

#	OTHER (PLEASE SPECIFY)	DATE
1	e-bike	4/11/2023 8:42 PM
2	🤸 to the mailbox 💁	4/11/2023 7:26 PM
3	Mobility scooter used weekly like a bicycle for trails when necessary.	2/16/2023 11:08 AM
4	Onewheel	12/30/2022 7:48 PM
5	School Bus	12/15/2022 10:53 AM
6	Pre-pandemic it was several times weekly	11/21/2022 8:38 PM

Q10 For which activities do you use the sidewalks and trails? Select all that apply.

Answered: 383 Skipped: 48



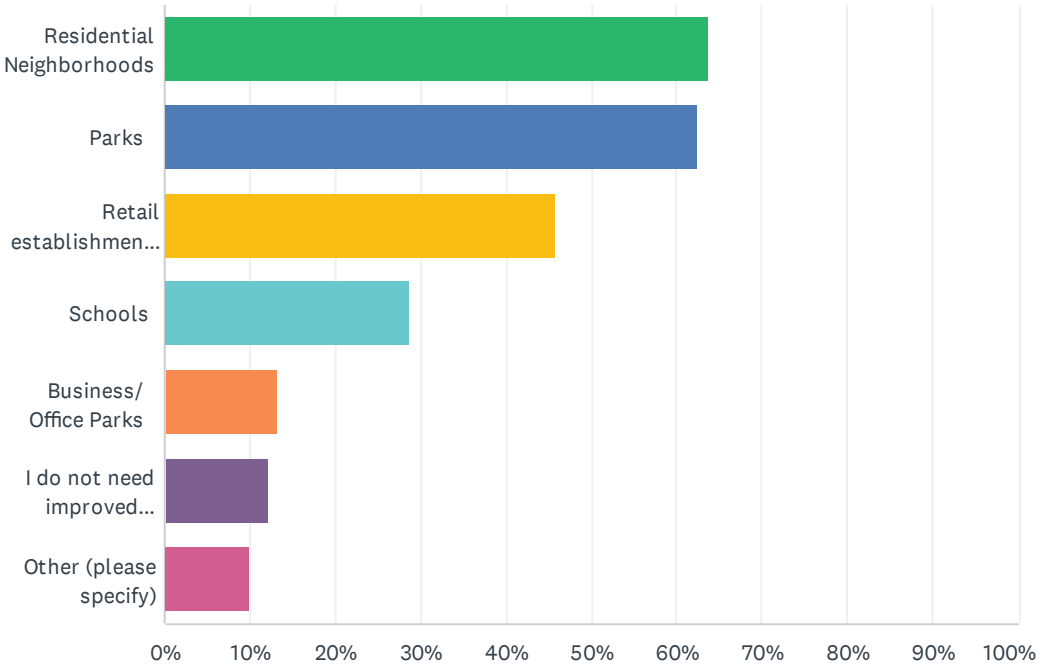
ANSWER CHOICES	RESPONSES	
Walking	92.95%	356
Nature walks (i.e bird watching)	47.26%	181
General Recreation	44.65%	171
Biking	44.39%	170
Running	36.81%	141
Transportation for errands	13.32%	51
Transportation for work	4.96%	19
Other (please specify)	4.44%	17
I do not use sidewalks or trails	3.66%	14
Total Respondents: 383		

#	OTHER (PLEASE SPECIFY)	DATE

1	Dog walks	4/12/2023 6:48 PM
2	Use of mobility scooter like a bike when necessary.	2/16/2023 11:08 AM
3	only use trails	2/15/2023 8:01 PM
4	Dog walking	1/4/2023 9:19 PM
5	Walking our dogs	1/4/2023 3:42 PM
6	Onewheel	12/30/2022 7:48 PM
7	transportation for dining and drinking	12/6/2022 10:59 AM
8	Hi	11/22/2022 4:31 PM
9	We walk in township park trails daily	11/21/2022 7:32 PM
10	Walking kids to school	11/21/2022 5:08 PM
11	Trails only, not sidewalks	11/13/2022 6:54 AM
12	I don't think any of the township trails are suitable for biking--too narrow.	11/11/2022 7:46 PM
13	Taking my dog on a walk	11/11/2022 5:58 PM
14	Dog walking	11/11/2022 9:56 AM
15	Trail to Fischer’s park	11/10/2022 9:28 PM
16	Bike to gym	11/10/2022 9:05 PM
17	Bike/foot access to state park	11/10/2022 12:48 PM

Q11 To what areas would you like improved pedestrian and/or bicycle access? Select all that apply.

Answered: 378 Skipped: 53



ANSWER CHOICES	RESPONSES	
Residential Neighborhoods	63.76%	241
Parks	62.43%	236
Retail establishments by location (i.e. Towamencin Village Shopping Center)	45.77%	173
Schools	28.84%	109
Business/ Office Parks	13.23%	50
I do not need improved pedestrian access	12.17%	46
Other (please specify)	10.05%	38
Total Respondents: 378		

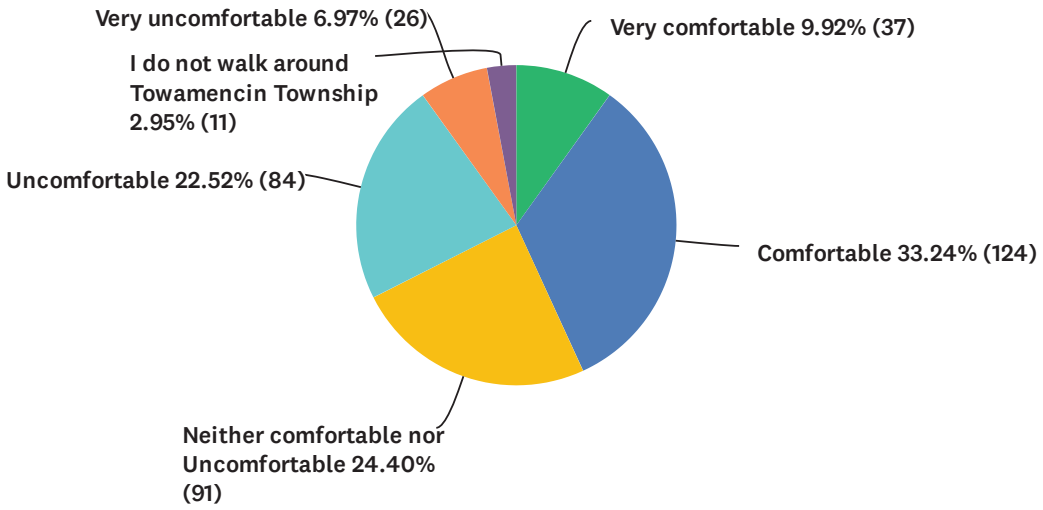
#	OTHER (PLEASE SPECIFY)	DATE
1	Places where the shoulder is very small or nonexistent	4/13/2023 3:31 PM
2	I would like Main Street towamencin to have more places to go to like shops and restaurants and not just the business center and urgent care and Walgreens….we need more fun things for the people to actually walk to/or want to walk to…	4/12/2023 9:14 PM
3	Towamencin pool	4/12/2023 6:42 PM
4	The intersection of Kriebel and Springer is in need of a sidewalk, leading to a crosswalk to Fishers Park, leading to area near the new bridge. Currently the turn and walk on Kreibel road	4/12/2023 2:10 PM

	to teh park is very dangerous as oncoming traffic comes around a currve and is blinded to any pedestrians or bikers that might be on the road. This entry point to the park is used by many runners and bikers, and I fear its a matter of time until an accident happens unless the area is updated with a safer corridor for walking or biking to the park.	
5	kerr road	4/12/2023 1:34 PM
6	no sidewalks on stretches of Kriebel Rd along creek (PECO, and "farm")	4/12/2023 11:50 AM
7	Freddy Hill Farms	4/11/2023 8:42 PM
8	I would love to travel from 40 ft road to Valley Forge on Sumnytown	4/11/2023 7:26 PM
9	All roads, especially around parks, should be accessible by walking. Narrow roads should be widended to all for pedestrianas to walk safely in Towamencin.	4/11/2023 5:53 PM
10	Keeler Road section of Towamencin trail needs to be made safe for bikes and pedestrians. It is very dangerous as it is.	4/6/2023 10:24 PM
11	Community centers like Freddy's Family Fun Center	4/6/2023 12:23 PM
12	It would be nice to be able to walk on Allentown Road to the Towamencin Village Shopping Center (if they EVER get stores in there!) Wish Towamencin welcomed new businesses like Hatfield Township does.	2/18/2023 9:19 PM
13	We use the areas already in place.	2/17/2023 8:50 PM
14	Through routes. I bike from Hatfield to upper Gwynedd and pass thru	2/9/2023 7:55 PM
15	Pedestrian bridge connecting Green Lane	2/9/2023 5:14 PM
16	The new pathway on the Towamencin Trail is phenomenal! So appreciative!! Would love for it to connect to Fisher Park and/or for it to loop around and provide sidewalk access on Morris Road all the way back to Trumbauer Road. Morris Road has sidewalks most of the way back to Trumbauer.	2/7/2023 6:31 AM
17	If there were actually viable businesses in Towamencin, I would walk to them. Seems you need to address absence of any useful businesses before you address at which points you would need sidewalks.	2/6/2023 3:59 PM
18	Connecting neighbour's	2/6/2023 1:07 PM
19	Be able to walk to Township buildings	2/5/2023 6:15 PM
20	pedestrian access along Sumneytown pike	2/3/2023 3:42 PM
21	Connection to trails like the Skippack	2/1/2023 11:23 AM
22	All high-traffic roads	1/23/2023 4:07 PM
23	Bustard Rd from the school to the fire house	1/23/2023 3:55 PM
24	Connecting neighborhoods	1/2/2023 1:52 AM
25	Please work with other boroughs to link trails and connect them to residential and commercial areas throughout North Penn.	12/30/2022 10:52 AM
26	I have no idea where the limitations are.	12/15/2022 8:51 PM
27	Bustard Road	12/6/2022 10:59 AM
28	Orvilla Road and Welsh Road - would like to walk to the Lansdale train station	11/30/2022 6:27 PM
29	Sumneytown pike has several areas near Green Lane that do not have sidewalks	11/23/2022 7:21 PM
30	Country Roads - areas back by Kerr Rd, Kriebel, Springer	11/22/2022 2:52 PM
31	There are no sidewalks on part of Anders Rd. This creates a very dangerous condition for walkers or anyone trying to share the road with cars.	11/21/2022 6:01 PM
32	Connect green lane road to kriebel with a walking trail	11/11/2022 11:10 PM
33	Streets & Roads	11/11/2022 11:08 PM

34	ADA access to cross Anders Rd connectig sidewalks	11/10/2022 10:53 PM
35	Green Lane road needs a foot/bike path	11/10/2022 9:28 PM
36	Some sort of lighting/ signage like on whites road for crosswalk at WF elementary. Very dangerous to cross.	11/10/2022 8:23 PM
37	Kriebel Road curve leading to the path	11/10/2022 7:40 PM
38	Connections between these places. E.g: neighborhoods to shopping centers.	11/10/2022 7:27 PM

Q12 From a perspective of traffic safety, how comfortable do you feel walking in Towamencin Township?

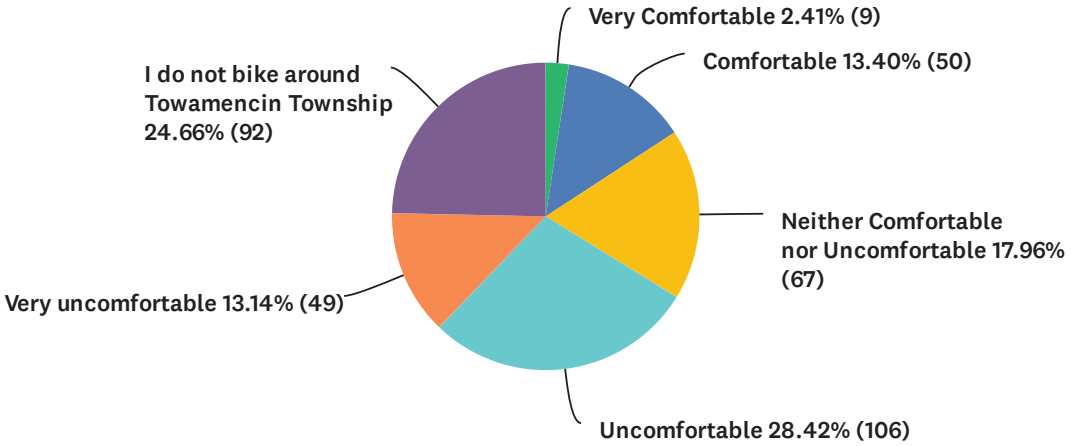
Answered: 373 Skipped: 58



ANSWER CHOICES	RESPONSES	
Very comfortable	9.92%	37
Comfortable	33.24%	124
Neither comfortable nor Uncomfortable	24.40%	91
Uncomfortable	22.52%	84
Very uncomfortable	6.97%	26
I do not walk around Towamencin Township	2.95%	11
TOTAL		373

Q13 From a perspective of traffic safety, how comfortable do you feel biking in Towamencin Township?

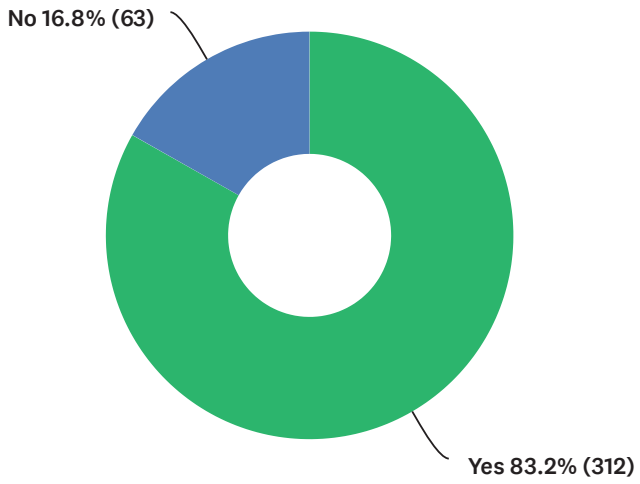
Answered: 373 Skipped: 58



ANSWER CHOICES	RESPONSES	
Very Comfortable	2.41%	9
Comfortable	13.40%	50
Neither Comfortable nor Uncomfortable	17.96%	67
Uncomfortable	28.42%	106
Very uncomfortable	13.14%	49
I do not bike around Towamencin Township	24.66%	92
TOTAL		373

Q14 From a perspective of traffic safety, are there locations as a motorist where you are concerned with pedestrian and/or bicyclist safety?

Answered: 375 Skipped: 56



ANSWER CHOICES	RESPONSES	
Yes	83.2%	312
No	16.8%	63
TOTAL		375

Q15 Please list the top 5 locations where you are concerned with pedestrian and/or bicyclist safety.

Answered: 281 Skipped: 150

#	RESPONSES	DATE
1	Fisher's park bridge/4 way stop area to kriebel Morris road to trambauer Trambauer to Kriebel Kriebel around fisher park where the trail ends to the road. The road connecting Kriebel to 40ft road	4/13/2023 7:30 PM
2	Troxel and Snyder Rd Snyder Rd and Valley Forge Rd Troxel Rd bridge over Towamencin creek Inglewood Elementary across Allentown Rd	4/13/2023 3:33 PM
3	Kriebel Road right behind Fischer's Park. Now that there is a wonderful much needed bridge behind Fischer's Park there needs to be a safer way to get there from Kriebel Road. Cars drive through there a lot and there is a huge blind spot as the street curves. Many walkers/runners/bicyclists of all ages come up on that road to get into Fischer's Park but there is a huge safety concern crossing Kriebel Road to get onto the Park. Everyday when the weather is 50 degrees or higher, Springer Road has tons of runners/walkers/bicyclists that use my street but the street is not very wide as there is no sidewalk. It would be helpful to have sidewalks especially for Kriebel Road to get onto the park ground safely.	4/13/2023 10:08 AM
4	Forty Foot and Sumneytown pike Old Forty Foot and Sumneytown pike Allentown and Forty Foot Bustard road Old Forty Foot road	4/13/2023 9:41 AM
5	Morris Rd	4/13/2023 9:33 AM
6	Sumneytown Pike, Valley Forge Road	4/13/2023 9:00 AM
7	The cross way between Old Forty Road and Rittenhouse Road.	4/12/2023 9:16 PM
8	Morris Road approaching Bustard (Fischer's park) in both directions	4/12/2023 9:08 PM
9	Intersection of Sumneytown and Bustard/Forty Foot, Sumneytown and Green Lane, Green Lane in general	4/12/2023 8:50 PM
10	All access paths to Fischer Park. Many peds/cyclists and speed limits don't align with road size.	4/12/2023 6:51 PM
11	The approach to the Towamencin pool on Weikel Rd from Snyder Rd	4/12/2023 6:43 PM
12	Weikel Rd—between Orchard and Snyder Woodlawn and surrounding streets without sidewalks. Troxel Rd.	4/12/2023 6:04 PM
13	Morris rd where there is no sidewalk. Accessing Fisher park other than car Connecting the new trail with the other existing trails	4/12/2023 3:33 PM
14	Valley Forge Road , Morris Road, Spring Valley Road,	4/12/2023 3:31 PM
15	Forty foot and Allentown, forty foot and welsh, Sumneytown and forty foot, Allentown and valley forge, Snyder and valley forge	4/12/2023 3:03 PM
16	Towamencin is not very bike friendly	4/12/2023 2:36 PM
17	1) Kriebel Road near the (new) back entrance to fisher park 2) Kriebel Road gong towards 40 foot road- there are many turns that make this area dangerous- due to blind spots 3) Bustard Road between Fishers park and Sumnytown, then on to Allentown Rd Pike- this is a high traffic road, that is not Bike Friendly 4) Kerr Road- this road is way too narrow for the traffic it currently handles. Also popular with walkers and bikers due to its proximity to parklands 5) Old Morris Road: would benefit from a sidewalk that connexts bustard to 40 foot road. This road is narrow and traffic high and most people do not feel safe on this road for walking or biking.	4/12/2023 2:17 PM
18	Rittenhouse and Old Forty Foot Rd	4/12/2023 1:25 PM

19	Fishers Park CVS- Ray's Troxel RD Wendy's- and fitness center Snyder Rd	4/12/2023 12:48 PM
20	Allentown and forty foot rds. Allentown and Derstine rds	4/12/2023 12:11 PM
21	Kriebel Rd near water treatment plant. Deer & geese issue, too. No sidewalk connecting turnpike bridge to neighbor hoods on both sides. No good way to cross Sumneytown. Add a pedestrian/bridge connector on Green Lane Rd across the creek?	4/12/2023 11:54 AM
22	Bustard road, old forty foot, valley forge road	4/12/2023 9:12 AM
23	1. Snyder Road is too dark in the winter when kids are trying to cross the street before sunrise. 2. I would like more sidewalks down Keeler towards Quarry - the curve does not have enough visibility to see smaller pedestrians when driving. 3. It would be nice to have more bike trails along bigger roads.	4/12/2023 5:21 AM
24	1. Allentown Road and Valley Forge Rd intersection is a death trap. 2.Forty Foot Road and Allentown Road - also a death trap. 3. Valley Forge Road and Sumneytown Pike 4. Troxel Road and Sumneytown Pike 5. Troxel Road and Allentown Road	4/12/2023 12:08 AM
25	Sumneytown Pike Orvilla Road Welsh Road Bustard Road	4/11/2023 10:26 PM
26	All. No bikes paths in tya	4/11/2023 9:54 PM
27	sumneytown pike, allentown rd, kriebel rd	4/11/2023 8:44 PM
28	Sumnytown between 40 ft and valley forge. Keeler and Allentown. Keeler between quarry and orvilla (my wife and I almost got hit). Orvilla between keeler and Allentown.	4/11/2023 7:34 PM
29	Valley Forge Rd., Kriebel Rd, Valley Forge Rd	4/11/2023 7:00 PM
30	Kriebel Road, Bustard Road, Old Forty Foot Road, Wentz Church Road, Kerr Road, and all roads leading up to and near Fischer's Park.	4/11/2023 5:55 PM
31	Allentown Road both above and below Forty Foot Road.	4/11/2023 5:36 PM
32	Kriebel Road. There is a blind sport in both directions near the old school.	4/11/2023 4:32 PM
33	Old Morris, Old Forty Foot, Rittenhouse,	4/11/2023 4:28 PM
34	Allentown road Weikel Road	4/11/2023 4:12 PM
35	Allentown Rd, Forty Foot Rd, Sumneytown Pk, Detwiler Rd, Welsh Rd	4/11/2023 3:43 PM
36	Fischer’s park Morris road Valley forge rd	4/11/2023 3:19 PM
37	Bustard Road/Morris Road near Fisher’s Park	4/11/2023 3:11 PM
38	Valley Forge Rd (kids walking and biking to school and Wawa/McDonalds) Anders rd Kreibel Rd Morris Rd (sidewalks end before Troxel and after Valley View)	4/11/2023 3:02 PM
39	Sumneytown pike	4/11/2023 2:52 PM
40	Near Freddy Hill Farms, Weikel road from Snyder where there is no sidewalk, Sumneytown Pike from Freddy Hill to Margaritas, Kriebel rd from Sumneytown pike to Fischer’s Park	4/11/2023 2:21 PM
41	Kreibel Rd	4/11/2023 1:59 PM
42	Troxel Rd Bustard Rd Morris Rd Sumneytown Pike Old Forty Ft Rd	4/11/2023 1:43 PM
43	Troxel and Sumneytown Pike Snyder and Valley Forge Rd Please put a sidewalk the full length of troxel and on Kriebel to connect into Fishers park!	4/11/2023 1:15 PM
44	Allentown Road Sumneytown Pike Old Forty Foot Road Bustard Road Valley Forge Road	4/11/2023 1:05 PM
45	Anders rd, kriebel rd,(from Sumneytown all to Old Forty Ft) bustard rd, obv: Valley Forge rd, , Sumneytown Pk	4/11/2023 1:00 PM
46	40 ft road, Sumneytown pike	4/7/2023 5:30 AM
47	Allentown rd Sumneytown pike Bustard rd	4/7/2023 5:17 AM
48	Sections of Keeler Road, Troxel, Welsh, and Valley Forge Road in front of NP high school (no shoulder or sidewalk).	4/6/2023 10:29 PM

49	Welsh Rd/Rt 63 to Orvilla Rd Orvilla Rd to Allentown Portions of Allentown Rd	4/6/2023 4:02 PM
50	1. Along Sumneytown Pike (walking & biking) 2. Along Allentown Road (Forty Foot Rd to Sumneytown Pike; both walking and biking) 3. Along Forty Foot Road (speeding traffic; biking) 4. Along Welsh Road (Forty Foot Road to Valley Forge Road; both walking and biking) 5. From Sumneytown Pike (Freddy Hill) past Township Bldg to Allentown Road (walking and cycling)	4/6/2023 3:48 PM
51	Troxel & Sumneytown Kreibel between Sumneytown & Trumbauer Keeler Rd between Michael Way & Quarry Rd Keller Rd & Troxel Intersection Weikel Rd between Snyder & Orchard rd	4/6/2023 12:27 PM
52	40 foot road; allentown road	4/5/2023 12:31 PM
53	1. Commercial area near Welsh and Forty Foot Road including Ralph's Corner 2. Along major roads specifically Welsh, Forty Foot, Allentown, and Orville.	4/5/2023 11:00 AM
54	Sumneytown Pike - missing sidewalks between Green Lane & Forty Foot Troxel Rd - Missing sidewalks near light at Sumneytown Pike Bustard Road - Missing Sidewalk between 476 bridge and Firehouse Park entrance	4/4/2023 5:06 PM
55	Corner of Bustard and Forty foot rd	4/4/2023 4:59 PM
56	Bustard rd between Sumneytown and Rittenhouse.	4/4/2023 4:07 PM
57	Troxel Road between Allentown Road and Pickwick Lane Troxel Rd. btw. Seventh Day Adventist and Carriage Way Weikel Road between Orchard Lane and Snyder Road Trails and walking around Towamencin Pool	4/4/2023 3:25 PM
58	Getting to Fisher Park by walking along Kriebel or Bustard Roads. Walking an/or driving on Kriebel Road. Drivers discovered Kriebel road as a quicker way to avoid traffic lights to get to Valley Forge Road. they drive too fast. Where Kriebel intersects Pheasant Hlil Road and Way people come flying over the turnpike bridge and don't really see the intersection of Pheasant Hill Road and Way with Keibel. It is hidden and now two little children live in the house on the corner and they have pets. We need a slower speed on Kriebel and a warning that the street is hidden or a stop sign and Children at play sign. We also need street lights on both sides of the bridge at Trumbauer Road and Kreibe intersection. The street lights have been needed for a long time at that bridge.	4/2/2023 12:55 PM
59	Morris Rd, old Morris Rd, bustard rd, Wentz Church Rd	4/2/2023 9:02 AM
60	Weikel Road (South end) without sidewalks. Also, Weikel Road and Allentown Road intersection.	4/1/2023 9:35 AM
61	Bustard road, green lane road, old forty foot road	4/1/2023 8:13 AM
62	Valley Forge Rd & Sumneytown Pike Sumneytown Pike & Bridle Path Dr Allentown Rd @ Walton Farm Elementary School Kriebel Rd @ Fischer's Park Anders Rd for bicyclist safety	3/31/2023 9:33 PM
63	Intersections of Welsh/Orvilla, Welsh/Gristmill, Welsh/Forty Foot, Forty Foot/Allentown, Sumneytown/Valley Forge	3/31/2023 7:43 PM
64	Green Lane/Liberty Bell intersection. And the majority of the neighborhood around liberty bell dr that doesn't have sidewalks	3/31/2023 6:31 PM
65	Sumneytown pike Welsh Rd	3/31/2023 6:25 PM
66	ALL OF MORRIS RD. SPEEDING CARS AND TRUCKS. 60 MPH PLUS	3/31/2023 5:03 PM
67	Areas that do not have sidewalks. Valley Forge Rd., Troxell, Bustard Road, Old Forty Ft Rd.	3/31/2023 4:52 PM
68	Bustard Rd and Kriebel Green Lane Rd Kriebel Rd	3/31/2023 4:45 PM
69	Forty foot road	3/31/2023 4:37 PM
70	Trying to get to green lane park or Fischers park should be simple since we live so close. It is not because the only current way is to walk, ride, or run on bustard road and there are no sidewalks. We end up driving since it isn't safe. Many of us would LOVE a walking/riding trail that connects Green Lane Road. Currently, it is very difficult/almost impossible to walk through the woods/creek that separates Green Lane Road. This would solve many issues that this area currently has and would connect multiple parks.	3/31/2023 3:32 PM
71	Troxell Road at Sumneytown Pike, intermittent sidewalks to light controlled crossing. Snyder	3/27/2023 3:21 PM

	Road at Weikel, missing sidewalk at junction. Valley Forge at Sumneytown Pike, access to North Penn Market Place. Allentown Road at Woodlawn, light does not detect cyclists. Snyder and Troxell, trail crosses Troxel but no pedestrian crossing.	
72	Areas where there are partial sidewalks which end abruptly forcing pedestrians onto the shoulder or directly onto the road. For example, Snyder Rd in front of the Vet's property.	3/27/2023 11:39 AM
73	Weikel Road	3/26/2023 8:02 PM
74	Forty Foot Rd.	3/26/2023 11:33 AM
75	Welsh Road through Lansdale	3/24/2023 9:35 PM
76	Valley Forge Road from Snyder to North Penn High School as walkers use that road to walk to the high school and stores. Bicycling/Walking along parts of Snyder Road Bicycling/Walking to cross Sumneytown pike	3/24/2023 8:04 PM
77	Bustard Road Green Lane Road Forty Foot Road	3/24/2023 7:23 PM
78	Along Allentown Road, Sumneytown Pike,and along Main Street — many walkers & cyclists, no sidewalks. Along most roads and sidewalks—too many cyclists who think they own the property, run over pedestrians on sidewalks or ignore traffic regulations!	3/24/2023 5:30 PM
79	Forty Foot Road, Towamencin Avenue, Tomlinson Road,	3/24/2023 5:27 PM
80	intersection of 40 ft road and sumneytown pike	2/20/2023 9:02 PM
81	Sumneytown and Forty Foot Road	2/20/2023 8:10 PM
82	Sumneytown Pike Bustard Road	2/19/2023 5:23 PM
83	Bustard Road - no sidewalks! Route from our house to Nash and Fischer’s Park	2/19/2023 3:02 AM
84	Forty Foot Road Fretz Road Allentown Road	2/18/2023 9:19 PM
85	Bikes on Kriebel especially past Bustard towards Skippack.	2/18/2023 8:59 AM
86	Near turnpike/ sumneytown and forty foot Forty foot and Allentown Valley forge at NPHS Sumneytown and valley forge Allentown and valley forge	2/17/2023 9:01 PM
87	Troxel Keeler Allentown Rd Welsh Rd Forty foot Rd	2/17/2023 6:18 PM
88	Wherever there aren't sidewalks and I have to ride in the street	2/17/2023 6:12 PM
89	Rittenhouse Road Bridge	2/17/2023 5:49 PM
90	Snyder x Troxel Snyder x Valley Forge Rd Exiting CVS onto Valley Forge Rd	2/17/2023 2:25 PM
91	Near the intersection of Rt 63 (Welsh Rd) and Orvilla Rd. The intersection of Rt 63 and Forty Foot Rd The intersection of Rt 63 and Kohl's shopping center	2/16/2023 11:11 AM
92	Morris rd by Fisher park	2/11/2023 9:39 AM
93	Crosswalks, schools, parks, major intersections, and non-residental streets	2/9/2023 8:58 PM
94	Old forty foot road Rittenhouse road	2/9/2023 8:50 PM
95	Public roads with no sidewalk	2/9/2023 7:25 PM
96	Bustard Road once you pass Liberty Bell Dr heading South	2/9/2023 5:15 PM
97	Old Forty Foot Road and Quarry Road intersection. Designated a bike route but horrible to turn out onto Old Forty Foot	2/9/2023 5:03 PM
98	Weikel Road Troxel Road Quarry Road	2/9/2023 4:18 PM
99	1. bicyclists on Morris Road near Fisher's Park	2/9/2023 6:31 AM
100	1. Keeler Road over the bridge (behind the police dept between Quarry Rd and Troxel) 2. Where Allentown Road meets Keeler 3. Allentown Road from Inglewood Elem to forty foot rd 4. Detwiler Road between Wombold and Forty Foot 5. Forty Foot Rd Over the turnpike bridge from Sumneytown to Firehouse park	2/7/2023 1:15 PM
101	Green lane rd Fischer’s park	2/7/2023 8:30 AM

102	Allentown Road near Keeler	2/7/2023 7:41 AM
103	Kriebel to Bustard and Morris to Bustard	2/7/2023 6:32 AM
104	Allentown Rd., Fretz Rd., Tomlinson Rd., Destine Rd., Welsh Rd	2/6/2023 11:44 PM
105	Bustard Rd bridge at Kriebel. Allentown Rd from Reinert to Fourty Foot. Crossing Fourty Foot Rd around ShopRite plaza	2/6/2023 11:37 PM
106	Around fisher park	2/6/2023 7:29 PM
107	The only safe bike or walking places in Towamencin are within protected neighborhoods.	2/6/2023 4:00 PM
108	(1)Welsh Road - very little space for pedestrians and bicyclists between Orvilla and 40 Foot Roads, sight lines are limited. Signage prohibits eastbound pedestrians arriving at Orvilla (walking on the left per guidelines) from crossing either Orvilla or Welsh. The graveyard fence and wall prevents any legal option except turning back. (2) Forty Foot and Towamencin - People turning right from Forty Foot to Towamencin do not expect to slow down more than need to actually make the turn. (3) Forty Foot and Allentown - Crossing Allentown is dangerous because of both right and left turning vehicles not expecting people on foot. (4) Much of S. Valley Forge Road from Sumneytown to Morris Roads. No safe place for cyclists or walkers. (5) Morris and Bustard at Fischer's Park. In spite of the 3 way Stop, it feels dangerous just to be near that intersection. The Fischer's fence is place too close to the road to enable safe walking along the road.	2/6/2023 3:43 PM
109	No sidewalk from hillside to meadow Glen. Sidewalk from meadow to valley forge on anders. Have to walk in the grass/ditch with heavy traffic on anders.	2/6/2023 1:10 PM
110	Bustard & Rittenhouse road Sumneytown & Bustard / 40 ft road 40ft rd & Allentown rd	2/6/2023 9:51 AM
111	Morris road - my kids want to bike to Fischer’s park and it’s too dangerous.	2/6/2023 9:29 AM
112	Allentown and Forty Foot Road Reinert Road Tomlinson Road Fretz Road	2/6/2023 9:14 AM
113	Morris Rd between Spring Valley and Trumbauer Morris Rd Spring Valley to Bustard	2/6/2023 9:06 AM
114	Keeler Td. between Quarry and Michael Way	2/5/2023 6:17 PM
115	1. Coming downhill from Freddy Hill on Sumneytown Pike towards the turnpike. 2. Between Towamencin Beverage and Wawa on Sumneytown Pike	2/3/2023 5:21 PM
116	Sumneytown Pike Between North Penn High School and Forty Foot Rd	2/3/2023 3:44 PM
117	Sumneytown pike	2/3/2023 1:41 PM
118	Morris Road before Bustard, Mainland Rd & Sumneytown Pike at new turnpike entrance, Bustard Rd bridge	2/2/2023 11:30 AM
119	Kriebel Road	2/2/2023 8:21 AM
120	Sumneytown Pike from Valley Forge to the TP, Valley Forge Rd from Snyder to Sumneytown Pk, Orvilla Rd.	2/1/2023 7:39 PM
121	Kriebel Rd & Springer Road	2/1/2023 6:12 PM
122	Keeler Road Wambold Road	2/1/2023 5:33 PM
123	Valley Forge Rd and Sumneytown . Walking anywhere without sidewalks	2/1/2023 4:53 PM
124	Bridge on Bustard Rd. near Kriebel. Kriebel Rd. near Springer Rd intersection Anders Rd and Valley Forge Rd Metz Rd between Schlosser and Kerr Rds Kriebel Rd. between Kulp and Metz Rds	2/1/2023 2:43 PM
125	Along Sumneytown Pike, Allentown Road, and parts of Forty Foot Road — speeding, heavy traffic and no sidewalks	2/1/2023 12:18 PM
126	Forty foot rd, sumneytown pike, valley forge rd,	2/1/2023 12:12 PM
127	Morris road some areas, Snyder road	2/1/2023 12:02 PM
128	Bustard & Sumneytown, Sumneytown between towamencin beverage and Freddy Hill (only the section from the bottom of the hill to Freddy Hill), Freddy Hill to Kreibel,	2/1/2023 11:33 AM

129	Along Old Forty Foot Rd. Going the “illegal” way across the Rittenhouse Rd bridge	1/28/2023 11:28 AM
130	Keeler Rd bridge Allentown Rd between Walton farm school and keeler where there is no sidewalk	1/27/2023 2:52 AM
131	Sumneytown Pike - Forty Foot to Green Lane (No sidewalk on a side of the road). Forty Foot - No sidewalk past Allentown to Welsh Road Detwiler Road - No sidewalk on one side of road. Everywhere - No bike lanes or places to walk (e.g. Bustard Road, Old Forty Foot Road) - Cannot get to Skippack from Kulpsville by foot or bike.	1/26/2023 8:32 PM
132	The entire length of Allentown Road, Forty Foot Road, Tomlinson Road, and Detweiler Road where sidewalks don't exist.	1/25/2023 12:25 PM
133	Bustard Rd, Sumneytown Pike	1/24/2023 8:24 AM
134	- kriebel rd between Kulp and Metz rd (getting to fisher park the back way) - old Morris has lots of walkers but it’s not as dangerous - would love safe/continuous way to bike to/from train	1/23/2023 6:28 PM
135	Allentown Road, crossing Allentown Road at Forty foot road, bustard road, Tomlison road. Sumneytown pike	1/23/2023 6:15 PM
136	Forty Foot Road Sumney Town Pike Valley Forge ropad	1/23/2023 5:49 PM
137	Troxel Rd Sumneytown Pike Old Forty Foot Rd Allentown Rd	1/23/2023 5:17 PM
138	Pedestrians often walk / run / bike along Troxel Road where it crosses towamencin creek. It's a blind curve with no shoulder or sidewalk. I'm not sure how to solve.	1/23/2023 4:16 PM
139	Inglewood development	1/23/2023 4:07 PM
140	Forty Foot Road between Sumneytown Pike & Allentown Road is a death trap — speeding vehicles, too many trucks	1/23/2023 4:03 PM
141	Bustard Rd Old Morris Rd Sumneytown Pike Forty Foot Rd Allentown Rd Troxel Rd	1/23/2023 4:02 PM
142	turnpike bridge over bustard road Crossing Bustard Road at Rittenhouse Crossing Bustard Road at Sumneytown Pike Crossing Sumneytown Pike at Forty Foot Road Crossing Bustard Road over Bridge to Fishers Park	1/15/2023 3:29 PM
143	Main St./Welch Road from Lansdale to Forty Foot Rd., The Kulpsville/Forty Foot/Turnpike area Sumneytown Pike from NPHS to Freddy Hill	1/13/2023 9:22 AM
144	Valley forge rd Allentown rd	1/12/2023 1:54 PM
145	Bustard Road, Old Morris Road, Kriebel Road, Detweiler Road, Tomlinson Road	1/9/2023 8:46 AM
146	Allentown rd Woodlawn drive Weikel road Valley forge road sumneytown pike	1/8/2023 2:33 PM
147	Trumbauer Road to access trail on Kriebel Rd Morris Road where sidewalk ends before Trumbauer Road	1/7/2023 6:39 AM
148	Sumneytown Pike at NPHS Kriebel Rd curve near Turnpike overpass	1/5/2023 8:37 PM
149	Walk/Bike from Gristmill development to Lansdale Walk from Gristmill development to 40 Foot road shopping (Lowes/ShopRite) Corner of West Orvilla Road and Welsh Road	1/5/2023 3:03 PM
150	Welsh rd, Allentown road, troxel rd	1/5/2023 11:27 AM
151	1. The intersection of forty foot road and Allentown road. 2. Forty Foot road and Sumneytown Pike 3. Forty foot road and welsh road	1/5/2023 9:37 AM
152	Forty Foot Rd Valley Forge Road Sumneytown Pike	1/4/2023 8:12 PM
153	Bustard and Summneytown Intersection Old forty foot road	1/4/2023 7:17 PM
154	Sumneytown Pike Allentown Rd between Forty Foot and Wambold Fretz Rd from Wambold to Allentown Bustard Rd	1/4/2023 6:40 PM
155	Crossing troxel road from municipal building to Snyder needs a pedestrian yield walkway…for kids needed for school/practices and pool	1/4/2023 6:14 PM
156	Quarry Rd/Bridge Rd and Old Forty Foot Rd; Rittenhouse Rd and Old Forty Foot Rd; car bridge on Bustard Rd near Fisher's Park - too narrow; anywhere along Old Forty Foot Rd - no shoulder	1/4/2023 5:34 PM

157	Green Lane Road near trail at turnpike bridge Bustard Road entrance to Firehouse Park	1/4/2023 5:10 PM
158	Weikel Road, Boyd Ave,	1/4/2023 4:54 PM
159	Sumneytown and Bustard Rds. Rittenhouse and Old Forty Foot Rds., Sumneytown and Green Lane Rds., Sumneytown and Forty Foot Rds, Sumneytown and Towamencin Rds.	1/4/2023 4:50 PM
160	Sumneytown Pike, Kriebel Rd, Troxel Rd	1/4/2023 4:44 PM
161	Kriebel Rd	1/4/2023 4:42 PM
162	Towamencin Trail along Old Morris Road between Old Forty Foot and Bustard. There is no shoulder and bikes/walkers have to ride/walk on the road. It would be great to have a 3ft wide gravel trail to walk/bike on. We do not feel safe on the road because cars go way too fast.	1/4/2023 4:30 PM
163	Crossing street from my neighborhood to Towamencin Shopping Village Allentown Road has some sidewalks, but it’s not continual and that would make me feel safer	1/4/2023 4:12 PM
164	Weikel Road between Orchard Lane and Snyder Road.	1/4/2023 4:10 PM
165	Any location where sidewalks have been deferred. As a bicyclist I never know where a ride will take me and often times I run into areas of concern since I can't get off the roadway due to the lack of sidewalks.	1/4/2023 4:04 PM
166	Sumneytown Pike Allentown Rd Valley Forge Rd Bustard Rd Kreibel Rd	1/4/2023 3:49 PM
167	1-Kriebel Road between 476 and Sumneytown 2-The Trumbauer Road bridge over Towamencin Creek 3-The Bustard Road bridge over Towamencin Creek. These two bridges hamper access for residents to enjoy Fischer's Park and great trail by the creek. In general, Fischer's Park is tough to access on foot or bicycle.	1/4/2023 3:47 PM
168	Bustard rd near Kriebel; Kriebel Rd is dangerous no shoulder	1/2/2023 1:53 AM
169	Sumneytown Pike S Valley Forge Rd	12/30/2022 7:50 PM
170	Allentown road Bustard road Weinkle road I usually stay in a confined area, howerver would definately bike or run further out if safer to go along some of the main drags	12/30/2022 4:58 PM
171	Intersection of Valley Forge Rd. and Sumneytown Pike - and anywhere around the High School complex. Allentown Road between Troxel and Keeler roads. Particularly the intersection at Keeler. Anders Road crossing at Valley Forge Rd. Morris Road on the windy part from where the bike lane ends down to the Bustard Rd intersection. Welsh Rd. between Orville and Ralphs Corner entrance.	12/30/2022 11:29 AM
172	Anywhere on Allentown Road. That whole road is a nightmare for biking or walking. Also, some trail intersections need work. Specifically, the one by Leidy and Cherry Lane right between the church and the cemetery because I don't think drivers even know there's a bike trail there. There are stop signs in both directions for the drivers, and the trail riders have right of way because they don't have a stop sign. However, very few of the drivers ever stop for people using the trail. It also needs to be maintained in the winter or bicyclists are going to have to ride on the road.	12/30/2022 10:57 AM
173	Allentown and forty foot rd, Allentown and valley forge rd, forty foot and welsh, forty foot and Sumneytown, Snyder and valley forge	12/30/2022 9:49 AM
174	Sumneytown Pike. Riding to North Wales train station or riding to retail establishments on Sumneytown Pike toward Forty Foot Road	12/21/2022 9:32 AM
175	intersections, potholes, Valley Forge Road, places surrounding the high school, the towamencin shopping center	12/17/2022 6:56 PM
176	The underpass for cars makes transversal inconvenient due to the lack of sidewalk.	12/16/2022 7:40 AM
177	Valley Forge Rd too small for pedestrian, too scary for bicyclist	12/15/2022 4:50 PM
178	North Penn High School Parking Lot & Surrounding Area	12/15/2022 3:48 PM
179	sidewalks from NPHS to wawa/mcdonalds firehouse park to general nash elementary	12/15/2022 11:16 AM
180	- Any point past the Wawa at Bustard and Sumneytown - Bustard by General Nash Elementary	12/15/2022 8:24 AM

181	Allentown / Valley Forge Road	12/15/2022 8:19 AM
182	I'm not sure	12/15/2022 7:30 AM
183	Main street, north penn to the shopping center, north penn to main street,	12/15/2022 7:23 AM
184	North Penn High School Area, Allentown Road along Grist Mill Park Area, crossing Sumneytown from Troxel to Kriebel Rd. , Allentown Road - traffic calming in residential areas, Old Forty Foot Road - so many of the existing road trails connect to this road but it has no shoulder and wayfinding is much needed.	12/10/2022 1:56 PM
185	Curve on kriebel by new trail, Kerr rd,	12/10/2022 6:00 AM
186	Bustard Road bridge over the Turnpike- there should be a barrier of some type between the roadway and the shoulder. Also, Bustard Road in general - there is not continuous sidewalk from the school to the restaurants at the corner of Sumneytown Pike.	12/6/2022 10:59 AM
187	1) Kriebel Road between Green Lane Road and Parkview Road where there are 2 properties without a sidewalk so you are forced onto the street with 35 mph speed limit. 2) Green Lane Road between Pheasant Hill Road and Old Forde Way - the property where the power lines are has a sidewalk but it is not maintained for snowy and icy conditions or wet slippery leaves and you are forced onto the street	12/4/2022 11:43 AM
188	Along bustard rd. Sumneytown Pk. Troxel Old Forty Ft.	12/4/2022 8:53 AM
189	1. Morris road between Fischer's Park and Traumbuer Rd 2. Bridge on Traumbuer Rd 3. Bridge near Fischer's park 4. Bustard Rd between Adam Rd and Sumneytown Pike	12/3/2022 11:36 AM
190	1. Bustard Road between Kriebel and Sumneytown 2. Allentown Road between Valley Forge Rd and Wambold Road 3. Kriebel Rd. between Sumneytown Pike and Old Forty Foot Road 4. Valley Forge Rd between Anders and Allentown Rd. 5. Sumneytown Pike between Valley Forge and Wambold Road.	12/1/2022 10:05 PM
191	1.Keeler road is supposedly the "trail" that runs between my house and Dock Villaige where I go to help out daily. Sometimes I do not have a car and have no choice but run the "trail" around the dangerous corner on Keeler road. 2. While road also no shoulder or sidewalks. 3. Troxel road no shoulder, limited sidewalks. 4. Joining "the trail" with actual trail down forty foot rd to Bustard road park would be nice! Especially for runners and bikers safety	12/1/2022 7:57 PM
192	Sumneytown Pk Bustard Rd Kriebel Rd Valley Forge Rd Allentown Rd	12/1/2022 5:43 PM
193	1. The curve/bridge on Troxel Road next to Seventh Day Adventist Church. 2. Troxel Rd in front of the Harris house (connecting Carriage Way to sidewalk in front of Family Worship Center. 3. As you exit the Township building on Troxel Road, up to and across Keeler Rd there is no sidewalk. It would also be nice to have a pedestrian crossing (with a button to push and lights) from the Troxel Rd exit of the township building across Troxel to the paved trails that goes up Snyder. 4. Crossing Allentown Road at Inglewood Elementary School. 5. North Penn High School, from the school to Valley Forge Road, I can't believe after all these years there is no sidewalk on either side. Everyone, including students, must walk in the street or in the grass.	12/1/2022 11:22 AM
194	Kriebel road	11/30/2022 7:06 PM
195	Crossing Welsh Road from Gristmill Run neighborhood to Plains Mennonite Park Walking Welsh Road from Gristmill Run neighborhood to Forty Foot Road Orvilla Road Walking Welsh Road going towards Lansdale	11/30/2022 6:31 PM
196	Kriebel Road	11/30/2022 9:42 AM
197	Kriebel Rd	11/30/2022 9:05 AM
198	Kriebel Road Bustard rd	11/29/2022 7:32 PM
199	Forty Foot Road, Kriebel Road, Sumneytown Pike, Allentown Road, Bustaed Road	11/29/2022 4:51 PM
200	Kriebel rd too narrow to share with other cars and pedestrials or bike. Morris Rd, Sumneytown pike, Allentown rd	11/29/2022 4:42 PM
201	Kriebel Morris Bridge over the turnpike	11/29/2022 3:13 PM
202	Metz road has become a thoroughfare to bustard road. People routinely go 50mph and above	11/29/2022 10:50 AM

	with people walking and cycling with access to fisher park as well. Very dangerous	
203	1. Weikel Road from pool to Snyder 2. Troxel Road (opposite side of township building/on the farm property from the corner of Troxel & Snyder to where the sidewalk picks back up in front of Keeler Rd.) 3. Crossing the street at Troxel and Snyder 4. Crosswalk in front of Walton Farm 5.	11/28/2022 6:36 PM
204	Metz Road Frye Road Kerr Road bustard Road Essentially area around Fischer's park. Many people in township walk to park and cars all speed excessively down the small roads	11/27/2022 11:14 AM
205	Kriebel Road, Old Forty Foot Road, Bustard Road, Allentown Road, Valley Forge Road.	11/26/2022 11:14 PM
206	Morris Rd & Valley Forge Rd Valley View Way at Morris & Locust (Milestone) Morris Rd near Bustard (windy, narrow)	11/26/2022 9:43 PM
207	1. Troxel Road from Keeler Road to Snyder Road. 2. Troxel Road from Stephen Lane to Sumneytown Pike 3. Snyder Road from Oxford Road to the High School Driveway. 4. Weikel Road from Snyder Road to the Township Swimming Pool. 5. Valley Forge Road from Snyder Road to the High School Driveway.	11/25/2022 10:10 PM
208	Kerr road (way to thin with cars zipping thru it), Bustard road, Forty foot road	11/25/2022 5:33 PM
209	Kreibel Rd Bustard Rd Valley Forge Rd	11/25/2022 4:22 PM
210	Kriebel Rd from Sumneytown Pike to Anders Rd. Over the bridges near Fushers Park and Troumbaur Rd. Sumneytown pike.	11/24/2022 10:33 AM
211	Weikel Road between Orchard Ln and Snyder. Troxel Rd between Carriage Way and Pickwick Lane	11/24/2022 8:34 AM
212	Bridle Path & Sumneytown Pike Troxel Road & Sumneytown Pike Sumneytown Pike & Valley Forge Road Allentown Road & Forty Foot Road	11/23/2022 11:35 PM
213	Sumneytown and Green Lane Sumneytown between Finch Run and Village Way (large differences in height of sidewalk slabs)	11/23/2022 7:22 PM
214	Bustard/Forty Foot Rd and Sumneytown- NO ONE stops when making a right from Sumneytown on to forty foot Accessing Fishers Park- an amazing resource for the township and you can't safely walk/bike there from pretty much anywhere in the township with kids! Bustard Rd	11/23/2022 7:13 PM
215	Bustard Road between Liberty and Fishers Park. There is zero shoulder. I would never bike through there and when I run its way up in the grass against the tree line both ways. Along Old Morris and Old Forty Foot. Busy roads with no sidewalk or shoulder both of which limit how far one can go that direction. Crossing Sumneytown at Bustard/Forty Foot is insanely dangerous! Intersection is way too big and cars rarely if ever abide cross walk lights. Ive almost been hit so many times I wont even go that way anymore.	11/23/2022 6:19 PM
216	The firehouse park trail ends on Green Lane road and can get busy due the neighborhood where Nash elementary is located. Since that trail ends on Green Lane road and is not connected to Liberty Bell Drive this presents a safety issue since there are a-lot of walkers with strollers coming from the neighborhood going back to their homes.	11/23/2022 3:17 PM
217	Old Forty Foot Road; Rittenhouse Rd Bridge on a bike or on foot going in the wrong direction	11/23/2022 11:19 AM
218	Allentown Road, Forty Foot Road	11/23/2022 10:37 AM
219	Trumbauer Rd no sidewalks Morris Rd no sidewalks Kriebel rd no sidewalks Bustard rd no sidewalks No access to get to any shopping centers via sidewalks	11/23/2022 7:24 AM
220	Access across township. Access to Freddy Hill or other businesses Access to public pool Access to grocery shopping	11/22/2022 8:15 PM
221	Quarry Road Sumneytown Pike	11/22/2022 5:57 PM
222	The bend on Keeler Road between Troxel and Quarry.	11/22/2022 5:37 PM
223	Sumneytown pike	11/22/2022 4:32 PM
224	1. Kerr Road 2. Kriebel Road 3. Springer Road 4. Schlosser Road *In addition to the people who live in these areas, we frequently get people taking extended walks and bike rides from	11/22/2022 2:55 PM

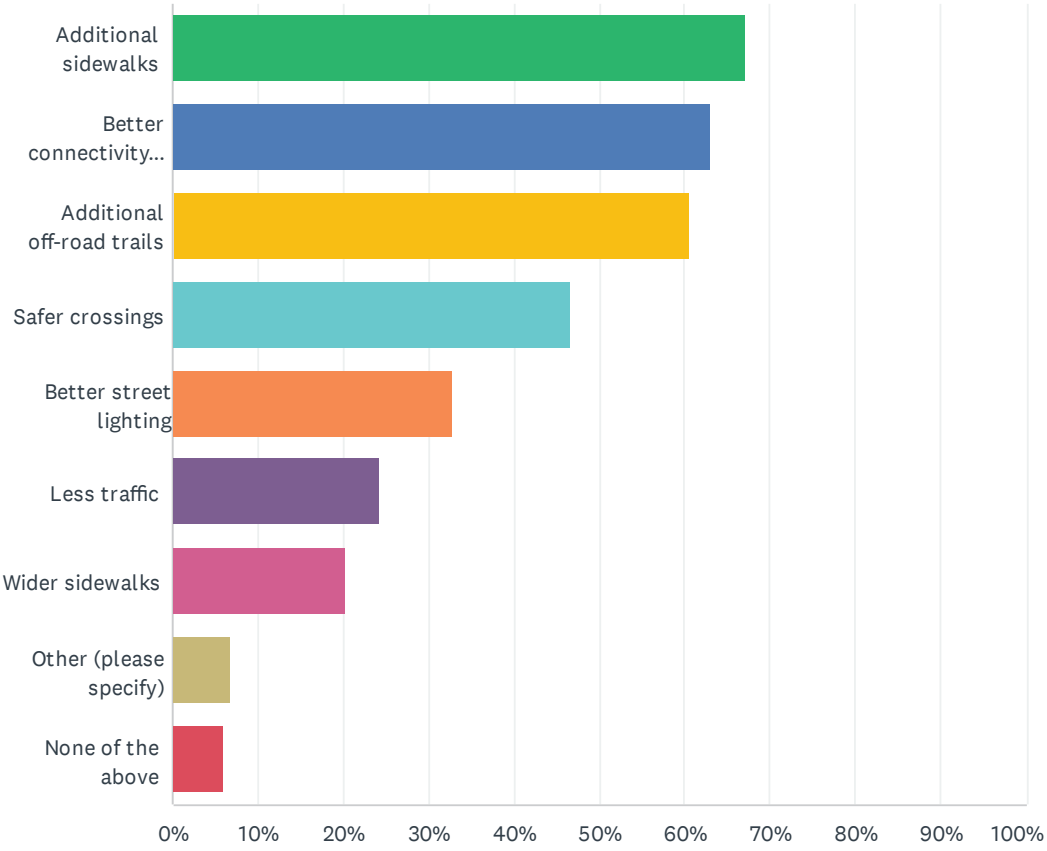
	Fisher Park, Evansburg, etc. In some areas, our roads are too narrow for two cars to pass, let alone what may happen if a pedestrian is there. If a truck or bus passes you, you often have to move to the side of the road to avoid being hit. Very dangerous area!	
225	Old Forty Foot Rd + Rittenhouse Rd Kriebel Rd + Bustard Rd Sumneytown Pk + Bustard Rd/Forty Foot Rd Clemens Rd Sumneytown Pk	11/22/2022 1:09 PM
226	Morris Rd Kreible Rd Sumneytown Pike	11/22/2022 7:25 AM
227	My neighborhood (Inglewood Gardens) is often used as a traffic cut through, especially Boyd and Woodlawn. I have seen cars go entirely too fast, and without sidewalks I am not comfortable letting my children walk and ride bikes in the neighborhood.	11/22/2022 7:22 AM
228	Valley Forge & Morris Road. Upper Gwynedd has bike lanes, then once you cross Valley Forge Road, no bike lanes on Morris Road in Towamencin Two.	11/21/2022 8:41 PM
229	Our half of Anders Road is too narrow. We've lost pets, wildlife, and mailboxes to speeding motorists. A stop sign or widening of the street is desperately needed!!!!!!!	11/21/2022 7:35 PM
230	South Valley Forge Road between Morris Road and Sumneytown Pike, locations on Allentown road that are narrow and have no sidewalks like the intersection of Fretz Road and Allentown Road	11/21/2022 6:20 PM
231	Anders Rd between Meadow Glen Dr and Valley Forge Rd has no sidewalk and no bike path, despite being very heavily walked and biked. Troxel Rd near Carriage way has no sidewalk on a blind turn in both directions.	11/21/2022 6:04 PM
232	Anders Road (1000 block) is heavily trafficked and people SPEED down the street. Every time I go for a walk, i risk getting hit by a motor vehicle because there are no sidewalks. We need sidewalks and speed bumps to help make the street safer.	11/21/2022 5:25 PM
233	Keeler Road Troxler Road Wambold Road Sumneytown Pike	11/21/2022 4:56 PM
234	Orvilla Road between Allentown road and Welsh road. Weikel Road between the pool and Snyder road. Old Forty Ft road between Rittenhouse and Hedrick road. Kriebel road between Sumneytown pike and Anders road.	11/21/2022 3:02 PM
235	Troxel Rd, Orvilla Rd, Allentown Rd (biking safety), Bustard Rd, and Sumneytown	11/20/2022 1:24 PM
236	Kriebel Road Sumneytown Pike Bustard Road Fischers Park Valley Forge Road	11/18/2022 11:22 AM
237	KRIEBEL RD (BETWEEN SUMNEYTOWN AND TURNPIKE BRIDGE BUSTARD RD (BETWEEN KRIEBLE AND SUMNEYTOWN) KRIEBEL RD (BUSTARD RD TO SPRINGER ROAD) TROXEL RD	11/16/2022 6:18 PM
238	Allentown and Valley Forge, Sumneytown and Valley Forge, Kriebel Road entire length (widen and add yellow lines and edge lines and sidewalks) Green lane road connecting for cars but at least for pedestrians by baseball fields. Sidewalks along Morris road from SunnyAyre to Trumbaur and alongTrumbauer.	11/16/2022 12:59 PM
239	Krieble Road Bustard Road Anders Road	11/14/2022 8:42 PM
240	Bikes on the narrow roads . Danger to themselves and vehicles	11/14/2022 8:39 AM
241	The bridge on trumbauer, the curve on Kriebel, sections on Kriebel with no sidewalk between rampart and green lane.	11/13/2022 9:10 PM
242	Weikel Road, between Snyder and Orchard Lane (i.e., section before it widens by Orchard).	11/13/2022 10:59 AM
243	Bicycles on back roads. They should be on trails already available to lessen traffic accidents	11/13/2022 6:57 AM
244	All of bustard rd, Kreible rd Summneytown pike Valley forge rd Allentown rd	11/12/2022 4:39 PM
245	Excessive speeding on Rittenhouse Rd the entire length	11/11/2022 11:12 PM
246	Kriebel Road	11/11/2022 8:43 PM
247	Sumneytown Pike, Valley Forge, Bustard Rd. Allentown Rd. (bike) Pretty much all roads without sidewalks that do not have a shoulder for walking or biking	11/11/2022 7:48 PM
248	Forty Foot Road, Troxel Road at the narrow bridge, Troxel Road where there is no sidewalk, Keeler Road at the 90 degree curve, Troxel Road right off Sumneytown pike	11/11/2022 7:47 PM

249	Intersection of Bustard and Krieble Rd, , Bustard Rd., Krieble Rd., all crossroads over Sumneytown and Valley Forge Rds	11/11/2022 6:26 PM
250	Forty Foot rd	11/11/2022 5:58 PM
251	Intersection of Old Forty Foot Road and Rittenhouse Road; all along Bustard Road from Sumneytown Pike to Hollis Road; Derstine Road; Detwiler Road; Forty Foot Road in front of Lowes, Wawa, Chick Fil A	11/11/2022 5:35 PM
252	On roads near fishers park, kriebel, springer, bustard; the intersection of bustard rd and kriebel by the bridge. Also worry for teens crossing sumneytown pike to get to wawa.	11/11/2022 4:41 PM
253	Kriebel Road - the entire length. Bustard Road Sumneytown Pike Keeler Road Allentown Road	11/11/2022 2:59 PM
254	Kreibel road, bustard road, keeler road, summneytown pike, valley forge road	11/11/2022 2:48 PM
255	Kriebel Rd, Bustard Rd, Keeler Rd, Summnytown Pike, and Valley Forge.	11/11/2022 2:47 PM
256	Towards giant in Harleysville from neighborhood. Along the Harleysville pike.	11/11/2022 1:40 PM
257	Allentown road mostly	11/11/2022 12:59 PM
258	Sumneytown Pike and Forty Foot Rd	11/11/2022 9:57 AM
259	Welsh Rd, Allentown Rd, Valley Forge Rd, Bustard Rd	11/11/2022 9:47 AM
260	Troxel Rd (all) Allentown Rd - all that goes through Towamencin. All intersections along it are pretty dangerous. Weikel Rd - all Sumneytown and Valley Forge Intersection Woodlawn Drive	11/11/2022 8:43 AM
261	Sumneytown Rd Allentown Rd Fourty Foot Rd	11/11/2022 6:39 AM
262	Bustard Road, Sumneytown Pike, Allentown Road, Welsh Road, Old Morris	11/11/2022 12:51 AM
263	Allentown Rd Valley Forge Rd	11/10/2022 10:44 PM
264	Morgan Way and Yeakel Way. There is no stop sign people don’t stop when kids are walking	11/10/2022 10:33 PM
265	Rt63 and Orvilla, Rt63 and Forty Foot, and Forty Foot and Sumneytown	11/10/2022 10:07 PM
266	1. Orville - Welsh Junction 2. Allentown - forty foot junction 3. Koeffel - Forty foot junction 4. The crosswalk outside walton farm	11/10/2022 9:29 PM
267	The speed on Forty Foot Road is getting bad especial with kids from Pennfield walking and kids walking or biking to wawa and shopping centers.	11/10/2022 9:29 PM
268	Kriebel Road from Sumneytown to Pheasant Hill Road There is a hill and bicyclists force drivers into blind oncoming traffic	11/10/2022 9:14 PM
269	Forty Foot Road Sumneytown Pike Allentown Road Tomlinson	11/10/2022 9:07 PM
270	The trail from fishers park after the bridge which leads to the street Anders Rd	11/10/2022 9:01 PM
271	Weimar rd and other area with no sidewalks/paths	11/10/2022 8:42 PM
272	Allentown Road crosswalk near WF	11/10/2022 8:24 PM
273	Dertstine rd. Tomlinson Rd. Allentown Rd. Forty Foot and Allentown intersection	11/10/2022 7:50 PM
274	The Kriebel curve - I was walking this week and staying to the side and a woman driving an SUV honked multiple time and forced me off the road on to private property so she could pass - there was no one coming towards her or in the other lane - I felt very very unsafe. I have seen this happen multiple times being a resident on this street.	11/10/2022 7:43 PM
275	Reinert Rd. to Forty Foot via Allentown. Tomlinson Rd. Deterstine Rd. Allentown Rd. Forty Foot because traffic does not stop at red lights.	11/10/2022 7:32 PM
276	Busy roads without sidewalks (Allentown, Valley Forge Forty Foot, Bustard, etc.)	11/10/2022 4:11 PM
277	Neighborhood behind Towamencin pool (no sidewalks) Weikel Road Allentown Road Kriebel Road Derstine/Fretz Rd.	11/10/2022 3:40 PM
278	Inglewood neighborhood workout sidewalks Morris rd	11/10/2022 2:38 PM

279	Morris Road between 363 and Bustard Rd	11/10/2022 2:06 PM
280	The cross section of summeytown and forty foot and Allentown and forty foot. I think the cross walks should be a lot larger, designated horizontal l stripes across and noted PED-Xing. Drivers are so distracted I think it would help.	11/10/2022 12:50 PM
281	Bustard Road, connecting Sumneytown to Fischers	11/10/2022 12:34 PM

Q16 What would encourage you to walk more? Select all that apply.

Answered: 357 Skipped: 74



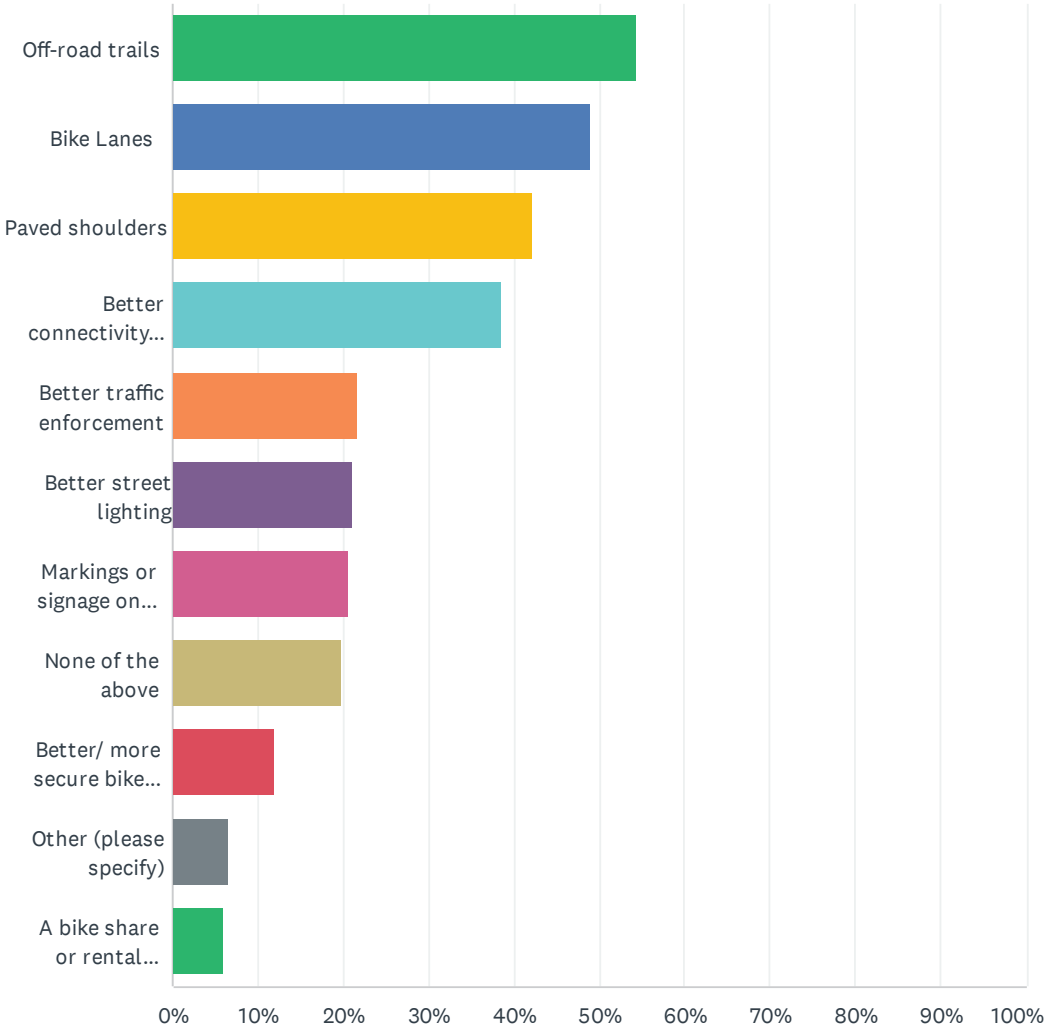
ANSWER CHOICES	RESPONSES	
Additional sidewalks	67.23%	240
Better connectivity between sidewalks	63.03%	225
Additional off-road trails	60.50%	216
Safer crossings	46.78%	167
Better street lighting	32.77%	117
Less traffic	24.37%	87
Wider sidewalks	20.17%	72
Other (please specify)	6.72%	24
None of the above	5.88%	21
Total Respondents: 357		

#	OTHER (PLEASE SPECIFY)	DATE
1	Better places to walk to!! My family likes to go to Skippack usually because it’s more fun to	4/12/2023 9:20 PM

	walk around. Please do something about these abandoned shopping centers and the boring Towamencin downtown. We don't need another Wawa. We need fun shops, restaurants, and entertainment.	
2	Speed limits	4/12/2023 6:52 PM
3	Towamencin Trail should be connected!	4/12/2023 6:05 PM
4	Wider Roads in some areas (e.g. Kerr Road).	4/12/2023 2:19 PM
5	speed enforcement or calming on Kreibel Rd	4/12/2023 11:56 AM
6	Township Police enforcing speed limits	4/12/2023 11:55 AM
7	Slow the traffic; force cyclists to yield to walkers; ban dirt bikes and ATVs	4/6/2023 3:50 PM
8	No	3/31/2023 5:37 PM
9	GET THE POLICE ON MORRIS RD	3/31/2023 5:04 PM
10	Green lane road trail	3/31/2023 3:32 PM
11	Sidewalks to shopping, pool, parks and schools	3/27/2023 3:23 PM
12	More control of traffic speed.	3/24/2023 5:29 PM
13	Not Applicable. I walk plenty in my neighborhood and connect easily to Christopher Dock campus.	2/18/2023 9:20 PM
14	Lowering speed limits	2/9/2023 5:04 PM
15	Parking at trail entrances	2/1/2023 4:55 PM
16	Keep bicycles and dirt bikes off the sidewalks	2/1/2023 12:19 PM
17	More sidewalks. Bike lanes - there is no real safe area to ride a bike in Towamencin.	1/26/2023 8:36 PM
18	Longer traffic lights for crossing and no turn on red	1/15/2023 3:30 PM
19	BRIDE OVER TOWAMENCIN CREEK AT BUSTARD AND KRIEBLE RD INTERSECTION	11/16/2022 6:27 PM
20	Being able to walk to fischers park safely from Kriebel road	11/13/2022 9:13 PM
21	Violations for speeding on Rittenhouse Rd	11/11/2022 11:14 PM
22	Paved trails not rocks that wash away	11/11/2022 8:45 PM
23	Clean air	11/11/2022 1:41 PM
24	Stop sign at Yeakel Way	11/10/2022 10:34 PM

Q17 What would encourage you to bike more? Select all that apply.

Answered: 349 Skipped: 82



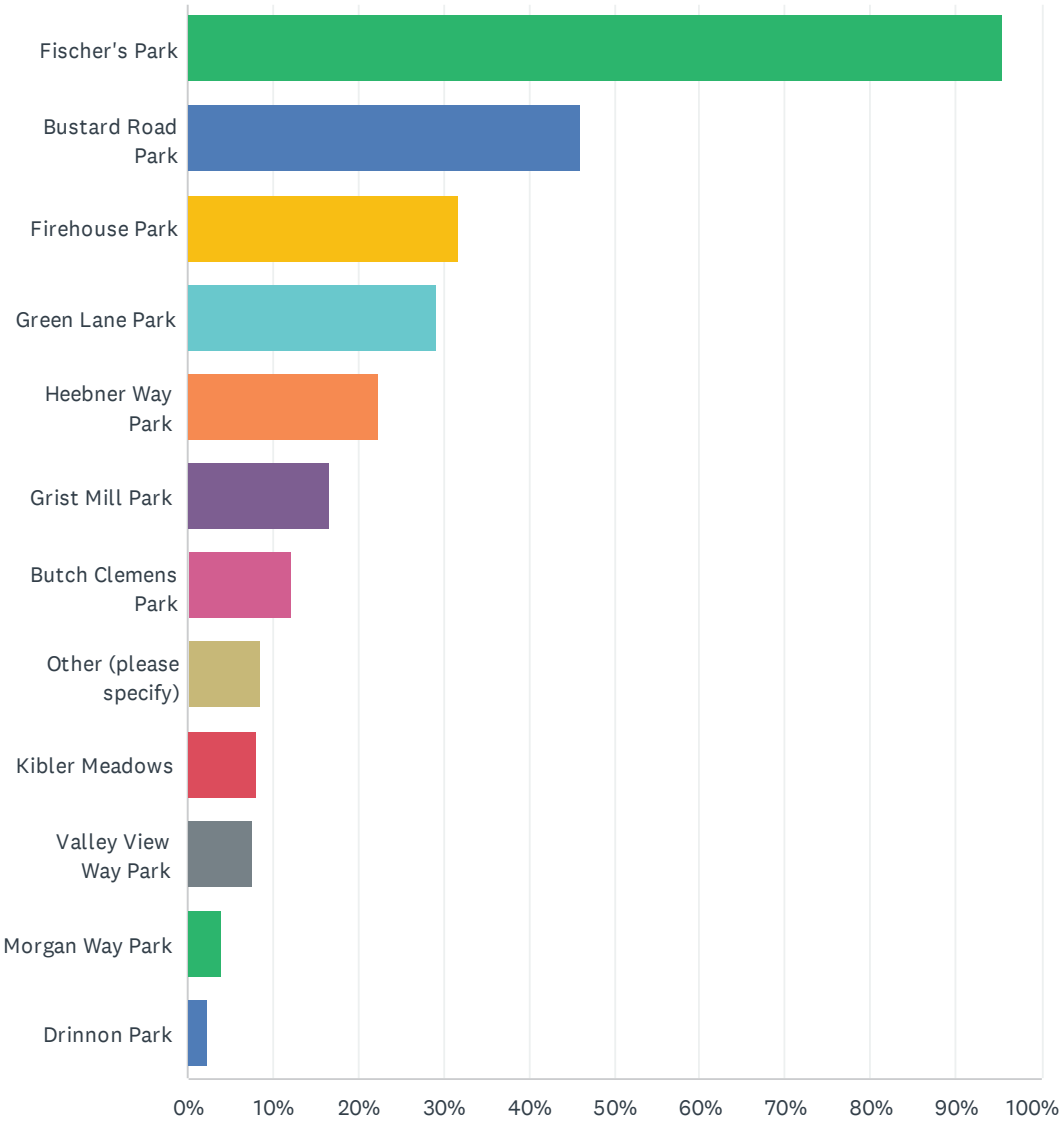
ANSWER CHOICES	RESPONSES	
Off-road trails	54.44%	190
Bike Lanes	49.00%	171
Paved shoulders	42.12%	147
Better connectivity between bike facilities	38.68%	135
Better traffic enforcement	21.78%	76
Better street lighting	21.20%	74
Markings or signage on roads	20.63%	72
None of the above	19.77%	69
Better/ more secure bike parking	12.03%	42
Other (please specify)	6.59%	23
A bike share or rental program	6.02%	21
Total Respondents: 349		

#	OTHER (PLEASE SPECIFY)	DATE
1	Speed limits	4/12/2023 6:52 PM
2	Township Police enforcing speed limits	4/12/2023 11:55 AM
3	Would not bike on streets	4/11/2023 6:40 PM
4	traffic lights that sense bicycles not just cars	4/6/2023 10:31 PM
5	Enforcement of rules for bikers and drivers.	4/2/2023 12:58 PM
6	Stop signs at Green Lane/Liberty Bell Dr.	3/31/2023 6:33 PM
7	STOP THE SPEEDING AND TAIL GAITING	3/31/2023 5:04 PM
8	Trails	3/31/2023 4:37 PM
9	Green lane road trail	3/31/2023 3:32 PM
10	Force cyclists to follow the laws!	3/24/2023 5:31 PM
11	I do not own a bike so doesn't pertain to me.	2/18/2023 9:20 PM
12	Connection to established trails	2/3/2023 1:43 PM
13	More bike lanes and trails. Would like to get from Kulpsville to Skippack, Harleysville and North Penn HS by walking or bike. There are NO SHOLDERS on these roads so it is very dangerous to walk and bike. I like to leave the car home whenever I can as I prefer to walk/bike for errands and exercise.	1/26/2023 8:36 PM
14	Paved trails	1/5/2023 11:29 AM
15	a highly interconnected bike path such as in Harleysville, interconnecting neighborhoods, schools & businesses	1/4/2023 5:36 PM
16	More sidewalks	1/4/2023 4:05 PM
17	They shouldn't only connect to bike facilities. They need to connect to all the kinds of places motorists would go to such as stores, schools, movie theaters, churches, etc. Any bike lanes installed should be protected because otherwise it's just paint that drivers can ignore, and the bike lanes and trails need winter maintenance.	12/30/2022 11:00 AM
18	wayfinding, existing signs are confusing at best	12/10/2022 1:58 PM

19	Better roads - some roads get worked on and then paved in spots, 3 or 4 places, and they are brutal to ride across.	12/1/2022 11:24 AM
20	biking on paved ways vs gravels.	11/29/2022 4:43 PM
21	a way to cross the Mainland Golf Course creek in the "wrong" direction for that bridge - maybe a narrow lane painted on the bridge for walkers & bikes - it is wide enough for 2 cars to squeeze past each other - I did this once decades ago!	11/23/2022 11:20 AM
22	Connectivity of trails	11/21/2022 4:58 PM
23	Less traffic	11/10/2022 9:08 PM

Q18 Which parks, natural areas, or open spaces areas do you currently visit? (Please check all that apply)

Answered: 343 Skipped: 88



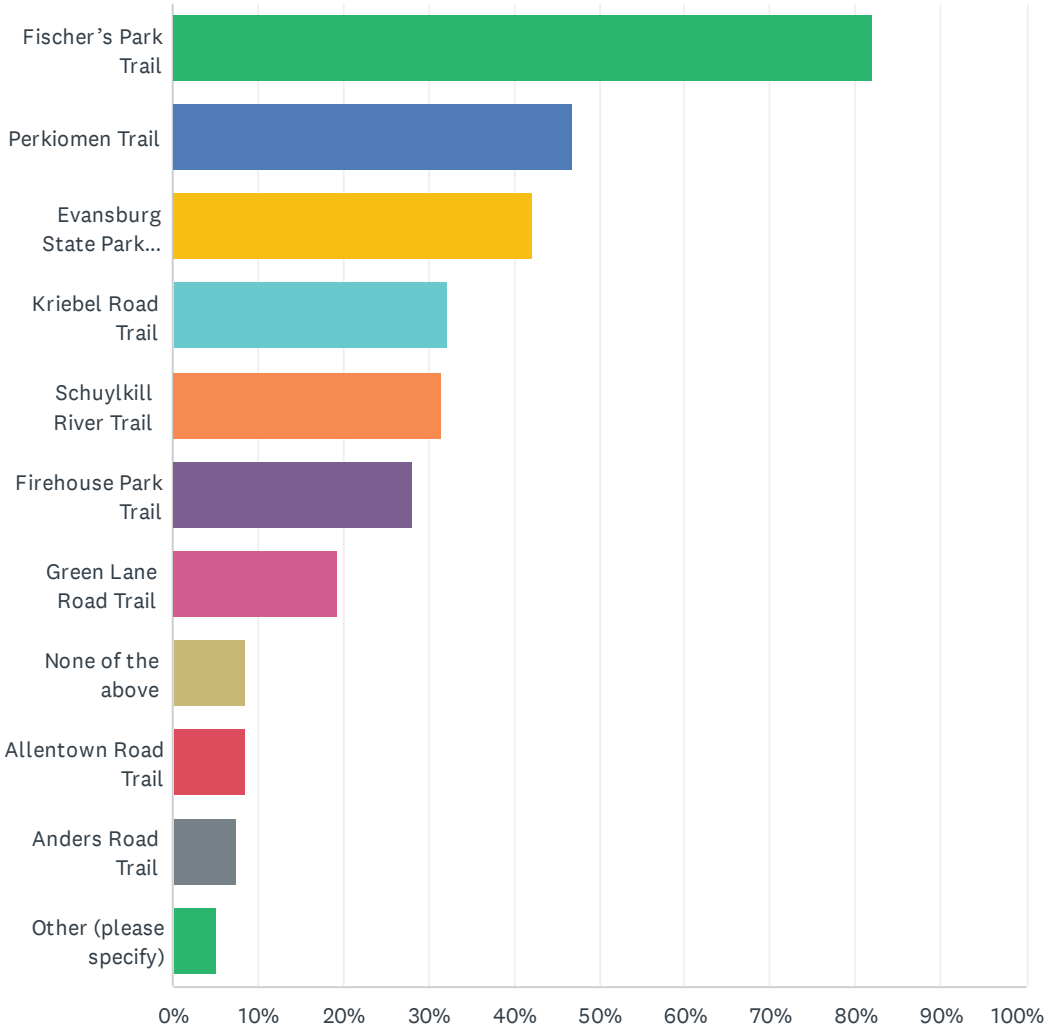
ANSWER CHOICES	RESPONSES	
Fischer's Park	95.63%	328
Bustard Road Park	46.06%	158
Firehouse Park	31.78%	109
Green Lane Park	29.15%	100
Heebner Way Park	22.45%	77
Grist Mill Park	16.62%	57
Butch Clemens Park	12.24%	42
Other (please specify)	8.45%	29
Kibler Meadows	8.16%	28
Valley View Way Park	7.58%	26
Morgan Way Park	4.08%	14
Drinnon Park	2.33%	8
Total Respondents: 343		

#	OTHER (PLEASE SPECIFY)	DATE
1	Evansburg	4/4/2023 5:00 PM
2	Between Towamencin Pool and Woodlawn	4/4/2023 3:27 PM
3	Pool walking area	4/4/2023 2:38 PM
4	Heebner Park, White's Road Park	3/31/2023 4:53 PM
5	Stoney Creek Park	3/27/2023 11:41 AM
6	I do not visit parks.	3/24/2023 5:30 PM
7	Drubbing park needs paved path and improved playground	2/13/2023 2:16 PM
8	Evansburg State Park	2/9/2023 5:05 PM
9	Charles L. Reed Park, Whites Rd. Park, Parkside Place	2/6/2023 11:50 PM
10	Garfield park	2/6/2023 1:24 PM
11	Parkside place	2/1/2023 4:59 PM
12	Gwennyd preserve	1/23/2023 4:16 PM
13	Evansburg Park	1/13/2023 9:24 AM
14	Area by the pool complex	1/4/2023 4:56 PM
15	Towamencin pool	12/28/2022 6:19 PM
16	Spring Valley and Peace Valley Park	12/15/2022 9:45 PM
17	Evansburg State Park	12/10/2022 2:02 PM
18	I used many more when I had kids playing soccer!	12/1/2022 11:25 AM
19	Out of township trails	11/30/2022 7:08 PM
20	Plains Mennonite Church Park (Hatfield)	11/30/2022 6:59 PM
21	Isn't Bustard rd park the same as the Firehouse park?	11/23/2022 11:21 AM

22	Heebner Park in Worchester	11/21/2022 7:36 PM
23	Towamencin Pool Park	11/20/2022 1:27 PM
24	New Kriebel Road Trail	11/16/2022 1:00 PM
25	Briarwyck Park	11/11/2022 1:42 PM
26	Would visit more/parks lack active activities	11/11/2022 1:01 PM
27	Park/trail around Towamencin pool	11/10/2022 9:44 PM
28	Trails within Dock Woods	11/10/2022 7:35 PM
29	Park at the pool	11/10/2022 2:40 PM

Q19 Which trails do you currently visit? (Please check all that apply)

Answered: 351 Skipped: 80

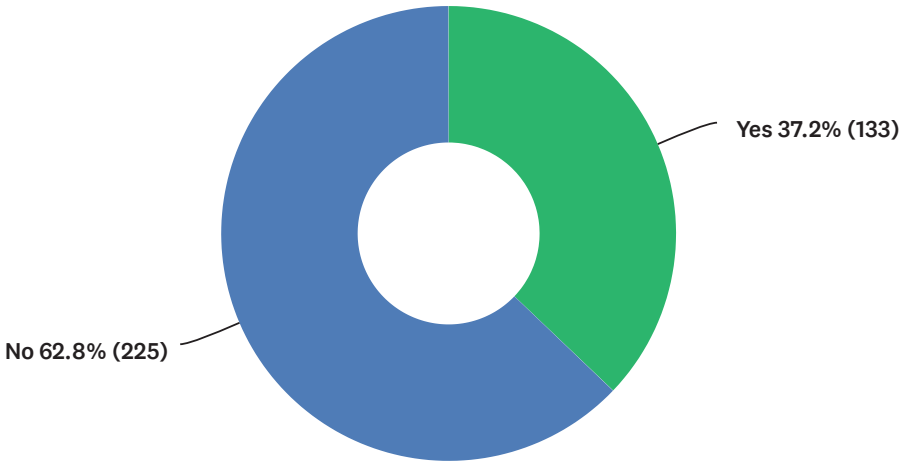


ANSWER CHOICES	RESPONSES	
Fischer's Park Trail	82.05%	288
Perkiomen Trail	47.01%	165
Evansburg State Park Trails	42.17%	148
Kriebel Road Trail	32.19%	113
Schuylkill River Trail	31.62%	111
Firehouse Park Trail	28.21%	99
Green Lane Road Trail	19.37%	68
None of the above	8.55%	30
Allentown Road Trail	8.55%	30
Anders Road Trail	7.41%	26
Other (please specify)	5.13%	18
Total Respondents: 351		

#	OTHER (PLEASE SPECIFY)	DATE
1	There is no Anders Rd Trail??!?! - Have no idea about the Allentown Rd Trail, Where is the Green Lane Rd Trail?,	4/11/2023 1:03 PM
2	Wissahickon Valley (Green)	4/6/2023 12:28 PM
3	Have no idea where these trails are or the names of the trails I go on	4/4/2023 5:07 PM
4	I do not use trails.	3/24/2023 5:30 PM
5	Lower Gwynedd Trails	2/9/2023 9:00 PM
6	New trail behind Valley View park	2/6/2023 9:08 AM
7	Trail behind Parkside	2/1/2023 4:59 PM
8	Skippack Trail	2/1/2023 11:36 AM
9	Skippack Trail. Weekly use Perkiomen and Skippack trails to visit eating places and go for exercise. The other trails are not sufficiently linked to allow me to utilize them. I often walk from Towamencin Firehouse to Ralph's Corners, but it is hard to walk in other nearby areas.	1/26/2023 8:40 PM
10	Have no idea where these trails are or the names of the trails I go on	1/4/2023 5:28 PM
11	Green Ribbon Trail, 202 Parkway Trail, Liberty Bell Trail	12/30/2022 11:37 AM
12	I don't know the names of the trails.	12/30/2022 11:02 AM
13	202 to Doylestown, Skippack Trail	12/21/2022 9:36 AM
14	Zacharias Creek (not in Towamencin)	11/22/2022 5:39 PM
15	Zacharias Creek Trail	11/18/2022 11:27 AM
16	Zacharia	11/14/2022 7:15 AM
17	Green ribbon trail, Zacharias creek trail	11/13/2022 9:15 PM
18	Franconia Park, White's Road Park	11/11/2022 7:49 PM

Q20 Do you have school-aged children?

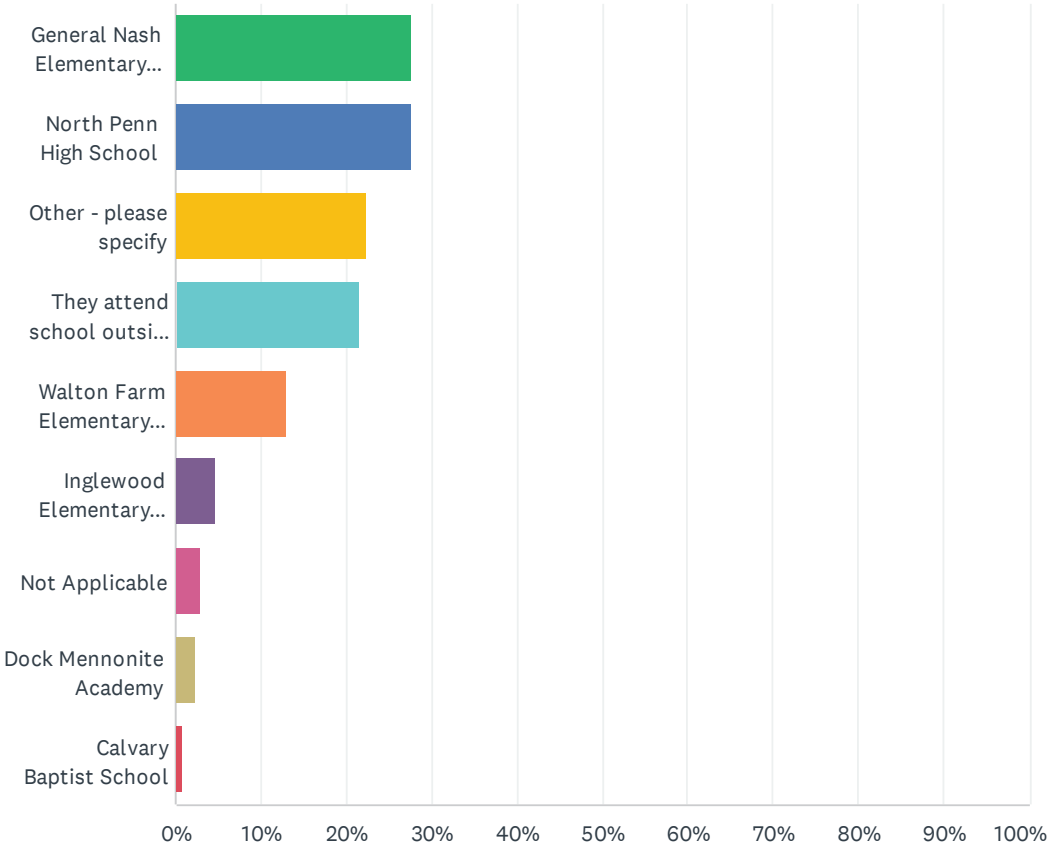
Answered: 358 Skipped: 73



ANSWER CHOICES	RESPONSES	
Yes	37.2%	133
No	62.8%	225
TOTAL		358

Q21 Which school(s) in the township do your school-aged children attend?

Answered: 130 Skipped: 301



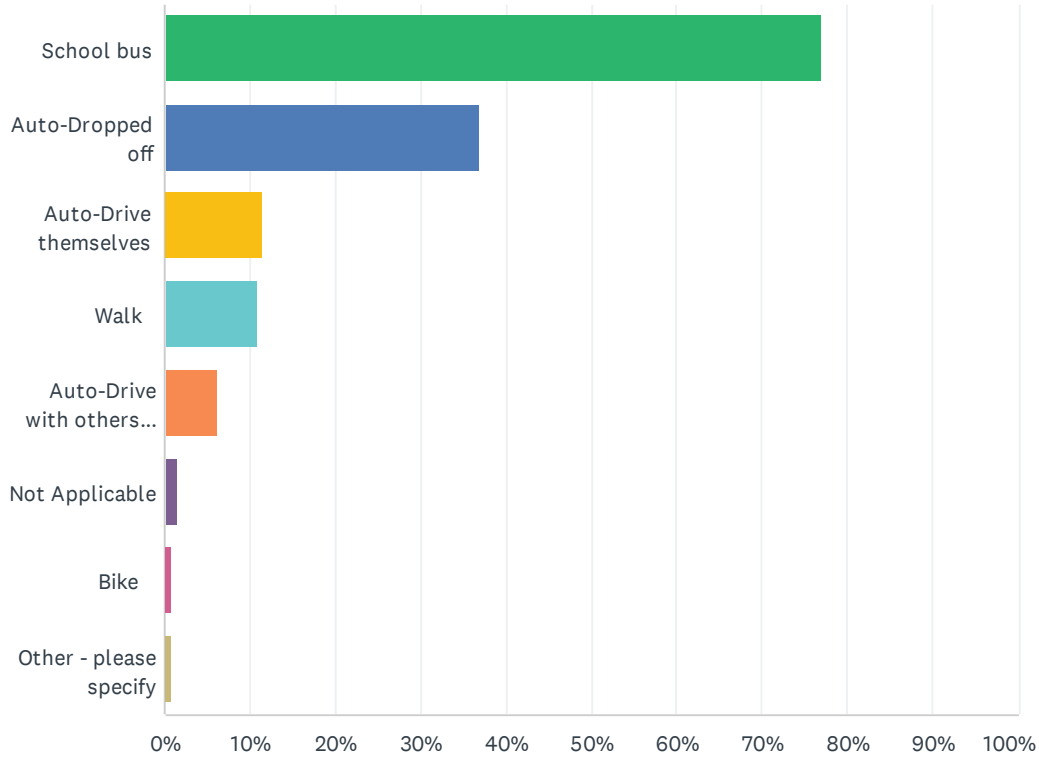
ANSWER CHOICES	RESPONSES	
General Nash Elementary School	27.69%	36
North Penn High School	27.69%	36
Other - please specify	22.31%	29
They attend school outside of Towamencin Township	21.54%	28
Walton Farm Elementary School	13.08%	17
Inglewood Elementary School	4.62%	6
Not Applicable	3.08%	4
Dock Mennonite Academy	2.31%	3
Calvary Baptist School	0.77%	1
Total Respondents: 130		

#	OTHER - PLEASE SPECIFY	DATE
1	Gwynedd Square	4/12/2023 3:34 PM

2	Gwynedd Square	4/11/2023 7:03 PM
3	Gwynedd Square	4/11/2023 3:36 PM
4	Gwynedd Square	4/11/2023 3:21 PM
5	Penndale and Gwynedd Sq	4/11/2023 3:05 PM
6	Corpus christi	4/11/2023 1:17 PM
7	Walton farm needs paved path from her net way	2/13/2023 2:17 PM
8	Corpus Christi	2/7/2023 8:32 AM
9	Pennfield; will attend NPHS	2/7/2023 6:37 AM
10	Preschool	2/6/2023 11:40 PM
11	Penndale Gwynedd Square	2/6/2023 9:31 AM
12	SHS	2/1/2023 11:10 AM
13	Other	1/5/2023 8:38 PM
14	La Petite Academy	1/4/2023 4:14 PM
15	Pennfield MS	1/4/2023 3:56 PM
16	Pennfield MS	1/4/2023 3:28 PM
17	Pennfield MS	1/4/2023 3:24 PM
18	Corpus Christi	1/2/2023 1:56 AM
19	Am kulp	12/22/2022 12:12 PM
20	Pennfield	12/1/2022 7:59 PM
21	College	12/1/2022 11:26 AM
22	Corpus Christi	11/23/2022 11:29 AM
23	Pennfield Middle School	11/23/2022 10:39 AM
24	Gwynedd Square	11/21/2022 7:37 PM
25	When younger, attended General Nash Elementary School	11/11/2022 3:04 PM
26	Gwynedd Square	11/10/2022 9:03 PM
27	Corpus Christi	11/10/2022 8:55 PM
28	Gwynned square	11/10/2022 8:22 PM
29	Pennfield	11/10/2022 7:37 PM

Q22 What modes of transportation do your school-aged children use to get to/from school? Select all that apply.

