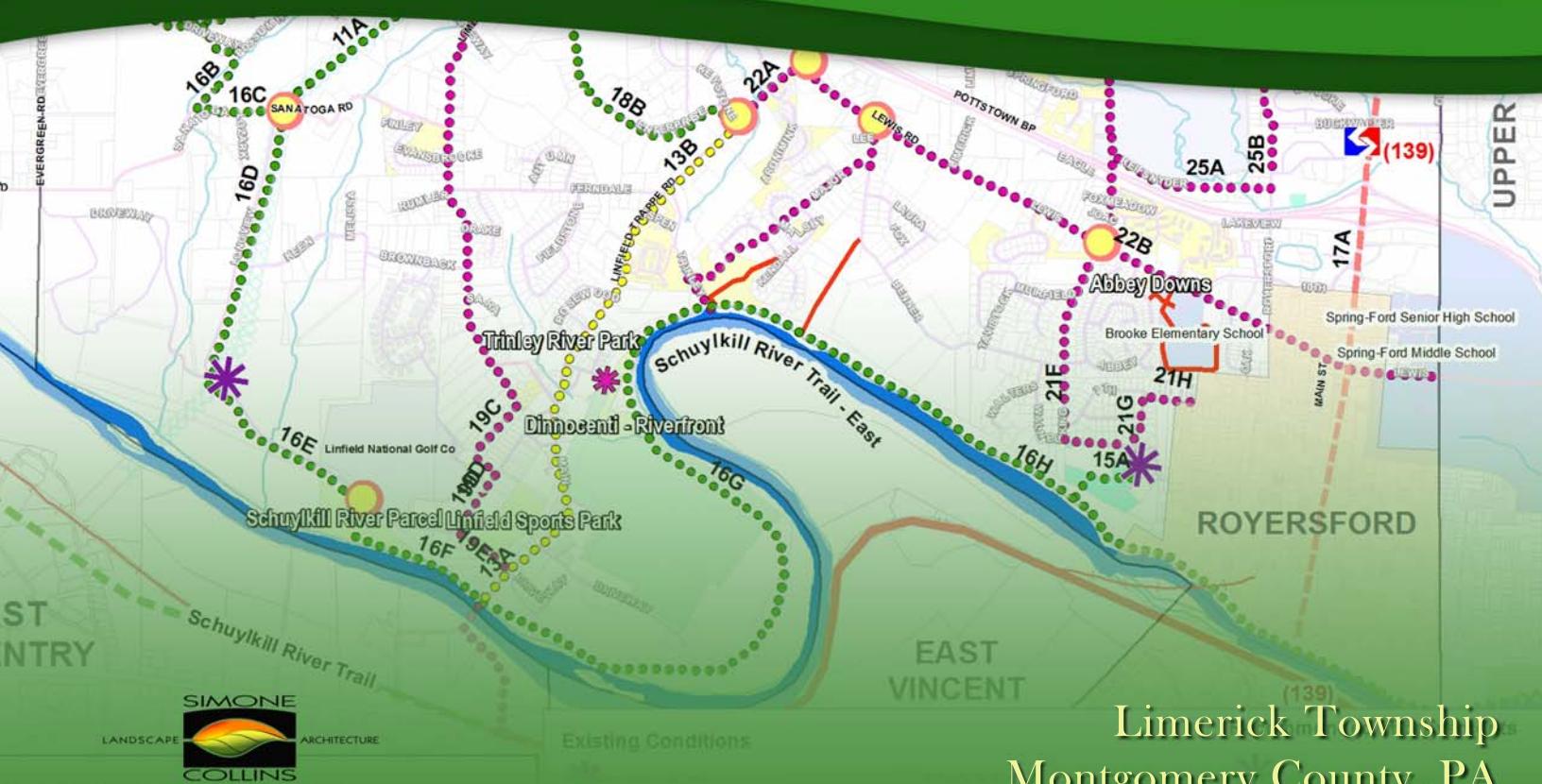




July, 2013

Greenways & Trails

Master Plan



Limerick Township
Montgomery County, PA

The Development of a Greenways and Trails Master Plan for
LIMERICK TOWNSHIP

This project was financed in part by a grant from the Community Conservation Partnerships Program, Keystone Recreation, Park and Conservation Fund, under the administration of the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation.