Answered: 130 Skipped: 301

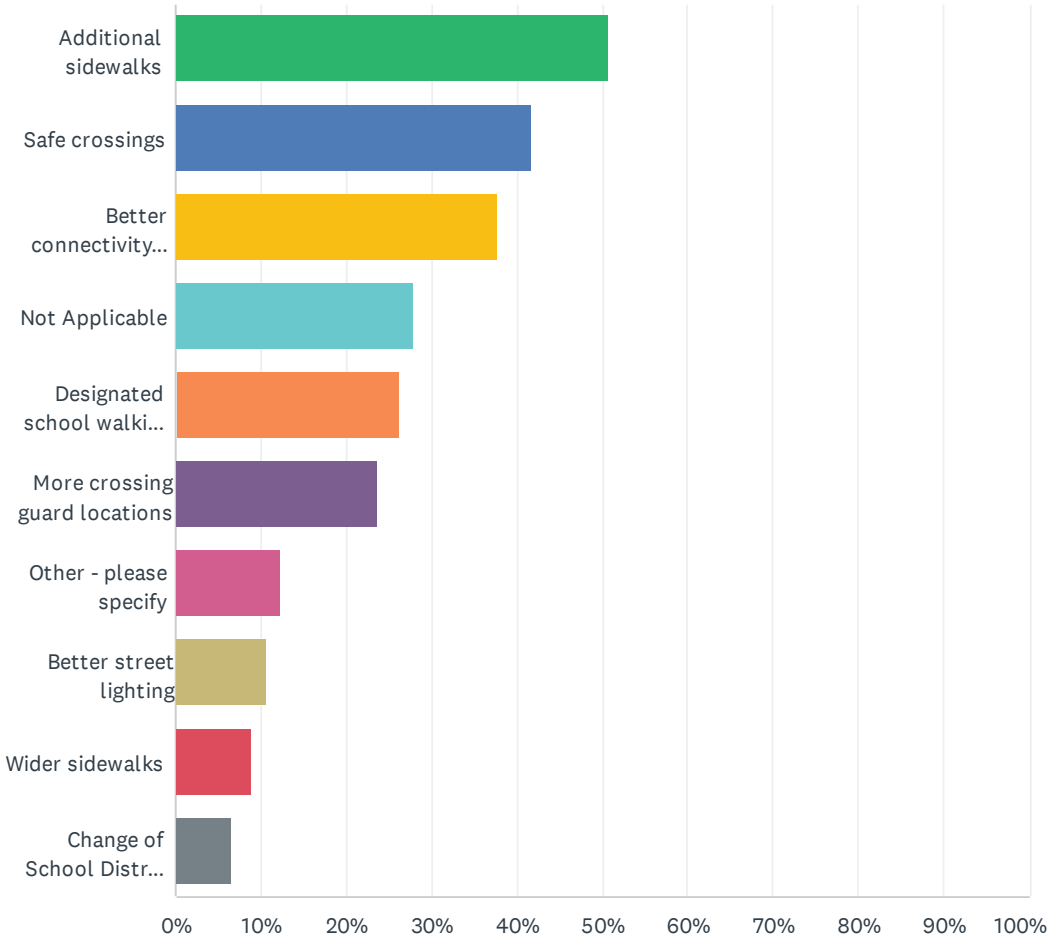


ANSWER CHOICES	RESPONSES	
School bus	76.92%	100
Auto-Dropped off	36.92%	48
Auto-Drive themselves	11.54%	15
Walk	10.77%	14
Auto-Drive with others (carpool)	6.15%	8
Not Applicable	1.54%	2
Bike	0.77%	1
Other - please specify	0.77%	1
Total Respondents: 130		

#	OTHER - PLEASE SPECIFY	DATE
1	Onewheel	12/30/2022 7:52 PM

Q23 If your child/children do not walk or bike to/from school, which physical changes would need to be made for this to occur? Select all that apply.

Answered: 122 Skipped: 309

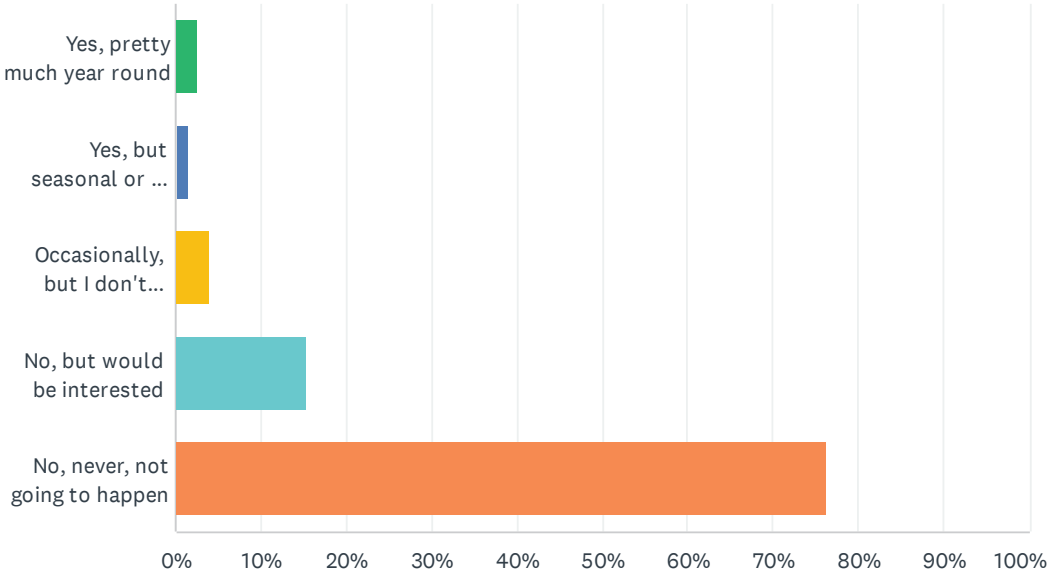


ANSWER CHOICES	RESPONSES	
Additional sidewalks	50.82%	62
Safe crossings	41.80%	51
Better connectivity between sidewalks	37.70%	46
Not Applicable	27.87%	34
Designated school walking routes	26.23%	32
More crossing guard locations	23.77%	29
Other - please specify	12.30%	15
Better street lighting	10.66%	13
Wider sidewalks	9.02%	11
Change of School District Policies	6.56%	8
Total Respondents: 122		

#	OTHER - PLEASE SPECIFY	DATE
1	Township Police enforcing speed limits	4/12/2023 11:57 AM
2	a bridge at green lane rd	3/31/2023 4:48 PM
3	Walking bridge over the creek	3/31/2023 4:38 PM
4	Safe bike storage at NPHS	2/17/2023 2:27 PM
5	Paved path from heebner way to the back of Walton farm	2/13/2023 2:17 PM
6	Bike lanes, traffic enforcement	2/9/2023 5:06 PM
7	Bike Paths and bike lanes and more connectivity in and out of the High School complex to surrounding neighborhoods, and better traffic speed enforcement.	12/30/2022 11:38 AM
8	safe bicycle paths	12/10/2022 2:05 PM
9	Cars do not stop for the bus most mornings. I would be very hesitant to allow my children to cross the street!	11/23/2022 7:24 PM
10	Move us out of Gwynedd Square to Nash or other	11/21/2022 7:37 PM
11	I’m not sure we’re close enough but there are no sidewalks so it’d be impossible	11/13/2022 9:19 PM
12	A crosswalk / guard close to the Inglewood walking path near Weikel Road side. Allentown Road is no place to cross currently without a traffic light.	11/13/2022 11:07 AM
13	When they were at General Nash, build a pedestrian bridge to connect Green Lane with Green Lane Road.	11/11/2022 3:04 PM
14	Less traffic	11/10/2022 9:09 PM
15	Too far to walk	11/10/2022 12:52 PM

Q24 Do you presently commute to work on foot?

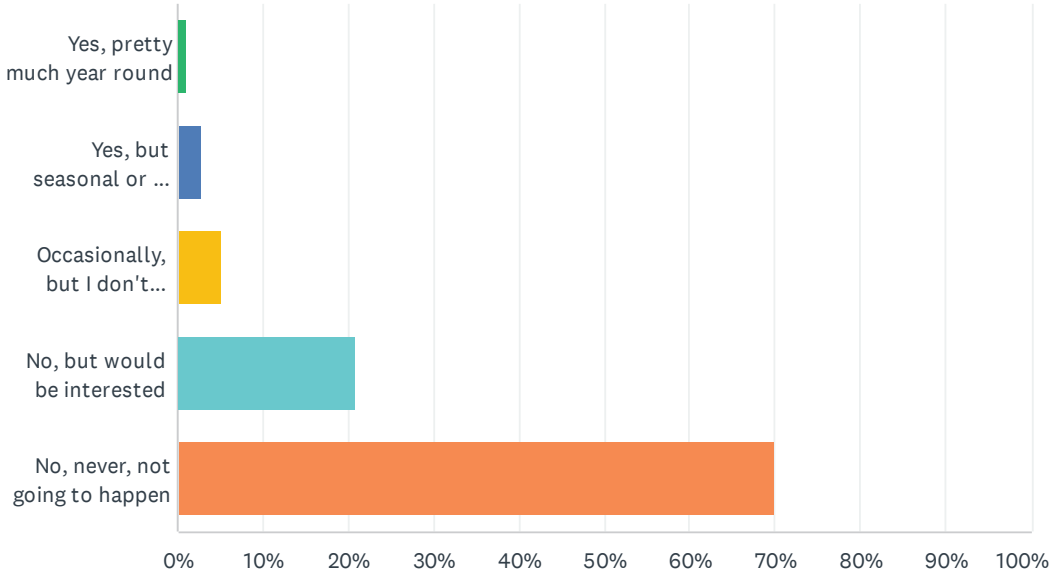
Answered: 343 Skipped: 88



ANSWER CHOICES	RESPONSES	
Yes, pretty much year round	2.62%	9
Yes, but seasonal or in fair weather	1.46%	5
Occasionally, but I don't consider myself a 'commuter'	4.08%	14
No, but would be interested	15.45%	53
No, never, not going to happen	76.38%	262
TOTAL		343

Q25 Do you presently commute to work by bicycle?

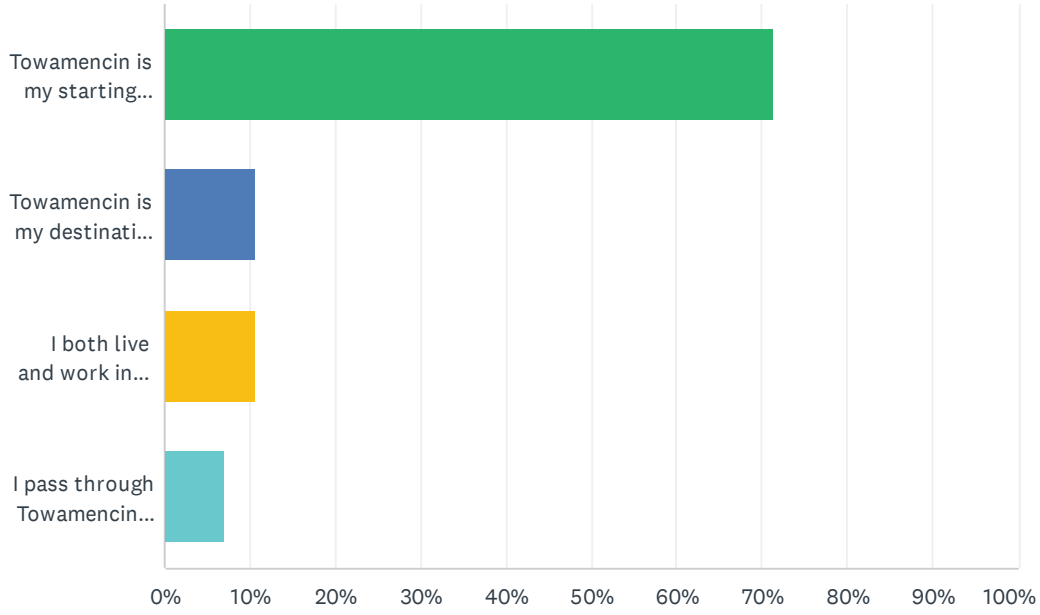
Answered: 353 Skipped: 78



ANSWER CHOICES	RESPONSES	
Yes, pretty much year round	1.13%	4
Yes, but seasonal or in fair weather	2.83%	10
Occasionally, but I don't consider myself a 'commuter'	5.10%	18
No, but would be interested	20.96%	74
No, never, not going to happen	69.97%	247
TOTAL		353

Q26 If you commute to work by bicycle:

Answered: 28 Skipped: 403



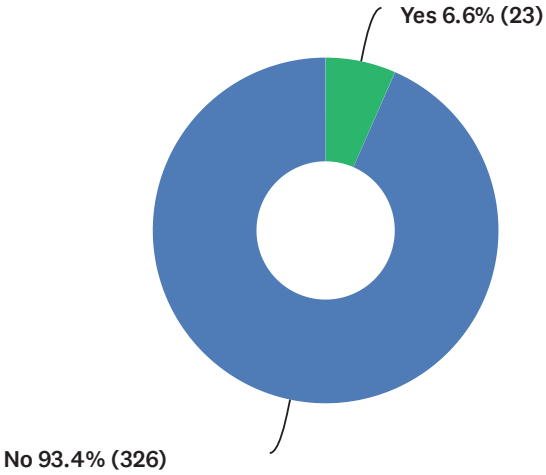
ANSWER CHOICES	RESPONSES	
Towamencin is my starting point (please enter destination in 'Please specify' below)	71.43%	20
Towamencin is my destination (please enter starting point in 'Please specify' below)	10.71%	3
I both live and work in Towamencin	10.71%	3
I pass through Towamencin (please enter start and end points in 'Please specify' below)	7.14%	2
TOTAL		28

#	PLEASE SPECIFY.	DATE
1	Merck	4/13/2023 3:34 PM
2	Merck West Point Site	4/11/2023 2:27 PM
3	Upper Gwynedd	4/6/2023 10:34 PM
4	North Wales	4/6/2023 3:52 PM
5	Telford	4/4/2023 1:44 PM
6	Merck	3/24/2023 5:33 PM
7	Merck	2/17/2023 5:50 PM
8	140 Clemens Road, Harleysville PA	2/10/2023 12:58 PM
9	I only bike through Towamencin for recreation and leisure	2/9/2023 9:01 PM
10	From Hatfield to Merck	2/9/2023 7:56 PM
11	North Wales and Blue Bell	2/1/2023 12:21 PM

12	Treywetown rd	2/1/2023 12:15 PM
13	King of Prussia	2/1/2023 11:37 AM
14	North Wales	1/23/2023 4:05 PM
15	Broad street lansdale	1/8/2023 2:35 PM
16	Montgomery County Community College, avoiding the end of Morris near Fisher's Park	1/4/2023 5:38 PM
17	Telford	1/4/2023 3:35 PM
18	Main and Chestnut in Souderton	12/30/2022 11:03 AM
19	Hatfield Borough	12/16/2022 7:48 AM
20	Carriage Way	12/1/2022 11:27 AM

Q27 Do you commute to work using public transportation (i.e. bus, train)

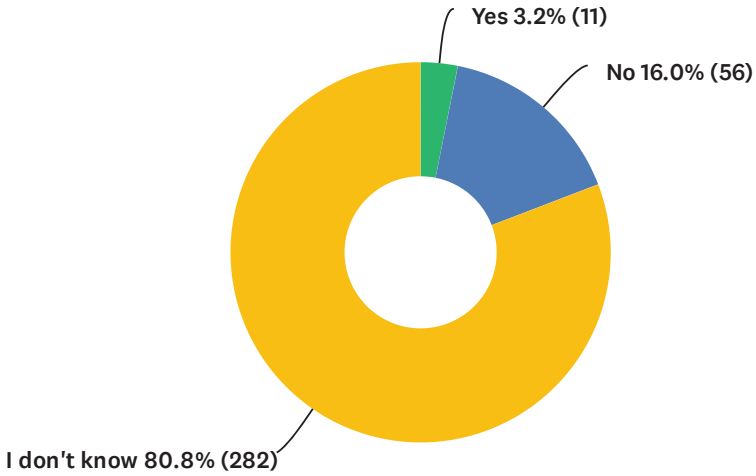
Answered: 349 Skipped: 82



ANSWER CHOICES	RESPONSES	
Yes	6.6%	23
No	93.4%	326
TOTAL		349

Q28 Are there an adequate number of bus shelters in Towamencin Township?

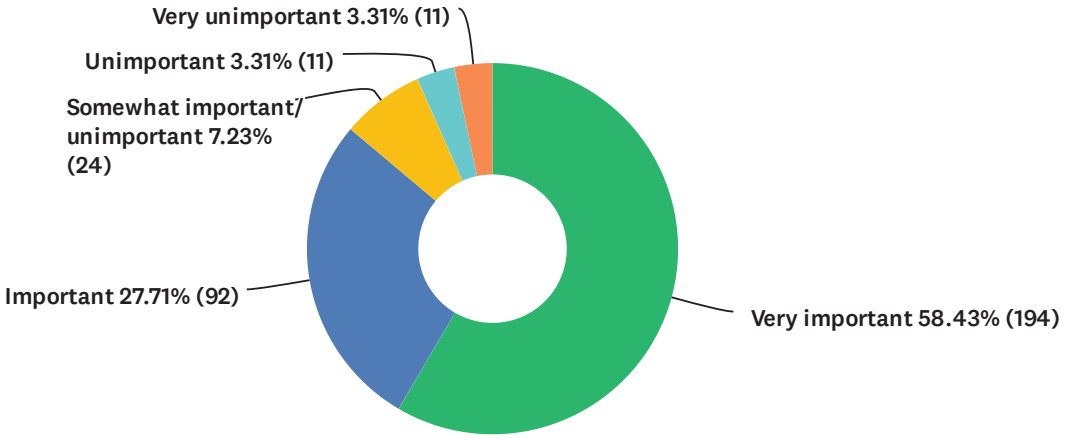
Answered: 349 Skipped: 82



ANSWER CHOICES	RESPONSES	
Yes	3.2%	11
No	16.0%	56
I don't know	80.8%	282
TOTAL		349

Q29 How important are sidewalk connections and trails to the well-being of the community and the quality of life in Towamencin Township?

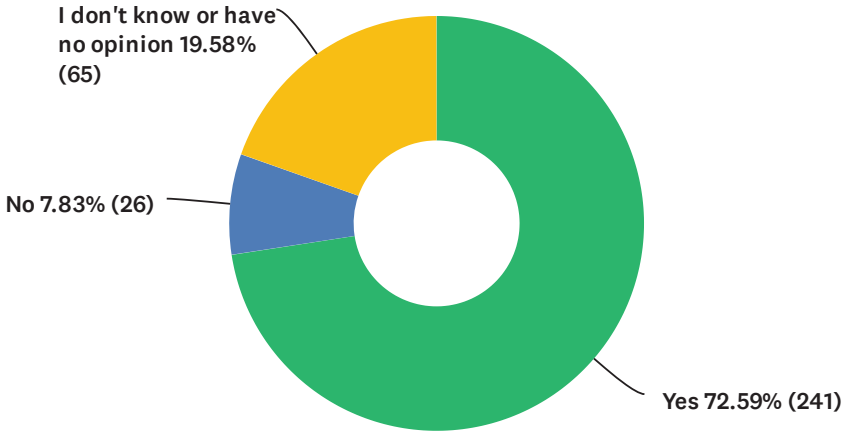
Answered: 332 Skipped: 99



ANSWER CHOICES	RESPONSES	
Very important	58.43%	194
Important	27.71%	92
Somewhat important/ unimportant	7.23%	24
Unimportant	3.31%	11
Very unimportant	3.31%	11
TOTAL		332

Q30 As a motorist I would accept a slightly longer travel time if that meant a safer environment for pedestrians and bicyclists.

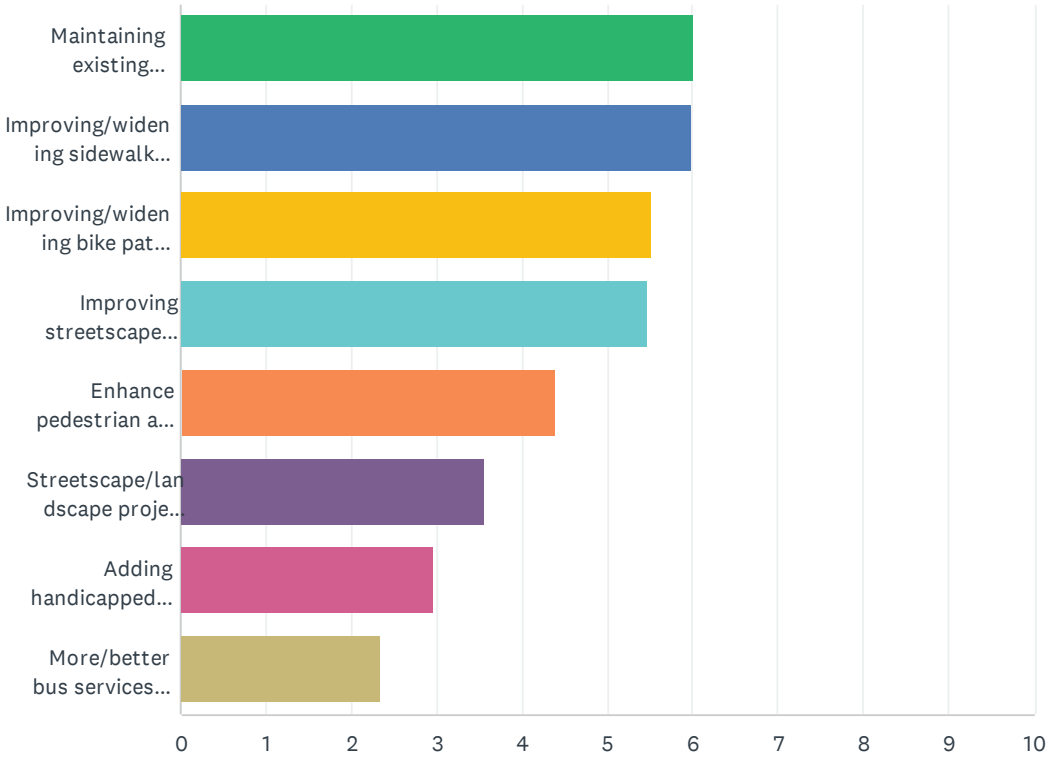
Answered: 332 Skipped: 99



ANSWER CHOICES	RESPONSES	
Yes	72.59%	241
No	7.83%	26
I don't know or have no opinion	19.58%	65
TOTAL		332

Q31 Please rank the following improvements on how you think Towamencin Township can create better pedestrian and bicycle connectivity. (1=Highest Priority, 8=Lowest Priority)

Answered: 325 Skipped: 106



	1	2	3	4	5	6	7	8	TOTAL	SCORE
Maintaining existing infrastructure (sidewalks, roadways, etc.)	31.60% 97	16.94% 52	15.96% 49	13.36% 41	8.79% 27	7.49% 23	4.56% 14	1.30% 4	307	6.02
Improving/widening sidewalks and pedestrian paths	22.11% 67	24.42% 74	22.11% 67	12.87% 39	7.26% 22	5.61% 17	3.63% 11	1.98% 6	303	6.00
Improving/widening bike paths and routes	16.67% 50	20.67% 62	18.00% 54	15.00% 45	14.00% 42	7.00% 21	6.00% 18	2.67% 8	300	5.53
Improving streetscape safety measures (adding crosswalks, pedestrian signage/signals, sidewalk buffers, etc.)	14.62% 44	19.60% 59	13.29% 40	23.26% 70	16.94% 51	6.31% 19	4.98% 15	1.00% 3	301	5.48
Enhance pedestrian and biking connections to commercial corridors	11.44% 35	9.48% 29	13.40% 41	8.82% 27	13.73% 42	21.57% 66	15.36% 47	6.21% 19	306	4.39
Streetscape/landscape projects to improve corridor aesthetics (adding street lights, plantings, decorative pavements, etc.)	2.65% 8	5.30% 16	11.26% 34	10.60% 32	17.88% 54	19.87% 60	14.90% 45	17.55% 53	302	3.57
Adding handicapped ramps/accessibility improvements	2.64% 8	3.30% 10	4.95% 15	12.21% 37	11.22% 34	15.18% 46	21.45% 65	29.04% 88	303	2.97
More/better bus services and routes	2.30% 7	1.97% 6	1.97% 6	3.62% 11	8.88% 27	14.47% 44	25.99% 79	40.79% 124	304	2.34

Q32 Please share any additional thoughts, comments or ideas you have for the Towamencin Township Sidewalk Connectivity Plan.

Answered: 147 Skipped: 284

#	RESPONSES	DATE
1	Connect towamencin lane trail to other bike routes (srt)	4/13/2023 7:37 PM
2	It would also be nice to have a few trashcans here and there so people can discard trash or pick up and discard litter.	4/13/2023 3:37 PM
3	Sidewalks from the commercial centers to surrounding neighborhoods needs to be a priority. Also, completing the proposed off-road trails would add a lot of quality to the area.	4/13/2023 9:46 AM
4	Adding bike lanes and/or sidewalks to Sumneytown Pike would not be worth it as the drivers are not careful, they speed, litter, and do not watch out for bikers or pedestrians. It is dangerous to even mow the lawn in our yard! It's much more important to add bike paths and sidewalks on less traveled roads.	4/13/2023 9:06 AM
5	The Towamencin Trail seems to be a mishmash of pieces here and there with no connectivity. If it really is a continuous trail, could you place maps I.e. outside of the pool area in Weikel?,	4/12/2023 6:09 PM
6	Pick points (commercial areas/parks) throughout the township and determine how many residents could potentially reach that point safely as a pedestrian to determine priority of improvements and connectivity.	4/12/2023 3:07 PM
7	I'd like to see added recreational facilities with Tennis & Pickleball. Towamencin should consider a facility like Montgomery & Upper Gwynedd has.	4/12/2023 2:45 PM
8	Please remember that this township already has a drainage problem. Do not pave more of our land and make a bigger problem.	4/12/2023 1:28 PM
9	who is going to pay for this?	4/12/2023 12:51 PM
10	The township has plenty of places to walk. I think adding additional sidewalks is a waste of tax dollars. I've reviewed the financial statements and it appears Towamencin is operating in the red so we should not incur new unnecessary expenses. I'd rather see more Police enforcing speed limits on streets to keep our children safe. Bustard road posted speed limit 35mph (average speed 50+) forty foot road posted speed limit 35 (average speed 60+) Liberty bell drive posted speed limit 25 cars use this road as a cut thru going at times 50+. More police presence and speed enforcement will be much more beneficial to Towamencian residents and ultimately make our streets safer not only for pedestrians but everyone else as well.	4/12/2023 12:14 PM
11	Encourage people to train dogs better. We cross streets to avoid aggressive-seeming dogs "guarding" their homes. Many owners are not in sight, or ineffective at curbing the actions.	4/12/2023 12:08 PM
12	Enough dead shopping centers, overdevelopment, sidewalks/bridges to nowhere. Towamencin needs more pedestrian accessibility and natural areas.	4/12/2023 12:16 AM
13	Work on connectivitiy to Liberty Bell Trail in Hatfield and to bike lanes on Morris Rd Make bike lanes on forty foot rd protected bike lanes by adding delineators. Add sidepaths/trails to connect to NP High School	4/11/2023 8:50 PM
14	I’d like to see the sidewalk connection from Spring Valley Rd to the new path along the water	4/11/2023 7:06 PM
15	Access to newly installed walking path from our neighborhood is very important.	4/11/2023 6:47 PM
16	It ought to be possible to take a sidewalk up and down every major artery of the township, and to every park/trail in the township.	4/11/2023 5:40 PM
17	If they bring the trail up through the tree lit on Kriebel. I do not want the current tree line removed, would not like to see the walking trail.	4/11/2023 4:36 PM
18	As a resident of Brookside Farms, I would like to see an access point in our neighborhood to	4/11/2023 3:15 PM

	be considered to connect us to the new walking path.	
19	Please connect Spring Valley Road to the new path along Kreibel. Thanks!	4/11/2023 3:09 PM
20	Would love a complete sidewalk path or trail from Township buildings to Fischer's park!	4/11/2023 2:29 PM
21	In our kulpsville area, we are mostly concerned about adding or improving sidewalks to feel more comfortable walking/biking near high-traffic areas. Particularly for us, we would love a connected sidewalk and crossing on Sumneytown across from pudge's so we can safely get across to the post-office strip mall. Also it would be nice to have a connector/full loop between firehouse park and the walking path in the business park behind margarita's. The section of road over the turnpike bridge always feels extremely open/unsafe to cross with young kids - similarly on green lane rd going under the turnpike bridge and up to liberty bell.	4/11/2023 1:59 PM
22	We need to make the shopping centers and places like Freddy Hill as accessible as downtown Skippack to their residents…. More sidewalks all over are needed.	4/11/2023 1:19 PM
23	I drive my car (with my bike on)accross Valley Forge Rd to bike in Upper Gwynedd. All thru the neighborhoods to Upper Gwynedd Pk (Garfield and Park Aves.need help) - Take a page from their (and others; Collegeville, Skippack) walkable/bikable communities.	4/11/2023 1:11 PM
24	Would love more trails/sidewalks to run/walk It would be beneficial to the community!	4/11/2023 1:03 PM
25	Please coordinate this survey & results with Towamencin Zoning (too many new houses, too many new warehouses); Traffic Safety (slow down Forty Foot Road traffic); and North Penn School District craziness	4/6/2023 3:57 PM
26	The best townships have off-street trails - encouraging and supporting healthy lifestyles. Calling "Towamnecin Trails" trails is kind of a joke. PLEASE improve off-street trails and sidewalk connections. Thank you.	4/6/2023 12:34 PM
27	Just walked today on the Chester County trail. What a pleasure, that is what we should aspire to	4/5/2023 12:36 PM
28	Added paved sidewalks and bike paths lead to less water retention. Please consider that this township already has drainage issues, don't make them worse!	4/4/2023 2:41 PM
29	I don't support bike lanes on busy main roads- I think biking should be done on the many bike trails already in place. I would like to be able to walk to Fisher's park but without sidewalks on the section of Morris rd between Henning Way and Bustard Rd it is too dangerous for pedestrians.	4/2/2023 9:13 AM
30	Street lighting improvements, and connection to green lane road park from other side of creek would help us from liberty bell drive would help us and neighbors	4/1/2023 8:19 AM
31	Thank you	3/31/2023 9:41 PM
32	We need to have functional sidewalks essentially everywhere they don't currently exist. They should be required in the plans of any new developments (residential or Commercial).	3/31/2023 7:48 PM
33	A 3 way stop is needed at green lane/liberty bell dr	3/31/2023 6:36 PM
34	POLICE ENDING THE SPEEDING ON MORRIS RD. I AM READY TO MOVE AWAY. FED UP !	3/31/2023 5:13 PM
35	Walking trail connecting green lane road	3/31/2023 4:58 PM
36	We have such great parks and open spaces, please help our kids get to them!	3/31/2023 4:56 PM
37	We should put a walking bridge over the towamencin creek from green lane road	3/31/2023 4:39 PM
38	It is pointless to spend funds on routes that go nowhere. Routes should be safe for children twelve or older to use independently. Routes should prioritize access to railroad stations, schools and shopping.	3/27/2023 3:33 PM
39	Enjoy educational and historic signage	3/24/2023 4:51 PM
40	Since the supervisors have moved to sell the sewer system leaving residents open to huge rate increases in the future, I think every effort should be taken to curb township spending in order to keep taxes steady or lower taxes. Worrying about bike bicyclists and pedestrians at a time when seniors worry about keeping their homes is irresponsible and tone deaf. Any	2/27/2023 12:11 PM

	expenditures beyond those to maintain current assets should be put on hold until it is learned how high the sewer rates will sky rocket.	
41	I would like to be able to walk around the township. Walking within my neighborhood is great, but walking a longer distance is not safe since too many major roads have no sidewalks!	2/19/2023 3:08 AM
42	I would just like to see a sidewalk on Allentown Road so you can walk to Forty Foot Road.	2/18/2023 9:22 PM
43	The Rittenhouse Road bridge needs a lane for pedestrians and/or bicycles.	2/17/2023 5:52 PM
44	Bad info is worse than no info. NEVER require answers. The ranking approach is childish. What would it mean if I told you that number 1 had a weighting of 99% and all the others, combined, were 1%?	2/17/2023 2:42 PM
45	While planning for bike crossings and paths, please consider older residents who walk slowly or use mobility scooters for travels to and from grocery and other stores, as well as for enjoyment of the outdoors. Thank you.	2/16/2023 11:27 AM
46	The playground at drinnon needs update. Swingsets? Older age playground added? Needs a trail because the back is pure marsh mud and wet most of the time. I have 5 boys that play there and it could be utilized much more if people have more access. Usually people have to cross through our yard to get to it	2/13/2023 2:21 PM
47	Additional entrances to kreibel path	2/11/2023 9:45 AM
48	My wife and I would love any type of path from Old Forty Foot Road (at Hendricks) to Skippack.	2/10/2023 1:02 PM
49	Looking forward to it	2/10/2023 9:55 AM
50	Consider linking up neighborhoods with paths so that non-motorists can move through closed off/dead-end neighborhoods. Consider traffic calming measures in addition to trails. Lastly, think of the town for the person and not the car.	2/9/2023 9:07 PM
51	Evansburg State Park trail connectivity could get funding from at least 3 townships AND state and could connect to huge existing trail systems	2/9/2023 5:09 PM
52	Weikel Road is part of the towamencin trail yet walking/biking the trail is dangerous. Especially along Weikel Road.	2/9/2023 4:22 PM
53	Connecting Bustard Rd Park to Green Lane to allow families and kids to freely move between parks should be a no brainer. Unfortunately there was always an excuse why a trail could not be built. Regardless of the reason, many kids go between the parks in the woods when games are being played at both facilities. These two parks need to be connected via a walking/biking path.	2/9/2023 6:37 AM
54	We would very much appreciate more connectivity between existing sidewalks, especially in sections, where they are gaps, making unsafe for children and pedestrians. We would not want to see any more lighting in telemedicine. We feel like there are enough street lights and too many lights at night. Do	2/7/2023 1:29 PM
55	Would love to see a connection of Green lane roads. Also a connection from the Kriebel rd trail to Fischer’s park	2/7/2023 8:34 AM
56	Sidewalks and bike paths are only useful if they are interconnected as part of a network. If 90% of my route has a nice sidewalk, but 10% is on a dangerous, blind curve of a road like on Tomlinson, Fretz, or Allentown, I'll opt to drive. Also, almost all successful downtown areas are very walkable and bikeable, are are a place to be and enjoy, not JUST shop or run errands.	2/7/2023 12:03 AM
57	Add green gathering spaces at our shopping areas	2/6/2023 11:43 PM
58	Connecting neighborhood sideways will be a great improvement to walking and running the township.	2/6/2023 7:40 PM
59	More needs to be done on the poor quality of roads in the twp	2/6/2023 7:36 PM
60	The Township spent a ridiculous amount of money in neighborhoods redoing already adequate curb cuts….and making curb cuts where none were needed. I am an advocate for the handicapped (by profession)….and even I think Towamencin is way too good at spending money where not needed and then grabbing money that will harm residents (i.e. your stupid sewer sale). When will you really pay attention to residents?	2/6/2023 4:06 PM

61	Please put an entrance to the new trail on spring valley road- it would be such a shame to have that trail right there w safe access to Fischer's park but not have a way to get on it.	2/6/2023 9:33 AM
62	Trash along the existing walkways is an issue. Perhaps trash receptacles, especially near commercial walkways may be helpful (think Chick-Fil-A, Wawa, etc. Lots of trash along that walkway.	2/6/2023 9:21 AM
63	Would love to have sidewalk connecting Trumbauer to Spring Valley on Morris Rd	2/6/2023 9:11 AM
64	I'm sure you have great ideas and I hope you can implement them. However, the only comment I have is that it it "dangerous" to walk, jog or bike the dog leg from Quarry to Michael Way over the bridge and probably quite expensive to correct!	2/5/2023 6:27 PM
65	Let's use the ones we have instead of everyone running and walking in the roads.	2/2/2023 11:36 AM
66	It would be especially good if the walking trail on Kriebel could be extended to allow access to Fisher Park.	2/2/2023 8:24 AM
67	I tried suggesting a path on the wikimapping page, but it came back with this message: Draft project can only have limited users, please activate the project	2/1/2023 2:50 PM
68	Enforce existing traffic laws to decrease speeding along Forty Foot Road and speeding/reckless driving by ATVs & dirt bikers.	2/1/2023 12:26 PM
69	Connection to neighboring trails like Skippack and Perkiomen.	2/1/2023 11:42 AM
70	I work from home and would love to be able to walk/bike to local businesses for breakfast, lunch and dinner. Living in Kulpsville, I would like to walk/bike to places like Skippack, Hatfield, Harleysville and towards Valley Forge road. I walk daily from the Rittenhouse Road to the Wawa and would appreciate better sidewalks on both sides of Bustard Road. I cross Sumneytown daily near Margarita's restaurant, and would like better traffic lights that respond to the crossing button. It is a long wait for the light to turn. I moved to this area over 25 years ago after reading an article in the Philly Inquirer about this area and how Towamencin had a plan to build trails. I am still waiting for this.	1/26/2023 8:49 PM
71	Having lived in Towamencin for 42 years and raising 3 children, the concern we had when we were younger and the kids were getting around the neighborhoods was the lack of sidewalks along Bustard Rd and Sumneytown Pike. We never allowed our kids to walk/ ride bikes the 4 miles to or from NPHS, because of the lack of sidewalks or bike paths. We no longer have those concerns, but now as senior drivers, we see the need to keep drivers and walkers/bike riders separate from the roadway. Sidewalks/paths along those main arteries are important, especially with the amount of traffic now.	1/24/2023 8:33 AM
72	1. Allow people to get to parks without driving 2. Get streetlights or reflectors on roads so people use high beams less and decrease risk of hitting deer 3. Have a way for most area to safely bike to the train station.	1/23/2023 6:35 PM
73	Improve lighting on streets & sidewalks. Enforce speed limits, especially speeding by dirt bikers & impaired drivers (drugs & alcohol).	1/23/2023 4:09 PM
74	I don't want the added cost and maintenance for sidewalks. Residents will be burdened with both adding and maintaining them.	1/23/2023 3:56 PM
75	There are many children in the communities near General Nash Elementary and you see them heading to the Wawa on Bustard Road over the Turnpike Bridge and then crossing Sumneytown Pike. This is something they should be able to do safely and I worry every time I see them as these are not safe roads whatsoever. I think serious thought needs to be considered as to how to make them safe. There was an overpass created where it wasn't needed and really there ought to be some consideration of how to allow safe passage to the Wawa. Pedestrians will always want to walk there for snacks, so this will continue to be an issue. One of the biggest downsides of Towamencin is it lack of walkability and this is especially the case for those on the Bustard side of Sumneytown Pike when the "convenience" stores require a car.	1/15/2023 3:38 PM
76	Why waste our taxes on surveys and ideas like this	1/12/2023 1:57 PM
77	My neighborhood, Grist Mill Run, only has sidewalk along half of the main street (Grist Mill Dr). This makes it difficult to walk around the neighborhood. Many times people end up walking on	1/6/2023 11:36 AM

	the lawn on the side that was never finished. I would like to see the sidewalk in my neighborhood completed as normal with a walking path on both sides of the main street.	
78	Please review possible routes for connecting all areas of the township to Fishchers Park via sidewalks or trails	1/5/2023 9:02 PM
79	There is no safe exit to leave Gristmill development other than a busy Welsh road. Walking into Lansdale has no sidewalks, Walking towards 40 Foot Road has no connector to the shopping centers on 40 Foot Road. Traffic issues on West Orvilla and Welsh roads need to be improved.	1/5/2023 3:11 PM
80	Could we please look at the sidewalks for the Towamencin Shopping Village - they are unsafe.	1/5/2023 9:46 AM
81	Many areas have sidewalks but they are isolated. We need to connect sidewalked areas to each other to avoid walking on the road.	1/4/2023 9:29 PM
82	looking forward to the park/trails near towamencin village shopping center	1/4/2023 7:57 PM
83	Ban tractor trailers from single-lane roadways through residential areas	1/4/2023 6:47 PM
84	Great community, love living here. Hope for safer paved trails and crosswalks as my kids are getting older and they are walking with friends and to promote a healthy and active lifestyle in our community. Thanks for making the survey!	1/4/2023 6:23 PM
85	I did not think any public buses traveled anywhere within Towamencin. A painted stripe on the Rittenhouse Rd bridge to create a 2-way bike/pedestrian lane since it is now a one way car bridge.	1/4/2023 5:42 PM
86	The Towamencin Trail doesn't seem to exist as a safe walking trail. There are signs on roads but they don't connect. Is there a map!	1/4/2023 4:16 PM
87	Stop allowing developers to defer sidewalk installation	1/4/2023 4:10 PM
88	We love the new trail extension south of Kriebel Road just west of 476. More off-road project like this and better connectivity between already establish paths would really enhance our quality of life. Thank you for your efforts!	1/4/2023 4:01 PM
89	Residents of Walnut Meadows that walk around the development must cross Detwiler Rd to find a sidewalk to complete the loop. It would be so nice to have a sidewalk on Walnut Meadows side of Detwiler Road so we don't have to cross the dangerous street. Thank you	1/4/2023 3:40 PM
90	I believe priorities should be: 1.Connecting existing neighborhoods to their elementary school. 2. Connecting existing neighborhoods to their nearest park or trail. 3. Connecting existing neighborhoods to other attractions (ie pool, Freddy Hill, Shopping areas.	1/4/2023 3:36 PM
91	The new pedestrian bridge on the Kriebel trail is great. We really need another one just like it connecting the green lane rd dead ends. That'd be a huge trail connection for the community. Thank you	1/2/2023 2:02 AM
92	I added a few suggestions via the maps, not sure if it went through	12/30/2022 5:02 PM
93	I appreciate being able to complete this survey even though I live in Upper Gwynedd Township. I bike and drive through Towamencin often and and a frequent customer at business like Lowe/s and I have a child to attends North Penn High School. I can only encourage the township to take a region approach to their planning in this effort. Towamencin is not an island. They value they create by enhancing sidewalks and paths will increase dramatically if they are coordinated with surrounding municipal bodies and promote connectivity between these municipal bodies.	12/30/2022 11:44 AM
94	Honestly, as long as Towamencin Township remains spread out, public transportation might not be feasible unless taxes are increased, and walking as a mode of transportation won't be practical. I'm not against those things, but you need to densify first. If you don't allow medium density, mixed use development, improving and maintaining bicycle infrastructure would be the next best step to a cleaner, safer, and more live-able environment.	12/30/2022 11:11 AM
95	Towamencin is a car centric community, defining and improving the regional access to highways needs to be balanced with local connectivity for persons not in a car. How do we safely connect every resident in Towamencin to a park, a commercial area, and public transportation?	12/30/2022 10:01 AM

96	I believe the current options are great and these improvements can make this township an example for other municipalities of a successful blend of travel options for pedestrians, cyclists and motorists. Please be mindful of a safe link to the Rail infrastructure. Safe passage for folks cycling to the train. I've done it and it is a great idea to explore other communities but the ride home down Sumneytown Pike from North Wales train station gets a bit sketchy near North Penn HS. One lane without a shoulder. Recipe for disaster, now I just drive to the train station. Hopeful for the planned changes.	12/21/2022 9:45 AM
97	Kriebel Road Trail is nice and I would love to walk there more often especially since if it connected to fischers park, but living on kriebel rd there's no way to get to it, it's not at all a safe street to walk on.	12/17/2022 4:06 PM
98	Major roads like Allentown Road or Sumneytown Pike are only moveable by Car, due to the lack of sidewalks and bumpy structure. Even roads like Troxel and Weikel mostly don't have sidewalks even if they aren't used nearly as much. I do think the path down Forty foot Road and the connections to Landsdale are well done, though.	12/16/2022 7:57 AM
99	As a neighbor to Towamencin Twp. I know there is great interest in how our communities are connected. Please make sure that this gets advertised to the neighboring municipalities.	12/10/2022 2:11 PM
100	Thank you!	12/4/2022 8:59 AM
101	I am retired and walk mainly for recreation but see the need for all neighborhoods to connect to parks and schools. On my many walks I always see people walking in the streets, not on the sidewalks even though they are present. Especially in neighborhoods when there are two or three people walking together. Sidewalks seem to be wide enough for only one person or maybe two now that people seem to stay further apart.	12/1/2022 10:22 PM
102	Excited to see this survey. Would love to see the trail connected throughout the township for everyone to be more encouraged to get out and move more.	12/1/2022 8:04 PM
103	I think the key word here is "connectivity" - too often a walker has to cross a street to get to a sidewalk, or walk in the street or grass for a while until the next sidewalk is available. Towamencin doesn't have a "main street" like a Lansdale or Hatfield, so where do people walk? Do they really want to drive somewhere to walk? I'd prefer to walk from my house, in a loop, then back home again. Same for biking. Maybe the committee and walk and bike different areas and see for themselves the challenges.	12/1/2022 11:33 AM
104	Thank you for conducting this study and asking for my opinion.	11/30/2022 7:02 PM
105	Adding speed signs or bumps around park access points in the township	11/29/2022 10:54 AM
106	Adding handicap entrances to all corners in the township where there are sidewalks already.	11/28/2022 6:41 PM
107	The speed limit needs to be lowered on residential streets around township to 25 with more regulation. Speed bumps near pedestrian park entrances, speed radar signs, etc. Sidewalks would help move around township safer.	11/27/2022 11:19 AM
108	A lot of the connectivity problems are due to relatively short spans of missing sidewalks between existing ones that make no sense when trying to safely walk to a park, a business or to a school.	11/25/2022 10:22 PM
109	Please refrain from saddening residents with any additional costs associated with residing in the Township. If costs are going to be incurred, let the proceeds from the sewer sale cover these costs.	11/24/2022 6:48 PM
110	The Towamencin Trail should be 100% sidewalks. What good is this trail if you can't walk it or bike it? There is no complete circuit anywhere in towamencin that has sidewalks. Any circuit involves having to be in the road or on someone's grass at some point. Very dangerous especially in the evenings when it dark earlier.	11/24/2022 8:41 AM
111	Please consider finding a way to connect Green Lane Rd to Green Lane Road. There are two large neighborhoods that would be connected, more students could bike/walk to Nash if they choose. Also, improvig pedestrian access to Fisher's Park- combining these two thigns would give a large portion of the town ship biking/running/walking access to Fisher's Park. Also safety with the bustard/forty foot rd/sumneytown intersection needs to be addressed. No one stops turning from Sumneytown on to Forty Foot. I frequently run/bike there and have almost been hit numerous times.	11/23/2022 7:20 PM

112	Would love to explore if there could be a sidewalk on Woodlawn drive all the way to Allentown road	11/23/2022 7:05 PM
113	There are a number of quiet safe areas to walk and bike however you have to pass through insanely unsafe areas (traffic wise, not crime) to get to them. Example getting to Fishers Park, Kriebel Rd and neighborhoods heading towards Valley Forge Rd, the loop near the farms of Schlosser, Kulp, Kriebel and Kerr etc are all made impossible by that one short section of Bustard along the creek where there is no shoulder and bad visibility due to the hills and bend. You cant even cut through Green Lane because the two ends of the road dont connect.	11/23/2022 6:27 PM
114	Top priority would be a way for bicyclists & pedestrians to cross the creek in the Mainland Golf Course along Old Forty Foot Rd! I do think the Rittenhouse Rd bridge is safer being one way for cars, but I have experienced drivers get annoyed if I bicycle or walk in the wrong direction on it. The only other places to cross are Sumneytown Pike Pike at Old Forty Foot (way too dangerous!) or to walk/bike quite a ways along Old Forty Foot Rd down to Quarry/Bridge Rd. Old Forty Foot Rd has a large volume of high speed traffic & 1-2 inches of shoulder in some places ; none in others! A sidewalk along Old Forty Foot Rd would be wonderful - from Sumneytown Pike down to Skippack Pike, on the creek side. Also, the trail from the Bustard Rd firehouse up to the shopping center with the post office is a wonderful & seldom used trail. Give it some publicity or at least signs last both ends.	11/23/2022 11:33 AM
115	We appreciate all the hard work going into making our community safer and able to walk and stay healthy and safe by adding sidewalks to these areas.	11/23/2022 7:31 AM
116	Can there be a pedestrian bridge from one side of Bustard Rd to the other so I don't have to drive from my neighborhood to Fischers. It's scary to run across the road	11/22/2022 4:37 PM
117	Thank you for organizing this survey and committee. I would encourage you to see the condition of areas by Fisher's Park (ie Kriebel Road, Kerr Road) and see how often people are walking and enjoying these areas. The road condition, driver's speed, etc. make it a very dangerous area.	11/22/2022 3:00 PM
118	Please connect Spring Valley Rd to the new Kreibel Rd Trail I project via the intended easement between 2050 & 2052 SV Rd.	11/22/2022 7:37 AM
119	Please consider adding sidewalks throughout the Inglewood Gardens neighborhood :)	11/22/2022 7:27 AM
120	The New Kriebel Road trail could be accessible from the Brookside Farms development adjacent the newly installed trail bridge. Access from this development to the trail would be a great benefit to the township residents.	11/21/2022 8:49 PM
121	I had many years in Philly and cramps City living. I move to this Township 10 years ago because of the nice wide open rural atmosphere. Don't change it. No more sidewalks. Leave it rural and live happy not crowded.	11/21/2022 7:44 PM
122	Anders Road is a heavily used road for bicycles, the North Penn cross country team, and many residents for recreational use. There is a large need for widening the road and additional sidewalks and lighting. Or at the very least a stop sign to slow down the NASCAR raceway that our neighborhood has become. Thank you and God Bless.	11/21/2022 7:42 PM
123	I have a toddler and another baby on the way. I would like to be able to take them on walks around the neighborhood (Anders Rd) but in its current state, that is not possible. There are no sidewalks and cars speed down the street making it dangerous endeavor. I would love to have sidewalks added to my street.	11/21/2022 5:30 PM
124	Extend sidewalks on Green Lane Road from Liberty Bell Drive to Hedgerow Way as students who attend Nash have to walk in the street for that stretch.	11/21/2022 5:16 PM
125	The so called Towamencin Trail is disjointed and confusing. Need to improve or discontinue	11/21/2022 5:03 PM
126	Adding sidewalks to Troxel Rd specifically between Pickwick Lane and Avalon Way to have better walking access to Towamencin Pool.	11/20/2022 1:32 PM
127	Kriebel Road needs widening and continuous sidewalks to accommodate traffic, bikers and pedestrians. Traffic signal at Sumneytown Road would be helpful or open Green Lane Road at Pheasant Hill Road. Why is there no safe pedestrian/bike access to Fischers Park?	11/18/2022 11:30 AM
128	The new Kriebel Road trail is great but parking for trail heads? Making sure their are sidewalks that connect these trails together. Along Kriebel Road old trail should cross to the north and	11/16/2022 1:07 PM

	add sidewalks across PECO right of way past the wastewater treatment plant with perhaps lighted crosswalk over Forty Foot Road to pedestrian bridge to access Fishers Park. On the North side of Anders road, Kriebel Road is simply too small for the traffic it carrys (for people avoiding Sumneytown and Valley Forge light) no safe place for bikes nor pedestrians. Widen, add sidewalks and perhaps a backway entrance to Freddy Hill Farms to encourage walks their, now I must drive but I would walk if it was safe)	
129	Forgot to mention no sidewalks around firehouse park trail exit, would be nice to have	11/13/2022 9:23 PM
130	More frequent street cleaning in neighborhoods. :-)	11/13/2022 11:11 AM
131	We have enough concrete in twp. Keep it natural!	11/13/2022 7:03 AM
132	I walk along Troxel Road frequently - there are several breaks in the sidewalk where you have to walk on the shoulder (if there is one) or on the grass. Connecting the sidewalks would be so helpful. Building sidewalks out to Sumneytown pike and providing a safe crosswalk to Freddy Hill would be such a great addition. And if the bridge on Troxel Road could be widened to include a pedestrian space safety for pedestrians would be enhanced. I literally jog across the bridge praying that no cars will come.	11/11/2022 7:55 PM
133	Answers on commuting are not applicable, since I am retired, just saying.	11/11/2022 7:52 PM
134	I appreciate you asking	11/11/2022 6:02 PM
135	Biking on most roads can be very dangerous. Bike lanes would help.	11/11/2022 5:38 PM
136	Walking a loop trail is more desirable than an out and back trail.	11/11/2022 3:09 PM
137	Another important location- Weikel Rd where it narrows between pool and NPHS	11/11/2022 9:50 AM
138	Towamencin is extremely pedestrain friendly. While there are many locations with sidewalks, connectivity is an issue. It's common for sidewalks to not lead anywhere. Connectivity and safe crossing would be a huge improvement. One of my children used to attend Inglewood, which should be a super easy walk from our house. However, there was no connection of current sidewalks, which made it unsafe - add to that, it's not safe to cross Allentown. I don't think we need more lights it all, but better patterns for pedestrian safety would be great. While it shares space Upper Gwynedd, the intersection of Allentown and Valley Forge is scary. I watched near misses with pedestrians and cyclists daily. The same goes for Valley Forge and Sumney - even more concerning since many high school kids attempt to cross there. Hopefully, better walkability can be achieved without more destruction of Towamencin's rapidly dwindling natural and open spaces.	11/11/2022 8:53 AM
139	Originating from Quebec Canada, they take pride in Pedestrian trails for walking and biking and Rollerblading. So much so that we also bike on nice winter days to & from work. It helps keep our Mental and physical health in check. I advocate our money going towards our health by improving our sidewalks and trails and parks and adding beautiful arrangements and huge planters around town for us to “see” our lovely town as a cozy welcome of home, something we feel proud of, something to drive through on our way home from work and being reminded of where our hard earned money is going towards and to feel proud to be a part of the town we live in.	11/11/2022 7:00 AM
140	My family just bought a house here a few months ago, came from Philly. The two biggest things we miss are the food and walking/running everywhere. We bought a house that has sidewalks to walk after work but it’s a small area so we have to do the same loop multiple times. We live near fisher park which we love to run at but my wife drives the 3 minutes there because it is unsafe to run there. The run is perfect except after Kulp rd we turn on Kriebel rd and that 1/4 mile is very dangerous until we turn off on Metz road and go into the park on the back end. I’ll be at every meeting and support this project anyway I can because I know how much my family’s quality of life will improve by building something on that 1/4 mile section of road. Lots of people walk or bike old Morris road and Kulp road. They would get so much more exercise if they could extend their route to Fisher Park. The timing of moving here and this survey is amazing. Please help us run from green bank way to fisher park safely. We currently share a car since in Philly we never needed a car so not needing it to get to fisher park would free the other person up.	11/10/2022 9:23 PM
141	After forcing the residents of Towamencin to dig DEEP into their savings accounts for new curbs and sidewalks don't you dare pay for more by raising taxes, everything works well leave	11/10/2022 9:21 PM

	it alone and don't burden the taxpayers anymore. Restrict bike riders to bike lane roads and stop putthing themselves and drivers in jeopardy.	
142	Yes it be nice to visit the and local eateries on food or bike instead of a vehicle. These locations are not, but if accessible would be going on foot or bike. Thanks Henry	11/10/2022 8:00 PM
143	Would love to see the Kriebel Road trail completed and added safety to the curve. I enjoy the local park trails as well it will be nice when they connect to have a lengthy path	11/10/2022 7:48 PM
144	With more people working from home, including myself, being able to walk/bike further via sidewalks would greatly improve my wellbeing. You can only walk so far before you are trapped by deadly roads with no sidewalks or shoulders. It would greatly enhance the community to be able to walk or bike to shopping centers, schools and friends. Thank you for this survey!	11/10/2022 7:43 PM
145	The fact that I had to google the names of most of the parks and "trails" doesn't say a lot for the Township's parks. Many developments and major roads don't have sidewalks so therin the township I don't consider a baseball field a park. It is a sports facility that may or may not have a jungle gym. The only park in the township that I consider multi-use is Fischer's, other than that most of the "parks" in the township are just glorified baseball fields. If nothing else, add some walking trails around the perimeters,	11/10/2022 4:26 PM
146	Please, please, we need sidewalks in Inglewood south of Allentown, enforcement of the speed limit, and traffic calming measures!!!!	11/10/2022 2:49 PM
147	Sidewalk from Sunny Ayr to Trumbauer Rd would unlock several neighborhoods to have pedestrian access to the fischer park system and bustard road park.	11/10/2022 2:10 PM

ID	Type	Category Id	Category	Initial Comment	Creator ID	Creator	Create Dat	Comment ID	Comment	Commente	Commente	Comment IN	et Like	Like	Dislike	View Feature
434719	point	19986	All other cc	No sidewalk and leave it that way. Do not want a sidewalk here.	349682		10-Nov-22									https://wikin
434720	point	19989	Challenging	No sidewalk, narrow road, high speed traffic	349682		10-Nov-22									https://wikin
434757	point	19984	Desired loc	Would love to be able to walk out of our neighborhood at the light and walk left to forty foot road and walk along forty foot road to Allentown road. There is are no side walks all along Jacobs wood	349738		12-Nov-22									https://wikin
434866	point	19985	Barriers to	There is a private home that has driveway on their property that connects Sunny Ayre Way to the perpendicular road that is a dead end. Perhaps a right of way and small trail between the two homes. Since there are no sidewalks on Morris between Trumbauer and SunnyAyre this might be a quick solution. Still wou	349846		16-Nov-22									https://wikin
434875	point	19989	Challenging	Walkers and Bikers on Kriebel Rd when it's not even wide enough for double line	349925		18-Nov-22									https://wikin
434876	point	19989	Challenging	Walkers and Bikers on Kriebel Rd when it's not even wide enough for double line	349925		18-Nov-22									https://wikin
434877	point	19989	Challenging	Walkers and Bikers on Kriebel Rd when it's not even wide enough for double line	349925		18-Nov-22									https://wikin
434878	point	19989	Challenging	Walkers and Bikers on Kriebel Rd when it's not even wide enough for double line	349925		18-Nov-22									https://wikin
434945	point	19988	Sidewalk G	There are spots on this street with no sidewalk and motorists fly down this road especially during rush hour	350131		25-Nov-22									https://wikin
434947	point	19989	Challenging	homeowner's trees make it difficult to see oncoming traffic when turning from Anders Rd onto Kreibel Rd	350131		25-Nov-22	365776	I agree tho	354026		########				https://wikin
435146	point	19989	Challenging	Kriebel and Troxel are part of the existing on road Towamencin Trail system, but this intersection can be challenging for cyclist and motorist. Troxel and Sumneytown has a light but the shoulder is gone and vehicles or bicyclist coming from Kriebel north on Sumneytown have to navigate busy traffic	350830		10-Dec-22									https://wikin
435147	point	19985	Barriers to	This once vehicular bridge is still used by bicyclist and pedestrians navigating through Evansburg Park. The bridge is deteriorating and safety is a concern. Please partner with the park to keep this beautiful and important connection open.	350830		10-Dec-22	365777	unfortunat	354012		########				https://wikin
435147	point	19985	Barriers to	This once vehicular bridge is still used by bicyclist and pedestrians navigating through Evansburg Park. The bridge is deteriorating and safety is a concern. Please partner with the park to keep this beautiful and important connection open.	350830		10-Dec-22	368084	unfortunat	245068	jwallace	########				https://wikin
435148	point	19989	Challenging	traffic calming in this stretch of road is greatly needed. Many cyclist and pedestrians navigate this narrow roadway that has elevations that makes for some blind spots.	350830		10-Dec-22									https://wikin
435149	point	19989	Challenging	Towamencin Trail ends at Kriebel and Old Forty Foot Road, but many cyclist continue onto Bridge Road since Old Forty Foot is not very bicycle friendly.	350830		10-Dec-22									https://wikin
435150	point	19986	All other cc	Don't know about this trail. If this does exist, there is no signage to promote this trail	350830		10-Dec-22									https://wikin
435151	point	19989	Challenging	Towamencin Trail starts past Grist Mill Park. Allentown and 63 are two busy roads that are surrounded with proposed, new, and old neighborhoods and parks. Connection through this area needs to be a priority. There is a bike lane and sidewalk along 63, but connections to Allentown Road is non existent.	350830		10-Dec-22									https://wikin
435152	point	19982	Desired de	General Nash Elementary School	308950		12-Dec-22									https://wikin
436152	point	19989	Challenging	The intersection at Allentown and Forty Foot is challenging to anyone not in vehicle. Traffic volume, high speeds, wide lines, missing sidewalks.	351980		28-Dec-22									https://wikin
436153	point	19985	Barriers to	Reinert Road has no sidewalks, think about possible connections to the future veterens memorial park.	351980		28-Dec-22									https://wikin
436154	point	19989	Challenging	Our broad and main? This is a high traffic area that is not inviting to anyone not in a vehicle. This area has sidewalks but they don't extend to other neighborhoods or communities except north on forty foot road.	351980		28-Dec-22	368192	would love	245068	jwallace	########				https://wikin
436155	point	19988	Sidewalk G	Missing sidewalk to Green Lane Rd.	351980		28-Dec-22									https://wikin
436176	point	19985	Barriers to	It is very hard to get in and out of the North Penn High School campus with out a car. Better sidewalk access needs to be added from all directions. The interaction at Sumnytown Pike and Valley Forge Road needs to be re-designed and made safer - particularly if the planned Super WAWA moves forward. Bike lanes	351977		30-Dec-22									https://wikin
436177	point	19989	Challenging	This intersection is on the township bike/path route, but it is a very dangerous intersection when trying to turn left on Allentown road - for bikes and cars. Due to the rolling hills in this area sight lines to see on coming traffic and for on-coming traffic to see you is very limited. Auto traffic in this area often exceeds tl	351977		30-Dec-22									https://wikin
436178	point	19986	All other cc	It would be great of the wide, paved path/sidewalk could be consistent from the pedestrian over pass all the way to Dunkin Donuts. Several sections have only a narrow sidewalk.	351977		30-Dec-22									https://wikin
436179	point	19986	All other cc	There needs to be a safer way to get across Towamencin and through to Upper Gwynedd Township. Morris road and its bike lane helps, but the combination of Kriebel and Anders could be an important connector if there was a safe way to cross Valley Forge Road. Due to auto speeds exceeding the speed limit on V	351977		30-Dec-22									https://wikin
436232	point	19989	Challenging	Need traffic signs to caution drivers of new trail crossing at trumbauer rd.	352178		2-Jan-23									https://wikin
436233	point	19989	Challenging	dangerous along kriebel rd curve for pedestrians and cyclists	352192		2-Jan-23	365714	We need a	354026		########				https://wikin
436234	point	19986	All other cc	Is this trail current or future? Looks like a great idea.	352192		2-Jan-23									https://wikin
436297	point	19988	Sidewalk G	The sidewalk on the left side the street ends right before the bridge. Would like the sidewalks to extend up to Liberty Bell Drive to safely travel to the Nash playground. Also to connect to the trail next to the bridge.	352268		4-Jan-23									https://wikin
436298	point	19988	Sidewalk G	There is a gap in the sidewalk of grass at this corner.	352268		4-Jan-23									https://wikin
436299	point	19989	Challenging	There is a large bush here that extends across the sidewalk, forcing you to go on the street (not easy with a stroller).	352268		4-Jan-23									https://wikin
436300	point	19985	Barriers to	A trail pops out onto Butard before the turnpike bridge, but there is no sidewalk on the other side of the bridge to be able to walk/ride to the entrance of Firehouse Park. Even the side of the road is very narrow here making it dangerous with traffic.	352268		4-Jan-23									https://wikin
436301	point	19989	Challenging	No sidewalk and little area next to road to walk from Walton Farm to Keeler Road to get to the trails.	352268		4-Jan-23									https://wikin
436575	point	19982	Desired de	We need a safe and effective way to cross valley forge road to connect the neighborhoods and neighboring township	353315		23-Jan-23									https://wikin
436576	point	19984	Desired loc	ation for crosswalk	353318		23-Jan-23									https://wikin
436967	point	19983	Cultural/Hi	Perkiomen Watershed Conservancy is moving it's operation from Peter Wentz Farm to here - building a greenhouse, doing restoration work, etc. Would be an amazing partner and hub for a larger trail connection	245068	jwallace	14-Feb-23									https://wikin
436968	point	19983	Cultural/Hi	Washington's troops camped along Skippack Creek and Old Forty Foot road before and after the battle of Germantown - could be a very interesting interpretive route https://hsmcpa.org/index.php/component/k2/item/149-forty-foot-road	245068	jwallace	14-Feb-23									https://wikin
436969	point	19988	Sidewalk G	ap location	245068	jwallace	14-Feb-23									https://wikin
436981	point	19983	Cultural/Hi	Mennonite Church - old graveyard where several revolutionary war casualties from the Battle of Germantown are buried	354012		15-Feb-23									https://wikin
436982	point	19983	Cultural/Hi	Skippack Historical Society	354012		15-Feb-23									https://wikin
436985	point	19986	All other cc	Adding bike lanes west along Morris from Rt. 363 to Trumbauer or further would extend the bike lanes already in-place on the other side of Rt. 363 in Upper Gwynedd Twp.	245068	jwallace	16-Feb-23									https://wikin
436986	point	19988	Sidewalk G	Sidewalk needs to be installed on Morris Road heading west from Rt. 363 to first development and Valley View Road. This would connect to existing sidewalks along Morris Road.	245068	jwallace	16-Feb-23									https://wikin
437363	point	19985	Barriers to	There is no safe legal walking/running/biking route out of grist mill. No sidewalks on welsh. Orvilla intersection is very dangerous. A path to grist mill park would solve this	245068	jwallace	6-Mar-23									https://wikin
437364	point	19985	Barriers to	No sidewalks along welsh for people taking the bus or walking. (Also no sidewalks on the hatfield side at ralphs corner.)	245068	jwallace	6-Mar-23									https://wikin
438188	point	19988	Sidewalk G	No sidewalk on Towamencin beverage side of street so you can not easily cross Sumneytown Pike here and walk/ride to Wawa. Forces you to cross at Margarita's or Forty Fort where it is more dangerous because there is four lanes of traffic.	245068	jwallace	4-Apr-23									https://wikin
438303	point	19988	Sidewalk G	Freddy Hill Far (Freddy's Family Fun Center is a Towamencin family destination, yet because of a small (~200ft?) sidewalk gap it is inaccessible on foot (or bike) to township residents east of Sumneytown Pike. Children and families ought to be able to access the mini-golf, batting cages, ice cream, etc on foot via tro	245068	jwallace	6-Apr-23									https://wikin
438720	point	19982	Desired de	stinations	245068	jwallace	12-Apr-23									https://wikin
438721	point	19982	Desired de	pool	245068	jwallace	12-Apr-23									https://wikin
438722	point	19982	Desired de	stinations	245068	jwallace	12-Apr-23									https://wikin
438723	point	19985	Barriers to	narrow bridge	245068	jwallace	12-Apr-23									https://wikin
438724	point	19989	Challenging	narrow bridge	245068	jwallace	12-Apr-23									https://wikin
438725	point	19982	Desired de	stinations	245068	jwallace	12-Apr-23									https://wikin
438726	point	19982	Desired de	Pennfield Middle School	245068	jwallace	12-Apr-23									https://wikin
438727	point	19986	All other cc	Clemens Food Group - very large local employer	245068	jwallace	12-Apr-23									https://wikin
1328903	line	19979	Desired Sic	This small section to connect Kulp rd to get into Fisher Park via the back entrance would be a game changer for people in my area (green bank way) and all the people in the townhouses behind me. So many people walk or run Kulp road because the farm but turn around when they get to Kriebel Road. Those peopl	349693		11-Nov-22									https://wikin
1328904	line	19987	Desired Bik	This is used by bikers and runners. Itâ€™s decently safe but I could see small improvements to ensure people walking/running/biking were more safe. This is a very popular road for people to walk on.	349693		11-Nov-22									https://wikin
1328905	line	19987	Desired Bik	This would just be a nice to have bike area, connecting firehouse park to fisher park for bikers/runners but not sure bustard rd has enough room to do that.	349693		11-Nov-22									https://wikin
1328906	line	19987	Desired Bik	Being able to bike to the train would be good and people might take the train more instead of driving into Philly, big saver for the environment.	349693		11-Nov-22									https://wikin
1328979	line	19979	Desired Sic	Sidewalk from Sunny Ayre to Trumbauer and Trumbauer to Kriebel Road. Kriebel Road entire length.	349846		16-Nov-22									https://wikin
1328980	line	19979	Desired Sic	Kriebel Road from Trumbauer to Sumneytown Pike	349846		16-Nov-22	365715	The house	354026		########				https://wikin
1328981	line	19980	Desired Trc	Trail and pedestrian crossing completing Green Lane Road across barrier. Preferably complete the road with a pedestrian bridge next to it, this is the only Sumneytown Pike Access with a light. People using Kriebel Road making left turns is terrible with light at Troxel road blocking traffic back at morning and evening	349846		16-Nov-22									https://wikin
1328982	line	19979	Desired Sic	Access side walk to Upper Gwynedd to connect to proposed Power Line trail	349846		16-Nov-22									https://wikin
1328985	line	19980	Desired Trc	Connect Green Lane Rd	349925		18-Nov-22									https://wikin
1328986	line	19979	Desired Sic	Continuous sidewalk along Kriebel Rd	349925		18-Nov-22									https://wikin
1328987	line	19979	Desired Sic	Connect Kriebel Rd to Fischers Park - should be some way to reach the Park other than driving there	349925		18-Nov-22									https://wikin
1328988	line	19979	Desired Sic	Sidewalk all along Morris Road	349925		18-Nov-22									https://wikin
1328989	line	19979	Desired Sic	Continue sidewalk along Kriebel Road	349925		18-Nov-22									https://wikin
1328990	line	19979	Desired Sic	Sidewalk along Sumneytown Pike	349925		18-Nov-22									https://wikin
1329005	line	19981	Barriers to	Many people walk, run, bike along Kulp Rd and would go to fisher park from there if they could safely walk on Kriebel rd to Metz road.	350051		22-Nov-22									https://wikin
1329006	line	19987	Desired Bik	Not an urgent priority but would be nice to increase the safety for bikers/walkers/runners along here. Townhouse people walk this often.	350051		22-Nov-22									https://wikin
1329007	line	19987	Desired Bik	A good amount of bike lines before and after this small section but for some odd reason their is a small area that doesnâ€™t have a bike should or sidewalk.	350051		22-Nov-22									https://wikin
1329008	line	19987	Desired Bik	Forty foot road is safe to bike on but if people could go from there to the train station that would be huge. Connecting forty foot road safely to the area of Lansdale train station would be great for bikers	350051		22-Nov-22									https://wikin
1329009	line	19980	Desired Trc	This may already be planned, but having a trail to connect directly to Fischers Park would be ideal	350131		25-Nov-22									https://wikin
1329010	line	19980	Desired Trc	would make an easy connection between Green Lane Park and Firehouse Park	350131		25-Nov-22									https://wikin
1329065	line	19987	Desired Bik	Connect green lane	350815		10-Dec-22									https://wikin
1329066	line	19979	Desired Sic	Kriebel curve	350815		10-Dec-22									https://wikin
1329067	line	19987	Desired Bik	Widen Kerr rd	350815		10-Dec-22									https://wikin
1329068	line	19979	Desired Sic	Connect Anders	350815		10-Dec-22									https://wikin
1329069	line	19980	Desired Trc	Connect trial to Fischers park	350815		10-Dec-22									https://wikin
1329071	line	19980	Desired Trc	trail along creek to connect Fischers and Evansburg Parks	350830		10-Dec-22									https://wikin
1329072	line	19980	Desired Trc	connection to Kibler Meadow	350830		10-Dec-22									https://wikin
1329073	line	19987	Desired Bik	opportunity to provide a nice connecting loop starting from Fischers and connecting to Kibler Meadows and Evansburg Park before connecting back to existing Towamencin Trail	350830		10-Dec-22									https://wikin
1329074	line	19987	Desired Bik	many students in Lansdale borough have no direct or safe bike route to the High School.	350830		10-Dec-22									https://wikin
1329075	line	19980	Desired Trc	There is a small path existing by Towamencin Pool but it could be made wider and using Woodlawn and Columbia would provide a great connection between Towamencin and Lansdale and the bigger regional Liberty Bell Trail.	350830		10-Dec-22									https://wikin
1329076	line	19980	Desired Trc	nice connection for neighborhoods to the prime shopping area. There is a utility line running through, but I believe there is room for a trail that would not interfere with the ROW	350830		10-Dec-22									https://wikin
1329104	line	19979	Desired Sic	Sidewalk connection from Ralphs Corner/Forty Foot & Welsh into Lansdale. Often pedestrians are forced onto the roadway or private property when walking this route. Encourge connection between communities and public transportation (Lansdale Train Station)	351980		28-Dec-22									https://wikin
1329105	line	19979	Desired Sic	Continue sidewalk next to Grist Mill Park to Allentown road, sidewalk connection is missing.	351980		28-Dec-22									https://wikin
1329106	line	19980	Desired Trc	Loop trail at Buch Clemens Park, underutilized space	351980		28-Dec-22									https://wikin
1329107	line	19987	Desired Bik	If this stretch of Sumnerytown Pike had safe bike lanes it would connect to other significant roads in the township which are more bikeable, it would also start to create more options for getting in around out of the High School complex using something other than cars.	351977		30-Dec-22									https://wikin
1329108	line	19987	Desired Bik	If I am trying to get to places in Towmancin township by bike, I need a save connector to the southwest part of Upper Gwynedd Township. The intersection at Anders would be a great place for a bike lane and a traffic light. Most people will not ride bikes on Sumneytown Pike or Valley Forge Road, so offering a way	351977		30-Dec-22									https://wikin
1329109	line	19987	Desired Bik	Extending the existing bike lane to this section of Allentown road would make it safer and more of a connector road through the residential sections of the township to the more commercial areas on Forty Foot Road	351977		30-Dec-22									https://wikin
1329110	line	19980	Desired Trc	There is a whole section of Towamencin with now easy way to get through. Here is a suggesting for getting from Troxel to Keeler.	351977		30-Dec-22									https://wikin
1329111	line	19987	Desired Bik	bike route or sidewalk the full length. Allentown road is dangerous to ride on due to very narrow shoulder, hills and speed of traffic. a route along this road will connect the eastern and western parts of the township.	352111		30-Dec-22									https://wikin
1329112	line	19987	Desired Bik	bike route or trail along bustard road. allows easier connectivity to/from Fishers park	352111		30-Dec-22									https://wikin
1329113	line	19987	Desired Bik	continue aloong Allentown road to Weinkle where at least there are sidewalks to continue	352111		30-Dec-22									https://wikin
1329114	line	19979	Desired Sic	add sidewalk/improve bike lane. shoulder is very narrow in this area with no sidewalk. dangerous to run along this area	352111		30-Dec-22									https://wikin
1329115	line	19979	Desired Sic	extend sidewalks in this area - shoulder is narrow with lots of traffic. dangerous to walk/run in this area	352111		30-Dec-22									https://wikin
1329116	line	19980	Desired Trc	Trail and pedestrian bridge connecting green lane rd	352178		2-Jan-23									https://wikin
1329117	line	19980	Desired Trc	Trail and pedestrian bridge connecting green lane rd near power lines or green lane park to bustard park	352178		2-Jan-23									https://wikin
1329118	line	19980	Desired Trc	Green lane park and bustard Park connecting trail	352178		2-Jan-23									https://wikin

1329119	line	19980	Desired Trz	Please add pedestrian trail and bridge to connect green lane road	352187		2-Jan-23	https://wikin
1329120	line	19980	Desired Trz	Connecting trail between green land and bustard park	352187		2-Jan-23	https://wikin
1329121	line	19980	Desired Trz	Trail to connect kreibel rd to Freddy hill	352187		2-Jan-23	https://wikin
1329122	line	19980	Desired Trz	trail and walking bridge to connect green lane rd dead ends	352192		2-Jan-23	https://wikin
1329123	line	19980	Desired Trz	trail and walking bridge to connect green lane park and bustard park	352192		2-Jan-23	https://wikin
1329124	line	19980	Desired Trz	add additional trail along kriebel rd and walking bridge to connect to fishers park	352192		2-Jan-23	https://wikin
1329132	line	19981	Barriers to	Would like to connect Green Lane with the path behind 1600 Sumneytown Pike. There is currently a vacant open field that we currently cut across to get to the parking lot to get to the trail. It is very difficult to ride a bike across the grass, and impossible for young kids. There should be ways to make a connecter tr	352268		4-Jan-23	https://wikin
1329133	line	19981	Barriers to	Though no one wants Green Lane to connect for car passage, it would be nice if there was a path to connect here to be able to walk/ride to Green Lane fields and Fischer Park.	352268		4-Jan-23	https://wikin
1329134	line	19981	Barriers to	Would be nice to have a path to connect Kriebel Rd and the Spring Valley Rd community, so they could access the trails off Kriebel and the parks with out having to go on the very busy Morris Road.	352268		4-Jan-23	https://wikin
1329135	line	19981	Barriers to	If are able to connect Spring Valley to Kriebel, then also connect Valley View Way Rd so they can also access the trails and parks off Kriebel.	352268		4-Jan-23	https://wikin
1329157	line	19980	Desired Trz	connect green lane road either with pedestrian trail and bridge	353315		23-Jan-23	https://wikin
1329158	line	19980	Desired Trz	bridge somewhere over valley forge like the one over forty foot road by the hotel and walgreens	353315		23-Jan-23	https://wikin
1329159	line	19979	Desired	Sidewalk	353318		23-Jan-23	https://wikin
1329160	line	19979	Desired	Sidewalk	353318		23-Jan-23	https://wikin
1329161	line	19979	Desired	Sidewalk	353318		23-Jan-23	https://wikin
1329163	line	19979	Desired	Sidewalk	353318		23-Jan-23	https://wikin
1329164	line	19979	Desired	Sidewalk	353318		23-Jan-23	https://wikin
1329165	line	19979	Desired	Sidewalk	353318		23-Jan-23	https://wikin
1329406	line	19987	Desired Bik	Connecting the trails in Evansburg up through Jacob Reiff Park and to Heckler Plains and to the big netword that ties in up there would be an amazing connection to make	245068	jwallace	14-Feb-23	https://wikin
1329416	line	19980	Desired Trz	The new Kriebel Road Trail needs a trail to the Spring Valley Road development. The dotted line is already township owned land.	245068	jwallace	16-Feb-23	https://wikin
1329417	line	19980	Desired Trz	Could this be an alternative to using Kriebel Road and incorporate using Wagon Wheel down to Anders?	245068	jwallace	16-Feb-23	https://wikin
1329671	line	19987	Desired Bike	Route	245068	jwallace	12-Apr-23	https://wikin
1329672	line	19980	Desired	Trail	245068	jwallace	12-Apr-23	https://wikin
1329673	line	19980	Desired	Trail	245068	jwallace	12-Apr-23	https://wikin
1329674	line	19987	Desired Bik	add signage to forty foot rd to show sidepaths. add delineators to existing bike lanes and continue through Pennfield Middle School	245068	jwallace	12-Apr-23	https://wikin
1329678	line	19979	Desired Sic	There should be a sidewalk and cross walk across the turnpike exit next to the Royal farms. Since the exit is only sending traffic out onto 63, it should be possible to establish a pedestrian crossing pattern.	245068	jwallace	13-Apr-23	https://wikin
1329679	line	19987	Desired Bik	No shoulders, impossible to bike or run here	245068	jwallace	13-Apr-23	https://wikin
1329680	line	19980	Desired Trz	This offroad trail would get a lot of use, please build it	245068	jwallace	13-Apr-23	https://wikin

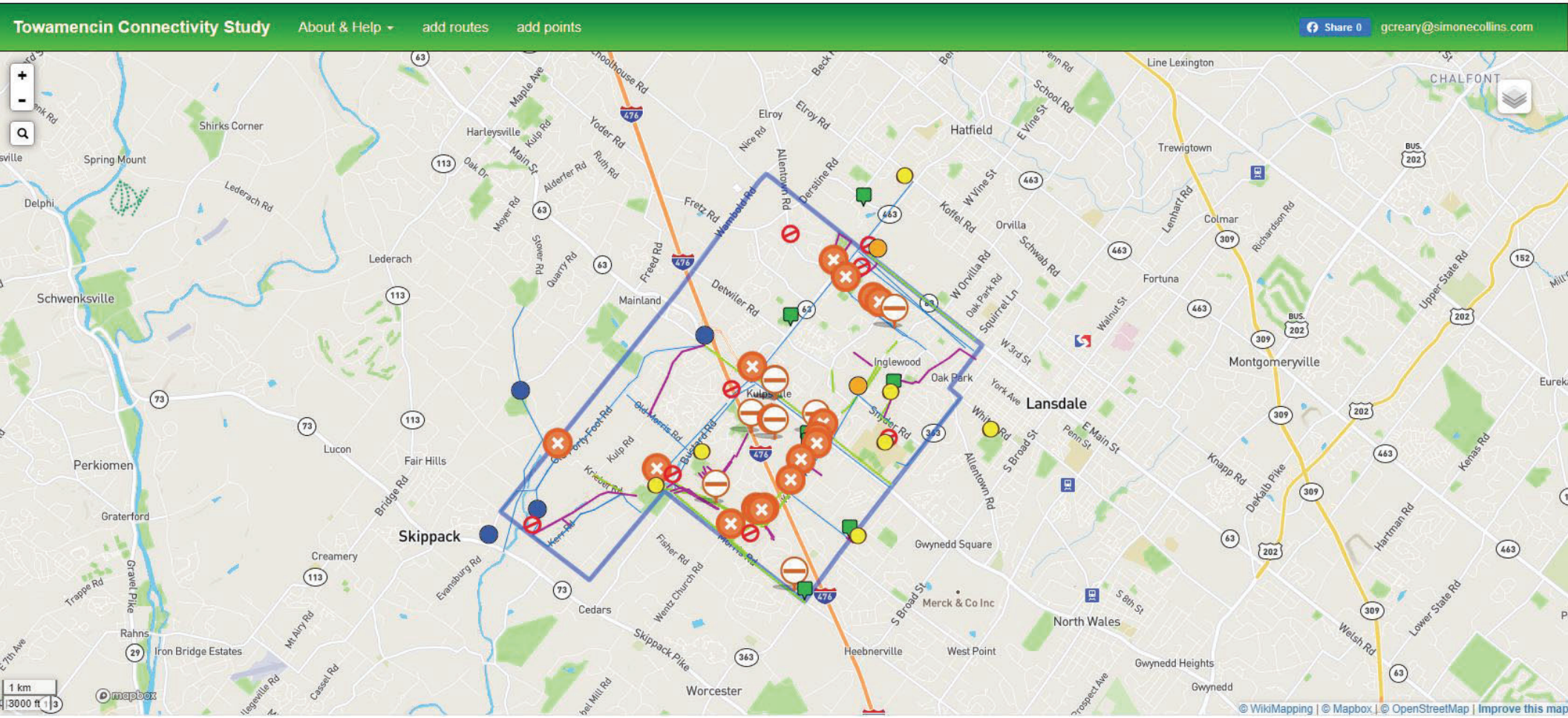
Users(*): 8 Lines: 74 Points: 54 Line comm Point comments: 5 Line Creatc Point Creat Line Comm Point Commenter(*): 3

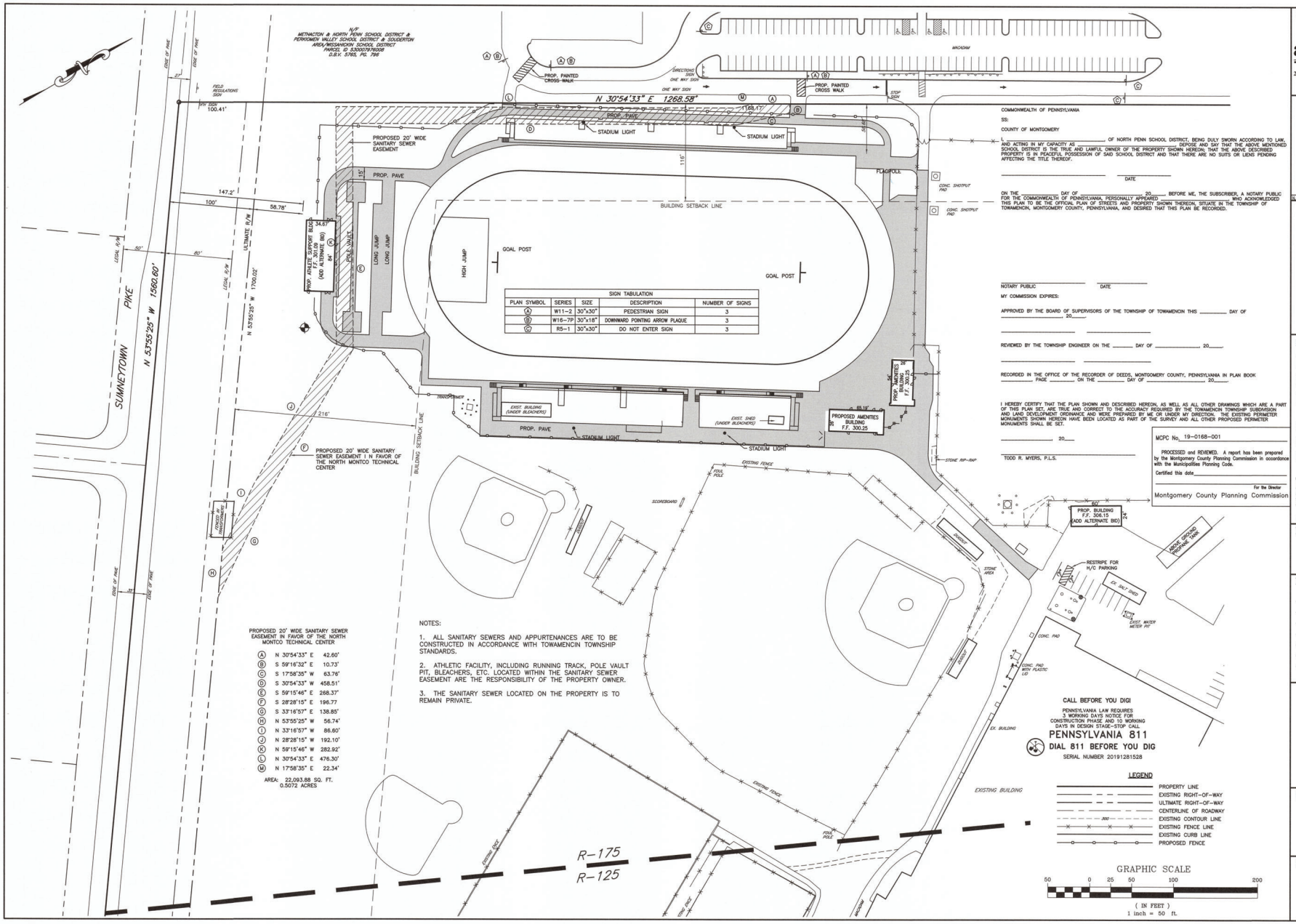
Note: * when allow anonymous users, the data won't be precise as multiple users may use the same computer to input

Towamencin Township would like to get your input into trail connections, pedestrian connections and bicycle routes as part of the current 'Connectivity & Trails' study taking place in the Township.

Click 'Add Routes'
to draw desired bike routes sidewalks, and trails.

Click 'Add Points'
to note locations of desired destinations, sidewalk gaps, desired crosswalk locations challenging areas, and areas of saferty concern.





SIGN TABULATION				
PLAN SYMBOL	SERIES	SIZE	DESCRIPTION	NUMBER OF SIGNS
(A)	W11-2	30"x30"	PEDESTRIAN SIGN	3
(B)	W16-7P	30"x18"	DOWNWARD POINTING ARROW PLAQUE	3
(C)	R5-1	30"x30"	DO NOT ENTER SIGN	3

PROPOSED 20' WIDE SANITARY SEWER EASEMENT IN FAVOR OF THE NORTH MONTCO TECHNICAL CENTER

(A)	N 30°54'33" E	42.60'
(B)	S 59°16'32" E	10.73'
(C)	S 17°58'35" W	63.76'
(D)	S 30°54'33" W	458.51'
(E)	S 59°15'46" E	268.37'
(F)	S 28°28'15" E	196.77'
(G)	S 33°16'57" E	138.85'
(H)	N 53°55'25" W	56.74'
(I)	N 33°16'57" W	86.60'
(J)	N 28°28'15" W	192.10'
(K)	N 59°15'46" W	282.92'
(L)	N 30°54'33" E	476.30'
(M)	N 17°58'35" E	22.34'

AREA: 22,093.88 SQ. FT.
0.5072 ACRES

NOTES:

1. ALL SANITARY SEWERS AND APPURTENANCES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH TOWAMENCIN TOWNSHIP STANDARDS.
2. ATHLETIC FACILITY, INCLUDING RUNNING TRACK, POLE VAULT PIT, BLEACHERS, ETC. LOCATED WITHIN THE SANITARY SEWER EASEMENT ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
3. THE SANITARY SEWER LOCATED ON THE PROPERTY IS TO REMAIN PRIVATE.

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
PENNSYLVANIA 811
DIAL 811 BEFORE YOU DIG
SERIAL NUMBER 20191281528

LEGEND

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- ULTIMATE RIGHT-OF-WAY
- CENTERLINE OF ROADWAY
- 300 EXISTING CONTOUR LINE
- EXISTING FENCE LINE
- EXISTING CURB LINE
- PROPOSED FENCE

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

COMMONWEALTH OF PENNSYLVANIA
SS:
COUNTY OF MONTGOMERY

I, _____, OF NORTH PENN SCHOOL DISTRICT, BEING DULY SWORN ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS _____, DEPOSE AND SAY THAT THE ABOVE MENTIONED SCHOOL DISTRICT IS THE TRUE AND LAWFUL OWNER OF THE PROPERTY SHOWN HEREON; THAT THE ABOVE DESCRIBED PROPERTY IS IN PEACEFUL POSSESSION OF SAID SCHOOL DISTRICT AND THAT THERE ARE NO SUITS OR LIENS PENDING AFFECTING THE TITLE THEREOF.

_____ DATE

ON THE _____ DAY OF _____, 20____, BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC FOR THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF STREETS AND PROPERTY SHOWN THEREON, SITUATE IN THE TOWNSHIP OF TOWAMENCIN, MONTGOMERY COUNTY, PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED.

_____ _____
NOTARY PUBLIC DATE
MY COMMISSION EXPIRES:

APPROVED BY THE BOARD OF SUPERVISORS OF THE TOWNSHIP OF TOWAMENCIN THIS _____ DAY OF _____, 20____.

_____ _____

REVIEWED BY THE TOWNSHIP ENGINEER ON THE _____ DAY OF _____, 20____.

_____ _____

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS, MONTGOMERY COUNTY, PENNSYLVANIA IN PLAN BOOK _____ PAGE _____ ON THE _____ DAY OF _____, 20____.

I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON, AS WELL AS ALL OTHER DRAWINGS WHICH ARE A PART OF THIS PLAN SET, ARE TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE TOWAMENCIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND WERE PREPARED BY ME OR UNDER MY DIRECTION. THE EXISTING PERIMETER MONUMENTS SHOWN HEREON HAVE BEEN LOCATED AS PART OF THE SURVEY AND ALL OTHER PROPOSED PERIMETER MONUMENTS SHALL BE SET.

_____, 20____
TODD R. MYERS, P.L.S.

MCPC No. 19-0168-001

PROCESSED and REVIEWED. A report has been prepared by the Montgomery County Planning Commission in accordance with the Municipalities Planning Code.

Certified this date _____

_____
For the Director
Montgomery County Planning Commission

LAND ARCHITECT

architerra, pc

205 North Main Street Coopersburg, Pennsylvania 18036

COWAN ASSOCIATES, INC.
PROVIDING A FULL RANGE OF CIVIL ENGINEERING & SURVEYING SERVICES
120 PENN-AM DRIVE P.O. BOX 949
QUAKERTOWN, PENNSYLVANIA 18951
TELEPHONE (215) 538-7075
FAX (215) 536-1582
CAI NO. 14717.21

N.J. General Authorization No. 24GA28059300

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT PETER McMACKIN ENGINEER

SCOTT PETER McMACKIN, P.E. 057003-E

PROJECT TITLE

NORTH PENN SCHOOL DISTRICT

CRAWFORD STADIUM RENOVATION

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

ARCHITERRA PROJECT NUMBER 1834.00

DATE

30 MAY, 2019

REVISIONS

06-13-19	PER CONSERVATION DISTRICT
07-23-19	GENERAL REVISIONS
08-05-19	PER CONSERVATION DISTRICT
08-21-19	BID ISSUE
09-27-19	GENERAL REVISIONS
10-10-19	REBID
01-23-20	RECORD SET

SHEET TITLE

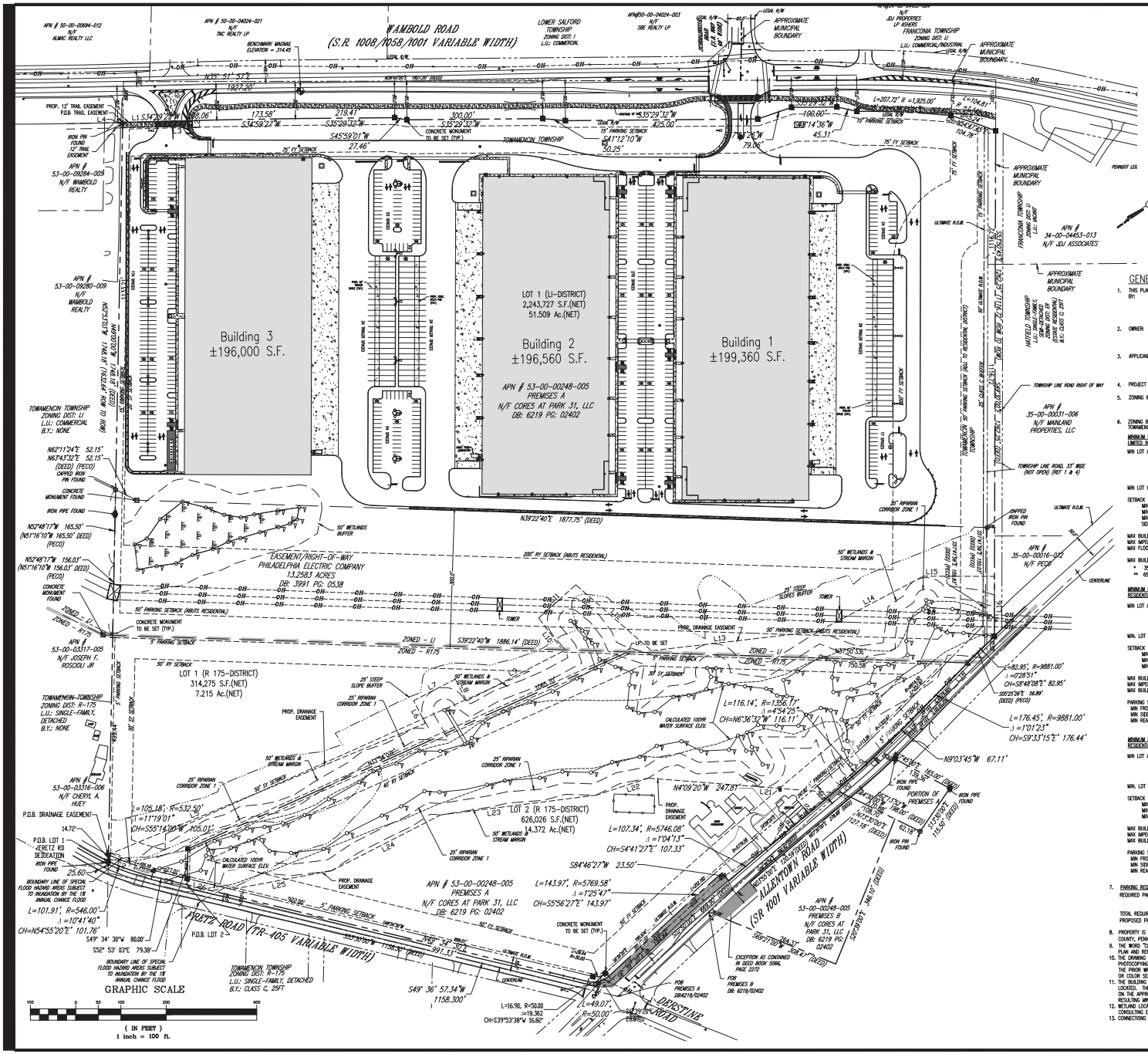
RECORD SITE PLAN

SHEET NUMBER

SP-2 of 26

© architerra, pc 2019

Year	SLD #	Development Name	Address
2017	LD 808	Lansdale Commerce Center (withdrawn)	2130 Allentown Rd
	LD 809	Wambold Realty LP	551 Wambold Rd
	LD 810	WAWA	1401 Forty Foot Rd
	LD 811	Ronald Main Sub-Division	1765 Metz Road
2018	LD 812	Walker Residential Subdiv	695 Keeler Rd
	LD 813	Upper Gwynedd Twp	1898 S Valley Forge Rd
	LD 814	NP Towamencin Industrial LLC	2130 Allentown Rd
2019	LD 815	CFC-Freddie's & Firestone/Phase IIB	Forty Foot Rd
	LD 816	Reynolds Acquisitions LP (24.49 acre lot)	2750 Kriebel Rd
	LD 817	NPHS Crawford Stadium Renovations	1340 Valley Forge Rd
	LD 818	CORE 5	2130 Allentown Rd
	LD 819	Towamencin Town Square Stage II-A - Starbucks	1735 Sumneytown Pike
2020	LD 820	Franklin Street Storage	1520 Franklin Street
	LD 821	Belfair Square townhomes	Welsh Road
	LD 822	Delp Drive Industrial Building	Delp Drive
2021	LD 823	Chipotle Restaurant/Mattress Warehouse	1758 Allentown Rd, Pad C
	LD 824	Dock Academy Campus Expansion	1000 Forty Foot Rd
	LD 825	Wambold Realty LP	531 Wambold Rd
	LD 826	Dock Woods Health Care Addition	275 Dock Dr
	LD 827	North Penn Animal Hospital	1200 Welsh Rd
	LD 828	Dock Woods Hybrid Independent Living Apts	275 Dock Dr
	LD 829	Liberty Paving Company LLC	0 Detwiler Rd
	LD 830	Schempp Properties	1261-1301 Snyder & 1064 Weikel Rds
2022	LD 831	Essential Portfolio Partners LLC	1560 Old Forty Foot Rd
	LD 832	PSDC Grocery Supermarket	1758 Allentown Rd Unit 1
	LD 833	Schnabel Minor Subdivision	1750 Kriebel Rd



LOCATION MAP 1" = 2000' ±

GENERAL NOTES

1. THIS PLAN REFERENCES A SURVEY PLAN BY: CORNERSTONE CONSULTING ENGINEERS AND ARCHITECTURAL, INC. 213 WEST MAIN STREET LANSDALE, PA 19446 PLAN ENTITLED: "ALTA / NSPS LAND TITLE SURVEY" PLAN DATED: 5/10/2019
2. OWNER: CORE5 AT PARK 31, LLC C/O CORE5 INDUSTRIAL PARTNERS, LLC 1230 PEACHTREE STREET, NE, SUITE 3560 ATLANTA, GA 30309
3. APPLICANT: CORE5 INDUSTRIAL PARTNERS, LLC 1230 PEACHTREE STREET, NE, SUITE 3560 ATLANTA, GA 30309
4. PROJECT LOCATION INFORMATION: T.M.P. NUMBER: 53-00-00248-00-5
5. ZONING INFORMATION: ZONING DISTRICT: LI – LIMITED INDUSTRIAL & R-175 RESIDENTIAL AGRICULTURAL EXISTING USE: PROPOSED USE: LOT 1: I-10 WAREHOUSE (591,900 SF) LOT 2: R-1 SINGLE FAMILY DETACHED DWELLING
6. ZONING BULK AND AREA REQUIREMENTS: TOWNENCIN VILLAGE OVERLAY DISTRICT:

MINIMUM LOT REQUIREMENTS (PORTION OF PROPOSED LOT 1 LIMITED INDUSTRIAL DISTRICT LI)

	REQUIRED	EXISTING	PROPOSED LOT 1
MIN LOT AREA:	3.0 Ac. (OR 130,680 S.F.)	55.983 Ac.(GROSS) (OR 2,434,274 S.F.) 51.798 Ac.(NET) (OR 2,254,564 S.F.)	55.883 Ac.(GROSS) (OR 2,434,274 S.F.) 51.509 Ac.(NET) (OR 2,243,727 S.F.)
MIN LOT WIDTH:	300 FT	1,891 FT	1,891 FT
SETBACK REQUIREMENTS:			
MIN FRONT YARD:	75 FT	N/A	81.5 FT
MIN SIDE YARD:	20 FT	N/A	145.3 FT
MIN REAR YARD:	50 FT	N/A	338.7 FT
SIDE YARD ABUTTING RESIDENTIAL:	200 FT	N/A	N/A
MAX BUILDING COVERAGE:	* 20%	N/A	26.4% (591,900 SF)
MAX IMPERVIOUS COVERAGE:	** 50%	N/A	56.5% (1,268,522 SF)
MAX FLOOR AREA RATIO:	70%	N/A	26.4% (591,900 SF)
MAX BUILDING HEIGHT:	40 FT	N/A	40 FT

* 35% (FOR AN INDIVIDUAL LOT SIZE OF 9+ AC.)
** 65% (FOR AN INDIVIDUAL LOT SIZE OF 9+ AC.)

MINIMUM LOT REQUIREMENTS (PORTION OF PROPOSED LOT 1) RESIDENTIAL DISTRICT R-175:

	REQUIRED	EXISTING	PROPOSED LOT 1
MIN LOT AREA:	60,000 S.F.	24.07 Ac.(GROSS) (OR 1,048,501 S.F.) 21.592 Ac.(NET) (OR 982,345 S.F.)	7.342 Ac.(GROSS) (OR 319,834 S.F.) 7.215 Ac.(NET) (OR 314,275 S.F.)
MIN. LOT WIDTH:	175 FT	850 FT	181.20 FT
SETBACK REQUIREMENTS:			
MIN FRONT YARD:	50 FT	15.3 FT	N/A
MIN SIDE YARD:	50 FT	50 FT+	N/A
MIN REAR YARD:	50 FT	50 FT+	N/A
MAX BUILDING COVERAGE:	12%	0.67% (6,614 SF)	N/A
MAX IMPERVIOUS COVERAGE:	20%	1.42% (13,938 SF)	N/A
MAX BUILDING HEIGHT:	65 FT	25 FT	N/A
PARKING SETBACKS:			
MIN FRONT YARD:	5 FT	72 FT	72 FT
MIN SIDE YARD:	5 FT	5 FT	5 FT
MIN REAR YARD:	5 FT	5 FT	5 FT

MINIMUM LOT REQUIREMENTS (LOT 2) RESIDENTIAL DISTRICT R-175:

	REQUIRED	EXISTING	PROPOSED LOT 2
MIN LOT AREA:	60,000 S.F.	N/A	16.728 Ac.(GROSS) (OR 728,668 S.F.) 14.372 Ac.(NET) (OR 626,026 S.F.)
MIN. LOT WIDTH:	175 FT	N/A	901 FT
SETBACK REQUIREMENTS:			
MIN FRONT YARD:	50 FT	N/A	15.3 FT
MIN SIDE YARD:	30 FT		50 FT+
MIN REAR YARD:	40 FT		50 FT+
MAX BUILDING COVERAGE:	12%	N/A	1.06% (6,614 SF)
MAX IMPERVIOUS COVERAGE:	20%	N/A	2.23% (13,938 SF)
MAX BUILDING HEIGHT:	35 FT	N/A	25 FT
PARKING SETBACKS:			
MIN FRONT YARD:	5 FT	N/A	72 FT
MIN SIDE YARD:	5 FT		5 FT
MIN REAR YARD:	5 FT		5 FT

7. PARKING REQUIREMENTS:
REQUIRED PARKING: I-10 WAREHOUSE = ONE(1) SPACE PER EACH 1,000 SF OF GROSS FLOOR AREA, PLUS ONE SPACE FOR EACH VEHICLE NORMALLY STORED ON THE PREMISES.
=591,920 SF WAREHOUSE/ 1,000 = 591.92 SPACES
TOTAL REQUIRED: 592 SPACES
PROPOSED PARKING: 592 SPACES (INCLUDING 16 ACCESSIBLE SPACES)
8. PROPERTY IS LOCATED IN ZONE X AND ZONE E AREAS PER MAP ENTITLED "FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS) PANEL 139 OF 451" MAP NUMBER 42091C0139 G (EFFECTIVE DATE: MARCH 2, 2016.).
9. THE WORD "CERTIFY" OR "CERTIFICATE" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THIS PLAN AND REFERENCED SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.
10. THE DRAWING IS PREPARED BY CORNERSTONE CONSULTING ENGINEERS AND ARCHITECTURAL, INC. AND NO PART OF THIS DRAWING MAY BE REPRODUCED BY PHOTOCOPYING, RECORDING OR BY ANY OTHER MEANS, OR STORED, PROCESSED, OR TRANSMITTED IN OR BY ANY COMPUTER OR OTHER SYSTEMS WITHOUT THE PRIOR WRITTEN PERMISSION OF THE SURVEYOR, ENGINEER, ARCHITECT, OR DESIGN PROFESSIONAL. COPIES OF THIS PLAN WITHOUT A RAISED IMPRESSION OR COLOR SEAL ARE NOT VALID.
11. THE BUILDING FOOTPRINTS ARE CONCEPTUAL ONLY AND ESTABLISH BUILDING ENVELOPES IN WHICH THE FINAL BUILDING FOOTPRINTS WILL BE GENERALLY LOCATED. THE FINAL BUILDING FOOTPRINTS SHALL BE DETERMINED AT THE TIME OF BUILDING PERMIT ISSUANCE AND SHALL BE GENERALLY AS CONFIGURED ON THE APPROVED RECORD PLAN WITH AN OVERALL SQUARE FOOTAGE NOT TO EXCEED THE TOTAL SHOWN ON THE APPROVED RECORD PLAN. ANY RESULTING MINOR MODIFICATIONS TO GRADING OR IMPERVIOUS COVERAGE SHALL BE REVIEWED AND APPROVED BY THE TOWNSHIP ENGINEER.
12. WETLAND LOCATION FROM DELINEATION BY PENN TRAIL ENVIRONMENTAL, LLC ON DECEMBER, 2016 AND LOCATION BY FIELD SURVEY BY CORNERSTONE CONSULTING ENGINEERS AND ARCHITECTURAL INC., ON JANUARY 2017. WETLAND SURVEY UPDATED BY FIELD SURVEY AS OF JUNE 2018.
13. CONNECTIONS TO PUBLIC WATER AND PUBLIC SEWER SYSTEMS ARE PROPOSED FOR LOT 1 AND LOT 2.

CLIENT DATA

CORE5 INDUSTRIAL PARTNERS

Cornerstone
Consulting Engineers & Architectural, Inc.
213 West Main Street · Lansdale · PA 19446
Phone: 215-362-3600 · Fax: 215-362-8400
www.cornerstonecorp.net
Pocono Region 570-839-1770
Lehigh Valley Region 610-625-2600
Philadelphia Region 215-362-3600

REVISIONS

NO.	BY	DESCRIPTION	DATE
1	ATB	REVISED PER TOWNSHIP COMMENTS	3-5-2020
2	ATB	REVISED PER TOWNSHIP COMMENTS	4-24-2020
3	ATB	REVISED PER TOWNSHIP COMMENTS	5-8-2020
4	ATB	REVISED TO ADD CAR PARKING	5-20-2020
5	ATB	REVISED PER TOWNSHIP COMMENTS	8-20-2020
6	ATB	REVISED PER TOWNSHIP COMMENTS	10-29-2020
7	ATB	REVISED PER ADDITIONAL COMMENTS	11-30-2020
8	ATB	REVISED PER ADDITIONAL COMMENTS	12-28-2020
9	ATB	REVISED PER CLIENT COMMENTS	2-15-2021
10	ATB	REVISED PER TOWNSHIP / PLANNING COMMISSION COMMENTS	3-5-2021
11	ATB	REVISED PER ADDITIONAL COMMENTS	4-7-2021
12	ATB	REVISED PER ADDITIONAL COMMENTS	4-26-2021

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irish Run Road
West Mifflin, Pennsylvania 15122
1-800-242-1776

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY.
PA LAW REQUIRES 3 FULL WORKING DAYS NOTICE TO PA 1 CALL BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH.

J.B. ANDERSON
PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
LICENSE No. PE-078318
ANDREW J. BOSCO
PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
LICENSE No. 084037

PROJECT LOCATION

CORE5 INDUSTRIAL PARTNERS PRESENTS CORE5 AT PARK 31

PRELIMINARY/FINAL LAND DEVELOPMENT SET

2130 ALLENTOWN ROAD
TMP# 53-00-00248-005
TOWNENCIN TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

TITLE

OVERALL SITE PLAN
(RECORD PLAN SHEET 1 OF 6)

PROJ. #	19-0230	DATE	06-2019
CAD ID	19-0230	DRN BY	DJB
SCALE	AS NOTED	CHK BY	JBA

SHEET 2 OF 48

REVISION 12

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
6-0	MONTGOMERY	TOWAMENCIN	--	0000	KRT	17

ECMS NO. 111494

ALSO INCLUDED:

BRIDGE L-327 PLAN & PROFILE	SHEETS	4
TRAFFIC CONTROL PLAN	SHEET	2
SIGNING AND PAVEMENT MARKING PLAN	SHEETS	5
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	SHEETS	12
CROSS SECTIONS	SHEETS	28
ADA PLANS	SHEETS	5

TOWAMENCIN TOWNSHIP

DRAWINGS
FOR
CONSTRUCTION
OF

KRIEBEL ROAD MULTI-USE TRAIL

IN MONTGOMERY COUNTY

FROM STA -00+50.00 TO STA 39+87.00

LENGTH 4,025 FT 0.762 MI

SCALE

HORIZONTAL 0 25 50 FEET

PLANS PREPARED BY:
GILMORE & ASSOCIATES, INC
65 E. BUTLER AVENUE, SUITE 100
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH F. CARLIN ENGINEER PE077908

DATE: 5/5/2021

RECOMMENDED DATE: 5/5/2021

Michael W. Robert

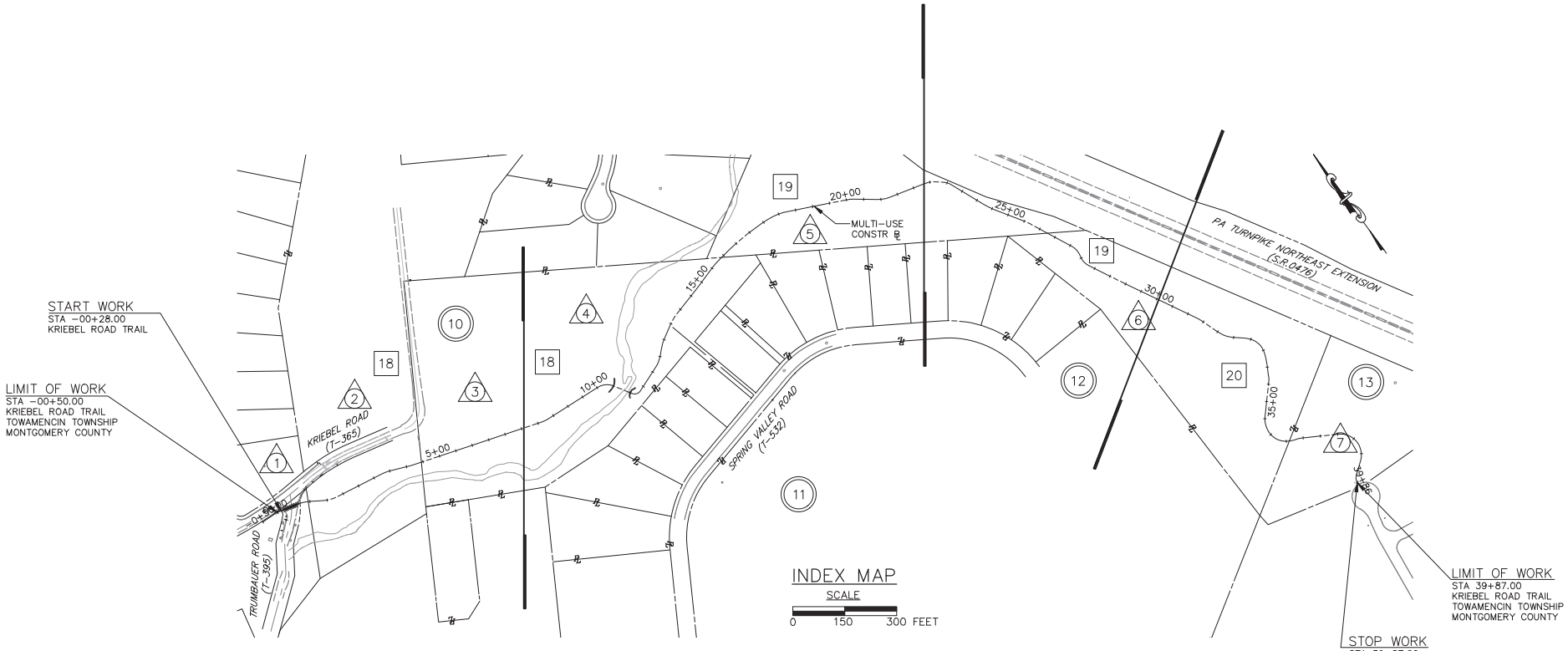
DISTRICT EXECUTIVE

APPROVED DATE: 5/10/2021

TOWAMENCIN TOWNSHIP MANAGER

SHEET INDEX BLOCK	
DESCRIPTION	SHEET
TITLE SHEET	1
INDEX SHEET	2
TYPICAL SECTION AND DETAIL SHEETS	3 – 4
GEOMETRY SHEETS	5–8
SUMMARY SHEET	9
TABULATION SHEET	10
PLAN SHEETS	11–14
PROFILE SHEETS	15–17

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6–0	MONTGOMERY	0000	KRT	2 OF 17
TOWAMENCIN TOWNSHIP				
REVISION NUMBER	REVISIONS		DATE	BY



INDEX MAP

SCALE

0 150 300 FEET

LIST OF PROPERTY OWNERS

PARCEL NO	OWNER	PARCEL NO	OWNER
1	TOWAMENCIN TOWNSHIP	5	PENNSYLVANIA TURNPIKE COMMISSION
2	TOWAMENCIN TOWNSHIP	6	TOWAMENCIN TOWNSHIP
3	TOWAMENCIN TOWNSHIP	7	TOWAMENCIN TOWNSHIP
4	TOWAMENCIN TOWNSHIP		

LEGEND

PLAN SHEET

PARCEL IDENTIFICATION NUMBER – NO TAKE

PROFILE SHEET

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

JOSEPH F. CARLIN
ENGINEER
PE077795

5/5/2021

\\NB1.gilmore.local\SERVER1\ENVRO\2015\15-12029-02-Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\INDEX.dwg Layout: INDEX Plotted By: lsalisbury, on Mon Mar 15, 2021 at 9:03am

LIST OF PUBLIC UTILITIES

PECO ENERGY COMPANY
1050 W. SWEDESFORD ROAD —g—g—
BERWYN, PA 19312 —f—f—
CONTACT: BILL HENSIL —GE—GE—

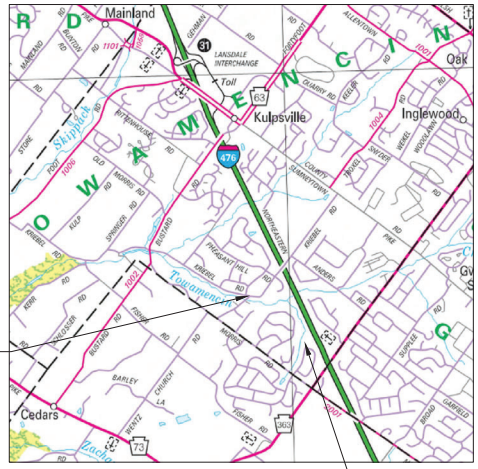
TOWAMENCIN TOWNSHIP
P.O. BOX 303 —s—s—
KULPSVILLE, PA 19443
CONTACT: DAVID HILLMANTEL

NORTH PENN WATER AUTHORITY
300 FORTY FOOT ROAD — w —w1 —
LANSDALE, PA 19446
CONTACT: DAN PRESTON

VERIZON PENNSYLVANIA, LLC —T—T—
1050 VIRGINIA DRIVE – FLOOR 4
FORT WASHINGTON, PA 19034
CONTACT: LAURA LIPPINCOTT

COMCAST CABLE COMMUNICATIONS, INC
2320 TRENTON ROAD
LEVITTOWN, PA 19056
CONTACT: JOHN DOHALICK

PA–ONE CALL SERIAL NUMBER: 20183251462



LIMIT OF WORK
STA –0+50.00
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY

LIMIT OF WORK
STA 39+87.00
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY

LOCATION MAP
SCALE IN MILES
0 1/2 1

LEGEND

- TRAFFIC ROUTE TOWNSHIP ROAD
- 1010 — REMAINING STATE ROAD AND IDENTIFIER
- TOWNSHIP ROAD
- (PRIMITIVE / UNIMPROVED)
- OTHER ROAD
- 61 — PENNSYLVANNIA TRAFFIC ROUTE
- CSXT — RAILROAD (IN SERVICE)
- TOWNSHIP LINE
- INCORPORATED BOROUGH
- COLLEGE OR UNIVERSITY
- CEMETERY

SUMMARY OF PROJECT COORDINATES

BASED ON 1983 STATE PLANE COORDINATE SYSTEM

MULTI–USE TRAIL CONSTRUCTION BASELINE

RTE	STATION	POINT	COORDINATES NORTHING	COORDINATES EASTING	BEARING
	0+00.00	BEGIN STA	333845.9680	2641619.0490	
	0+66.77	PC	333823.6782	2641681.9930	S61° 41' 51.72"E
	0+82.44	PI	333818.4752	2641696.7682	S61° 41' 51.72"E
	0+97.85	PT	333809.0033	2641709.2446	S61° 41' 51.72"E
	1+40.10	PC	333783.4591	2641742.8917	S64° 27' 59.44"E
	1+60.75	PI	333770.9683	2641759.3448	S64° 27' 59.44"E
	1+80.84	PT	333766.0191	2641779.4004	S64° 27' 59.44"E
	3+26.86	PC	333731.0345	2641921.1708	S69° 44' 56.33"E
	3+38.06	PI	333728.3518	2641932.0422	S69° 44' 56.33"E
	3+49.16	PT	333723.3310	2641942.0511	S69° 44' 56.33"E
	4+10.94	PC	333695.6324	2641997.2672	S65° 21' 40.42"E
	4+14.43	PI	333694.0655	2642000.3906	S65° 21' 40.42"E
	4+17.92	PT	333692.7205	2642003.6159	S65° 21' 40.42"E
	8+08.79	PC	333542.8352	2642364.5984	S74° 32' 43.20"E
	8+21.08	PI	333538.1377	2642375.9598	S74° 32' 43.20"E
	8+33.25	PT	333536.3320	2642388.1206	S74° 32' 43.20"E
	10+01.79	PC	333511.5775	2642554.8357	S54° 05' 59.14"E
	10+27.77	PI	333507.7620	2642580.5318	S54° 05' 59.14"E
	10+49.71	PT	333484.5430	2642592.1820	S54° 05' 59.14"E
	11+07.13	PC	333433.2258	2642617.9305	S66° 20' 11.96"E
	11+23.73	PI	333418.3894	2642625.3747	S66° 20' 11.96"E
	11+34.84	PT	333422.9726	2642641.3286	S66° 20' 11.96"E
	12+17.76	PC	333445.8695	2642721.0326	N61° 53' 18.09"E
	12+35.10	PI	333450.6574	2642737.6992	N61° 53' 18.09"E
	12+51.93	PT	333461.8490	2642750.9449	N61° 53' 18.09"E
	12+65.75	PC	333470.7667	2642761.4994	N56° 57' 47.56"E
	12+84.59	PI	333482.9254	2642775.8896	N56° 57' 47.56"E
	13+03.23	PT	333491.1478	2642792.8395	N56° 57' 47.56"E
	13+46.18	PC	333509.8937	2642831.4822	N71° 44' 58.62"E
	13+66.27	PI	333518.6616	2642849.5564	N71° 44' 58.62"E
	13+86.12	PT	333522.3646	2642869.3008	N71° 44' 58.62"E
	15+54.15	PC	333555.8534	2643033.9407	N81° 17' 25.35"E
	15+64.20	PI	333558.0346	2643043.7464	N81° 17' 25.35"E
	15+74.21	PT	333558.8888	2643053.7553	N81° 17' 25.35"E
	15+91.53	PC	333560.3617	2643071.0123	S88° 28' 10.82"E
	16+76.98	PI	333567.6283	2643156.1519	S88° 28' 10.82"E
	17+61.72	PT	333555.8262	2643240.7820	S88° 28' 10.82"E
	17+65.43	PC	333555.3129	2643244.4630	S71° 15' 22.26"E
	17+94.06	PI	333551.3589	2643272.8159	S71° 15' 22.26"E
	18+22.01	PT	333537.2411	2643297.7197	S71° 15' 22.26"E
	20+00.92	PC	333449.0065	2643453.3650	S54° 28' 00.66"E
	20+09.83	PI	333444.6122	2643461.1167	S54° 28' 00.66"E
	20+18.68	PT	333438.7058	2643467.7885	S54° 28' 00.66"E
	20+92.59	PC	333389.7176	2643523.1253	S59° 28' 09.50"E
	21+09.09	PI	333378.7791	2643535.4813	S59° 28' 09.50"E
	21+25.18	PT	333373.2587	2643551.0328	S59° 28' 09.50"E
	22+32.99	PC	333337.1937	2643652.6304	S58° 14' 23.54"E
	22+50.53	PI	333331.3271	2643669.1571	S58° 14' 23.54"E
	22+67.53	PT	333319.1500	2643681.7772	S58° 14' 23.54"E
	22+89.08	PC	333304.1926	2643697.2788	S31° 50' 01.44"E
	23+01.72	PI	333295.4142	2643706.3766	S31° 50' 01.44"E
	23+13.84	PT	333283.3664	2643710.2085	S31° 50' 01.44"E
	25+56.58	PC	333060.0565	2643803.1504	S24° 10' 34.92"E
	25+62.00	PI	333055.2656	2643805.6788	S24° 10' 34.92"E
	25+67.40	PT	333050.1925	2643807.5785	S24° 10' 34.92"E
	27+06.84	PC	332919.6076	2643856.4796	S0° 49' 42.21"E
	27+24.75	PI	332902.8407	2643862.7584	S0° 49' 42.21"E
	27+41.23	PT	332885.8993	2643856.9670	S0° 49' 42.21"E
	27+45.39	PC	332881.9611	2643855.6207	S1° 49' 09.67"E
	27+64.28	PI	332864.0906	2643849.5117	S1° 49' 09.67"E
	27+81.51	PT	332846.6439	2643856.7425	S1° 49' 09.67"E
	31+31.50	PC	332524.7091	2643994.0332	S19° 02' 22.04"E
	31+37.94	PI	332518.7950	2643996.5893	S19° 02' 22.04"E
	31+44.36	PT	332512.5632	2643998.2247	S19° 02' 22.04"E
	31+99.62	PC	332459.1191	2644012.2504	S30° 06' 22.26"E
	32+27.16	PI	332432.4742	2644019.2429	S30° 06' 22.26"E
	32+53.38	PT	332413.1688	2644038.8935	S30° 06' 22.26"E
	32+85.26	PC	332390.8254	2644061.6362	S8° 31' 06.76"E
	33+30.45	PI	332359.1520	2644093.8758	S8° 31' 06.76"E
	33+62.73	PT	332319.4226	2644072.3310	S8° 31' 06.76"E
	35+45.14	PC	332182.5229	2643954.2922	S35° 39' 26.98"W
	35+57.11	PI	332174.3521	2643945.5494	S35° 39' 26.98"W
	35+68.77	PT	332163.4525	2643940.6101	S35° 39' 26.98"W
	24+20.69	PC	333181.5438	2643742.5946	S22° 44' 00.45"E
	24+38.50	PI	333164.5691	2643747.9936	S22° 44' 00.45"E
	24+56.22	PT	333148.8158	2643756.3074	S22° 44' 00.45"E
	34+24.64	PC	332266.1637	2644040.8221	S39° 28' 23.16"W
	34+32.50	PI	332259.4984	2644036.6557	S39° 28' 23.16"W
	34+40.27	PT	332254.1313	2644030.9129	S39° 28' 23.16"W
	38+02.62	PC	332006.2659	2644082.0516	S0° 47' 49.69"W
	38+91.23	PI	331955.5664	2644154.7346	S0° 47' 49.69"W
	39+19.69	PT	331906.9087	2644080.6692	S0° 47' 49.69"W
	35+72.78	PC	332159.7955	2643938.9529	S20° 29' 14.57"E
	36+32.50	PI	332105.4007	2643914.3032	S20° 29' 14.57"E
	36+66.75	PT	332080.4963	2643968.5818	S20° 29' 14.57"E
	36+84.04	PC	332073.2842	2643984.3002	S60° 13' 40.07"E
	36+89.42	PI	332071.0400	2643989.1914	S60° 13' 40.07"E
	36+94.78	PT	332067.9612	2643993.6052	S60° 13' 40.07"E
	39+66.53	PC	331881.1922	2644041.5243	S35° 46' 08.40"W
	39+74.18	PI	331876.9927	2644035.1320	S35° 46' 08.40"W
	39+81.14	PT	331869.5995	2644033.1729	S35° 46' 08.40"W
	39+86.17	END STA	331864.7337	2644031.8836	

NOTE: FOUR (4) PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

TABULATION OF CONSTRUCTION LENGTH

KRIEBEL TRAIL STA 00+12 TO STA 39+87 = 3,975 FT = 0.753 MI

TABULATION OF OVERALL LENGTH

KRIEBEL TRAIL STA –00+50 TO STA 39+87 = 4,025 FT = 0.762 MI

LIST OF STATION EQUALITIES

NONE

EARTHWORK SUMMARY ENTIRE PROJECT

THE INFORMATION ON ESTIMATED AMOUNTS OF EARTHWORK HAS BEEN USED IN THE PRELIMINARY ESTIMATE. DO NOT USE AS A WAIVER OF ANY PROVISIONS OF THE SPECIFICATIONS AND CONTRACTS.

CUBIC YARDS OF EXCAVATION						CUBIC YARDS OF COMPLETED EMBANKMENT*	CUBIC YARDS OF BORROW EXCAVATION	CUBIC YARDS OF SELECT BORROW	CUBIC YARDS OF WASTE
CLASS 1	CLASS 1A	CLASS 1B	CLASS 2	CLASS 3	CLASS 4	2044	1077	0	
~~1945~~ 168 967	–0–	–0–	–0–	–0–	–0–	1377 2673	~~1248~~ 2544	129	~~697~~ 0

* INCLUDES ALL BORROW ITEMS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6–0	MONTGOMERY	0000	KRT	3 OF 17

TOWAMENCIN TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY
2	ADDENDUM 4	7/16/21	JFC
3	ADDENDUM 5	8/09/21	JFC

GENERAL NOTES

1. ☒ THE DEPARTMENT RESERVES THE RIGHT TO ELIMINATE ANY OR ALL OF THIS WORK. DO NOT PERFORM WORK EXCEPT THAT WHICH IS WITHIN THE HIGHWAY RIGHT–OF–WAY UNTIL SO ORDERED IN WRITING BY THE ENGINEER.

2. DETAILS, OTHER THAN THOSE INDICATED, ARE ON THE FOLLOWING STANDARD DRAWINGS:
   RC–21M JUNE 1, 2010
   RC–30M DECEMBER 17, 2019
   RC–45M SEPTEMBER 15, 2016
   RC–46M SEPTEMBER 15, 2016
   RC–64M JUNE 1, 2010
   RC–67M DECEMBER 17, 2019
   RC–70M FEBRUARY 8, 2019
   RC–72M FEBRUARY 8, 2018
   RC–77M DECEMBER 17, 2019
   RC–80M JUNE 1, 2010
   RC–81M JUNE 1, 2010
   RC–82M JUNE 1, 2010
   RC–83M FEBRUARY 8, 2019
   RC–84M JUNE 1, 2010
   RC–91M DECEMBER 17, 2019
   RC–721M SEPTEMBER 30, 2016
   BC–722M SEPTEMBER 30, 2016

   TRAFFIC SIGNAL STANDARDS TC–8800 SERIES DECEMBER 12, 2011

3. DO NOT INTERFERE WITH THE OPERATION OF ANY FIRE HYDRANT, FIRE CALL BOX OR POLICE CALL BOX.

4. THIS IS A FEDERAL AID PROJECT AND AS SUCH IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE FEDERAL HIGHWAY ADMINISTRATION, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND TOWAMENCIN TOWNSHIP.

5. THREE TO TEN WORKING DAYS PRIOR TO EXCAVATION BASED ON THE COMPLEXITY OF THE PROJECT, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC., PHONE 1–800–242–1776, SERIAL NO. 20183251462 FOR TOWAMENCIN TOWNSHIP. ADDITIONAL INFORMATION IS AVAILABLE AT https://www.pa1call.org/PA811/Public/.

6. THE CONTRACTOR IS REQUIRED TO NOTIFY THE DEPARTMENT AND SUBMIT AN ALLEGED VIOLATION REPORT (AVR) TO THE PA PUBLIC UTILITY COMMISSION THROUGH THE PA ONE CALL SYSTEM, WWW.PA1CALL.ORG, WITHIN TEN (10) BUSINESS DAYS AFTER A UTILITY LINE IS STRUCK, DAMAGED, OR PREVIOUS DAMAGE IS DISCOVERED AS REQUIRED BY PENNSYLVANIA'S UNDERGROUND UTILITY LINE PROTECTION LAW ACT 50 (P.L.852, NO. 287 AMENDED OCT. 30, 2017).

7. THE SURVEY IS BASED ON THE 1983 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPSC83). THE COMBINED AVERAGE SCALE FACTOR IS 0.99998260.

8. HORIZONTAL DATUM IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM (GPS), WITH OBSERVATIONS REFERENCED TO THE TOPCON TOPSURV GPS BASE STATION NETWORK.

9. VERTICAL DATUM IS NAVD88 AS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE TOPCON TOPSURV GPS BASE STATION NETWORK.

10. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE–GROUND OBSERVATION OF THE SITE. NO EXCAVATIONS WERE PERFORMED IN THE PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITES TO BE PRESENT WHICH ARE NOT SHOWN ON THE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY GILMORE & ASSOCIATES INC.

11. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON MARCH 29, 2007, PENNSYLVANIA ACT 181. GILMORE & ASSOCIATES INC. HAS OBTAINED A PA–ONE CALL FOR DESIGN PURPOSES ONLY.

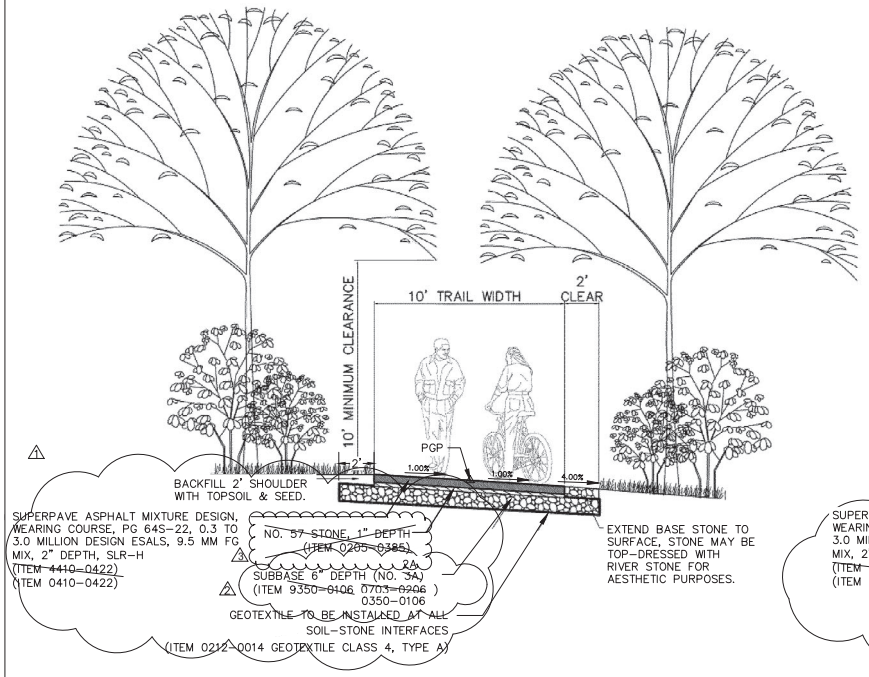
PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER PE077998

3/19/2021

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	4 OF 17
TOWAMENCIN TOWNSHIP				

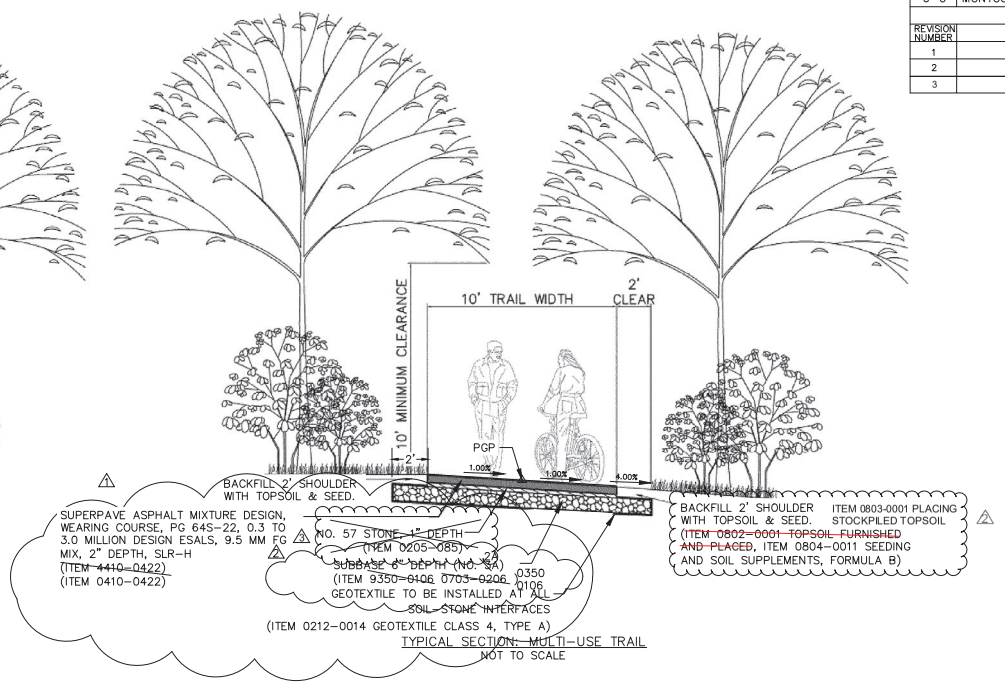
REVISION NUMBER	REVISIONS	DATE	BY
1	ADDENDUM 1	6/16/21	JFC
2	ADDENDUM 4	7/20/21	JFC
3	ADDENDUM 5	8/09/21	JFC



TYPICAL SECTION: MULTI-USE TRAIL WITH EXPOSED STONE SHOULDER FOR SUBSURFACE INFILTRATION BED

NOT TO SCALE

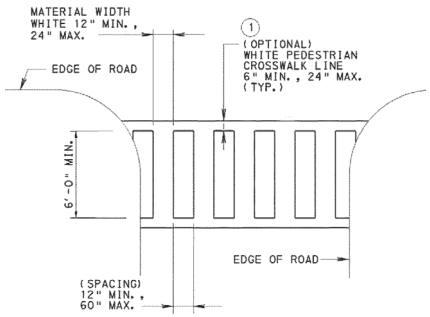
NOTE: REFER TO TRAIL PLAN & PROFILE SHEETS FOR LIMITS OF TRAIL WITH EXPOSED STONE SHOULDER



TYPICAL SECTION: MULTI-USE TRAIL

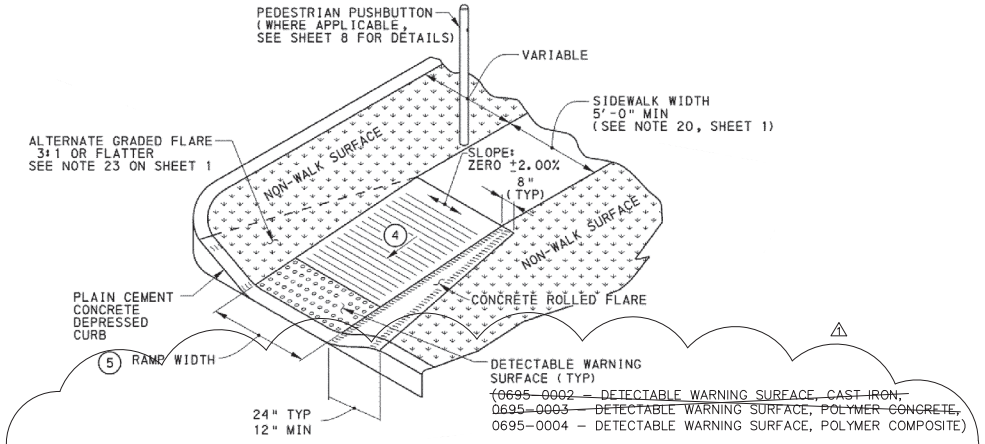
NOT TO SCALE

NOTE: REFER TO TRAIL PLAN & PROFILE SHEETS FOR LIMITS OF TRAIL WITH EXPOSED STONE SHOULDER



TYPE C PERPENDICULAR CROSSWALK
(ITEM 0960-0021 24 INCH WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS & ITEM 0960-0005 6 INCH WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS)

NOT TO SCALE



ALTERNATE TYPE 4A CURB RAMP, PARALLEL
PUB 72M, RC-67, SHEET 4 OF 14
(ITEM 0630-0010 PLAIN CEMENT CONCRETE CURB, INCLUDING REMOVAL OF EXISTING CURB, ITEM 0676-0001 CEMENT CONCRETE SIDEWALK)

NOT TO SCALE

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

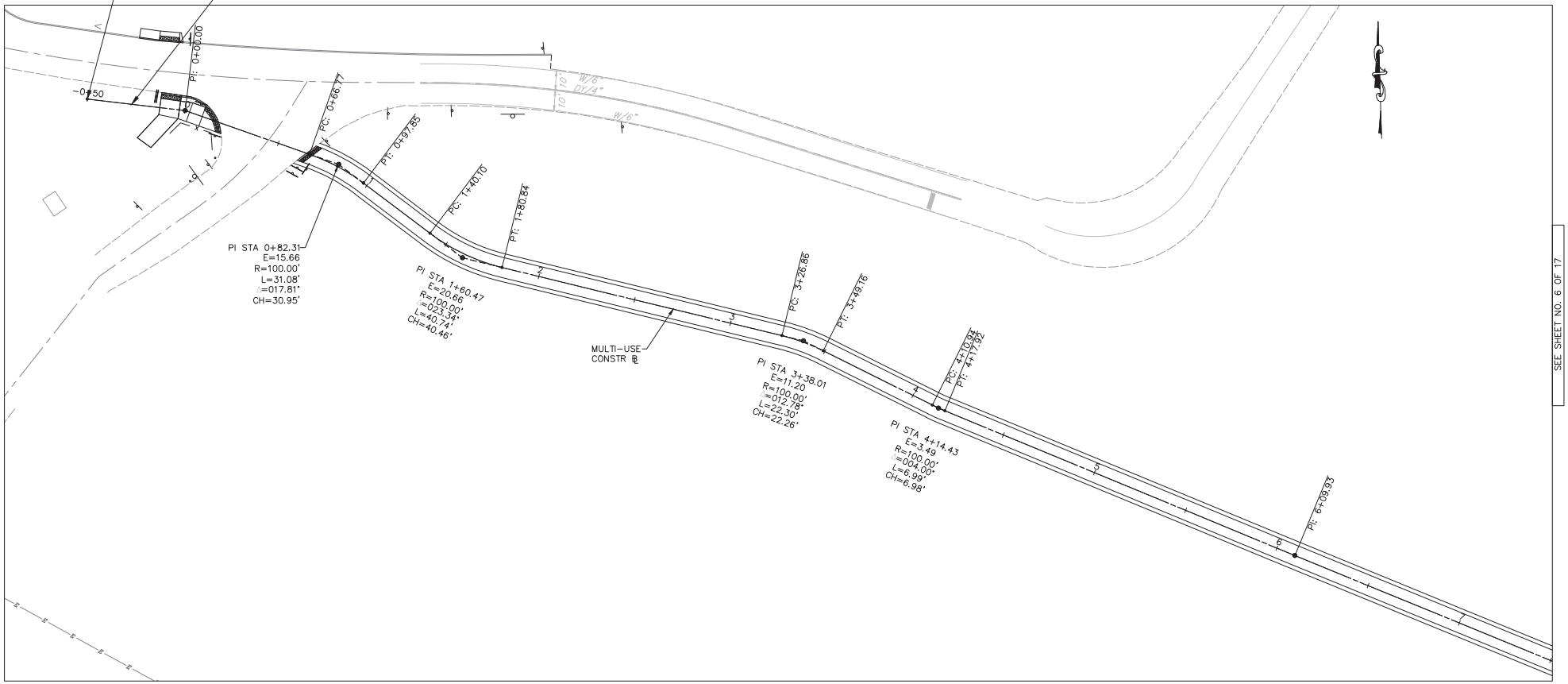
JOSEPH F. CARLIN
REGISTERED PROFESSIONAL ENGINEER PE077998 PENNSYLVANIA

3/19/2021

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	5 OF 17
TOWAMENCIN TOWNSHIP				
REVISION NUMBER	REVISIONS		DATE	BY

LIMIT OF WORK
STA -00+50.00
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY

START WORK
STA 00+28.00
KRIEBEL ROAD TRAIL



GEOMETRY PLAN

SCALE

0 25 50 FEET

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
PE077908

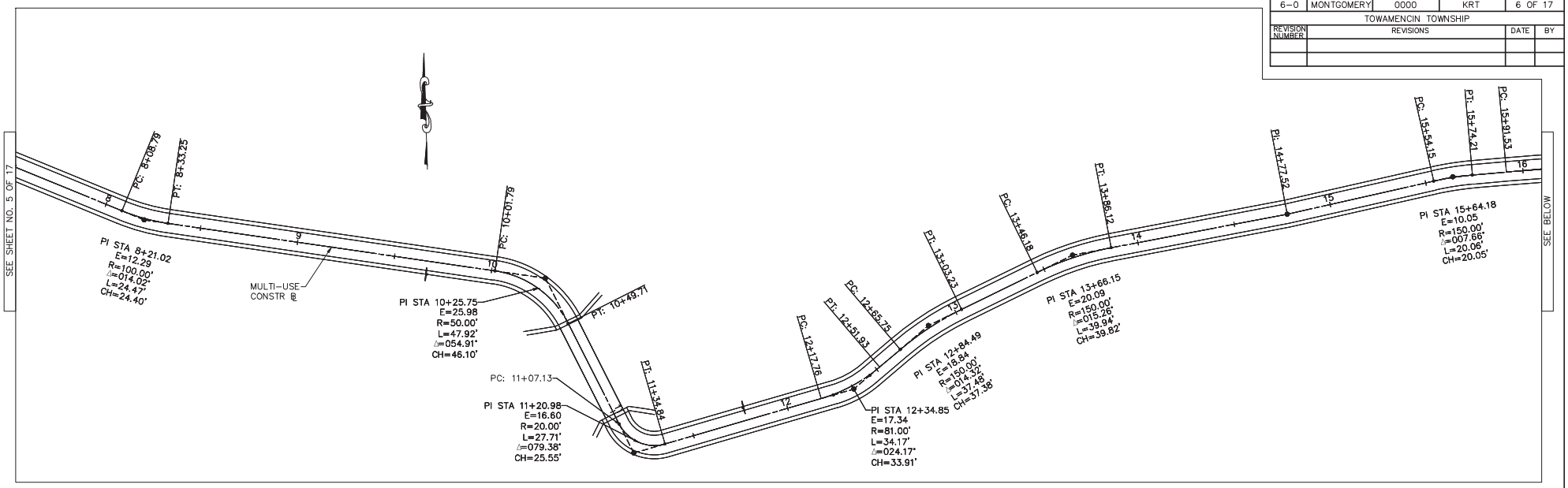
5/5/2021

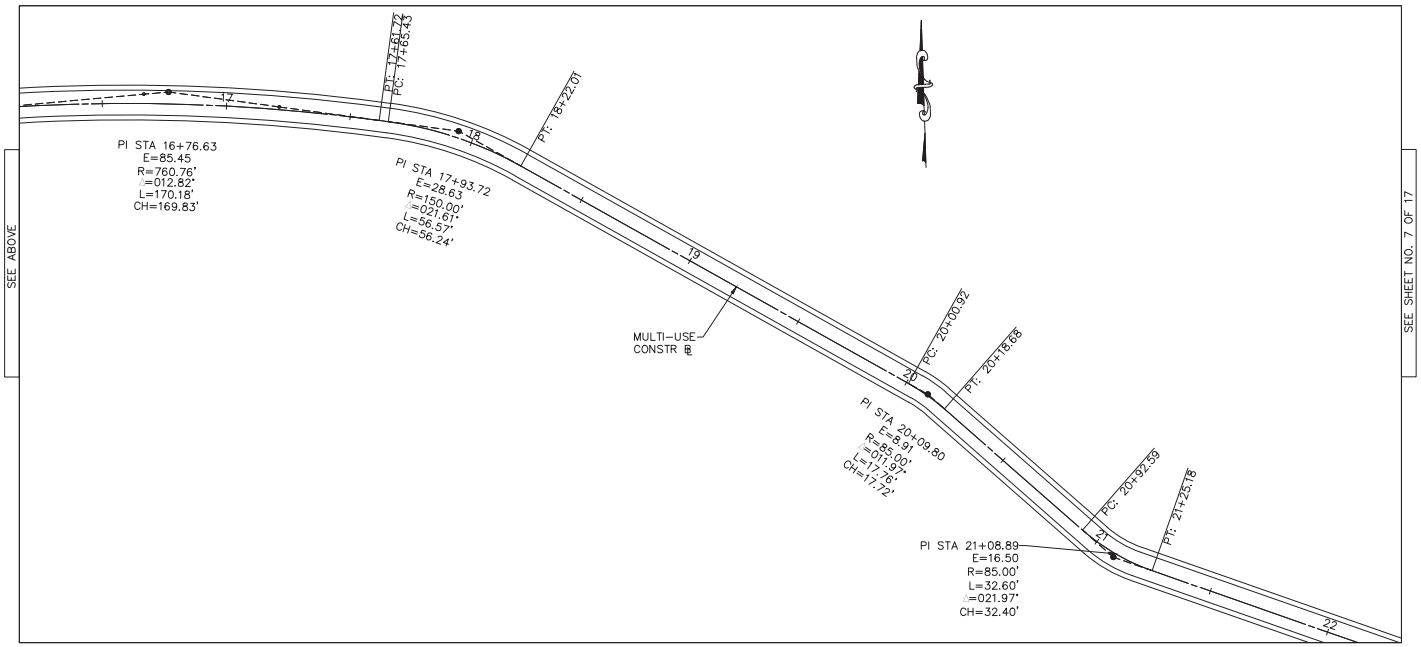
\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02--Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\GEOMETRY PLAN.dwg Layout: 5 Plotted By: lsalisbury, on Mon Mar 15, 2021 at 9:04am

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	6 OF 17

TOWAMENCIN TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY





GEOMETRY PLAN

SCALE

0 25 50 FEET

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

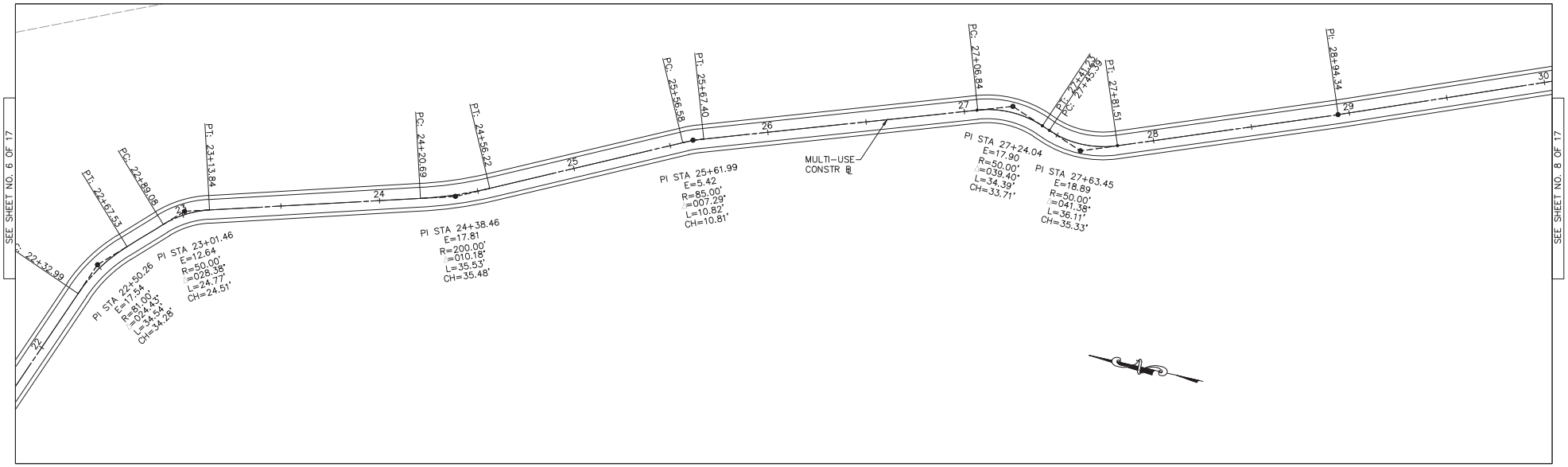
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
049778

5/5/2021

\\Rbf.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02--Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\GEOMETRY PLAN.dwg Layout: 6 Plotted By: lsalisbury, on Mon Mar 15, 2021 at 9:12am

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	7 OF 17
TOWAMENCIN TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



GEOMETRY PLAN

SCALE

0 25 50 FEET

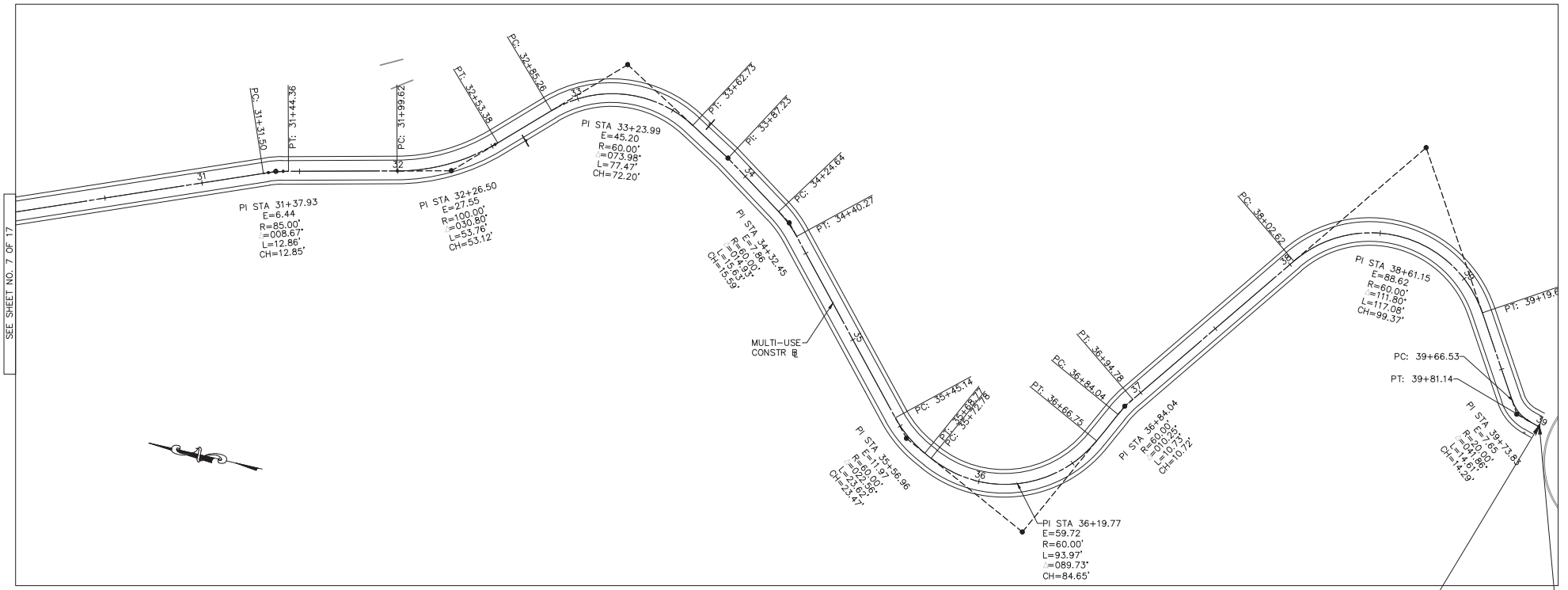
PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

JOSEPH F. CARLIN
ENGINEER
PE077918

5/5/2021

\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02--Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\GEOMETRY PLAN.dwg Layout: 7 Plotted By: lsalisbury, on Mon Mar 15, 2021 at 9:11am

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	8 OF 17
TOWAMENCIN TOWNSHIP				
REVISION NUMBER	REVISIONS		DATE	BY



GEOMETRY PLAN

SCALE

0 25 50 FEET

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
5/5/2021

\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02--Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\GEOMETRY PLAN.dwg Layout: 8 Plotted By: lsalisbury, on Mon Mar 15, 2021 at 9:11am

SP STRUCTURE PLAN

SPMP SIGNING AND PAVEMENT MARKING PLAN

SUMMARY

◆ - SEE SPECIAL PROVISIONS

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1	REVISE ITEMS PER ADDENDUM #1	6/16/21	JFC	6-0	MONTGOMERY	0000	KRT	9 OF 17
2	ADDENDUM 4	7/20/21	JFC	TOWAMENCIN TOWNSHIP				
3	ADDENDUM 5	8/03/21	JFC					

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	0201 0001 LS	CLEARING AND GRUBBING		10-11
3 2 967 ~~168~~ 1945	0203 0001 CY	CLASS 1 EXCAVATION		10-11
3 1 245	0205 038X5 TON	~~SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 57~~		10-11
8241	0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE A		10-11
4338	0410 0422 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM FG MIX, 2" DEPTH, SRL-H ◆		10-11 3
	0608 0001 LS	MOBILIZATION		10-11
	0609 0004 LS	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE C		10-11
	0609 0009 LS	EQUIPMENT PACKAGE ◆		10-11
22	0630 0001 LF	PLAIN CEMENT CONCRETE CURB		10-11
17	0676 0001 SY	CEMENT CONCRETE SIDEWALK		10-11
	0688 0002 LS	MICROCOMPUTER WITH BATTERY BACKUP SYSTEM, TYPE A		10-11
	0689 0001 LS	NARRATIVE SCHEDULE		10-11
92	0695 0004 SF	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE		10-11
2 ~~0300 0105~~ ~~1042~~ ~~7338~~ ~~6 073~~	6703 0028 SYSX	~~NO. 3 COARSE AGGREGATE SUBBASE 6" DEPTH (NO. 2A)~~ ◆		10-11
3 ~~116~~ 509	0802 3 0001 CY	~~TOPSOIL FURNISHED AND PLACED PLACING STOCKPILED TOPSOIL~~		10-11
120	0804 0011 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA B		10-11
10	0805 0021 TON	MULCHING - HAY		10-11
5000	0845 0001 DOLLA	UNFORESEEN WATER POLLUTION CONTROL		10-11
2 5	0849 0010 EACH	ROCK CONSTRUCTION ENTRANCE		10-11
3	0855 0003 EACH	PUMPED WATER FILTER BAG		10-11
2 2063 ~~1150~~	0867 0018 LF	COMPOST FILTER SOCK, 18" DIAMETER		10-11
1951 ~~1560~~	0867 0022 LF	COMPOST FILTER SOCK, 24" DIAMETER		10-11
	4901 0001 LS	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION MODIFIED ◆		10-11
2 79 ~~92~~	0931 0001 SF	POST MOUNTED SIGNS, TYPE B		SPMP

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
103	0960 0002 LF	4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		SPMP
150	0960 0005 LF	6" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		SPMP
207	0960 0021 LF	24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		SPMP
6	0960 0140 EACH	WHITE HOT THERMOPLASTIC LEGEND, SLOW CURVE ARROW, LEFT (INCLUDES ARROW, THE WORD SLOW AND 2 TRANSVERSE BANDS)		SPMP
121	9000 0001 SY	~~SELECTED BORROW EXCAVATION, RIVER STONE 1" DEPTH~~ ◆		10-11
	9000 0002 LS	~~PREFABRICATED PEDESTRIAN BRIDGE AND REINFORCED CONCRETE STRUCTURE~~ ◆		SP 2
130	9000 0003 TON	BRIDGE ABUTMENT STONE TOE PROTECTION ◆		SP
150	9000 0004 LF	TRAIL FENCE COMPLETE WITH POSTS AND HARDWARE ◆		10-11 1
~~6160~~	9000 0005 LF	~~MAINTAIN PREVIOUSLY PLACED COMPOST FILTER SOCK~~ ◆		10-11 2
2	9000 0006 EACH	SANDBAG COFFER DAM ◆		10-11
1	0686 0010 LS	CONSTRUCTION SURVEYING, TYPE A		NO TAB 1
1	0686 0055 LS	CONSTRUCTION SURVEYING, TYPE D		NO TAB
~~1077~~ ~~2544~~ 3	0209 0100 CY	FOREIGN BORROW EXCAVATION		10-11 2
	8211 0001 LS	DESIGN OF BRIDGE STRUCTURE (NO AS-DESIGNED FOUNDATION PROVIDED) ◆		SP
	8299 0001 LS	CONSTRUCTION OF PREFABRICATED PEDESTRIAN BRIDGE ◆		SP

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET

QUANTITY	ITEM NO / UNIT	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOSEPH F. CARLIN — ENGINEER — PE077998

C:\padb2000cTraffic\18-05091 Kriebel Road Trail\KRIEBEL2.MDB 5/20/2021 12:31:46 PM

TABULATION OF QUANTITIES

TRAIL

REVISION NO	REVISIONS	DATE	BY
1	ADDENDUM 1	6/16/21	JFC
2	ADDENDUM 4	7/20/21	JFC
3	ADDENDUM 5	8/03/21	JFC

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	-		10 OF 17
	TOWAMENCIN			

ITEM NUM	UNIT	CLEARING AND GRUBBING	CLASS 1 EXCAVATION	SELECTED BORROW EXCAVATION, COARSE AGGREGATE, NO. 7	GEOTEXTILE, CLASS 4, TYPE A	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM FG MIX, 2" DEPTH, SRL-H	MOBILIZATION	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE C	EQUIPMENT PACKAGE	PLAIN CEMENT CONCRETE CURB	CEMENT CONCRETE SIDEWALK	MICROCOMPUTER WITH BATTERY BACKUP SYSTEM, TYPE A	NARRATIVE SCHEDULE	DETECTABLE WARNING SURFACE POLYMER COMPOSITE	~~NO. 3 COARSE AGGREGATE~~ SUBBASE 6" DEPTH (NO. 2A)	TOPSOIL FURNISHED AND PLACED, PLACING STOCKPILED TOPSOIL	SEEDING AND SOIL SUPPLEMENTS - FORMULA B	MULCHING - HAY	UNFORESEEN WATER POLLUTION CONTROL	ROCK CONSTRUCTION ENTRANCE	PUMPED WATER FILTER BAG	COMPOST FILTER SOCK, 18" DIAMETER	COMPOST FILTER SOCK, 24" DIAMETER	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION MODIFIED	SELECTED BORROW EXCAVATION, RIVER STONE 1 DEPTH	TRAIL FENCE COMPLETE WITH POSTS AND HARDWARE	MAINTAIN PREVIOUSLY PLACED COMPOST FILTER SOCK	SANDBAG COFFER DAM	REMARKS	SIDE	STATIONS
		0201 0001	0203 0001	0205 0389	0212 0014	0410 0422	0608 0001	0609 0004	0609 0009	0630 0001	0676 0001	0688 0002	0689 0001	0695 0004	0305 0106	0809 0001	0804 0011	0805 0021	0845 0001	0849 0010	0855 0003	0867 0018	0867 0022	4901 0001	9000 0001	9000 0004	9000 0006			
		LS	CY	TON	SY	SY	LS	LS	LS	LF	SY	LS	LS	SF	CY	CY	LB	TON	DOLLA	EACH	EACH	LF	LF	LS	SY	LF	DE	EACH			
																				2		2				1			ENTIRE PROJECT		
																				5	3	2063 T150	1951 T560				8190	2			
3														20															ADA CURB RAMP	LT	0+08.51
2														20															ADA CURB RAMP	LT	0+12.24
														28	2	3													ADA CURB RAMP	LT/RT	0+17.57
		967 T945	168 T945	245	8241	4338				22	17				2 T338 T042	509 T16	120	10	5000						181	97 T50			MULTI-USE TRAIL	LT	0+27.41 TO 39+86.17
														24	3														ADA CURB RAMP	LT/RT	0+65.00
		967 T945	168 T945	245	8241					22	17			92	2 T338 T042	509 T16	120	10	5000	5	3	2063 T150	1951 T560		181	97 T50	8190	2	TOTALS		

C:\padb2000cTraffic\18-05091 Kriebel Road Trail\KRIEBEL2.MDB 5/18/2021 5:18:09 PM

TABULATION OF QUANTITIES

TRAIL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
2	ADDENDUM 4	7/20/21	JFC	6-0	MONTGOMERY	-		10A OF 17
3	ADDENDUM 5	8/09/21	JFC	TOWAMENCIN				

ITEM NUM	UNIT	REMARKS	SIDE	STATIONS
0205 0100	CY	FOREIGN BORROW EXCAVATION		
		ENTIRE PROJECT		
		ADA CURB RAMP	LT	0+08.51
		ADA CURB RAMP	LT	0+12.24
		ADA CURB RAMP	LT/RT	0+17.57
1077 2044	3	MULTI-USE TRAIL	LT	0+27.41 TO 39+86.17
		ADA CURB RAMP	LT/RT	0+65.00
1077 2044	3	TOTALS		

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
PE077998

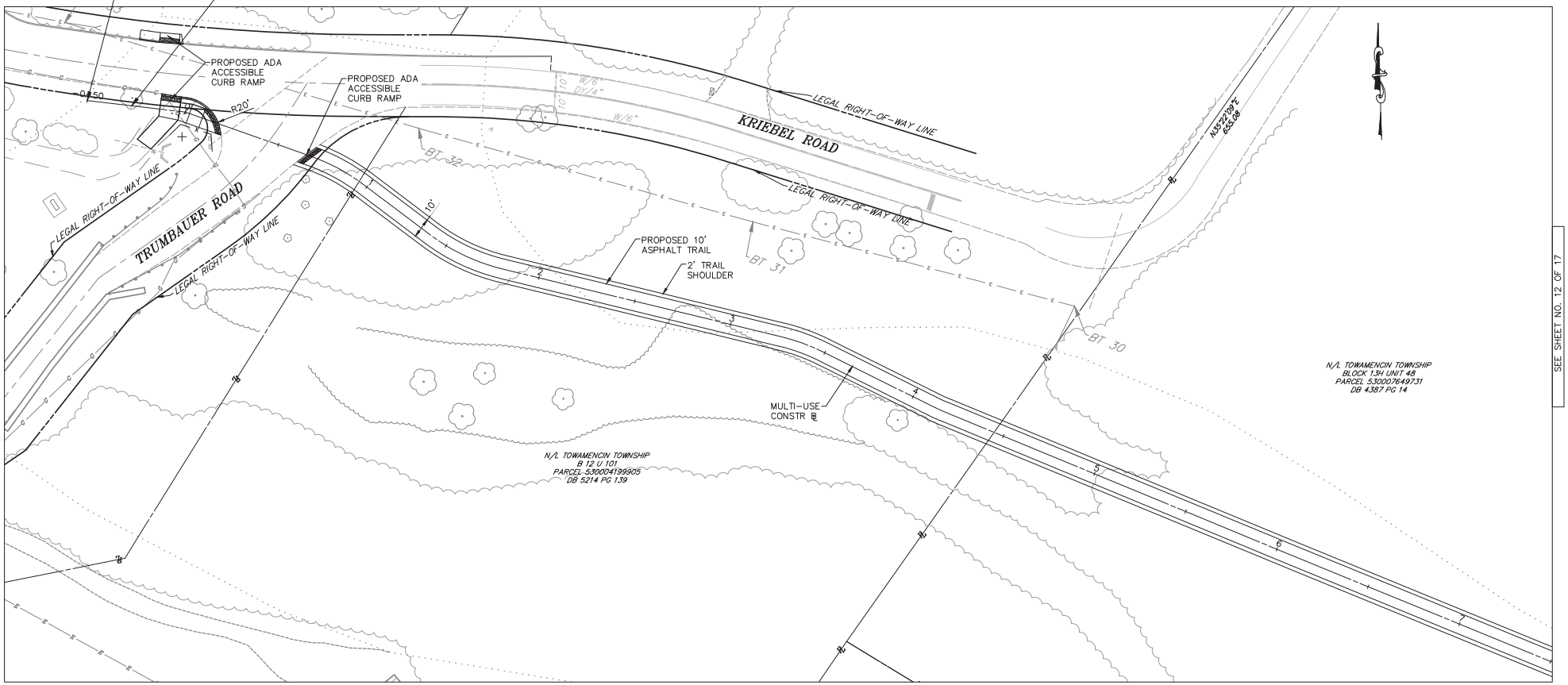
C:\padb2000cTraffic\18-05091 Kriebel Road Trail\KRIEBEL2.MDB 5/18/2021 5:18:09 PM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	11 OF 17
TOWAMENCIN TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

LIMIT OF WORK
STA -00+50.00
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY

START WORK
STA 00+28.00
KRIEBEL ROAD TRAIL



LEGEND

- PROPOSED TRAIL
- PROPERTY / DEED LINE
- EXISTING LEGAL RIGHT-OF-WAY
- EXISTING ELECTRIC LINE
- EXISTING TREE
- TREE TO BE REMOVED

FOR PROFILE SEE SHEET 15

CONSTRUCTION PLAN

SCALE

0 25 50 FEET

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH F. CARLIN ENGINEER PE077108

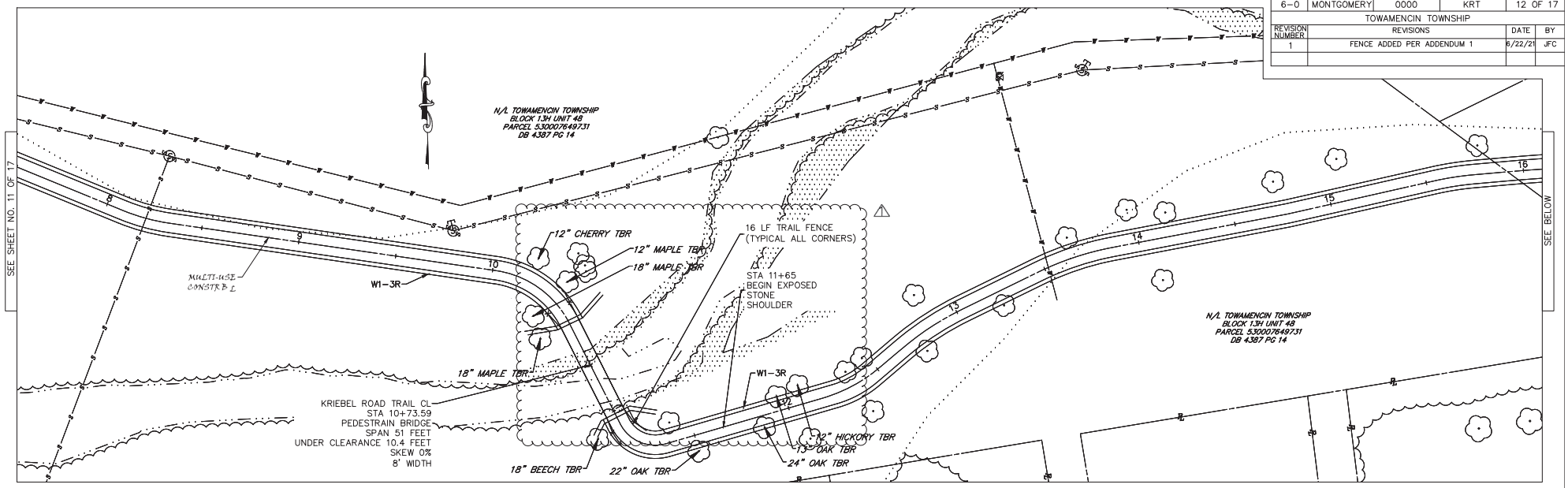
5/5/2021

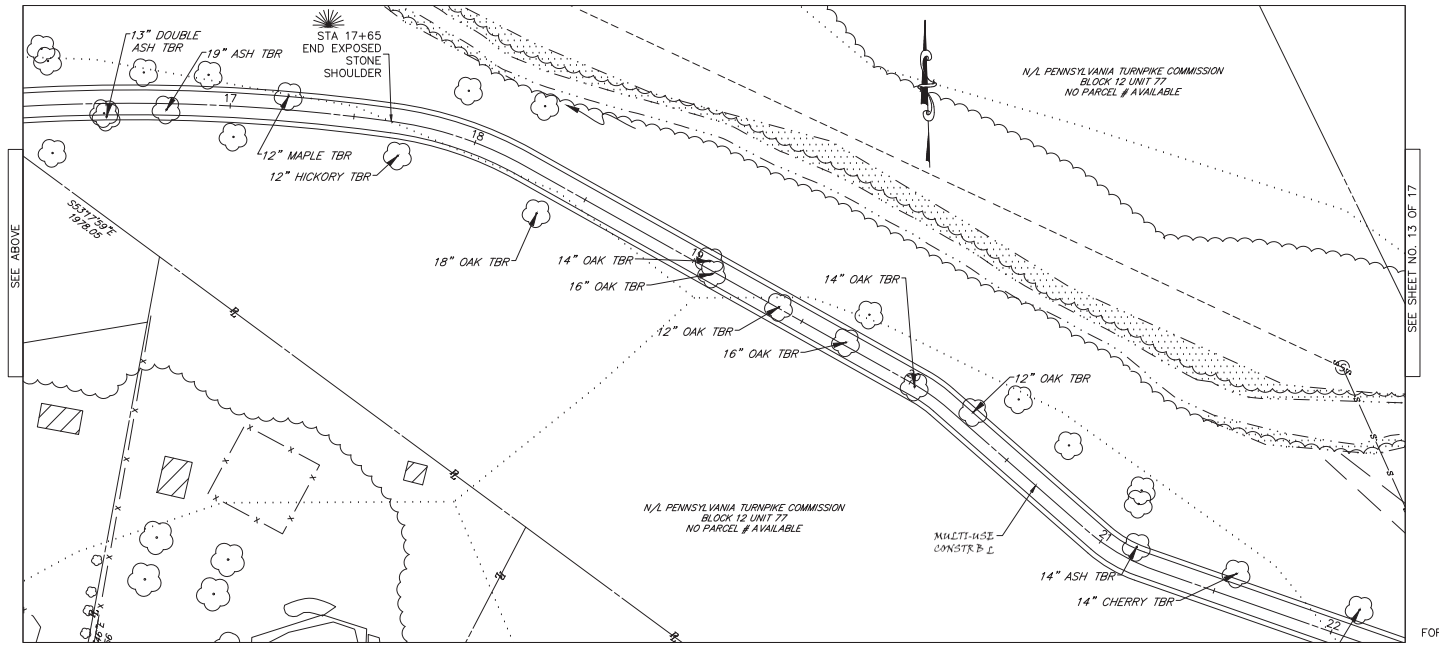
\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02--Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\CONSTRUCTION PLAN.dwg Layout: 11 Plotted By: lsalisbury, on Tue Mar 16, 2021 at 10:47am

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	12 OF 17

TOWAMENCIN TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY
1	FENCE ADDED PER ADDENDUM 1	6/22/21	JFC





LEGEND

- PROPOSED TRAIL
- PROPERTY / DEED LINE
- EXISTING LEGAL RIGHT-OF-WAY
- EXISTING WATER MAIN
- EXISTING COMBINED SANITARY & STORM SEWER
- EXISTING TREE
- TREE TO BE REMOVED

CONSTRUCTION PLAN

SCALE

0 25 50 FEET

FOR PROFILE SEE SHEETS 15-16

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

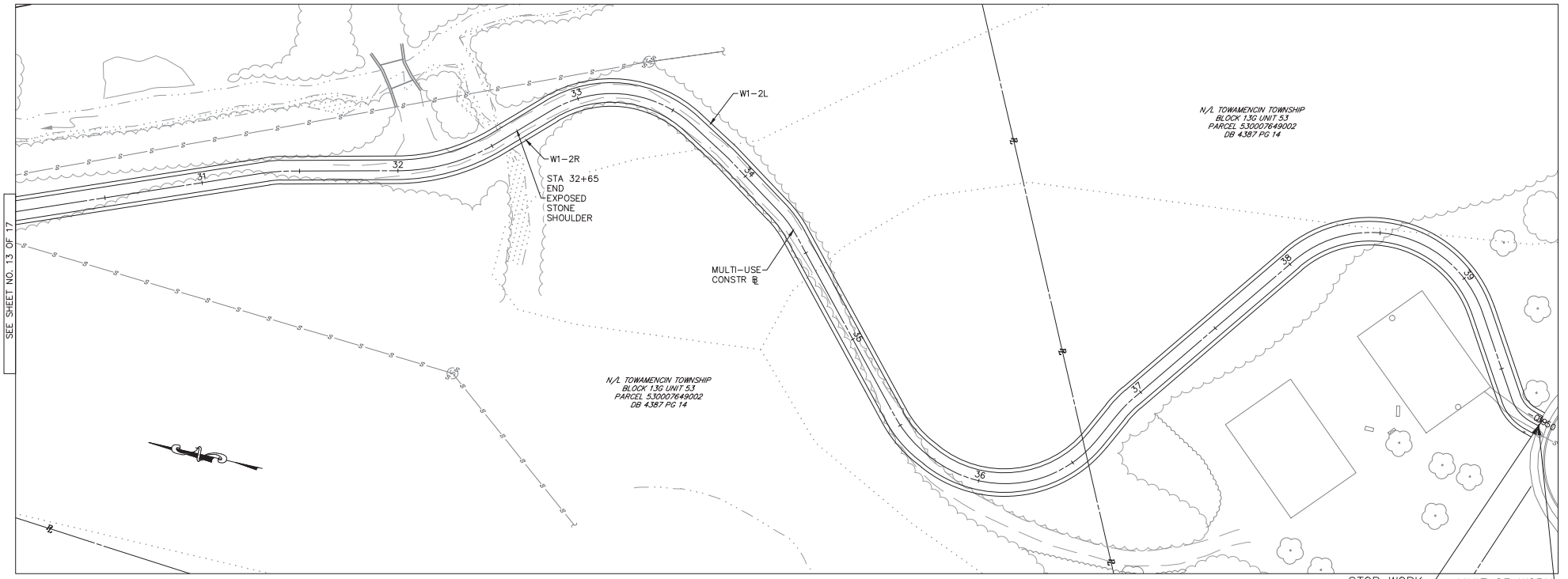
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
PE077998

03/19/2021

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	14 OF 17
TOWAMENCIN TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

SEE SHEET NO. 13 OF 17



LEGEND

- PROPOSED TRAIL
- PROPERTY / DEED LINE
- EXISTING LEGAL RIGHT-OF-WAY
- EXISTING COMBINED SANITARY & STORM SEWER
- EXISTING TREE
- TREE TO BE REMOVED

FOR PROFILE SEE SHEET 17

CONSTRUCTION PLAN

SCALE

0 25 50 FEET

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

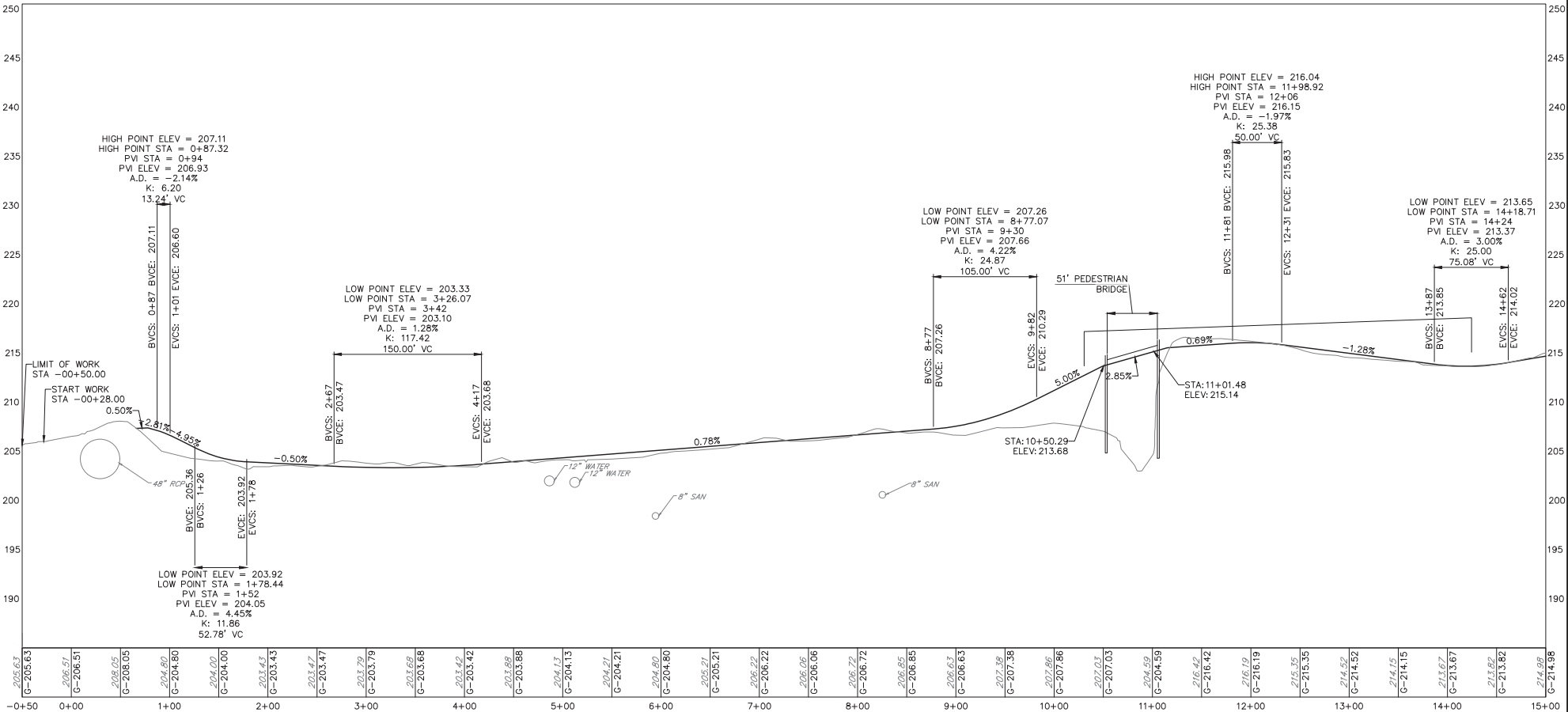
JOSEPH F. CARLIN
ENGINEER
PE077706

5/5/2021

\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02--Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\CONSTRUCTION PLAN.dwg Layout: 14 Plotted By: lsalisbury on Tue Mar 16, 2021 at 10:43am

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	15 OF 17
TOWAMENCIN TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



KRIEBEL ROAD MULTI-USE TRAIL CL

STATION -0+50.00 TO 15+00.00

FOR PLAN SEE SHEETS 11-12

SCALE

VERT: 0 5 10 FEET

HORIZ: 0 50 100 FEET

PROFILE

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

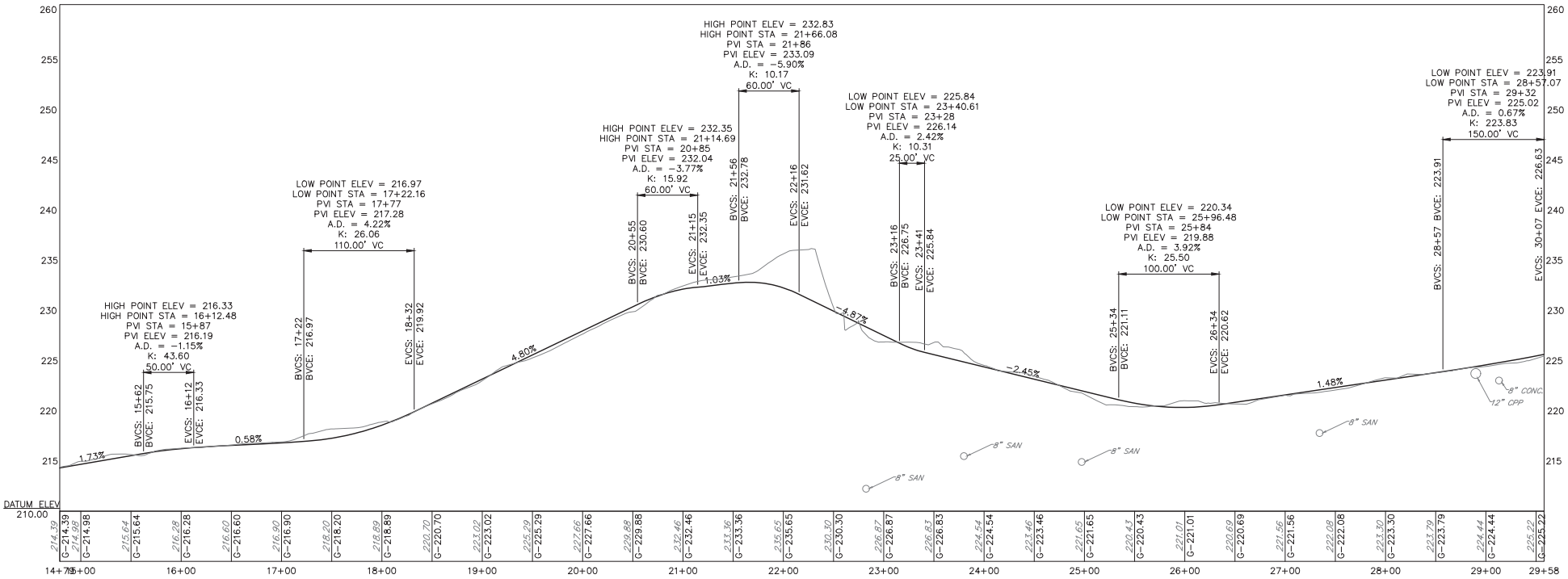
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH F. CARLIN ENGINEER PE077936

5/5/2021

\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02-Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\PROFILES.dwg Layout: 15 Plotted By: lastabury, on Tue Mar 16, 2021 at 12:23pm

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	16 OF 17
TOWAMENCIN TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY



KRIEBEL ROAD MULTI-USE TRAIL CL

STATION 14+79.00 TO 29+58.00

FOR PLAN SEE SHEETS 12-13

SCALE

VERT: 0 5 10 FEET

HORIZ: 0 50 100 FEET

PROFILE

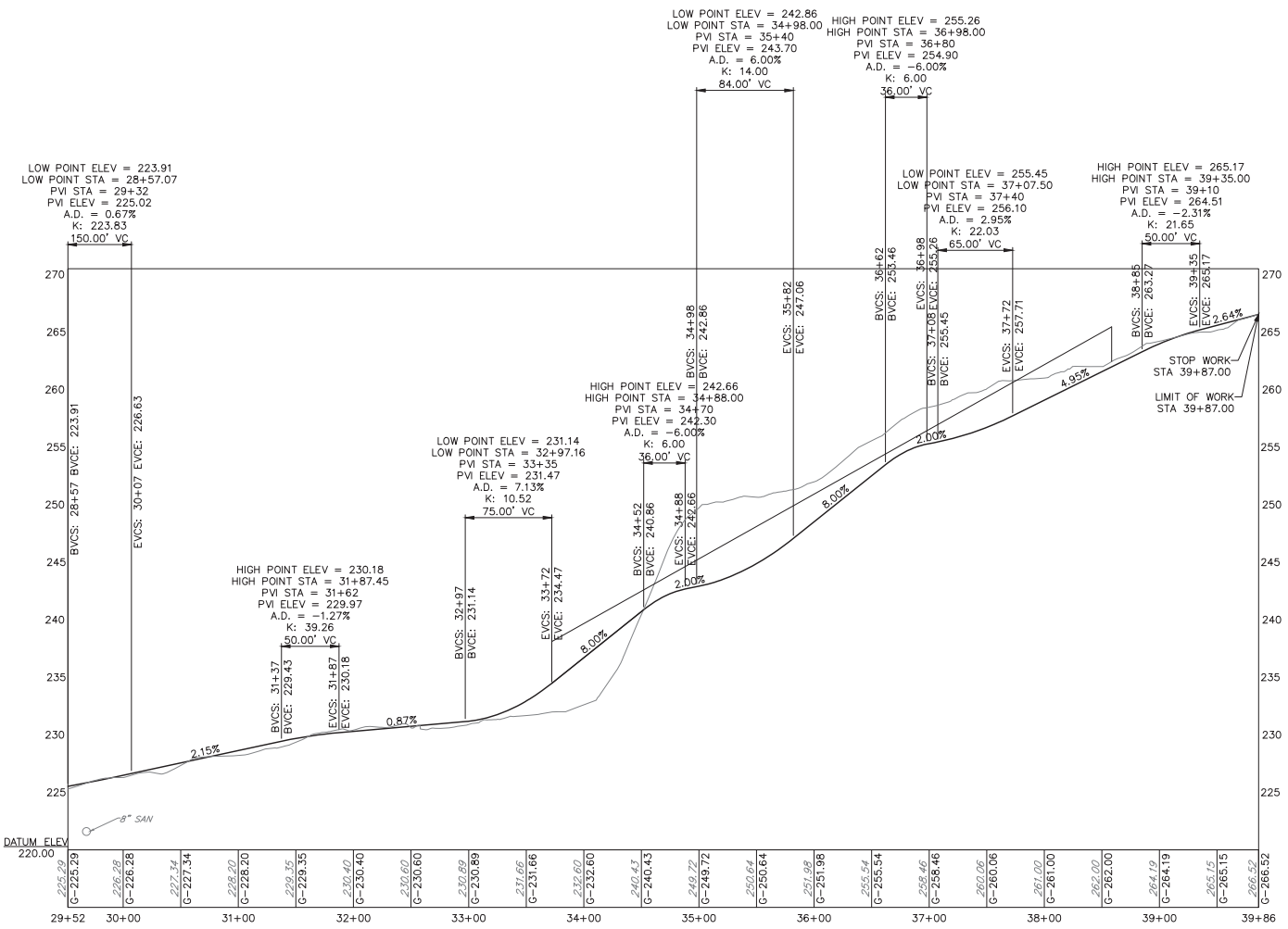
PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH F. CARLIN ENGINEER

5/5/2021

\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02-Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\PROFILES.dwg Layout: 16 Plotted By: lsalisbury, on Tue Mar 16, 2021 at 12:23pm

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0000	KRT	17 OF 17
TOWAMENCIN TOWNSHIP				
REVISION NUMBER	REVISIONS		DATE	BY



KRIEBEL ROAD MULTI-USE TRAIL CL

STATION 29+52.00 TO 39+86.17

FOR PLAN SEE SHEETS 13-14

SCALE

VERT: 0 5 10 FEET

HORIZ: 0 50 100 FEET

PROFILE

PREPARED BY:
GILMORE & ASSOCIATES, INC.
65 E. BUTLER AVE
NEW BRITAIN, PA 18901

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH F. CARLIN ENGINEER PE077936

5/5/2021

\\NB1.gilmore.local\SERVER1\ENVIRO\2015\15-12029-02-Towamencin Township Kriebel Road Trail\Drawings\PennDOT Plans\PROFILES.dwg Layout: 17 Plotted By: lsalisbury on Tue Mar 16, 2021 at 12:22pm

GENERAL NOTES:

G1. PROVIDE ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408/2020 INCLUDING ALL SUPPLEMENTS, THE PROJECT MANUAL, CONTRACT SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS.

G2. THE INFORMATION SHOWN AS "EXISTING" ON THE PLANS IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT, AND IS NOT TO BE CONSIDERED AS A BASIS FOR COMPUTATION OF UNIT PRICES FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED WARRANTY OR GUARANTEE THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED. THE BIDDER MUST MAKE HIS/HER OWN INVESTIGATION PRIOR TO SUBMITTING A BID FOR THIS PROJECT.