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Introduction

Faced with a growing population and a deficit of alternative transportation options, Limerick Township commissioned this township-wide study to develop a comprehensive network of trail and bicycle routes to connect major destinations.

The township applied for, and received a Pennsylvania Department of Conservation and Natural Resources (DCNR) grant to prepare the master plans according to DCNR guidelines. Matching funds were provided by PECO / Exelon and Limerick Township.

Project Purpose, Goals, Objectives, and Findings

The impetus for this plan rises amid intense land development pressures over the past 20 years. Township residents have responded by participating in the creation of the township's Comprehensive Plan in 2009 which called for bicycling and pedestrian networks to be part of future planning efforts and ultimately this Greenway and Trail Plan.

This plan is a result of a community based vision for future trail and greenway alignments that will maintain and improve the quality of life in Limerick Township and ensure trail and greenway amenities for current and future generations. This plan will serve as a long-term guide for the construction or dedication of trails or greenways as part of future land developments, or through the utilization of local, county, state or federal grant funding sources.

Project Intent:

"The Limerick Township Greenway and Trail Network Master Plan will examine opportunities for new pedestrian and bicycle routes throughout the township that will link parks, open space, schools, residential areas and employment centers, as well as to connect to regional transportation and recreational trails. The master plan is intended to offer Limerick residents close-to-home transportation options and recreational and fitness opportunities".

1. Introduction

Greenway and Trail Master Plan Purpose

The purpose of the Limerick Township Greenway and Trail Master Plan is to:

- Conduct a study of the community and effectively identify and delineate existing natural and manmade features;
- Inventory existing trail and greenway networks and municipal and county trail planning completed to date;
- Develop a “vision” for proposed greenway types including conservation greenways, restorative opportunities, and transportation greenways; and,
- Develop an action plan to prioritize implementation of the Master Plan, identify roles and responsibilities, develop an estimate of probable costs, and identify potential pilot projects.

The township has identified several benefits that will result from this project, including:

- Natural Resource and Rural Legacy Protection;
- Economic Benefits (i.e. eco-tourism, enhanced property values);
- Conservation of historic and cultural resources;
- Social Benefits (i.e. improved quality of life and public health, environmental education opportunities); and,
- Recreation & Transportation Benefits (i.e. additional recreation facilities and non-motorized linkages to township destinations).

Plan Objectives Include

- Correlate information gathered from this and other studies into a single comprehensive study;
- Identify key issues, opportunities and constraints for greenway development;
- Map alternative trail alignments;

Greenway Plan Goals:

- Inventory natural resources or “Green Infrastructure”
- Inventory man-made or “Gray Infrastructure”
- Identify township destinations, existing trails, and potential connections to regional facilities and existing trails located in adjacent municipalities
- Identify municipal and county-wide planned future trails and future development areas
- Identify potential greenway/trail types
- Identify preferred trail routes and support facilities such as township destinations, developments with existing sidewalks, new developments, and other trail facilities
- Identify project partners to assist with implementation



- Specify construction requirements (per facility type) and prepare an estimate of probable development costs;
- Provide measures for the preservation of natural areas found along stream corridors;
- Prepare an implementation and funding strategy, including the identification of potential funding resources; and,
- The selection of demonstration projects that will jump start future plans to create a township-wide greenway system.



Existing township trails create opportunities for future linkages.

Plan Findings

Project Committee input and community input from the public participation process led to the identification of a township-wide network of pedestrian and bicycle facilities that will serve the township residents and create regional connections to adjacent municipalities and/or facilities. The primary focus of these planning efforts concentrates on connecting the following elements:

- Neighborhoods with existing sidewalks or trails;
- New or proposed residential land developments;
- Public destinations (schools, parks, trailheads, open space, State game lands, village and commercial centers, municipal facilities, and private recreational facilities);
- Stream and river corridors; and,
- Planned facilities and public destinations in adjacent municipalities.