G3. FIELD VERIFY ALL DIMENSIONS AND FEATURES OF THE EXISTING SITE AS IS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

G4. FOLLOW O.S.H.A. SAFETY REQUIREMENTS AT ALL TIMES IN ALL EXCAVATION AREAS AND DURING ALL ON-SITE OPERATIONS.

G5. PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS FOR CAST-IN-PLACE CONSTRUCTION, EXCEPT AS NOTED. PROVIDE 1.5" CONCRETE COVER ON REINFORCEMENT BARS FOR PRECAST CONCRETE CONSTRUCTION, EXCEPT AS NOTED.

G6. USE PENNDOT COMPLIANT CLASS "AA" CEMENT CONCRETE FOR ALL CAST-IN-PLACE CONCRETE CONSTRUCTION. SUBMIT APPROVED PENNDOT MIX DESIGN TO TOWNSHIP FOR REVIEW NOT LESS THAN 10 DAYS PRIOR TO ANTICIAPTED PLACEMENT OF CONCRETE ON THIS PROJECT.

G7. PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A615/A615M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS. ALL REINFORCING STEEL IS TO BE CORROSION PROTECTED USING EPOXY COATING IN ACCORDANCE WITH ASTM A775.

G8. PROVIDE WELDED WIRE REINFORCEMENT, WHEN SPECIFIED, MEETING THE REQUIREMENTS OF AASHTO M55, ASTM A1064/A1064M. PROVIDE EPOXY COATED WELDED WIRE REINFORCEMENT MEETING THE REQUIREMENTS OF ASTM A884, TYPE I, CLASS A.

G9. EPOXY-COAT REINFORCING BARS, WELDED WIRE REINFORCEMENT, DOWEL BARS AND THREADED INSERTS AT BACKWALLS.

G10. GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE TOWNSHIP.

G11. PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH FOR REINFORCING BARS IN ACCORDANCE WITH PENNDOT STANDARD BC-736M.

G12. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

G13. CHAMFER EXPOSED CONCRETE EDGES 3/4" BY 3/4", EXCEPT AS NOTED.

G14. COAT ALL EXISTING CONCRETE MATING SURFACES THAT ARE TO BE IN CONTACT WITH NEW CEMENT CONCRETE USING EPOXY BONDING COMPOUND (ADHESIVE) IMMEDIATELY PRIOR TO PLACING THE NEW CONCRETE. CLEAN THE EXISTING CONCRETE THOROUGHLY PRIOR TO THE APPLICATION OF THE EPOXY BONDING COMPOUND (ADHESIVE). THE COST OF THE EPOXY BONDING COMPOUND (ADHESIVE) IS INCIDENTAL TO THE CLASS OF CONCRETE FOR WHICH IT IS APPLIED. PROVIDE EPOXY BONDING COMPOUND (ADHESIVE) TYPE V, GRADE 2, ASTM C881 OR APPROVED EQUAL.

G15. SEISMIC SITE CLASS IS NOT CLASS E.

G16. MANUFACTURE, STORAGE, DELIVERY AND INSTALLATION OF THE PREFABRICATED STEEL BRIDGE(S), BRIDGE COMPONENTS AND PRECAST REINFORCED CONCRETE COMPONENTS, ARE TO BE IN ACCORDANCE WITH THE MANUFACTURER'S AND FABRICATOR'S INSTRUCTIONS, SPECIFICATIONS AND OTHER REQUIREMENTS. THESE DRAWINGS AND SPECIFICATIONS PROVIDE THE MINIMUM REQUIRED STANDARD OF WORK THAT IS EXPECTED AND ALL DESIGNS MUST CONFORM TO THE SPECIFIED REQUIREMENTS SHOWN ON THESE DRAWINGS AND/OR IN THE PROJECT MANUAL, CONTRACT SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS.

G17. FINAL GRADING AND EARTHWORK ADJACENT TO AND SURROUNDING THE PROPOSED BRIDGE MUST BE CONSTRUCTED AS SHOWN ON THE CONSTRUCTION DETAILS SHEET OF THE CIVIL/SITE DRAWINGS PREPARED BY G&A.

G18. VERIFY LOCATION OF UNDERGROUND PIPES, CULVERTS AND UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE STRUCTURES OR UTILITIES WILL NOT BE DISTURBED OR ENDANGERED AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO THESE FACILITIES DURING CONSTRUCTION. THE TOWNSHIP DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY OR BURIED AND/OR AERIAL FACILITIES. CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2020, SECTION 105.06 AND 107.12.

G19. COORDINATE, TEMPORARILY SUPPORT AND PROTECT ANY EXISTING UTILITIES AND FACILITIES. CONTACT ALL UTILITY OWNERS AND COMPLY WITH EACH OWNERS REQUIREMENTS. FURNISH AND INSTALL TEMPORARY PROTECTION OF EXISTING UTILITIES & FACILITIES AND REMOVE TEMPORARY WORKS UPON COMPLETION. WHEN REQUIRED, TEMPORARILY RELOCATE OR BYPASS UTILITIES AS REQUIRED IN ORDER TO COMPLETE THE PROPOSED WORK. RESTORE ANY RELOCATED OR BYPASSED UTILITIES UPON COMPLETION OF WORK.

G20. TEMPORARY SUPPORT, BRACING, SHORING AND/OR UNDERPINNING (COLLECTIVELY KNOWN AS "TEMPORARY WORKS") MAY BE REQUIRED AS A PART OF THIS PROJECT. CONTRACTOR IS RESPONSIBLE TO RETAIN A PROFESSIONAL ENGINEER LICENSED IN GOOD STANDING IN THE COMMONWEALTH OF PENNSYLVANIA TO PREPARE CALCULATIONS, DRAWINGS, SPECIFICATIONS AND ALL NECESSARY SUBMITTAL DOCUMENTS, FOR ALL TEMPORARY WORKS. THE TEMPORARY WORKS MUST BE DESIGNED USING CURRENT DESIGN CRITERIA AS PUBLISHED IN PENNDOT PUBLICATION 408/2020, PENNDOT DESIGN MANUAL, PART 4, "STRUCTURES", AASHTO REFERENCE DOCUMENTS CITED IN PENNDOT PUBLICATIONS AND DESIGN MANUALS AND INDUSTRY-RECOGNIZED DESIGN METHODOLOGIES AND CONSTRUCTION TECHNIQUES, AS APPLICABLE. ALL SUBMITTALS MUST BE COMPLETE AND MUST BE SIGNED AND SEALED BY THE PA PROFESSIONAL ENGINEER RESPONSIBLE FOR THE WORK. SUBMIT ELECTRONIC SETS OF DOCUMENTS IN PDF FORMAT TO THE TOWNSHIP AND THEIR ENGINEER OR OTHER DESIGNATED REPRESENTATIVES FOR REVIEW, COMMENT AND CONFORMANCE PRIOR TO STARTING ANY WORK AND AT LEAST 15 BUSINESS DAYS PRIOR TO THE START OF THE TEMPORARY WORKS ITEM THAT IS BEING SUBMITTED. COMPLY WITH ALL REVIEW COMMENTS; REVISE AND RESUBMIT UNTIL THE SUBMITTAL IS ACCEPTED BY THE TOWNSHIP.

FOUNDATION:

F1. CONTRACTOR IS RESPONSIBLE TO RETAIN A PROFESSIONAL ENGINEER LICENSED IN GOOD STANDING IN THE COMMONWEALTH OF PENNSYLVANIA TO PREPARE CALCULATIONS, DRAWINGS, SPECIFICATIONS AND ALL NECESSARY SUBMITTAL DOCUMENTS FOR PRECAST REINFORCED CONCRETE SUBSTRUCTURE AND FOUNDATION ELEMENTS, COMPONENTS, ANCHOR BOLTS AND CONNECTIONS IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, 8TH EDITION, AND AS SUPPLEMENTED BY THE PENNDOT DESIGN MANUAL, PART 4, ~~APRIL 2020~~ DECEMBER 2019 EDITION, △2 SPECIFIED DESIGN LOADS AND APPLICABLE PENNDOT DESIGN STANDARD DRAWINGS. CAST-IN-PLACE REINFORCED CONCRETE MAY BE SUBSTITUTED FOR PRECAST CONCRETE BUT THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN ENGINEERING.

F2. THE DELEGATED DESIGN OF THE PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE SUBSTRUCTURE AND FOUNDATION ELEMENTS, COMPONENTS AND CONNECTIONS SHALL INCLUDE EARTH PRESSURE, LIVE LOAD SURCHARGE, WIND LOADS, HYDRAULIC LOADS (FOR STREAM OR OTHER WATERCOURSE CROSSINGS) AND ALL REACTIONS FROM THE STEEL BRIDGE SUPERSTRUCTURE. CHECK FOR SEISMIC LOADS AND FURNISH A DETERMINATION OF APPLICABILITY. WHEN SEISMIC ANALYSIS OR DESIGN ARE APPLICABLE, SUBMIT PA P.E. SIGNED & SEALED SEISMIC ANALYSIS OR DESIGN, AND SPECIFY SEISMIC REQUIREMENTS.

F3. BOTTOM OF ALL FOOTINGS MUST BE PLACED A MINIMUM OF 3'-6" BELOW THE STREAM BED ELEVATION, OR DEEPER, WHEN FACTORS DICTATE. PERFORM A SCOUR ANALYSIS AND DETERMINE SCOUR PROTECTION FOR THE ABUTMENTS AND FOOTINGS. INCREASE BURY DEPTH OF PENETRATION OF THE FOOTINGS AND FURNISH & INSTALL SCOUR PROTECTION BASED UPON THE RESULTS OF THE SCOUR ANALYSIS. SUBMIT PA P.E. SIGNED & SEALED SCOUR ANALYSIS OR DESIGN, AND SPECIFY SCOUR REQUIREMENTS.

F4. A PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY OF 3,000 PSF IS TO BE USED FOR THE DESIGN OF FOUNDATIONS. THE SUBGRADE BEARING CAPACITY OF THE FOUNDATION MATERIALS MUST BE FIELD VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION OF THE CRUSHED AGGREGATE BASE AND FOOTINGS. THE CONTRACTOR IS RESPONSIBLE TO RETAIN A GEOTECHNICAL ENGINEER TO CERTIFY SUBGRADE.

F5. SPREAD FOOTINGS MAY BE ORDERED BY THE ENGINEER TO BE AT ANY ELEVATION OR OF ANY DIMENSIONS NECESSARY TO PROVIDE A PROPER FOUNDATION.

F6. REINFORCEMENT AT PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE ELEMENTS IS TO BE DESIGNED AND DETAILED BY THE CONTRACTOR'S OR FABRICATOR'S PROFESSIONAL ENGINEER AND SHOWN ON THE SHOP DRAWINGS.

F7. THE CONTRACTOR'S OR FABRICATOR'S PROFESSIONAL ENGINEER IS RESPONSIBLE TO DETERMINE AND ACCOUNT FOR ANY ADDITIONAL REINFORCEMENT THAT IS REQUIRED FOR HANDLING AND INSTALLATION.

F8. THREADED INSERTS TO BE INCORPORATED IN PRECAST CONCRETE ELEMENTS MUST BE DETAILED BY THE PRECAST REINFORCED CONCRETE FABRICATOR.

F9. THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE TOWNSHIP'S CONSULTING BRIDGE / TRAIL ENGINEER AFTER VISUAL INSPECTION OF THE BEARING MATERIAL AT SUBGRADE, THE BOTTOM OF COARSE AGGREGATE, ELEVATION. FOUNDATION SUBGRADE WILL BE INSPECTED AND MUST BE VIEWED AND APPROVED BY THE TOWNSHIP OR TOWNSHIP'S REPRESENTATIVE.

F10. EXCAVATE A MINIMUM OF 12 INCHES BELOW THE BOTTOM OF THE PLANNED REINFORCED CONCRETE FOOTING ELEVATION AND BACKFILL WITH COMPACTED PENNDOT NO. 2A AGGREGATE.

F11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT DEWATERING TO MAINTAIN THE BOTTOM OF THE EXCAVATION DRY AND FREE FROM FLOWING WATER. STANDING WATER MUST BE REMOVED BY PUMPING INTO A SEDIMENT FILTER BAG SIZED APPROPRIATELY FOR THE PUMPING RATE OF THE PUMP USED FOR DEWATERING OF THE EXCAVATION. DO NOT MIX "CLEAN" PUMPED WATER FROM THE STREAM DIVERSION WITH SEDIMENT-LADEN WATER PUMPED FROM THE EXCAVATION.

F12. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DIRECT ALL SURFACE RUNOFF AWAY FROM THE EXCAVATIONS. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH O.S.H.A. SAFETY REQUIREMENTS.

F13. BLASTING IS NOT PERMITTED AND SHALL NOT BE USED AS A METHOD OF EXCAVATION.

F14. CONTRACTOR AND CONTRACTOR'S PROFESSIONAL ENGINEER ARE RESPONSIBLE FOR FURNISHING AND LOCATING WEEPHOLES, AND/OR A FOUNDATION DRAINAGE SYSTEM, FOR THE PROPOSED BRIDGE. THE WEEPHOLES AND/OR FOUNDATION DRAINAGE SYSTEM MUST USE NOT LESS THAN 4 INCH INSIDE DIAMETER (I.D.) PIPE AND ALL DRAINAGE SYSTEM COMPONENTS MUST BE SHOWN ON THE SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE TOWNSHIP.

F15. CONTRACTOR AND CONTRACTOR'S PROFESSIONAL ENGINEER ARE RESPONSIBLE FOR FURNISHING AND SPECIFYING WATERPROOFING MEMBRANES AT ALL VERTICAL AND HORIZONTAL JOINTS OF THE SUBSTRUCTURE COMPONENTS. THE WATERPROOFING MEMBRANES MUST BE LOCATED AT THE RETAINED EARTH SURFACE OF THE SUBSTRUCTURE. WATERPROOFING MEMBRANES MUST BE COMPLIANT WITH PENNDOT PUBLICATION 408/2020 AND STANDARD DRAWING BC-788M.

F16. IN ADDITION TO THE STRUCTURAL BRIDGE COMPONENTS ASSOCIATED WITH THE ENGINEERING PHASE OF THIS DELEGATED DESIGN-BUILD TRAIL BRIDGE PROJECT, THIS SPECIFICATION REQUIRES THAT THE CONTRACTOR'S PROFESSIONAL ENGINEER IS RESPONSIBLE FOR SPECIFYING A WATERPROOFING MEMBRANE SYSTEM AT ALL VERTICAL AND HORIZONTAL JOINTS OF THE SUBSTRUCTURE COMPONENTS, INCLUDING THE ABUTMENTS, WINGWALLS AND FOOTINGS. THE WATERPROOFING MEMBRANE SYSTEM MUST BE LOCATED AT THE RETAINED EARTH SURFACE OF THE SUBSTRUCTURE. THE WATERPROOFING MEMBRANE SYSTEM MUST BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2020 AND STANDARD DRAWINGS BC-788M. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE WATERPROOFING MEMBRANE SYSTEM PER THE CONTRACTOR'S PROFESSIONAL ENGINEER'S SPECIFICATIONS AND WATERPROOFING MEMBRANE SYSTEM MANUFACTURER'S RECOMMENDATIONS. SUBMIT WATERPROOFING MEMBRANE SYSTEM DOCUMENTATION, CATALOG CUTS, TECHNICAL DATA SHEETS, INSTALLATION INSTRUCTION AND ANY NECESSARY ADDITIONAL INFORMATION TO THE TOWNSHIP AND BRIDGE ENGINEER FOR REVIEW AND APPROVAL AT LEAST FIFTEEN (15) DAYS PRIOR TO INSTALLATION OF THE BRIDGE SUBSTRUCTURE COMPONENTS.

F17. CONSTRUCT AND INSTALL PRECAST REINFORCED CONCRETE ELEMENTS IN ACCORDANCE WITH APPLICABLE PARTS OF SECTION 1085 OF PUBLICATION 408/2020.

F18. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF ERECTION OF ALL BRIDGE COMPONENTS AND FOR PROVIDING ALL NECESSARY TEMPORARY AND PERMANENT BRACING AND SUPPORTS.

PREFABRICATED STEEL BRIDGE DESIGN NOTES:

S1. CONTRACTOR'S PROFESSIONAL ENGINEER, OR THE PREFABRICATED STEEL BRIDGE MANUFACTURER'S PROFESSIONAL ENGINEER, IS RESPONSIBLE FOR THE DELEGATED DESIGN, FABRICATION AND DETAILING OF THE PREFABRICATED STEEL BRIDGE COMPONENTS, CONNECTIONS, ANCHOR BOLTS, FASTENERS AND ASSOCIATED APPURTENANCES IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, 8TH EDITION, AS SUPPLEMENTED BY AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES 2009 EDITION, AND PENNDOT DESIGN MANUAL, PART 4, APRIL 2020 EDITION, PROJECT MANUAL, PROJECT SPECIFICATIONS AND APPLICABLE PENNDOT DESIGN STANDARD DRAWINGS. THE DESIGNATED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN OF THE PREFABRICATED STEEL BRIDGE WILL BE CONSIDERED THE ENGINEER-OF-RECORD FOR THE PREFABRICATED STEEL BRIDGE SUPERSTRUCTURE.

S2. THE CONTRACTOR'S PROFESSIONAL ENGINEER, OR THE PREFABRICATED STEEL BRIDGE MANUFACTURER'S PROFESSIONAL ENGINEER, IS RESPONSIBLE FOR IDENTIYING AND SPECIFYING ANY ADDITIONAL REINFORCEMENT AND BRACING THIS IS REQUIRED FOR HANDLING, TRANSPORTATION AND INSTALLATION.

S3. CONSTRUCT AND INSTALL PREFABRICATED STEEL BRIDGE ELEMENTS IN ACCORDANCE WITH THE BRIDGE FABRICATOR'S INSTRUCTIONS, SPECIFICATIONS AND OTHER REQUIREMENTS.

S4. THE BRIDGE IS TO BE STEEL WITH EPOXY PAINT COATING SYSTEM WITH THE FINAL COLOR TO BE SELECTED BY THE OWNER. STRUCTURAL STEEL BRIDGES MUST BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS THAT SPECIFY A THREE-COAT BRIDGE EPOXY PAINTING SYSTEM IS TO BE UTILIZED, AND THAT THE COATING SYSTEM IS TO BE ANTI-GRAFFITI.

S5. THE ENTIRE BRIDGE SUPERSTRUCTURE IS TO BE EPOXY PAINTED WITH THE FINAL COLOR SELECTION TO BE BY THE OWNER. PAINTED STRUCTURAL STEEL BRIDGES MUST BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS USING AN APPROVED THREE-COAT BRIDGE EPOXY COATING SYSTEM, WITH ANTI-GRAFFITI COATING. THE COATING SYSTEM MUST BE SUBMITTED TO THE TOWNSHIP AND BRIDGE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND DELIVERY OF THE STEEL BRIDGE SUPERSTRUCTURE. SUBMIT THE COATING SYSTEM INFORMATION WITH THE SHOP DRAWINGS FOR THE PREFABRICATED STEEL BRIDGE SUPERSTRUCTURE.

S6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE ERECTION OF ALL STRUCTURAL COMPONENTS AND FOR PROVIDING ALL NECESSARY TEMPORARY AND PERMANENT BRACING AND SUPPORTS.

S7. ALL WOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS (N.D.S.) FOR WOOD CONSTRUCTION, CURRENT EDITION.

S8. UNLESS OTHERWISE SPECIFIED, ALL SAWN LUMBER IS TO BE SOUTHERN YELLOW PINE, GRADE NO. 2, OR BETTER, AND GRADED UNDER THE SOUTHERN PINE INSPECTION BUREAU (SPIB) RULES AND GRADING STANDARDS.

S9. ALL SAWN LUMBER IS TO BE "S4S" (SURFACED FOUR SIDES), UNLESS NOTED OTHERWISE.

S10. ALL SAWN LUMBER IS TO BE PRESERVATIVE TREATED WITH CHROMATED COPPER ARSENATE (CCA). PRESERVATIVE TREATMENT MUST BE IN ACCORDANCE WITH AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARDS P5 AND A2, CURRENT EDITIONS. ALL LUMBER, WOOD AND TIMBERS SHALL BE PRESERVATIVE IMPREGNATED UNDER AWPA STANDARD U1, CURRENT EDITION, WHERE APPLICABLE. RETENTION LEVELS FOR LUMBER AND TIMBER SHALL BE A MINIMUM OF 0.60 PCF.

S11. ALL SAWCUTS, DRILLED HOLES OR OTHER PENETRATIONS SHALL BE TREATED WITH COPPER NAP, WOOD PRESERVATIVE SOLUTION, PRIOR TO INSTALLING HARDWARE, BOLTS OR OTHER BRIDGE MEMBERS OR COMPONENTS.

S12. ALL WOOD FRAMING MATERIAL IS TO BE SURFACED DRY AND USED AT 19% MAXIMUM MOISTURE CONTENT.

S13. ALL PLATES, ANCHORS, NAILS, SCREWS, BOLTS, NUTS, WASHERS AND OTHER MISCELLANEOUS HARDWARE USED FOR TIMBER FRAMING IS TO BE HOT-DIPPED GALVANIZED.

S14. TIMBER DECKING IS TO BE ATTACHED TO STRINGERS, BEAMS AND GIRDERS USING TYPE 316 STAINLESS STEEL SCREWS, OR BETTER, RECESSED AT A MINIMUM OF ¼ INCH BELOW THE FINISHED DECK SURFACE.

S15. THE CONTRACTOR MUST PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND INDIVIDUAL STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED.

DESIGN SPECIFICATIONS:

DS1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2017, 8TH EDITION, AS SUPPLEMENTED BY AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2009 EDITION, AND PENNDOT DESIGN MANUAL, PART 4, ~~APRIL 2020~~ DECEMBER 2019 EDITION, THE PROJECT MANUAL, CONTRACT SPECIAL PROVISIONS, TECHNICAL SPECIFICATIONS, AND APPLICABLE PENNDOT DESIGN STANDARD DRAWINGS. △2

DS2. DESIGN SHALL BE IN ACCORDANCE WITH THE LRFD METHOD.

DESIGN LIVE LOADS:

L1. MINIMUM DESIGN LIVE LOADS: 90 PSF UNIFORM LIVE LOAD

L2. MINIMUM DESIGN VEHICULAR LIVE LOAD: 10,000 LB. (AASHTO H5) MOVING VEHICLE LOAD.

L3. MINIMUM DESIGN WIND LOAD: 35 PSF UNIFORM WIND LOAD ON SUPERSTRUCTURE AND EXPOSED PORTIONS OF SUBSTRUCTURE.

L4. MINIMUM UPLIFT DESIGN LOAD: 20 PSF UNIFORM UPLIFT LOAD, APPLIED CONCURRENTLY WITH WIND LOAD.

L5. MINIMUM THERMAL DESIGN LOAD: SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND MUST ACCOMMODATE A TEMPERATURE DIFFERENTIAL OF 120 DEGREES FAHRENHEIT.

L6. MINIMUM BRIDGE BARRIER/RAILING DESIGN LOAD: SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION, AND ALL CODES AND STANDARDS REFERENCED WITHIN THE IBC 2015. GUARD CRITERIA OF CHAPTER 10, SECTION 1015, APPLIES TO ALL COMPONENTS OF THE BRIDGE AND BRIDGE RAILING SYSTEM. A HAND RAIL IS ALSO REQUIRED IN ADDITION TO THE GUARD ON BOTH SIDES OF THE BRIDGE. HANDRAIL CRITERIA OF CHAPTER 10, SECTION 1014, APPLIES TO THE HANDRAIL COMPONENTS INCORPORATED INTO THE GUARD ON BOTH SIDES OF THE BRIDGE.

DESIGN DEAD LOADS:

D1. THE CONTRACTOR'S PROFESSIONAL ENGINEER OR THE PREFABRICATED STEEL BRIDGE MANUFACTURER'S PROFESSIONAL ENGINEER ARE RESPONSIBLE TO DETERMINE ALL APPLICABLE DEAD LOADS, INCLUDING THE SELF-WEIGHT OF ALL BRIDGE COMPONENTS AND ALL SUPERIMPOSED DEAD LOADS.

DESIGN REVIEWED BY:
PICKERING CORTS & SUMMERSON
642 NEWTOWN YARDLEY ROAD
NEWTOWN, PA 18940

10/22/2020

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — RICHARD H. STANGER — ENGINEER — PE040660

THE DESIGN REVIEW IS FOR GENERAL CONFORMANCE WITH THE DEPARTMENT'S DESIGN AND CONSTRUCTION CRITERIA AND STANDARDS AND IS NOT INTENDED TO RELIEVE THE DESIGNER OF FULL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF PLANS.

NOTE: THE BRIDGE SUPERSTRUCTURE, BEARING PLATES, ANCHOR BOLTS, ABUTMENTS, WINGWALLS, BACKWALLS, FOOTINGS, CONNECTIONS AND ASSOCIATED DIMENSIONS OF SAME ARE FOR ILLUSTRATION PURPOSES ONLY. THE PREFABRICATED STEEL BRIDGE SUPERSTRUCTURE IS TO BE DESIGNED BY THE PREFABRICATED STEEL PEDESTRIAN BRIDGE MFG., NOT BY G&A. THE PRECAST REINFORCED CONCRETE SUBSTRUCTURE AND FOUNDATION COMPONENTS, AND ALL CONNECTIONS, ARE TO BE DESIGNED BY THE PRECAST REINFORCED CONCRETE FAB., NOT BY G&A.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JACOB D. BRINK — ENGINEER — NO. 084406

JACOB D. BRINK, P.E. #084406

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901 • (215) 345-4330 • www.gilmore-assoc.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHALL BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS INSTRUMENT OF PROFESSIONAL SERVICE PREPARED BY GILMORE & ASSOCIATES, INC. AND IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. AND MAY NOT BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
© COPYRIGHT GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

NOT APPROVED FOR CONSTRUCTION

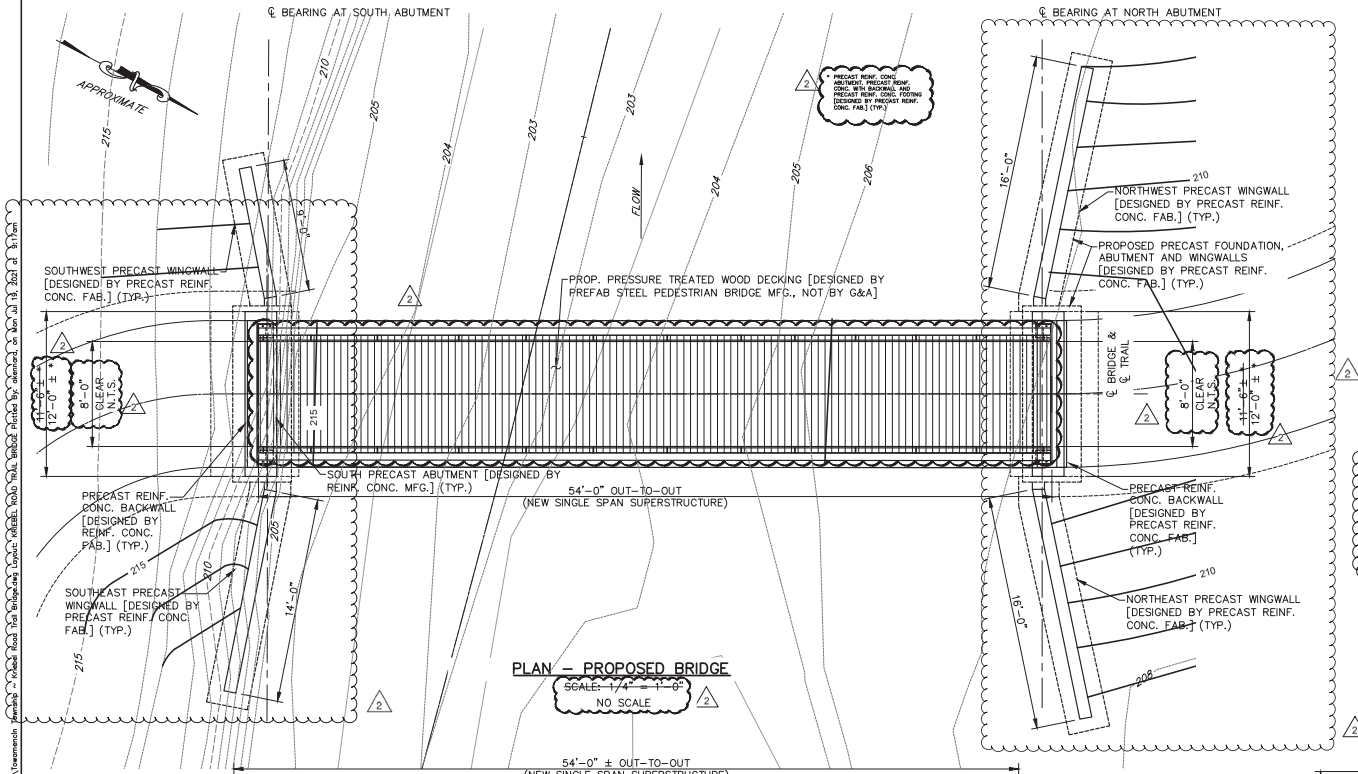
JOB NO.: 2018050911 | TAX MAP PARCEL NO.: - | MUNICIPAL FILE NO.: - | DRAWN BY: MHG | CHECKED BY: REJ
OWNER: TOWAMENCIN TOWNSHIP | TOTAL AREA: - | TOTAL LOTS: - | DESIGNED BY: - | SCALE: - | DATE: 07/30/2020

PEDESTRIAN BRIDGE
CONCEPTUAL GENERAL NOTES
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

NO.	DESCRIPTION	DATE	BY
2	ADDENDUM 4	09/23/21	SSK

SHEET NO.: 1 OF 34

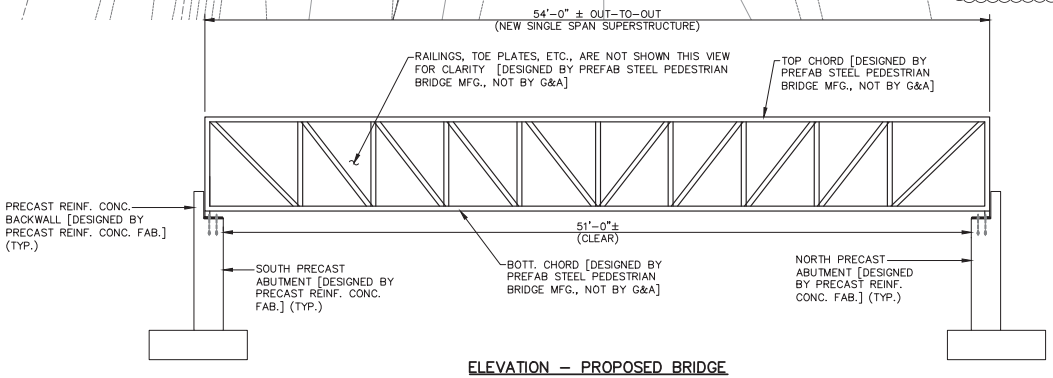
\\WB2.gilmore.local\SERVER2\STRUCTURAL_PROJECTS\2018\18050911_Kriebel Road Trail-Pedestrian Bridge\7.1 DESIGN\CAD\Production Drawings\Towamencin Township - Kriebel Road Trail Bridge.dwg Layout: KRIEBEL GENERAL NOTES Plotted By: dkennard, on Mon Jul 19, 2021 at 8:44am



PLAN – PROPOSED BRIDGE

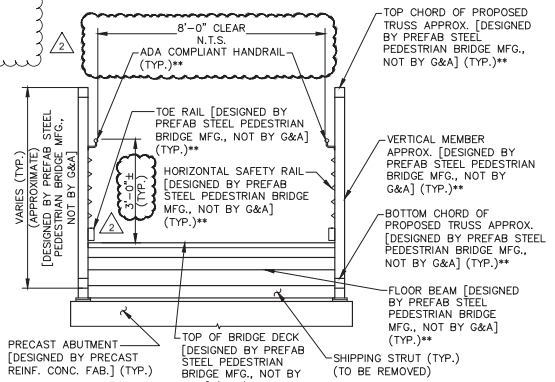
~~SCALE: 1/4" = 1'-0"~~
NO SCALE

APPROXIMATE QUANTITIES BRIDGE L-3027			
ITEM NO.	DESCRIPTION	UNIT	TOTAL
8211-0001	DESIGN OF BRIDGE STRUCTURE (NO AS-DESIGNED FOUNDATION PROVIDED)	LS	LUMP SUM
8299-0001	CONSTRUCTION OF PREFABRICATED PEDESTRIAN BRIDGE	LS	LUMP SUM
9000-0003	BRIDGE ABUTMENT STONE TOE PROTECTION	130	TON



ELEVATION – PROPOSED BRIDGE

SCALE: 1/4" = 1'-0"



TYPICAL BRIDGE SECTION AT PROPOSED TRUSS

~~SCALE: 1/2" = 1'-0"~~
NO SCALE

NOTE: THE BRIDGE SUPERSTRUCTURE, BEARING PLATES, ANCHOR BOLTS, ABUTMENTS, WINGWALLS, BACKWALLS, FOOTINGS, CONNECTIONS AND ASSOCIATED DIMENSIONS OF SAME ARE FOR ILLUSTRATION PURPOSES ONLY. THE PREFABRICATED STEEL BRIDGE SUPERSTRUCTURE IS TO BE DESIGNED BY THE PREFABRICATED STEEL PEDESTRIAN BRIDGE MFG., NOT BY G&A. THE PRECAST REINFORCED CONCRETE SUBSTRUCTURE AND FOUNDATION COMPONENTS, AND ALL CONNECTIONS, ARE TO BE DESIGNED BY THE PRECAST REINFORCED CONCRETE FAB., NOT BY G&A.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JACOB D. BRINK ENGINEER NO. 084406
JACOB D. BRINK, P.E. #084406

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901 • (215) 345-4330 • www.gilmore-assoc.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHALL BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS INTENDED SPECIFICALLY FOR THE PURPOSE AND PROJECT INDICATED HEREON. MODIFICATION OF THIS PLAN BY ANY PERSON OTHER THAN THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2020 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

NOT APPROVED FOR CONSTRUCTION

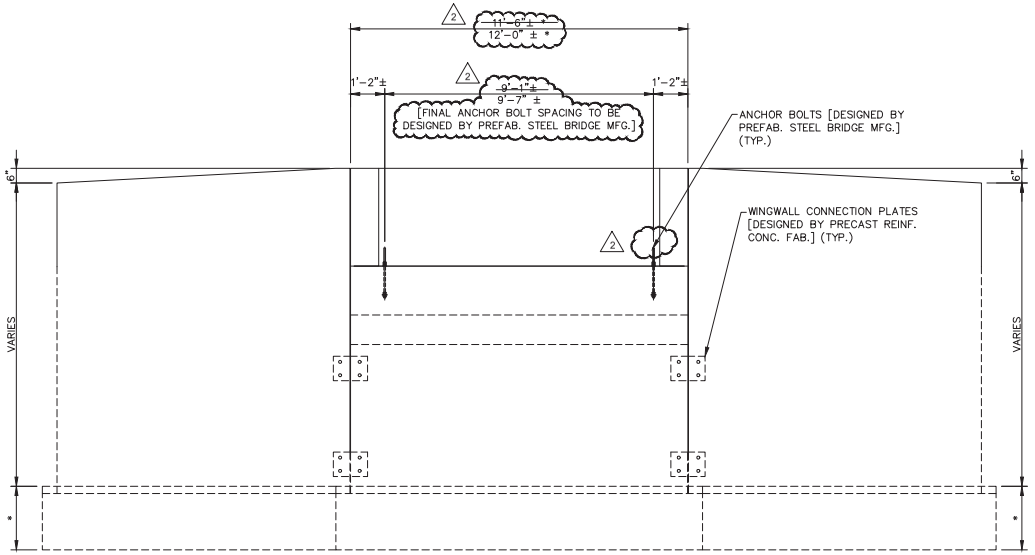
JOB NO.: 2018050911
MUNICIPAL FILE NO.: _
TAX MAP PARCEL NO.: _
OWNER: TOWAMENCIN TOWNSHIP
TOTAL AREA: _
TOTAL LOTS: _
DATE: 07/30/2020
SCALE: _
DESIGNED BY: JDB
DRAWN BY: ASC
CHECKED BY: REJ

PEDESTRIAN BRIDGE
CONCEPTUAL PLAN, ELEVATION AND SECTION
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

REV.	DESCRIPTION	DATE	BY
2	ADDENDUM #	09/23/21	SSK

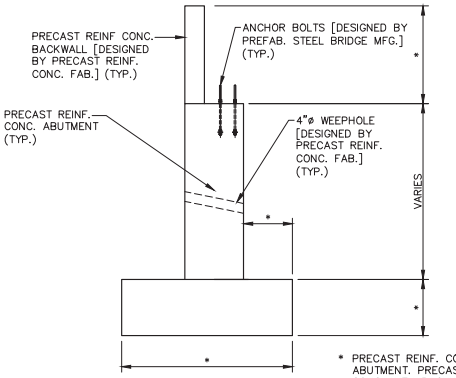
SHEET NO.: 2 OF 34

\\WB2.gilmore.local\SERVER2\STRUCTURAL_PROJECTS\2018\18050911_Kriebel Road Trail-Pedestrian Bridge\7.1 DESIGN\CAD\Production Drawings\Towamencin Township - Kriebel Road Trail Bridge.dwg, Layout: KRIEBEL ROAD TRAIL, 9/23/2021 10:47:13 AM, jdbrink, Plotted by: jdbrink, on Mon Jul 19, 2021 at 9:17am



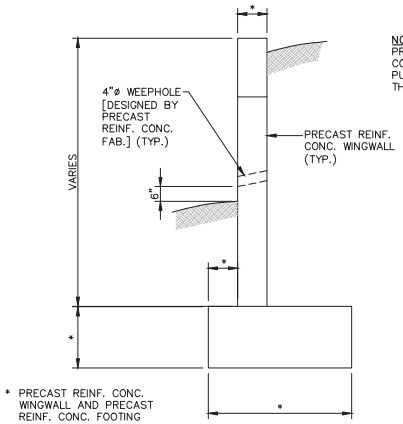
TYPICAL ABUTMENT ELEVATION
NO SCALE

* PRECAST REINF. CONC. ABUTMENT. PRECAST REINF. CONC. WITH BACKWALL AND PRECAST REINF. CONC. FOOTING [DESIGNED BY PRECAST REINF. CONC. FAB.] (TYP.)



* PRECAST REINF. CONC. ABUTMENT. PRECAST REINF. CONC. WITH BACKWALL AND PRECAST REINF. CONC. FOOTING [DESIGNED BY PRECAST REINF. CONC. FAB.] (TYP.)

TYPICAL ABUTMENT SECTION
NO SCALE



NOTE:
PRECAST REINFORCED CONCRETE UNITS AND COMPONENTS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY AND MUST BE DESIGNED BY THE PRECAST CONCRETE FAB.

* PRECAST REINF. CONC. WINGWALL AND PRECAST REINF. CONC. FOOTING [DESIGNED BY PRECAST REINF. CONC. FAB.] (TYP.)

TYPICAL WINGWALL SECTION
NO SCALE

NOTE: THE BRIDGE SUPERSTRUCTURE, BEARING PLATES, ANCHOR BOLTS, ABUTMENTS, WINGWALLS, BACKWALLS, FOOTINGS, CONNECTIONS AND ASSOCIATED DIMENSIONS OF SAME ARE FOR ILLUSTRATION PURPOSES ONLY. THE PREFABRICATED STEEL BRIDGE SUPERSTRUCTURE IS TO BE DESIGNED BY THE PREFABRICATED STEEL PEDESTRIAN BRIDGE MFG., NOT BY G&A. THE PRECAST REINFORCED CONCRETE SUBSTRUCTURE AND FOUNDATION COMPONENTS, AND ALL CONNECTIONS, ARE TO BE DESIGNED BY THE PRECAST REINFORCED CONCRETE FAB., NOT BY G&A.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JACOB D. BRINK ENGINEER NO. 084406
JACOB D. BRINK, P.E. #084406

GILLMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901 ■ (215) 345-4330 ■ www.gillmore-assoc.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHALL BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS INTENDED SOLELY FOR USE ON THE PROJECT AND PROJECT LOCATION SHOWN HEREON. MODIFICATION OR REUSE OF THIS PLAN FOR ANY OTHER PURPOSE OR LOCATION WITHOUT THE EXPRESS WRITTEN CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2020 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

NOT APPROVED FOR CONSTRUCTION

JOB NO.: 2018050911
MUNICIPAL FILE NO.: -
TAX MAP PARCEL NO.: -
DESIGNED BY: -
DRAWN BY: ARS
CHECKED BY: REJ
OWNER: TOWAMENCIN TOWNSHIP
TOTAL AREA: -
TOTAL LOTS: -
DATE: 07/30/2020
SCALE:

PEDESTRIAN BRIDGE
CONCEPTUAL TYPICAL ELEVATION, SECTIONS AND DETAILS
KRIEBBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

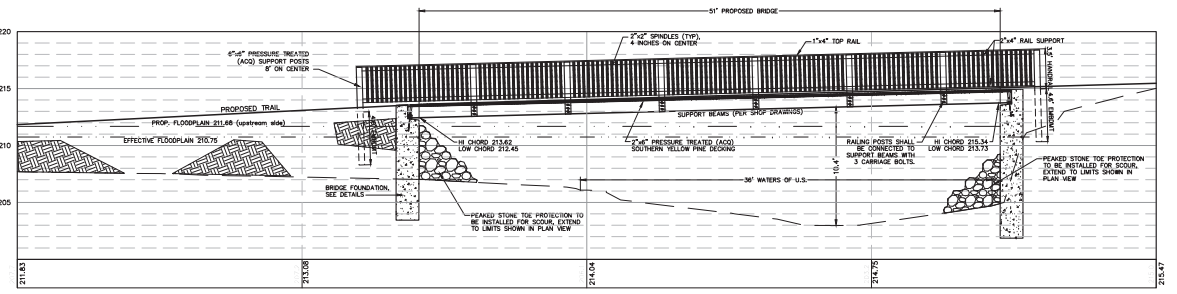
REV.	DESCRIPTION	DATE	BY
2	ADDENDUM 4	09/23/21	SSK

SHEET NO.: 3 OF 34

\\WS2.gillmore.local\SERVER2\STRUCTURAL\PROJECTS\2018\1805091_Kriebel Road Trail-Pedestrian Bridge\7.1 DESIGN\CAD\Production Drawings\Towamencin Township - Kriebel Road Trail Bridge.dwg Layout: KRIEBEL DETAILS Plotted By: akennard, on Mon Jul 19, 2021 at 8:46am

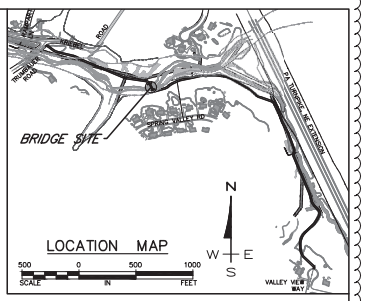
CONSTRUCTION SPECIFICATIONS FOR BRIDGE ABUTMENTS:

1. TEMPORARY SLOPES OR EXCAVATION SUPPORT RELATIVE TO EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.
2. CONCRETE REINFORCING BARS SHALL BE DEFORMED NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 WITH DEFORMATIONS MEETING ASTM A305.
3. ALL CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL HAVE MIN. 3" COVER FOR REINFORCED STEEL, AS REQUIRED IN THE ACI 318, 7.7.1.
4. REINFORCING BARS SHALL LAP A MINIMUM OF 24" WHERE SPLICED.
5. WHERE CONDITIONS ARISE WHICH ARE NOT SPECIFICALLY COVERED BY THESE DRAWINGS, THE CURRENT STANDARDS OF ACI #318, #347 AND C.R.S.I. MANUAL OF STANDARD PRACTICES SHALL GOVERN.
6. CONCRETE MIX FOR ABUTMENTS SHALL BE DESIGNED FOR A 28 DAY ULTIMATE STRENGTH (f'c) OF 3500 PSI IN CONFORMANCE WITH A.C.I. MIX DESIGN CRITERIA. ALL CONCRETE WHICH WILL BE EXPOSED TO WEATHER SHALL HAVE AN AIR-ENTRAINING ADMIXTURE IN THE MIX (5%±1%). USE OF WATER-REDUCING ADMIXTURES IS STRONGLY ENCOURAGED.
7. CONCRETE FINISHES SHALL BE ROUGH FLOAT. CHAMFER ALL EXPOSED CONCRETE EDGES 1".
8. COMPACT ALL BACK FILL TO A MINIMUM OF 95% STANDARD PROCTOR (ASTM D698).
9. COLD WEATHER PRECAUTIONS MUST BE OBSERVED. PROTECT THE GROUND, REINFORCING STEEL, AND FORMS FROM FREEZING AND FROST. CONCRETE MUST BE PROTECTED FROM FREEZING AFTER IT IS POURED. IBC 1905.12 AND ACI 318.
10. FOUNDATION BEARING CONDITIONS SHALL BE CERTIFIED COMPETENT TO ENGINEER BY CONTRACTOR OR OWNER'S AGENT. INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER.

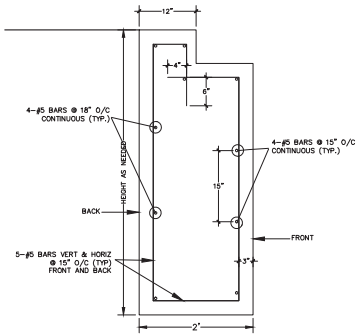


DATUM ELEV
200.00

TRAIL CL STATION 9+50.00 TO 10+50.00: Bridge Profile
SCALE: 1" = 5'

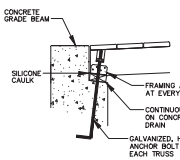


LOCATION MAP
SCALE: 500 0 500 1000 IN FEET

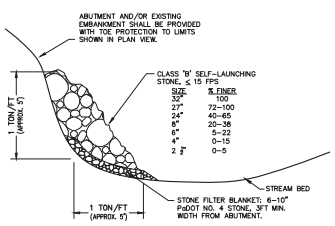


BRIDGE ABUTMENT CROSS-SECTION DETAIL
SCALE: N.T.S.

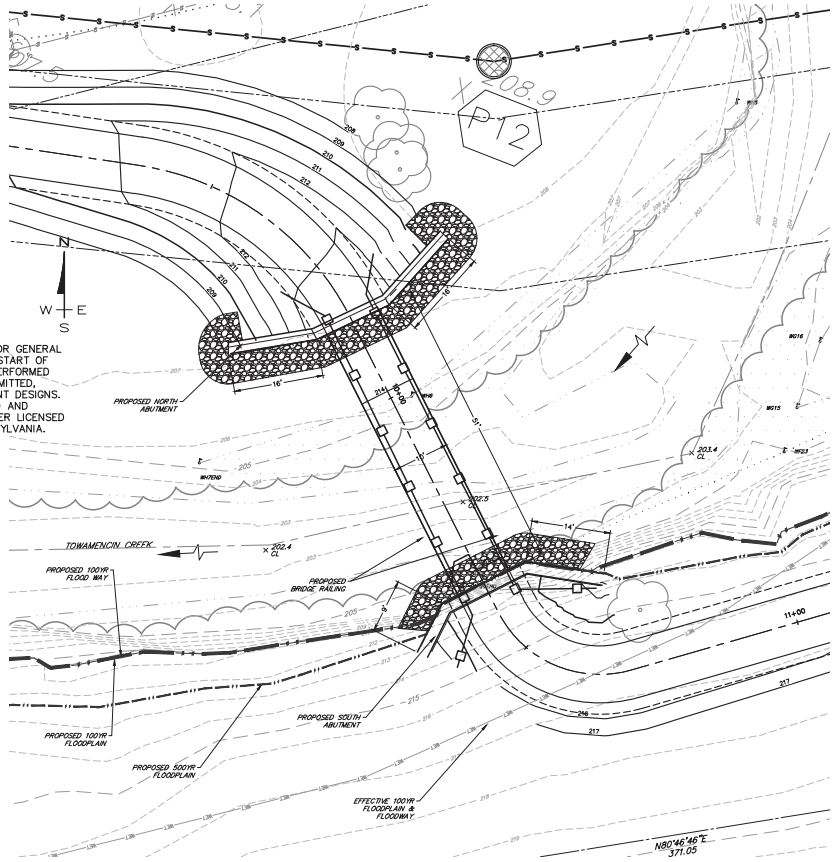
ABUTMENT DESIGN IS PROVIDED FOR GENERAL DESIGN PARAMETERS. PRIOR TO START OF WORK, SOIL BORINGS SHALL BE PERFORMED AND BRIDGE SHOP DRAWINGS SUBMITTED, INCLUDING SITE-SPECIFIC ABUTMENT DESIGNS. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.



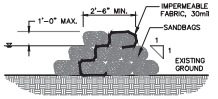
NAILER DETAIL
SCALE: N.T.S.



LONGITUDINAL PEAKED STONE TOE PROTECTION (LPSTP) DETAIL
NOT TO SCALE



PROPOSED LOW-FLOW BRIDGE CROSSING
SCALE: 1" = 10'

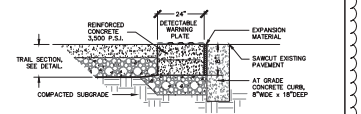


NOTE: SANDBAGS SHALL BE PLACED A MAXIMUM OF 1' ABOVE THE NORMAL WATER SURFACE ELEVATION.

SECTION A–A: SANDBAG COFFERDAM DETAIL
NOT TO SCALE

COMMERCIALLY AVAILABLE COFFERDAM SYSTEMS, SUCH AS 'PORTA-DAM' OR EQUAL, SHALL BE ACCEPTABLE ALTERNATIVE TO SANDBAG DAM. SAID SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. PRODUCT DATA SHEETS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

EXISTING	LEGEND	PROPOSED
	1-FT CONTOURS	
	5-FT CONTOURS	
	TREES	
	WATERS OF U.S.	
	WETLANDS	
W16	WATERS/WETLANDS FLAGS	
100	100YR FLOOD WAY	
100	100YR FLOOD FRINGE	
S	SANITARY SEWER	S
	STONE SCOUR PROTECTION	



DWS STRIP AT ROAD CROSSINGS
NOT TO SCALE

1. DETECTABLE WARNING SURFACE (DWS) PLATE SHALL BE INSTALLED AT ALL ROAD CROSSINGS.
2. INSTALL 12" STOP SIGN (R1-1) AT DWS PLATE, MOUNTING HEIGHT 48"

SEQUENCE OF CONSTRUCTION: BRIDGE WORK

BRIDGE INSTALLATION ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED, UNLESS NOTED OTHERWISE.

AT LEAST 7 DAYS PRIOR TO START OF WORK ON THE BRIDGE, A PRECONSTRUCTION MEETING SHALL BE HELD INCLUDING THE OWNER, SITE CONTRACTOR, MONTGOMERY COUNTY CONSERVATION DISTRICT, AND THE PLAN DESIGNER.

1. TEMPORARY ESC MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PLANS APPROVED BY COUNTY CONSERVATION DISTRICT. BRIDGE SITE SHALL BE ACCESSED VIA STONE TIRE CLEANER(S) AND ESTABLISHED LOD.
2. ACCESS TO THE STREAM CHANNEL SHALL BE VIA THE TOP OF BANKS. AT NO TIME SHALL EQUIPMENT ENTER THE STREAM AT ANY LOCATION OTHER THAN APPROVED TEMPORARY CROSSING LOCATIONS.
3. INSTALL COFFERDAMS ALONG STREAM AS SHOWN AND DETAILED ON ESC PLANS. MAIN CHANNEL OF STREAM SHALL REMAIN OPEN AND UNDISTURBED THROUGHOUT THE WORK.
4. INSTALL BRIDGE FOUNDATION ABUTMENT ON EACH SIDE OF STREAM AS SPECIFIED AND DETAILED ON PLANS. WORK ON THE ABUTMENTS MAY PROCEED CONCURRENTLY OR INDEPENDENTLY AS CONSTRUCTION SCHEDULE DICTATES.
   A. EXCAVATE AND INSTALL FORM FOR THE FOUNDATION ABUTMENT. CONCRETE FOR ABUTMENT SHALL BE PUMPED AS NEEDED.
   B. TOPSOIL AND EXCAVATED SUBSOILS SHALL BE STOCKPILED SEPARATELY.
   C. ANY STOCKPILED MATERIAL WHICH IS TO REMAIN ON SITE SHALL BE STOCKPILED OUTSIDE THE 100-YEAR FLOODPLAIN.
   D. COFFERDAMS SHALL REMAIN UNTIL CONCRETE FOUNDATIONS ARE POURED AND AREA HAS BEEN RESTORED.
   E. AFTER CONCRETE ABUTMENTS HAVE CURED, TIMBER BRIDGE SHALL BE INSTALLED PER STANDARD CONSTRUCTION TECHNIQUES.
5. UPON COMPLETION OF WORK, ALL DISTURBED AREAS SHALL BE PROVIDED WITH A MINIMUM OF 8" TOPSOIL, WHERE NEEDED, AND SEEDED IMMEDIATELY. ALL VEGETATED AREAS SHALL BE STABILIZED WITH VEGETATION AND MULCH AS SOON AS POSSIBLE.
6. WORK ON REMAINDER OF TRAIL CONSTRUCTION SHALL PROCEED IN ACCORDANCE WITH APPROVED PLANS.

PROJECT IDENTIFICATION:

PROVIDE 8 FT WIDE X 6 FT HIGH PROJECT SIGN OF EXTERIOR GRADE PLYWOOD AND WOOD FRAME CONSTRUCTION, PAINTED, WITH EXHIBIT LETTERING BY PROFESSIONAL SIGN PAINTER TO ENGINEER'S DESIGN AND COLORS. SIGN SHALL MEET THE FOLLOWING REQUIREMENTS:

1. LIST TITLE OF PROJECT, NAMES OF OWNER, ENGINEER, AND CONTRACTOR.
2. ERECT ON SITE AT KRIEBEL ROAD END OF PROJECT AND REMAIN THROUGHOUT CONSTRUCTION.
3. SIGN SHALL NOTE "THIS PROJECT IS FINANCED IN PART BY MONTGOMERY COUNTY THROUGH THE MONTCO 2040 IMPLEMENTATION GRANT PROGRAM."

PLAN SURVEY DATA:

HORIZONTAL DATUM: NAD 83 PA SPC SOUTH ZONE
VERTICAL DATUM: NAVD 88 PER OPUS SOLUTIONS AND GPS OBSERVATIONS MH AND TRAV POINTS ELEVATED USING DIFFERENTIAL LEVELS
USIN HV1 AS BENCH MARK ELEVATION 191.07'

REV.	DESCRIPTION	DATE	BY
2	ADDENDUM 4	7/23/21	JFC
5	REVISED TO PER COMMENTS FROM FEMA ON FLOODPLAIN STUDY	5/15/17	SKD
4	REVISED TO PER COMMENTS FROM FEMA ON FLOODPLAIN STUDY	1/10/17	SKD
3	REVISED TO PER COMMENTS FROM FEMA ON FLOODPLAIN STUDY	12/22/16	SKD
2	REVISED TO PER COMMENTS FROM FEMA ON FLOODPLAIN STUDY	11/18/16	SKD
1	REVISED TO ADD 100YR FLOODPLAIN PER HEC-RAS ANALYSIS	7/28/16	SKD

OWNER:
TOWAMENCIN TOWNSHIP
PO BOX 303, 253 TROXEL RD
KULPSVILLE, PA 19438
215-368-7602

TAX MAP PARCEL NO.:
MUNICIPAL FILE NO.:
TOTAL AREA:
TOTAL LOTS:
DATE: 6/15/16
SCALE: 1" = 10'

CONCEPTUAL PERMIT PLANS
TRAIL STATION 9+50 to 10+50:
BRIDGE PLAN, PROFILE & DETAILS
KRIEBEL ROAD TRAIL
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

I, SHARON K. DOTTS, PE, CPESC, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS, AND REPORTS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE, IS TRUE AND CORRECT, AND IS IN CONFORMANCE WITH CHAPTER 105 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Commonwealth of Pennsylvania — Registered Professional Engineer — Sharon K. Dotts

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-4360 • (215) 345-4330 • www.gilmoreassoc.com

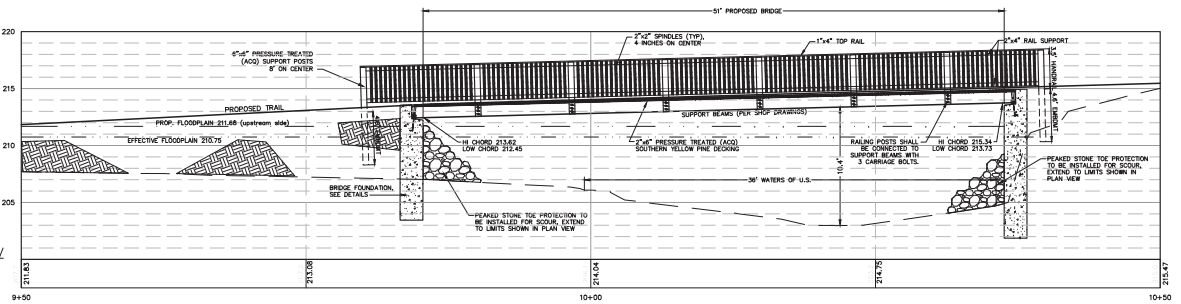
SCALE: 10 0 10 20 IN FEET
JOB NO.: 15-12029-02
SHEET NO.: 4 OF 4

DESIGNED BY: SKD | DRAWN BY: | CHECKED BY: WKD

ONLY THOSE PLANS INCORPORATING THE RAISED PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
© COPYRIGHT 2014 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

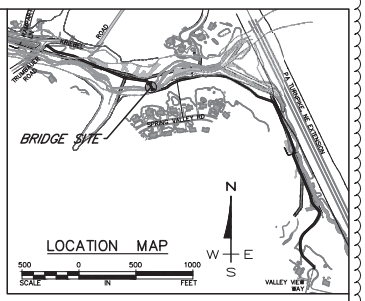
CONSTRUCTION SPECIFICATIONS FOR BRIDGE ABUTMENTS:

1. TEMPORARY SLOPES OR EXCAVATION SUPPORT RELATIVE TO EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.
2. CONCRETE REINFORCING BARS SHALL BE DEFORMED NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 WITH DEFORMATIONS MEETING ASTM A305.
3. ALL CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL HAVE MIN. 3" COVER FOR REINFORCED STEEL, AS REQUIRED IN THE ACI 318, 7.7.1.
4. REINFORCING BARS SHALL LAP A MINIMUM OF 24" WHERE SPLICED.
5. WHERE CONDITIONS ARISE WHICH ARE NOT SPECIFICALLY COVERED BY THESE DRAWINGS, THE CURRENT STANDARDS OF ACI #318, #347 AND C.R.S.I. MANUAL OF STANDARD PRACTICES SHALL GOVERN.
6. CONCRETE MIX FOR ABUTMENTS SHALL BE DESIGNED FOR A 28 DAY ULTIMATE STRENGTH (f'c) OF 3500 PSI IN CONFORMANCE WITH A.C.I. MIX DESIGN CRITERIA. ALL CONCRETE WHICH WILL BE EXPOSED TO WEATHER SHALL HAVE AN AIR-ENTRAINING ADMIXTURE IN THE MIX (5%±1%). USE OF WATER-REDUCING ADMIXTURES IS STRONGLY ENCOURAGED.
7. CONCRETE FINISHES SHALL BE ROUGH FLOAT. CHAMFER ALL EXPOSED CONCRETE EDGES 1".
8. COMPACT ALL BACK FILL TO A MINIMUM OF 95% STANDARD PROCTOR (ASTM D698).
9. COLD WEATHER PRECAUTIONS MUST BE OBSERVED. PROTECT THE GROUND, REINFORCING STEEL, AND FORMS FROM FREEZING AND FROST. CONCRETE MUST BE PROTECTED FROM FREEZING AFTER IT IS POURED. IBC 1905.12 AND ACI 318.
10. FOUNDATION BEARING CONDITIONS SHALL BE CERTIFIED COMPETENT TO ENGINEER BY CONTRACTOR OR OWNER'S AGENT. INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER.



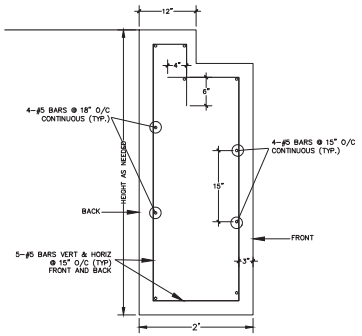
TRAIL CL STATION 9+50.00 TO 10+50.00: Bridge Profile

SCALE: 1" = 5'



LOCATION MAP

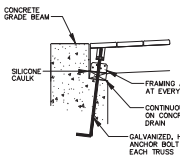
SCALE: 500 0 500 1000 IN FEET



BRIDGE ABUTMENT CROSS-SECTION DETAIL

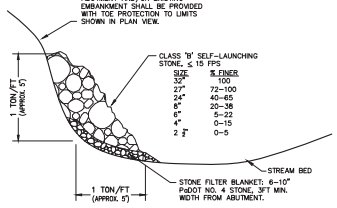
SCALE: N.T.S.

ABUTMENT DESIGN IS PROVIDED FOR GENERAL DESIGN PARAMETERS. PRIOR TO START OF WORK, SOIL BORINGS SHALL BE PERFORMED AND BRIDGE SHOP DRAWINGS SUBMITTED, INCLUDING SITE-SPECIFIC ABUTMENT DESIGNS. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.



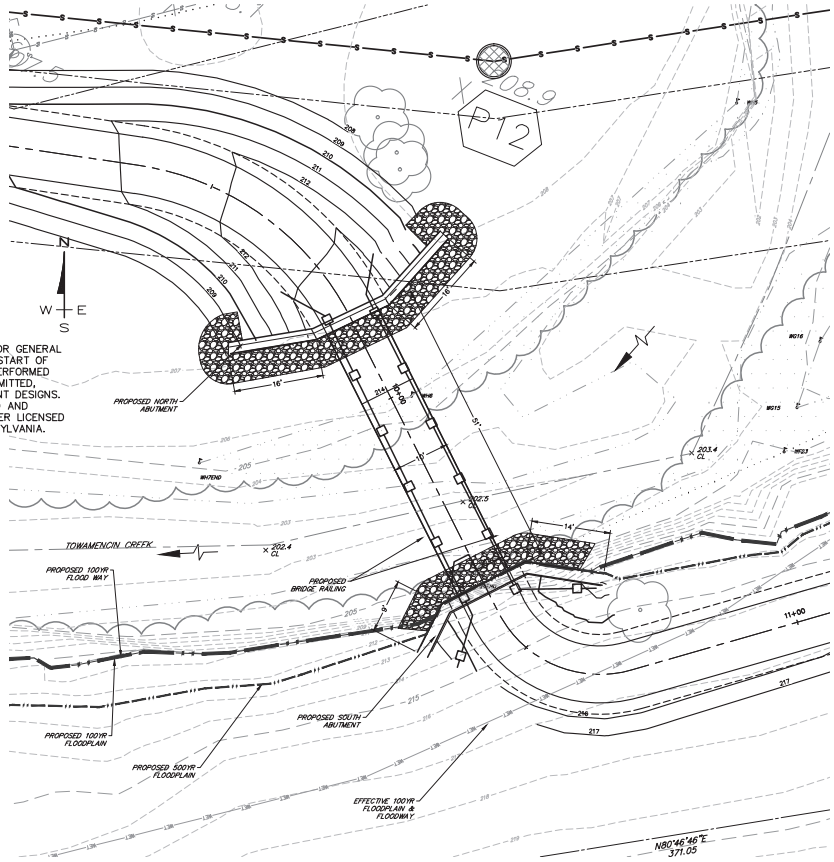
NAILER DETAIL

SCALE: N.T.S.



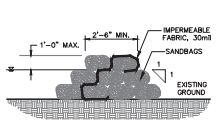
LONGITUDINAL PEAKED STONE TOE PROTECTION (LPSTP) DETAIL

NOT TO SCALE



PROPOSED LOW-FLOW BRIDGE CROSSING

SCALE: 1" = 10'



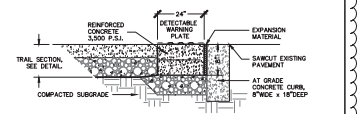
NOTE: SANDBAGS SHALL BE PLACED A MAXIMUM OF 1' ABOVE THE NORMAL WATER SURFACE ELEVATION.

SECTION A–A: SANDBAG COFFERDAM DETAIL

NOT TO SCALE

COMMERCIALLY AVAILABLE COFFERDAM SYSTEMS, SUCH AS 'PORTA-DAM' OR EQUAL, SHALL BE ACCEPTABLE ALTERNATIVE TO SANDBAG DAM. SAID SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. PRODUCT DATA SHEETS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

EXISTING	LEGEND	PROPOSED
	1-FT CONTOURS	
	5-FT CONTOURS	
	TREES	
	WATERS OF U.S.	
	WETLANDS	
W16	WATERS/WETLANDS FLAGS	
100YR	100YR FLOOD WAY	
100YR	100YR FLOOD FRINGE	
S	SANITARY SEWER	S
	STONE SCOUR PROTECTION	



DWS STRIP AT ROAD CROSSINGS

NOT TO SCALE

1. DETECTABLE WARNING SURFACE (DWS) PLATE SHALL BE INSTALLED AT ALL ROAD CROSSINGS.
2. INSTALL 12" STOP SIGN (R1-1) AT DWS PLATE, MOUNTING HEIGHT 48"

SEQUENCE OF CONSTRUCTION: BRIDGE WORK

BRIDGE INSTALLATION ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED, UNLESS NOTED OTHERWISE.

AT LEAST 7 DAYS PRIOR TO START OF WORK ON THE BRIDGE, A PRECONSTRUCTION MEETING SHALL BE HELD INCLUDING THE OWNER, SITE CONTRACTOR, MONTGOMERY COUNTY CONSERVATION DISTRICT, AND THE PLAN DESIGNER.

1. TEMPORARY ESC MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PLANS APPROVED BY COUNTY CONSERVATION DISTRICT. BRIDGE SITE SHALL BE ACCESSED VIA STONE TIRE CLEANER(S) AND ESTABLISHED LOD.
2. ACCESS TO THE STREAM CHANNEL SHALL BE VIA THE TOP OF BANKS. AT NO TIME SHALL EQUIPMENT ENTER THE STREAM AT ANY LOCATION OTHER THAN APPROVED TEMPORARY CROSSING LOCATIONS.
3. INSTALL COFFERDAMS ALONG STREAM AS SHOWN AND DETAILED ON ESC PLANS. MAIN CHANNEL OF STREAM SHALL REMAIN OPEN AND UNDISTURBED THROUGHOUT THE WORK.
4. INSTALL BRIDGE FOUNDATION ABUTMENT ON EACH SIDE OF STREAM AS SPECIFIED AND DETAILED ON PLANS. WORK ON THE ABUTMENTS MAY PROCEED CONCURRENTLY OR INDEPENDENTLY AS CONSTRUCTION SCHEDULE DICTATES.
   A. EXCAVATE AND INSTALL FORM FOR THE FOUNDATION ABUTMENT. CONCRETE FOR ABUTMENT SHALL BE PUMPED AS NEEDED.
   B. TOPSOIL AND EXCAVATED SUBSOILS SHALL BE STOCKPILED SEPARATELY.
   C. ANY STOCKPILED MATERIAL WHICH IS TO REMAIN ON SITE SHALL BE STOCKPILED OUTSIDE THE 100-YEAR FLOODPLAIN.
   D. COFFERDAMS SHALL REMAIN UNTIL CONCRETE FOUNDATIONS ARE POURED AND AREA HAS BEEN RESTORED.
   E. AFTER CONCRETE ABUTMENTS HAVE CURED, TIMBER BRIDGE SHALL BE INSTALLED PER STANDARD CONSTRUCTION TECHNIQUES.
5. UPON COMPLETION OF WORK, ALL DISTURBED AREAS SHALL BE PROVIDED WITH A MINIMUM OF 8" TOPSOIL, WHERE NEEDED, AND SEEDED IMMEDIATELY. ALL VEGETATED AREAS SHALL BE STABILIZED WITH VEGETATION AND MULCH AS SOON AS POSSIBLE.
6. WORK ON REMAINDER OF TRAIL CONSTRUCTION SHALL PROCEED IN ACCORDANCE WITH APPROVED PLANS.

PLAN SURVEY DATA:

HORIZONTAL DATUM: NAD 83 PA SPC SOUTH ZONE

VERTICAL DATUM: NAVD 88 PER OPUS SOLUTIONS AND GPS OBSERVATIONS MH AND TRAV POINTS ELEVATED USING DIFFERENTIAL LEVELS

USIN HV1 AS BENCH MARK ELEVATION 191.07'

PROJECT IDENTIFICATION:

PROVIDE 8 FT WIDE X 6 FT HIGH PROJECT SIGN OF EXTERIOR GRADE PLYWOOD AND WOOD FRAME CONSTRUCTION, PAINTED, WITH EXHIBIT LETTERING BY PROFESSIONAL SIGN PAINTER TO ENGINEER'S DESIGN AND COLORS. SIGN SHALL MEET THE FOLLOWING REQUIREMENTS:

1. LIST TITLE OF PROJECT, NAMES OF OWNER, ENGINEER, AND CONTRACTOR.
2. ERECT ON SITE AT KRIEBEL ROAD END OF PROJECT AND REMAIN THROUGHOUT CONSTRUCTION.
3. SIGN SHALL NOTE "THIS PROJECT IS FINANCED IN PART BY MONTGOMERY COUNTY THROUGH THE MONTCO 2040 IMPLEMENTATION GRANT PROGRAM."

REV.	DESCRIPTION	DATE	BY
3	ADDENDUM 5	8/03/21	JFC
2	ADDENDUM 4 - New Sheet	7/23/21	JFC

OWNER: TOWAMENCIN TOWNSHIP, PO BOX 303, 253 TROXEL RD, KULPSVILLE, PA 19438, 215-368-7602

TAX MAP PARCEL NO.:

MUNICIPAL FILE NO.:

TOTAL AREA: TOTAL LOTS:

DATE: 6/15/16 SCALE: 1" = 10'

CONCEPTUAL PERMIT PLANS

TRAIL STATION 9+50 to 10+50: BRIDGE PLAN, PROFILE & DETAILS

KRIEBEL ROAD TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

I, SHARON K. DOTTS, PE, CPESC, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS, AND REPORTS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE, IS TRUE AND CORRECT, AND IS IN CONFORMANCE WITH CHAPTER 105 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Sharon K. Dotts

GILMORE & ASSOCIATES, INC.

ENGINEERING & CONSULTING SERVICES

65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-4360 • (215) 345-4330 • www.gilmoreassoc.com

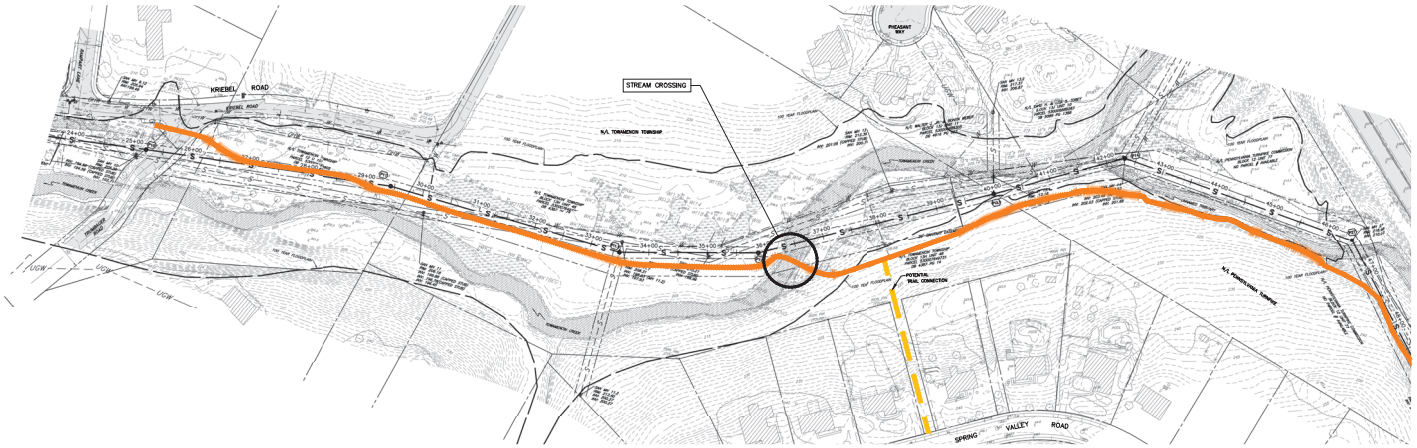
SCALE: 10 0 10 20 IN FEET

JOB NO.: 15-12029-02

SHEET NO.: 5 OF 5

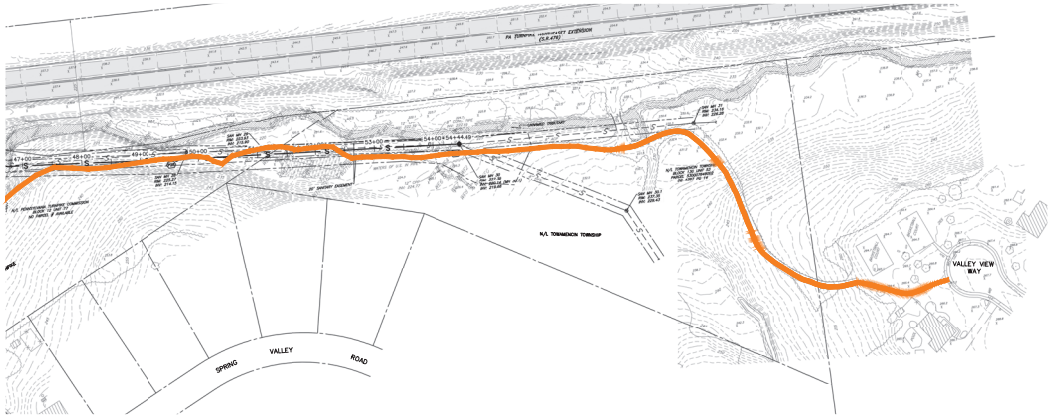
DESIGNED BY: SKD DRAWN BY: CHECKED BY: WKD

ONLY THOSE PLANS INCORPORATING THE RAISED PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
© COPYRIGHT 2014 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED



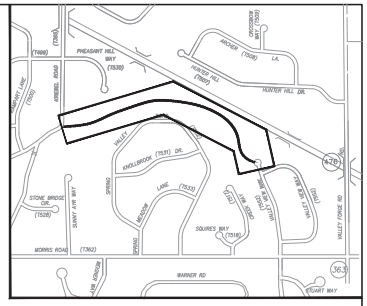
PLAN

STA. 25+00 TO 48+00



PLAN

STA. 48+00 TO VALLEY VIEW WAY



LOCATION MAP

LEGEND:

KRIEBEL ROAD TO VALLEY VIEW WAY TRAIL ROUTE

POTENTIAL TRAIL CONNECTION

TRAIL INFORMATION

APPROXIMATELY 4,000 L.F.

ONE (1) SIGNIFICANT STREAM CROSSING

ONE (1) MINOR WETLAND CROSSING

LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE-GROUND OBSERVATION OF THE SITE. NO EXCAVATIONS WERE PERFORMED IN THE PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY GILMORE & ASSOCIATES INC.

ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2008, PENNSYLVANIA ACT 121. GILMORE & ASSOCIATES INC. HAS OBTAINED A PA-ONE CALL SERIAL NUMBER AS NOTED HEREON FOR DESIGN PURPOSES ONLY.

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2015 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

OWNER:
TOWAMENCIN TOWNSHIP
1090 TROVEL ROAD
LANSDALE, PA 19446

MUNICIPAL FILE NO.: 1501039T

REV.	DESCRIPTION	DATE	BY

TAX MAP PARCEL NO.:

TOTAL AREA: TOTAL LOTS:

DATE: 11/6/15 SCALE: SELECT SCALE

PRELIMINARY
KRIEBEL ROAD TO VALLEY VIEW WAY
TRAIL ROUTE

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
CORPORATE HEADQUARTERS
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901 • (215) 345-4330 • www.gilmore-assoc.com

SCALE: 100 0 100 200 IN FEET

JOB NO.: 1501039T

SHEET NO.: 1 OF 1

DESIGNED BY: WKD DRAWN BY: MMM CHECKED BY: WKD

NOT APPROVED FOR CONSTRUCTION

x:\Mark Conway\MMATTUCCI\Kriebel_Trail_Draft (2).dwg Layout: 24 x 36 BORDER Plotted By: mconway, on Fri Nov 06, 2015 at 12:00pm

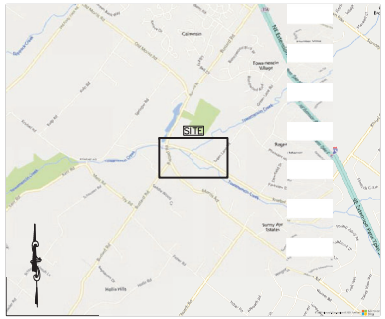
PROPOSED PLANS

FOR

TOWAMENCIN TOWNSHIP

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA



LOCATION MAP

2000 00 2000 4000

SCALE IN FEET

SCALE: 1"=2000'

GENERAL NOTES:

1. THE CONTRACTOR SHALL SEQUENCE WORK IN A MANNER WHICH WILL MINIMIZE INCONVENIENCE TO THE RESIDENTS ALONG THE TOWNSHIP ROADS WITHIN THE LIMIT OF THE PROJECT.
2. ALL DRIVEWAYS SHALL BE KEPT OPEN TO PERMIT ACCESS TO RESIDENTS AND BUSINESSES.
3. A SINGLE LANE OF TRAFFIC MUST BE MAINTAINED ON ALL ROADS AT ALL TIMES DURING THE WORK ACTIVITIES. THE CONTRACTOR MUST ADHERE TO PENNDOT PUBLICATION 203 (67 PA CODE, CHAPTER 203) REQUIREMENTS FOR TRAFFIC WHILE COMPLETING WORK IN AND ADJACENT TO ROADWAYS.
4. THE CONTRACTOR MUST PROVIDE AND MAINTAIN PROPER TRAFFIC CONTROL AT ALL TIMES DURING THE DURATION OF THE PROJECT IN ACCORDANCE WITH THE PENNDOT PUBLICATION 213 TEMPORARY TRAFFIC CONTROL GUIDELINES, LATEST REVISED EDITION.
5. THE CONTRACTOR MUST PROVIDE AND MAINTAIN PROPER TRAFFIC CONTROL AND TRAFFIC CONTROL SIGNAGE AND DEVICES AT ALL TIMES DURING THE DURATION OF THE PROJECT IN
6. NO OPERATION OF EQUIPMENT IN THE VICINITY OF RESIDENCES SHALL BE PERMITTED PRIOR TO 7:00 A.M. OR AFTER 7:00 P.M. ON WEEKDAYS OR PRIOR TO 8:00 A.M. OR AFTER 6:00 P.M. ON SATURDAYS AND HOLIDAYS. NO WORK ACTIVITIES PERMITTED ON SUNDAYS. NO EXTRA PAYMENT WILL BE MADE TO THE CONTRACTOR FOR NIGHT OR WEEKEND WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS WHICH ARE DISTURBED DURING CONSTRUCTION.

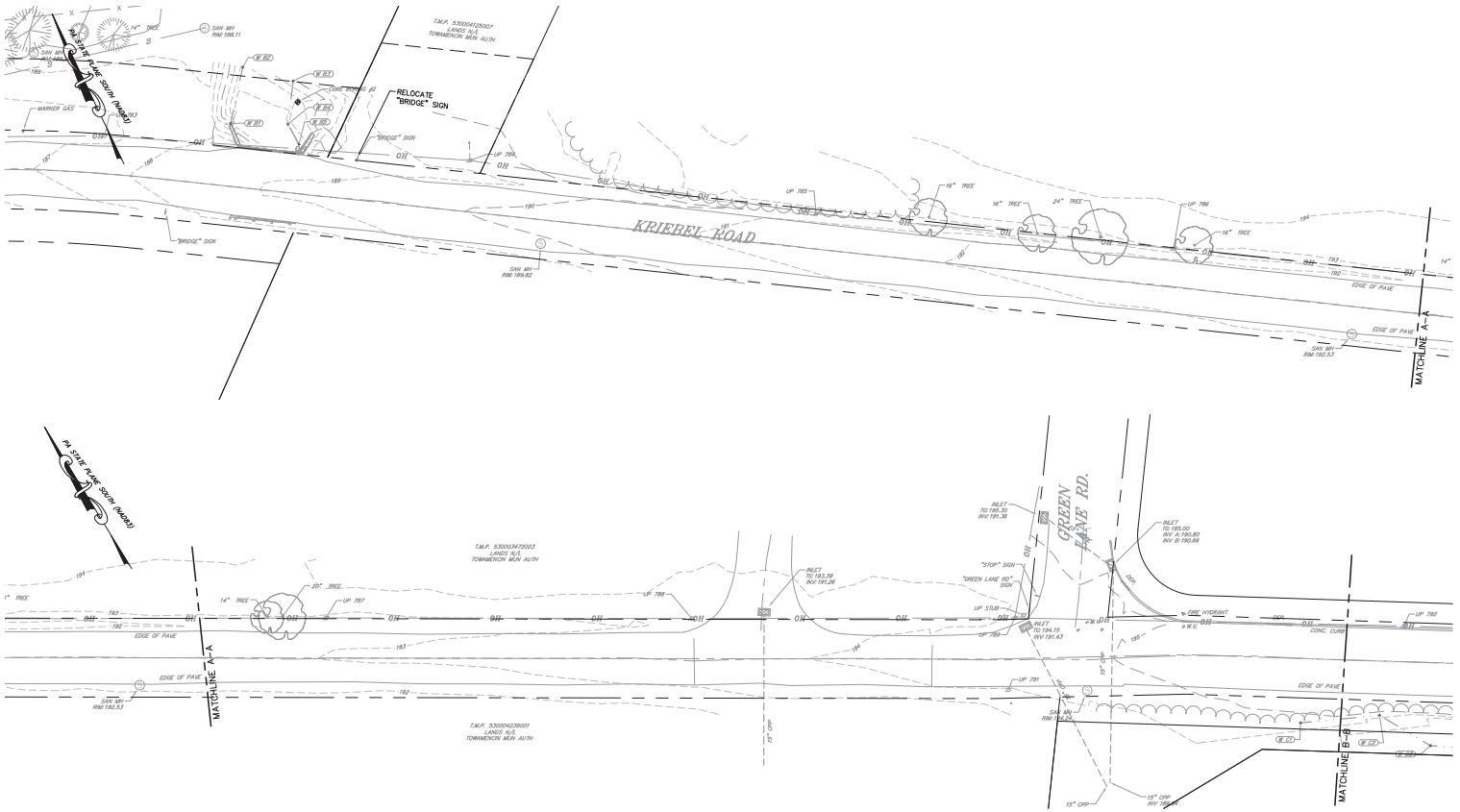
SHEET INDEX

SHEET NUMBER	SHEET TITLE
1	COVER
2	EXISTING FEATURES PLAN
3	EXISTING FEATURES PLAN
4	SITE PLAN
5	SITE PLAN
6	PLAN AND PROFILE
7	PLAN AND PROFILE
8	PLAN AND PROFILE
9	PLAN AND PROFILE
10	EROSION AND SEDIMENT CONTROL PLAN
11	EROSION AND SEDIMENT CONTROL PLAN
12	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
13	CONSTRUCTION DETAILS
14	ADA RAMP LAYOUT PLAN
15	ADA RAMPS A & B
16	ADA RAMPS C D & E
17	ADA RAMP DETAILS
	ALSO INCLUDED:
1 OF 1	MPT PLAN

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 300, TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PLAN DATE: October 7, 2022



LOCATION MAP

SCALE: 1"=2000'

GENERAL SURVEY NOTES:

1. THE PROPERTY LINES SHOWN ARE BASED ON MONTGOMERY COUNTY GIS DATA ONLY. NOT TITLE RESEARCH WAS PERFORMED IN PREPARATION OF THIS PLAN.
2. THIS SURVEY IS BASED ON A FIELD SURVEY PERFORMED BY GILMORE & ASSOCIATES, INC. ON JUNE 15, 2021, AND THE REFERENCED INFORMATION LISTED HEREON. IT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
3. SUBJECT TO COVENANTS, RESTRICTIONS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.
4. THE WETLANDS WERE FLAGGED AND LOCATED BY GILMORE & ASSOCIATES, INC.
5. VERTICAL DATUM IS NAVD88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.
6. HORIZONTAL DATUM IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NAD 83) ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.

REFERENCES:

1. TAX MAP FOR THE TOWNSHIP OF TOWAMENCIN, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA.

25 0 25 50
SCALE IN FEET
1"=25'

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TRAPPE, PA 19426 • (610) 489-4949 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL, AND RELIED UPON BY USERS. THIS PLAN IS RELEASED FOR THE PURPOSE OF REVIEW BY THE RECIPIENT AND THE INFORMATION HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA
JOSEPH F. CARLIN
PROFESSIONAL ENGINEER
037359
DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

SHEET - EXF

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

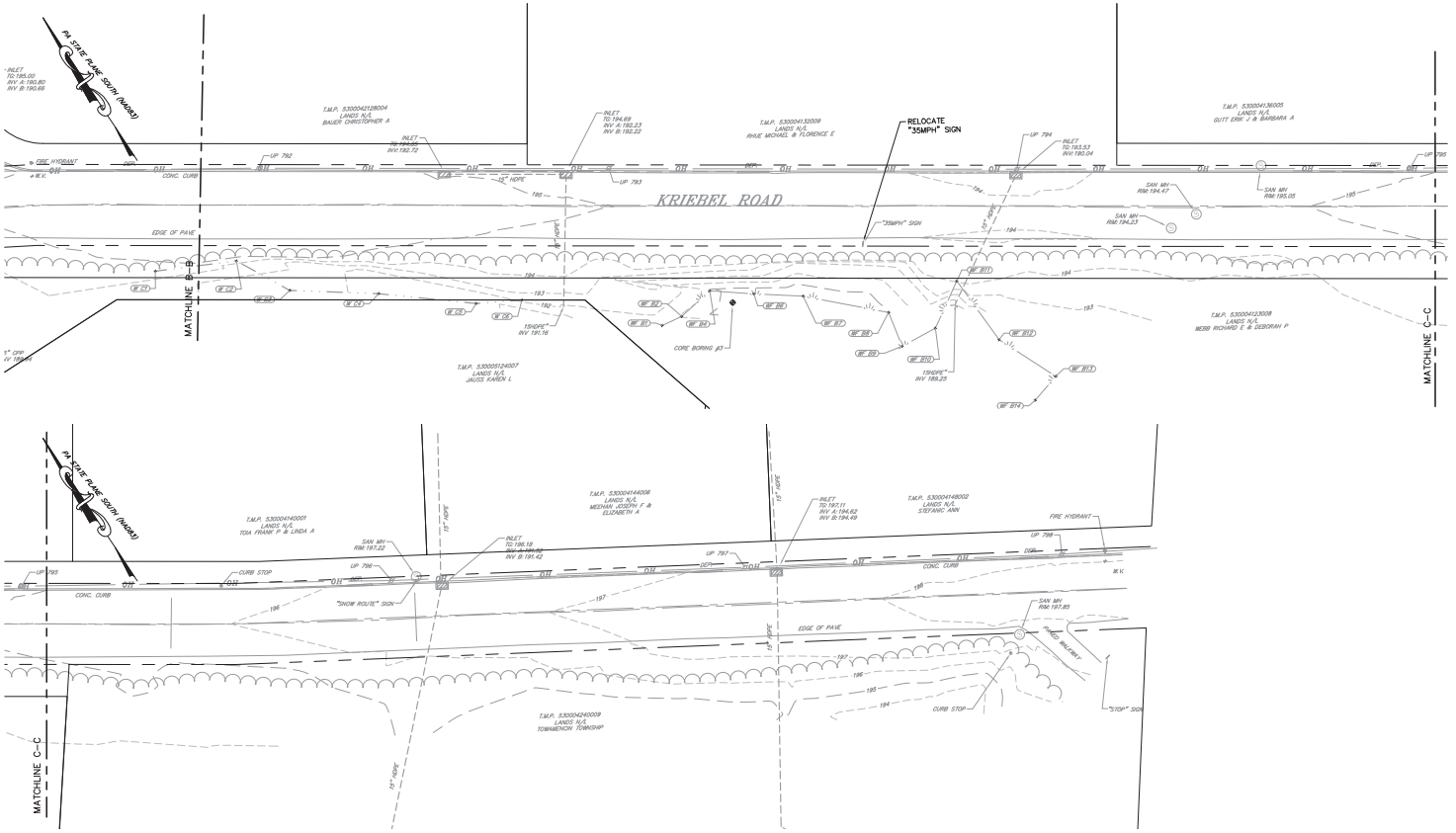
TAX MAP PARCEL No.:

TOTAL AREA: TOTAL LOTS:

DATE: 10/07/22 SCALE: 1"=25'

DRAWN BY: SWC CHECKED BY: JFC

SHEET NO.:
2 OF 17



LOCATION MAP

SCALE: 1"=2000'

GENERAL SURVEY NOTES:

1. THE PROPERTY LINES SHOWN ARE BASED ON MONTGOMERY COUNTY GIS DATA ONLY. NOT TITLE RESEARCH WAS PERFORMED IN PREPARATION OF THIS PLAN.
2. THIS SURVEY IS BASED ON A FIELD SURVEY PERFORMED BY GILMORE & ASSOCIATES, INC. ON JUNE 15, 2021, AND THE REFERENCED INFORMATION LISTED HEREON. IT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
3. SUBJECT TO COVENANTS, RESTRICTIONS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.
4. THE WETLANDS WERE FLAGGED AND LOCATED BY GILMORE & ASSOCIATES, INC.
5. VERTICAL DATUM IS NAVD88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.
6. HORIZONTAL DATUM IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NAD 83) ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.

REFERENCES:

1. TAX MAP FOR THE TOWNSHIP OF TOWAMENCIN, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA.

25 0 25 50
SCALE IN FEET
1"=25'

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS RELEASED FOR THE USE OF THE USER AND MAY NOT BE REPRODUCED HEREON, MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — JOSEPH F. CARLIN — PROFESSIONAL — ENGINEER — No. E077359

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

EXISTING FEATURES PLAN

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

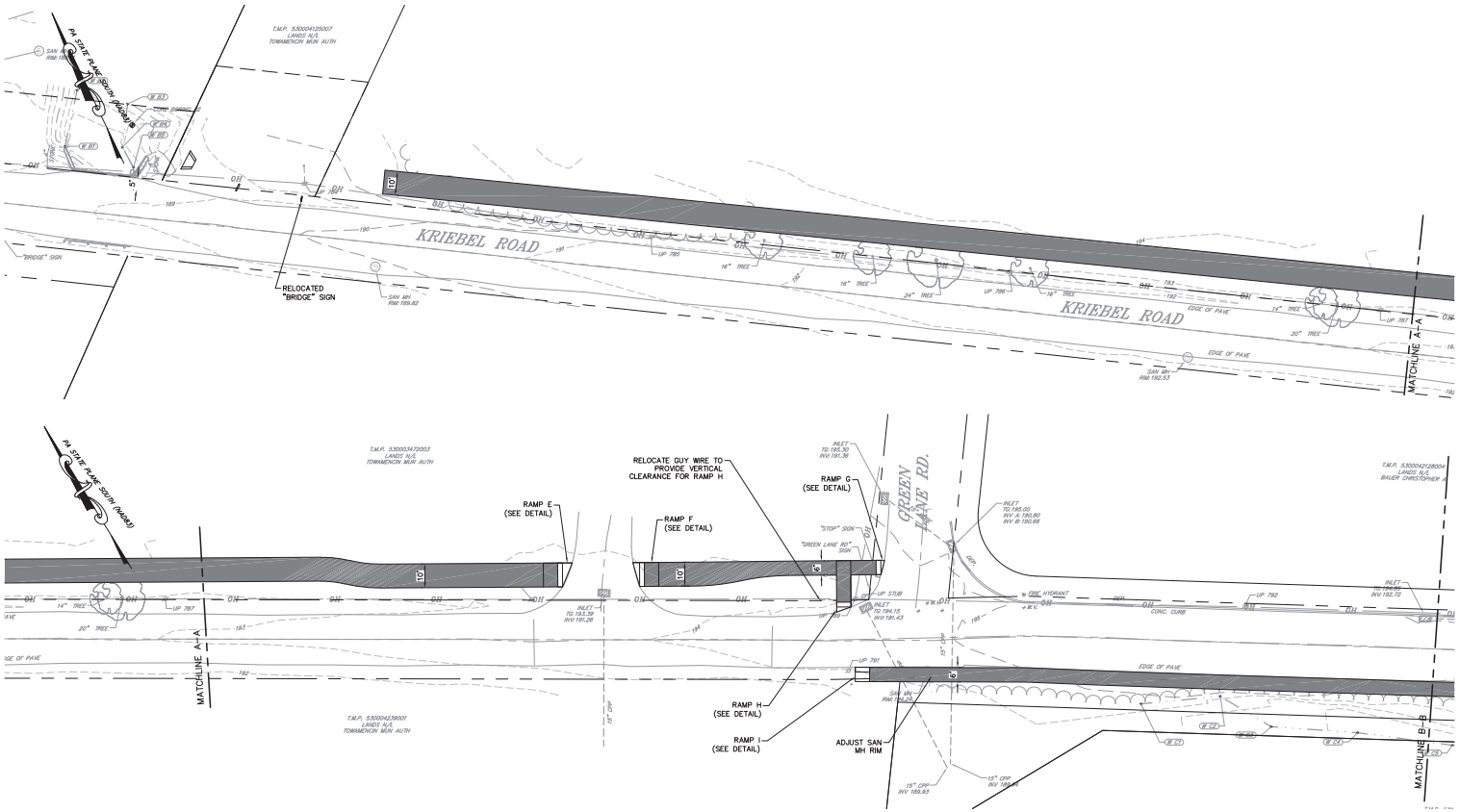
TAX MAP PARCEL No.:

TOTAL AREA: | TOTAL LOTS:

DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

SHEET NO.: 3 OF 17



LOCATION MAP

SCALE: 1"=2000'

GENERAL SURVEY NOTES:

1. THE PROPERTY LINES SHOWN ARE BASED ON MONTGOMERY COUNTY GIS DATA ONLY. NO TITLE RESEARCH WAS PERFORMED IN PREPARATION OF THIS PLAN.
2. THIS SURVEY IS BASED ON A FIELD SURVEY PERFORMED BY GILMORE & ASSOCIATES, INC. ON JUNE 15, 2021, AND THE REFERENCED INFORMATION LISTED HEREON. IT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
3. SUBJECT TO COVENANTS, RESTRICTIONS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.
4. THE WETLANDS WERE FLAGGED AND LOCATED BY GILMORE & ASSOCIATES, INC.
5. VERTICAL DATUM IS NAVD88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.
6. HORIZONTAL DATUM IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NAD 83) ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.

REFERENCES:

1. TAX MAP FOR THE TOWNSHIP OF TOWAMENCIN, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA.

LEGEND:

- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- EX. RIGHT OF WAY
- PR. MINOR CONTOUR
- PR. MAJOR CONTOUR
- EX. FENCE
- EX. TREELINE
- EX. STORM
- EX. SANITARY
- EX. OVERHEAD ELECTRIC
- EX. EDGE OF PAVEMENT
- PR. TRAIL

SCALE: 1"=25'

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TRAPPE, PA 19426 • (610) 489-4949 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL, AND RELIED UPON BY USER. THIS PLAN IS PROPERTY OF GILMORE & ASSOCIATES, INC. AND SHALL NOT BE REUSED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — JOSEPH F. CARLIN — PROFESSIONAL ENGINEER — 077959 — REGISTERED

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

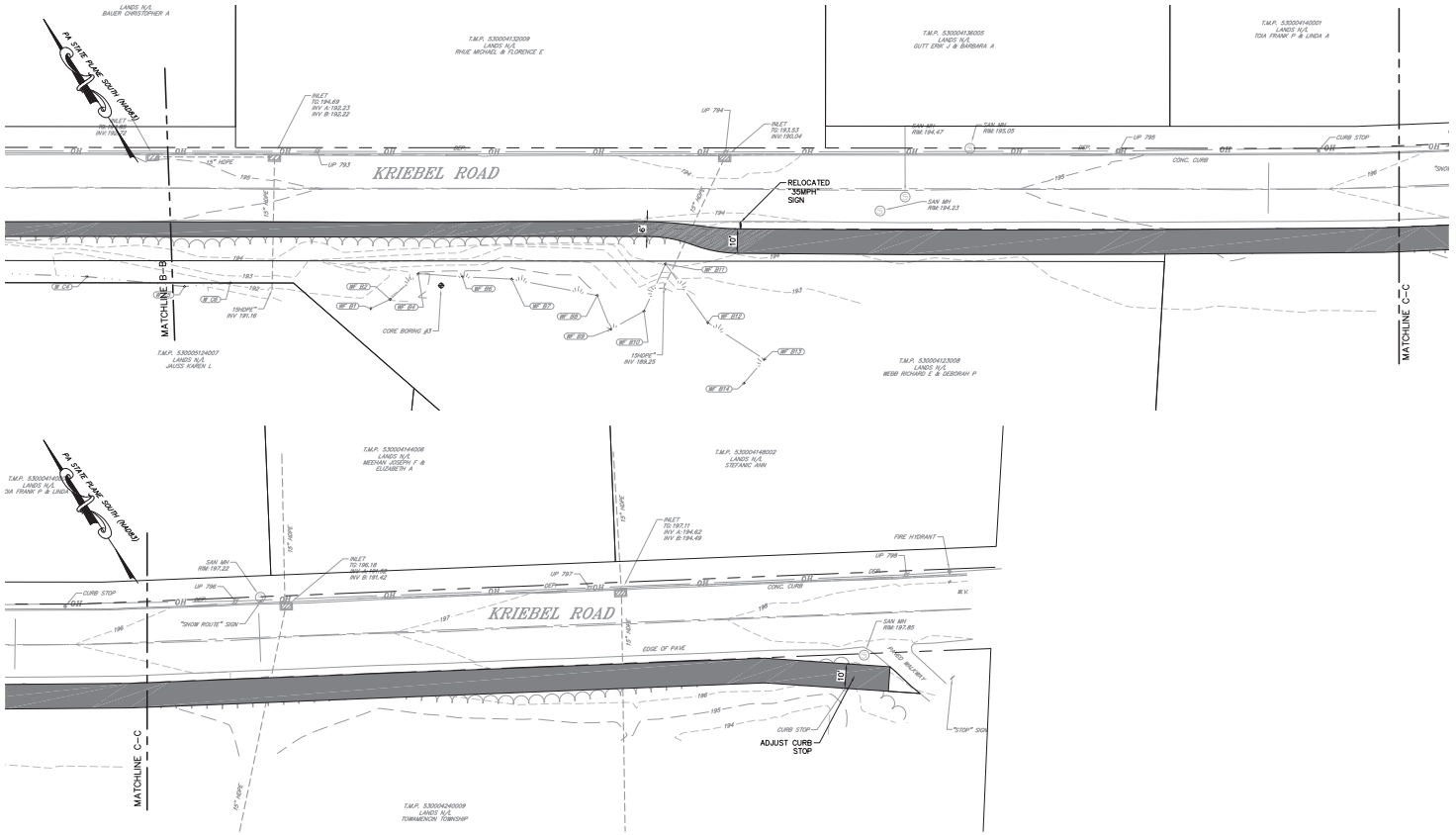
SITE PLAN

GILMORE & ASSOCIATES, INC.

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: 1"=25'
DRAWN BY: SWC	CHECKED BY: JFC

SHEET NO.: 4 OF 17

REV.	DESCRIPTION	DATE	BY



LOCATION MAP

SCALE: 1"=2000'

GENERAL SURVEY NOTES:

1. THE PROPERTY LINES SHOWN ARE BASED ON MONTGOMERY COUNTY GIS DATA ONLY. NO TITLE RESEARCH WAS PERFORMED IN PREPARATION OF THIS PLAN.
2. THIS SURVEY IS BASED ON A FIELD SURVEY PERFORMED BY GILMORE & ASSOCIATES, INC. ON JUNE 15, 2021, AND THE REFERENCED INFORMATION LISTED HEREON. IT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
3. SUBJECT TO COVENANTS, RESTRICTIONS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.
4. THE WETLANDS WERE FLAGGED AND LOCATED BY GILMORE & ASSOCIATES, INC.
5. VERTICAL DATUM IS NAVD88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.
6. HORIZONTAL DATUM IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NAD 83) ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE KEYNET-GPS VIRTUAL REFERENCE STATION SYSTEM.

REFERENCES:

1. TAX MAP FOR THE TOWNSHIP OF TOWAMENCIN, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA.

LEGEND:

- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- EX. RIGHT OF WAY
- PR. MINOR CONTOUR
- PR. MAJOR CONTOUR
- EX. FENCE
- EX. TREELINE
- EX. STORM
- EX. SANITARY
- EX. OVERHEAD ELECTRIC
- EX. EDGE OF PAVEMENT
- PR. TRAIL

25 0 25 50
SCALE IN FEET
1"=25'

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET (SUITE 100) TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL, AND RELIED UPON BY USER. THIS PLAN IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. AND IS NOT TO BE USED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — PROFESSIONAL — JOSEPH C. GILMORE — No. 037356 — REGISTERED PROFESSIONAL SURVEYOR
DATE: 10/07/22

COMMONWEALTH OF PENNSYLVANIA — PROFESSIONAL — JOSEPH F. CARLIN — No. E-077358 — REGISTERED PROFESSIONAL ENGINEER
DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

SITE PLAN

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

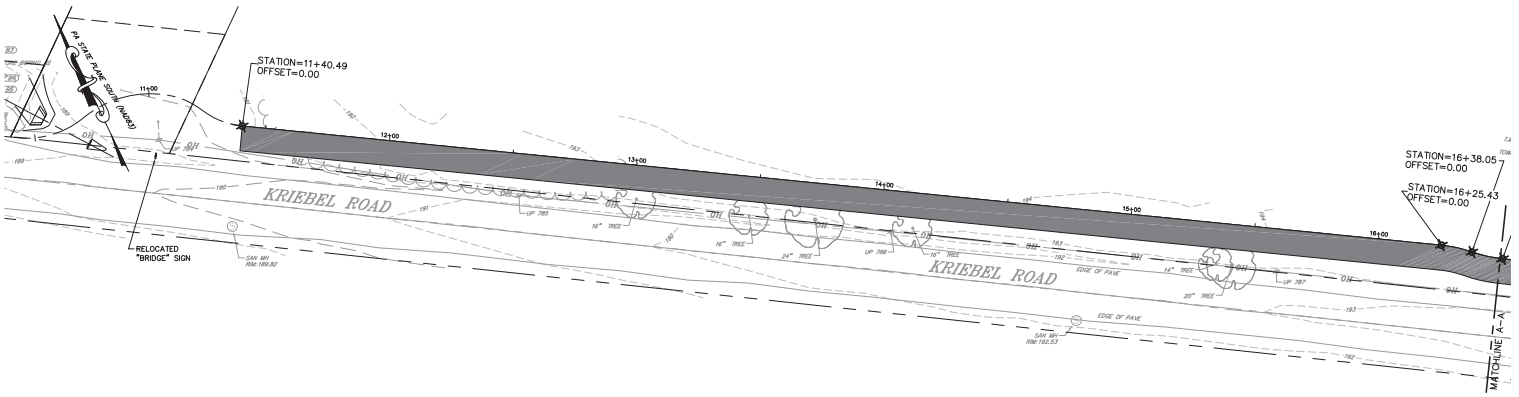
TAX MAP PARCEL No.:

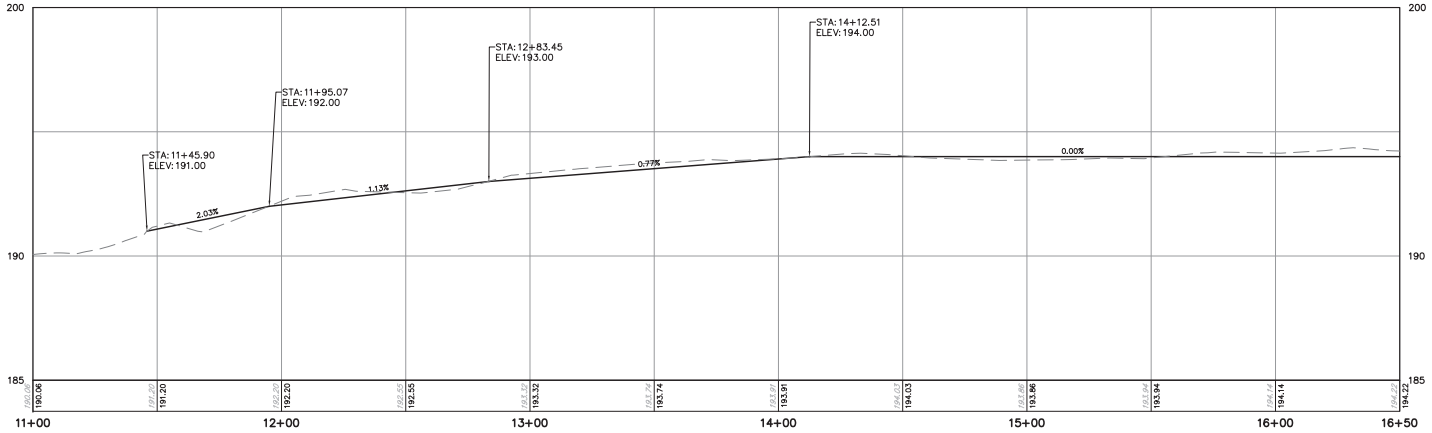
TOTAL AREA: | TOTAL LOTS:

DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

SHEET NO.: 5 OF 17





PATH FROM BUSTARD ROAD TO GREEN LANE ROAD CROSSING

STATION 11+00 TO 16+50
SCALE: HORZ 1"=25'
VERT 1"=2'

LEGEND:

- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- EX. RIGHT OF WAY
- PR. MINOR CONTOUR
- PR. MAJOR CONTOUR
- EX. FENCE
- EX. TREELINE
- EX. STORM
- EX. SANITARY
- EX. OVERHEAD ELECTRIC
- EX. EDGE OF PAVEMENT
- PR. TRAIL

SCALE: 25 0 25 50 — IN 1"=25' — FEET

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1076

811

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

NON-MEMBERS MUST BE CONTACTED DIRECTLY

PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

SERIAL NO. #########

LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE-GROUND OBSERVATION OF THE SITE. NO EXCAVATIONS WERE PERFORMED IN THE PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY GILMORE & ASSOCIATES INC.

ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON APRIL 28, 2018 PENNSYLVANIA ACT 50.

GILMORE & ASSOCIATES INC. HAS OBTAINED A PA-ONE CALL SERIAL NUMBER AS NOTED HEREON FOR DESIGN PURPOSES ONLY.

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 300, TROPPE, PA 19424 • (610) 630-8000 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL, AND RELIED UPON BY USER. THIS PLAN IS BEING SUPPLIED FOR THE EXCLUSIVE USE OF THE PROJECT DESCRIBED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — JOSEPH F. CARLIN — PROFESSIONAL ENGINEER — ENGINEER NO. E077398

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

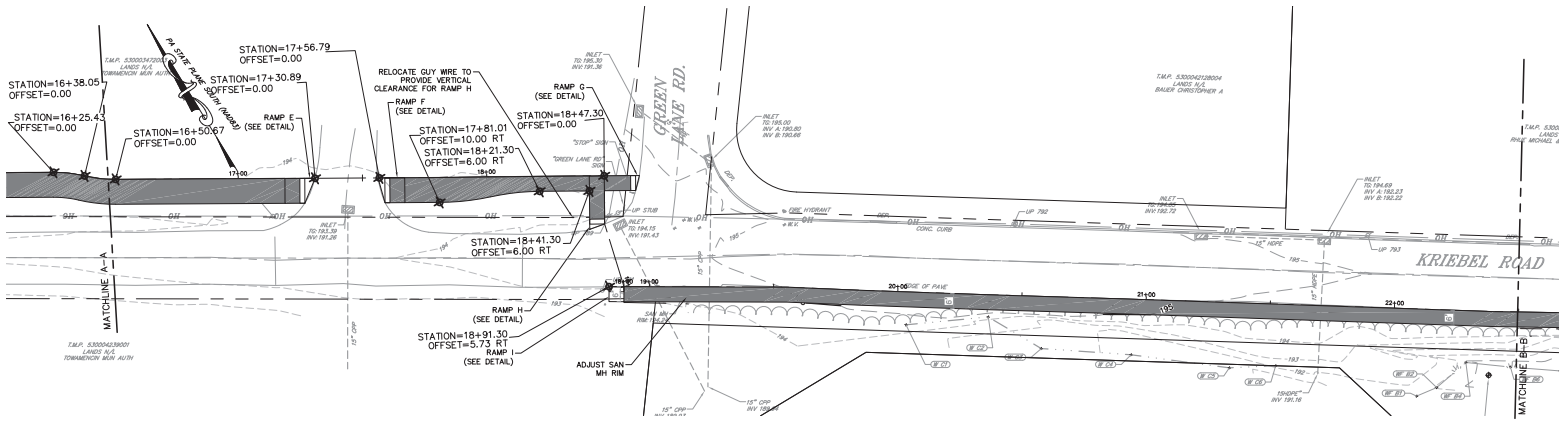
TAX MAP PARCEL No.:

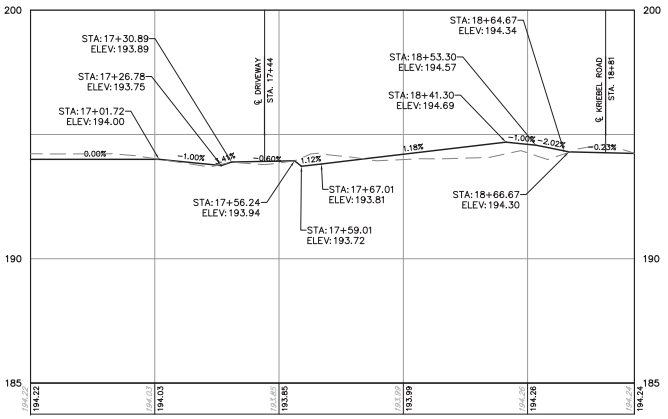
TOTAL AREA: | TOTAL LOTS:

DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

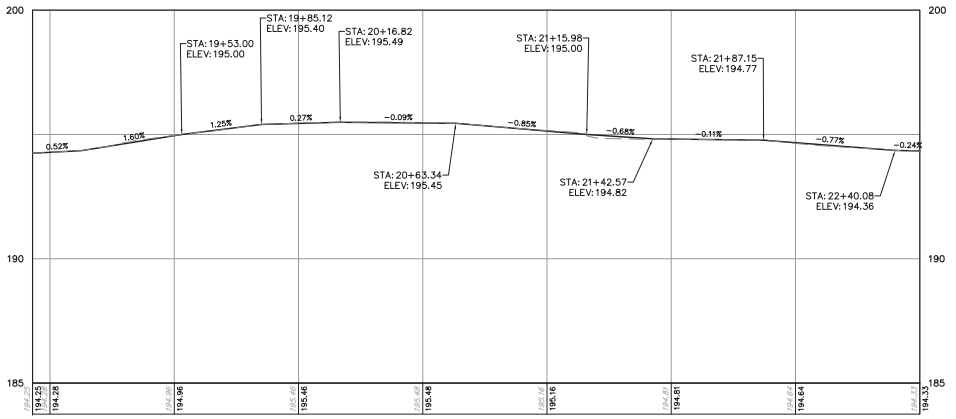
SHEET NO.: 6 OF 17





PATH FROM BUSTARD ROAD TO GREEN LANE ROAD CROSSING

STATION 16+50 TO 18+93
SCALE: HORZ 1"=25'
VERT 1"=2'



EXISTING PATH TO CROSSING AT GREEN LANE ROAD

STATION 18+93 TO 22+50
SCALE: HORZ 1"=25'
VERT 1"=2'

SCALE: 25 0 25 50 IN FEET
1"=25'

LEGEND:

EX. MINOR CONTOUR	187
EX. MAJOR CONTOUR	190
EX. RIGHT OF WAY	
PR. MINOR CONTOUR	191
PR. MAJOR CONTOUR	190
EX. FENCE	X X
EX. TREELINE	
EX. STORM	
EX. SANITARY	S
EX. OVERHEAD ELECTRIC	OE
EX. EDGE OF PAVEMENT	
PR. TRAIL	

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmore-assoc.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PROTECTED BY COPYRIGHT AND OTHER PROPRIETARY RIGHTS AND MAY NOT BE REPRODUCED, MODIFIED, REVISED, DUPLICATED OR USED WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER
JOSEPH F. CARLIN
E077598
DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

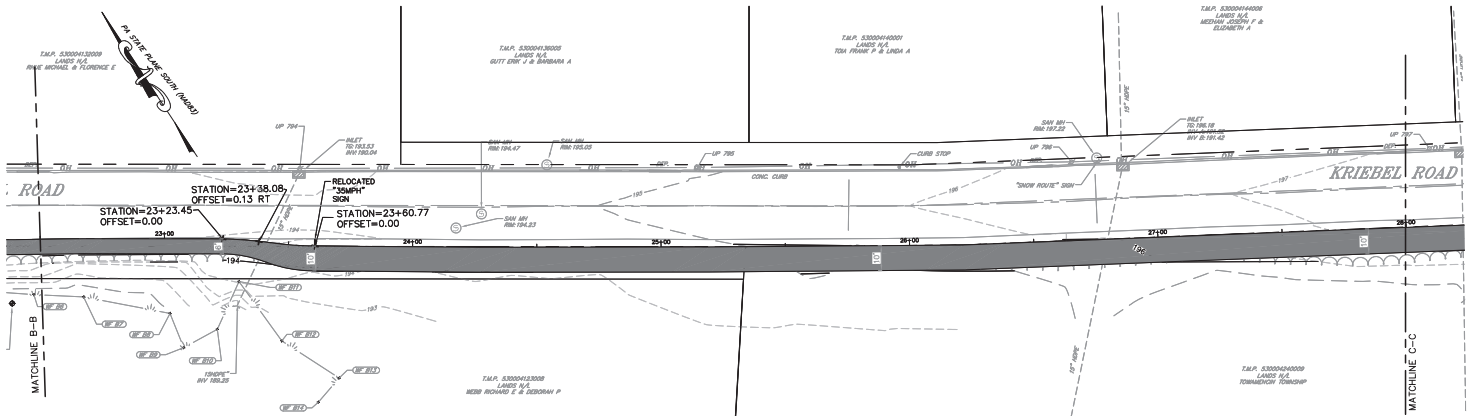
TAX MAP PARCEL No.:

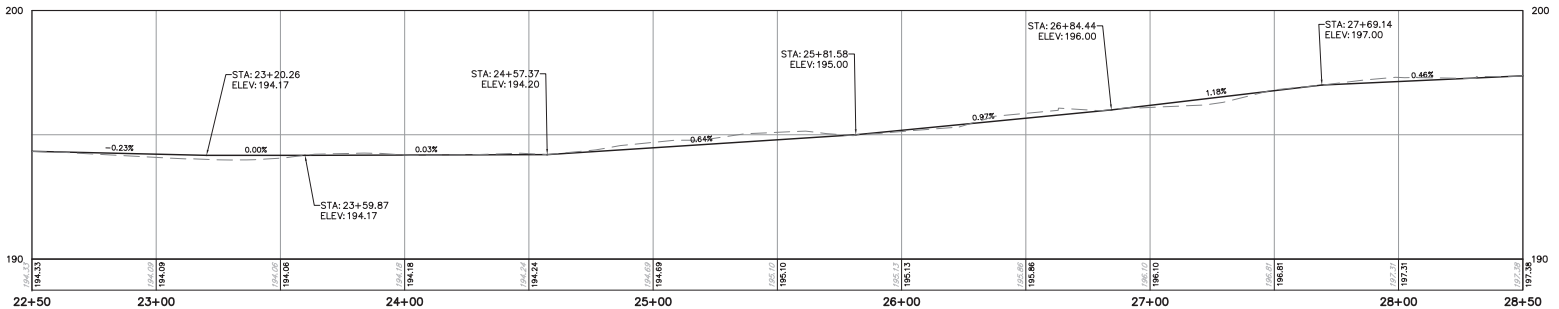
TOTAL AREA: | TOTAL LOTS:

DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

SHEET NO.:
7 OF 17





EXISTING PATH TO CROSSING AT GREEN LANE ROAD

STATION 22+50 TO 28+50
SCALE: HORZ 1"=25'
VERT 1"=2'

LEGEND:

EX. MINOR CONTOUR	191
EX. MAJOR CONTOUR	190
EX. RIGHT OF WAY	
PR. MINOR CONTOUR	191
PR. MAJOR CONTOUR	190
EX. FENCE	X X
EX. TREELINE	
EX. STORM	
EX. SANITARY	S
EX. OVERHEAD ELECTRIC	OE
EX. EDGE OF PAVEMENT	
PR. TRAIL	

25 0 25 50
SCALE IN 1"=25' FEET

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19424 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS PROTECTED BY COPYRIGHT AND OTHER PROPRIETARY RIGHTS. UNAUTHORIZED REUSE, MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOSEPH F. CARLIN — ENGINEER — 077358
DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE

GILMORE & ASSOCIATES, INC.

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

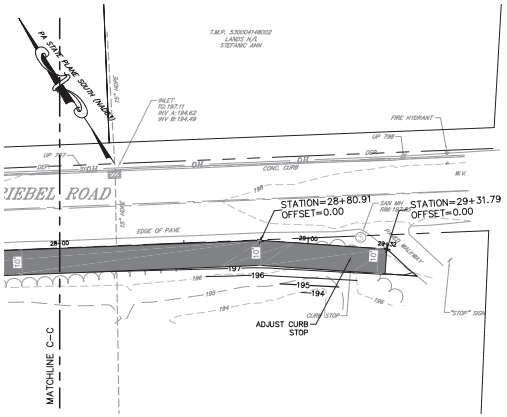
TAX MAP PARCEL No.:

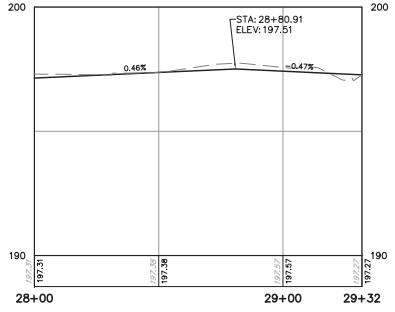
TOTAL AREA: | TOTAL LOTS:

DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

SHEET NO.: 8 OF 17





EXISTING PATH TO CROSSING AT GREEN LANE ROAD

STATION 28+00 TO 29+32
SCALE: HORZ 1"=25'
VERT 1"=2'

LEGEND:

EX. MINOR CONTOUR	181
EX. MAJOR CONTOUR	180
EX. RIGHT OF WAY	
PR. MINOR CONTOUR	191
PR. MAJOR CONTOUR	190
EX. FENCE	X X
EX. TREELINE	
EX. STORM	
EX. SANITARY	S
EX. OVERHEAD ELECTRIC	OE
EX. EDGE OF PAVEMENT	
PR. TRAIL	

25 0 25 50
SCALE IN 1"=25' FEET

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS RELEASED PRELIMINARY FOR THE PURPOSE OF REVIEW AND COMMENT AND IS NOT TO BE USED FOR CONSTRUCTION. THE INFORMATION CONTAINED HEREON, MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
E077358
DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

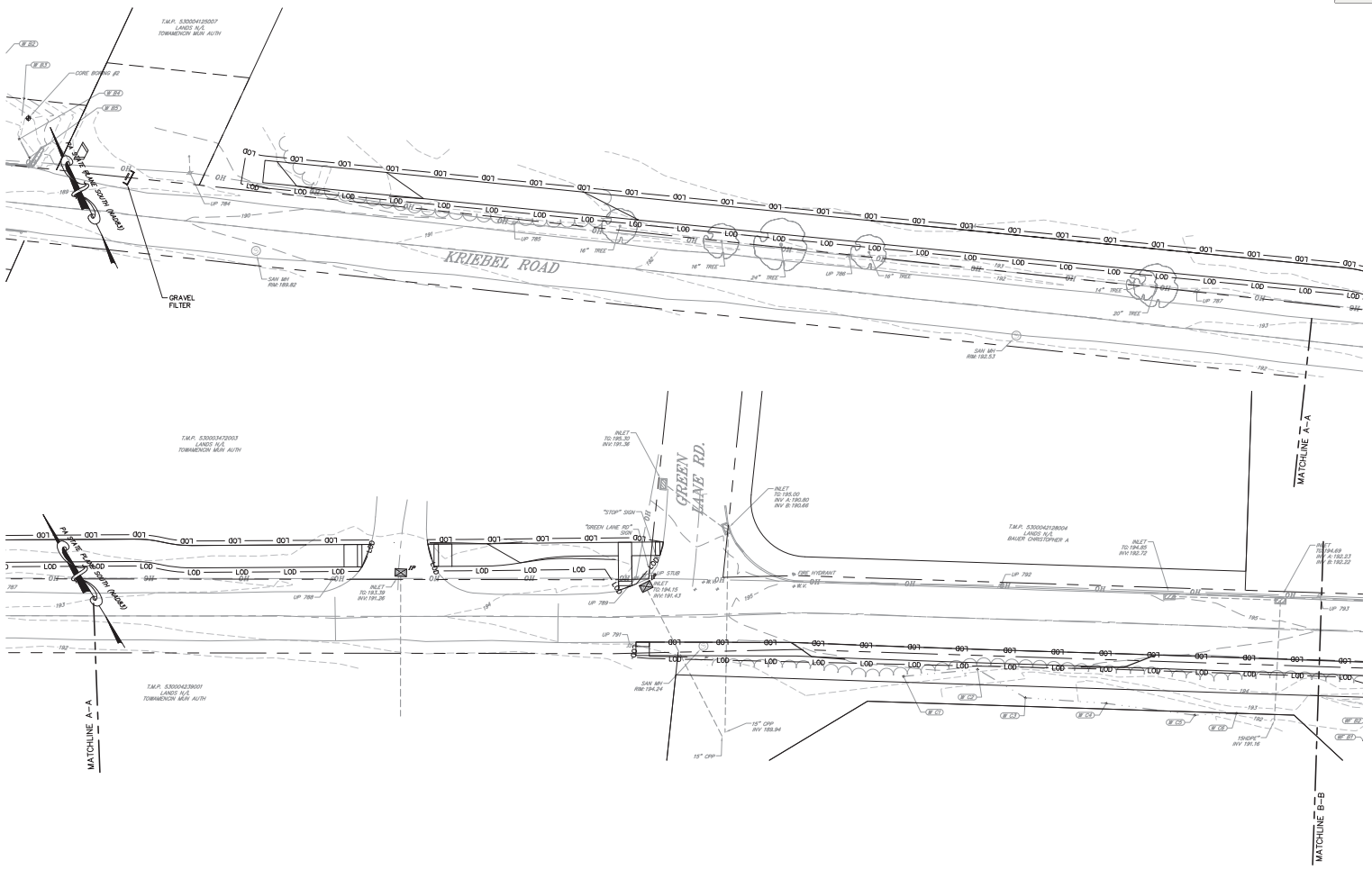
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: 1"=25'
DRAWN BY: SWC	CHECKED BY: JFC

SHEET NO.:
9 OF 17



LOCATION MAP

SCALE: 1"=2000'

E&S LEGEND:

LIMIT OF DISTURBANCE	LOD LOD
12" COMPOST FILTER SOCK	CFS
INLET FILTER BAG	
TEMPORARY SANDBAG	
RIPRAP	

REV.	DESCRIPTION	DATE	BY

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PROPERTY OF GILMORE & ASSOCIATES, INC. AND IS NOT TO BE USED FOR ANY PURPOSE HEREON, MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TRAPPE, PA 19426 • (610) 489-4949 • www.gilmoreassociates.com

JOSEPH F. CARLIN
COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER
E077359
REGISTERED

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

EROSION AND SEDIMENT CONTROL PLAN

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

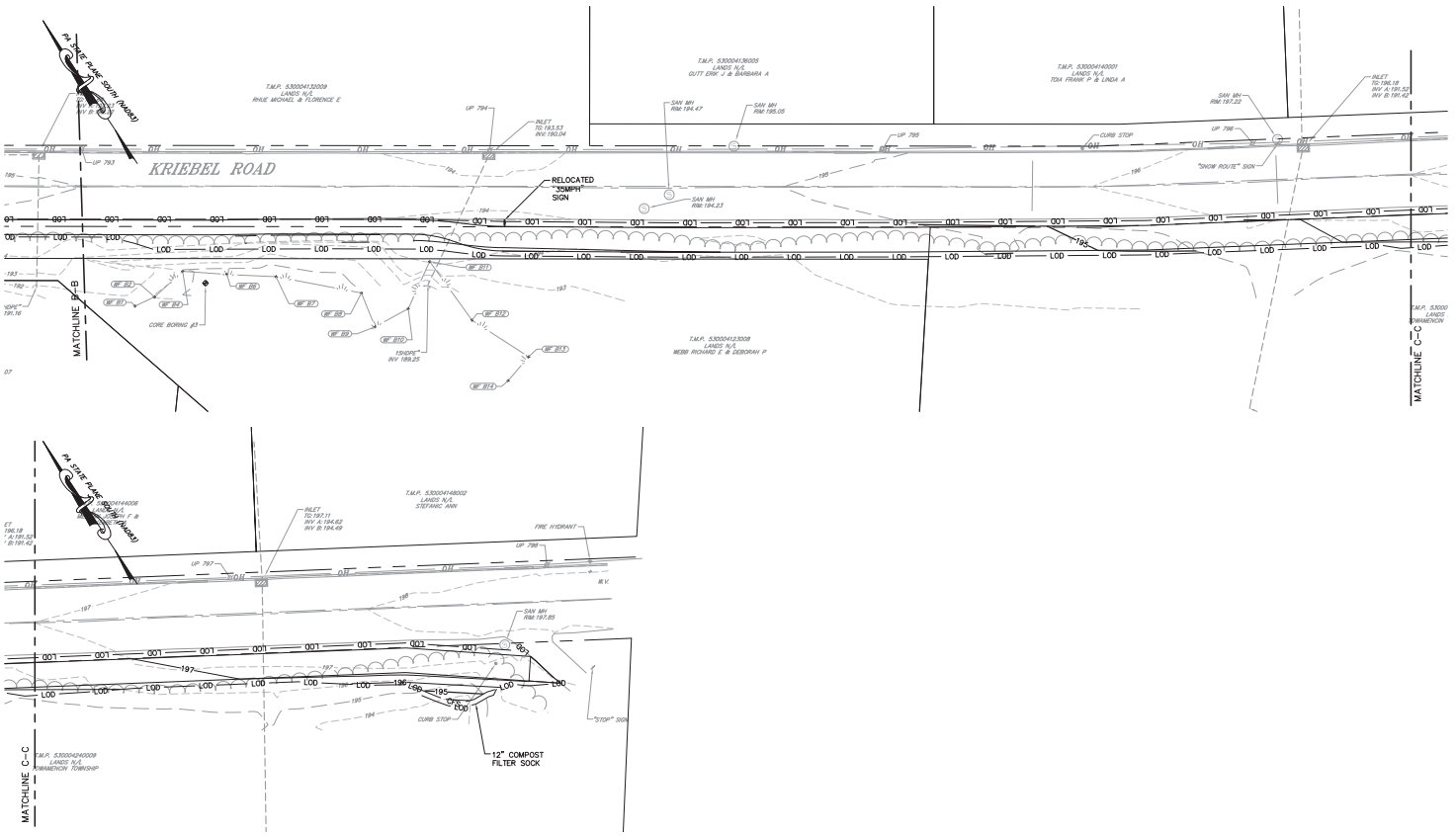
TAX MAP PARCEL No.:

TOTAL AREA: | TOTAL LOTS:

DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

SHEET NO.: 10 OF 17



LOCATION MAP

SCALE: 1"=2000'

E&S LEGEND:

LIMIT OF DISTURBANCE	LOD LOD
12" COMPOST FILTER SOCK	CFS
INLET FILTER BAG	
TEMPORARY SANDBAG	
RIPRAP	

SCALE: 1"=25'

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TRAPPE, PA 19426 • (610) 489-4949 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS PROTECTED BY COPYRIGHT AND OTHER PROPRIETARY RIGHTS AND HEREIN. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — JOSEPH F. CARLIN — PROFESSIONAL ENGINEER — E-077359

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

EROSION AND SEDIMENT CONTROL PLAN

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: 1"=25'
DRAWN BY: SWC	CHECKED BY: JFC

SHEET NO.: 11 OF 17

MONTGOMERY COUNTY CONSERVATION DISTRICT STANDARD EROSION & SEDIMENT CONTROL NOTES:

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
2. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE CONTRACTOR SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICES AND SHALL INCLUDE COMPLETE, WRITTEN LOGS OF THOSE INSPECTIONS WHICH SHALL BE MADE AVAILABLE TO THE MONTGOMERY COUNTY CONSERVATION DISTRICT. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, REGRADING, RESEEDING, AND RESTABILIZATION SHALL BE PERFORMED IMMEDIATELY.
4. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
5. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE MONTGOMERY COUNTY CONSERVATION DISTRICT.
6. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
7. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
8. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
9. COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
10. ONLY LIMITED DISTURBANCE WILL BE PERMITTED TO PROVIDE ACCESS TO THE PROJECT SITE FOR GRADING. EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S.
11. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
12. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT AT LEAST SEVEN DAYS BEFORE CONSTRUCTION IS TO BEGIN TO DETERMINE IF A PRECONSTRUCTION CONFERENCE IS REQUIRED. THE CONTRACTOR AND OTHERS UNDERTAKING THE EARTH DISTURBANCE ACTIVITY MUST ATTEND A PRECONSTRUCTION CONFERENCE WHEN REQUESTED BY THE DEPARTMENT OR CONSERVATION DISTRICT. THE CONTRACTOR OR OPERATOR MUST BRING A COPY OF THE PLANS, AND ALL ASSOCIATED DEPARTMENT APPROVALS/PERMITS WHICH MUST BE AVAILABLE AT THE CONFERENCE UPON REQUEST. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.
13. UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
14. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE.
15. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE OR SHOULD A TEMPORARY CESSATION OF ACTIVITY OCCUR WHICH WILL LAST LONGER THAN 4 DAYS, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
16. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

OTHER BMP'S:

1. SEDIMENT MUST BE REMOVED FROM STORM WATER INLET PROTECTION AFTER EACH RUNOFF EVENT.

MATERIAL RECYCLING/DISPOSAL REQUIREMENTS:

1. PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THIS SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH DEP'S SOLID WASTE MANAGEMENT REGULATIONS, AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.
2. THE OPERATOR SHALL REMOVE FROM THIS SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH DEP'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THIS SITE.
3. THE FOLLOWING MATERIALS ARE ANTICIPATED TO BE POST-CONSTRUCTION WASTE: PAVEMENT, ASPHALT PAVING, CONCRETE PAVING/SPOILS, AND PLASTIC PIPING.
4. THE FOLLOWING MATERIALS ARE ANTICIPATED TO BE POST-CONSTRUCTION WASTE: TRASH AND DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH TRASH AND RECYCLING GUIDELINES. SEDIMENT THAT IS REMOVED FROM INLETS SHALL BE DISPOSED OF IN A LANDSCAPE AREA.

CLEAN FILL REQUIREMENTS:

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE CONTRACTOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS AS NOTED IN TABLES FP-1A AND FP-1B FOUND IN THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S POLICY "MANAGEMENT OF FILL."

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.

ENVIRONMENTAL DUE DILIGENCE: THE LANDOWNER/APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S POLICY "MANAGEMENT OF FILL."

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTER 287 RESIDUAL WASTE MANAGEMENT OR CHAPTER 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

TOPSOIL APPLICATION:

ALL VEGETATED AREAS SHALL BE STABILIZED WITH VEGETATION AND MULCH AS SOON AS POSSIBLE. GRADED AREAS SHALL BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3" TO 5" TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREAS AND TO PROVIDE A ROUGHENED SURFACE TO PREVENT TOPSOIL FROM SLIDING DOWN SLOPE. TOPSOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF 4 TO 8 INCHES MINIMUM. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS UNLESS SUCH DEPRESSIONS ARE PART OF THE PCSM PLAN. TOPSOIL SHALL NOT BE PLACED WHEN THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHEREVER POSSIBLE PRIOR TO SEEDING.

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL ASSURE THAT AN APPROVED EROSION & SEDIMENT CONTROL PLAN IS BEING IMPLEMENTED AND MAINTAINED FOR ALL OFFSITE BORROW OR SPOIL SITES.
   1.1. ALL FILL MATERIALS TO BE USED ON THIS SITE SHALL BE CLEAN FILL UNLESS OTHERWISE APPROVED BY THE MUNICIPALITY AND THE CONSERVATION DISTRICT. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM DUE DILIGENCE IN DETERMINING THAT FILL IS CLEAN.
   1.2. INVESTIGATIVE TECHNIQUES SHALL INCLUDE, BUT ARE NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.
2. FOR PROJECTS THAT REQUIRE NPDES PERMIT, LANDOWNER OR HIS DESIGNATED REPRESENTATIVE SHALL MAINTAIN, AND MAKE AVAILABLE TO THE MONTGOMERY COUNTY CONSERVATION DISTRICT, COMPLETE, WRITTEN INSPECTION LOGS OF THE INSPECTION AND MAINTENANCE OF ALL EROSION-SEDIMENT CONTROL BMPS.
3. SEEDING, MULCHING AND FERTILIZING SHALL BE IN ACCORDANCE WITH THE SEEDING AND MULCHING SCHEDULE.
4. ANY SEDIMENT OR MUD THAT IS TRACKED ONTO THE PUBLIC ROADWAYS MUST BE CLEANED OFF IMMEDIATELY BY BROOMING AND/OR SHOVELING TO THE SATISFACTION OF THE TOWNSHIP AT THE EXPENSE OF THE DEVELOPER AND/OR RESPONSIBLE CONTRACTOR. USE OF A BACKHOE BUCKET TO SCRAPE ROADWAY SURFACE IS PROHIBITED. WHERE SAND AND/OR SEDIMENT IS CAUSING SLICK OR HAZARDOUS CONDITIONS, ROADWAY SURFACE SHALL BE PRESSURE WASHED TO REMOVE THE CONDITION. ALL SEDIMENT LADEN WATER MUST BE FILTERED IN A MANNER SATISFACTORY TO THE MONTGOMERY COUNTY CONSERVATION DISTRICT BEFORE ENTERING STORM SEWERS AND/OR DRAINAGE CHANNELS.
5. NO SEDIMENT OR SEDIMENT LADEN WATER MUST BE ALLOWED TO LEAVE THE SITE WITHOUT FIRST BEING FILTERED TO THE SATISFACTION OF MONTGOMERY COUNTY CONSERVATION DISTRICT. ANY PUMPED WATER MUST BE DIRECTED TO A FILTER BAG DEVICE DISCHARGING OVER NON-DISTURBED AREAS.
6. THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON THIS PLAN HAVE BEEN PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE MONTGOMERY COUNTY CONSERVATION DISTRICT. GILMORE AND ASSOCIATES DOES NOT TAKE ANY RESPONSIBILITY IN OBSERVING AND CERTIFYING THE CONSTRUCTION OF THESE FACILITIES UNLESS REQUESTED SPECIFICALLY BY THE OWNER AND/OR CONTRACTOR. THEREFORE GILMORE AND ASSOCIATES DOES NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF IMPROPER CONSTRUCTION AND/OR MAINTENANCE OF FACILITIES DURING CONSTRUCTION.
7. ACCUMULATED SEDIMENTS REMOVED FROM ANY AND ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES. REPLACED SOILS SHALL BE SEEDED AND MULCHED IMMEDIATELY.
8. UPON COMPLETION OR ANY TEMPORARY CESSATION LONGER THAN 4 DAYS OF THE EARTH DISTURBANCE ACTIVITIES, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (E&S MANUAL), COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION, DOCUMENT NO. 363-2134-008, MARCH 2012, AS AMENDED AND UPDATED. EROSION AND SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED AND PCSM BMPS ARE OPERATIONAL.
9. CONTRACTOR SHALL FOLLOW THE PROCEDURES OUTLINED BY THE APPROVED EROSION & SEDIMENT CONTROL PLAN AND THE SEQUENCE OF CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE TOWNSHIP ENGINEER AND THE MONTGOMERY COUNTY CONSERVATION DISTRICT.
10. THE E&S PLAN MINIMIZES EXTENT AND DURATION OF EARTH DISTURBANCE BY PROVIDING A CONSTRUCTION SEQUENCE WHICH REQUIRES CONTRACTOR TO COMPLETE GRADING, REPLACE TOPSOIL AND PERMANENTLY STABILIZE GRASSED AREAS AS GRADING HAS BEEN COMPLETED. COMPLETING AREAS AND PROVIDING PERMANENT STABILIZATION ARE CRITICAL.
11. THE E&S PLAN MAXIMIZES THE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION. THE REMOVAL OF EXISTING VEGETATION IS LIMITED TO THAT WHICH IS REQUIRED TO CONSTRUCT THE PROPOSED SITE IMPROVEMENTS.
12. THE E&S PLAN MINIMIZES SOIL COMPACTION BY PROVIDING CONSTRUCTION ENTRANCES AND STONE HAUL ROADS. THE CONTRACTOR IS INSTRUCTED TO UTILIZE THE CONSTRUCTION ENTRANCE AND PROPOSED ROAD TO ACCESS DISTURBED AREAS OF THE PROJECT.
13. THE E&S PLAN MINIMIZES THE GENERATION OF INCREASED STORM WATER RUNOFF BY REQUIRING THE CONTRACTOR TO SEED AND MULCH DISTURBED AREAS THAT ARE NOT BEING ACTIVELY WORKED. VEGETATION IS THE MOST EFFECTIVE WAY TO REDUCE RUNOFF AND EROSION.
14. SOIL USE LIMITATIONS FOR PONDS AND EMBANKMENTS ARE AS FOLLOWS: ALL THE SOILS ARE SOMEWHAT LIMITED FOR EARTH EMBANKMENTS WITH POOR TO FAIR COMPACTION. ANTI-SEEP COLLARS ARE PROVIDED FOR THE BASIN OUTFALL PIPES WHICH WILL BE INCORPORATED IN THE EXISTING SOIL AND BACKFILLED.
15. SOIL USE LIMITATIONS: SHALLOW DEPTH TO WATER TABLE; SHALLOW DEPTH TO BEDROCK; SEASONABLE HIGH WATER TABLE; FAIR FOR ROAD FILL AND TOPSOIL ADDRESS LIMITATIONS: THE TEST RESULT (REPORT ATTACHED) IN THE GEOTECHNICAL RECOMMENDATIONS BRING IN STRUCTURAL FILL. THE EXISTING UNSUITABLE SITE MATERIALS WILL BE STOCKPILED ON THE SITE IN THE MOST EFFICIENT CONDITION AND A GEOTECHNICAL ENGINEER WILL OVERSEE STRUCTURAL FILL PLACEMENT. NO INFILTRATION IS PROPOSED ON THE SITE.
16. THERE ARE NO GEOLOGIC FORMATIONS/SOIL CONDITIONS PRESENT ON THE PROJECT SITE THAT WOULD INDICATE POTENTIAL FOR POLLUTION.
17. ANTI-DEGRADATION ANALYSIS: DUE TO THE PROXIMITY OF THE TRAIL TO THE DEVELOPMENT TO BLACK ROCK ROAD, A NON-DISCHARGE ALTERNATIVE DOES NOT EXIST FOR THE E&S AND PCSM. THE CONSTRUCTION SEQUENCE SPECIFIES THAT E&S CONTROLS MUST BE IN PLACE PRIOR TO SOIL DISTURBANCE AND THE CONSTRUCTION IS SEQUENCES TO THAT RUNOFF FROM CONSTRUCTION AREAS IS DIRECTED TO FILTER SOCK AND INLET PROTECTION. IN ADDITION TO THE FILTER SOCK AND INLET PROTECTION, CONSTRUCTION ENTRANCES ARE EXTENDED TO A MINIMUM OF 100FT.

SEEDING AND MULCHING SPECIFICATIONS:

1. SITE PREPARATION, STABILIZATION AND MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH PENN STATE UNIVERSITY'S "THE AGRONOMY GUIDE" AND PENNDOT FORM 408 SPECIFICATIONS' MOST RECENT ADDITION.

   TEMPORARY SEEDING SPECIFICATION FORMULA E – ANNUAL RYE GRASS

   PERMANENT SEEDING SPECIFICATION FORMULA B –
   - 50% KENTUCKY BLUEGRASS MIXTURE
   - 30% PENNLAWN RED FESCUE
   - 20% PERENNIAL RYEGRASS MIXTURE

   STEEP SLOPE SEEDING SPECIFICATION FORMULA W –
   - 70% TALL FESCUE
   - 20% BIRDSFOOT TREFOIL MIXTURE
   - 10% REDTOP

   SEEDING RATE FOR THE ABOVE MIXTURES:
   - 10 LBS/1,000 SY FOR TEMPORARY SEEDING
   - 21 LBS/1,000 SY FOR PERMANENT SEEDING
   - 11 LBS/1,000 SY FOR STEEP SLOPE SEEDING (SEE NOTE 5)
2. HAY OR STRAW MULCH SHALL BE APPLIED AT THE RATES OF AT LEAST 3.0 TONS PER ACRE AND SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 OR STEEPER.
3. PULVERIZED AGRICULTURAL LIMESTONE AND COMMERCIAL FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS WHICH ARE TO BE SEEDED EXCEPT FOR TEMPORARY SEED AREAS AT THE FOLLOWING RATES:

PULVERIZED AGRICULTURAL LIMESTONE –	90 LBS/1,000 SF
10-20-20 ANALYSIS COMMERCIAL FERTILIZER –	20 LBS/1,000 SF

   NOTE: APPLICATION OF LIME AND FERTILIZER FOR TEMPORARY SEEDING IS UNNECESSARY AND ONLY SERVES TO CONTRIBUTE TO AN OVERABUNDANCE OF NUTRIENT POLLUTION IN THE WATERSHED.
4. PERMANENT SEEDING SHALL TAKE PLACE FROM MARCH 15 TO JUNE 1 OR FROM AUGUST 1 TO OCTOBER 15. IF COMPLETED IN OTHER SEASONS, AREAS SHALL RECEIVE TEMPORARY SEEDING AND 3.0 TONS PER ACRE MULCH.
5. STEEP SLOPE AREAS SHALL BE PROTECTED FROM EROSION BY ONE OF THE FOLLOWING METHODS. MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED FOR PARTICULAR METHOD AND SPECIFIC SITE CONDITIONS.

   FLEXIBLE GROWTH MEDIUM: SHALL BE HYDRAULICALLY APPLIED COMBINATION OF SEED, MULCH, AND FERTILIZER. PROTECTION MATERIAL SIMILAR TO "FLEXTERRA" BY ACF OR EQUAL BY OTHER MANUFACTURER.

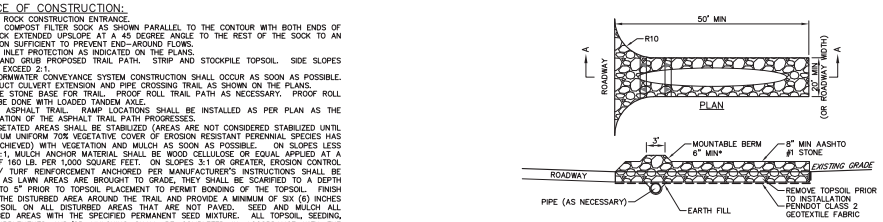
   EROSION CONTROL MATTING: SHALL BE TEMPORARY MATTING SIMILAR TO SC350 BY NORTH AMERICAN GREEN OR EQUAL BY OTHER MANUFACTURER.
6. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN (I.E. ANTICIPATE THE COMPLETION DATE AND SCHEDULE THE SEEDER). IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE.

SEQUENCE OF CONSTRUCTION:

1. INSTALL ROCK CONSTRUCTION ENTRANCE.
2. INSTALL COMPOST FILTER SOCK AS SHOWN PARALLEL TO THE CONTOUR WITH BOTH ENDS OF THE SOCK EXTENDED UPSLOPE AT A 45 DEGREE ANGLE TO THE REST OF THE SOCK TO AN ELEVATION SUFFICIENT TO PREVENT END-AROUND FLOWS.
3. INSTALL INLET PROTECTION AS INDICATED ON THE PLANS.
4. CLEAR AND GRUB PROPOSED TRAIL PATH. STRIP AND STOCKPILE TOPSOIL. SIDE SLOPES NOT TO EXCEED 2:1.
5. THE STORMWATER CONVEYANCE SYSTEM CONSTRUCTION SHALL OCCUR AS SOON AS POSSIBLE. CONSTRUCT CULVERT EXTENSION AND PIPE CROSSING TRAIL AS SHOWN ON THE PLANS.
6. PREPARE STONE BASE FOR TRAIL. PROOF ROLL TRAIL PATH AS NECESSARY. PROOF ROLL SHALL BE DONE WITH LOADED TANDEM AXLE.
7. INSTALL ASPHALT TRAIL. RAMP LOCATIONS SHALL BE INSTALLED AS PER PLAN AS THE INSTALLATION OF THE ASPHALT TRAIL PATH PROGRESSES.
8. ALL VEGETATED AREAS SHALL BE STABILIZED (AREAS ARE NOT CONSIDERED STABILIZED UNTIL A MINIMUM UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED) WITH VEGETATION AND MULCH AS SOON AS POSSIBLE. ON SLOPES LESS THAN 3:1, MULCH ANCHOR MATERIAL SHALL BE WOOD CELLULOSE OR EQUAL APPLIED AT A RATE OF 160 LB. PER 1,000 SQUARE FEET. ON SLOPES 3:1 OR GREATER, EROSION CONTROL MAT W/ TURF REINFORCEMENT ANCHORED PER MANUFACTURER'S INSTRUCTIONS SHALL BE USED. AS LAWN AREAS ARE BROUGHT TO GRADE, THEY SHALL BE SCARIFIED TO A DEPTH OF 3" TO 5" PRIOR TO TOPSOIL PLACEMENT TO PERMIT BONDING OF THE TOPSOIL. FINISH GRADE THE DISTURBED AREA AROUND THE TRAIL AND PROVIDE A MINIMUM OF SIX (6) INCHES OF TOPSOIL ON ALL DISTURBED AREAS THAT ARE NOT PAVED. SEED AND MULCH ALL DISTURBED AREAS WITH THE SPECIFIED PERMANENT SEED MIXTURE. ALL TOPSOIL, SEEDING, SOIL SUPPLEMENTS AND/OR MULCHING SHALL BE COMPLETED IN ACCORDANCE WITH THE STANDARDS FOR EROSION AND SEDIMENT POLLUTION CONTROL IN PENNSYLVANIA. ALL IMPORTED TOPSOIL, IF REQUIRED, SHALL BE FERTILE AND TYPICAL OF THE LOCALITY AND SHALL BE FREE FROM STONE, CLAY AND WEEDS.
9. AFTER FINAL STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MAY BE REMOVED. CONDITIONS OF STABILIZATION ARE AS FOLLOWS: A VEGETATED AREAS MUST ACHIEVE A MINIMUM UNIFORM 70% PERENNIAL VEGATIVE COVER OVER THE ENTIRE DISTRUBED AREA. B. TRAIL PATH SHOULD AT BE PAVED. AREAS DISTURBED DURING REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

ROCK CONSTRUCTION ENTRANCE:

SEDIMENT TRACKED ONTO ANY ROADWAY SHALL BE RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY AND DISPOSED OF IN A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEPT INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.



*MOUNTABLE BERM SHOULD BE USED WHEREVER OPTIONAL CULVERT PIPE IS USED TO PROVIDE PROPER COVER FOR PIPE PER MANUFACTURER'S SPECIFICATION. PIPE TO BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

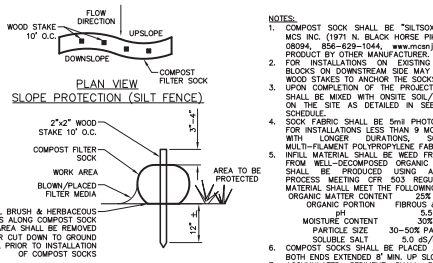
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.

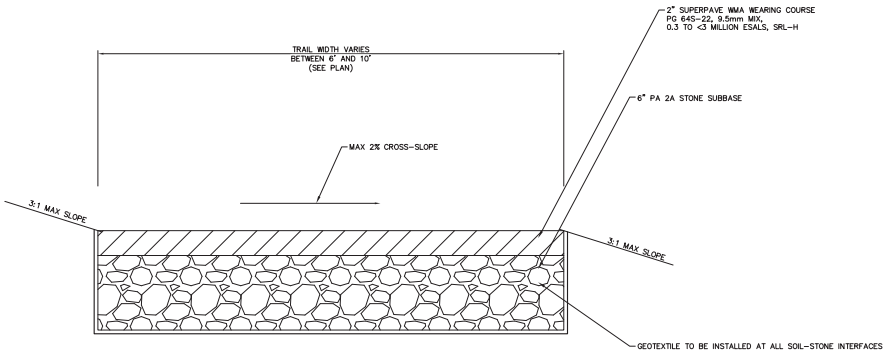
IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50-FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWER, CULVERTS OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE

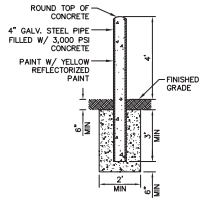
NOT TO SCALE



NOTES:
1. COMPOST SOCK SHALL BE "SILTSOXX" AS SUPPLIED BY MCS INC. (1971 N. BLACK HORSE PIKE, WILLIAMSTOWN, NJ 08094, 856-629-1044, www.mcsnj.nc.com) OR EQUAL PRODUCT BY OTHER MANUFACTURER.
2. FOR INSTALLATIONS ON EXISTING PAVEMENT, CINDER BLOCKS ON DOWNSTREAM SIDE MAY BE USED IN LIEU OF WOOD STAKES TO ANCHOR THE SOCKS.
3. UPON COMPLETION OF THE PROJECT, COMPOST MATERIAL SHALL BE MIXED WITH



MULTI-USE TRAIL SECTION DETAIL
NOT TO SCALE



BOLLARD DETAIL
NOT TO SCALE

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS BEING PROVIDED TO YOU FOR THE PURPOSE OF REVIEW BY YOU AND YOUR CONSULTANTS. ANY REUSE, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA
JOSEPH F. CARLIN
PROFESSIONAL ENGINEER
E077358

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

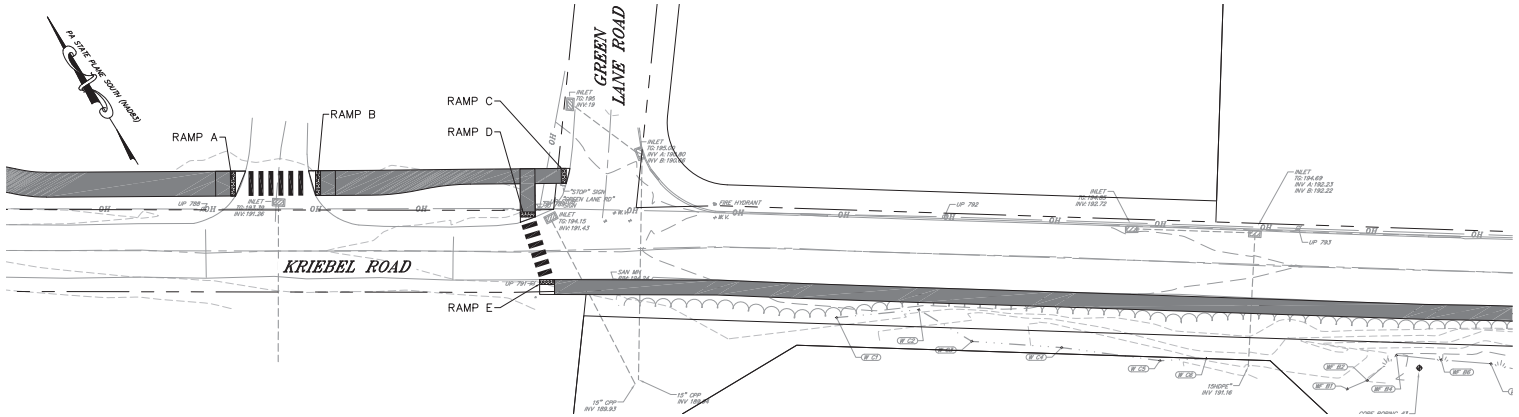
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

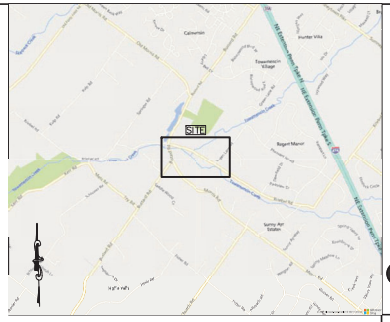
CONSTRUCTION DETAILS

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: N.T.S.
DRAWN BY: SWC	CHECKED BY: JFC

SHEET NO.:
13 OF 17





LOCATION MAP

2000 00 2000 4000
SCALE IN FEET

SCALE: 1"=2000'

25 0 25 50
SCALE IN FEET
1"=25'

REV.	DESCRIPTION	DATE	BY

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. ANY PLAN IS PREMATURE UNLESS SIGNED AND SEALED FOR FINAL APPROVAL. UNAUTHORIZED REVISION, MODIFICATION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

COMMONWEALTH OF PENNSYLVANIA
JOSEPH F. CARLIN
PROFESSIONAL ENGINEER
E077358

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

ADA RAMP LAYOUT PLAN

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T

OWNERS INFO:
TOWAMENCIN TOWNSHIP
1090 TROXEL ROAD
LANSDALE, PA 19446
215-368-7602

MUNICIPAL FILE No.: 1904062T

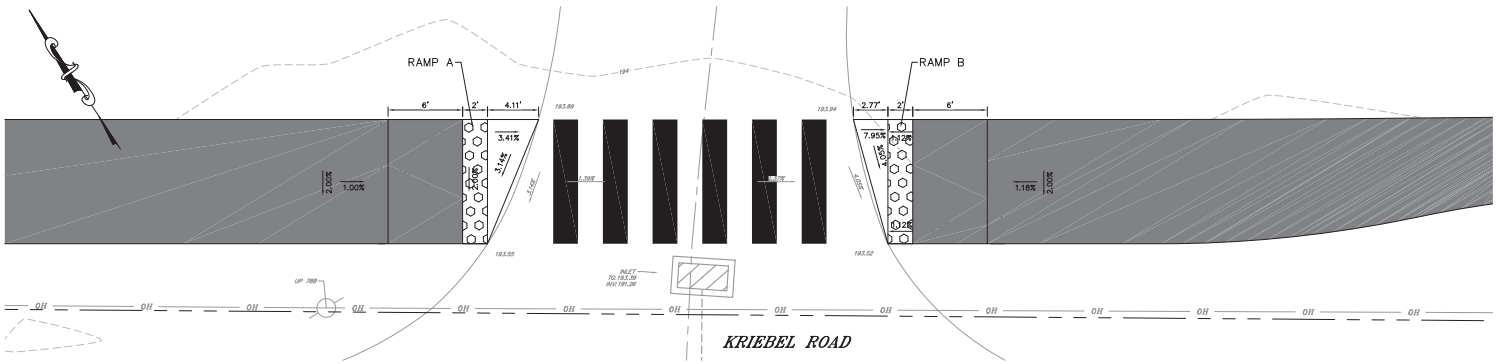
TAX MAP PARCEL No.:

TOTAL AREA: | TOTAL LOTS:

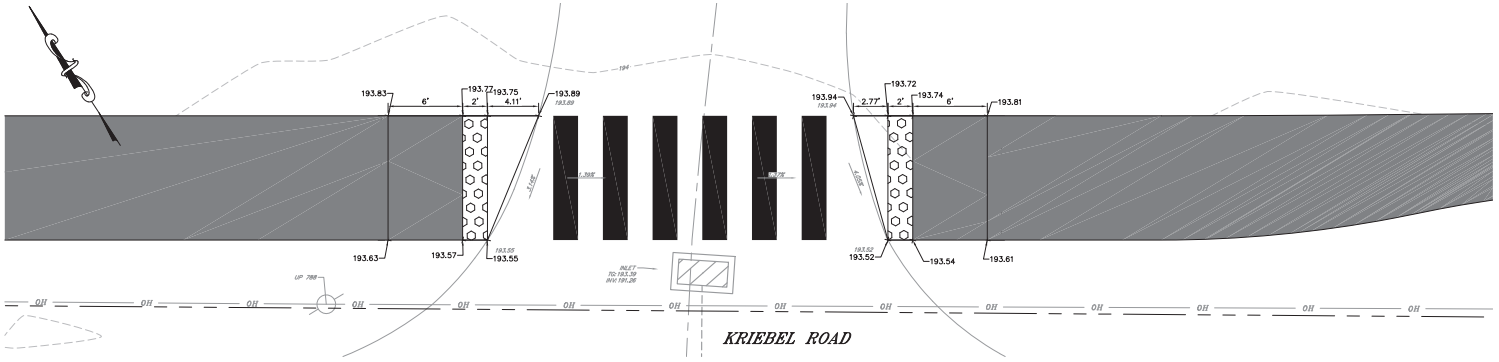
DATE: 10/07/22 | SCALE: 1"=25'

DRAWN BY: SWC | CHECKED BY: JFC

SHEET NO.:
14 OF 17



RAMPS "A" & "B" SLOPES
TYPE 4A CURB RAMPS
SCALE: 1"=5'



RAMPS "A" & "B" ELEVATIONS
TYPE 4A CURB RAMPS
SCALE: 1"=5'

LEGEND

- LEVEL TURNING AREA (2% MAX)
- DETECTABLE WARNING SURFACE
- X XXX.XX PROPOSED SPOT ELEVATION
- X XXX.XX EXISTING SPOT ELEVATION
- X.XX% PROPOSED SLOPE
- X.XX% EXISTING SLOPE
- PROPOSED CURB/PATH
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE TO BE REMOVED
- W/24" 24 INCH WHITE LINE

NOTES:

1. REMOVE EXISTING CONCRETE APRON AND REPLACE WITH GRASS.
2. PROPOSED TOP OF CURB AND BOTTOM OF CURB TIE-IN POINTS SHALL MATCH EXISTING TOP OF CURB AND BOTTOM OF CURB ELEVATIONS.
3. IMMEDIATELY STABILIZE ALL SURROUNDING GRADES AND DISTURBED GROUND SURFACES (MAX. SLOPE 3H:1V TYP.)
4. ALL DISTURBED GRASSED AREAS SHALL BE RESTORED WITH TOPSOIL, SEED, AND STRAW MULCH UNLESS OTHERWISE SPECIFIED. ALL RESTORED AREAS SHALL BE SEEDED WITH PENNDOT FORMULA B SEED MIXTURE IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS, SECTION 804, LATEST EDITION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR SAW-CUTTING PAVEMENT IN ORDER TO REMOVE EXISTING PAVEMENT STRUCTURE AND CONCRETE CURBING TO BE REPLACED TO THE LIMITS SHOWN ON THE PLAN. COLEBROOKDALE TOWNSHIP SHALL BE RESPONSIBLE FOR ALL PAVEMENT RESTORATION.

SCALE: 5 0 5 10 IN 1"=5' FEET

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 300, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL, AND RELIED UPON BY USERS. THIS PLAN IS PROTECTED BY COPYRIGHT AND OTHER PROPRIETARY RIGHTS AS STATED HEREIN. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JOSEPH F. CARLIN — ENGINEER — E077358

DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

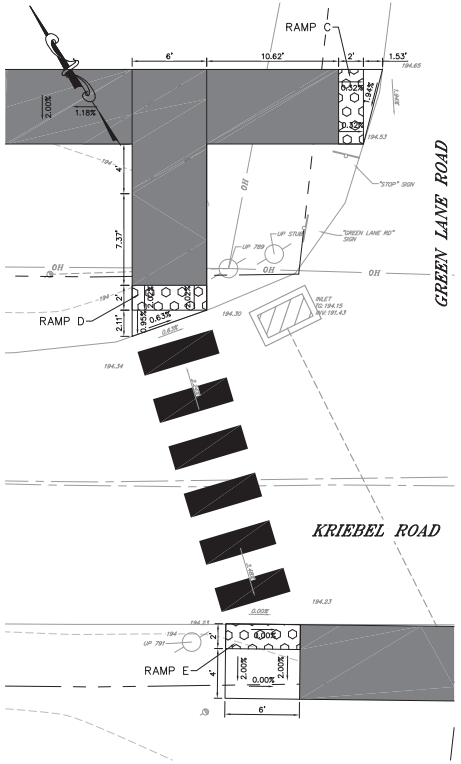
TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

ADA RAMPS A & B

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: 1"=5'
DRAWN BY: SWC	CHECKED BY: JFC

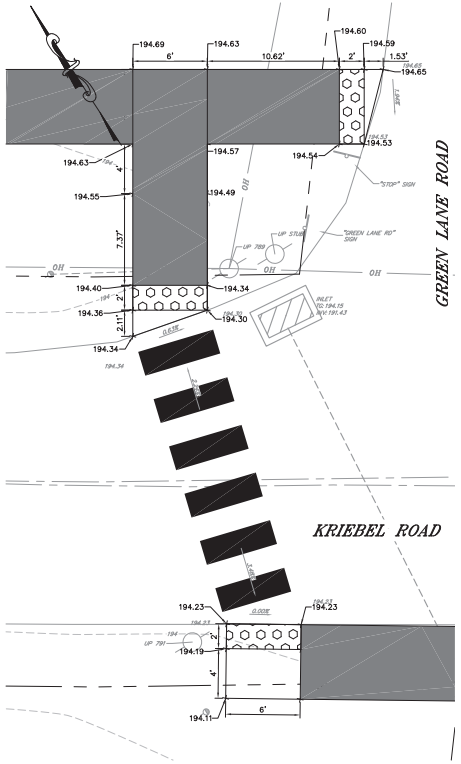
SHEET NO.: 15 OF 17



RAMPS "C", "D", & "E" SLOPES

TYPE 4A CURB RAMPS

SCALE: 1"=5'



RAMPS "C", "D", & "E" ELEVATIONS

TYPE 4A CURB RAMPS

SCALE: 1"=5'

LEGEND

- LEVEL TURNING AREA (2% MAX)
- DETECTABLE WARNING SURFACE
- X XXX.XX PROPOSED SPOT ELEVATION
- X XXX.XX EXISTING SPOT ELEVATION
- X.XX% PROPOSED SLOPE
- X.XX% EXISTING SLOPE
- PROPOSED CURB/PATH
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE TO BE REMOVED
- W/24" 24 INCH WHITE LINE

NOTES:

1. REMOVE EXISTING CONCRETE APRON AND REPLACE WITH GRASS.
2. PROPOSED TOP OF CURB AND BOTTOM OF CURB TIE-IN POINTS SHALL MATCH EXISTING TOP OF CURB AND BOTTOM OF CURB ELEVATIONS.
3. IMMEDIATELY STABILIZE ALL SURROUNDING GRADES AND DISTURBED GROUND SURFACES (MAX. SLOPE 3H:1V TYP.)
4. ALL DISTURBED GRASSED AREAS SHALL BE RESTORED WITH TOPSOIL, SEED, AND STRAW MULCH UNLESS OTHERWISE SPECIFIED. ALL RESTORED AREAS SHALL BE SEEDED WITH PENNDOT FORMULA B SEED MIXTURE IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS, SECTION 804, LATEST EDITION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR SAW-CUTTING PAVEMENT IN ORDER TO REMOVE EXISTING PAVEMENT STRUCTURE AND CONCRETE CURBING TO BE REPLACED TO THE LIMITS SHOWN ON THE PLAN. COLEBROOKDALE TOWNSHIP SHALL BE RESPONSIBLE FOR ALL PAVEMENT RESTORATION.

5 0 5 10

SCALE IN 1"=5' FEET

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USERS. THIS PLAN IS PROPERTY OF GILMORE & ASSOCIATES, INC. AND IS NOT TO BE COPIED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JOSEPH F. CARLIN PE077358 ENGINEER

DATE: 10/07/22

LAND DEVELOPMENT PLAN

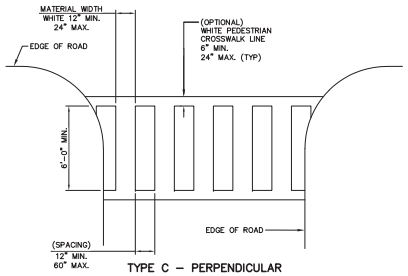
KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

ADA RAMPS C D & E

GILMORE & ASSOCIATES, INC.

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: 1"=5'
DRAWN BY: SWC	CHECKED BY: JFC
SHEET NO.: 16 OF 17	



TYPE C – PERPENDICULAR

REV.	DESCRIPTION	DATE	BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
184 WEST MAIN STREET, SUITE 100, TROPPE, PA 19426 • (610) 630-8500 • www.gilmoreassociates.com

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PROVIDED ACCORDING TO THE CONTRACT BETWEEN THE USER AND GILMORE & ASSOCIATES, INC. AND IS SUBJECT TO THE TERMS AND CONDITIONS HEREIN. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2021 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
E077358
DATE: 10/07/22

LAND DEVELOPMENT PLAN

KRIEBEL ROAD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

ADA RAMP DETAILS

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

PROJECT No.: 1904062T	
OWNERS INFO: TOWAMENCIN TOWNSHIP 1090 TROXEL ROAD LANSDALE, PA 19446 215-368-7602	
MUNICIPAL FILE No.: 1904062T	
TAX MAP PARCEL No.:	
TOTAL AREA:	TOTAL LOTS:
DATE: 10/07/22	SCALE: N.T.S.
DRAWN BY: SWC	CHECKED BY: JFC

SHEET NO.:
17 OF 17

PATA 102

1. For operations of 15 minutes or less:
   a) The ROAD WORK sign is not required.
   b) All channelizing devices may be eliminated if a shadow vehicle is present and the operation does not proceed against normal traffic flow.
2. When a shadow vehicle is not used, distance E is measured from the end of the taper to the beginning of the work space.

Signs

W20-1

Sign Spacing, Channelizing Device Spacing, Buffer Space, and Roll Ahead Space					
Speed	Channelizing Devices Spacing	Sign Spacing		Buffer Space	Roll Ahead Space
		Urban	Rural		
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	E (Feet)	H (Feet)
25	50	100 - 200	500 - 800	155	150
30	60	100 - 200	500 - 800	200	150
35	70	100 - 200	500 - 800	250	150
40	80	350 - 500	500 - 800	305	150
45	90	350 - 500	500 - 800	360	150
50	100	350 - 500	500 - 800	425	250
55	110	350 - 500	500 - 800	495	250

Taper Lengths and Minimum Number of Channelizing Devices		
Speed	Shoulder Taper: 1/3L	
S (MPH)	Length (Feet)	Minimum Number Of Devices
25	45	6
30	60	6
35	85	6
40	110	6
45	180	6
50	200	6
55	220	6

PATA 103

1. The RIGHT REVERSE CURVE sign shall only be used when lane shifts onto shoulder.
2. When a shadow vehicle is not used, distance E is measured from the end of the taper to the beginning of the work space.

Signs

W20-1 W5-5

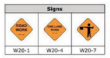
Sign Spacing, Channelizing Device Spacing, Buffer Space, and Roll Ahead Space					
Speed	Channelizing Devices Spacing	Sign Spacing		Buffer Space	Roll Ahead Space
		Urban	Rural		
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	E (Feet)	H (Feet)
25	50	100 - 200	500 - 800	155	150
30	60	100 - 200	500 - 800	200	150
35	70	100 - 200	500 - 800	250	150
40	80	350 - 500	500 - 800	305	150
45	90	350 - 500	500 - 800	360	150
50	100	350 - 500	500 - 800	425	250
55	110	350 - 500	500 - 800	495	250

Taper Lengths and Minimum Number Of Channelizing Devices						
Speed	Shifting Taper: 1/2L		Shoulder Taper: 1/3L		50' Per Lane Taper	
S (MPH)	Length (Feet)	Minimum Number Of Devices	Length (Feet)	Minimum Number Of Devices	Length (Feet)	Minimum Number Of Devices
25	65	6	45	6	50	6
30	90	6	60	6	50	6
35	125	6	85	6	50	6
40	160	6	110	6	50	6
45	270	7	180	6	50	6
50	300	7	200	6	50	6
55	330	7	220	6	50	6

PATA 107

1. Flaggers shall be clearly visible to traffic for a minimum distance of E.
2. For operations of 15 minutes or less:
   a) The ROAD WORK, ONE LANE ROAD, and FLAGGER SYMBOL signs are not required.
   b) All channelizing devices may be eliminated if a shadow vehicle is present and the operation does not proceed against normal traffic flow.
3. When a shadow vehicle is not used, distance E is measured from the end of the taper to the beginning of the work space.

Signs



W20-1 W20-4 W20-7

Sign Spacing, Channelizing Device Spacing, Buffer Space, and Roll Ahead Space					
Speed	Channelizing Devices Spacing	Sign Spacing		Buffer Space	Roll Ahead Space
		Urban	Rural		
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	E (Feet)	H (Feet)
25	50	100 - 200	500 - 800	155	150
30	60	100 - 200	500 - 800	200	150
35	70	100 - 200	500 - 800	250	150
40	80	350 - 500	500 - 800	305	150
45	90	350 - 500	500 - 800	360	150
50	100	350 - 500	500 - 800	425	250
55	110	350 - 500	500 - 800	495	250

Taper Lengths and Minimum Number Of Channelizing Devices		
Speed	50' Per Lane Taper	
S (MPH)	Length (Feet)	Minimum Number Of Devices
25	50	6
30	50	6
35	50	6
40	50	6
45	50	6
50	50	6
55	50	6

PATA 110 (A Through T)

1. PATA 110 drawings show work spaces on roads that approach and depart 4-Way intersections. Single-flagger or multi-flagger intersection control is illustrated for intersections with three types of permanent control:
   a) One-Way Stop
   b) All-Way Stop
   c) Traffic Signal
2. Flaggers shall be clearly visible to traffic for a minimum distance of E.
3. For operations of 15 minutes or less:
   a) The ROAD WORK, ONE LANE ROAD, and FLAGGER SYMBOL signs are not required.
   b) All channelizing devices may be eliminated if a shadow vehicle is present and the operation does not proceed against normal traffic flow.
4. When a shadow vehicle is not used, distance E is measured from the end of the taper to the beginning of the work space.

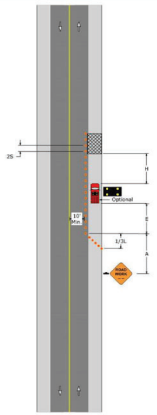
Signs

W20-1 W20-4 W20-7

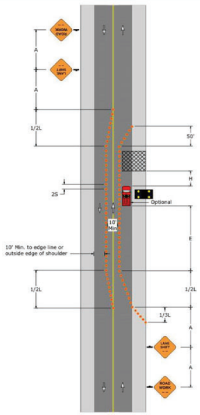
Sign Spacing, Channelizing Device Spacing, Buffer Space, and Roll Ahead Space					
Speed	Channelizing Devices Spacing	Sign Spacing		Buffer Space	Roll Ahead Space
		Urban	Rural		
S (MPH)	2S (Feet)	A (Feet)	A (Feet)	E (Feet)	H (Feet)
25	50	100 - 200	500 - 800	155	150
30	60	100 - 200	500 - 800	200	150
35	70	100 - 200	500 - 800	250	150
40	80	350 - 500	500 - 800	305	150
45	90	350 - 500	500 - 800	360	150
50	100	350 - 500	500 - 800	425	250
55	110	350 - 500	500 - 800	495	250

Taper Lengths and Minimum Number Of Channelizing Devices		
Speed	50' Per Lane Taper	
S (MPH)	Length (Feet)	Minimum Number Of Devices
25	50	6
30	50	6
35	50	6
40	50	6
45	50	6
50	50	6
55	50	6

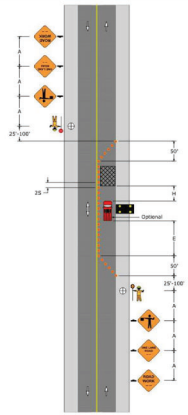
PATA 102



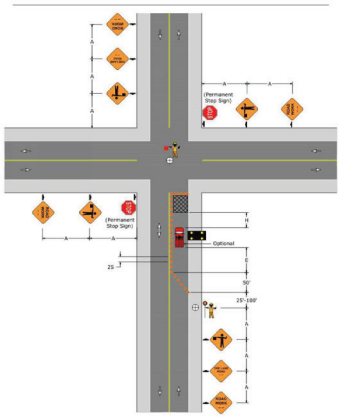
PATA 103



PATA 107



PATA 110-A



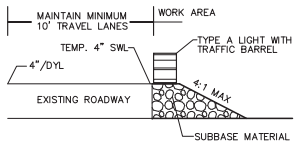
MAINTENENCE AND PROTECTION OF TRAFFIC

SEQUENCE OF CONSTRUCTION

PHASE I
CONSTRUCT PROPOSED TRAIL UTILIZING PATAS 102, 103, 107, AND 110 AS APPROPRIATE.

PHASE II
CONSTRUCT PROPOSED ADA ACCESSIBLE CROSSINGS UTILIZITNG PATAS 107 AND 110 AS APPROPRIATE.

PHASE III
PLACE PAVEMENT MARKINGS UTILIZING PATAS 107 AND 110 AS APPROPRIATE.



NOTE: SAFETY SLOPES ARE TO BE USED WHEN OPEN EXCAVATION ALONG AN ACTIVE ROADWAY RESULTS IN A DROPOFF OF GREATER THAN 2".

SAFETY SLOPE DETAIL
N.T.S.

OWNER:
Towamencin Township
1090 Troxel Road
Lansdale, PA 19446

MUNICIPAL FILE NO.:

REV.	DESCRIPTION	DATE	BY

TAX MAP PARCEL NO.:

TOTAL AREA: TOTAL LOTS:

DATE: SCALE: 1"=20'

HOP PLANS

GENERAL NOTES AND DETAIL

KRIEBEL RD FISCHER PARK TRAIL

TOWAMENCIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JOSEPH F. CARLIN
ENGINEER
PE077898

DATE: 10/7/2022

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
CORPORATE HEADQUARTERS
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901 • (215) 345-4330 • www.gilmore-assoc.com

SCALE: 20 0 20 40 IN FEET

JOB NO.: 1904062T

SHEET NO.: 1 OF 1

DESIGNED BY: JFC | DRAWN BY: JFC | CHECKED BY: JFC

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.
©COPYRIGHT 2015 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED

LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE-GROUND OBSERVATION OF THE SITE. NO EXCAVATIONS WERE PERFORMED IN THE PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY GILMORE & ASSOCIATES INC.

ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2008, PENNSYLVANIA ACT 121.
GILMORE & ASSOCIATES INC. HAS OBTAINED A PA-ONE CALL SERIAL NUMBER AS NOTED HEREON FOR DESIGN PURPOSES ONLY.