Key implementation recommendations are based on a variety of factors including: land ownership, connectivity to regional trails / parks / major destinations and construction feasibility. A summary of the key implementation recommendations is below:

- Install bike lanes and complete missing sidewalk gaps to provide two north-south pedestrian/bicycle routes connecting existing

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neighborhoods, schools and parks. This will also facilitate a critical regional connection between the existing Perkiomen Trail and Schuylkill River Trail.

- Create a major off-road trail connection along 3.8 miles of the PECO right-of-way to connect the east and west portions of the township.
- Create awareness for bicycles by establishing an 11 mile on-road bicycle circuit deploying pavement markings and signage on rural roads located in the northern portion of the township.
- Work with Norfolk Southern to construct a 1.5 mile hiking trail between Trinley Park and Royersford Borough to serve as a placeholder for the planned Schuylkill River Trail East.

Township Background

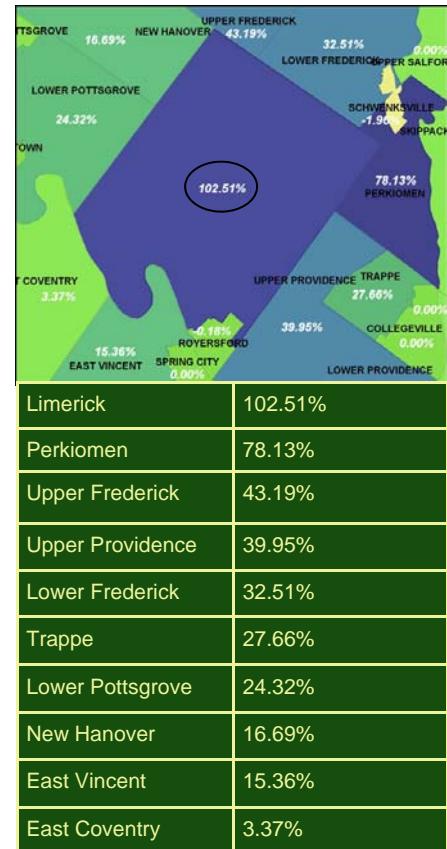
Limerick Township is located in the greater Philadelphia area situated about 35 miles northwest of downtown Philadelphia in Montgomery County, Pennsylvania. The township consists of a total land area of 22.8 square miles and is classified as a second class township governed by a five member board of supervisors.

Demographics

According to the 2010 U.S. Census, the total population of Limerick Township was 18,074 residents. With a population density of 792 people per square mile, the character of the township is that of a densely populated residential suburb with developed areas focused around main transportation corridors. Much of the remaining land is agricultural and wooded lands found mostly in the northern section of the township. The median age of the population was 39 years with 26.7% of the population under the age of 18. Average household size was recorded at 2.62 persons per household with a median income of \$82,526.

Median Household Income Growth (2000-2010)

Community	Median Household Income 1999	Median Household Income 2009-2010	Percent (%) Change
Limerick Township	\$64,752	\$82,526	27.4%
Montgomery County	\$60,829	\$76,380	25.5%





Regional Context Map.

Regional Context

The Regional Context Map shows the relationship between Limerick Township, Montgomery County and the State of Pennsylvania. Limerick Township is bordered by the municipalities of Upper Frederick Township, Lower Frederick Township, Perkiomen Township, Upper Providence Township, Royersford Borough, Spring City Borough, East Vincent Township, East Coventry Township, Lower Pottsgrove Township, and New Hanover Township. The southern portion of the Township is served by the U.S. Route 422 bypass which connects the City of Philadelphia to the City of Reading (about 20 miles to the northwest). The township's development pattern along the 422 corridor is distinctly more dense than the rural northern portion of the township. This strategic location, coupled with ample highway access, has allowed the township to become a fairly developed community that has historically experienced faster population growth than its neighboring municipalities, and increasing development pressures.