MONTGOMERY COUNTY LAND USE CODES

0319	R	PREFERENTIAL ASSESSMENT		2101	R	RES VAC LAND UNDER 5000 SQ FT
0515	C	PREFERENTIAL ASSESSMENT		2102	R	RES VAC LAND 5000-10000 SQ FT
1000	R	MISCELLANEOUS		2103	R	RES VAC LAND 10001-20000 SQ FT
1001	R	HOUSE ONLY, NO LAND		2104	R	RES VAC LAND 20001-30000 SQ FT
1002	R	LAND ONLY, BLDG ASSESSED SEPARATELY		2105	R	RES VAC LAND 30001-40000 SQ FT
1003	R	OPEN SPACE/COMMON AREA		2106	R	RES VAC LAND 40001-60000 SQ FT
1004	R	COMMON ELEMENT/CONDO AMENITIES		2107	R	RES VAC LAND 60001-87120 SQ FT
1005	R	DETENTION BASIN		2108	R	RES VAC LAND 2.00- 4.99 ACRES
1006	R	SUBSIDIZED SINGLE FAMILY DETACHED		2109	R	RES VAC LAND 5.00- 9.99 ACRES
1101	R	SINGLE FAMILY		2110	R	RES VAC LAND 10.00-19.99 ACRES
1105	R	SINGLE DWELLING GARAGE APT		2111	R	RES VAC LAND 20.00-29.99 ACRES
1106	R	BOARDED-UP HOUSE		2112	R	RES VAC LAND 30.00-49.99 ACRES
1108	R	MORE THAN 1 HOUSE, DETACHED		2113	R	RES VAC LAND 50.00+ ACRES
1110	R	GARAGE ON LOT		2200	C	COM VAC LAND ASS'D IN OTHER MUNC
1111	R	POOL ON LOT		2201	C	COM VAC LAND UNDER 5000 SQ FT
1112	R	POLE BLDG, STABLE, BARN, ETC		2202	C	COM VAC LAND 5000-10000 SQ FT
1113	R	TENNIS COURT ON LOT		2203	C	COM VAC LAND 10001-20000 SQ FT
1116	R	HOUSE WITH IN-LAW SUITE		2204	C	COM VAC LAND 20001-30000 SQ FT
1132	R	DUPLEX		2205	C	COM VAC LAND 30001-40000 SQ FT
1134	R	TRIPLEX		2206	C	COM VAC LAND 40001-60000 SQ FT
1136	R	QUADRAPLEX		2207	C	COM VAC LAND 60001-87120 SQ FT
1140	C	RESIDENTIAL CONVERSION 5 OR MORE APT		2208	C	COM VAC LAND 2.00- 4.99 ACRES
1145	C	ROOMING HOUSE - TOURIST HOME		2209	C	COM VAC LAND 5.00- 9.99 ACRES
1160	C	RESIDENTIAL-COMMERCIAL NON-CONFORM		2210	C	COM VAC LAND 10.00-19.99 ACRES
1161	C	RESIDENTIAL/PROFESSIONAL		2211	C	COM VAC LAND 20.00-29.99 ACRES
1175	R	CONDOMINIUM-SINGLE DETACHED		2212	C	COM VAC LAND 30.00-49.99 ACRES
1180	R	RESIDENTIAL CONVERTIBLE REAL ESTATE		2213	C	COM VAC LAND 50.00+ ACRES
1188	R	CONDO TOWNHOUSE		2300	I	IND VAC LAND ASS'D IN OTHER MUNC
1189	R	CONDOMINIUM CLUSTER 2-5 UNITS		2301	I	IND VAC LAND UNDER 5000 SQ FT
1190	R	CONDOMINIUM - 2-4 UNITS		2302	I	IND VAC LAND 5000-10000 SQ FT
1200	R	CONDO GARAGE		2303	I	IND VAC LAND 10001-20000 SQ FT
1201	R	CONDO GARDEN STYLE-PRIVATE ENT. 1-3S		2304	I	IND VAC LAND 20001-30000 SQ FT
1202	R	CONDO GARDEN STYLE-COMMON ENT. 1-3S		2305	I	IND VAC LAND 30001-40000 SQ FT
1203	R	CONDOMINIUM MID RISE 4-6 STORIES		2306	I	IND VAC LAND 40001-60000 SQ FT
1204	R	CONDOMINIUM HIGH RISE 7 + STORIES		2307	I	IND VAC LAND 60001-87120 SQ FT
1220	R	MOBILE HOME - OWNER'S LOT		2308	I	IND VAC LAND 2.00- 4.99 ACRES
1221	R	MOBILE HOME - RENTED LOT - PARK		2309	I	IND VAC LAND 5.00- 9.99 ACRES
1222	R	MANUFACTURED HOME - RENTED LOT		2310	I	IND VAC LAND 10.00-19.99 ACRES
1270	R	SEASONAL DWELLING		2311	I	IND VAC LAND 20.00-29.99 ACRES
1282	R	MASTER PARCEL CONDO/COOP/PLANNED COM		2312	I	IND VAC LAND 30.00-49.99 ACRES
1901	E	EXEMPT DWELLING VETERANS		2313	I	IND VAC LAND 50.00+ ACRES
2000	R	NO ZONE VAC LAND ASS'D IN OTHER MUNC		2400	R	WOOD/REC/AGR ASS'D IN OTHER MUNC
2001	R	NO ZONE VAC LAND UNDER 5000 SQ FT		2401	R	WOOD/REC/AGR UNDER 5000 SQ FT
2002	R	NO ZONE VAC LAND 5000-10000 SQ FT		2402	R	WOOD/REC/AGR 5000-10000 SQ FT
2003	R	NO ZONE VAC LAND 10001-20000 SQ FT		2403	R	WOOD/REC/AGR 10001-20000 SQ FT
2004	R	NO ZONE VAC LAND 20001-30000 SQ FT		2404	R	WOOD/REC/AGR 20001-30000 SQ FT
2005	R	NO ZONE VAC LAND 30001-40000 SQ FT		2405	R	WOOD/REC/AGR 30001-40000 SQ FT
2006	R	NO ZONE VAC LAND 40001-60000		2406	R	WOOD/REC/AGR LAND 40001-59999 SQ FT
2007	R	NO ZONE VAC LAND 60001-87120		2407	R	WOOD/REC/AGR LAND 60001-87120 SQ FT
2008	R	NO ZONE VAC LAND 2.00-4.99 ACRES		2408	R	WOOD/REC/AGR LAND 2.00- 4.99 ACRES
2009	R	NO ZONE VAC LAND 5.00-9.99 ACRES		2409	R	WOOD/REC/AGR LAND 5.00- 9.99 ACRES
2010	R	NO ZONE VAC LAND 10.00-19.99 ACRES		2410	R	WOOD/REC/AGR LAND 10.00-19.99 ACRES
2011	R	NO ZONE VAC LAND 20.00-29.99 ACRES		2411	R	WOOD/REC/AGR LAND 20.00-29.99 ACRES
2012	R	NO ZONE VAC LAND 30.00-39.99 ACRES		2412	R	WOOD/REC/AGR LAND 30.00-49.99 ACRES
2013	R	NO ZONE VAC LAND 50.00+ ACRES		2413	R	WOOD/REC/AGR LAND 50.00+ ACRES
2100	R	RES VAC LAND ASS'D IN OTHER MUNC		2500	C	INST'L VAC ASS'D IN OTHER MUNC

MONTGOMERY COUNTY LAND USE CODES

2501	C	INST'L VAC LAND UNDER 5000 SQ FT		3347	I	IND-OLD MILL TYPE ABOVE 100000 S.F.
2502	C	INST'L VAC LAND 5000-10000 SQ FT		3348	I	INDUST CMPLX CONVERT TO MULTITENANT
2503	C	INST'L VAC LAND 10001-20000 SQ FT		3351	I	IND- COLD STORAGE PLANT
2504	C	INST'L VAC LAND 20001-30000 SQ FT		3352	I	IND-MEAT PACKING PLANT
2505	C	INST'L VAC LAND 30001-40000 SQ FT		3500	I	IND-INDUSTRIAL BLDG CONDO
2506	C	INST'L VAC LAND 40001-60000 SQ FT		3501	I	COMMON ELEMENT-INDUST. BLDG CONDO
2507	C	INST'L VAC LAND 60001-87120 SQ FT		3503	I	CONVERT REAL EST-INDUST BLDG CONDO
2508	C	INST'L VAC LAND 2.00- 4.99 ACRES		4000	C	MISC./VARIED COMMERCIAL
2509	C	INST'L VAC LAND 5.00- 9.99 ACRES		4001	C	BLDG ONLY/LAND ASSESSED SEPARATELY-C
2510	C	INST'L VAC LAND 10.00-19.99 ACRES		4002	C	LAND ONLY/BLDG ASSESSED SEPARATELY-C
2511	C	INST'L VAC LAND 20.00-29.99 ACRES		4100	C	RETAIL, OFFICE, APTS. - MULTI-USE
2512	C	INST'L VAC LAND 30.00-49.99 ACRES		4200	A	LOW-RISE 5-10 UNITS(1 BLDG) < 3-STRY
2513	C	INST'L VAC LAND 50.00+ ACRES		4201	A	LOW-RISE 11-30 UNITS(1 BLD) < 3 STRY
2600	C	ADMIN OFC LND ASSD IN OTHER MUNC		4202	A	LOW-RISE > 30 UNITS, < 3-STORY
2601	C	ADMIN'VE OFC LND UNDER 5000 SQ FT		4203	A	GARDEN (GROUP OF LOW RISE) < 50 UNIT
2602	C	ADMIN'VE OFC LND 5000-10000 SQ FT		4204	A	GARDEN(GROUP OF LOW RISE) > 51 UNITS
2603	C	ADMIN'VE OFC LND 10001-20000 SQ FT		4205	A	GARDEN(GROUP OF LOW RISE) > 101 UNIT
2604	C	ADMIN'VE OFC LND 20001-30000 SQ FT		4210	A	HIGH RISE > 4-STORY, < 50 UNITS W/EL
2605	C	ADMIN'VE OFC LND 30001-40000 SQ FT		4211	A	HIGH RISE > 4-STORY, > 50 UNITS W/EL
2606	C	ADMIN'VE OFC LND 50001-59999 SQ FT		4212	A	HIGH RISE > 4-STORY, > 100 UNIT W/EL
2607	C	ADMIN'VE OFC LAND 60001-87120 SQ FT		4213	A	TOWNHOUSES UP TO 25
2608	C	ADMIN'VE OFC LAND 2.00- 4.99 ACRES		4214	A	TOWNHOUSES 26 OR MORE
2609	C	ADMIN'VE OFC LAND 5.00- 9.99 ACRES		4216	A	SUBSIDIZED HOUSING
2610	C	ADMIN'VE OFC LAND 10.00-19.99 ACRES		4220	C	HOT/MOT UNDER 40 UNITS W/RESTAURANT
2611	C	ADMIN'VE OFC LAND 20.00-29.99 ACRES		4221	C	HOT/MOT 40-100 UNITS W/RESTAURANT
2612	C	ADMIN'VE OFC LAND 30.00-49.99 ACRES		4222	C	HOT/MOT 101+ UNITS W/RESTAURANT
2613	C	ADMIN'VE OFC LAND 50.00+ ACRES		4223	C	HOT/MOT UNDER 40 UNITS W/O RESTAURAN
2700	C	LANDFILL LAND ASSD IN OTHER MUNC		4224	C	HOT/MOT 40-100 UNITS W/O RESTAURANT
2701	C	LANDFILL VACANT LAND UNDER 5000 SQFT		4225	C	HOT/MOT 101+ UNITS W/OUT RESTAURANT
2702	C	LANDFILL VACANT LAND 5000-10000 SQFT		4226	C	HOT/MOT CABINS-SMALL MOTEL (MOM&POP)
2703	C	LANDFILL VACANT LAND 10001-20000 SF		4227	C	HOT/MOT BED & BREAKFAST
2704	C	LANDFILL VACANT LAND 20001-30000 SF		4230	C	DEPARTMENT STORE
2705	C	LANDFILL VACANT LAND 30001-40000 SF		4231	C	1-STORY STRIP STORE (NO MAJOR FOOD)
2706	C	LANDFILL VACANT LAND 40001-60000 SF		4232	C	2-STORY STRIP STORE W/OFF OR APT
2707	C	LANDFILL VACANT LAND 60001-87120 SF		4235	C	AIRPORT
2708	C	LANDFILL VAC LAND 5.00- 9.99 ACRES		4236	C	AUTOMOBILE GRAVEYARD
2709	C	LANDFILL VAC LAND 5.00- 9.99 ACRES		4237	C	AUTOMOBILE SHOWROOM
2710	C	LANDFILL VAC LAND 10.00-19.99 ACRES		4238	C	AUTO SERVICE CENTER - PEP BOYS, ETC.
2711	C	LANDFILL VAC LAND 20.00-29.99 ACRES		4239	C	BEVERAGE DISTRIBUTOR
2712	C	LANDFILL VAC LAND 30.00-49.99 ACRES		4240	C	BANK
2713	C	LANDFILL VAC LAND 50.00+ ACRES		4241	C	BAR OR TAPROOM
2800	R	REVERSE SUBDIVISION - NO LOT SIZE		4242	C	BOWLING ALLEY
2900	R	ASSESSED WITH		4244	C	BAR/HOTEL
3000	I	IND-ONE STORY MISC./VARIED		4245	C	CAR WASH
3320	I	IND-ONE STORY WHSE/MFG UP TO 15000 S		4246	C	COIN-OPERATED LAUNDROMAT
3321	I	IND-MUL STORY WHSE/MFG UP TO 15000 S		4248	C	CONVENIENCE STORE (7-11,WAWA)
3324	I	IND-MUL STORY WHSE/MFG 15-25000 S.F.		4249	C	CONTRACTOR'S FACILITIES
3325	I	IND-ONE STORY WHSE/MFG 15-25000 S.F.		4250	C	DAIRY STORE
3326	I	IND-MUL STORY WHSE/MFG 25-50000 S.F.		4251	C	DAY CAMP
3327	I	IND-ONE STORY WHSE/MFG 25-50000 S.F.		4252	C	DINER
3330	I	IND-ONE STORY WHSE/MFG 50-100000 S.F		4253	C	DISCOUNT DEPARTMENT STORES
3331	I	IND-MUL STORY WHSE/MFG 50-100000 S.F		4254	C	FARMER'S MARKET
3340	I	IND-ONE STORY WHSE MFG 100000+ S.F.		4255	C	FAST FOOD OPERATIONS
3341	I	IND-MUL STORY WHSE MFG 100000+ S.F.		4256	C	FUNERAL HOME
3345	I	IND- OLD MILL TYPE UP TO 50000 S.F.		4257	C	DAY CARE CENTER
3346	I	IND-OLD MILL TYPE 50000-100000 S.F.		4259	C	GAS STATION, MINI MARKET

4260	C	GAS STATION		4503	C	OFFICE- CONVERT R.E., BLDG CONDO
4261	C	GOLF COURSES		4545	C	MALL STORES
4262	C	GREENHOUSES, NURSERIES		4546	C	SHOPPING CENTER - NBHD(MAJOR FOOD)
4263	C	HEALTH SPA		4547	C	SHOPPING CENTER - COMMUNITY(FOOD +)
4264	C	HOME CENTER (CHANEL, ETC.)		4548	C	SHOPPING CENTER - REGIONAL (2 DEPT T
4265	C	LANDFILL		4550	C	EXHIBITION AND CONVENTION CENTER
4266	C	LUMBER YARDS		4800	C	LERTA
4267	C	MINI BANK		4850	C	TIF DISTRICT-TAX INCREMENT FINANCE
4271	C	MEDICAL-DENTAL CENTER		5000	C	TAXABLE MISCELLANOUS
4272	C	MULTI-TENANT MINI STORAGE FACILITY		5101	C	TAXABLE CHURCH
4275	C	PARKING LOTS		5102	C	TAXABLE CHURCH PARKING LOT
4276	C	PARKS, REC. FAC., POOLS (PRIVATE)		5104	C	TAXABLE CONVENTS, RETREAT HOUSES
4277	C	POST OFFICE		5105	R	TAXABLE PARSONAGES
4278	C	PARKING GARAGE		5106	C	TAXABLE OTHER RELIGIOUS ORGANIZATION
4279	C	QUARRY		5110	C	TAXABLE OTHER CHARITABLE ORG
4280	C	REPAIR SHOP OR GARAGES		5120	C	TAXABLE CEMETERIES (RELIGIOUS)
4281	C	RESTAURANT W/LIQUOR LICENSE		5125	C	TAXABLE CEMETERIES (PRIVATE)
4282	C	RESTAURANT WITHOUT LIQUOR LICENSE		5129	C	TAXABLE FIREHOUSES
4283	C	RETAIL AND SHOP		5130	C	TAXABLE HOSPITALS, MEDICAL FACILITY
4284	C	RETAIL SHOWROOM (FURNITURE, ETC)		5131	C	TAXABLE AMBULANCE FACILITY
4285	C	RETAIL STAND ALONE 8,000 SF + UNDER		5140	C	TAXABLE NURSING HOMES, SANITORIUMS
4286	C	RETAIL STAND ALONE ABOVE 8,000 SF		5145	C	TAXABLE RETIREMENT CENTERS & HOMES
4289	C	FUEL OIL DISTRIBUTION COMPANY		5150	C	TAXABLE SCHOOLS - PAROCHIAL,NURSERY
4290	C	SCRAP & JUNK YARDS		5152	C	TAXABLE SCHOOLS-PAROCHIAL,PRIMARY
4291	C	SKATING RINKS		5154	C	TAXABLE SCHOOLS-PAROCHIAL,SECONDARY
4292	C	STORAGE TANKS		5156	C	TAXABLE SCHOOLS-PAROCHIAL,HIGH
4293	C	SUPERMARKETS		5158	C	TAXBL SCHOOLS-PAROCHIAL COLLEGE,UNIV
4294	C	USED CAR DEALER		5166	C	TAXABLE SCHOOLS-PRIVATE NURSERY
4295	C	TENNIS AND/OR RACQUETBALL CLUBS		5168	C	TAXABLE SCHOOLS-PRIVATE PRIMARY
4296	C	THEATER (INDOOR)		5170	C	TAXABLE SCHOOLS-PRIVATE SECONDARY
4297	C	THEATER (OUTDOOR)		5172	C	TAXABLE SCHOOLS-PRIVATE HIGH SCH.
4298	C	WIRELESS TELECOMMUNICATION FACILITY		5174	C	TAXBL SCHOOLS-PVT COLLEGE UNIVER.
4299	C	TRUCK TERMINAL		5178	C	TAXABLE SCHOOLS-SPECIAL PURPOSE
4300	C	ANIMAL HOSPITAL/DOG KENNEL		5180	C	TAXBL CLUBS & FRATL ORGANIZATIONS
4304	C	TRASH TRANSFER STATION		5319	E	PREFERENTIAL ASMT EXEMPT 319
4305	C	PRIVATE SEWER PLANT		5515	E	PREFERENTIAL ASMT EXEMPT 515
4310	C	MOBILE HOME PARK- 1 TO 50 PADS		5800	E	PARTIAL EXEMPT MISCELLANOUS
4311	C	MOBILE HOME PARK- 51 TO 100 PADS		5801	E	PARTIAL EXEMPT CHURCH
4312	C	MOBILE HOME PARK 100+ PADS		5804	E	PART EXEMPT CONVENTS, RETREAT HOUSES
4320	C	OFFICE- 1 STORY UNDER 15000 S.F.		5805	E	PARTIAL EXEMPT PARSONAGES
4321	C	OFFICE- MUL STORY UNDER 15000 S.F.		5806	E	PARTL EXEMPT OTHER RELIGIOUS ORG
4325	C	OFFICE- 1 STORY 15000-50000 S.F.		5810	E	PARTIAL EXEMPT OTHER CHARITABLE ORG.
4326	C	OFFICE- MUL STORY 15000-50000 S.F.		5820	E	PARTL EXEMPT CEMETERIES (RELIGIOUS)
4330	C	OFFICE- 1 STORY 50000-100000 S.F.		5825	E	PARTIAL EXEMPT CEMETERIES (PRIVATE)
4331	C	OFFICE- MUL STORY 50000-100000 S.F.		5829	E	PARTIAL EXEMPT FIREHOUSES
4335	C	OFFICE- 1 STORY 100000+ S.F.		5830	E	PARTL EXEMPT HOSPITALS, MED FACIL.
4336	C	OFFICE- MUL STORY 100000+ S.F.		5831	E	PARTIAL EXEMPT AMBULANCE FACILITY
4340	C	OFFICE- 1 STORY RESEARCH AND ENGINER		5840	E	PARTL EXEMPT NURS HOMES, SANITORIUS
4341	C	OFFICE- MUL STORY RESEARCH & ENGINEE		5845	E	PARTL EXEMPT RETIREMENT CTRS & HOME
4343	C	PHARMACEUTICAL FACILITY		5850	E	PARTL EXEMPT SCHLS-PAROCHIAL,NURSERY
4345	C	COMMERCIAL CONDO		5852	E	PARTL EXEMPT SCHLS-PAROCHIAL,PRIMARY
4346	C	COMMON ELEMENT - COMMERCIAL CONDO		5854	E	PARTL EXEMPT SCHLS-PAROCHIAL,SECONDY
4347	C	CONVERTIBLE REAL ESTATE - COMM CONDO		5856	E	PARTL EXEMPT SCHLS-PAROCHIAL,HIGH S.
4500	C	OFFICE- CONDO		5858	E	PARTL EXEMPT SCHLS-PAROCHIAL COLLEGE
4501	C	OFFICE- CONDO COMMON ELEMENT		5866	E	PARTL EXEMPT SCHOOLS-PRIVATE NURSERY
4502	C	OFFICE- FLEX BUILDINGS		5868	E	PARTL EXEMPT SCHOOLS-PRIVATE PRIMARY

5870	E	PARTL EXEMPT SCHLS-PRIVATE SECONDARY				
5872	E	PARTL EXEMPT SCHLS-PRIVATE HIGH SCH.				
5874	E	PARTL EXEMPT SCHLS-PRIV. COLL. UNIV.				
5876	E	PARTL EXEMPT SCHLS-PRIVATE VOCATIONL				
5878	E	PARTL EXEMPT SCHOOLS-SPECIAL PURPOSE				
5880	E	PARTL EXEMPT CLUBS, FRATERNAL ORG				
5900	E	EXEMPT MISCELLANOUS				
5901	E	EXEMPT CHURCH				
5902	E	EXEMPT CHURCH PARKING LOT				
5903	E	PARTL EXMPT CHRCH PKG LT				
5904	E	EXEMPT CONVENTS, RETREAT HOUSES				
5905	E	EXEMPT PARSONAGES				
5906	E	EXEMPT OTHER RELIGIOUS ORGANIZATION				
5910	E	EXEMPT OTHER CHARITABLE ORGANIZATION				
5916	E	EXEMPT SUBSIDIZED HOUSING				
5920	E	EXEMPT CEMTERIES (RELIGIOUS)				
5925	E	EXEMPT CEMETERIES (PRIVATE)				
5929	E	EXEMPT FIREHOUSES				
5930	E	EXEMPT HOSPITALS, MEDICAL FACILITIES				
5931	E	EXEMPT AMBULANCE FACILITY				
5940	E	EXEMPT NURSING HOMES, SANITORIUMS				
5945	E	EXEMPT RETIREMENT CENTERS & HOMES				
5950	E	EXEMPT SCHOOLS-PAROCHIAL, NURSERY				
5952	E	EXEMPT SCHOOLS-PAROCHIAL,PRIMARY				
5954	E	EXEMPT SCHOOLS-PROCHIAL,SECONDARY				
5956	E	EXEMPT SCHOOLS-PAROCHIAL,HIGH SCHOOL				
5958	E	EXEMPT SCHLS-PAROCHIAL COLLEGE, UNIV				
5966	E	EXEMPT SCHOOLS-PRIVATE NURSERY				
5968	E	EXEMPT SCHOOLS-PRIMARY				
5970	E	EXEMPT SCHOOLS-PRIVATE SECONDARY				
5972	E	EXEMPT SCHOOLS-PRIVATE HIGH SCHOOL				
5974	E	EXEMPT SCHOOLS-PRIVATE COLLEGE-UNIV.				
5976	E	EXEMPT SCHOOLS-PRIVATE VOCATIONAL				
5978	E	EXEMPT SCHOOLS-SPECIAL PURPOSE				
5980	E	EXEMPT CLUBS & FRATL ORGANIZATIONS				
8100	U	OTHER UTILITY PROPERTY- TAXABLE				
8200	U	ELECTRIC GENERATION PLANT-TAXABLE				
8900	U	EXEMPT PUBLIC UTILITY				
8910	U	GOVERNMENTAL AUTHORITIES- EXEMPT				
8966	U	UTILITY REALTY - PURTA				
8980	U	GOVERNMENTAL AUTHORITIES- TAXABLE				
9910	E	EXEMPT- FEDERAL GOVERNMENT				
9920	E	EXEMPT - STATE GOVERNMENT				
9930	E	EXEMPT - COUNTY GOVERNMENT				
9940	E	EXEMPT - LOCAL MUNICIPALITY				
9950	E	EXEMPT - BD OF ED, PRIMARY				
9960	E	EXEMPT - BD OF ED, SECONDARY				
9970	E	EXEMPT - BD OF ED, HIGH SCHOOL				
9980	E	EXEMPT - BD OF ED, UNIVERSITY				
9990	E	EXEMPT - BD OF ED, VOCATIONAL				

Towamencin Township Park, Recreation, and Open Space Preservation Plan Update

Adopted: September 27, 2006

Adopted by Towamencin Township Board of Supervisors by Resolution #06-51

Prepared with the assistance of:
The Waetzman Planning Group
1230 County Line Road
Bryn Mawr, Pennsylvania 19010

and

EDM Consultants, Inc.
1101 South Broad Street
Suite 200, PO Box 1545
Lansdale, Pennsylvania 19446

Towamencin Township
Park, Recreation, and Open Space Preservation Plan Update

Adopted: September 27, 2006

Prepared with the assistance of:

The Waetzman Planning Group
1230 County Line Road
Bryn Mawr, Pennsylvania 19010

and

EDM Consultants, Inc.
1101 South Broad Street
Suite 200, PO Box 1545
Lansdale, Pennsylvania 19446

Adopted by Towamencin Township Board of Supervisors by Resolution #06-51

The preparation of the report was made possible by
a grant from Montgomery County's *Green Fields/Green Towns* Program

Towamencin Township Board of Supervisors
Daniel M. Littley, Jr., Chairman
Thomas M. Hollenbeck, Vice Chairman
H. Charles Wilson, III, Treasurer
James P. Sinz, Secretary
John V. Gottschall
Theodore D. Dorand*

Towamencin Open Space Planning Committee
Joseph F. Meehan, Chairman
Monica Burcik, Member
Carol Gifford, Member*
Thomas M. Hollenbeck, Member
Brett H. MacKay, Member
John E. Minihan, Member
Thomas Shirley, Member*

**past member*

Township Staff Liaisons
Robert A. Ford, Township Manager
Chris Thayler, Recreation Coordinator

Montgomery County Planning Commission Liaison
Michael Stokes, Assistant Director

Table of Contents

List of Maps ..... *iv*
List of Tables ..... *iv*
List of Charts ..... *iv*
CHAPTER 1. INTRODUCTION **1**
GREEN FIELDS/GREEN TOWNS 2
AUDIT OF THE 1995 PLAN 3
CHAPTER 2. COMMUNITY BACKGROUND **4**
REGIONAL SETTING 4
EXISTING LAND USE 5
DEMOGRAPHICS, HOUSING, AND EMPLOYMENT 7
Population Growth *7*
Education *8*
Age Structure *8*
Age Comparison to Surrounding Municipalities *8*
Household Income *9*
Household Types *10*
Household Size Comparison to Surrounding Municipalities *10*
Special Needs Groups *10*
Civilian Non Institutionalized Population *11*
Housing Information *11*
Employment *12*
Demographic Implications *12*
EXISTING PLANS AND ORDINANCES 13
Comprehensive Plan *13*
Township-Wide Trail Master Plan *14*
Zoning Ordinance of Towamencin Township *15*
Subdivision and Land Development Ordinance *18*
CHAPTER 3. GOALS AND OBJECTIVES **20**
CHAPTER 4. PROTECTED AND POTENTIALLY VULNERABLE LANDS **23**
PERMANENTLY AND TEMPORARILY PROTECTED LANDS 23
POTENTIALLY VULNERABLE RESOURCES 26
Natural Features – Geology and Soils *27*
Topography, Hydrology, Vegetation, and Wildlife *27*
Scenic, Historic, and Cultural Resources *29*
POTENTIAL OPEN SPACE LINKAGES 31
CHAPTER 5. ANALYSIS OF UNPROTECTED RESOURCES **32**
GROWTH AREA CALCULATIONS – BUILD OUT ANALYSIS 33
EVALUATION OF OPEN SPACE NEEDS 35
CHAPTER 6. COMPARISON TO ABUTTING PLANS **37**
Montgomery County *37*
Lower Salford *39*
Skippack *40*
Upper Gwynedd *41*
Worcester *41*
Hatfield *43*
Lansdale Borough *44*
CHAPTER 7. MUNICIPAL TRAIL AND PATHWAY DEVELOPMENT – OPTIONAL ELEMENT **46**
CHAPTER 8. RECOMMENDATIONS **50**
SHORT-TERM RECOMMENDATIONS (2005-2008) 50
LONG-TERM RECOMMENDATIONS (BEYOND 2008) 52
POLICIES AND METHODS FOR PROTECTING OPEN SPACES 55
CHAPTER 9. ACTION PLAN **61**
ACTION PLAN CHART 62
CHAPTER 10. APPENDICES **69**

APPENDIX A: MEETING MINUTES....69
APPENDIX B: AUDIT NOTES....99
APPENDIX C: ADOPTION RESOLUTIONS....107
Towamencin Township....108
Montgomery County Open Space Board....109
APPENDIX D: OTHER FUNDING SOURCES....110
Federal....110
Commonwealth of Pennsylvania....110
Regional....113
Private....114
APPENDIX E: MONTGOMERY COUNTY TRAIL GUIDELINES....117

List of Maps

Map 1: Existing Land Use....6
Map 2: Existing Open Space....25
Map 3: Environmental Features....28
Map 4: Significant Historical or Cultural Sites....30
Map 5: Build Out Analysis....34
Map 6: Trail Plan....49
Map 7: Open Space Plan....54

List of Tables

Table 1: Grants Since 1995 for Open Space Projects....1
Table 2: Existing Land Use as a Percentage of Total Area....5
Table 3: Population Totals and Change 1980-2000....7
Table 4: Population Projections....7
Table 5: Level of Education....8
Table 6: Median Age of Surrounding Municipalities....9
Table 7: Household Types....10
Table 8: Average Household Size....10
Table 9: Special Needs Groups....11
Table 10: Non Institutionalized Population....11
Table 11: Units per Structure....11
Table 12: Towamencin Largest Employers....12
Table 13: Forecasted Employment Change, 2000 through 2030....12
Table 14: Park Area Requirements....18
Table 15: County Identification of Protected Lands....24
Table 16: Historic Sites in Towamencin Township with a brief description....29
Table 17: Temporarily Protected Land in Towamencin Township....32
Table 18: Population and Job Growth....33
Table 19: Existing Open Space Area....35
Table 20: Linear feet of Trail, proposed and installed....46

List of Charts

Chart 1: Age Structure....8
Chart 2: Household Income....9
Chart 3: Open Space Needs Assessment....36

Chapter 1. Introduction

Towamencin Township has abundant natural resources, recreational areas, and public and private parks and open lands; however these open space amenities are threatened by growth pressures on the Township. As residential, commercial, office and industrial development expands, landscape changes will result, and the visual quality of the Township will shift to a predominately suburban character. Approximately 19,000 people live in Towamencin Township at present. Population forecasts indicate that the Township can expect a population of 21,000 by the year 2030. Jobs are projected to increase by 74% by 2030. At the same time that land is being developed for residential and commercial uses, the demand for recreational areas, facilities and programs will grow due to increased population and changes in preferences. Strategically located sites capable of serving local recreational needs must be preserved to meet the Township's demand for recreational areas, facilities and programs.

In 1993, Montgomery County created what is now considered Phase 1 of their Open Space Program to help municipalities, such as Towamencin, preserve their open spaces. Under Phase 1, Towamencin received a planning grant for which they created the *Park, Recreation & Open Space Preservation Plan* (1995). The Township received additional funds under Phase 1 to help implement their plan (see Table 1: Grants Since 1995 for Open Space Projects); this table also documents grants from other sources received for open space projects.

Table 1: Grants Since 1995 for Open Space Projects

Project	Acres	Year	Source	Amount
Township Tree Farm (Ellis Tract)	6.92	1998	County	$117,900
Rittenhouse Property (Municipal Complex)	15.26	1996	County	$270,000
Arneth Property (Fischer's Park Addition)	22.98	1996	County	$247,500
Reiff Road Properties	4.42	1999	County	$142,200
Tree Planting (Bustard Road)		1996	County	$11,474
Tree Planting (Park Trees)		1999	County	$21,330
Tree Planting (Park Trees)		2000	County	$6,994
			County Subtotal	$817,398
Tree Planting (Tree Farm)		2001	America the Beautiful	$1,500
Grading Permits & Playing Field Design (Bustard Park/Green Lane, Grist Mill Park)		2004	DCED	$15,000
Fischer's Park Tot Lot and Parking Lot		2002	DCNR	$98,000
Fischer's Park Trails		2001	Growing Greener	$99,968
Pool Construction		2001	HUD	$898,020
			Other Grants Subtotal	$1,112,488
			Total All Grants	**$1,929,886**

Green Fields/Green Towns

Phase Two of Montgomery County's open space program is now underway and Towamencin must update their 1995 Plan to participate and receive Montgomery County funding. The *Green Fields/Green Towns* program has three major funding components (in addition to the planning grants) as described by the Montgomery County Planning Commission:

> Phase two of the Montgomery County open space program began when the Montgomery County Commissioners officially adopted the new *Green Fields/Green Towns* program on December 18, 2003. The ten-year $150 million program was approved by voter referendum in November 2003. The *Green Fields/Green Towns* program is made up of three basic components: municipal grants ($67 million), private organization grants ($8 million), and county open space expenditures ($75 million).

Municipal Grants

All Montgomery County municipalities are eligible to apply for open space grants. The first round (the first four years of the program ending April 2008) will provide guaranteed allocation grant funds for each municipality. The second round of the program will provide the remaining grant funds to municipalities on a completive basis. Municipalities will need to update their existing open space plans. Once this done, they can turn their attention to the open space projects listed in the new plans. In addition to land acquisition, municipalities may direct funds toward heritage resource conservation, green infrastructure, farmland preservation, floodplain restoration, community trails that connect to the County's trail network, and implementation of the Schuylkill River Greenway.

Private Organization Grants

Private organizations experienced in land preservation and heritage conservation will be eligible for open space grant funds. Applicants may use open space funds toward the acquisition and easement of properties and buildings, given natural resource or heritage value. Projects involving buildings must be accompanied by a strategic plan for fundraising and restoration or adaptive reuse. Open space grant funds may not be used to restore structures.

County Open Space Projects

Over the next ten years, the County will pursue five major open space goals aimed at creating a connected open space network. These include the development and preservation of trails and greenways; land acquisition and easement of lands that expand, protect, and enhance county parks, historic sites, and natural areas; capital improvement and planning for parks and historic sites; continuation and expansion

for the farmland preservation program; and implementation of the Schuylkill River Greenway.

This update to the 1995 Plan provides current demographic and land use data for Towamencin, sets goals, and makes recommendations. The development trends documented in 1995 have continued and resulted in increased residential lands and fewer farms. The goals in this update reflect the physical changes in the Township and also emphasize cooperation with other municipal governments. Towamencin has also elected to take advantage of the *municipal trail and pathway development* optional plan element offered by the County to prioritize certain open space preservation efforts.

Audit of the 1995 Plan

An audit of the 1995 *Park, Recreation, and Open Space Plan* was conducted by Township Staff and the Open Space Planning Committee to determine how effective the Plan's goals and objectives were and which goals and objectives require additional planning. On the whole, the 1995 was very successful. Seven properties were either donated or acquired for preservation totaling over 90 acres (See Map 2: Existing Open Space). A number of farms began participation in the State Agricultural Security Area program. The Township also made several changes to their zoning and land development ordinances that help to preserve open space, such as allowing clustered development. Additionally, several recreation plans were conducted including park master plans and a township-wide trails plan.

A few elements of the 1995 Plan need additional attention. While the Township adopted a clustering ordinance, the minimal tract size is 100 acres, which leaves very few possible sites. Additional zoning tools such as performance zoning were recommended but not carried forward. The full audit of the 1995 Plan with the goals and objectives is attached as Appendix B.

Chapter 2. Community Background

Regional Setting

(The following section is reproduced from the 1995 Park, Recreation, and Open Space Preservation Plan)

Towamencin Township is located in the west-central portion of the North Penn Area of Montgomery County. In addition to Towamencin Township, the municipalities that comprise the North Penn area are: Franconia Township, Hatfield Borough, Hatfield Township, Lansdale Borough, Lower Salford Township, Montgomery Township, North Wales Borough, Souderton Borough, Telford Borough and Upper Gwynedd Township. Adjacent municipalities include: Franconia Township, Hatfield Township, Lansdale Borough, Lower Salford Township, Skippack Township, Upper Gwynedd Township and Worcester Township.

Several of these communities have recreation facilities which provide recreation opportunities for Towamencin Township residents. Evansburg State Park, a portion of which is located in Towamencin Township, also includes some acreage in Worcester Township and the bulk of its acreage is located in Skippack Township. The Philadelphia Variety Club Camp for handicapped children and adults, the Peter Wentz Farmstead County Park and the Center Square Golf Club are located in Worcester Township but provide recreational opportunities to Towamencin Township residents. Mainland Golf Course which contains an eighteen-hole golf course is located in both Lower Salford and Towamencin Townships. Another eighteen-hole golf course is located at the Indian Valley Country Club in Franconia Township. Additional swimming pool facilities are located at the Nor-Gwyn Pool in Upper Gwynedd. A public library, the North Penn Boys Club, the North Penn YMCA, and two pools are located in Lansdale, but provide recreation opportunities to Towamencin Township residents. Senior Adult Activity Centers are located in Lansdale and Lower Salford Township and provide programming and resources for recreation for older adults living in the North Penn Community.

Existing Land Use

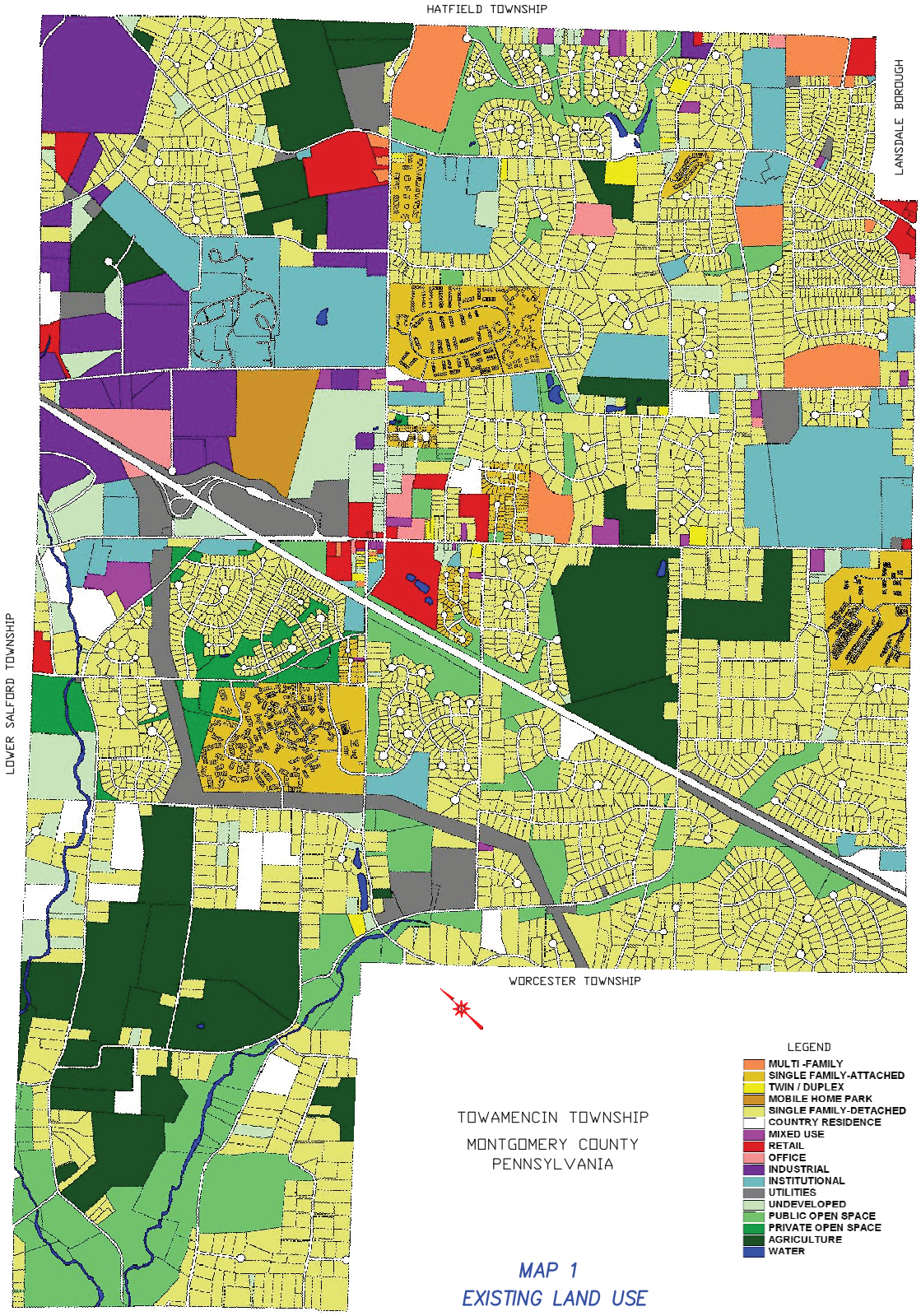
It appears that the Township is nearing its full build out with only 3.46% of the land classified "undeveloped." However, it should be noted that agricultural uses (with 15.44%) are the second highest land use percentage, and are predominantly found near Evansburg State Park, in the southwestern part of the Township. Nearly half the land area of the Township is residential (47.63%), with the strong majority of all residential uses being single family detached homes, spread throughout the Township. Overall, 11.25% of the land area is open space, either public or private; while most of the open space is part of Evansburg State Park, Township parks/open space and homeowners' association lands are also included. Higher Density Residential homes are principally located in the center of the Township, and industrial uses are concentrated in the northwest corner of the Township. Kulpsville Village is characterized by a mix of uses. The following chart details the exact acreage for each land use, and that land uses' percent of the total Township Area; and Map 1: Existing Land Use graphically represents all land uses.

Table 2: Existing Land Use as a Percentage of Total Area

EXISTING LAND USE	GROSS ACRES	% OF TOTAL ACRES
OTHER RESIDENTIAL (1)	862.26	12.34%
SINGLE FAMILY DETACHED (2)	2,465.20	35.29%
MIXED USE	43.19	0.62%
RETAIL	112.56	1.61%
OFFICE	40.67	0.58%
INDUSTRIAL	334.38	4.79%
INSTITUTIONAL	592.13	8.48%
UTILITIES	397.41	5.69%
UNDEVELOPED	241.82	3.46%
PUBLIC OPEN SPACE	679.41	9.73%
PRIVATE OPEN SPACE	105.85	1.52%
AGRICULTURE	1,078.36	15.44%
WATER	32.80	0.47%
TOTAL	**6,986.04**	**100.00%**

NOTES: 1) Includes Multi-Family, Single Family Attached, Twin / Duplex and Mobile Home Park.

2) Includes Single Family Detached and Country Residence



TOWAMENCIN TOWNSHIP

MONTGOMERY COUNTY

PENNSYLVANIA

MAP 1

EXISTING LAND USE

NOVEMBER 2005

THE WALTZMAN PLANNING GROUP

EDM CONSULTANTS, INC.
Brookview Corporate Center, Suite 2020 · 1250 South Broad Street
Lansdale, PA 19446 Phone (215) 699-4727 Fax (215) 699-4631

GRAPHIC SCALE

800 FT 0 800 1600 2400

W:/101/TTwpOpenMap1

Demographics, Housing, and Employment

The following section describes the demographic characteristics of Towamencin Township. Most of the data is derived from the 2000 U.S. Census. Information is provided regarding population growth, education, age structure, income, household type/size, special needs groups, and employment.

Population Growth

Towamencin experienced a 27.5% increase in population from 1980 to 1990, while Montgomery County only experienced a 5.4% increase during the same time period. From 1990 to 2000, Towamencin continued to grow at a fast pace, increasing its population by another 24.2%. From 1990 to 2000, Montgomery County grew by 10.6%.

Table 3: Population Totals and Change 1980-2000

	1980	1990	2000	Change 1980-90	Change 1990-00
Towamencin	11,112	14,167	17,597	27.5%	24.2%
Montgomery County	643,371	678,111	750,097	5.4%	10.6%

Sources: US Census, www.census.gov, 1995 Park, Recreation, & Open Space Preservation Plan

According to the 2000 Census, the total population for Towamencin Township was 17,597. The average household size in 2000 was 2.55.

The population of Towamencin Township is projected to increase by approximately 24% from 2000 to 2025, with a growth rate of 3-5% every five years. The population for Montgomery County is projected to increase by approximately 3% every 5 years through 2020.

Table 4: Population Projections

	2000	Forecasts				
	Census	2005	2010	2015	2020	2025
Towamencin	17,597	18,510	19,400	20,190	20,980	21,740
Montgomery County	750,097	776,340	797,990	818,210	838,700	857,030

Source: DVRPC, Table 3: Forecasted Population Change, Revised 2002 (www.dvrpc.org/data/databull/rdb/db73.htm)

Education

Of the population aged 25 or older, 92% were high school graduates and 43.1% had a bachelor's degree or higher.

Table 5: Level of Education

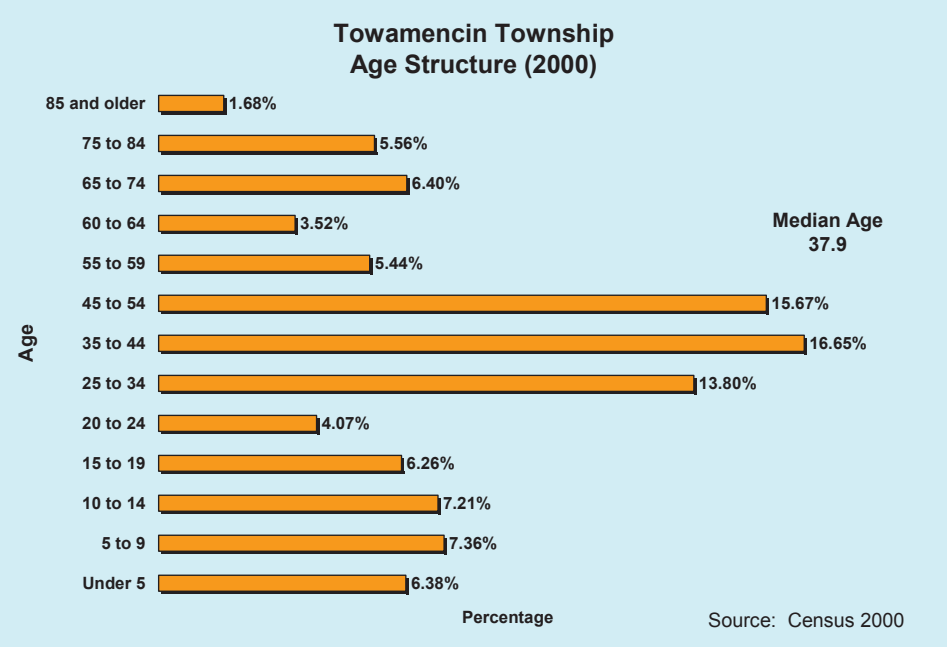
	Number	Percent
Population 25 years or older	12,085	100.0%
High School graduate or higher	11,106	92.0%
Bachelor's degree or higher	5,203	43.1%

Source: US Census 2000

Age Structure

The median age of a Towamencin resident in 2000 was 37.9. Approximately 27% of the population was aged 19 or younger and 23% of the population was aged 55 or older. The majority of the population (50%) was between 20 and 54.

Chart 1: Age Structure



Age Comparison to Surrounding Municipalities

The following graph shows the median age of Towamencin Township in comparison to the surrounding townships of: Franconia, Hatfield, Lansdale, Lower Salford, Skippack, Upper Gwynedd, and Worcester; as well as for Montgomery County. The median age

for Towamencin Township (37.9) is about the average median age for the surrounding municipalities illustrated in Table 6 below.

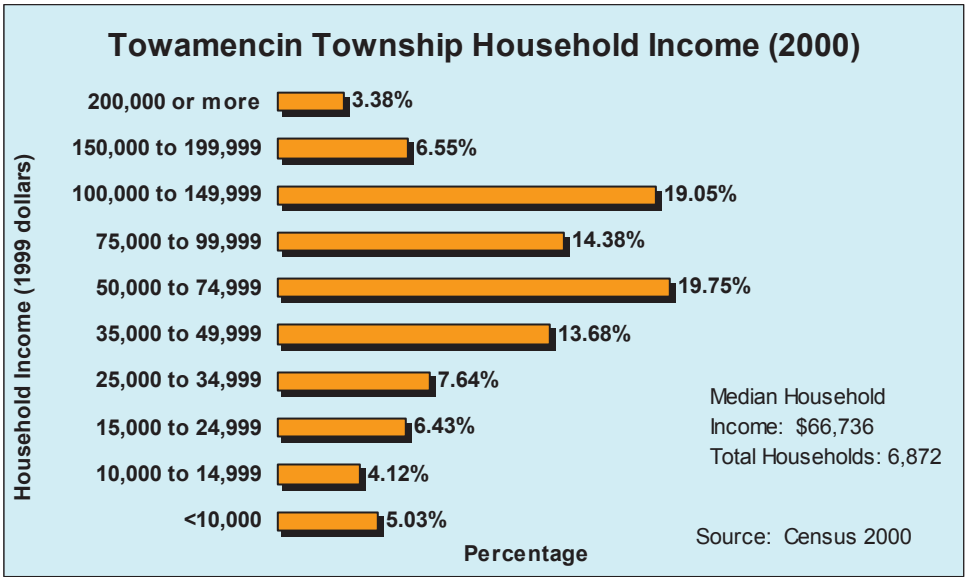
Table 6: Median Age of Surrounding Municipalities

	Median Age
Franconia	39.5
Hatfield	36.6
Lansdale	37.0
Lower Salford	34.6
Skippack	36.0
Towamencin	37.9
Upper Gwynedd	39.9
Worcester	39.9
Montgomery County	38.2

Household Income

The median household income in Towamencin in 2000 was $66,736, about 10% higher than the $60,829 median household income for Montgomery County.

Chart 2: Household Income



Household Types

Towamencin is a family-oriented community. Of the 6,872 households living there, 70% of them are family households. 49% of families have children under the age of 18.

Table 7: Household Types

	Number	Percent
Family Households	4,807	70.0%
Non-family Households	2,065	30.0%
Householder living alone	1,764	26.0%
Households with individuals <18	2,437	35.0%
Households with individuals 65 or older	1,742	25.0%
Total Households	**6,872**	**100.0%**
Average household Size	2.55	
Average family size	3.11	

Source: US Census, 2000

Household Size Comparison to Surrounding Municipalities

Towamencin has the lowest average household size of the surrounding municipalities, but almost the same as the average household size for the county. The average household size for Towamencin in 2000 was 2.55, somewhat less than the 1990 figure of 2.71; this is consistent with regional and national trends.

Table 8: Average Household Size

	Average Household Size
Franconia	2.70
Hatfield	2.63
Lansdale	2.36
Lower Salford	2.89
Skippack	2.73
Towamencin	2.55
Upper Gwynedd	2.63
Worcester	2.69
Montgomery County	2.54

Special Needs Groups

Special needs groups live within Towamencin and should be noted. Of the 13,152 civilian population aged 18 or older, 1,528 or 11.6% of them are civilian veterans. Of the 17,597 total population, 2,400 or 13.6% of them are senior citizens and 503 or 2.9% of them live in poverty.

Table 9: Special Needs Groups

	Number	Percent
Civilian population 18 or older	13,152	100.0%
Civilian veterans	1,528	11.6%
Total Population	17,597	100.0%
Seniors 65 years and older	2,400	13.6%
Individuals below poverty line	503	2.9%

Source: US Census, 2000

Civilian Non Institutionalized Population

Some of the people residing in Towamencin live with a disability and this should be noted and taken into consideration when planning for future recreational needs. Of the population aged 5-20, 4.6% of them have a disability. 12.8% of the population aged 21-64 live with a disability. Almost a third of the population aged 65 and older (32.1%) lives with a disability.

Table 10: Non Institutionalized Population

	Number	Percent
Population Age 5-20	3,699	100.0%
With a Disability	171	4.6%
Population Age 21-64	10,331	100.0%
With a Disability	1,320	12.8%
Population Age 65 and older	2,264	100.0%
With a Disability	727	32.1%

Housing Information

The majority of homes in Towamencin Township are single family detached (50.3%). 20.3% of the homes are single family attached.

Table 11: Units per Structure

	Number	Percent
1-unit, detached	3,538	50.3%
1-unit, attached	1,431	20.3%
2 units	97	1.4%
3 or 4 units	290	4.1%
5 to 9 units	477	6.8%
10 to 19 units	391	5.6%
20 or more units	698	9.9%
Mobile homes	116	1.6%
Total housing units	7,038	100.0%

Source: Census 2000 www.census.gov

Employment

The largest eight employers in the Township provide 2,442 jobs representing roughly 48% of Towamencin's total employment.

Table 12: Towamencin Largest Employers

North Penn School District	595
Green Tweed	570
Dock Woods Community	370
Accupac Acquisitions	230
SKF USA Inc.	225
MArtech Medical	260
Clemens Markets	112
Roy Lomas Carpets	80
Total	**2,442**

Montgomery County's employment is forecasted to increase 21.2% by 2030 while Towamencin's is forecasted to increase 73.8%. It is assumed that one of the reasons for such a high forecast is the anticipated development and redevelopment of properties in the Kulpsville Village area.

Table 13: Forecasted Employment Change, 2000 through 2030

	2000	2005	2010	2015	2020	2025	2030
Montgomery County	492,677	504,009	531,225	547,162	563,029	579,920	597,300
Towamencin	5,466	5,948	6,664	7,291	7,964	8,702	9,500

Source: Delaware Valley Regional Planning Commission

Demographic Implications

Reviewing Towamencin's demographic information reveals several trends which have important implications for recreation and open space planning.

Like many of the surrounding communities in Montgomery County, Towamencin is a community with a large proportion of families. The average household size is relatively high, confirming the presence of children (the Township's average family size is 3.11). This being the case, there should be a continued focus on providing sufficient active recreational opportunities such as sports fields or courts, playground equipment, and large multi-purpose open space areas.

Towamencin also has a prevalence of senior citizens. As population ages in place, this segment of the population has the potential to increase significantly. Consideration should be given to recreation and open space that is appropriate for an older population. While many seniors enjoy more passive recreational opportunities such as

walking trails, bird-watching, and passive open spaces, others enjoy active recreation as well.

Previously, Towamencin has demonstrated a balanced approach to recreation and open space planning. There are many factors beyond age that contribute to someone's recreational and open space preference, so by maintaining a balance of active and passive opportunities, the preferences of most of the citizens should be met. Based on the demographic profile of the township and projections, it is appropriate to continue this approach.

Existing Plans and Ordinances

Comprehensive Plan

In the most general sense, Towamencin Township's Comprehensive Plan, adopted in 1988, had as "Major Objectives" the preservation and enhancement of major environmental features and open space within the Township and for the provision of a coordinated system of needed municipal parklands and recreation areas. Again, speaking in generalities, the plan detailed approximately 488 acres of open space/recreation facilities in the study area for the Township. (It should be noted that this total does not detail the specific acreage for Evansburg State Park or Fischer's Pool within Towamencin Township).

Specifically, the Natural Features Plan within the Comprehensive Plan calls for the protection of critical environmental features through the following methods (this list is not every method outlined within the Comprehensive Plan; the list only contains those items which are pertinent to this Open Space Plan):

- Steep Slopes
  - Keep natural vegetation intact
  - Preserve areas with a slope greater the 25%
  - Require larger lots in steep slope areas
- Floodplains
  - A prohibition on all building in the floodplains
  - Permanent preservation as public or private open space
  - Avoiding the disturbance of natural vegetation with any paved surfaces
- Groundwater
  - Determine the maximum area of pervious surfaces so that maximum groundwater recharge can occur
- High Water Table Soils
  - Preserve all wetlands as open Space

- Wooded Areas
    - Remove diseased and dead trees from Township-owned Open Space and replant trees as needed
- Natural Drainage Channels
    - Preserve adequate width along channels. Keep lands open within fifteen feet of banks of natural drainage channels and small drainage-ways.
- Creeks
    - Require building and paving setbacks from creek and intermittent stream banks (twenty five foot minimum)

The Land Use Plan within the Comprehensive Plan does not specifically detail the parcels, if any are proposed for Open Space Preservation. However, the document does detail various options in place within the Township's Zoning Ordinance for Open Space to be set aside as part of the development process.

The Community Facilities Plan details the Township's plans for park and pathway development. The Plan shows two proposed parks; the first in the northwest portion of the Township (near the Walton Farm School) and the second south of Sumneytown Pike near North Penn High School. In addition, it shows one 'bikeway/pathway' along the PECO right-of-way west of Route 463 and north of Evansburg State Park (to be acquired through limited easements).

Township-Wide Trail Master Plan

The *Township-Wide Trail Master Plan* (adopted in January 1996) identifies a network of trails to serve all non-automobile transportation in the Township. The Trail Plan is an extension of the 1995 *Park, Recreation, and Open Space Preservation Plan* and its recommendations are therefore consistent with the recommendations made in this Plan Update. Specifically, the Plan Update recommends connecting the Liberty Bell Trail in the northern part of the Township with the Evansburg Trail in the southern part of the Township. The connecting trail, discussed later in this Plan, utilizes many of the same trail alignments established in the Trail Plan.

The Trail Plan also provides a detailed inventory of Towamencin's existing right-of-ways. An extensive trail network is proposed and different classifications are assigned to trail segments based on intensity and purpose of use. Implementation and funding strategies are developed that prioritize the trails based on need, safety, and likelihood of development. Partnerships and funding possibilities are also suggested as are design standards that address grading, landscaping, signage, and crossing standards.

Zoning Ordinance of Towamencin Township

There are three major sections of the Towamencin Township Zoning Ordinance, as amended through April 25, 2001, that relate to the creation, design and maintenance of open spaces. The Ordinance provides a residential cluster district that requires open space dedication. A floodplain district limits development, protects natural features, and creates open space in the 100-year floodplain. Last, the Ordinance provides environmental performance standards that protect various natural features including steep slopes.

The **Mixed Residential Cluster District** provides an option for tracts that are 100 acres or larger and are served by public water and sewer. The purpose and intent of the district according to Section 153-303.A.(8), is to "encourage a creative approach to the use and development of land while preserving open space and natural features, to promote a more desirable visual character in residential areas and to provide affordable housing and a variety of housing types in the Township within a neighborhood setting with usable open areas designed into the neighborhood and with the creation of, and connection to, open space corridors throughout the district and Township." Requirements of the district are established in Section 153-408. The minimum open space set aside is 25% of the gross tract area. The required maximum density in the District is 2.5 units per acre (excluding the right-of-way of existing streets). Three types of residential structures must be included in the development. At least 50% must be single-family detached and the other uses must not be less than 15%.

Subsection K. describes in detail the requirements for the design and maintenance of the created open space. Open spaces must be "located and so shaped as to be suitable for the purpose intended. Consideration shall be given to contiguous portions of existing and potential open space lands in adjacent tract." In addition to the required 25% minimum for open space, 25% of open space lands must be for active recreational purposes. Open space lands must be offered for dedication to the Township unless used for private purposes. The Township can require the dedication of specific open space lands if they are deemed to be a "key element" of the open space plan.

Towamencin's Zoning Ordinance also provides a **Floodplain Conservation Overlay District** for all area in the 100-year floodplain. The intent of the District is in part to, "protect areas of floodplain subject to, and necessary for, the containment of floodwaters, and to permit and encourage the retention of open space land uses which will be so located and utilized as to constitute a harmonious and appropriate aspect of the continuing physical development of Towamencin Township." Specific statements of purpose and intent are listed including to, "To maintain undisturbed the ecological balance between those natural system elements, including wildlife, vegetation, and marine life, dependent upon watercourses and water areas." (Section 153-303)

Section 153-617 of the Zoning Ordinance describes the permitted, prohibited, and banned uses and activities in the Floodplain Conservation District. The permitted uses are:

(1) Cultivation and harvesting of crops in accordance with the recognized soil conservation practices.
(2) Pasture and grazing land in accordance with recognized soil conservation practices.
(3) The growing of plant stock or an orchard in accordance with recognized soil conservation practices.
(4) Wildlife sanctuary, woodland preserve, arboretum, and passive recreation or parks, including hiking, bicycle and bridle trails, but including no facilities subject to damage by flooding.
(5) Forestry, lumbering and reforestation in accordance with recognized natural resource conservation practices, but permitting no structures.
(6) Utility transmission lines.
(7) Sealed public water supply wells and pipelines with approval of proper state agencies.
(8) Sanitary sewers, including pumping stations and similar uses, and storm sewers with the approval of the Township Engineer and the Pennsylvania Department of Environmental Resources.
(9) Front, side, or rear yards, and required lot area for any district.
(10) Public roadways with approval of applicable state agencies and the Board of Supervisors.
(11) Golf courses, not miniature, but permitting no structures.
(12) Picnic grove, but permitting no structures.
(13) Piers and docks along a waterway.

Prohibited activities and uses relate to the addition, expansion, removal, or modification of structures, soils, water, and vegetation in the floodplain are enumerated in the Ordinance. Banned uses include the storage of hazardous materials, which are also listed in the Ordinance. Procedures and standards for the application, variance, and special exception of the Floodplain District are also described in this section.

The Zoning Ordinance provides **Environmental Performance Standards** (Section 153-616), which are applicable to "Any site alterations, grading, filling or clearing of vegetation … when necessary in accordance with an approved subdivision." The standards limit the development activity within floodplains, lakes, wetlands, streams and watercourses, steep slopes, woodlands, and tree protection areas by requiring special exceptions for development. Specifically the Zoning Ordinance states:

> *Floodplain protection standards*. No structures, filling, piping, diverting, or stormwater detention basins shall be permitted within the floodplain as defined by this chapter except that roads, dams, culverts, bridges, storm or sanitary sewer facilities may be located in the floodplain or on floodplain soils where approval is obtained from the Pennsylvania Department of Environmental

Resources, the Zoning Hearing Board by special exception, and other regulatory agencies.

Lakes and ponds protection standards. No development, filling, or diverting shall be permitted in lakes or ponds or within lake/pond margins [50 feet] except where used for farm irrigation purposes.

Wetlands protection standards. Wetlands shall not be altered, regraded, developed, filled, piped, diverted, or built upon except that roads may cross wetlands where approval is obtained from the township by special exception of the Zoning Hearing Board and the U.S. Army Corps of Engineers or, as applicable, the Pennsylvania Department of Environmental Resources, and where no other access to the property is available. The property owner/applicant shall identify wetlands and where encroachment is anticipated shall obtain the applicable state and federal permits. One hundred percent of these wetland areas shall be protected. [Standards in this section include a 50 foot buffer, but exclude *limited value wetlands.*]

Streams and watercourses. Streams and watercourses (any lake, pond, perennial or intermittent stream shown on the U.S.G.S. map and/or identified by field survey) shall be 100% protected and shall remain as open space [Includes a 50 foot margin except where approved by special exception].

Steep slopes [Slopes in excess of 15%]. [The Zoning Ordinance provides detailed standards relating to the application of this section, stripping of vegetation, design standards, liability, and restrictions. These standards relate to the following stated intents of this section:]

[1] All structures will be located away from steep slopes on safe, stable grounds away from possible landslide or erosion activities.

[2] All roads and driveways will have safe and stable side slopes or shoulders.

[3] Development activities such as grading and stripping of vegetation will be minimized on steep slopes to reduce accelerated stormwater runoff and soil erosion of the slope, thereby preserving water quality.

[4] Environmentally sensitive native wildlife habitats (such as woodlands) located on steep slopes will be minimally affected by development.

[5] The visual integrity of steep slopes areas will be maintained throughout development.

Woodlands. Mature trees with a circumference of 60 inches or greater measured 14 inches above ground shall be identified and preserved, unless the Board of Supervisors agrees to a different disposition.

Tree protection area. The purpose is to ensure that trees which are to be protected do not suffer damage during the development. The tree protection area is an area radial to the trunk of a tree and shall be 15 feet from the trunk of the tree to be retained, or the distance from the trunk to the drip-line (the line marking the outer edge of the branches of the tree), whichever is greater. Where there is a group of trees or woodlands, the tree protection area shall be an area encompassing the protection areas for the individual trees.

Subdivision and Land Development Ordinance

The Subdivision and Land Development Ordinance of the Township of Towamencin, adopted April 17 1995, as amended through March 24 1999, establishes design, development, and maintenance standards for open spaces.

Section 136-502. Community facilities, requires both the Township Planning Commission and a developer to address community facilities for proposed developments or subdivisions including public requirements for open space. Subsection A. states, "In reviewing subdivision plans, the Township Planning Commission shall consider whether community facilities in the area are adequate to serve the needs of the additional dwellings proposed by the subdivision and shall make such report thereon as it deems necessary in the public interest." Subsection B. states, "Subdividers shall reserve land for both public and quasi-public community facilities and will reserve areas for facilities normally required in residential neighborhoods, including churches, libraries, schools and other public buildings, and parks, playgrounds and playfields." Playground and neighborhood park requirements are based on the number of dwelling units. Subsection B. requires:

Table 14: Park Area Requirements

Dwelling Units	Min. Park Acres
1 to 49	1.5 to 2.5
50 to 100	2.5 to 3.5
100 to 200	3.5 to 5.0
200 to 400	5.0 to 7.0
Each additional 100 units	1.0 to 2.0

The Ordinance provides minimum open space area dedication for residential land uses and provides a payment of a fee in lieu of dedication for non-residential land (and for residential land under certain circumstances). Lands that are not suitable for open space may not be used to meet the requirements of this section. Open space set asides

must be contiguous unless approved by the Board of Supervisors and they must conform to the Comprehensive Plan and Park and Recreation Plan. The maintenance and administration of open spaces not dedicated to the Township must be described in the plan. Additionally, all open space must be designated on plans as one of the four following categories:

(1) Lawn. A grass area, with or without trees, which may be used by the residents for a variety of purposes and which shall be mowed regularly to insure a neat and tidy appearance.
(2) Natural area. An area of natural vegetation undisturbed during construction, or replanted. Such areas may contain pathways. Meadows shall be maintained as such and not left to become weed-infested. Maintenance may be minimal, but shall prevent the proliferation of weeds and undesirable plants such as honeysuckle and poison ivy. Litter, dead trees and brush shall be removed, and streams shall be kept in free-flowing condition.
(3) Recreation area. An area designated for a specific recreation use including, but not limited to, tennis, swimming, shuffleboard, playfield, and tot lot. Such areas shall be maintained so as to avoid creating a hazard or nuisance, and shall perpetuate the proposed use.
(4) Agricultural area. An area designated for family vegetable plots or to be leased for an agricultural use.

Section 136-510 Landscape requirements. provides installation and maintenance standards for development plans. There is an emphasis on maintaining mature trees and vegetation in this section. The Section also outlines various requirements for buffers and landscaping in proposed developments; all of these are based on specific standards found in the Township Engineering Standards.

Chapter 3. Goals and Objectives

The following set of goals and objectives have been developed to guide the formulation of the 2005 update to the *Towamencin Township Park, Recreation & Open Space Preservation Plan*. These goals and objectives have been established in order to protect and enhance the quality of life sought by individuals living and working in the Township. In order to ensure that these goals and objectives continue to reflect current Township policies and that they are being actively pursued, they will be reviewed at least once a year by a committee appointed by the Board of Supervisors. As the need arises, this committee will recommend modifications of the goals and objectives to the Board.

Goal 1 Actively pursue new open space opportunities within the Township

a. Adopt methods to require useful and sustainable green space in areas to be redeveloped.
b. Develop various types of playing fields and additional recreational facilities to meet the current and growing needs of the community, and when appropriate, require the same of developers.
c. Coordinate the location and development of new open spaces with other existing and projected land uses so that they enhance one another.
d. Centrally locate recreational land within established and developing neighborhoods.
e. Establish a working list of priorities for immediate and long-term projected recreational and open space acquisitions and improvements and review and update this list annually.

Goal 2 Expand and maintain existing parks, open space and recreational areas

a. Plan new and existing parks, recreational areas, and recreational facilities to address a variety of uses.
b. Conduct an audit of existing uses and facilities at the Township's parks to determine if they are still appropriate based on current demands, and to assess the need for any repairs or renovations.
c. Conduct an audit of existing recreational uses in public open space areas within established residential developments to determine if additional facilities (for example, tot lots) should be installed.
d. Select park and recreation sites based on the land's suitability for their intended purposes.

e. Develop public and private partnerships to enable services and commercial ventures within our parks and recreational areas.
f. Work with local organizations to carry out similar open space goals.
g. Seek public input on plans for acquiring and developing open space lands, using all available options (Township newsletter, website, public meetings, etc.).

Goal 3 Protect Historic and Cultural Resources

a. Identify potential historical resources and sites within the Township.
b. Promote existing historical areas within the Township.
c. Partner with similar Township organizations and developers to preserve these areas.
d. Explore opportunities to preserve historic resources through the zoning and subdivision/land development processes.

Goal 4 Coordinate Township efforts with the regional open space network

a. Coordinate open space preservation, trail linkages, and facilities planning efforts with the efforts of other levels of government, abutting municipalities, and institutional entities.
b. Work with county on regional trail planning.
c. Continue to develop existing and new Township trails and linkages with the countywide trail system.

Goal 5 Protect and preserve natural resources

a. Separate residential uses from inharmonious land uses by utilizing topographic features, stream corridors, woodland, lakes, and other natural features, landscaped greenbelts, and open space as transition areas between uses.
b. Minimize the loss of open space from development through changes in zoning requirements, including consideration of adding cluster and performance zoning provisions.
c. Continue to protect the critical natural features and resources of the Township such as floodplains, woodlands, steep slopes, wetlands, and bodies of water. Confirm the adequacy of the controls on the permitted disturbance of critical resources during land development.

d. Continue to preserve and enhance the Township's existing green spaces.

Goal 6 Maximize the use of scarce financial resources available for open space and recreation

a. Pursue the rights of 'first refusal' for vulnerable parcels.
b. Monitor and take advantage of the resources available through various grant programs administered by all levels of government and other sources.
c. Encourage the use of innovative and least cost techniques to acquire land and develop recreation facilities.
d. Review and amend, as appropriate, Township requirements for developers to set aside open space and provide recreational facilities.
e. Review "fee in lieu of" requirements and update periodically to reflect current value of land and recreational facilities which would otherwise be required of developers.

Chapter 4. Protected and Potentially Vulnerable Lands

An important component open space planning is to establish a baseline of how much open space exists in a municipality and where it is located. A baseline inventory helps to identify where open space is most needed and where acquisition, maintenance, and open space linkage objectives have already been met. To help guide where open space preservation might be most important, it is also important to conduct an inventory of where vulnerable lands are located. Vulnerable lands have certain physical or cultural characteristics that make them more desirable as open space. The next section provides an inventory of Towamencin's open spaces followed by inventory of vulnerable lands.

Permanently and Temporarily Protected Lands

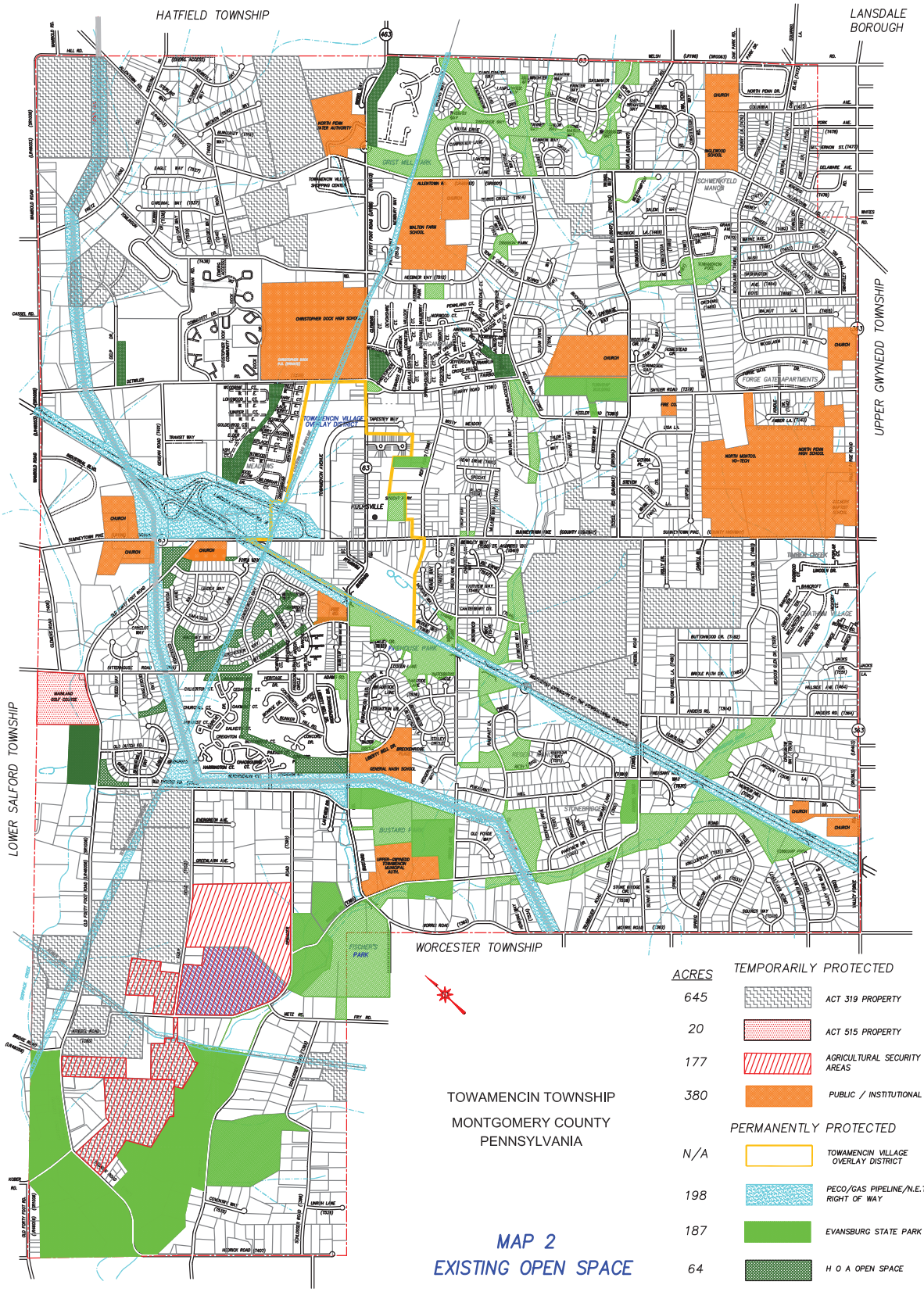
Open space protection can be provided by public governments or programs, private individuals or companies, or by not-for-profit land trusts through a variety of development restrictions. The greatest protection is offered through the purchase of a property, or a property's development rights, in order to restrict development permanently. Lesser forms of protection are offered through incentive programs that encourage a property owner to not develop their property; but do not offer permanent restriction. There are also open spaces for which protection is less clear. Institutional uses such as schools often have open spaces and recreation areas, which may developed if the school decides to move to a new location.

The *Green Fields/Green Towns* manual divides open space protection into two categories: permanently protected and temporarily protected. The manual then assigns the different tools to protect open space into the two categories (see Table 15: County Identification of Protected lands.). Most of the ways in which land is protected are fairly straight forward. Lands that are in municipal ownership, for example, are protected by the municipality. There are a few state programs that require some explanation however. Act 515 land refers legislation enacted in 1965 that allows property owners, on a voluntary basis, to defer certain property taxes on land so long as their land is not developed. Act 319 is a similar program enacted in 1974 that offers tax abetments for land that is used for agricultural purposes. Agricultural Security Areas are part of another state program that offers incentives for land preservation and ultimately can permanently preserve land through the acquisition of development rights.

Table 15: County Identification of Protected Lands

Permanently Protected		Temporarily Protected	
Municipal parks and open space	362	Act 515 land	20
County parks and open space	0	Act 319 land	645
State parks and open space	187	Golf courses	0
Federal parks and open space	0	Private recreation lands	0
Utility right-of-way	198	Large institutional holdings	380
Watershed association/conservation org. land	0	Agricultural security areas	177
Homeowners association land	77		
Other (cons. easements, dev'l rights purchased)	42		
Total	**866**	**Total**	**1,222**

These different open space protection tools have been carefully inventoried for Towamencin, and mapped (see Map 2: Existing Open Space). There are 866 acres of open space in the Township that are permanently protected and 1,222 that are under temporary protection. Combined, this is nearly one third of the Township's total area. The temporarily protected lands are subject to development. Protected lands are fairly evenly distributed with somewhat less open space in the northwest quadrant.


HATFIELD TOWNSHIP
LANSDALE BOROUGH
UPPER GWYNEDD TOWNSHIP
LOWER SALFORD TOWNSHIP
WORCESTER TOWNSHIP
TOWAMENCIN VILLAGE OVERLAY DISTRICT
SCHWENKFELD MANOR
FORGE GATE APARTMENTS
NORTH PENN HIGH SCHOOL
CHRISTOPHER DOCK HIGH SCHOOL
WALTON FARM SCHOOL
MARLAND GOLF COURSE
EVANSBURG STATE PARK
FISHER'S PARK
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA
MAP 2
EXISTING OPEN SPACE
NOVEMBER 2005
GRAPHIC SCALE
800 FT 0 800 1600 2400
ACRES
TEMPORARILY PROTECTED
645 ACT 319 PROPERTY
20 ACT 515 PROPERTY
177 AGRICULTURAL SECURITY AREAS
380 PUBLIC / INSTITUTIONAL
PERMANENTLY PROTECTED
N/A TOWAMENCIN VILLAGE OVERLAY DISTRICT
198 PECO/GAS PIPELINE/N.E.TURNPIKE RIGHT OF WAY
187 EVANSBURG STATE PARK
64 H O A OPEN SPACE
254 EXISTING TOWNSHIP OPEN SPACE
42 DEVELOPMENT RIGHTS EASEMENT (PURCHASED AFTER 1995)
13 H O A OPEN SPACE ADDED AFTER 1995
108 EXISTING TOWNSHIP OPEN SPACE ADDED AFTER 1995
THE WALTZMAN PLANNING GROUP
EDM CONSULTANTS, INC.
Brookview Corporate Center, Suite 2000 - 1252 South Broad Street
Lansdale, PA 19446 Phone (215) 699-4737 Fax (215) 699-4931
W:/101/TTwpOpenMap2

Potentially Vulnerable Resources

There are numerous physical and cultural characteristics that make open space a more valuable amenity. If open space abuts water for example, it has greater potential for recreation use and for connecting with trails. Because of the increased importance of these open spaces, they are more vulnerable from a preservation perspective. *Green Fields/Green Towns* provides a list of physical and cultural attributes that make land more vulnerable (see inset below). The amenities that occur in Towamencin are described below followed by a map showing their locations.

Green Fields/Green Towns Potential Vulnerable Resources

1. Natural Features:
    a. Geology:
        - unique geologic features
        - geologic hazard areas (sink holes, limestone formations, etc.)
        - rock outcroppings
        - aquifer characteristics (including recharge potential).
    b. Topography:
        - steep slopes (15+ percent and 25+ percent)
        - watershed boundaries
        - drainage areas
    c. Soils:
        - agricultural soils (prime farmland; soils of statewide importance)
        - seasonal high water table
    d. Surface Waters:
        - water bodies (streams, lakes, ponds, etc.)
        - headwater streams and springs
        - wetlands (hydric soils, national wetlands inventory)
        - floodplains (100-year)
        - water quality (cold water fisheries, exceptional waters)
        - riparian buffers
    e. Vegetation and Wildlife:
        - wooded areas (of defined size and width)
        - locally important vegetation
        - significant wildlife habitats
        - Pennsylvania Natural Diversity Inventory locations
        - Montgomery County Natural Areas Inventory
2. Scenic Resources:
    a. scenic roads.
    b. scenic vistas.
3. Historic and Cultural Resources:
    a. national register and national landmark sites.
    b. other historic sites (locally important and other).
    c. archaeological sites or ruins
    d. sites of local cultural significance.

Natural Features – Geology and Soils

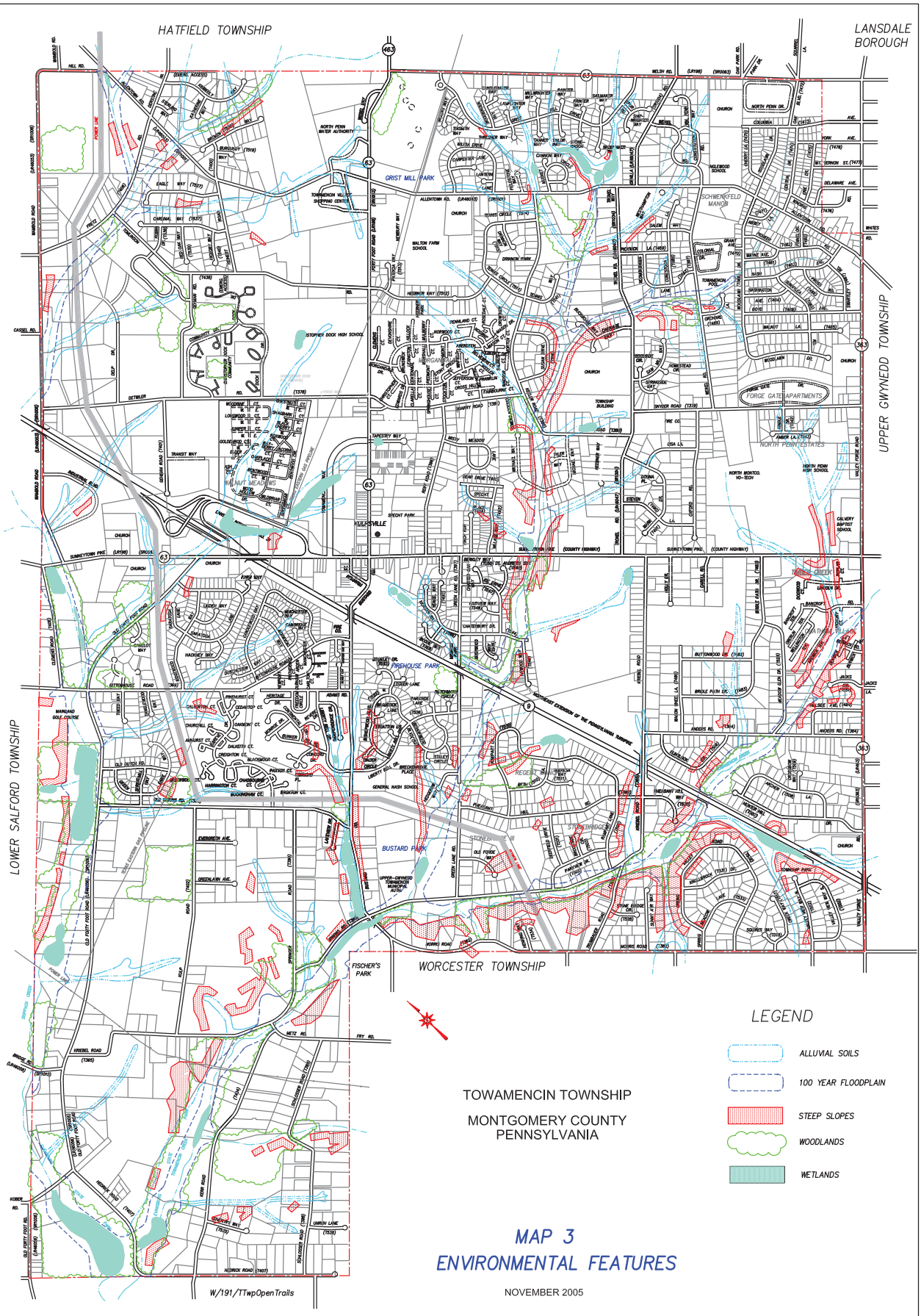
The entire Township is Brunswick Shale and Sandstone. According to the Montgomery County *Open Space Natural Resources and Cultural Resources Plan* (2005) "The Brunswick formation underlies most of the northwestern half of the county, except where several diabase intrusions are found. Brunswick shale and sandstone are characterized by reddish brown shale, mudstone, and siltstone. The topography of the formation is characterized by rolling hills. Groundwater yields are highly variable. The rocks are generally fine-grained and allow little primary porosity. Secondary openings, such as joints and fractures, are the key to adequate groundwater flow. This rock is a good to fair source of construction aggregate and fill material."

Topography, Hydrology, Vegetation, and Wildlife

Towamencin does not have significant amounts of unusual topography. The steeper parts of the Township are generally those around stream corridors, although there are some steeper hills. Steep slopes are generally not ideal for development and can therefore be used as open space. Because steep slopes are often transitional areas between different habitats they are often home to diverse species. Map 3: Environmental Features shows the location of all slopes greater than 15% in the Township.

Towamencin is located in the Skippack Creek Basin and the Towamencin Creek Sub-Basin. There are a number of 100 year floodplains located along the Township's major streams. There are also numerous wetlands. Both floodplains and wetlands offer diverse habitats for wildlife and have limited development possibilities. Therefore they present excellent opportunities for open space preservation. These areas are shown in Map 3.

No sites in Towamencin are identified in the Natural Areas Inventory prepared by the Nature Conservancy. There are *Areas of Hydrologic and Terrestrial Convergence* identified in Montgomery County's *Open Space, Natural Features, and Cultural Resource Plan* within the Township, but most of those are within Evansburg State Park, which is already protected.



LEGEND

- ALLUVIAL SOILS
- 100 YEAR FLOODPLAIN
- STEEP SLOPES
- WOODLANDS
- WETLANDS

TOWAMENCIN TOWNSHIP

MONTGOMERY COUNTY
PENNSYLVANIA

MAP 3
ENVIRONMENTAL FEATURES

NOVEMBER 2005

GRAPHIC SCALE

800 FT 0 800 1600 2400

THE WAETZMAN PLANNING GROUP

EDM CONSULTANTS, INC.
1101 South Broad Street
Lansdale, PA 19446 Phone (215) 393-0670 Fax (215) 393-0652

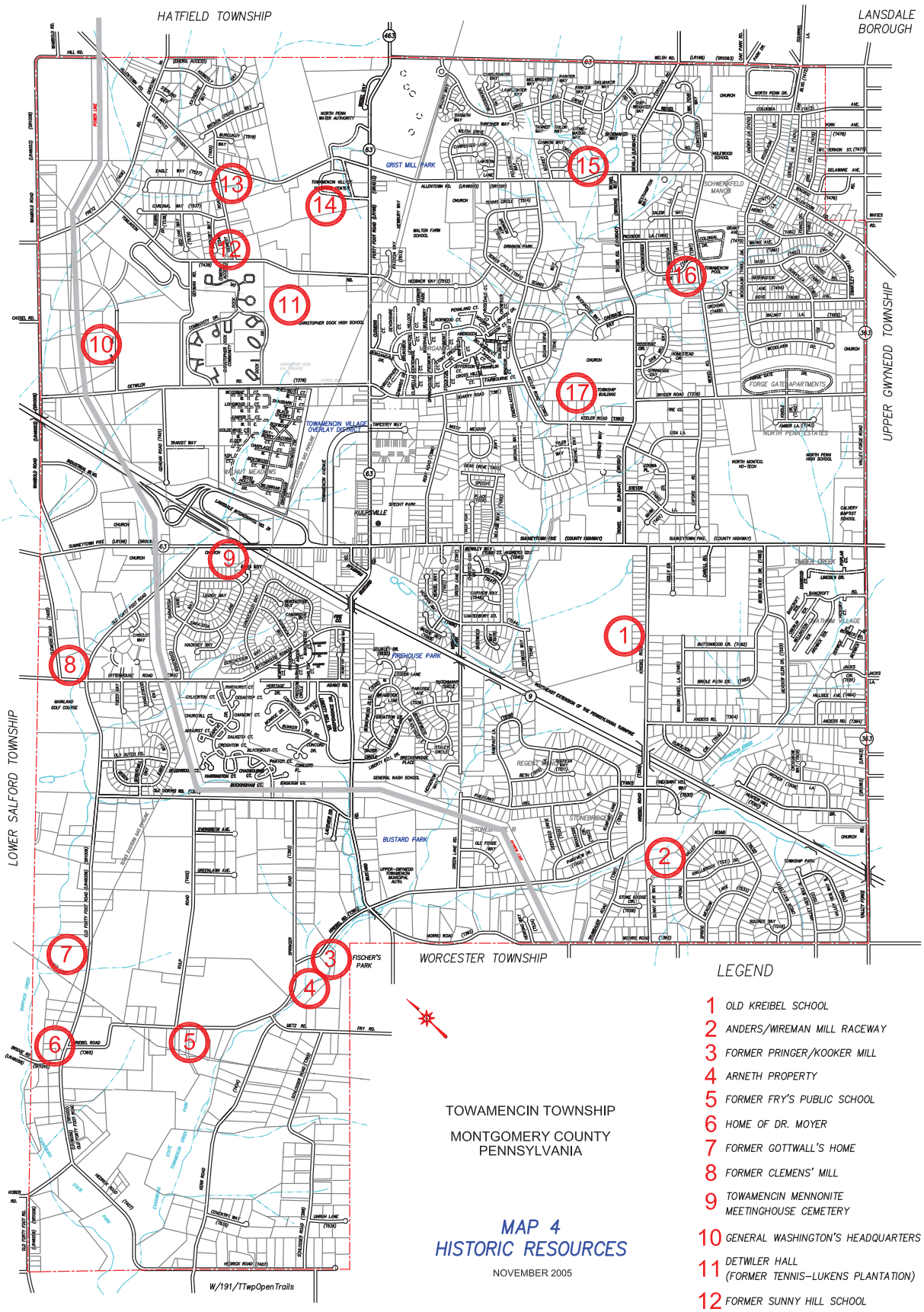
Scenic, Historic, and Cultural Resources

(Adapted from Historical Society of Towamencin promotional flyer, Historic Tour of Towamencin October 2002, compiled by Historic Society of Towamencin, Dr. Thomas Hollenbeck)

Towamencin, a Native American term for a poplar tree, was first inhabited by the Lenni Lenape tribe who moved down from the mountainous regions of the Delaware Valley in the winter to the New Jersey shore in the summer, searching for food. The earliest European settlers, German Mennonites, inhabited the area of the Township in 1702. In 1725, those settlers erected their first Quaker Meetinghouse, and in 1728 the Township was officially incorporated. Historic sites are plentiful in Towamencin Township, ranging from former Mill sites, to one room school houses, to markers identifying the earliest roads. The following chart and the accompanying Map 4: Significant Historic or Cultural Sites lists a few of the sites within the Township.

Table 16: Historic Sites in Towamencin Township with a brief description

Site	Description
Old Kreibel School	One of the few remaining one room schoolhouse in the North Penn Area
Anders/Wireman Mill Raceway	
Pringer/Kooker Mill	Headwater site for the Mill, thought to be in operation during the encampment of George Washington
Arneth Property	Donated to the Township
Fry's Public School	Modified from the original structure with dormers and an attached garage
Home of Dr. Moyer	Home to an early physician in the Township
Former Gottwall's Home	Site of where General Francis Nash died following the Battle of Germantown in October 1777
Former Clemens' Mill	Along Skippack Creek and was in operation until the early 1970's
Towamencin Mennonite Meetinghouse Cemetery	Site of various fallen soldiers from the Battle of Germantown, including General Francis Nash
General George Washington's Headquarters	A small plaque identifying the location of General George Washington's Headquarters during his 1777 encampment in the Township
Detwiler Hall (former Tennis-Lukens Plantation	A site used in the Underground Railroad prior to and during the Civil War
Former Sunny Hill School	Believed to have been moved from Allentown Road
1789 Stone Marker	Noting the site traveled by the Liberty Bell when it was moved from Philadelphia to Bethlehem in 1777
Tennis-Lukens Cemetery	Contains the remains of Revolutionary War causalities
Farm of Charles and Anna Moyer	A farm settle in the early 1800's
Morgan Log House	Home of the Grandparents of Daniel Boone
Rittenhouse Farmstead	Adaptive reuse of the Farmstead, now used as Towamencin's municipal complex



LEGEND

1 OLD KREIBEL SCHOOL
2 ANDERS/WIREMAN MILL RACEWAY
3 FORMER PRINGER/KOOKER MILL
4 ARNETH PROPERTY
5 FORMER FRY'S PUBLIC SCHOOL
6 HOME OF DR. MOYER
7 FORMER GOTTWALL'S HOME
8 FORMER CLEMENS' MILL
9 TOWAMENCIN MENNONITE MEETINGHOUSE CEMETERY
10 GENERAL WASHINGTON'S HEADQUARTERS
11 DETWILER HALL (FORMER TENNIS–LUKENS PLANTATION)
12 FORMER SUNNY HILL SCHOOL
13 1769 STONE MILE MARKER
14 TENNIS–LUKENS CEMETERY
15 FORMER FARM ANNA & CHARLES MOYER
16 MORGAN LOG HOUSE
17 FORMER RITTENHOUSE FARMSTEAD

SEE TEXT FOR DESCRIPTION OF HISTORIC RESOURCES

TOWAMENCIN TOWNSHIP

MONTGOMERY COUNTY
PENNSYLVANIA

MAP 4
HISTORIC RESOURCES

NOVEMBER 2005

GRAPHIC SCALE
800 FT 0 800 1600 2400

THE WALTZMAN PLANNING GROUP

EDM CONSULTANTS, INC.
1101 South Broad Street
Lansdale, PA 19446 Phone (215) 393-0670 Fax (215) 393-0652

W:/101/TTwpOpenMap4

Potential Open Space Linkages

Integral parts of the community, such as schools, neighborhoods, institutional buildings, commercial centers, and recreation areas benefit from being linked through an extensive trail network. There are numerous elements in Towamencin Township, and in neighboring municipalities that should be linked by a trail; whether that trail is on or off road, bikeway, or even just linear open space, the impact and accessibility of a community facility for the general population is greatly enhanced by the connection. The inventory of natural and built features in this Plan shows several important areas for connection.

However, of all the important areas for linkage within the Township and into the neighboring municipalities, Evansburg State Park is the largest and most important destination. In addition, with the recent feasibility study of the Liberty Bell Trail, a preferable route for connecting the Park to the northern areas of the Township have been previously studied, and offer a well documented route for connections throughout the Township. Remaining trails within the Township can make use of many existing rights-of-way, stream beds, or existing roads. As an example, the PECO or the Texas Eastern Gas rights-of-way provide an existing corridor that is accessible and has been used as trail locations in many other municipalities. In addition, Towamencin has many stream beds that have been developed as trails; however, those natural features can be further used for trail development. Skippack Creek and Towamencin Creek are two examples of trail corridors that have been developed, but can be expanded.

Chapter 5. Analysis of Unprotected Resources

Currently in Towamencin Township, there are 1,222 acres of temporarily protected open space land. Over half this land is currently protected under PA Act 319, a preferential assessment program, which lowers the assessed value of a property (based on a farm use). However, this program, or land use designation can be voluntarily removed by the landowner (once the difference in taxes between the farm use and the proposed use, and penalties have been paid).

The second largest portion of unprotected land within the Township is land held by large institutions. With landowners such as the North Penn School District (North Penn High School and Walton Farm School), the Mennonite Church (Christopher Dock High School), and the North MontCO Technical Career Center, these properties could be considered less likely to be developed than the Act 319 Land.

Table 17: Temporarily Protected Land in Towamencin Township

Act 515 land		20
Act 319 land		645
Golf courses		0
Private recreation lands		0
Large institutional holdings		380
Agricultural security areas		177
	Total	**1,222**

Overall, the risk of losing the majority of unprotected land within Towamencin may be low; however, this should not preclude the Township from a continual monitoring process. The Board of Supervisors should authorize the Open Space Advisory Committee to undertake a survey of the availability of the unprotected parcels on an annual basis and advise the Board of Supervisors to potential development on these sites.

In addition to unprotected tracts of land, an important element in the preservation of the land is the view to that land. The Township has identified one scenic road and numerous scenic views worthy of protection. Kriebel Road, near the Towamencin Creek, and specifically the southern portion of that roadway is a highly scenic road. Currently a linear park helps protect this roadway, but as any of the larger residential lots south of the creek develop, caution will need to be taken to ensure the view's preservation. The scenic views, as noted on Map 7, Open Space Plan (page 54) generally look onto the open spaces (park or agricultural land) within the Township, primarily in the southeastern, least developed area. Because the roadway and the views

provide even the casual observer with a glimpse into natural features of Towamencin Township, they should be considered when preservation decisions are being made.

Growth Area Calculations – Build Out Analysis

Through analysis of the available land (including unprotected open space) it has been determined that once completely built out, Towamencin Township's population will include 3,961 new residents (assuming that all new homes built within the Township will be inhabited by new residents). In addition, there will be an additional 928,000 square feet of new light industrial space developed, which would presumably create 1,856 new workers. The following table, Table 18: Population and Job Growth details the areas of growth:

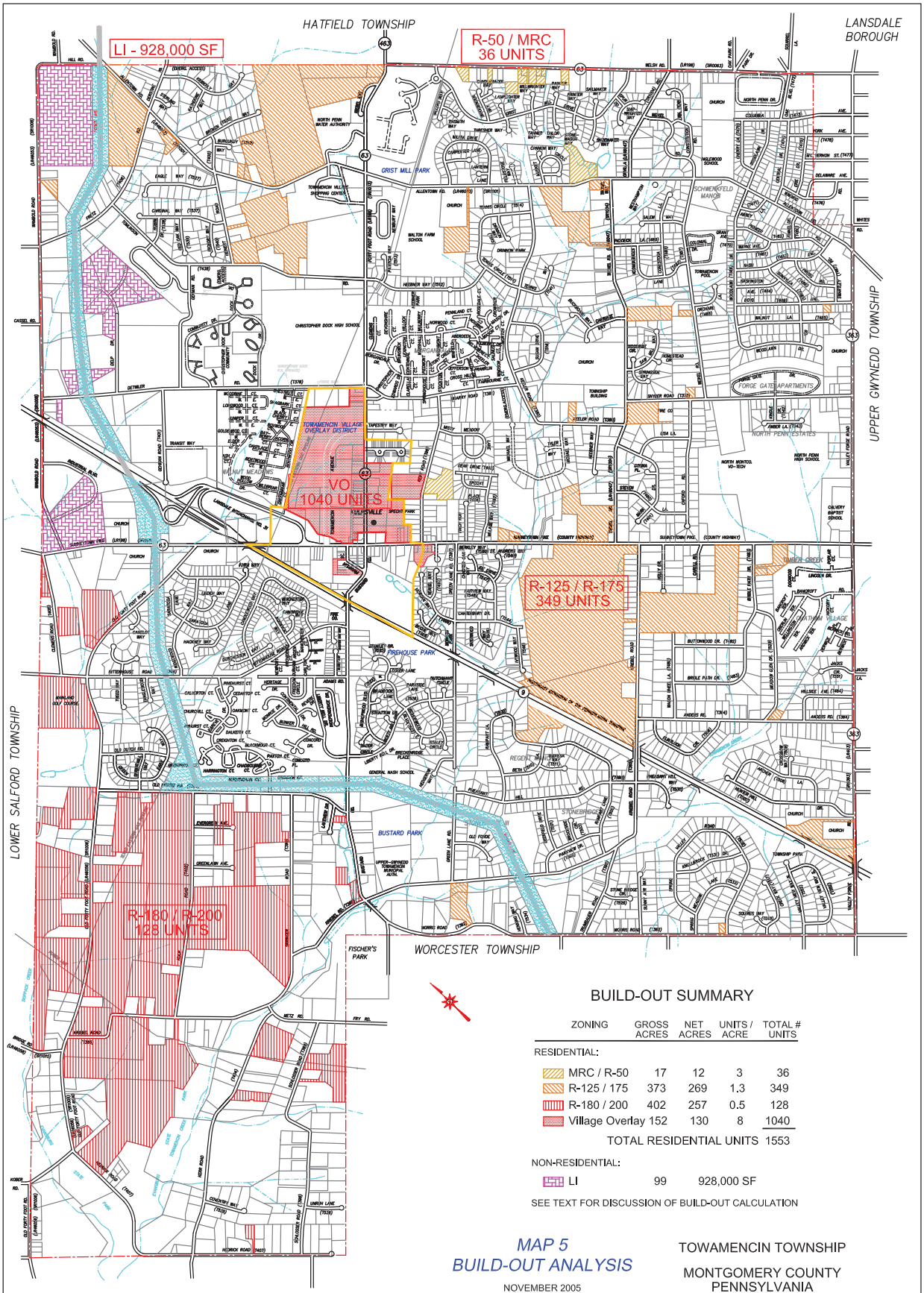
Table 18: Population and Job Growth

	Gross Acres	Environmental Constraint Reduction (percentage)*	Infrastructure Reduction (percentage)**	Net Acres	Units/Acre	Units Produced
MRC/R50	17	10	20	12	3	36
R125/R175	373	10	20	269	1.3	349
R180/R200	402	20	20	257	0.5	128
Village Overlay	152	5	10	130	8	1,040
Total	**944**		**Total**	**668**	Total	**1,553**
					New Residents:	**3,961**

Non-Residential	Gross Acres	Environmental Constraints*	Infrastructure Reduction**	Net Acres	Building Coverage	Square Footage Produced
Light Industrial	99	10	20	71	30%	928,000
					Jobs Created:	1,856

**Gross acreage is reduced by the percentages listed, to account for any environmentally constrained land.*
***Gross acreage is reduced by the percentages listed, to account for any infrastructure installed in a development.*

It should be noted that while the Village Overlay District allows a range of uses, it was assumed that the land in that District would all be developed residentially. This is the most conservative assumption since residential use has the greatest impact on the need for open space.



BUILD-OUT SUMMARY

ZONING	GROSS ACRES	NET ACRES	UNITS / ACRE	TOTAL # UNITS
RESIDENTIAL:				
MRC / R-50	17	12	3	36
R-125 / 175	373	269	1.3	349
R-180 / 200	402	257	0.5	128
Village Overlay	152	130	8	1040
TOTAL RESIDENTIAL UNITS				1553
NON-RESIDENTIAL:				
LI	99		928,000 SF	

SEE TEXT FOR DISCUSSION OF BUILD-OUT CALCULATION

MAP 5
BUILD-OUT ANALYSIS

NOVEMBER 2005

TOWAMENCIN TOWNSHIP

MONTGOMERY COUNTY
PENNSYLVANIA

GRAPHIC SCALE

800 FT 0 800 1600 2400

THE WAETZMAN PLANNING GROUP

EDM CONSULTANTS, INC.
1101 South Broad Street
Lansdale, PA 19446 Phone (215) 393-0670 Fax (215) 393-0652

W/101/TTwpOpenMap5

Evaluation of Open Space Needs

Historically, open space plans used a needs standard developed by the National Recreation and Park Association (NRPA) of 10 acres per 1,000 residents. This was a regional recommendation and primarily was used to calculate active recreation in developed areas. This one size fits all approach was determined to be too general to meet the needs of diverse communities, so the NRPA developed a new approach in their most recent publication *Park, Recreation, Open Space and Greenway Guidelines (1995).* Their new approach recommends considering the needs, desires, and resources of communities as well as changing environmental, social, economic and demographic trends.

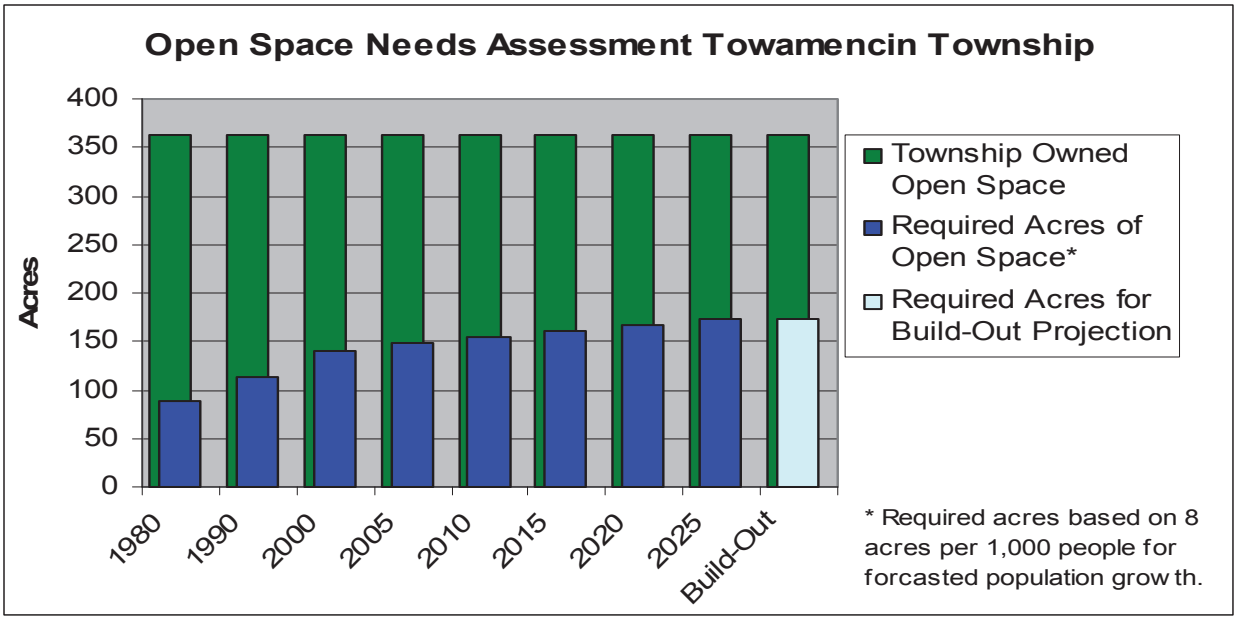
The Delaware Valley Regional Planning Commission (DVRPC) in following the NRPA's guidelines developed a density based formula for assessing open space needs in the Delaware Valley. It should be noted that the DVRPC is a regional entity and focuses on sub-regional (county) and regional (state and federal) open space requirements but also includes standards for local open space needs. In their 2002 report *Recreation Open Space Needs Analysis for the Delaware Valley,* the DVRPC determined need should be density based. For example, 1,000 residents in Philadelphia would not have the same open space needs as the same number of people in a rural township.

Towamencin Township, with a 2000 population density of 1,827 residents per square mile, falls into a density category that calls for eight acres of open space per 1,000 residents. In 2000, Towamencin had a population of 17,597 requiring 140.775 acres of open space based on the DVRPC standard. This amount does not include county, state, or federal parks which are viewed as regional or sub-regional open spaces. The current non-county or state open space land far exceeds this amount (see Table 19). The existing amount of open space is sufficient well beyond 2025 as shown in Chart 3.

Table 19: Existing Open Space Area

	Acres
Facilities ROW	198
Institutional	380
Evansburg State Park	187
Private Open Space	64
Open Space	254
ASA – Easement	42
Since 1995	
Private Open Space	13
Open Space	73
Total	**1,211**

Chart 3: Open Space Needs Assessment



Towamencin's open space needs are therefore focused on preserving the rural and natural lands that exist and creating active open spaces that can meet the needs of the residents of Towamencin. For example, while it is essential that the younger children and teens have sufficient fields and courts for their recreational needs, nearly half of the Township (46%) was between the ages of 25 and 54 in 2000 according to the US Census. It will therefore be important to provide a full range of recreational opportunities for whatever lands are acquired.

Chapter 6. Comparison to Abutting Plans

Towamencin is surrounded by six municipalities and is located within Montgomery County. Each has developed their own open space plan that meets the needs of the individual communities, but also influences Towamencin due to trail linkages and other overlapping regional open space planning. To ensure consistency and promote coordination, each of the surrounding municipality's open space plans were examined. Important overlaps are described below.

Montgomery County

Shaping Our Future: A Comprehensive Plan for Montgomery County

Open Space, Natural Features, and Cultural Resources Plan – Shaping Our Future: A Comprehensive Plan for Montgomery County (2004) guides open space decision making through the year 2025. *Shaping Our Future* inventories existing conditions, sets goals, and makes policies for the preservation of Montgomery County's natural features, open spaces, trails, farmland, and historic resources. Not surprisingly this document provides much of the information and is similar in format to the requirements of Montgomery County's *Green Fields Green Towns* manual upon which Towamencin's Open Space is based.

Shaping Our Future provides general information such as goals that can be applied to the County as a whole and specific information that can be applied to municipalities or sub-regional areas. The Plan's goals are listed below along with a short description of each goal.

Goal 11. Preserve Large Interconnected Areas of Significant Open Space. This goal includes purchasing of lands, adopting zoning ordinances, limiting sewer and water infrastructure in non-developed areas, fostering communication among interested parties and endorsing comprehensive open space plans.

Goal 12. Protect and Manage Wetlands, Stream, Steep Slopes, Woodlands, and Natural Habitats. Elements of this goal include protecting wetlands and environmentally sensitive areas on and for development plans and adopting riparian steep slope, and landscaping ordinances.

Goal 13. Create a Greenway System along Rivers, Creeks, and other Sensitive Natural and Historic Features. This goal will be achieved through ordinances,

purchasing land or development rights, and connecting open spaces to keep greenways in their natural state and to move development away from important greenways.

Goal 14. Develop a County-Wide Network of Interconnected Trails. This goal will be achieved through building trails along major corridors and working with different levels of government and the public to create interconnected trails.

It is noted that the County Trail Plan proposes three trails that impact Towamencin Township. The first, the Evansburg Trail meets a second trail, The Power Line Trail, at the southern-most Township border with Skippack Township. The third trail, the Liberty Bell Trail, touches the Township its boundary with Lansdale Borough. It is the primary goal of this Plan to develop a trail that is complementary of Montgomery County's proposed trails. As will be described later within this document, Towamencin is proposing a trail, named the Liberty Bell/Evansburg Park Trail, which will connect all the County Trails in the Township while also providing access to schools, neighborhoods, and community facilities throughout the Towamencin.

Goal 15. Provide Park Facilities to Meet the Public's Recreation Needs. This goal intends to place active recreation areas as close to population centers and growth areas as possible through zoning ordinances that require active open spaces, purchasing lands, and encouraging schools to allow their open spaces to be used by the general public.

Goal 16. Preserve Farmland. This goal will be achieved by through purchasing development rights and adopting zoning provisions that encourage large lots of preserved land.

Goal 17. Protect Scenic Roads, Vistas, and Viewsheds. This goal will be achieved through inventorying scenic corridors, providing scenic easements, and creating ordinances that cluster development, allow for transfers of development rights, and control the intensity and character of development.

Goal 18. Protect Historic Resources and Cultural Landscapes. This goal will be achieved by purchasing structures, using grants to improve and protect facades in historic areas, planning for historic resources, and creating ordinances to create village commercial areas and encourage adaptive reuse.

Lower Salford

Lower Salford's Open Space plan is being prepared by the Montgomery County Planning Commission. Examination of a draft of their open space plan and discussion with County staff indicate that there are limited opportunities for coordination between Lower Salford and Towamencin. There is overlap between the goals of the two Townships and collaboration on efforts to achieve these goals should be pursued where appropriate. Lower Salford's open space goals are to:

- Protect and Maintain Remaining Rural Character
- Protect Sensitive Natural Features
- Maintain and Enhance Recreation

Protect and Maintain Remaining Rural Character

Remaining areas of rural character have been diminishing during the past ten years. Therefore, it has become a high priority goal to identify key areas of the Township where significant rural qualities and characteristics can still be conserved, including the following:

Preserve Farmland, Scenic Views and Roads, Historic Sites and Landscapes

Rural character cannot be maintained if these elements are not effectively preserved and protected from the spread of suburban development. Therefore, protection of these rural features should be pursued aggressively through acquisition of land and/or easements, enactment of ordinance standards that require protection, and cooperation among landowners, developers, and the Township to maximize retention of rural character.

Preserve the Identity and Character of Existing Villages

The historic character of the Township's villages makes a vital contribution to the rural agricultural heritage of the Township and region. Measures that encourage retention of the identity and character of these villages are critical to the overall goals of this open space plan.

Protect Rural Character Using Regional Planning Concepts

The Township has historically permitted a wide variety of housing types from low to high density, and non-residential development with a wide variety of goods, services, and employment opportunities. As a member community in the Indian Valley Region, Lower Salford has planned for growth areas and rural resource conservation areas. In concert with the Future Land Use Plan element of the Indian Valley Regional Comprehensive Plan, the Township's Open Space Plan intends to protect vital elements of rural character and use land appropriately for active and passive recreation within those areas.

Protect Sensitive Natural Features

Natural features are critical elements of the rural character of the Township and they extend throughout the developed areas as well. Protection of these natural features should be aggressively pursued for both aesthetic benefits and environmental qualities using regulatory and stewardship methods.

Protect Steep Slopes

Avoid increased runoff and sedimentation from disturbed slopes, improve water quality and stormwater management, and retain habitats for plants and wildlife.

Protect Stream Corridors, Floodplains, and Wetlands

Carry floodwaters, reduce erosion, protect water quality, facilitate groundwater recharge, provide plant and animal habitats, and provide recreation opportunities.

Protect Woodlands

Reduce the impact of rainfall and control erosion, filter the air, protect privacy, provide windbreaks, cool the summer air, muffle noise, absorb odors, provide plant and animal habitat, and improve the appearance of the area.

Maintain and Enhance Recreation Opportunities

Most areas of the Township have convenient access to Township parkland and the need to acquire more land for active recreation has diminished. Therefore, the Open Space Plan recommends optimized use of existing parklands for active and passive purposes, and encourages establishment of a variety of recreation programs to serve the Township's residents.

Optimize Use of Existing Parklands

Community level parks are places to play a variety of organized sports such as soccer, baseball, softball, tennis, and basketball, and neighborhood level parks are conveniently accessible, especially as play areas for younger children. Greenway corridor parks along waterways protect natural features and facilitate trail connections and passive recreation activities.

Continue to Expand the Trail Network

The Township's existing trail network provides opportunities for recreation and alternative transportation. Wherever appropriate, new development should provide segments for the trail network and the network should interconnect with trails in adjoining communities, as outlined in the Indian Valley Regional Comprehensive Plan, and with the County's trail system.

Skippack

While not finalized, the Skippack Township Open Space Plan has a connection to Towamencin Township. The draft Plan details the acquisition of an easement along the

PECO right-of-way that would also connect to Evansburg State Park. This complements the proposed trail network within this plan.

Upper Gwynedd

In review of Upper Gwynedd Township's Trail Master Plan and Open Space Plan we note that it shows trails and land proposed to be acquired, yet there is little to no impact to the Township. In addition, the proposed trails do not extend to the border shared with Towamencin Township, nor do they connect to proposed trails in Towamencin Township. However, there are no conflicts with Towamencin's Plan.

Worcester

Preserve designated open space priority lands in the township in order to protect sensitive natural resources, preserve important agricultural lands and working farms, and conserve historic and heritage resources.

Objectives:

- Utilize local, state, and federal funding mechanisms in order to preserve approximately 50 to 100 acres annually.
- Discuss options for a local funding mechanism for the purpose of preserving additional Open Space Priority Lands.
- Preserve farmland surrounding Peter Wentz Farmstead to buffer the historic site from development and to preserve the unique attributes of the farmstead.
- Review and revise local ordinances as necessary to protect and promote the continued economic viability of working farms of all types in the township, in order to encourage existing farmers to continue farming as well as to attract additional farm owners to the township.

Preserve suburban open space lands in the township in order to prevent further sprawl development and reduce costs for public services such as schools, sewers, water, and roads.

Objectives:

- Enact a mandatory conservation subdivision zoning ordinance for all new subdivisions (except minor subdivisions), using Growing Greener-Conservation by Design Model.
- Create an Environmental Advisory Council, to review the specifics of land development plans in order to assure the protection, to the greatest extent possible, of important natural, cultural, and historic resources in the township.

- Enact a historic preservation ordinance to promote the preservation of lands and structures that may have local, state or national historic significance.
- Amend the current Subdivision and Land Development Ordinance to include more progressive site design techniques for stormwater management which will minimize the need for structural stormwater controls in all new developments.
- Identify and consider protection of local mill sites as historic and heritage resources of local significance.

Develop a network of parks and recreational trails to connect the passive and active open space within the township, as well as throughout the county.

Objectives:

- Identify potential linkages between existing or planned destinations within the township and in neighboring townships, and identify possible strategies to implement these linkages.
- Develop a recreation facilities assessment plan for the township to determine how to address recreation needs as well as the ideal location of the facilities.
- Enact a Park & Recreation Fee Ordinance in conjunction with the proposed Park & Recreation Assessment Plan to help create and preserve more active and passive open space.
- Enact a trail ordinance to require developers of larger parcels to provide a trail easement across the parcel so that planned or potential future trail linkages are not blocked by development.
    - Develop the following trail sections:
    - Evansburg State Park to Heebner Park.
    - Heebner Park to Nike Park.
    - Peter Wentz Loop

Connect areas of preserved open space with greenway linkages to enhance and protect the township's potential as an important natural habitat.

Objectives:

- Implement an environmental impact fee ordinance for variances granted under floodplain, riparian buffer, and steep slope protection ordinances, and use these fees to supplement municipal funding efforts to protect greenway areas.
- Establish a protected greenway along the Zacharias Creek (including feeder creeks and headwater areas) to handle floodwaters, minimize erosion, protect water quality, and provide important wildlife habitat.

- Establish a protected greenway along the Stoney Creek feeders (including headwater areas) to handle floodwaters, protect against erosion, protect water quality, and provide important wildlife habitat.
- Use "SmartConservation" mapping to identify and prioritize areas of environmental significance in order to plan for future protection of sensitive natural resources.

Hatfield

Bordering Towamencin Township along most of its northern edge, Hatfield Township has drafted their Open Space Preservation Plan (the plan is not officially adopted as of this printing). The draft Plan calls for the development of a trail network. These proposed trails are planned to connect to the proposed trail network contained within this plan.

The first short term Action Item in the Hatfield Multi-Municipal Open Space Plan (in conjunction with Hatfield Borough) is to design and build the Liberty Bell Trail. For the Township this includes the following actions:

- Acquire an easement on the Ruby's Plastics site at Schawb and Orvilla Roads
- Acquire an easement on the Railroad Corridor adjacent to the electric sub-station
- Acquire an easement on the Snyder property, if the property is developed in the future
- Work with the property owner of the trailer park to acquire the necessary right-of-way for development of the trail
- Pursue any required easements necessary for the complete of the trail through the Township.

While not immediately adjacent to Towamencin Township, the Hatfield Multi-Municipal Open Space Plan recommends the protection and preservation of "several adjacent undeveloped properties to create a large area of protected open space in the southern portion of the Township." These parcels as listed in the Draft Plan are as follows:

- The 87 acres of movie lots currently owned by the North Penn School District
- The Richard and Eva Baum Properties
- The Palo and Beach Property
- The Ehrlich Property

Overall, the Hatfield Multi-Municipal Open Space Plan in this current draft form, appears to be complementary to the proposed Open Space Plan for Towamencin Township.

Lansdale Borough

The small border that Towamencin and Lansdale Borough share is mostly residential and there are few open space areas around where they border. A portion of the Liberty Bell Trail is located along the border and this plan proposes a trail that will connect with the Liberty Bell Trail. The Goals and objectives of the Lansdale Open Space Plan are below.

2005 GOALS & OBJECTIVES

1. ESTABLISH A GREEN TOWN IMAGE

A. Fill gaps in the street tree network, especially in the central business district.
B. Create green gateways at strategic borough entrances.
C. Direct landowners on how to create and maintain greener public spaces, streetscapes, and parking lots.
D. Establish a residential neighborhood tree program.
E. Develop a façade and streetscape improvement plan.

2. PROVIDE OPEN SPACE OPPORTUNITIES IN ALL DISTRICTS

A. Create new plazas and pocket parks in the central business district.
B. Adopt methods to require useful and sustainable green space in redeveloped areas.
C. Maintain existing park, open space, and community facilities

3. ENHANCE EXISTING PARKS TO MEET COMMUNITY NEEDS

A. Create a balanced open space system with a variety of opportunities for all residents.
B. Enhance protection of streams, woodlands, and habitat at existing parks and throughout the borough.
C. Support development of cultural amenities in parks.
D. Develop public/private partnerships to enable services and commercial ventures within parks.
E. Expand existing parks when adjacent tracts add significantly to the open space network.

4. CONNECT WITH A REGIONAL OPEN SPACE NETWORK

A. Participate in regional trail planning.
B. Develop a local trail plan to compliment the regional system.
C. Manage sidewalk system to increase pedestrian access throughout the borough.
D. Develop clear signage to enhance usage of services and businesses in Lansdale.

5. PRESERVE PRIVATE LANDS THE COMMUNITY RELIES ON FOR RECREATION & OPEN SPACE

A. Pursue right of first refusal for vulnerable parcels.

B. Maximize community recreation benefit from private and institutionally-owned facilities.

Chapter 7. Municipal Trail and Pathway Development – Optional Element

As shown on Map 6: Trails, this Plan is calling for an extensive trail network to be developed in Towamencin Township. Currently, Towamencin has over 47,000 linear feet of trails constructed in the Township, 150,000 linear feet of planned trails, including over 41,000 linear feet designed trails. These trails are proposed to crisscross the Township and interconnect all major community facilities with Evansburg State Park, neighboring municipalities, and trails planned by Montgomery County. Table 20 shows the exact details of the length for each type of proposed and existing trail.

Table 20: Linear feet of Trail, proposed and installed

Future on road	Future Off Road	LBT/EPT HP	CMAQ Trail*	Completed Off-Road	Completed On-Road	Total Completed
44,795 feet	87,684 feet	26,035 feet	41,706 feet	12,500 feet	34,991 feet	47,491 feet
(8.48 miles)	(16.61 miles)	(4.83 miles)	(7.89 miles)	(2.36 miles)	(6.63 miles)	(8.99 miles)

**the linear feet included in this total are also included in the total linear feet for on and off road trails*

The 41,706-foot CMAQ Trail is separated out since these trail linkages have been designed. It is anticipated that the majority of the funding will come from a grant previously awarded to Towamencin Township. This grant was obtained through a Congestion Mitigation and Air Quality Improvement (CMAQ) Grant, a federal grant through the Delaware Valley Regional Planning Commission (DVRPC). CMAQ and the grant, as described by DVRPC's website are:

> [A] strategic federal initiative, funded through the DVRPC Transportation Improvement Program (TIP). The CMAQ program enables the DVRPC region to target funding to innovative programs that help manage congestion as we work to meet the national air quality standards. Many of these projects, though beneficial, might not be funded if not for this special effort. Periodically, DVRPC conducts a competitive application program open to public agencies, incorporated private firms and non-profit entities. Projects are selected for their ability to cost effectively reduce emissions from highway sources. CMAQ is a reimbursement program which can typically cover up to 80% of eligible project costs, with the project's sponsor covering at least the remaining 20%. (Source: www.dvrpc.org)

Of all the trails proposed in this Plan, the highest priority is the Liberty Bell Trail/Evansburg Park Trail; this trail also represents the highest priority recommendation for this plan. This trail will connect the proposed Montgomery County Trail in Evansburg State Park on the extreme southwest corner of the Township

to the proposed Liberty Bell Trail, which touches the Township on the extreme northeast corner. It also takes into account the County's proposed Power Line Trail. This trail is expected to be a combination of on- and off-road trail segments.

The high priority trail will directly serve a large cross-section of the Township's pedestrian and bicycle traffic. This trail provides linkages to other planned trails, and is designed to provide access between the Township's parks, residential neighborhoods, and the Towamencin Village District.

With regard to some specific destinations, the trail network proposed for Towamencin Township will connect the County's Liberty Bell/Evansburg State Park Trails, with two other "spines" connecting various destinations within the Township and provide excellent linkages, both on- and off- road. The first, Bustard Road/Forty-Foot Road nearly divides the Township down the middle. This provides a north-south spine, which generally connects important sites such as Christopher Dock High School, the Walton Farm Elementary School, and the Towamencin Village area through Township parks ending in Evansburg State Park. Leading from this spine, a trail has been planned between the Township Complex, an historic site, and the Towamencin Pool complex, adjacent to the Morgan Log House, also an historic site. The second major spine along Sumneytown Pike (Route 63, west of Forty-Foot Road) provides the east to west portion of the trail network, establishing a connection between the North Penn High School/North MontCO Vo-Tech School area and the Bustard Road/Forty-Foot Road spine, and through Township parklands, and again, ending at Evansburg State Park. It should be noted that Map 6 does not include specific delineation of trails within Evansburg State Park; it is recommended within the Action Plan that the Township work with the State on the development of the trail network within the Towamencin portion of the park.

In addition, all other trails, while still remaining a priority through the "window" of this plan, are planned for long term implementation. Primarily off road trails, the depiction of the trail locations on Map 6 (and Map 7: Open Space Plan) is merely representational; the exact location, ownership (easements or out-right Township acquisition), and exact construction details (materials, width, etc.) will be determined as each trail is programmed.

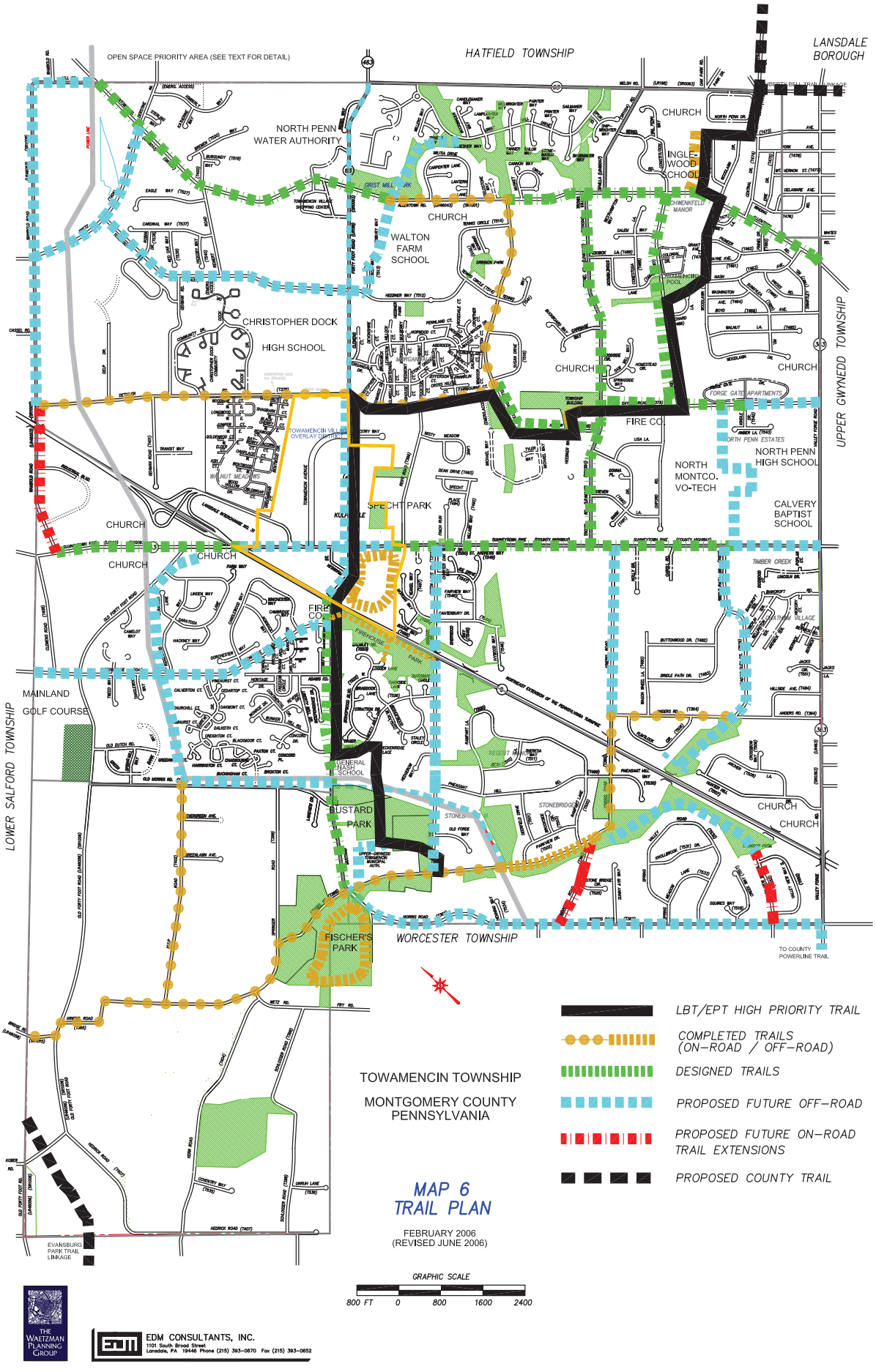
Various techniques can be used to acquire land for trail development by a municipality; according to the Guidelines for Trail Development within Montgomery County, Pennsylvania (the document is included in full in Appendix E), there are three acceptable methods:

1) Fee Simple Acquisition: A complete transfer of land ownership from one landowner to another party, usually by purchase.

2) Easement: Grants the right to use a specific portion of the land for a specific purpose or purposes. Easement may be limited to a specific period of time or may be granted in perpetuity; or the termination of the easement may be predicated upon the occurrence of a specific event. An easement agreement survives transfer of landownership and is generally binding upon future owners until expires on its own terms.

3) License/Lease Agreement: the temporary grant of an interest in land upon payment of determined fee. The fee does not have to monetary, but some consideration must be given for the right to use the land, or the lease will not be legally binding.

    i. License/lease agreements (between public utility agencies) will only be recognized and accepted by the Green Field/ Green Towns Program if the agreement is for 25 years or longer (with renewal options) and the municipality agrees to maintain and police the trail segment for that time span. The above stated condition of approval is to ensure that the municipality is 100% committed to planning, designing, building, and maintaining their public asset and recreation amenity.


OPEN SPACE PRIORITY AREA (SEE TEXT FOR DETAIL)
HATFIELD TOWNSHIP
LANSDALE BOROUGH
UPPER GWYNEDD TOWNSHIP
LOWER SALFORD TOWNSHIP
WORCESTER TOWNSHIP
NORTH PENN WATER AUTHORITY
WALTON FARM SCHOOL
CHRISTOPHER DOCK HIGH SCHOOL
INGLEWOOD SCHOOL
NORTH PENN HIGH SCHOOL
NORTH MONTCO. VO-TECH
CALVERY BAPTIST SCHOOL
MAINLAND GOLF COURSE
BUSTARD PARK
FISCHER'S PARK
SPECHT PARK
FIRE CO.
CHURCH
TOWAMENCIN VILLAGE OVERLAY DISTRICT
TO COUNTY POWERLINE TRAIL
EVANSBURG PARK TRAIL LINKAGE
LBT/EPT HIGH PRIORITY TRAIL
COMPLETED TRAILS (ON-ROAD / OFF-ROAD)
DESIGNED TRAILS
PROPOSED FUTURE OFF-ROAD
PROPOSED FUTURE ON-ROAD TRAIL EXTENSIONS
PROPOSED COUNTY TRAIL
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA
MAP 6
TRAIL PLAN
FEBRUARY 2006
(REVISED JUNE 2006)
GRAPHIC SCALE
800 FT 0 800 1600 2400
THE WAETZMAN PLANNING GROUP
EDM CONSULTANTS, INC.
1101 South Broad Street
Lansdale, PA 19446 Phone (215) 393-0670 Fax (215) 393-0652

Chapter 8. Recommendations

The Towamencin Open Space Planning Committee established a series of six goals and multiple objectives to guide open space preservation in the Township. Some of these goals can be implemented immediately by the Township while others will take additional planning, time, and resources. The Township is assisted in this process by their Round 1 municipal allocation of $1,314,808 from the *Green Fields/Green Towns* Program, which Towamencin is entitled to receive prior to April 2008. This initial funding is a logical vehicle to assist in the implementation of the Township's short-term priorities. The competitive funding provided by the County after 2008, presents an opportunity to assist in the implementation of long-term priorities. Other funding sources are available to assist in both short and long-term priorities.

Short-term Recommendations (2005-2008)

☐ Design and build the proposed Liberty Bell Trail/Evansburg Park Trail connector Trail (LBT/EPT Trail). The proposed LBT/EPT Trail is shown on Map 6: Trail Plan and Map 7: Open Space Plan.

☐ Develop the bike trails using previously awarded Congestion Mitigation and Air Quality (CMAQ) funding.

- Towamencin was awarded this funding from the federal transportation budget through the Delaware Valley Regional Planning Commission. The funding is for bike trails that have already been designed for construction by Schor dePalma Engineers (Township Engineer). Towamencin should move forward with this project and provide matching funds from their Round 1 allocation from the *Green Fields/Green Towns* program.

☐ Acquire recreation land in the Northwestern Section of the Township, represented on the Open Space Plan, Map 7, using the following criteria:

- Preference will be given to parcel(s) that are preferably 20 acres or larger (15 acres at a minimum)
- Land should not have large areas encumbered by environmental constraints that would make it unsuitable for recreational fields or courts.
- Track the status of private development in the northwest section, and give priority to any land areas that may be donated to the Township.
- The selected property should be accessible to:
    - Suitable through road(s)

  - Pedestrian paths
  - Residential areas
- Prioritize properties that could be developed in conjunction with:
  - Christopher Dock School
  - Hatfield Township
  - Lower Salford Township
  - North Penn School District
  - Other agencies or organizations.
- Prioritize properties that can be linked to the PECO power line right-of-way.

☐ There are several amendments to the Township Zoning Ordinance that the Planning Commission should investigate and if appropriate, draft language for the Board of Supervisors' approval, including:

- Amend the clustering provisions of the ordinance to, at a minimum, expand its use in other districts, reduce the minimum tract size where clustering applies, and increase the minimum open space set aside requirement. In amending the clustering provisions, include application to the R-200 Zoning District parcels with adjacent uses; these provisions should be written so that existing farmland is protected and development on agricultural tracts is not encouraged (with open space required around the periphery of the tract). This amendment will require a commitment for some form of on-site sewer provision; municipal sewer is not planned for this area.

- Investigate the possibility of amending the clustering provisions to include attached units and permit lot averaging (to allow for farm homes on larger sites). All attached unit provisions should have proper controls that ensure the development will have the appearance of large single homes. Design of the clustering subdivision should also ensure the protection of views.

- Add a subsection to the General Requirements that the donation or provision of open space or recreation amenities must be reviewed by the existing Township Open Space and Parks Advisory Committee to ensure consistency with this Plan.

- Add a subsection to the General Requirements creating historic resources performance standards to protect the cultural aesthetic of historic resources.

- Research legal techniques to fund open space acquisition and maintenance in addition to those currently enforced in the Township.

- ☐ There are several amendments to the Township Subdivision and Land Development Ordinance that the Planning Commission should investigate and if appropriate, draft language for the Board of Supervisors' approval, including:
    - Amend Section 136-502. of the ordinance to consider increasing minimum park acreage set-aside requirements per dwelling unit proposed.
    - Review and possibly update the other standards in Section 136-502.
    - Add a subsection that establishes open space design requirements for all developments similar to those in the MRC Zoning District. (These standards should be removed from the MRC District and merged into this proposed section.)

- ☐ The Board of Supervisors should authorize the Open Space and Parks Advisory Committee to conduct an audit of existing recreation facilities to determine where demand and maintenance needs are greatest.

- ☐ The Board of Supervisors should authorize the Open Space and Parks Advisory Committee to submit annual maintenance and improvement/acquisition priority reports to the Board.

- ☐ The Township should provide incentives to direct development into the Village Overlay District and other growth areas (through a streamlined development process) in order to guide growth away from lands to be preserved.

- ☐ Review land values and the fee charged as "fee-in-lieu of open space" for both non-residential and residential development. Assuming land values have risen since these fees were established, upward adjustments should be considered.

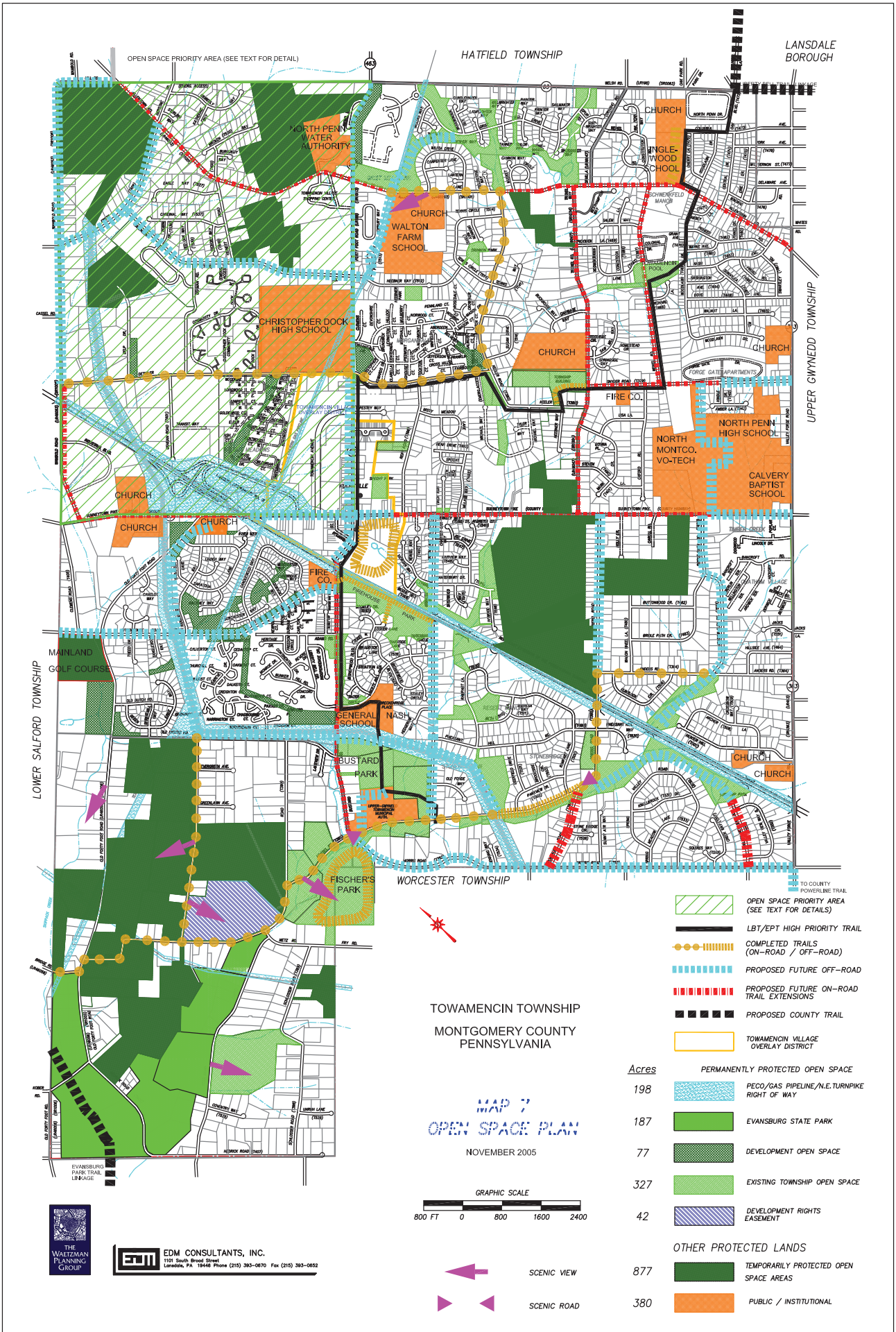
Long-term Recommendations (beyond 2008)

- ☐ The Board of Supervisors should request that the existing Agricultural Security Area Advisory Committee submit a status report of lands under Act 319, Act 515, and Agricultural Security Area protection and to prioritize farms that should be targeted for permanent preservation. This report should be shared with area land trusts to foster implementation.

- ☐ Design and develop the other Township trails identified on Map 6 and Map 7.

- ☐ Continue coordination with surrounding municipalities and the County for trail development and open space linkages.

- ☐ Work with the State to develop appropriate locations for the trails within Evansburg State Park and the connection points to those trails planned in Towamencin Township.


OPEN SPACE PRIORITY AREA (SEE TEXT FOR DETAIL)
HATFIELD TOWNSHIP
LANSDALE BOROUGH
UPPER GWYNEDD TOWNSHIP
LOWER SALFORD TOWNSHIP
WORCESTER TOWNSHIP
NORTH PENN WATER AUTHORITY
CHRISTOPHER DOCK HIGH SCHOOL
WALTON FARM SCHOOL
INGLE-WOOD SCHOOL
NORTH PENN HIGH SCHOOL
NORTH MONTCO. VO-TECH
CALVERY BAPTIST SCHOOL
FORGE GATE APARTMENTS
FIRE CO.
CHURCH
MAINLAND GOLF COURSE
GENERAL NASH SCHOOL
BUSTARD PARK
FISCHER'S PARK
EVANSBURG PARK TRAIL LINKAGE
TO COUNTY POWERLINE TRAIL
OPEN SPACE PRIORITY AREA (SEE TEXT FOR DETAILS)
LBT/EPT HIGH PRIORITY TRAIL
COMPLETED TRAILS (ON-ROAD / OFF-ROAD)
PROPOSED FUTURE OFF-ROAD
PROPOSED FUTURE ON-ROAD TRAIL EXTENSIONS
PROPOSED COUNTY TRAIL
TOWAMENCIN VILLAGE OVERLAY DISTRICT
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA
MAP 7
OPEN SPACE PLAN
NOVEMBER 2005
GRAPHIC SCALE
800 FT 0 800 1600 2400
Acres
PERMANENTLY PROTECTED OPEN SPACE
198 PECO/GAS PIPELINE/N.E.TURNPIKE RIGHT OF WAY
187 EVANSBURG STATE PARK
77 DEVELOPMENT OPEN SPACE
327 EXISTING TOWNSHIP OPEN SPACE
42 DEVELOPMENT RIGHTS EASEMENT
OTHER PROTECTED LANDS
877 TEMPORARILY PROTECTED OPEN SPACE AREAS
380 PUBLIC / INSTITUTIONAL
SCENIC VIEW
SCENIC ROAD
THE WAETZMAN PLANNING GROUP
EDM CONSULTANTS, INC.
1101 South Broad Street
Lansdale, PA 19446 Phone (215) 393-0670 Fax (215) 393-0652

Policies and Methods for Protecting Open Spaces

While outright acquisition is always an option, it is by far the most expensive option. Without actually buying land, there are numerous techniques that communities have available that preserve vulnerable resources. However, while all of the following methods will add to the public open space system, some land may be privately held land, as with permanently preserved agricultural land. The methods that could be used are described below.

[Editor's Note: This narrative has been extracted from documents prepared by Montgomery County Planning Commission. These policies and methods are generally applicable to most open space plans of this type. Editor's notes have been added indicating the specific applicability to the Towamencin Township Plan.]

Agricultural Zoning

This technique substantially lowers the density in rural areas so that only agricultural lots are created or perhaps a few residential lots. The minimum lot size must be large enough to support profitable farm operations (for example, from 10 to 40 acres). Generally 10 acres is used as a minimum farm size, which is consistent with Act 319 and other state and federal criteria. Whatever size is used, it will be a very restrictive minimum lot size and, except for estate lots, will exclude almost all residential development. A variation of this maintains a density of one home per 10 to 40 acres but allows homes to be put on smaller lots of 1 or 2 acres in size. This still limits the area to an agricultural density but allows small lots to be subdivided. As a result, farmers who need some income can subdivide off a few residential lots without changing the agricultural character of the area.

Still another variation relates the minimum lot size to the type of soil located on the property. Areas that have prime agricultural soils and soils of statewide importance would have one home per 10 to 40 acres, depending on the community's desires. Areas with other soil types could have homes on smaller lots (1 to 2 acres). This approach directly relates the zoning to the preservation of agricultural soils.

In order to use any of these zoning techniques, a municipality should have a strong, viable agricultural community and a limited amount of rural residential development. The zoning has to be clearly related to protecting agriculture, not just rural character. In addition, relating the zoning to the preservation of agricultural soils will strengthen the ordinance.

[Editor's note: Although it would appear that this may not be the most appropriate technique for Towamencin, it should be considered given the concentration of non-permanently protected agricultural land in the southwest corner of the Township.]

Create or Join an Agricultural Security Area and Encourage the Sale of Farmland Development Rights

State law allows groups of farmers, with municipal approval, to create agricultural security districts. These districts must comprise at least 500 acres, although the farms do not have to be contiguous. If a municipality has farms but cannot meet the acreage requirement, it can join another municipality's

district. Landowners who join one of these districts have absolutely no obligations whatsoever, but they do receive three distinct benefits. First, farms in agricultural security areas are protected from new ordinances that would restrict normal farming operations or define farms as nuisances. However, the farm operation must use acceptable farming practices that do not threaten the public health, safety, and welfare.

Second, condemning land in agricultural security areas is more difficult. Land condemnations by the Commonwealth or local municipal authorities, school boards, and governing bodies must be reviewed and approved by a state agricultural board before any action can be taken. Third, farms in an agricultural security area can apply to sell their development rights to the county and state. When development rights are sold, farmers receive the difference between the development value of their property and the farm value of their property. In return, a conservation easement is placed on the property permanently restricting any nonfarm development on the property. This program permanently preserves farms.

[Editor's note: As documented in this Plan, the Township already has an active ASA program, Encouraging existing participants, as well as any new ones, to sell their development rights, should be a priority.]

Performance Zoning

With this type of zoning, the minimum lot size in rural areas is directly related to the natural characteristics of a site. Through ratios put into the zoning ordinance, the lot size corresponds to the type and extent of natural features that present development constraints such as high water table soils, floodplain, and steep slopes. When a lot of these features are present, the minimum lot size must be increased. In contrast, where none exist, the minimum lot size will be relatively small, perhaps as small as 1 acre.

This type of zoning, known as performance zoning, has recently been upheld by the Pennsylvania courts as a viable way to controlling the impact of development on natural features. The simplest performance zoning ordinances subtract certain environmental constraints, such as floodplains and wetlands, from the net lot area. The area that is not environmentally constrained must meet the zoning district's minimum lot size. For example, if the zoning district allowed 2-acre lots and an applicant proposed a plan with a 2.5-acre lot but this lot had 1 acre of floodplains, the lot would not be permitted because it only has 1.5 acres of net area after floodplains are subtracted.

More complicated performance zoning ordinances apply ratios, ranging from 1 percent to 100 percent, to a wide range of environmental constraints such as floodplains, wetlands, steep slopes, soils, geology, woodlands, etc. The ratio is multiplied by the constrained portion of the lot. This is subtracted from the lot area to derive net lot area. For example, a 5-acre lot has 1 acre of floodplains and 1.6 acres of steep slopes. The zoning ordinance uses a ratio of 100 percent for floodplains and 50 percent for steep slopes. The 1 acre of floodplain is multiplied by 100 percent, which yields 1 acre. The 1.6 acres of steep slopes are multiplied by 50 percent, which yields .8 of an acre. The floodplain and steep slope constraints are added together, which totals 1.8 acres, and then subtracted from the lot area of 5 acres to yield a net lot area of 3.2 acres.

Reduce the Visual Impact of Rural Development

Communities can reduce the visual impact of rural development that occurs by encouraging or requiring homes to be hidden from view. For example, the zoning could allow a smaller lot size if

homes are located in wooded areas or behind ridgelines. On the other hand, the community could require homes that will be located on existing roads to have a larger lot size, bigger setbacks from the road, or screen buffers between the road and the home.

Often, municipalities require rural subdivisions to provide curbing and to widen the road, even though these improvements may not be necessary. It is necessary to widen streets and provide curbs in some areas. However, when these improvements are required in locations that do not need them, the historic rural character of the roadway is changed. Sometimes, special features of the landscape, such as historic bridges, tree rows, fences, and hedges, are also destroyed in the process.

Cluster Homes
Open space can be preserved within a proposed development by clustering the homes on one portion of the site while keeping the remainder as permanent open space. The overall density of the site remains approximately the same, but homes are put on smaller lots. The preserved open space might contain rural views, historic landscapes, farmland, woodlands, steep slopes, floodplain, wetlands, or any other vulnerable resource. The open space also may be dedicated to the township for parkland.

When homes are clustered on a site, significant portions of the site can be preserved-sometimes as much as 75 percent or 80 percent. Some of this open space can be left in the developed portion of the site so homes face neighborhood open space. In addition to benefiting the community by preserving important natural resources, clustering also benefits the developer by lowering infrastructure cost, usually by reducing the length of roads and utility lines.

[Editor's note: As documented in this Plan, some forms of cluster development already exist in the Township. Some recommendations to strengthen the effectiveness of this technique in the Township have been included in this Plan..]

Incentive Zoning
Communities can encourage developers to provide open space, recreation facilities, trails, and parkland through incentives. The incentive, which is put into specific zoning districts, might be that the developer gets a higher density than otherwise permitted, or perhaps a smaller lot size, or a waiver from certain landscaping requirements. The ordinance must be designed so that the cost of providing the amenity does not exceed the benefit received from the incentive. Otherwise, the developer will not take advantage of the incentive.

Natural Resource Protection Ordinances
These ordinances protect specific natural features such as floodplains, stream corridors, wetlands, groundwater, steep slopes, and woodlands.

- **Floodplains.** Floodplain ordinances, which exist in all of Montgomery County's communities, restrict or prohibit all development within floodplains, especially development within the 100-year floodplain. There are three levels of floodplain restrictions often seen in the county. Some floodplain ordinances, typically found in boroughs, allow development within the floodplain provided buildings are flood-proofed. Many ordinances do not allow most types of development within the floodplain. This approach protects property from flood damage, protects the environment within the floodplain, and reduces the possibility of raising the flood level. Other ordinances not only restrict development within the floodplain but also require a minimum setback from the edge of the floodplain. This approach protects the floodplain and may protect,

depending on its width, the unique wooded habitat, known as riparian woodlands, often located next to the floodplain.

• **Stream Corridors.** Stream corridor protection ordinances go further than floodplain ordinances, which are primarily intended to limit property damage. The intent of stream protection ordinances is to protect the water quality of the stream as well as plant and animal habitats. Typically, these ordinances impose a minimum setback from the stream bank in which no development may occur. For example, a minimum setback of 75 feet from the stream bank will help stabilize the stream bank, control sediment, remove nutrients that would pollute the stream, moderate stream temperature, and provide wildlife habitat. The area within the buffer should be left in its natural state, which will usually be a riparian woodland.

• **Wetlands.** Federal and state governments regulate wetlands and so can municipalities. Sometimes, development occurs on wetlands, and the state and federal governments are unaware of this development. Municipalities that prohibit development on wetlands and require wetlands to be shown on development plans, can stop development of wetlands from slipping through the cracks. Sometimes, developers receive all of the federal and state permits they need, but they locate homes right next to wetland areas. Although this is permitted by state and federal regulations, it can lead to future problems if individual homeowners decide to fill in the wet spot behind their home to have a more usable back yard. Local municipalities can eliminate this problem by requiring a minimum building setback from wetlands. In addition, federal and state regulations only address the filling of wetlands, not the destruction of vegetation within the wetlands. Local municipalities can require the replacement of destroyed wetlands vegetation.

• **Groundwater.** Groundwater quality can be protected with wellhead protection ordinances or aquifer recharge ordinances. Because aquifers are so large, wellhead protection ordinances are more common. These ordinances, which only protect public wells not individual wells, regulate development in an area that could potentially contaminate the groundwater supplying a well. This area, called a wellhead protection area, can be identified in a number of ways. The most accurate method is to conduct a hydrogeologic survey. Development within the wellhead protection area can be regulated by restricting certain uses such as gas stations, limiting the intensity of development (such as limiting the density of single-family detached homes with individual septic systems), and/or by controlling how a land use activity occurs (such as farming with specific types of pesticides, herbicides, and other chemicals). In addition, a community may impose design standards on new construction that might pollute the groundwater. This could include hazardous materials containment structures or areas, surface water runoff collection systems, and large impervious areas such as parking lots and buildings.

• **Steep Slopes**. Steep slope ordinances restrict or prohibit development in steep slope areas, which are typically areas with slopes of 15 percent or more. Usually, on slopes of 15 percent to 25 percent, development is permitted if the minimum lot size is increased and/or the percent of the lot disturbed is limited. Some steep slope ordinances prohibit all development, although this prohibition does not normally occur until the slopes are extremely steep-25 percent or more.

• **Woodlands**. Woodland preservation ordinances are intended to protect existing trees and woodlands. Some of these ordinances provide minimum standards, which must be followed during construction for trees that will remain. Other ordinances allow developers to put up fewer street trees, buffers, or individual lot trees when existing trees are preserved. Some ordinances

require developers to replace trees that are cut down. Other ordinances, which may face legal challenge, prohibit the destruction of any trees.

[Editor's note: Also as documented early in the Plan, the Township already has many regulatory provisions in place to protect sensitive environmental features, such as those discussed above. Recommendations to improve/supplement these regulations with additional ones, is included herein as well.]

Transfer of Development Rights
This method of preserving rural land transfers development from rural areas to growth areas. With a transfer of development rights program, rural landowners can sell their development rights to developers in the township's growth areas instead of developing their rural land.

For example, a rural landowner who has 50 acres might normally be allowed to subdivide them into 20 two-acre lots. Instead, with a TDR program, the landowner sells the right to build these 20 lots to a developer in a growth area. The developer adds those 20 units, or more as appropriate, to the number of units normally allowed to be built. The rural landowner, who has been paid for these development rights, is then required to deed restrict the land against any future development.

Encourage Donations of Properties for Permanent Open Space
Sometimes, landowners want to preserve their land by donating the full title of the property or by donating their development rights to nonprofit land conservation groups. Either of these approaches will permanently preserve land as open space. Landowners who donate development rights will receive tax benefits, but the land must be permanently restricted from future development. There are a number of land conservation groups operating in Montgomery County that would be willing to take these donations. These groups include the Montgomery County Lands Trust, the Brandywine Conservancy, the Natural Lands Trust, the Nature Conservancy, the Conservancy of Montgomery County, and the Wissahickon Watershed Association.

Some land conservation groups can also help local landowners develop some of their land while keeping the majority open and deed-restricted. With this approach, the land is developed in a very sensitive manner. The landowner receives some money, while the most important environmental amenities on the site are preserved.

[Editor's Note: The Township recently was the recipient of a donation of open Space, the 35 acre Kibler Estate. The Township should work with land preservation organization to better educate landowners about donations.

Require Developments to Provide Open Space or Pay a Fee In Lieu of Such Open Space
Through the zoning and/or subdivision ordinance, municipalities can require developers to provide open space. If this requirement is put into the zoning ordinance, it must be located in specific zoning districts such as the high-density residential district. The zoning ordinance may specify that a certain percentage of a site, perhaps 15 percent to 20 percent, must meet a number of criteria and be maintained as common open space. The municipality cannot require this open space to be dedicated or to be open to the public or to include specific recreational facilities. The community can, however, require the land to meet specific standards such as the open space must consist of flat, open land that is suitable for playing fields.

According to the Pennsylvania Municipalities Planning Code, the subdivision and land development ordinance can also require developers to provide open space, but it can go much further than the zoning ordinance. It can require the land to be dedicated to the township. If a developer does not want to provide land, the ordinance can require fees in lieu of land. In order to have this type of requirement, the community must have an adopted recreation plan, and the ordinance must follow specific standards in the municipality's code. Usually, unless a development includes an area the community wants to use for parkland, it is better for municipalities to accept fees in lieu of open space. This is so large, central parks can be provided rather than a number of small, inaccessible, and limited park sites.

Generally, requiring developments to provide open space allows municipalities to meet the needs of new residents without building new municipal parks. With this technique, for instance, the developer of a large townhouse development or single-family detached development would have to provide parkland for the homeowners in these developments. If there were no land and facilities provided by the developer, these homeowners might eventually put pressure on the township to provide open space and parkland.

[Editor's note: This practice is already in force in the Township. When open space cannot practically be provided, fees in lieu are collected. This plan recommends the amount of these fees be reviewed and adopted as appropriate to account for reviewed land values.]

Historic Preservation Ordinances

Although not directly related to open space preservation, saving historic properties does add to the character of an area. There are a number of techniques communities can use for historic preservation. First, they can amend their building codes to require a review before demolition permits are issued. This approach delays demolition and allows community input but does not stop demolition or encourage preservation of the building. Second, communities can also amend their zoning ordinance to encourage historic preservation. This could be done by creating a village ordinance which gives development bonuses for preserving buildings or restricts the uses that can go into the district. Incompatible uses, such as gas stations, are not permitted in these districts.

The zoning ordinance can also encourage historic preservation by allowing historic buildings to have more uses than normally permitted in a particular district. For example, apartments, bed and breakfast establishments, or offices might be permitted in historic homes located in a single-family detached residential district. Third, communities can create historic districts with the approval of the Pennsylvania Museum Commission. This approach is the most restrictive. After a historic district is created, townships have stringent control over design and preservation of facades. A township architectural review board has to be created to review all proposed changes to historic buildings.

[Editor's note: While a historic district does not appear appropriate for Towamencin, give the dispersal of resources, other zoning techniques could be advantageous. In addition to supplemental uses for some types of historic buildings, a historic and cultural overlay district is a possibility. This would ensure that these resources are properly considered during the development process.]

Chapter 9. Action Plan

On the following pages is an Action Plan which lists the various recommendations contained throughout the Plan. It lists the recommended implementation strategy (or 'action'), the responsible parties to undertake the action (in many cases there will be multiple parties, but the major 'players' are listed), the priority for the action, an estimated cost, and potential funding sources. In each case, Township revenues are possible funding sources, but are not listed since they would apply to all. Specific funding or grant programs which might fund particular types of actions are listed.

In terms of funding sources, the Township has several at its disposal. Currently, Towamencin Township requires that each development pay a fee-in-lieu of open space when none is set aside; the fee is dependant on the number of dwelling units developed or square footage of non-residential area developed ($1,000 per dwelling unit or $1,000 per 2,000 square feet for non-residential). Over the past five years, this fund has been averaging over $40,000 per year in contributions.

Additionally, the Township has investigated and obtained a grant from the Congestion Mitigation and Air Quality Improvement (CMAQ) Program; while this program is possibly a "one-time" funding source, others shall be investigated (as have been identified in the Action Plan Chart following this section).

Action Plan Chart

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
Design and build the proposed Liberty Bell Trail/Evansburg Park Trail connector Trail (LBT/EPT Trail).	Board of Supervisors, Open Space Committee, Township Staff, Township Engineer	Short Term	Using the Montgomery County standard linear foot cost for a six foot wide multi-use trail, paved the approximate cost for the 26,035 linear feet of proposed trail would be: $559,750. * *This figure does not include preliminary or final engineering costs or land acquisition (easements have been assumed). The cost, according to Montgomery County would be $21.50 per linear foot for "virgin" territory; cost would be less for areas where less earth moving is necessary.	Montgomery County Open Space Funding, Rivers, Trails, and Conservation Assistance Program (Nat'l Park Service)
Develop the bike trails using previously awarded Congestion Mitigation and Air Quality (CMAQ) funding.	Board of Supervisors, Open Space Committee, Township Staff, Township Engineer	Short Term	Using the Montgomery County standard as described in the previous row, and with the estimated 41,706 linear feet of proposed trail, the approximate cost for trails in this category would be $896,679.* *This figure does not include preliminary or final engineering costs or land acquisition (easements have been assumed). The cost, according to Montgomery County would be $21.50 per linear foot for "virgin" territory; cost would be less for areas where less earth moving is necessary.	CMAQ (DVRPC), Montgomery County Open Space Funding Rivers, Trails, and Conservation Assistance Program (Nat'l Park Service)

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
Acquire recreation land in the Northwestern Section of the Township, represented on the Open Space Plan, Map 6	Board of Supervisors, Open Space Committee, Township Staff	Short Term	The cost to acquire twenty acres in the Northwestern section of the Township would cost approximately $971,400. This estimate is based on the recent appraisal of the Kibler Estate, at $1.7 million for 35 acres ($48,570 per acre); the Kibler parcel is the most recent land donation and appraisal in Towamencin Township. Prices for acquisition will vary depending on market conditions, condition of the land, and numerous other factors. Engineering fees, or other costs for final land development are not included in this figure.	Montgomery County Open Space Funding, Community Conservation Partnership Program (DCNR) PECO Energy "Green Region" Funding
Review land values and the fee charged for "fee-in-lieu of open space."	Board of Supervisors, Township Staff	Short Term	Administrative Cost	

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
Zoning Text Changes				
Amend the clustering provisions of the ordinance to, at a minimum, expand its use in other districts, reduce the minimum tract size where clustering applies, and increase the minimum open space set aside requirement. In amending the clustering provisions, include application to the R-200 Zoning District parcels with adjacent uses; these provisions should be written so that existing farmland is protected and development on agricultural tracts is not encouraged (with open space required around the periphery of the tract). This amendment will require a commitment for some form of on-site sewer provision; municipal sewer is not planned for this area.	Board of Supervisors, Planning Commission, Township Staff, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $3,500 and $7,500	PA DCED Land Use Planning and Technical Assistance Program (LUPTAP)

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
Zoning Text Changes (cont)				
Investigate the possibility of amending the clustering provisions to include attached units and permit lot averaging (to allow for farm homes on larger sites). All attached unit provisions should have proper controls that ensure the development will have the appearance of large single homes. Design of the clustering subdivision should also ensure the protection of views.	Board of Supervisors, Planning Commission, Township Staff, Planning Consultant	Short Term	Note: This action item would be done in conjunction with the item immediately preceding item in this Action Plan; therefore no additional cost figure is included here.	PA DCED Land Use Planning and Technical Assistance Program (LUPTAP)
Add a subsection to the General Requirements that the donation or provision of open space or recreation amenities must be reviewed by the existing Township Open Space and Parks Advisory Committee to ensure consistency with this Plan.	Board of Supervisors, Planning Commission, Township Staff, Open Space and Parks Advisory Committee, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $1,500 and $2,500	LUPTAP
Add a subsection to the General Requirements creating historic resources performance standards to protect the cultural aesthetic of historic resources.	Board of Supervisors, Planning Commission, Township Staff, Historic Society, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $3,000 and $5,000	LUPTAP

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
Zoning Text Changes (cont)				
Research legal techniques to fund open space acquisition and maintenance in addition to those currently enforced in the Township.	Board of Supervisors, Planning Commission, Township Staff, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $3,000 and $6,000	LUPTAP
Subdivision and Land Development Ordinance Text Changes				
Amend Section 136-502 of the ordinance to consider increasing minimum park acreage set-aside requirements per dwelling unit proposed.	Board of Supervisors, Planning Commission, Township Staff, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $1,500 and $3,000	LUPTAP
Review and possibly update the other standards in Section 136-502.	Board of Supervisors, Planning Commission, Township Staff, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $2,500 and $4,000	LUPTAP
Add a subsection that establishes open space design requirements for all developments similar to those in the MRC Zoning District.	Board of Supervisors, Planning Commission, Township Staff, Planning Consultant	Short Term	Administrative Costs, possible consultant cost between $2,500 and $4,000	LUPTAP
Conduct an audit of existing recreation facilities to determine where demand and maintenance needs are greatest.	Board of Supervisors, Planning Commission, Township Staff, Open Space Advisory Committee	Short Term	Administrative Costs, possible consultant cost	

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
The Board of Supervisors should authorize the Open Space and Parks Advisory Committee to submit annual maintenance and improvement/acquisition priority reports to the Board.	Board of Supervisors, Open Space and Park Advisory Committee, Township Staff	On-going	Administrative Costs	
The Township should provide incentives to direct development into the Village Overlay District and other growth areas (through a streamlined development process) in order to guide growth away from lands to be preserved.	Board of Supervisors, Township Staff	Long Term	Administrative Costs, possible consultant cost between $2,000 and $4,000	LUPTAP
The Board of Supervisors should request that the existing Agricultural Security Area Advisory Committee submit a status report of lands under Act 319, Act 515, and Agricultural Security Area protection and to prioritize farms that should be targeted for permanent preservation. This report should be shared with area land trusts to foster implementation.	Board of Supervisors, Agricultural Security Area Advisory Committee, Township Staff	On-going		

Implementation Strategies (Actions)	Responsible Parties	Priority	Cost	Potential Funding Sources
Design and develop the other Township trails identified on Map 6 and Map 7.	Board of Supervisors, Open Space and Park Advisory Committee, Township Staff	On-going	Prop. linear feet / Cost per linear foot* / Total Cost On road 44,795 $13.00 $582,335 Off Road 87,684 $21.50 $1,885,296 Total: $2,467,631 *cost per linear foot based on Montgomery County Trail standards	
Continue coordination with surrounding municipalities and the County for trail development and open space linkages.	Board of Supervisors, Township Staff	On-going		
Work with the State to develop appropriate locations for the trails within Evansburg State Park and the connection points to those trails planned in Towamencin Township.	Board of Supervisors, Township Staff	On-going		

Notes:

(1) Some trail costs herein are duplicative since trail categories overlap in some areas (See Map 6).

(2) Consultant costs are general estimates; should ordinances amendments be done simultaneously, cost would not necessarily be additive.

Chapter 10. Appendices

Appendix A: Meeting Minutes

Towamencin Township
Open Space Plan Committee
June 28, 2004
7:00 p.m.

Present:

Thomas Hollenbeck
Tom Shirley
Monica Burcik
Carol Gifford
Brett MacKay
Joe Meehan
Chris Thaler

Absent:

John Minihan

Dr. Hollenbeck welcomed everyone and stated that before the meeting commenced, the members should appoint a Chairman, Vice Chairman and Recording Secretary.

It was the consensus of the Committee to appointment Joe Meehan as Chairman, Monica Burcik as Vice Chairman and Chris Thaler as Recording Secretary.

Dr. Hollenbeck asked Mrs. Burcik if she would give an overview of the Green Fields/Green Towns Program and the purpose of the Committee.

Mrs. Burcik explained the goals and purpose of the program. She stated it is an 80/20 match program with the County funding 80% and the Township funding 20%. She stated that the program was established to expand upon the previous County Open Space Plan.

A discussion was held on the role of the community with this plan.

The Committee discussed their objectives/goals for this Committee.

It was decided that the Committee would ask Santina DeSipio from the Montgomery County Planning Commission to attend the next meeting to answer questions the Committee may have.

The Committee agreed that priority should be focused on hiring a professional consultant for updating the Open Space Preservation Plan.

Mr. Thaler was directed to have a draft of a Request for Proposal together for the Committee's next meeting in July.

The next Committee meeting will be held on July 19 at 7:00 p.m. There being no further business, the meeting adjourned.

Respectfully submitted,

Chris Thaler, Recording Secretary

Towamencin Township
Open Space Plan Committee
July 19, 2004
7:00 p.m.

Present:

Thomas Hollenbeck	Tom Shirley
Monica Burcik	Brett MacKay
Joe Meehan	Chris Thaler
John Minihan	Michael Stokes, MontCO Planning Commission

Absent:

Carol Gifford

The meeting was called to order at 7:00 p.m.

Mr. Hollenbeck introduced Michael Stokes of the Montgomery County Planning Commission to the Committee.

The Committee approved the minutes of the June 28, 2004 meeting.

Mr. Stokes reviewed the grant process for the Green Fields/Green Town Programs. He explained the various funding allocations. Mr. Stokes stated the Township has $1.3 million available through this program and encouraged the Township to seek partnerships.

Mr. Stokes addressed the Committee member's individual questions concerning this grant program and what the money could be used for. He stated the Township was in a good position of receiving funds than other municipalities as it had an advisory committee in place, was an open minded Township, and had a proven tract record of accomplishments.

Mr. Meehan requested the Committee look at the Bustard Road Park baseball/softball Request for Proposals and use it as a guideline for the preparation of the Request for Proposals for the Open Space Plan revision.

The Committee discussed what should be added to the County's proposed Request for Proposal. Mr. MacKay suggested breaking down the Consultant's payments based on the importance of the project completion. The Committee agreed that the following breakdown was to be incorporated into the RFP.

5% - Plan audit
25% - Update inventory
35% - Analysis
15% - Recommendations
20% - Acceptance by the County and Board of Supervisors

The Committee came to the consensus that goals were needed to be outlined for the Request for Proposals.

The Committee directed Mr. Thaler to have an update to the Request for Proposal for the August 23 meeting.

Towamencin Township
Open Space Plan Meeting
August 24, 2004
7:00 p.m.

Present:
Tom Shirley
Tom Hollenbeck
Joe Meehan
Carol Gifford
Chris Thaler
Beth DiPrete

Absent:
Monica Burcik
Brett Mackay
John Minihan

Joe Meehan called the meeting to order at 7:00 p.m.

Approval of Minutes

The Committee approved the minutes of the July 19, 2004.

Request For Proposals (RFP)

The Committee reviewed the proposed RFP and made corrections.

Mrs. DiPrete asked for clarification on the payment schedule outlined in the revised RFP. Mr. Meehan explained the breakdown and how the Committee came to this conclusion.

Mrs. Gifford questioned how the Committee was to get the community involved in the plan. It was decided the Committee would discuss this matter further with the chosen consultants for this project.

Mrs. DiPrete asked Mr. Thaler to contact other municipalities to see what they are doing to get community involvement in the project and at what stage in the process are they incorporated.

Mr. Thaler was directed to update the RFP reflecting the changes made by the Committee. After the Board's approval, Mr. Thaler was directed to distribute the proposal to various consultants.

The next meeting of the Committee will be held on October 11th at 7:30 p.m. to review bids.

There being no further business, the meeting adjourned at 7:30 p.m.

Towamencin Township
Open Space Plan Meeting
October 11, 2004
7:30 p.m.

Present:

Robert A. Ford, Township Manager
Thomas M. Hollenbeck, Vice Chairman, Board of Supervisors
Christopher Thaler, Park & Recreation Coordinator
Thomas Shirley
Monica Burcik
Joseph Meehan
Carol Gifford

Mr. Meehan called the meeting to order at 7:40 p.m.

The Committee approved the minutes of the August 23, 2004 meeting.

Mr. Meehan stated the main focus of this evening's meeting was to review the proposals received to update the Open Space, Park and Recreation Preservation Plan.

Mr. Meehan stated that some items were missing from some of the proposals that were received. He asked for clarification on the missing items and how they would affect the reviewing process.

Mr. Ford explained that it is the Committee's decision on how they would like to handle it. He stated that if the firm was asked to participate in the interviewing process, they could be asked about the items that were omitted from the proposal.

Mr. Shirley asked for clarification on the funding for this project.

Mr. Ford explained it was a 60/40 split. The County's portion would be 60% with the Township being responsible for 40%.

Mr. Meehan asked about approaching some of the firms about lowering their cost for professional services.

Mr. Ford explained that firms know what the County expects from these updates and price accordingly. However, prior to the Township entering into an agreement with the selected firm, the Township can try to renegotiate the fee based on clarification of required plan components.

Mr. Ford suggested that Committee bring in the top three firms for a presentation on the proposals.

The Committee agreed with this approach and felt this would be the best way to select the most qualified firm.

The Committee reviewed and discussed the proposals.

Dr. Hollenbeck asked the Committee to consider what they expect from the chosen firm.

Dr. Hollenbeck asked how important a GIS system was.

Mrs. Burcik explained the GIS system was a mapping tool and explained how helpful it would be to this type of project.

It was noted that the Township does not presently have a GIS system in place.

The Committee selected the following candidates for a presentation:

EDM Consultants and Waetzman Planning Group
Barry Isett and Associates
Gannett Flemming

The Committee directed Mr. Thaler to schedule meetings with the candidates for their next meeting on October 26, 2004.

There being no additional business, the meeting adjourned at 9:20 p.m.

Towamencin Township
Open Space Plan Advisory Committee
February 21, 2005
7:30 p.m.

Present:

Bill Dingman, EDM Consultants
Charlie Guttenplan, Waetzman Planning Group
Robert A. Ford, Township Manager
Chris Thaler, Program Coordinator
Monica Burcik
Joe Meehan
Brett MacKay
John Minihan
Carol Gifford

Absent:

Tom Shirley

Joe Meehan called the meeting to order at 7:30 p.m.

Charlie Guttenplan introduced himself and Mr. Dingman and explained what he would like to accomplish this evening. He reviewed the outline of the agenda for the evening.

Mr. Guttenplan discussed the organization of the group. Mr. Guttenplan asked Mr. Thaler to record the minutes with Mr. Ford assisting. The Committee decided that email was the best method of communication and asked that they be contacted in this fashion.

Mr. Guttenplan discussed the in-process audit of the 1995 Open Space Preservation Plan. Mr. Guttenplan asked the Committee to review the goals and objectives of the 1995 Open Space Preservation Plan and determine what portions of the Plan was achieved over the past ten years and what was not.

Mr. Dingman reviewed what he felt was achieved from the 1995 Plan and asked the Committee to review the Master Trail Plan.

The Committee requested a copy of the "trail map" prior to the next meeting.

Mr. Meehan asked if the Committee wanted to eliminate the primary seven plan areas within the Township identified in the 1995 Plan and start new as open space and community needs have changed since the adoption of the Plan. The Committee agreed that the seven areas should be eliminated and the Township be looked at as a whole.

Mr. Guttenplan reviewed the 1995 Goals and Objectives and requested the Committee create new goals and objectives more specific to the Township's present needs.

Mr. Guttenplan also asked the Committee to consider partnership with other Townships and Township groups such as TYA when doing the new plan. He noted that the original plan did not address goals for funding and that the updated plan would need to address this.

Mr. Guttenplan suggested the Committee meet prior to meeting with the Consultants again to formulate the new goals and objectives and have them ready for discussion at the next Consultant's meeting.

Mr. Guttenplan also suggested that the Committee look into connecting to the Countywide trail system.

Dr. Hollenbeck asked about timelines for grants.

Mr. Ford explained the matching requirements for grants.

Mr. Guttenplan stated that is was important for the Township to budget money for grant matches. He stated the Township needed to meet and decide what grants they wished to pursue and what matching funds would be required.

Mr. Guttenplan requested a record of time spent by the Committee members and staff. Mr. Ford stated he would create a standard form for everyone's convenience.

Mr. Guttenplan reviewed the past and current demographic profile. He suggested that the Committee look at a balance of passive and active recreation based on current demographics.

Mr. Dingman suggested that the Committee incorporate TYA into discussions. Mr. Guttenplan also suggested that the Township look at partnerships with TYA and other similar organizations to discuss their needs.

Mr. Guttenplan reviewed the revised timeline for updating the plan and the Committee concurred with the timeframe.

The next meeting of the Committee will be held on March 9, 2005 at 7:30 p.m. to discuss the new goals and objectives.

Mr. Dingman requested the Township review the open space plan his office had prepared and make any corrections.

There being no further business, the meeting adjourned at 9:10 p.m.

Respectfully submitted,

Chris Thaler
Program Coordinator

Towamencin Township
Open Space Plan Advisory Committee
March 9, 2005
7:30 p.m.

Present:
Joseph Meehan, Chairman
Monica Burcik
Tom Shirley
Brett MacKay

Absent:
John Minihan
Carol Gifford

Staff:
Robert A. Ford, Township Manager
Chris Thaler, Park and Recreation Coordinator

Mr. Meehan called the meeting to order at 7:30 p.m.

Approval of Minutes

The Committee approved the minutes of February 21, 2005.

Mr. Meehan reviewed the goal of the meeting to audit the 1994 Plan and formulate goals and objectives for the current plan to present to the consultants.

The Committee reviewed and discussed the 1994 Parks and Open Space Preservation Plan.

Mr. MacKay stated that the goals and objectives from the 1994 Plan are still valid. The Committee agreed and felt however, that additional objectives need to be added to meet the changing needs of the community since the 1994 Plan was developed.

Mr. Shirley stated he felt that the Committee should look at partnerships with local businesses.

Mr. Meehan agreed based on the current financial situation of the Township.

Ms. Burcik stated that there possibly is land available at Orvilla and Route 63 in Hatfield. She wondered about a joint venture.

Mr. Ford stated he will contact Hatfield Township and inquire about the property.

Mr. Shirley stated that importance of discussion with the North Penn School District and TYA and that the Committee needed to anticipate for lost field space in our goals and objectives.

Ms. Burcik concurred that the Committee needed to look at additional recreational needs to meet the objectives of the growing community.

Mr. Thaler handed out a sample of the Lansdale Borough 2005 Goals and Objectives for the same plan. The Committee discussed what goals and objectives they felt needed to be added to this plan.

The Committee noted that one of the objectives in the Lansdale Plan was to pursue rights of first refusal for vulnerable parcels. They questioned whether Towamencin should consider this, especially for properties immediately adjacent to existing Township parks. Mr. Ford indicated that he would discuss this concept with the Township Solicitor to obtain further details required for such an approach.

Mr. Thaler was directed to prepare a draft of goals and objectives for the Committee members to review.

There being no further business, the meeting adjourned at 9:00 p.m.

2005 Goals and Objectives

Goal 1 Provide open space opportunities within the Township

1. Adopt methods to require useful and sustainable green space in redeveloped areas.
2. Add various types of playing fields and additional recreational facilities to meet the current and growing needs of the community.

Goal 2 Expand and maintain existing parks, open space and recreational areas

1. Plan new and existing parks and recreational areas to address a variety of ages and uses.
2. Develop public and private partnerships to enable services and commercial ventures within our parks and recreational areas.
3. Work with local organizations to carry out similar open space goals.

Goal 3 Protect Historic and Cultural Resources

1. Identify potential historical structures and sites within the Township.
2. Promote existing historical areas within the Township.
3. Partner with similar Township organizations to preserve these areas.

Goal 4 Coordination with regional open space network

1. Work with county on regional trail planning.
2. Continue to develop Township trails and linkages to the countywide trail system.

Goal 5 Protect and preserve open space

1. Minimize the loss of open space from development through changes in zoning requirements.
2. Pursue the rights of 'first refusal' for vulnerable parcels.
3. Continue to preserve and enhance the Township's existing green spaces.

Open Space Plan Advisory Committee
April 20, 2005
7:30 p.m.

Present:

Joseph Meehan, Chairman
Monica Burcik
Brett MacKay
Tom Shirley
Thomas Hollenbeck, Liaison, Board of Supervisors
Robert A. Ford, Township Manager
Michael Stokes, Montgomery County Planning Commission
Charles Guttenplan, Consultant
Bill Dingman, Consultant

Absent:

Carol Gifford
John Minihan
Chris Thaler, Recreation Coordinator

Chairman Meehan called the meeting to order at 7:30 p.m.

Approval of Minutes – March 9, 2005

On motion of Tom Shirley, seconded by Monica Burcik, the minutes of March 9, 2005 meeting were approved as written.

Chairman Meehan turned the meeting over the Planning Consultant, Charles Guttenplan of the Waetzman Planning Group.

Mr. Guttenplan had indicated that he spoke with Mr. Ford prior to the meeting regarding the audit of the 1995 Towamencin Township Open Space Plan. Mr. Ford advised that he had spoken with Sandy DiSipio of the County Planning Commission that afternoon and had received a copy of a sample audit that was completed by Lansdale Borough. It was noted that the audit was fairly simple being only two pages in length and Mr. Ford indicated that he and Mr. Thaler would complete the audit within the next week and distribute it to the Committee.

Mr. Meehan and Mr. Dingman commented that they would also be able to provide comments on the audit.

Goals and Objectives

A new set of Goals and Objectives had been distributed with the agenda based on the document prepared by Chris Thaler following the Committee's March 9, 2005 meeting. The Committee as a whole reviewed the draft Goals and Objectives documents and included comments from Carol Gifford that were provided through Mr. Guttenplan. Based on the comments received from the Committee, Mr. Guttenplan advised that he would redraft the Goals and Objectives and distribute them for the subsequent meeting.

Discussion of Township Development Trends

Mr. Guttenplan informed the Committee that he and Mr. Dingman were still working on the plan and would bring this to a later meeting. He would also like to include what neighboring Townships are doing with their development and Open Space Plans.

Mr. Ford briefed the Committee that he and Dr. Hollenbeck attended a meeting at Skippack Township that established the Evansburg State Park Trail Task Force. He noted that they would be meeting again in July but in the meantime they will be getting together with Lower Salford Township to compare common ground where trails could possibility link up.

Public Meeting

The Committee decided that it was appropriate to hold a meeting at the early stages of the project to obtain public input on the Goals and Objectives and the overall Open Space Plan concept. To this end, they decided to hold a public meeting at 8:00 p.m. on Monday, May 23, 2005. Prior to that meeting, the Committee will meet on May 18th as preparation for the public presentation.

There being no further business, the meeting adjourned at 9:21 p.m.

Respectfully submitted,

Robert A. Ford, Township Manager

Open Space Plan Committee
May 19, 2005
7:30 p.m.

Present:

Bill Dingman, Consultant
Charles Guttenplan, Consultant
Joseph Meehan, Chairman
John Minihan
Monica Burcik
Carol Gifford
Brett MacKay
Chris Thaler, Park and Recreation

Absent:

Thomas Shirley
Robert A. Ford, Township Manager
Thomas Hollenbeck, Vice Chairman, Board of Supervisors

Mr. Meehan called the meeting to order at 7:35 p.m.

The Committee approved the minutes of the April 20, 2005 meeting.

Mr. Meehan turned the meeting over to Mr. Guttenplan.

Mr. Guttenplan reviewed the agenda and handed out updated maps and a proposed meeting agenda for Monday night's public meeting.

Mr. Guttenplan then turned the meeting over to Bill Dingman to review the 1995 open space map, the existing open space map, existing open space areas and trails.

Mr. Dingman asked the township to check on existing on-road trails on Keeler Road and at the pool complex to see if they are part of the current trail plan. Mr. Thaler stated he would check on this and report back to him.

The Committee asked Mr. Dingman to identify the Fire Company properties as open space on the maps as well as all churches.

Mr. Guttenplan asked if there was a trail plan done in 1995. Mr. Meehan stated and Mr. Dingman confirmed that one was not in place at that time.

Mr. Minihan asked that all items listed on the maps as HOA open space be recognized as development open space.

Mrs. Burcik asked that new acreage be included on the current map. Mr. Dingman stated he would also outline the open space that has been acquired since 1995 so it will be easily identified.

Mr. Dingman said he would make these changes for Monday night's public meeting.

Mr. Dingman asked Mr. Thaler to see if the Township has any old aerial photos of the Township. Mr. Thaler stated he would look into this.

Mr. Guttenplan reviewed the agenda for the public meeting. He stated that there will be four areas set up for public comment and will be staffed by Committee members. They are Goals and Objectives, maps, general suggestions and photos of existing open space.

Mr. Thaler was asked to produce a public comment sheet for this meeting.

Mr. Guttenplan reviewed the revised Goals and Objectives with the Committee and asked for feedback.

Mr. Minihan suggested some verbiage changes, which Mr. Guttenplan will make prior to the public meeting.

Mr. Guttenplan asked the Committee what format they would like to see at the public meeting.

Mr. Meehan stated that it would be important to get comments on Goals and Objectives and what resident thought this early in the planning process.

Mr. Meehan asked Mr. Guttenplan if he would give an overview of the County Open Space Program so the residents not familiar with the program would have a better understanding.

Mr. Guttenplan stated he would put together opening comments for the meeting.

Mr. Guttenplan asked the Township to publicize Monday's meeting.

The meeting of the Open Space Plan Committee is scheduled for Monday, May 23, 2005 at 8:00 p.m. followed by a Committee meeting on Wednesday, June 29, 2005 at 7:30 p.m.

There being no further business, the meeting adjourned at 9:05 p.m.

Respectfully submitted,

Chris Thaler, Park and Recreation Coordinator

Public Meeting Debriefing
Meeting Held May 23, 2005

The majority of the comments from the public meeting fall into two categories. There were several comments recommending increased active recreational opportunities in the Township. The other major concern was about financing open space. Various funding options were commented on including a citizen funded open space account and an increase in taxes. Another popular suggestion was to prioritize the goals. Below is a synopsis of the comments received.

1. Goals need to be prioritized
2. Create a separate fund for citizens to donate to – green space fund???
3. There was a question as to why Fischer's park is considered to be only passive. Why no basket ball, volley ball or other courts?
4. There was a question and discussion about how to connect into Fischer's Park from across the stream on the Amen property and to connect the park to Bustard Road Park without using Bustard Road Bridge.
5. There was a suggestion to develop (or increase) a township open space tax.
6. There is a request to consider ball fields in addition to trails for the future open space needs of the community.
7. Another request for more active recreation opportunities – for children specifically.
8. Recommendation to create a central active recreational facility NOT on residentially zoned land.
9. Recommendation to incorporate the Green Lane parcels into the trail system.
10. Retain Specht fields and the old Township Building to preserve open space in the heart of the "Town Center". Fields and parking exist and is already Township owned.
11. A goal could be to eliminate use of neighborhood parks for more intense uses and make them quiet space for residents. Try and assemble unbuilt lands in center and on main roads for another active park if Bustard Road Park is not sufficient; this could be done by coordinating land that is donated and possibly working with adjacent municipalities.

Towamencin Township
Open Space Plan Committee
June 29, 2005
7:30 p.m.

Present:
Joseph Meehan, Chairman
John Minihan
Monica Burcik
Brett MacKay
Carol Gifford

Absent:
Thomas Shirley

Staff:
Robert A. Ford, Township Manager
Chris Thaler, Parks and Recreation Coordinator
Dr. Thomas M. Hollenbeck, Liaison, Board of Supervisors
Charles Guttenplan, Consultant
Bill Dingman, Consultant

Chairman Meehan called the meeting to order at 7:30 p.m.

Approval of Minutes – May 19, 2005

The Committee approved the minutes of the last meeting of May 19, 2005.

Mr. Guttenplan reviewed the comments from the residents that was received from the public meeting. He felt that the two important comments from the meeting were (1) more active recreation space and (2) funding.

Dr. Hollenbeck stated he thought one comment was made regarding accuracy.

Mr. Guttenplan stated he would go back and look at the original comment sheet to check for accuracy.

Mr. Guttenplan asked the Committee if the public comments changed any of the Committee's established goals.

The Committee and consultants agreed that the established goals addressed the comments made at the first public meeting.

Mr. Dingman reviewed the updated Open Space and Trail Plan.

He reviewed the links and trails:
Township Trails
Liberty Bell Trail
Evansburg Trail
Power line Trail

Mr. Dingman stated the current township trails and proposed trails, link to the proposed Evansburg and power line trails.

Mr. Dingman recommended the Committee look at connecting the Township trails to the Liberty Bell Trail.

The Committee asked Mr. Dingman to add the Trefoil trail loop, pool trail, and the adopted Bustard Road Park Plan trail to the trail map.

Mr. Guttenplan asked Mr. Dingman to prepare a map showing short and long term trail linkage plans.

Dr. Hollenbeck stated he felt that long and short term trail plans was a high priority for the plan.

There was a group discussion on a way to link Fischer's Park to the Liberty Bell trail.

Ms. Burcik asked that future trail maps be posted on the website.

Mr. Meehan stated that it is key to connect as many township facilities along the trail route.

The Committee agreed on a connection route from Fischer's to the Liberty Bell trail and requested Mr. Dingman to draft a map to include this link.

Mr. Guttenplan asked if there were any parcels of land along the proposed linkages or within the Township that should be considered for preserving.

The Committee agreed that the northeast corner of the Township needed more open space.

Mr. Dingman suggested that the Committee look at partnerships in this sector.

Mr. Guttenplan handed out a draft report on the Open Space Plan for the Committees review.

The Committee decided the next meeting of the Open Space Plan should be held on July 27, 2005.

There being no further business, the meeting adjourned at 9:35 p.m.

Respectfully submitted,

Chris Thaler
Parks and Recreation Coordinator

Towamencin Township
Open Space Plan Committee Meeting
July 27, 2005
8:00 p.m.

Present:

Joe Meehan, Chairman
Monica Burcik
Brett MacKay
Bill Dingman, EDM Consultants
Chris Thaler, Parks and Recreation
Charlie Guttenplan – Waetzman Planning Group
Oliver Carley – Waetzman Planning Group
Thomas Hollenbeck, Liaison to the Board of Supervisors

Absent:

John Minihan
Tom Shirley
Carol Gifford

Chairman Meehan called the meeting to order at 8:00 p.m.

Approval of Minutes – June 29, 2005

The Committee approved the minutes of June 29, 2005 as written.

Plan Overview

Mr. Carley reviewed the highest priority trail alignment development the Committee discussed at the previous meeting. He stated that the Committee discussed the Liberty Bell Trail and the Evansburg State Park Trail at the previous meeting.

Mr. Carley mentioned that after speaking with Mr. Ford, that CMAQ funding may be available for a portion of this proposed trail. Mr. Carley stated he would speak with Mr. Ford further on this option.

Mrs. Burcik asked about a connection on Sumneytown Pike and Green Lane Road for the trail. It was noted that the Committee decided last meeting that due to traffic concerns, the present drafted trail linkage is more suitable.

Mr. Carley stated he spoke with Mike Stokes from the Montgomery County Planning Commission and that Mr. Stokes stated that it was important to set parameters for acquisition of land. (i.e. identifying use and size)

The Committee identified what they felt were active open space priorities:

1. Parcel of land needs to be at least 20 acres.
2. Locate potential properties in the northwest sector of the Township.
3. The use of power lines as a means of trail linkages.

The Committee discussed the type of use for active open space land such as basketball courts, tennis courts, volleyball courts, etc.

It was decided that the Committee would look for active recreation space during the overall process of putting together the master plan and determine the types of activities to be utilized.

Mr. Guttenplan that partnering with other entities would look favorably by the County Planning Commission.

Mr. Guttenplan handed out the first draft of the Open Space Master Plan.

Mr. Meehan questioned the requirements for park areas.

Mr. Guttenplan stated he will compare the Township's requirements to that of neighboring municipalities to see where the Township stands in comparison.

Mr. Carley asked that each Committee member give any suggestions for changes to him.

Mr. Dingman reviewed the changes made to the map since the Committee's June meeting.

Mr. Dingman stated he will draft a specific map identifying the Liberty Bell Trail and the Evansburg State Park Trail link and the important historic Township landmarks along these trails for the Open Space Plan.

Mr. Carley reviewed the Freddy Hill preservation options.

Mrs. Burcik suggested a meeting with the owners of the Freddy Hill properties.

Mr. Guttenplan suggested that the Supervisors should lead this discussion.

Mr. Hollenbeck will discuss this issue further with the Supervisors and Mr. Ford.

It was determined that the consultant team will draft a possible ordinance outlining changes for discussion at the next meeting.

It was decided that the next meeting of the Open Space Plan will be held on September 8th at 7:30 p.m.

There being no further business, the meeting adjourned at 9:55 p.m.

Respectfully submitted,

Chris Thaler, Park and Recreation Coordinator

Open Space Plan Meeting
October 20, 2005
7:30 p.m.

Present:

Robert A. Ford, Township Manager
Chris Thaler, Park and Recreation Coordinator
Charles Guttenplan, Waetzman Planning Group
Joe Meehan
Monica Bursik
Brett MacKay

Absent:

Dr. Tom Hollenbeck, Liaison – Board of Supervisors
John Minihan
Bill Dingman, EDM Consultants

Mr. Meehan called the meeting to order at 7:35 p.m.

Mr. Meehan turned the meeting over to Mr. Guttenplan who handed out a copy of a letter from the Montgomery County Planning Commission requiring that open space plans include a build-out analysis.

Mr. Guttenplan stated this analysis has to be completed and added to our revised Open Space Plan.

This analysis must have the following:

1. An existing development property map.
2. Identify potential development.
3. Calculate potential development.
4. Map potential development.

Mr. Guttenplan will discuss this with Bill Dingman and work on constructing the maps reflecting this analysis.

Mr. Guttenplan explained that the rehabilitation of the trails at Evansburg State Park has been pushed back by the State. He stated this does not change our priorities and we can continue to plan for linkages to the park.

The Committee discussed the Township's existing land use map. Mr. Guttenplan asked that the Township look at this map to check its accuracy. The Township staff will review and update.

The Committee reviewed the existing Open Space Map. The map will be updated indicating Ginny Kibler's property that the Township will acquire.

The Committee reviewed the Township's Environmental Features map. The Committee had no comment concerning this map.

The Committee reviewed the Township's Historical Map. Mr. Guttenplan stated this map should be combined with another map. The Committee agreed that there was no need for separate maps.

The Committee reviewed the current Open Space Plan Map. Mr. Guttenplan recommended identifying land and property that the Committee would be interested in for open space on the current Open Space Map. The Committee decided that they could call this area the "Open Space Priority Areas".

Mr. Guttenplan stated that money was available through the Congestion Management Air Quality (CMAQ) grant program which could be applied to the Open Space Plan.

Mr. Ford stated he would set up a meeting to discuss the use of these funds for this grant and to gain a better understanding from all groups involved on how this can move forward.

The Committee discussed and agreed that the Liberty Bell/Evansburg Trail would be listed as a high priority on the open space map.

Mr. Ford will draft and send a letter to all Township property owners who own twenty plus acres or more them to attend the public meeting

Mr. Guttenplan handed out a sample agenda for this meeting.

The Committee agreed that the next meeting they would like to have a summary of the Open Space Plan done in Power Point. They would also like an updated copy of the Open Space Map for handouts.

Mr. Ford advised that there is a conflict with having the Open Space public meeting on November 16th previously planned as the Board of Supervisors have a meeting that same night. Mr. Ford indicated that he would check other possible dates and notify the Committee and Mr. Guttenplan.

There being no further business, the meeting adjourned at 9:00 p.m.

Respectfully submitted, Chris Thaler
Park and Recreation Coordinator

Public Presentation of Draft Plan and Recommendations
November 29, 2005
7:30 p.m.

The following PowerPoint Presentation was presented at a public meeting prior to the adoption of the draft plan.

Towamencin Township
Park, Recreation, and Open Space Preservation Plan Update

Presentation of Draft Plan and Recommendations

November 29, 2005

Park, Recreation, and Open Space Preservation Plan Update

The Draft *Park, Recreation, and Open Space Preservation Plan Update* was Prepared by the Towamencin Township Open Space Planning Committee

Joseph F. Meehan, Chairman
Carol Gifford, Member*
Brett H. MacKay, Member
Monica Burcik, Member
Thomas M. Hollenbeck, Member
John E. Minihan, Member
Thomas Shirley, Member*

Township Staff Liaisons

Robert A. Ford, Township Manager
Chris Thayler, Recreation Coordinator

With Technical Assistance by:
THE WAETZMAN PLANNING GROUP
&
EDM Consultants, Inc.

Montgomery County Planning Commission Liaison:
Michael Stokes, Assistant Director

*Former Member

Montgomery County
Green Fields/Green Towns

- Phase 2 of Montgomery County's Open Space Program
- Began January 2004 and Runs for 10 Years
- Funded by $150 Million Referendum Passed in November 2003
- Overseen by Montgomery County Open Space Board
- **Requires Open Space Plan Update**

Under Phase 1, Towamencin Township Received $817,398 in County Grants and Preserved Seven Properties Totaling over 90 Acres

Green Fields/Green Towns
Program Goals

- Providing Recreation Opportunities
- Conserving Natural Lands
- Preserving Historic and Cultural Landscapes
- Maintaining Scenic Quality
- Protecting Water Resources
- Providing Green Infrastructure for Developed Communities
- Shaping the Form of Land Use and Development
- Preserving Agricultural Land

How this Plan Update was Funded

County Grant	$25,000
Township Cash Contribution	$8,333
Township In-Kind Services	$8,333
Total	**$41,666**

Green Fields/Green Towns

County Grants

Round I

Open Space Plan Update	$25,000
Implementation Allocation (To be Spent by April 2008)	$1,289,808
Total	**$1,314,808**

Round II

Additional Competitive Funding will be Available after April 2008

All Implementation Grants (Round I and II) Require a 20% Local Match (10% for Jointly Sponsored Projects)

Open Space and Environmental Resource Protection Plan Update

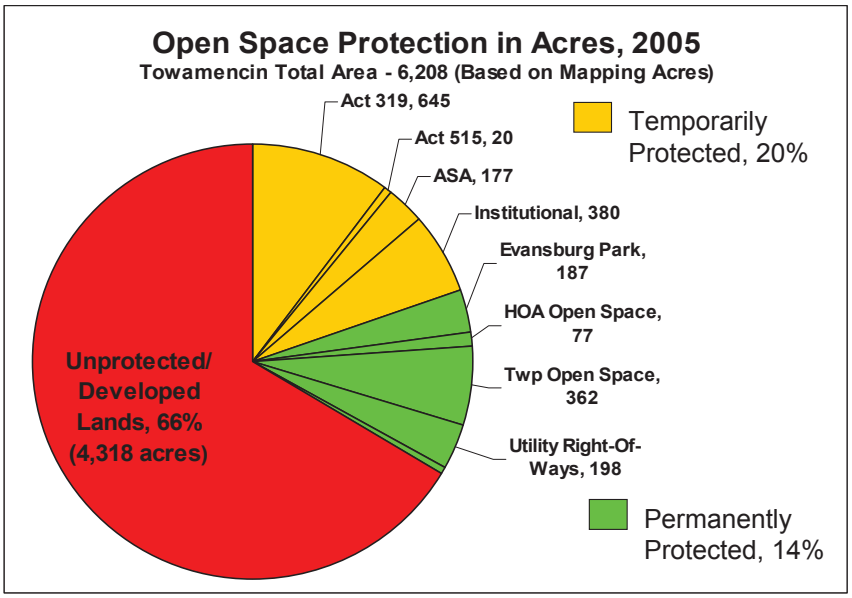
- Audit of 1995 Plan
- Background Data – Existing Land Use, Environmental Conditions, Demographics, Etc.
- Goals and Objectives
- Existing Open Spaces (Temporary and Permanent Protection)
- Comparison to Plans in Abutting Municipalities
- **Optional Element – Municipal Trail and Pathway Development**
- **Recommendations**
- **Implementation/Priorities**

Park, Recreation, and Open Space Preservation Plan Update

Plan Audit - Progress Since 1995 Plan

- Open Space Planning
  - Township Wide Trail Master Plan (1996)
  - Fisher's Park Master Plan (1998)
  - Grist Mill Park Master Plan (2000)
  - Bustard Road Park (2005)
- Environmental Conservation Amendments
  - Zoning Ordinance
  - Subdivision and Land Development Ordinance
- Acquired New Land
  - County Grants (4 Properties)
  - Additional Township Lands (Other Means)
  - Farmland Easement Secured

Existing Open Space

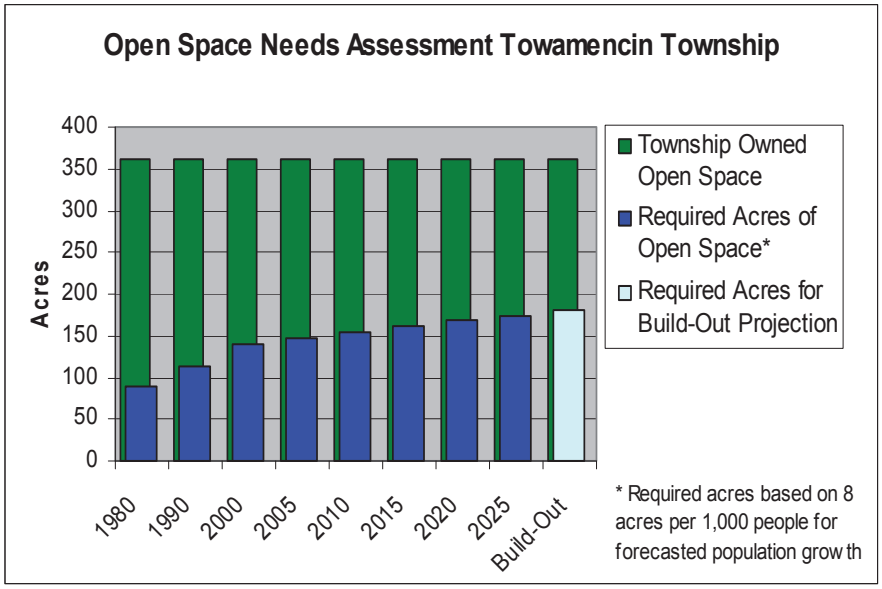


Build Out Analysis

Zoning District	Gross Acres	% Reduction Environmental	% Reduction Infrastructure	Net Acres	Units/ Acre	Units Produced
MRC/R50	17	10	20	12	3	36
R125/R175	373	10	20	269	1.3	349
R180/R200	402	20	20	257	0.5	128
Village Overlay	152	5	10	130	8	1,040
Total	**944**			**668**		**1,553**
Non-Residential					**% Bldg Cov.**	**Square Feet**
Light Industrial	**99**	**10**	**20**	**71**	**30%**	**928,000**

1,553 Units would House 3,960 Additional People Using Towamencin's 2000 Average Household Size of 2.55 People per Household.

Open Space Needs Assessment



Plan Goals

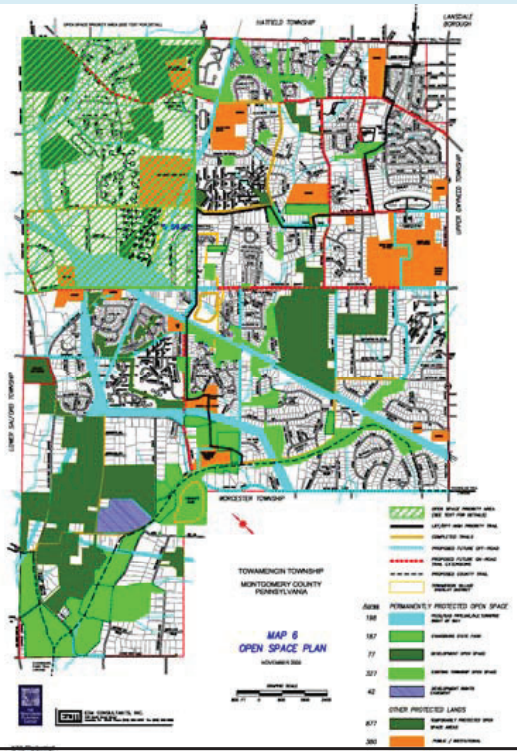
- *Goal 1* Actively pursue new open space opportunities within the Township
- *Goal 2* Expand and maintain existing parks, open space and recreational areas
- *Goal 3* Protect Historic and Cultural Resources
- *Goal 4* Coordinate Township efforts with the regional open space network
- *Goal 5* Protect and preserve natural resources
- *Goal 6* Maximize the use of scarce financial resources available for open space and recreation

Plan Recommendations

- Amend the Township Zoning and Subdivision and Land Development Ordinances to Increase Open Space Preservation from Land Development
- Provide Incentives to Direct Development into the Village Overlay District and Other Growth Areas
- Conduct an Audit of Recreation Facilities and Submit Annual Reports to the Board of Supervisors

Park, Recreation, and Open Space Preservation Plan Update

- Acquire New Open Space for Recreational Use
- Design and Build the Proposed Liberty Bell Trail/Evansburg Park Trail Connector
- Develop the Bike Trails Using Previously Awarded Congestion Mitigation and Air Quality (CMAQ) Funding



Implementation

- Priorities will be Finalized
  - Short-Term (Through April 2008)
  - Long-Term (Through the End of *Green Fields/Green Towns Program*)
- Action Plan to be Completed Based on Open Space Plan Recommendations

Appendix B: Audit Notes

CHAPTER 7 ACTION PLAN AND IMPLEMENTATION APPROACHES

One of primary missions of the Park, Recreation and Open Space Plan is the articulation of the desired goals of the Township with respect to parks, recreation facilities and recreation programs. The goals help to focus the concepts and implementation plan to meet the needs of the Township residents. The primary goals are described below, with several associated implementation strategies for each.

GOAL 1: Maintain a clean aesthetic natural environment for the enjoyment of present and future populations.

Acquisition of Land
The Township has acquired several parcels of land since the 1995 Open Space Plan was adopted. These acquisitions, through grant programs and purchases include:

Schnabel property (4.4 acres) acquired in 2002 at a cost of $352,000. This property is immediately adjacent to the Township's Bustard Road Park and helps expand that facility.

Arneth House & property (22.98 acres) was purchased in 1996 for $272,547 ($247,500 from Montgomery County Open Space Grant Program). This acquisition significantly expanded the Fischer's Park facility that was purchased by the Township in 1989.

Rittenhouse Farm (15.26 acres) was purchased in 1996 for $431,979 ($270,000 from Montgomery County Open Space Grant Program). This partially preserved active farmland as well as providing the site of the new municipal complex.

Reiff Road Properties (4.42) The Township acquired two small lots from PennDOT along Reiff Road.

Ellis Tract Tree Farm (6.92 acres) The Township acquired the tree farm located on Kreibel Road south of Pheasant Hill Road.

Christy Tract. The Christy tract was acquired by the Upper-Gwynedd Towamencin Municipal Authority as a buffer and is used by the Township as open space.

Performance Zoning
To protect the significant natural features of the township, Towamencin may impose performance zoning standards on potential developments. These standards set guidelines for how individual sites with natural features are developed by protecting the natural features and adjusting the carrying capacity or net density of the site. The standards may calculate the area of natural features protection and subtract it from the gross site area to arrive at a net developable lot area.

Although the Township does have cluster provisions within its Zoning Code and Subdivision / Land Development Code, it has not enacted Performance Zoning or other such design features such as the Natural Lands Trust "Growing Greener" models.

Expand Cluster Development
Cluster Zoning permits the reduction of lot area while holding the development density so that significant natural features of the area may be preserved. The open space then may be held by a home owners association or dedicated to the municipality for public use. Presently, Towamencin has a zoning ordinance for Mixed Residential Types Cluster Development. This ordinance requires a minimum of 100 acres and a mixture of three housing types to be eligible for this clustering. The township may elect to expand the ordinance to reduce the required acreage and number of types of units so that more clustering can result in more natural features protection.

Although the Township does have cluster provisions within its Zoning Code and Subdivision / Land Development Code, it has not enacted Performance Zoning or other such design features such as the Natural Lands Trust "Growing Greener" models.

Visual Impact Zoning
To protect the rural character of the township, Towamencin could develop and enforce more restrictive front yard setbacks and landscaped buffers from highly visible roadways. This can be accomplished by requiring deeper lots and longer front yards, and increasing the amount and location of vegetative buffering required for all developments in the township.

The Township adopted enhanced landscape buffer yard requirements within it Subdivision / Land Development Code in 2001.

Woodland & Tree Protection Measures
Towamencin has enacted some tree protection measures in its zoning ordinance. These measures call for protection of individual 60" caliper trees to the drip line. Expansion of this ordinance may further protect the existing woodlands and trees of the township.

This could be accomplished by reducing the limit of the size of the existing trees to be protected, and also by incorporating a re-vegetation component to the ordinance. This will ensure more significant trees will be preserved and the planting of new vegetation will be continued.
All land development shall be designed so as to minimize loss of mature trees over six inches (15.24 centimeters) in caliper, hedgerows and woodlands.

The developer is required to plant the identical number of trees to be removed elsewhere on a development site or plant the identical number of trees to be removed in Township parks in accordance with a plan prepared by the developer and approved by the Township Engineer. All replacement trees shall be a minimum of 21/2 inches (6.35 centimeters) as measured one foot (0.3048 meters) above the ground level.

Develop site specific master plans for the Townships parks and recreation areas

Establish recreation master plans that pertain directly to the needs of each community within the Township. This would allow for a well balanced variety of leisure time experiences while also maintaining the aesthetic quality of the individual parks. A hierarchy between physical and environmental recreation activities would be derived through these plans.

The Township has prepared and adopted several master plans since 1995. Each plan went through a comprehensive process that included site visits, environmental analysis, significant public participation, and public and work session meetings. The resulting products included the following:

Township Wide Trail Master Plan (1996)
Fisher's Park Master Plan (1998)
Grist Mill Park Master Plan (2000)
Bustard Road Park (2005)

GOAL 2: Preserve significant cultural resources within the Township.

Agricultural Preservation
The remaining farms in Towamencin hold the legacy of past generations dedicated to agriculture and the Township's past. The preservation of these farms as cultural resources should be as major focus for implementation and should be incorporated into the budgetary planning of the Township.

Encourage the Expansion of the Agricultural Security District
State Law permits groups of farmers to create agricultural security districts provided there are over 500 acres of land not necessarily contiguous and that their farming

practices are not a threat to public health, welfare and safety. Montgomery County has a number of these districts and encourages the development of more.

Towamencin Township has a rich heritage of being a farming community. Since 1993, over 276 acres of farmland has been secured under the Agricultural Security Area. Forty five of these acres have been included since 2000.

GOAL 3: Provide a sufficient number and variety of recreational sites for present and future activities, for residents of all ages, abilities, and interests.

Acquire Lands
The easiest and simplest way for a municipality to acquire land is to purchase it. It is recommended that the Township acquire the highest, most immediate prioritized land for open space and recreation expansion. Towamencin should utilize the county grant mechanism to acquire land, and research other acquisition options such as other grants and/ or increased dedicated open space.

The Township has acquired several parcels of land since 1995, including the "Hanks & Arneth" property (20 acres), the Towamencin Township Tree Farm (5 acres), and the Rittenhouse Farm (15 acres).

Encourage donation of land for tax incentives.
The Township will encourage landowners to donate land to various conservation groups throughout the County, permanently restricting future development from occurring on the property. The landowner would, in return, receive various tax benefits from their donation. This land would then be completely preserved or developed in a manner that would preserve the ecologically important areas on the site.

In 2005, the Township was named as a beneficiary in the will of a long time resident, Ms. Virginia Kibler, to receive 35 acres of land in the pan-handle section of the Township to be preserved in perpetuity as open space.

Encourage transfer of development rights.

The Township could preserve rural land by transferring development rights from rural areas to growth areas. Private land owners could sell their development rights to designated growth areas instead of developing their property. This would deed restrict these areas from future development and confine development within a certain boundary. The farm land within the Township is at greatest risk for future

development, so the price of these rights must be high enough to discourage the development of these locally important areas.
In early 2005, the Halteman Farm, a 73-acre property located in the panhandle section of the Township, was preserved from future development through the Montgomery County Agricultural Land Preservation program.

Mandatory dedication of open space.

The Municipalities Planning Code Requires development to provide open space, or pay a fee in lieu of such open space. Establish a structure so that fees to be paid in lieu of open space are equal to and not less than a certain amount of dedicated open space. This fee should be evaluated regularly to maintain a proper structure. The municipality cannot require a developer to dedicate open space but they can require that the land be flat and suitable for recreation purposes.

The Township Code requires the provision of suitable open space for parks, playgrounds and recreational areas with every subdivision / land development plan. Consideration must be given to the preservation of natural features, including large trees, groves of trees, waterways, historic points, and other community assets. The amount of land to be set aside 2,000 square feet for every dwelling unit and 10% of the gross area for non-residential developments.

Should the development not allow for the actual preservation of land on-site, the Township requires the submission of various Development Impact Fees as permitted by the Pennsylvania Municipalities Planning Code. These include an Open Space fee of $1,000 per dwelling unit for residential properties and $1,000 for every 2,000 square feet of floor area for non-residential developments. To date, the Township has acquired over $1,116,500.00 in Open Space Impact Fees.

Continue to build partnerships with the Township schools.

This option would keep a wide variety of open space available, to the Township, on a limited basis. Such activities as field hockey or lacrosse fields, included in these spaces and are not present in the Township parks, could be reserved for use at the local schools.

Recently, the North Penn School District has started to limit access to use of their athletic fields to outside organizations. The School District has advised that this is necessary to allow the over-used fields down periods to allow for re-growth. However, a recent project represents the combined efforts of Towamencin Township and the North Penn School District, which includes work on tee-ball and soft ball fields on areas

adjacent to the North Penn School District's General Nash Elementary school to allow the development of connecting trails and parking as shown on the Bustard Park Master Plan.

Assess the need for a community center

If the need for active recreation in the winter months increases, then the construction of a gymnasium/ community center will be considered. This will be a multi-purpose building, providing not only active recreation facilities but also educational classes. The location of this complex will be analyzed to determine whether the Town Center is a suitable area for developing this use, or if the location should be established elsewhere in the Municipality.

Due to various funding constraints, this has not been pursued.

Establish a uniform pedestrian trail throughout the Township.

The present trail system should be expanded to make the Township parks more easily accessible by walking and biking. The Township will also look beyond it's boundaries to link their trails to the proposed county trails, making Towamencin more accessible to the surrounding communities.

In 1996, Towamencin adopted the "Township-Wide Trail Master Plan." The plan provides for alternative, non-automobile oriented transportation and recreation opportunities, with a goal to identify a network of existing and potential trails across the Township. Since the adoption, several on and off-road pedestrian and bicycle trails (with signage) have been established, including trails throughout Fischer's Park, a nature walkway along Towamencin Creek off Kreibel Road, and various dedicated bicycle lanes along rights-of-way.

In May 2005, the Township joined the Evansburg Task Force. The Bureau of State Parks is developing a program to rehabilitate Evansburg State Park's network of trails and are looking to shape the park's internal trails that could connect to a sustainable trail system that reaches local communities.

GOAL 4: Manage growth to achieve these goals.

Concentrate development into specific growth areas.
The establishment of growth boundaries would limit a certain type of development to occur within those boundaries. This type of planning would limit the encroachment of suburban sprawl onto valuable open space such as farmland. This would encourage development to occur away from the existing agricultural lands while establishing growth areas that foster a community identity within these areas. For this principal to work, these boundaries need to be maintained. Should a developer own property outside the boundary of a specific land use and want to develop it as a different use, the Township should deny their proposal to preserve the integrity of this plan.

In the mid 1990's, Towamencin Township started developing a Town Center Plan for the Kulpsville section of the Township located neat the crossroads of Sumneytown Pike and Forty Foot Road. This vision evolved into the Towamencin Village Overlay Zoning District and its own associated Land Use and Design Manual. This District is intended to provide the opportunity for the re-development of the Village of Kulpsville in accordance with a Master Plan.

Review and modify the Township Ordinances to achieve this goal
The Townships major tool in managing growth is the zoning ordinance and subdivision/ land development ordinance. The Township should conduct periodic reviews and modifications to ensure that the ordinances are established according to the goals and objectives set forth by the Open Space Committee.

Protecting community character and encouraging appropriate development are twin goals for Towamencin Township. The zoning and land development codes can be a chief tool or, if not properly updated when needed, a chief barrier to effectively meeting the community's goals. Consequently, the Township reviews and considers amendments to both codes on a routine basis.

Establish a Historical Society.
To preserve the dwindling cultural and historic features of the township, a Historic Architectural Review Board may be created. This board would conduct activities such as: inventory the existing resources, establish historic areas, review architectural modification to significant structures and the like.

Strive to have historic or culturally important sites, within the Township, placed on the national or local register.

This would protect historic sites from future demolition or major alterations to the original quality of the building. This would also preserve elements of a specific era in history, providing the Township with a historic identity unique to this area.

Look for alternative ways to preserve historic sites, possibly through commercial or office uses locating within them.

This alternative would allow different uses to establish within a historic building, such as a restaurant or a medical office, while retaining the old facades and interior layouts that were specific to that time period. This could also exist as an option to maintaining these buildings, other than through expending Township funds.

Look to acquire land surrounding a historic site and incorporate it into a park design.
To allow for other ways of maintaining historic buildings, parks could be located around historic and cultural sites to act as a community meeting places. This would preserve the historic nature of the building while combining two uses into one area. This allows for easier maintenance and better protection.

The Towamencin Historical Society was incorporated in perpetuity on November 2, 1970 in Lansdale Borough, Montgomery County, Pennsylvania as a private, non-profit corporation in response to the threatened demolition of the Morgan Log House structure. It was organized exclusively for charitable, educational and scientific purposes as defined and limited by Section 501 (c) (3) of the Internal Revenue Code. Its stated mission was "The study and preservation of the history of Towamencin Township and Montgomery County, Pennsylvania, as well as the promotion of the study of history, local, national, and of the World."

On December 6, 1985, The Towamencin Historical Society filed Articles of Amendment changing its name to the Welsh Valley Preservation Society. This was in response to a need to expand its area of geographical association for fund-raising purposes. The W.V.P.S. is governed by a Board of Trustees consisting of not less than five members.

The W.V.P.S employs a full-time professional curator to implement the policies set by the Board of Trustees. The curator oversees and administers all operations at The Morgan Log House. These operations include curator duties, conservation, registration, research, education, public relations, development, security and maintenance. The curator is assisted by a corps of dedicated volunteers. The current curator began work in 1994.

A separate Towamencin Historical Society was established in 1995.

Appendix C: Adoption Resolutions

RESOLUTION 06-51

ADOPTION OF REVISED
PARKS, RECREATIONAND OPEN SPACE PRESERVATION PLAN

WHEREAS, on December 27, 1989, By Resolution 89-50, the Board of Supervisors of Towamencin Township adopted the Township Open Space Plan; and

WHEREAS, on December 18, 1995, the Board of Supervisors, adopted Resolution 95-70 which revised the Open Space Plan, now known as the Parks, Recreation and Open Space Preservation Plan; and

WHEREAS, Phase Two of the Montgomery County Open Space Program adopted the Green Fields/Green Towns Program on December 18, 2003 that provided $150 million in grant funds to be made available to municipalities within the County; and

WHEREAS, the Board of Supervisors authorized and requested the preparations of a revision of the said Parks, Recreation and Open Space Preservation Plan in order to incorporate and reflect the changing needs of the Township's Community and the requirements of the Montgomery County Green Fields/Green Town's Program; and

WHEREAS, the said revised plan was prepared through a series of public meetings with the participation of staff, public volunteers and consultants;

WHEREAS, the said Plan and any amendment thereto will be used to guide the Township in its development of future park and recreation facilities and in the expenditure of Open Space Impact Fees.

NOW, THEREFORE, BE IT HEREBY RESOLVED by the Board of Supervisors of Towamencin Township that the revised Parks, Recreation and Open Space Plan is hereby adopted by the Board of Supervisors.

RESOLVED this 27th day of September 2006.

Towamencin Township
Board of Supervisors

Daniel M. Littley, Jr., Chairman

ATTEST:

James P. Sinz, Secretary

RESOLUTION # 2006- 31

MONTGOMERY COUNTY OPEN SPACE BOARD
APPROVAL OF THE TOWAMENCIN TOWNSHIP MUNICIPAL OPEN SPACE PLAN

WHEREAS, On December 18, 2003 the Commissioners of Montgomery County established the Green Fields/ Green Towns Program which provides grant fund for open space preservation; and

WHEREAS, the Green Fields/ Green Towns Program requires the preparation of municipal open space plans and provides grants which may be used by any municipality in Montgomery County for the preparation of an open space plan; and

WHEREAS, Towamencin Township has prepared an open space plan in accordance with guidelines established for the Green Fields/ Green Towns Program; and

WHEREAS, the Montgomery County Open Space Board has reviewed the plan in accordance with the guidelines established by the county.

NOW THEREFORE BE IT RESOLVED that the Open Space Board hereby approves the Towamencin Township Open Space Plan subject to final adoption by Towamencin Township.

Resolved and Adopted by the Open Space Board June 27, 2006

Appendix D: Other Funding Sources

Federal

Catalogue of Federal Domestic Assistance
-Available at public libraries or at www.cfda.gov.

National Park Service
ww.nps.gov/ncrc/programs/rtca/

Rivers, Trails, and Conservation Assistance Program – The program offers technical assistance only to nonprofit organizations, community groups, and local or state government agencies. Rivers and Trails technical staff offers the following types of assistance for recreation and conservation projects:

- Building partnerships to achieve community-set goals;
- Assessing resources;
- Developing concept plans;
- Engaging public participation;
- Identifying potential sources of funding;
- Creating public outreach;
- Organizational development; and
- Providing conservation and recreation information.

Commonwealth of Pennsylvania

Department of Environmental Protection
www.dep.state.pa.us

Stormwater management

- Assist of reimburse counties for costs involved in preparing or revising watershed stormwater plans
- Reimburse municipalities for costs associated with the preparation, administration, enforcement, and implementation of ordinances and regulations as required by the Stormwater Management Act.

Department of Community and Economic Development
www.inventpa.com

- Community Development Block Grant Program (CDBG)**: Provides grant assistance and technical assistance to aid communities in their community and economic development efforts**
- Community Revitalization Program (CR): Provides grant funds to support local initiatives that promote the stability of communities
- Elm Street Program: Grant funds for planning, technical assistance and physical improvements to residential and mixed use areas in proximity to central business districts.
- Industrial Sites Reuse Program
  http://www.inventpa.com/default.aspx?id=291 Grant and low-interest loan financing to perform environmental site assessment and remediation work at former industrial sites.
- Main Street Program: This program provides assistance for revitalization planning and projects. Visit the DCED website as well as www.padowntown.org for more information.

Department of Natural Resources and Conservation
www.dcnr.state.pa.us/grants

Community Conservation Partnerships Program (C2P2) - The Community Conservation Partnerships Program provides state and federal grant dollars to help fund Community Recreation, Land Trust, Rails-to-Trails, Rivers Conservation and PA Recreational Trails projects.

Contact: Southeast Field Office (Philadelphia)
Don Gephart and Fran Rubert
908 State Office Building
1400 Spring Garden Street
Philadelphia, PA 19130
E-mail: dgephart@state.pa.us or frubert@state.pa.us
Phone: (215) 560-1182 or (215) 560-1183
Fax: (215) 560-6722

Pennsylvania Infrastructure Investment Authority (PENNVEST)
http://www.pennvest.state.pa.us/pennvest/site/default.asp
(for brownfield redevelopment and water / sewer issues)

Pennsylvania Historical and Museum Commission
www.phmc.state.pa.us

- Certified Local Government Grant Program – Provides funding for cultural resource surveys, national register nominations, technical and planning Assistance, educational and interpretive programs, staffing and training, and pooling CLG grants and third party administration
- Keystone Historic Preservation Grant Program - Funding for preservation, restoration, and rehabilitation
- Pennsylvania History and Museum Grant Program - Funding under this program is designated to support a wide variety of museum, history, archives and historic preservation projects, as well as nonprofit organizations and local governments. There are 10 types of grants.

Pennsylvania Emergency Management Agency
www.pema.state.pa.us

Pennsylvania Dept. of Transportation
www.dot.state.pa.us

- Safe Routes to School
  This category includes projects for bicyclists and pedestrians that permit safe passage for children to walk or bike to school. This includes activities that enhance the transportation system through the construction of new facilities or the improvement of existing facilities to make them more usable for pedestrians and bicyclists. Some examples of eligible activities include: sidewalk improvements, pedestrian/bicycle crossing improvements, bike lanes, traffic diversion improvements, off-street bicycle and pedestrian facilities. In addition, this program may fund traffic calming measures to slow the speed of cars such as the following: curb extensions, bulb-outs, traffic circles, raised median islands, speed humps, textured or raised crosswalks. Funds cannot be used for bicycle and pedestrian facilities that are solely for recreational use.

  http://www.dot.state.pa.us/Penndot/Bureaus/CPDM/Prod/Saferoute.nsf

- Home Town Streets
  This category includes a variety of streetscape improvements that are vital to reestablishing our downtown and commercial centers. These will include activities undertaken within a defined "downtown" area that collectively enhance that environment and promote positive interactions with people in the area.

Projects may include sidewalk improvements, planters, benches, street lighting, pedestrian crossings, transit bus shelters, traffic calming, bicycle amenities, kiosks, community "gateway" plantings, signage and other visual elements.

- Transportation Enhancement Program
  Trails – Construction, Maintenance and Improvement
  Historic Resource preservation and enhancement
  Streetscape improvements
  Public Transit Facility improvements
  Traffic Calming
  Trees/Planting

Contact: Greg Brown
7000 Geerdes Boulevard
King of Prussia, PA 19406
(610) 205-6950
gregbrown@state.pa.us

Pennsylvania Infrastructure Bank
http://www.dot.state.pa.us/penndot/bureaus/pib.nsf/homepagepib?readform
(low interest loans for capital improvement and construction projects)

WREN – Water Resources Education Network
www.pa.lwv.org/wren

Administered through the League of Women Votes of PA
Grants available for water resources education projects – especially projects that raise awareness about protecting drinking water sources and preventing non-point pollution.

Regional

Delaware Valley Regional Planning Commission
www.dvrpc.org

Transportation and Community Development Initiative - The TCDI program is intended to assist in reversing the trends of disinvestment and decline in many of the region's core cities and first generation suburbs by:

- Supporting local planning projects that will lead to more residential, employment or retail opportunities;

- Improving the overall character and quality of life within these communities to retain and attract business and residents, which will help to reduce the pressure for further sprawl and expansion into the growing suburbs;
- Enhancing and utilizing the existing transportation infrastructure capacity in these areas to reduce the demands on the region's transportation network; and
- Reducing congestion and improving the transportation system's efficiency.

Congestion Mitigation and Air Quality Improvement (CMAQ) Program seeks transportation-related projects that can help the region reduce emissions from highway sources and meet National Clean Air Act standards. The program covers the DVRPC region of Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania; and, Burlington, Camden, Gloucester and Mercer counties in New Jersey.

Schuylkill River Heritage Area
www.schuylkillriver.org

Grants are available to counties, municipalities and non profit organizations to develop projects and programs that address SRHA's five core goals:

1. resource conservation (natural and cultural)
2. education and interpretation
3. recreation
4. community revitalization
5. heritage tourism

Projects should be consistent with criteria established in the Schuylkill River Heritage Area Management Plan and Environmental Impact Statement, *Living with the River*, 2003, available on their website.

Contact: Cory Kegerise, Heritage Coordinator at 484-945-0200

Private

PECO Energy "Green Region" (administered by Natural Lands Trust)
www.natlands.org

Grants for municipalities in Southeastern Pennsylvania

- Up to 50% of the planning expenses associated with developing or updating municipal open space protection plans.

- Up to 75% of the direct and indirect expenses associated with the fee simple purchase (or receipt by donation) of open space properties identified in a municipal open space plan.
- Up to 75% of the direct and indirect expenses associated with the purchase (or receipt by donation) of conservation easements (also known as "development rights") on properties identified in a municipal open space plan.
- Up to 75% of the planning expenses to improve municipally-owned open spaces, or lands to be acquired by a municipality.
- Up to 50% of the cost of materials and labor to install habitat improvements and capital improvements for passive recreation similar to those in item 4, above, on municipally-owned open space, when such improvements are identified in a municipal open space plan.

Contact: Elizabeth Robb, Administrator
Green Region
c/o Natural Lands Trust
1031 Palmers Mill Road
Media, PA 19063
610-353-5587
e-mail: brobb@natlands.org

The Conservation Fund
www.conservationfund.org

Watershed ***Action*** Grant Program
Watershed Action Grants aid nonprofit organizations and their partners *implement conservation plans* to protect watersheds, improve water quality and promote watershed stewardship. Specific watersheds are targeted in southeastern Pennsylvania and southern New Jersey for grant awards during this 2005 grant cycle.

For complete information, please refer to the program's website: www.conservationfund.org, then go to "Award Programs" and to "Watershed Action Grants" or, alternatively, go directly to http://www.conservationfund.org/?article=2829.

William Penn Foundation
http://www.wpennfdn.org/

Grants for private non-profit 501(c)3 organizations in Southeastern PA

Funding Priorities:
Promote Sustainable Watershed Assets

Promote strategic, coordinated policies and investments to ensure land and water protection.

Implement projects in targeted areas that demonstrate model practices and policies.

Promote Sustainable Regional Development

Promote coordinated, strategic public redevelopment policies and investments that build on existing infrastructure and regional assets of older communities.

Foster innovation and implement community redevelopment models in the urban core -- targeted communities in Philadelphia and Camden.

The Pew Charitable Trusts
http://www.pewtrusts.org

Grants for private non-profit 501(c)3 organizations

Environment program
Contact: Josh Reichert
c/o The Pew Charitable Trusts,
2005 Market Street, Suite 1700,
Philadelphia, PA 19103
215.575.4740 envimail@pewtrusts.org

Claneil Foundation, Inc.

Purpose and activities: Giving primarily for the arts, education, health, the environment, and community development. Geographic focus: Pennsylvania
Contact: Cathy M. Weiss, Exec. Dir
630 W. Germantown Pike, Ste. 400
Plymouth Meeting, PA 19462-1059

Foundation Grants
www.fdncenter.org
Contact the Foundation Center at 79 Fifth Avenue, New York, NY 10003

This website has a large database of organizations that make grants for many different types of projects.

Appendix E: Montgomery County Trail Guidelines

Guidelines for Trail Development Within Montgomery County, Pennsylvania

Montgomery County Commissioners

James R. Matthews, Chairperson

Thomas Jay Ellis, Esq.

Ruth S. Damsker

Table of Contents

Trail Notes	3
The Open Space Program, Trails & You	3-4
Preferred County Trail Standards	3
Trail Terms and the Trail Ahead (Access & Ownership)	4-5
Trail Design Standards	6
Estimated Trail Construction Costs	7
Cross Section Illustrations of Trail Classification Types	8-10
Minimum Signage Dimensions and Examples	11-14
Trail & Bicycle Facilities Resource References	15
Appendix A— Potential Open Space Funding Sources	16-23

Trail Notes

Montgomery County's proposed primary trail network offers many potential benefits to county residents on a local, regional and even national level. Benefits of smart trail design and development range from preserved open space to the promotion of active, healthy lifestyles to the creation of an alternative source of transportation for commuters and recreation users alike. Additionally, the sixteen proposed interconnected county trails will establish connections to parklands, historic sites, natural areas and other points of interest through out the region. Through devoted trail planning, the county has constructed the Schuylkill River Trail and the Perkiomen Trail. These trails have set the foundation for the county's regional trail network while providing the framework for local trails and pathways to connect to the regional system.

The Open Space Program, Trails & You

The purpose of this document is to provide desirable and minimum trail design standards to municipalities applying for county open space funds to develop trail connections. The municipality's open space plan must indicate connections to existing or proposed county trails, and county parks and historic sites to be eligible for county trail funding.

If a municipality decides to pursue the design and construction of a regional county trail segment, the trail surface and width standards should reflect the preferred trail standards stated in the County's: *Open Space, Natural Features, and Cultural Resources Plan,* Montgomery County, 2004, Chap. 4, "Trails and Pathways," pp.131-141 (Summary excerpt of "Trails and Pathways" - see right sidebar column). Additionally, coordination with the county will be established regarding design and construction of a proposed county trail segment.

When a municipality enters the *Green Fields/Green Towns Program* and applies for the County Trail Connection Grant Option, the municipality will be required to meet county trail guidelines, and multiple requirements/conditions stated within the applications and grant agreement (see attached application packet). Furthermore, municipal trail design plans must be County approved.

Montgomery County's Proposed Primary Trail Network Preferred Standards

Chester Valley Trail
Preferred Trail Surface and Width Standards: **Macadam Pavement with a 10-12 foot trail width.**

Cresheim Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

Cross County Trail
Preferred Trail Surface and Width Standards: **Macadam Pavement with a 10-12 foot trail width.**

Evansburg Trail
Preferred Trail Surface and Width Standards: **Hard Cinder Pavement with an 8-10 foot trail width.**

Liberty Bell Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.** ***Exceptions through boroughs, village areas and areas where on road facilities and sidewalks must be used.***

Manatawny Trail
Preferred Trail Surface and Width Standards: **Hard Cinder Pavement with an 8-10 foot trail width.**

Pennypack Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

Perkiomen Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

Power Line Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

Schuylkill East Trail
Preferred Trail Surface and Width Standards: **Hard Cinder Pavement with an 8-10 foot trail width.**

Schuylkill River Trail
Preferred Trail Surface and Width Standards: **Macadam Pavement with a 10-12 foot trail width.**

Stony Creek Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

Sunrise Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

West County Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with a 10-12 foot trail width.**

Wissahickon Trail
Preferred Trail Surface and Width Standards: **Macadam or Hard Cinder Pavement with an 8-12 foot trail width.**

202 Trail
Preferred Trail Surface and Width Standards: **Macadam Pavement with a 10-12 foot trail width.**

In order to maintain consistency throughout the trail development process, the county has referenced and developed a trail and bicycle facilities design criteria to aid in the design and construction phases. The county has created four trail classification types providing a desirable and minimum standard range for each classification type. The four trail classification types are:

*Multiuse *Retrofit Sidewalk

*Pathway *On Road Improvements for Bicyclist

The trail classification type (or a related name/description) should be identified or noted within the municipality's open space plan update. Through the initial planning process, the trail type should be determined and solidified. Once established, the municipality should adhere to the county's applicable standards for that particular classification type. The criteria formulated in this document are characteristically universal standards derived from primary public and private publications noted at the end of this document.

The county acknowledges that unforeseen factors and environmental constraints may exist in the design and construction phase of trail development that may hinder the municipality from meeting certain standards. The county expects the municipality to research all possible trail realignments, remediation scenarios, land use impacts, negotiation strategies and community partnerships before determining that the minimum standards cannot be met.

Trail Terms and the Trail Ahead

To briefly elaborate, the county has described each trail classification type to allow the municipality to identify what type of trail they envisioned or would like to plan for.

Multiuse – A trail that permits more than one user group (jogger, bicyclist, hiker, etc.) at a time, creating a two-way shared use area. The trail is constructed of a hard paved surface or a hard compacted cinder to facilitate wheeled and pedestrian trail traffic.

Pathway – This is a temporary or permanent area that is normally dirt or cinder although some paths are asphalt or concrete. A path typically indicates the common route taken by pedestrians between two locations.

Retrofit Sidewalk – A widened and improved concrete pedestrian facility to allow more than one pedestrian user group (jogger, walker, hiker, etc.) at a time, creating a two-way shared use area (excludes wheeled trail traffic in most cases).

On Road Improvements for Bicyclist – Improvements consist of the creation or designation of the following: a) *Bike Lane* – A portion of a roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists; b) *Bike Route* – A shared right-of-way (widened curb lane or shoulder or the creation of a shoulder) located on medium to lightly traveled streets and roadways designated with appropriate "bike route" directional and informational signs. These signs help encourage use and warn motorists that bicycles may be present; c) *Bicycle Friendly Areas (BFAs)* – An area that provides compatible and safe streets for bicyclists. Typically, BFAs are used in residential neighborhoods, although these areas could be used in any type of development where designated bike lanes are not required, but motorists should be aware of bicyclists using the roadways.

Terms may differ throughout the municipalities open space plans updates. The idea is that each municipality that applies for county open space funds can relate to one of our four trail classification types and set in motion their trail building process as soon as it's identified.

The Trail Ahead...Access & Ownership

Another major component to a trail development project is the process of the municipality acquiring access and/or ownership to the corridor for the proposed trail alignment. **The County requires a 75' (foot) trail corridor-width minimum for all proposed trail projects.** If the minimum cannot be met, the municipality must demonstrate why its partial or entire corridor is below the minimum. The 75' minimum is required to ensure proper buffering, landscaping, aesthetic view-sheds and greenway preservation throughout the county.

There are a variety of acquisition and access methods a municipality may use to fulfill this component of trail development. Montgomery County's three acceptable standards are as follows:

a) *Fee Simple Acquisition*: A complete transfer of land ownership from one landowner to another party, usually by purchase.

b) *Easement*: Grants the right to use a specific portion of land for a specific purpose or purposes. Easements may be limited to a specific period of time or may be granted in perpetuity; or the termination of the easement may be predicated upon the occurrence of a specific event. An easement agreement survives transfer of landownership and is generally binding upon future owners until it expires on its own terms.

c) *License/Lease Agreement*: The temporary grant of an interest in land upon payment of a determined fee. The fee does not have to be monetary, but some consideration must be given for the right to use the land, or the lease will not be legally binding.

License/lease agreements (between public utility agencies) will only be recognized and accepted by the Green Fields/Green Towns Program if the agreement is for 25 years or longer (with renewal options) and the municipality agrees to maintain and police the trail segment for that time span. The above stated condition of approval is to ensure that the municipality is 100% committed to planning, designing, building and maintaining their public asset and recreational amenity.

Montgomery County prefers the municipality to either acquire the land or right-of-way through fee simple or obtain an easement in perpetuity throughout the trail corridor.

Design Standards

The heart of this document is the chart below. The chart contains tangible trail design standards that will provide direction and support behind a tremendous regional trail network.

TRAIL NOTE: Please note the term 'Cinder' used in the Trail Surface Type description applies to a variation of cinder/granular type surface applications. The most common cinders used include limestone (limestone dust), sandstone and crushed native rock. The stones' diameter should be less than 3/8 inch and the surface depth should be at least 4 inches thick (compacted) to accommodate mostly every multi-use trail user.

Montgomery County Trail Design Standards

Standard Description		Trail Classification Type			
Criteria Outline		Multiuse	Pathway	Retrofit Sidewalk	On Road Improvements for Bicyclist
Trail Width (75' trail corridor width minimum)	Desirable	12'	6'	10'-12' (multi-use w/o bike lane: two-way shared use)*	Bike Lane: 6'-5'
	Minimum	8'-10'	4'	6'-8' (multi-use with bike lane: two-way shared use)**	Bike Lane: 4'
Trail Shoulder Width	Desirable	4-5'	2'	4' (multi-use w/o bike lane: two-way shared use)	Road Shoulder: 8'-6'
	Minimum	2'	2'	2' (multi-use with bike lane: two-way shared use)	Road Shoulder: 4'
Trail Surface Type***	Desirable	Macadam	Cinder/Macadam	Concrete	Macadam
	Acceptable	Cinder	Cinder	Macadam (if acceptable by local zoning regulations)	Macadam
Trail Grade (longitudinal slope)	Desirable	1%-3%	1%-3%	1%-2%	--
	Maximum	5%	5%	5%	--
Trail Surface Grade (cross slope)	Desirable	1%	1%	1%	--
	Maximum	2%	2%	2%	--
Vertical Clearance	Desirable	10'	10'	10'	--
	Minimum	8'	8'	8'	--
Horizontal Clearance (edge of trail vegetation clearance)	Desirable	4-5'	2'	4'	--
	Minimum	2'	2'	2'	--
Design Speed (mph)	Desirable Grades	20	3-7	8-15	25-30
Viewshed (linear feet) {line of sight within a corridor}	Desirable	200'-175'	75'	200'-175'	--
	Minimum	150'	50'	150'	--
Signage	Trail	See 'Sign Dimensions for Trail & Bicycle Facilities' for chart and sign examples			
	Roadway				
* 6' (typical ped. sidewalk) ** 4' (typical ped. sidewalk) *** Macadam should be considered for trail grades over 2%		**All Trail Surface Depths are assumed @ 2-4" and Trail Sub-base Depths are assumed @ 4-8".**			

Note: Montgomery County Trail Design Standards were derived from multiple sources cited on the ' Trail & Bicycle Facilities Resource References' page located on page 15 of this document.

The remaining sections of this document contain the estimated construction costs, cross section illustrations of each classification type, signage dimensions and examples, and a trail and bicycle resource reference page.

TRAIL NOTE: In addition to county open space funds, municipalities are encouraged to seek and apply for other trail funding sources in conjunction with the subdivision and land development process to facilitate their trail development goals. See Appendix A for a detailed list of other potential trail funding sources for municipalities to seek out and utilize.

Estimated Trail Construction Costs

Baseline Estimates for Constructing Trail Type Surfaces*

12' Multiuse Wide Trail - Cost Range Per Linear Foot

Macadam	Concrete	Cinder	Road Improvements (Macadam)
$43.00	$77.00	$21.00	Variable dependent on scope and design of improvements.
$26.00	$53.00	$11.00	

6' Multiuse Wide Trail - Cost Range Per Linear Foot

Macadam	Concrete	Cinder	Road Improvements (Macadam)
$21.50	$38.50	$10.50	Variable dependent on scope and design of improvements.
$13.00	$26.50	$5.50	

- All estimated figures were calculated in 2005 dollar amounts -

* The above stated estimates were derived from Montgomery County's experience in developing the Schuylkill River and Perkiomen trails using force account labor (materials, trucks and equipment rentals included), utilizing regional and local engineering cost estimates and a national trail estimate. The estimated cost ranges calculated in the table above, represent a high (virgin territory) and low (existing rail/utility corridor) cost construction scenario for municipalities to consider when planning a future trail.

TRAIL NOTE: The above stated cost estimates throughout this memo do not include preliminary and/or final engineering design costs. Only after a careful review on a case-by-case basis of each project, can a reliable and accurate cost be calculated. The above stated cost estimates within this trail guideline document could increase due to many variables and unforeseen factors in the construction phase.

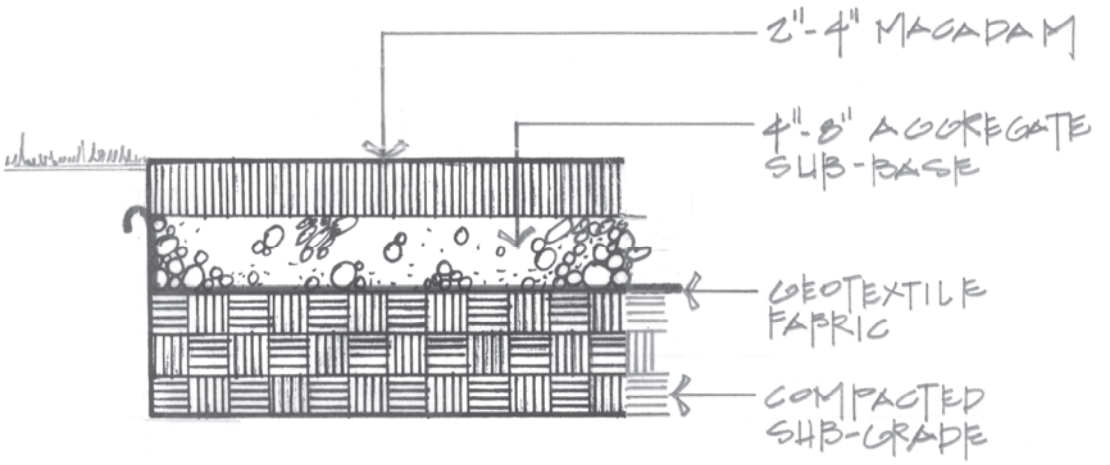
The cost of constructing a paved, concrete or cinder (gravel-surfaced) trail varies depending on whether the trail is built where there already exists a suitable base. For example, trail construction along an abandoned railroad corridor or a former roadway typically requires less site preparation work because a base already exists upon which the trail surface can be applied. If, however, a new trail is being blazed through virgin territory or where a dirt footpath is being upgraded to a more formalized trail, then the trail route must also be cleared, excavated and provided with an adequate sub-base prior to application of the actual trail surface. This extra work adds time and expense to the overall project cost (fuel cost should also be estimated for all power equipment and vehicles used for trail development).

Secondly, the expense of design engineering (i.e., the preparation of line and grade drawings; details/specifications; erosion and sedimentation control plans; applications to regulatory agencies for environmental clearance and approvals; etc.) must also be factored into a trail's overall development cost. Other qualifiers that could fluctuate the overall cost are: base thickness; surface thickness; motorized vehicle weight consideration; direction of alignment; curb cuts; access/driveway aprons; signage/signals; landscaping; and other amenities related to trail development. This component of cost is perhaps most difficult to accurately build into a typical cost estimate because each trail project is unique and will have its own set of design and engineering requirements. Generally, design costs will be higher for a trail that is being built through virgin territory because it will likely involve a greater degree of environmental impact versus a trail that takes advantage of an existing man-made corridor.

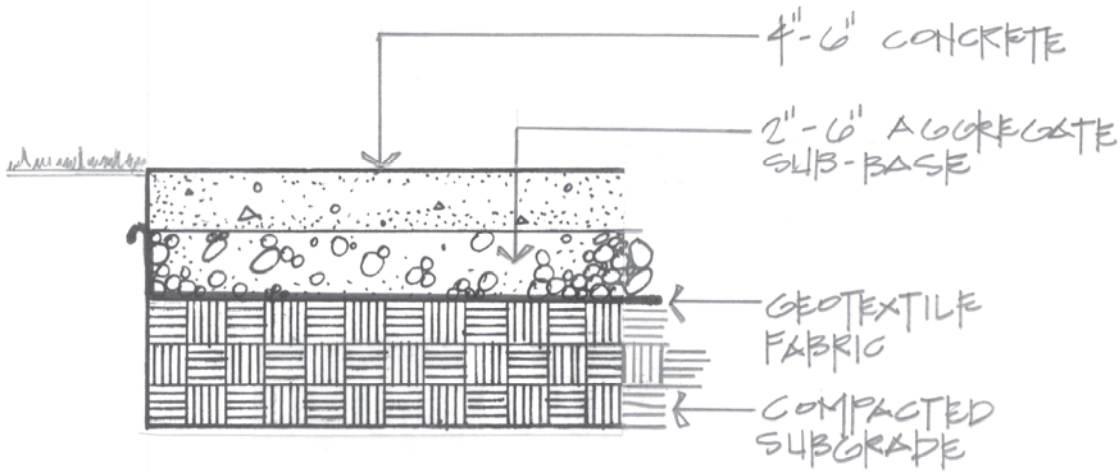
Lastly, a final variable that will affect typical trail development costs is labor. If an outside contractor is used, then local prevailing rates for construction crews can make the project more expensive than if public employees were to be used to perform the construction work. For example, a government-sponsored trail project can often be implemented using its force account labor (i.e., crews from its parks department, public works, or roads and bridges departments) to cut down on expenses since its employees' salaries are already paid for in the agency's regular payroll system. This approach assumes that departmental employees have time available to spend on the trail project without sacrificing other essential duties of their positions. It also assumes that the governing body has reviewed and approved of the approach to devote staff resources to the construction effort.

Cross Section Illustrations of Trail Classification Types

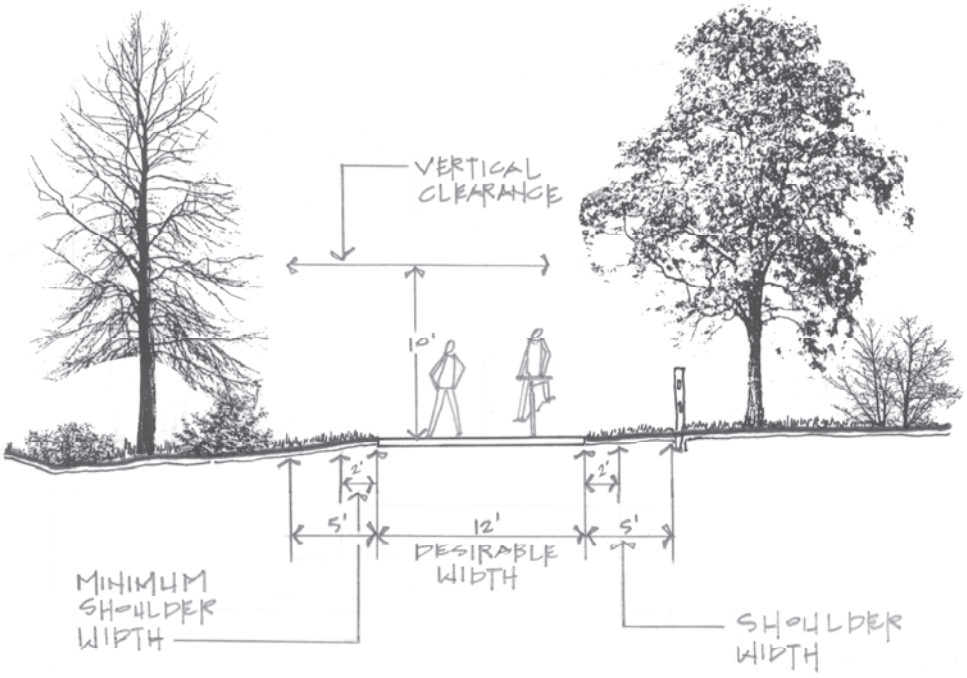
The trail cross sections and detail illustrations (pages 7-9) are visual examples of the County's recommended desirable and minimum principle standards which correspond with the trail design chart on page 5 of this document. Each trail classification illustration may depict multiple scenarios between desirable and minimum standards.



TYPICAL MACADAM TRAIL DETAIL

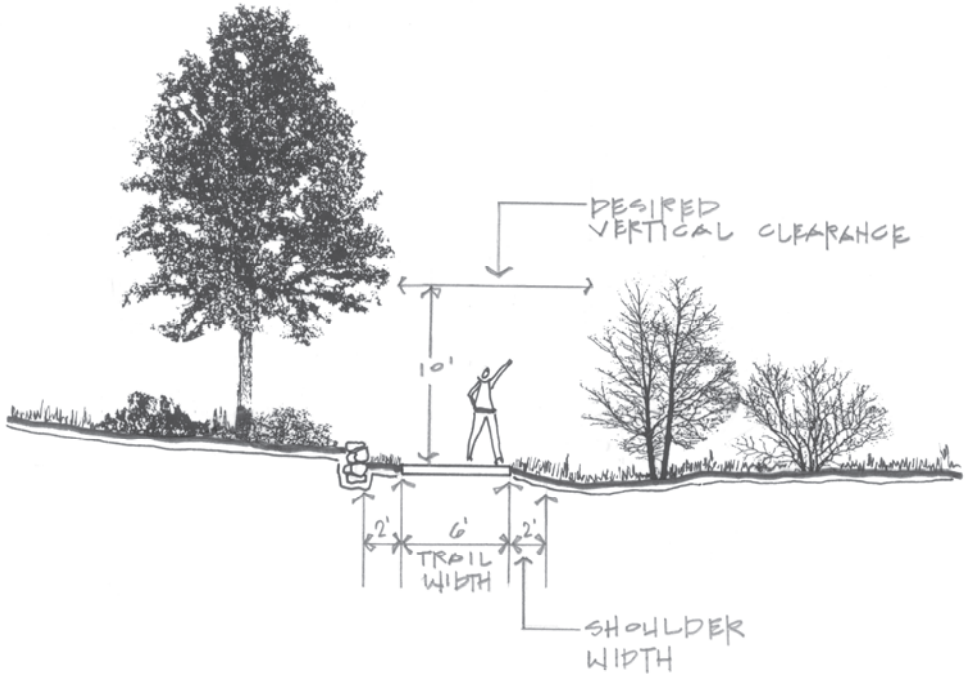


TYPICAL CONCRETE TRAIL DETAIL



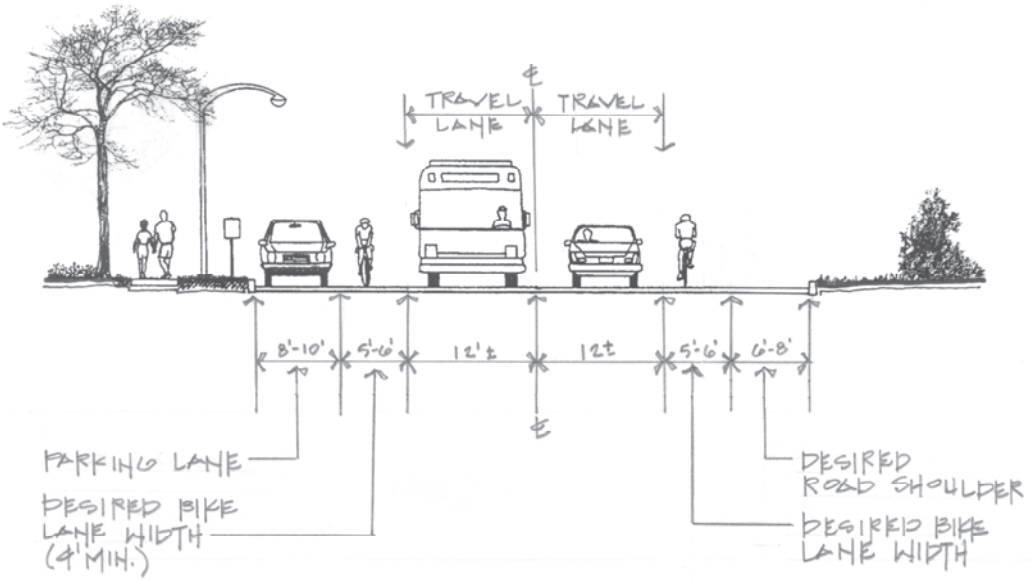
TYPICAL MULTIUSE TRAIL SECTION

NTS



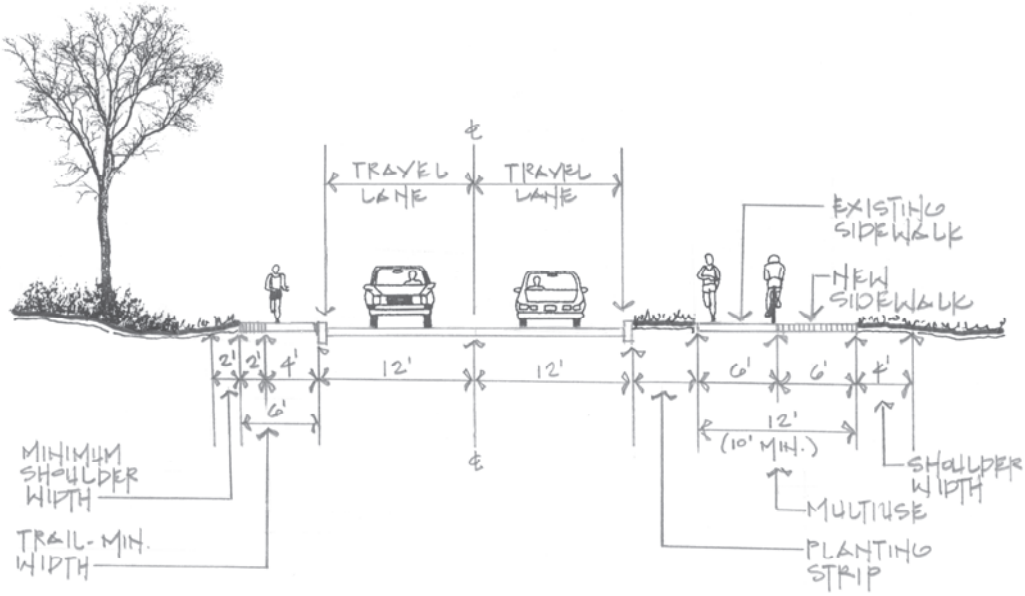
TYPICAL PATHWAY SECTION

NTS



ON ROAD IMPROVEMENTS FOR BICYCLES

NTS



SIDEWALK RETROFIT

NTS

Minimum Signage Dimensions

Sign Dimensions for Trail & Bicycle Facilities

Sign Type	Reference Code	Minimum Sign Size - inches	
		Multiuse	Roadway
Bike Route Ahead	1	18 x 18	30 x 30
Bike Route	2	24 x 18	24 x 18
Bike Lane	3	—	30 x 24
Share The Road	4	—	24 x 24
Bicycle Warning	5	18 x 18	24 x 24
Share The Road Plaque	5	—	18 x 24
Interstate Bicycle Route Sign	6	18 x 24	18 x 24
Bicycle Route Sign	7	12 x 18	12 x 18
Bicycle Parking	8	12 x 18	12 x 18
Bicycle Surface Condition	9	18 x 18	24 x 24
Bicycle Surface Condition Plaque	9	12 x 9	12 x 9
Playground	10	18 x 18	24 x 24
Hill	11	18 x 18	24 x 24
Bump	12	18 x 18	24 x 24
Pedestrian Crossing	13	18 x 18	24 x 24
Dip	14	18 x 18	24 x 24
Narrow Bridge	15	18 x 18	30 x 30
Bikeway Narrows	16	18 x 18	30 x 30
Signal Ahead (Same dimensions apply to Stop & Yield Ahead Signs)	17	18 x 18	30 x 30
Bicycle Guide Direction Signs	18,19	24 x 6	24 x 6
Street Name	20	18 x 6	18 x 6
Bicycle Route Supplemental Plaques	21,22,23	12 x 4	12 x 4
Route Sign Supplemental Plaques	24-29	12 x 9	12 x 9

1

2

3

4

5

6

7

8

9

10

11

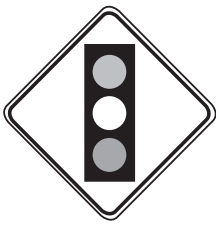
12

13

14

15

16



17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

Sign Dimensions for Trail & Bicycle Facilities

Sign Type	Reference Code	Minimum Sign Size - inches	
		Multiuse	Roadway
Standard County Trail Sign	30	18 x 18	18 x 18
Stop	31	18 x 18	30 x 30
Yield	32	18 x 18 x 18	30 x 30 x 30
Bicycle Lane Supplemental Plaques	33	—	30 x 12
Movement Restriction	34-36, 38	12 x 18	18 x 24
Begin Right Turn Lane Yield to Bikes	37	—	36 x 30
Push Button for Green Light	39	9 x 12	9 x 12
Bicycle Wrong Way	40	12 x 18	12 x 18
Ride With Traffic Plaque	40	12 x 12	12 x 12
No Motor Vehicles	41	24 x 24	24 x 24
No Bicycles	42	24 x 24	24 x 24
No Parking Bike Lane	43,44	—	12 x 18
Pedestrians Prohibited	45	18 x 18	18 x 18
Bicycle Regulatory	46,47	12 x 18	12 x 18
Shared-Use Path Restriction	48	12 x 18	—
To Request Green Wait on Symbol	49	12 x 18	12 x 18
Railroad Crossbuck	50	24 x 4.5	48 x 9
Advance Grade Crossing	51	15 Dia.	15 Dia.

TRAIL NOTE: For additional design details, sign materials and further examples please reference the *Manual on Uniform Traffic Control Devices for Streets and Highways* written and published by the Federal Highway Administration.

These design standards will guide the county in future trail developments, as well as the municipalities applying for open space funds. Montgomery County and the 62 municipalities are pioneering ahead to develop a first-rate integrated trail system on a local and regional level, while creating an innovative recreational and preservation program for all others to accredit and pursue.

Trail & Bicycle Facilities Resource References

Bicycling Road Map, Montgomery County Planning Commission, Norristown, PA, 1999.

Community Trails Handbook, Brandywine Conservancy, Chadds Ford, Pennsylvania, 1997.

Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO), Washington, D.C.,1999.

Guide for the Planning, Design, and Operation of Pedestrian Facilities, American Association of State Highway and Transportation Officials (AASHTO), Washington, D.C., July 2004.

Manual on Uniform Traffic Control Devices for Streets and Highways, 2003 ed., Federal Highway Administration, Washington, D.C., 2003.

Rails-to-Trails Conservancy, *Trails and Greenways Clearinghouse*, < http://www.trailsandgreenways.org/resources/>, accessed in 2005.

Ryan, Karen-Lee (ed), *Trails for the Twenty-First Century,* Island Press, Washington, D.C., 1993.

Appendix A – Potential Open Space Funding Sources

Potential Funding Sources from DCNR {Contact Info. Source– DCNR: www.dcnr.state.pa.us/brc/grants }

Six grant programs are administered by the PA Department of Conservation and Natural Resources, Bureau of Recreation and Conservation:

1. **Community Grant Program** – Grants require a 50 percent match except for Small Community Development type projects and certain technical assistance projects. Grants are awarded to municipalities for recreation, park and conservation projects. Projects types funded under the Community Grant Program include:

   Rehabilitation and Development Projects - These projects involve the rehabilitation and development of public indoor and outdoor park, recreation and conservation areas and facilities; and renovation of existing parks and indoor/outdoor recreation facilities to improve safety and accessibility to individuals with disabilities and special populations such as minorities, low income and the elderly.
   Acquisition Projects - These projects involve the acquisition of real property for park, recreation, conservation and open space purposes by fee simple title or other lesser interest that will insure the desired pubic benefit. Acquisition projects may be for the purchase of new park and recreation areas or expansion of existing sites.
   The Small Community Development Projects - These projects provide a municipal applicant with a population of 5,000 or less with an alternative method of funding for rehabilitation and development of minor indoor and basic outdoor park, recreation and conservation areas and facilities. The maximum grant under this project type is $40,000.
   Planning and Technical Assistance Projects - These projects involve studies completed by professional consultants to help develop planning strategies and courses of action to address local park, recreation, and open space and conservation concerns. Long-range recreation plans, grestudies, feasibility studies, and master site plans are eligible project types.

2. **Rails-to-Trails Grant Program** - This program provides 50/50 matching grants to municipalities and nonprofit organizations for the planning, acquisition and development of rail-trail corridors.
   Eligible corridors include abandoned railroad rights-of-way or lands available for trail purposes under railbanking. Lands abutting rights-of-way which provide opportunities to form trail linkages and create trailheads and related support facilities are also eligible:

Rehabilitation and Development Projects - Eligible projects include the construction of trails and associated structures as well as support facilities.
Acquisition Projects - Land may be purchased through fee simple or a less than fee interest such as an easement.
Planning and Technical Assistance Projects - Rail-trail feasibility studies, rail-trail master plans and special purpose studies are eligible project types.

3. **River Conservation Grant Program** - This program provides grants on a 50 percent matching basis to municipalities, counties, municipal and intermunicipal authorities, and river support groups to foster the conservation, restoration and enhancement of river resources:

   Planning Projects - These projects involve the preparation of a river conservation plan which inventories the environmental, cultural and recreational values of a waterway or watershed; identifies potential threats or opportunities to the water resource; and defines the policies and actions necessary to conserve, restore, or enhance the resource. Once a plan is approved by DCNR, the waterway can be listed on the PA Rivers Conservation Registry to enable it to be eligible for implementation, acquisition and development funds.
   Implementation Projects - These projects involve implementation of a non-development and non-acquisition type projects defined in a river conservation plan for a waterway that has been listed on the registry. Examples of eligible projects include investigations into river access, water quality monitoring and preparation of ordinances and zoning documents.
   Development Projects - Grants are limited to a maximum of $40,000 for development projects recommended in a river conservation plan for a registered waterway. Projects which involve river bank stabilization, riparian land improvement, stream improvement, and the provision of river access and recreation facility development (i.e., parking areas, restrooms, utilities, landscaping, etc.) are eligible.
   Acquisition Projects - Grants are limited to a maximum of $40,000 for the acquisition of land recommended in a river conservation plan for a registered waterway. Fee simple title or a less than fee interest such as an easement are eligible for purchase.

4. **Heritage Parks Grant Program** - In April 1995, Governor Ridge designated the Schuylkill River Heritage Corridor a State Heritage Park. Grants require a 25-50 percent match, depending on project type.

   Grants are available to municipalities, nonprofit organizations or federally designated commissions acting on behalf of the municipalities in a heritage park area. This designation allows grants to be awarded to further the objectives of the approved Management Action Plan for the heritage park area:

Special Purpose Study Projects - Grants awarded may be used to conduct feasibility studies, develop management action plans for heritage park areas, carry out specialized studies and the possible hiring of state heritage park managers.
Implementation Projects - Projects primarily include those related to acquisition, preservation, rehabilitation and development of sites and buildings and interpretive/educational exhibits and materials.

5. **Pennsylvania Recreational Trails Program** - Grants (range: $2,500 to $100,000) may range up to an 80/20 percent match except acquisition projects require a 50/50 match from the applicant. Eligible applicants include federal and state agencies, local governments and private organizations.

   The grants provide funds to develop and maintain recreational trails and trail related facilities for motorized and nonmotorized trial use. The wide array of projects eligible for funding includes:

   TRAIL NOTE: Montgomery County will not fund trail development projects for motorized vehicles.

   - redesigning, reconstructing, nonroutine maintenance, and relocating trails in order to mitigate and minimize the impact to the natural environment;
   - developing urban trail linkages near homes and workplaces;
   - maintaining existing recreational trails, including the grooming and maintenance of trails across snow;
   - restoring areas damaged by usage of recreational trails and backcountry terrain;
   - developing trail side and trail head facilities that meet goals identified by the National Recreational Trails Advisory Committee;
   - providing features, which facilitate the access and use of trails by persons with disabilities;
   - acquiring easements for trails or for trail corridors identified in the state trail plan;
   - acquiring fee simple title to property from a willing seller, when the objective of the acquisition cannot be accomplished by acquisition of an easement or by other means;
   - constructing new trails on state, county, municipal or private lands, where a recreational need for such construction is shown; and
   - only as otherwise permissible while abiding to all restrictions and regulations, construction of new trails on federally owned land.

6. **Land Trust Grant Program** - This program is a source of funding for non-profit conservation or preservation organizations, conservancies and land trusts.

   Grants provide 50 percent funding for acquisition and planning of open space and natural areas, which face imminent loss. Lands must be open to public use and priority is given to habitat for threatened species.

Acquisition Grants - Acquisition of lands which serve as critical habitat for rare, threatened or endangered plant or animal species or communities which are at risk of destruction or substantial degradation receive funding priority over other natural area acquisitions.

Planning Grants – Grants may be utilized for the preparation of documents useful in planning, developing, operating, protecting and managing natural areas and programs. Examples of eligible projects include: preservation and management plans for critical habitat, open space and natural areas; natural area inventories and studies; greenway and open space plans and feasibility studies.

Potential Funding Sources from PA DOT {Contact Info. Sources – DVRPC/PA DOT: www.dvrpc.org/transportation/capital / www.dot.state.pa.us }

Funds made available from the Pennsylvania Department of Transportation (DOT) are monies apportioned to the state from the federal government as a result of the Transportation Equity Act for the 21st Century (TEA-21). TEA-21 is the successor to the 1991 federal transportation bill commonly referred to as ISTEA. Projects which adhere to the following requirements are eligible for funding assistance on an 80/20 cost share basis, with 20% being the local share:

- Facilities must be located and designed pursuant to and incorporated within long range plans for the metropolitan planning area and the state.
- In general, no motorized vehicles shall be permitted to make use of the trails and pedestrian walkways.
- A bicycle project may only be carried out if it is determined that the project will be primarily for transportation purposes.

Below are three programs that relate to providing corridors for pedestrian and bicycle travel through surface transportation improvements:

1. **Surface Transportation (Transportation Enhancements: TE) Program** - The TE Program funds 'non-traditional' projects that enhance the transportation experience, mitigate the impacts of transportation facilities on communities and the environment, and enhance community character through transportation-related improvements.

   Funding can be either 80/20 if the project entails design, engineering and construction or 100% for construction-only projects. Eligible applicants include any federal or state agency and county of municipal governments. Types of improvements eligible for funding include:

- provision of facilities for pedestrians and bicyclists; familiar
- provision of safety and educational activities for pedestrians and bicyclists;
- acquisition of scenic easements and scenic or historic sites;
- scenic or historic highway programs;
- landscaping or other scenic beautification;
- historic preservation;
- rehabilitation and operation of historic transportation buildings, structures or facilities;

- preservation of abandoned railway corridors, including the conversion and use thereof for trails;
- control and removal of outdoor advertising;
- archeological planning and research;
- mitigation of water pollution due to highway runoff, or reduction of vehicle-caused wildlife mortality; and
- establishment of transportation museums.

2. **Congestion Mitigation and Air Quality (CMAQ) Improvement Program** - Projects providing facilities for pedestrians and bicycles may be funded under CMAQ if it is either determined to contribute to the attainment of a national ambient air quality standard or included in the states implementation plan designed to comply with the Clear Air Act.

   Projects are selected for there ability to cost effectively reduce emissions from highway sources. CMAQ is an 80/20 reimbursement program open to public agencies, incorporated private firms and non-profit entities.

3. **Home Town Streets and Safe Routes to School (HTS & SRS) Program** – The overall program has two primary objectives: a) enhancing and improving streets that run through the centers of cities and towns to promote pedestrian circulation and safety; b) establishing safe pedestrian (student) routes and connections to and from schools.

   HTS and SRS is an 80/20 reimbursement program open to any federal or state agency, county or municipal government, school district and non-profit organization. Improvements under the following programs may include:

HTS	SRS
Benches;	Sidewalk construction;
Sidewalk improvements;	Crosswalks;
Street Lighting;	Bike lanes;
Transit bus shelter;	Trails;
Traffic calming;	Traffic diversion improvements;
Crosswalks;	Curb extensions;
Planter;	Traffic circles; and
Kiosks;	Raised median island
Signage; and	
Bicycle amenities	

Potential Funding Source from the National Park Service (NPS)
{Contact Info. Source – NPS: www.nps.gov/ncrc/programs/rtca }

Rivers, Trails, and Conservation Assistance Program – The program offers *technical assistance only* to nonprofit organizations, community groups, and local or state government agencies. Rivers and Trails technical staff offers the following types of assistance for recreation and conservation projects:

- Building partnerships to achieve community-set goals;
- Assessing resources;
- Developing concept plans;
- Engaging public participation;
- Identifying potential sources of funding;
- Creating public outreach;
- Organizational development; and
- Providing conservation and recreation information.

Examples of Rivers and Trails assisted community projects include trail and greenway planning, open space protection, river conservation, watershed planning, rail-trail conversions and urban greening.
National Park Service staff for the Rivers and Trails program are based in 30 field locations to make them more accessible to local governments and nonprofit organizations throughout the country.

Potential Funding Source from PECO Energy/National Lands Trust, Inc.
{Contact Info. Source - noted below}

Green Region – The PECO Energy Open Space Program {Contact Info. Source – Natural Lands Trust: www.natlands.org or PECO: www.peco.com }

Purpose/Program Guidelines

Recognizing that open space in our communities is a crucial piece of the quality of our lives, PECO Energy has committed itself to assisting municipalities in southeastern Pennsylvania with their on-going efforts to protect, acquire and improve open land.
PECO has, therefore, developed the Green Region grant program, which can be used in combination with other funding sources to cover a portion of the expenses associated with open space programs. Underlying the program parameters is PECO's endorsement of deliberate planning for open space protection by municipalities as a means to encourage the wisest use of scarce resources.

Eligible Applicants

Any Township, Borough or City incorporated within Bucks, Montgomery, Philadelphia, Delaware or Chester Counties.

Eligible Activities

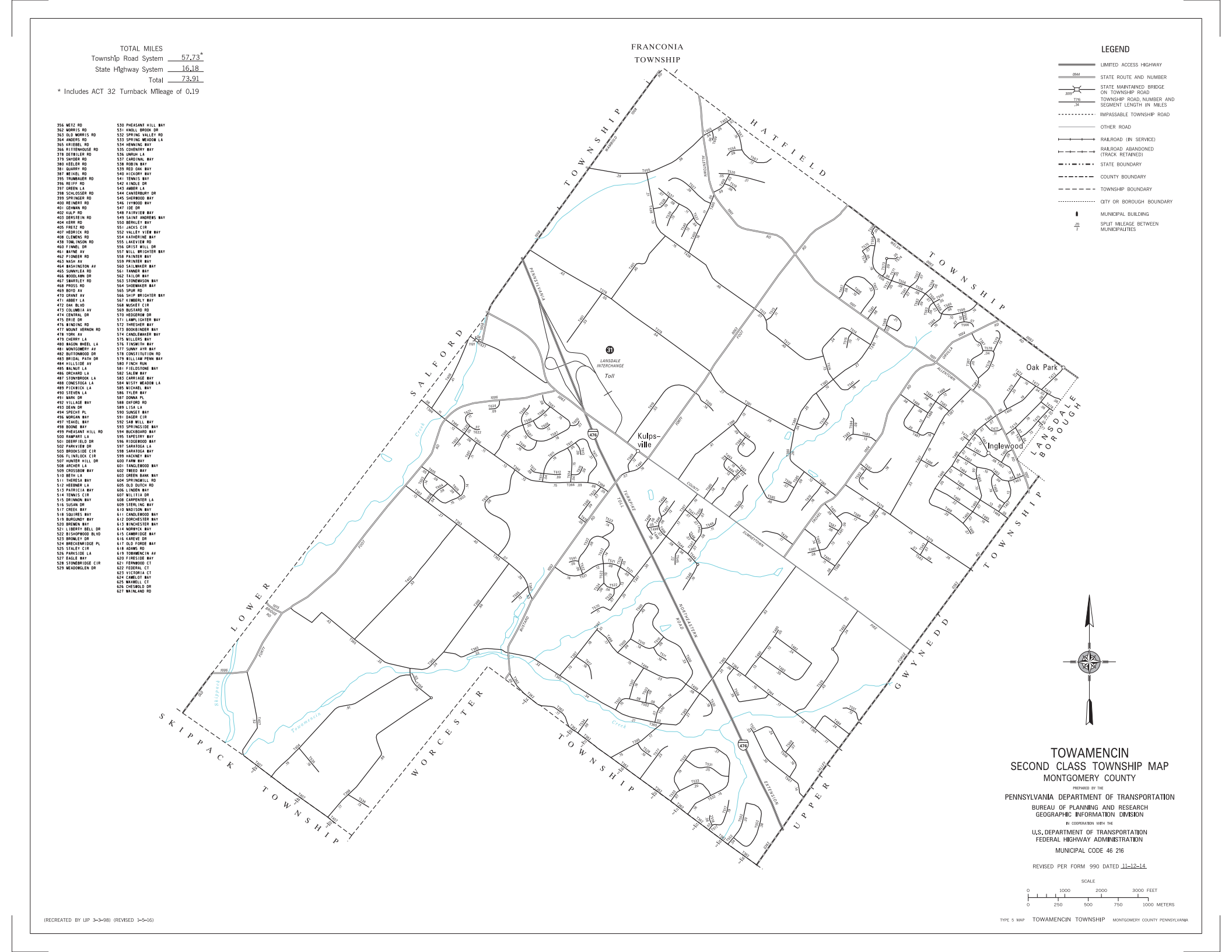
- Up to 50% of the planning expenses associated with developing or updating municipal open space protection plans. Such expenses may include consultant fees, expenses associated with public input (hall rental, advertising, etc.), and publication.
- Staff time for municipal employees is not an eligible expense.
- Up to 75% of the direct and indirect expenses associated with the fee simple purchase(or receipt by donation) of open space properties identified in a municipal open space plan. Such expenses may include legal or consultant fees, survey, environmental assessments, appraisals, etc.
- The purchase price of the property and staff time for municipal employees are not considered eligible expenses.
- Relocation of owner/tenant, condemnation and building repair/demolition are not eligible.
- Up to 75% of the direct and indirect expenses associated with the purchase (or receipt by donation) of conservation easements (also known as "development rights") on properties identified in a municipal open space plan. Such expenses may include legal or consultant fees, survey, environmental assessments, appraisals, etc.
- The purchase price of the easements and staff time for municipal employees is not considered an eligible expense.

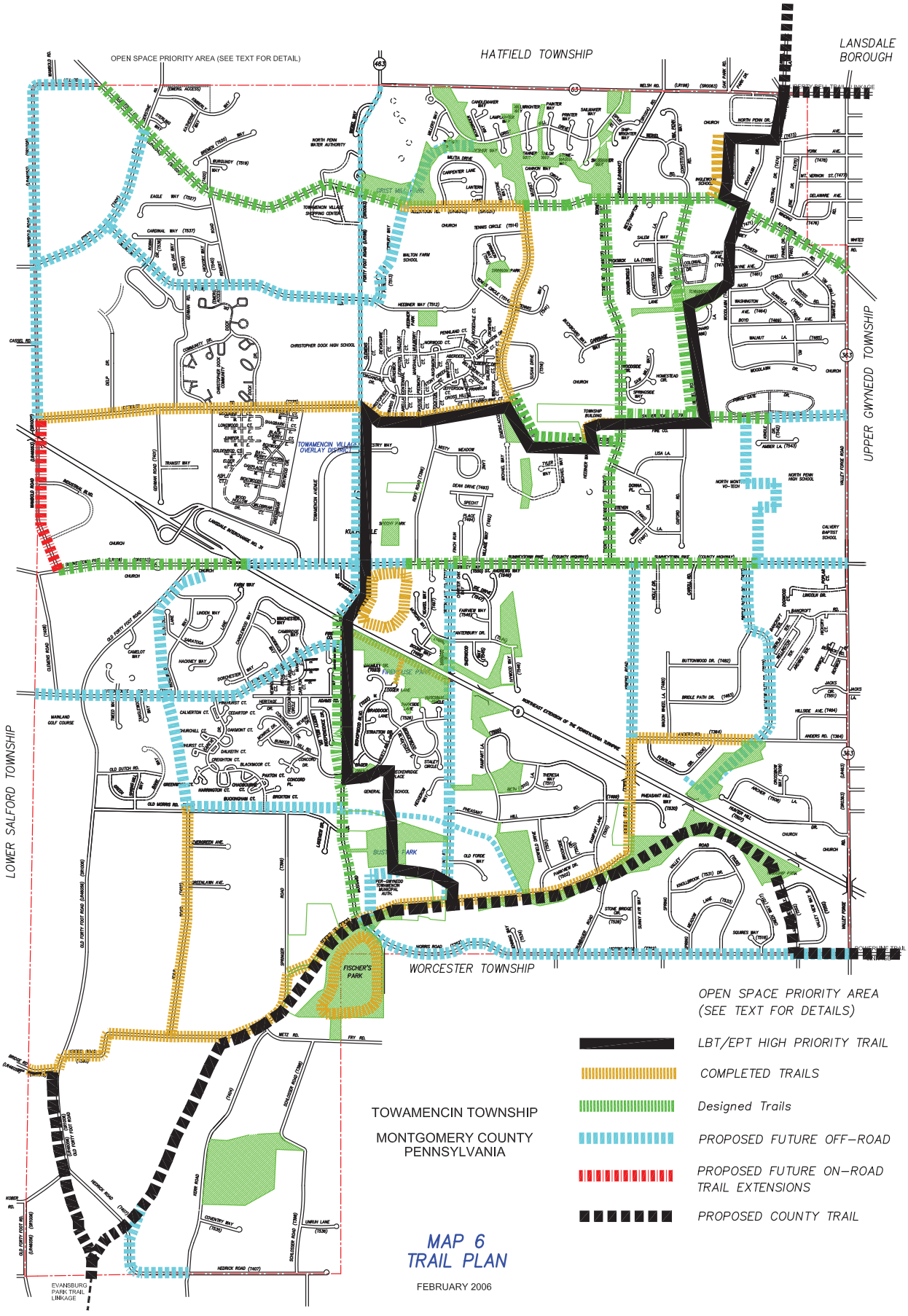
Green Region Program Guidelines

- Up to 75% of the planning expenses to improve municipally-owned open spaces, or lands to be acquired by a municipality.
- These plans may be for habitat improvements such as installing or improving meadows, woodlands, and riparian buffers. On properties designated for passive recreation, the plans may also be for the installation of capital improvements, such as trails, boardwalks, kiosks and observation platforms. Such expenses may include consultant fees for landscape architects, park designers, botanists, engineers etc. Staff time for municipal employees is not an eligible expense.
- Up to 50% of the cost of materials and labor to install habitat improvements and capital improvements for passive recreation similar to those in item 4, above, on municipally-owned open space, when such improvements are identified in a municipal open space plan. Staff time for municipal employees is not an eligible expense.

Grant Amounts and Timing

- Grants will be for no less than $5,000, and no more than $10,000.
- The Grants shall be available twice a year, with application deadlines in the Fall and Spring.
- Award notices will be made within six weeks of each application deadline. All applicants will be notified in writing of PECO's decision on their applications.
- Any successful recipient will be expected to fully expend the grant award within eighteen months of receipt of the funds.
- Retroactive reimbursement for costs accrued between the application deadline and the grant award will be allowed, with cause, on a case-by-case basis. All requests for such reimbursement shall be made in writing to the project administrator.
- A grant recipient may not apply for an additional grant until the current grant is fully expended.
- Matching funds shall be in cash, not in-kind services.

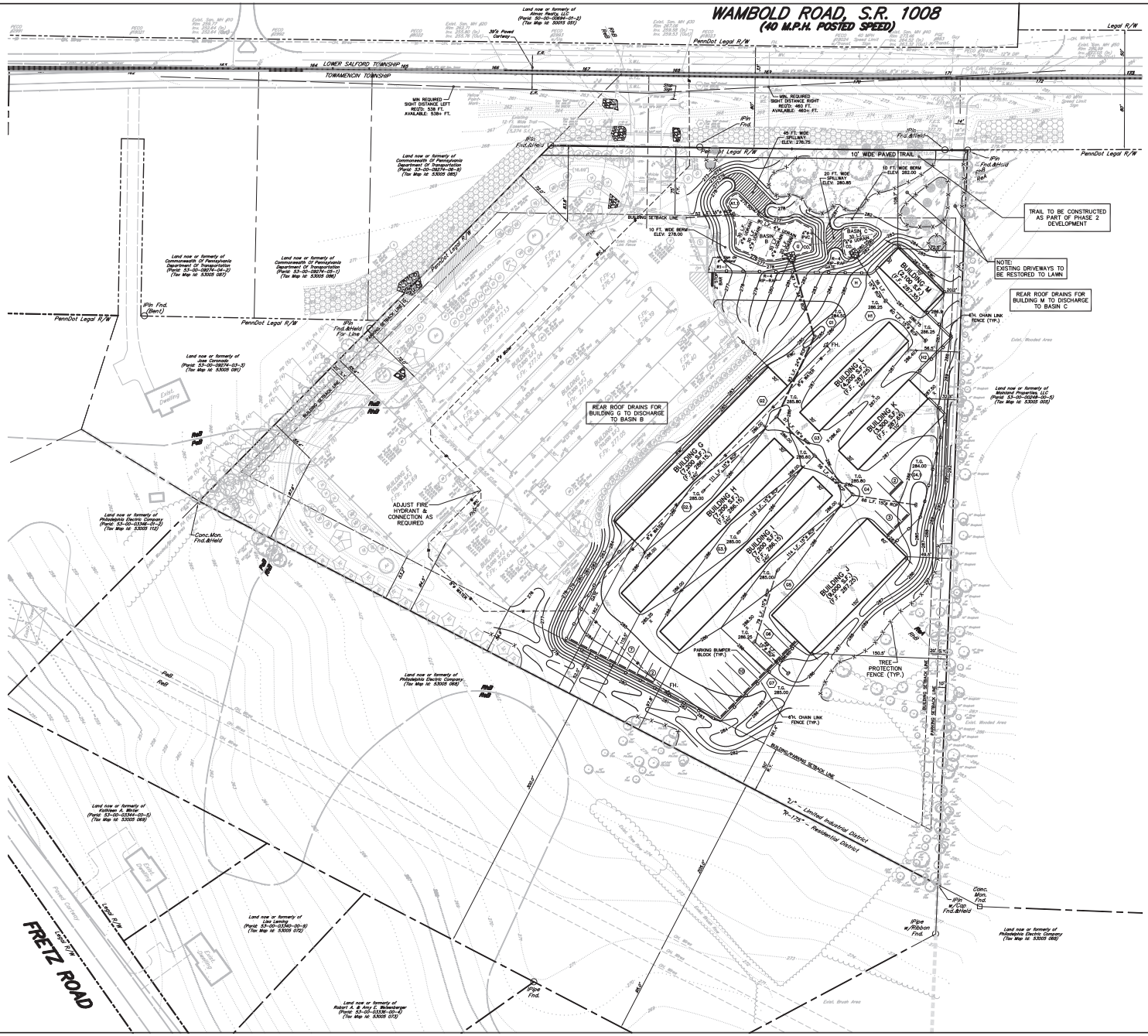

TOTAL MILES
Township Road System 57.73*
State Highway System 16.18
Total 73.91
* Includes ACT 32 Turnback Mileage of 0.19
356 METZ RD
362 MORRIS RD
363 OLD MORRIS RD
364 ANDERS RD
365 KRIEBEL RD
366 RITTENHOUSE RD
378 DETWILER RD
379 SNYDER RD
380 KEELER RD
381 QUARRY RD
387 MEIKEL RD
395 TRUMBAUER RD
396 REIFF RD
397 GREEN LA
398 SCHLOSSER RD
399 SPRINGER RD
400 REINERT RD
401 GEHMAN RD
402 KULP RD
403 DERSTEIN RD
404 KERR RD
405 FREIZ RD
407 HEDRICK RD
408 CLEMENS RD
430 TOMLINSON RD
460 FINNEL DR
461 WAYNE AV
462 PIONEER RD
463 NASH AV
464 WASHINGTON AV
465 SUNNYLEA RD
466 WOODLAWN DR
467 SWARTLEY RD
468 PROSS RD
469 BOYD AV
470 GRANT AV
471 ABBEY LA
472 OAK BLVD
473 COLUMBIA AV
474 CENTRAL DR
475 ERIE DR
476 WINDING RD
477 MOUNT VERNON RD
478 YORK AV
479 CHERRY LA
480 WAGON WHEEL LA
481 MONTGOMERY AV
482 BUTTONWOOD DR
483 BRIDAL PATH DR
484 HILLSIDE AV
485 WALNUT LA
486 ORCHARD LA
487 STONYBROOK LA
488 CONESTOGA LA
489 PICKWICK LA
490 STEVEN LA
491 MARK DR
492 VILLAGE WAY
493 DEAN DR
494 SPECHT PL
496 MORGAN WAY
497 YEAKEL WAY
498 BOONE WAY
499 PHEASANT HILL RD
500 RAMPART LA
501 DEERFIELD DR
502 PARKVIEW DR
503 BROOKSIDE CIR
506 FLINTLOCK CIR
507 HUNTER HILL DR
508 ARCHER LA
509 CROSSBOW WAY
510 BETH LA
511 THERESA WAY
512 HEEBNER LA
513 PATRICIA WAY
514 TENNIS CIR
515 ORINNON WAY
516 SUSAN DR
517 CREEK WAY
518 SQUIRES WAY
519 BURGUNDY WAY
520 BREMEN WAY
521 LIBERTY BELL DR
522 BISHOPWOOD BLVD
523 BROMLEY DR
524 BRECKENRIDGE PL
525 STALEY CIR
526 PARKSIDE LA
527 EAGLE WAY
528 STONEBRIDGE CIR
529 MEADOWGLEN DR
530 PHEASANT HILL WAY
531 KNOLL BROOK DR
532 SPRING VALLEY RD
533 SPRING MEADOW LA
534 HENNING WAY
535 COVENTRY WAY
536 UMRUH LA
537 CARDINAL WAY
538 ROBIN WAY
539 RED OAK WAY
540 HICKORY WAY
541 TENNIS WAY
542 KINDLE DR
543 AMBER LA
544 CANTERBURY DR
545 SHERWOOD WAY
546 IVYWOOD WAY
547 IDE DR
548 FAIRVIEW WAY
549 SAINT ANDREWS WAY
550 BERKLEY WAY
551 JACKS CIR
552 VALLEY VIEW WAY
554 KATHERINE WAY
555 LAKEVIEW RD
556 GRIST MILL DR
557 MILL BRIGHTEN WAY
558 PAINTER WAY
559 PRINTER WAY
560 SAILMAKER WAY
561 TANNER WAY
562 TAILOR WAY
563 STONEMASON WAY
564 SHOEMAKER WAY
565 SPUR RD
566 SHIP BRIGHTER WAY
567 KIMBERLY WAY
568 MUSKET CIR
569 BUSSARD RD
570 HEDGEROW DR
571 LAMPLIGHTER WAY
572 THRESHER WAY
573 BOOKBINDER WAY
574 CANDLEMAKER WAY
575 MILLERS WAY
576 TINSMITH WAY
577 SUNNY AYR WAY
578 CONSTITUTION RD
579 WILLIAM PENN WAY
580 FINCH RUN
581 FIELDSTONE WAY
582 SALEM WAY
583 CARRIAGE WAY
584 MISTY MEADOW LA
585 MICHAEL WAY
586 TYLER WAY
587 DONNA PL
588 OXFORD RD
589 LISA LA
590 SUNSET WAY
591 DAGER CIR
592 SAW MILL WAY
593 SPRINGSIDE WAY
594 BUCKBOARD WAY
595 TAPESTRY WAY
596 RIDGEWOOD WAY
597 SARATOGA LA
598 SARATOGA WAY
599 HACKNEY WAY
600 FARM WAY
601 TANGLEWOOD WAY
602 TREED WAY
603 GREEN BANK WAY
604 SPRINGMILL RD
605 OLD DUTCH RD
606 LINDEN WAY
607 MILITIA DR
608 CARPENTER LA
609 STERLING WAY
610 MADISON WAY
611 CANDLEWOOD WAY
612 DORCHESTER WAY
613 WINCHESTER WAY
614 NORWICK WAY
615 CAMBRIDGE WAY
616 KARLYN DR
617 OLD FORGE WAY
618 ADAMS RD
619 TOWAMENCIN AV
620 FIRESIDE WAY
621 FERNWOOD CT
622 FEDERAL CT
623 VICTORIA CT
624 CAMELOT WAY
625 MAXWELL CT
626 CHESWOLD DR
627 MAINLAND RD
FRANCONIA TOWNSHIP
HATFIELD TOWNSHIP
SALFORD TOWNSHIP
LOWER SKIPPACK TOWNSHIP
WORCESTER TOWNSHIP
UPPER GWYNEDD TOWNSHIP
LANSDALE BOROUGH
Kulpsville
Oak Park
Inglewood
LANSDALE INTERCHANGE
Toll
PENNSYLVANIA TURNPIKE
NORTHEASTERN EXTENSION
NORTHEASTERN ROAD
SUMNYTOWN PIKE
BUSTARD ROAD
SKIPPACK PIKE
WARMINSTER ROAD
ALLENTOWN ROAD
WELSH ROAD
ALLENTOWN ROAD
VALLEY ROAD
COUNTY LINE ROAD
Skippack Creek
Towamencin Creek
LEGEND
LIMITED ACCESS HIGHWAY
STATE ROUTE AND NUMBER
STATE MAINTAINED BRIDGE ON TOWNSHIP ROAD
TOWNSHIP ROAD, NUMBER AND SEGMENT LENGTH IN MILES
IMPASSABLE TOWNSHIP ROAD
OTHER ROAD
RAILROAD (IN SERVICE)
RAILROAD ABANDONED (TRACK RETAINED)
STATE BOUNDARY
COUNTY BOUNDARY
TOWNSHIP BOUNDARY
CITY OR BOROUGH BOUNDARY
MUNICIPAL BUILDING
SPLIT MILEAGE BETWEEN MUNICIPALITIES
TOWAMENCIN
SECOND CLASS TOWNSHIP MAP
MONTGOMERY COUNTY
PREPARED BY THE
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND RESEARCH
GEOGRAPHIC INFORMATION DIVISION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MUNICIPAL CODE 46 216
REVISED PER FORM 990 DATED 11-12-14
SCALE
0 1000 2000 3000 FEET
0 250 500 750 1000 METERS
(RECREATED BY LIP 3-3-98) (REVISED 1-5-16)
TYPE 5 MAP
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY PENNSYLVANIA



THE WALTZMAN PLANNING GROUP

EDM CONSULTANTS, INC.
1101 South Broad Street
Lansdale, PA 19446 Phone (215) 393-0670 Fax (215) 393-0652

W/101/TTwpOpenMap6



LEGEND

- PROPOSED ROOF DRAIN
- PROPOSED BLOW-OFF ASSEMBLY
- PROPOSED GATE VALVE
- PROPOSED TREE PROTECTION FENCE
- PROPOSED ALUMINUM FENCE
- PROPOSED CHAIN LINK FENCE
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED TREE ROW
- PROPOSED CURB
- PROPOSED EDGE OF ROAD
- PROPOSED EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLINE
- PROPOSED CONCRETE WALKWAY
- PROPOSED CONTOUR (MAJOR) 290
- PROPOSED CONTOUR (MINOR) 292
- ADJOINING OWNERS
- SETBACK LINES
- ZONING LINES
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CONTOUR (MAJOR) 280
- EXISTING CONTOUR (MINOR) 282
- EXISTING CURB
- EXISTING EDGE OF ROAD
- EXISTING RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING DRIVES
- EXISTING SOILS
- EXISTING TREE ROW
- EXISTING EASEMENT
- EXISTING WATER MAIN

CONSTRUCTION NOTES

1. THIS PLAN CONTAINS INFORMATION PERTAINING TO UNDERGROUND UTILITIES WHICH IS FOR GENERAL INFORMATION ONLY, AND MAY NOT BE BASED ON AN ACTUAL SUBSURFACE LOCATION SURVEY. ALL SUBSURFACE INFORMATION SHOWN ON THESE PLANS MUST BE VERIFIED BY THE CONTRACTOR BEFORE ANY EXCAVATION IS MADE. STA ASSUMES NO RESPONSIBILITY FOR AND MAKES NO REPRESENTATION OR WARRANTIES AS TO THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES OR OTHER UNDERGROUND FEATURES. THE PLAN USER SHALL EXECUTE A PA ONE CALL PRIOR TO ANY EXAVATION ON THE SITE.
2. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS. WHERE 18 INCHES OF CLEARANCE CAN NOT BE OBTAINED, THE LOWER UTILITY LINE SHALL BE CONCRETE ENCASED FOR A LENGTH OF 20 FEET, CENTERED ABOUT THE CROSSING.
3. ALL CONSTRUCTION SHALL CONFORM TO TOWAMENCIN TOWNSHIP STANDARDS AND SPECIFICATIONS OR PENN D.O.T. STANDARDS AND FORM 408 (LATEST EDITION), WHICHEVER IS APPLICABLE.
4. UNLESS OTHERWISE NOTED, ALL STORM SEWER INLETS SHALL BE PENNDOT TYPE "M" AND SHALL CONFORM TO FORM 408 (LATEST EDITION) SECTION 605 AND ALL STORM SEWER PIPE SHALL BE CLASS III REINFORCED CONCRETE.
5. ALL INLET GRATES IN PAVED SURFACES SHALL BE BICYCLE SAFE.
6. STAINLESS STEEL STORM DRAIN MARKERS SHALL BE AFFIXED TO THE INLET HOOD WITH ADHESIVE, RIVETS OR BOLTS IN OFF ROAD LOCATIONS. MARKERS SHALL BE MINIMUM 3 ½" IN DIAMETER AND INCLUDE "NO DUMPING DRAINS TO WATERWAY" AND A FISH SYMBOL.
7. ALL STORM SEWER SHALL HAVE A MINIMUM OF 1.5' OF COVER OVER THE TOP OF THE PIPES, INCLUDING OVER THE BELL.
8. ALL ROOF DRAINS TO BE SDR 35 AND HAVE A MINIMUM OF 2 FEET OF COVER WITH A MINIMUM 1% SLOPE.
9. ALL PAVED SLOPES TO HAVE A MINIMUM SLOPE OF 1%.
10. ALL LAWN AREAS SHALL BE DESIGNED AT A MINIMUM SLOPE OF 2%.
11. A MINIMUM OF 6-INCHES OF TOPSOIL SHALL BE RETURNED TO DISTURBED AREAS PRIOR TO FINAL GRADING AND SEEDING.
12. SWALES AND ANY SLOPE AREAS WHERE THERE IS CONCENTRATED FLOW FROM DOWNSPOUTS MUST BE STABILIZED WITH EROSION CONTROL MATTING.

GRAPHIC SCALE
50 0 25 50 100 150

2	JAC	PER VARIOUS REVIEWS	JUNE 4, 2021
1	JAC	PLAN ORIGINATION DATE	FEB. 22, 2021

CONSTRUCTION IMPROVEMENT PLAN
OF THE
WAMBOLD ROAD TRACT – PHASE 2
PREPARED FOR
WAMBOLD REALTY, LP.
SITE SITUATE IN
TOWAMENCIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

STA
Civil Engineers • Land Surveyors
2499 KNIGHT ROAD, PENNSBURG, PA 18073
MAILING: P.O. BOX 87, RED HILL, PA 18076
PH: (215) 679-0200; www.stotac.com

PLAN SCALE HORIZONTAL:	DRAFTED BY	PROJECT MANAGER	PLAN SHEET NUMBER
1"=50'	J.A.C.	S.A.R.	3 OF 14
	PROJECT NUMBER 4878	DRAWING FILE NUMBER 4878CI-PH2	

152