Benefits of Trails & Greenways Planning

An established trails & greenways system provides many economic, social - and most importantly - health benefits for township residents. Economic benefits include increased property values for those located near trails & greenways. Social benefits of trails include providing additional locations for community interaction and improving the quality of life.

The most important benefit of a trails & greenway system is the opportunity these facilities provide for bettering the community's general health and well being through regular physical activity. Depression, obesity and diabetes are chronic diseases directly related to the physical inactivity and unhealthy eating habits associated with a sedentary lifestyle. The US Department of Health and Human Services, Center for Disease Control and Prevention (CDC) reports that more than one-third (35.7%) of U.S. adults are obese, and the estimated cost of obesity in the United States in 2008 was about \$147 billion. Medical costs were estimated to be \$1,429 higher for the obese than those of normal weight. The 2010 obesity rate for the State of Pennsylvania is 28.6%. For more information on the facts presented as well as many other programs promoting

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healthy lifestyles by the CDC, please refer to their website: <http://www.cdc.gov/HealthyLiving/>

The opportunity for physical activity that trails, greenways and related facilities provide not only fights obesity and related diseases, but also results in reduced health care costs, increased work productivity, and improved longevity for the community as a whole.

Benefits of Trails and Greenways:

- Protecting Natural Resources;
- Protecting Rural Legacy;
- Providing Communities with Economic Opportunities and Prosperity;
- Conserving Historic and Cultural Resources;
- Providing Opportunities for Public Recreation, Health and Fitness;
- Enabling Outdoor Educational Opportunities for People of all Ages;
- Assisting in the Planning and Shaping of Communities, and;
- Providing Alternative and Safe Modes of Transportation.

(Source: Pennsylvania Greenways Partnership Commission)

Inventory & Analysis

Data Collection & Methodology

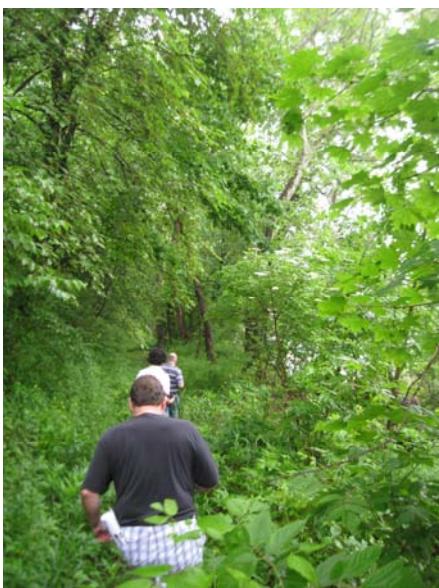
Data found within this report was compiled from many different sources, including Limerick Township, Montgomery County Planning Commission, Delaware Valley Regional Planning Commission, previous planning efforts to date, and new field reconnaissance data provided by the consultant.

Geographic Information System (GIS) base map information was used to prepare field maps and preliminary planning documents consisting of the base aerial photography, municipal boundaries, roadways, parcels and other identifying features.

The consultants performed initial field reconnaissance on 5/25/12 and 6/30/12 to inventory, analyze and document existing conditions. Field data was recorded by the consultant onto the field maps, and photographs were taken of existing site conditions for use in evaluating trail alignment alternatives. Follow-up field verification of proposed alignments was conducted to verify the feasibility of the conceptual trail alignments.

Consultants also interviewed key persons and landowners in the community who provided expert guidance to the planning process.

The project was guided by a steering committee assembled by the township to represent a diverse cross section of the community. The committee provided valuable insight and direction to the consultant for development of the plan. This insight included a consultant tour of the township to discuss first hand some of the known opportunities and obstacles to constructing trail and bicycle amenities. In addition to the site visit, a series of public meetings and study committee meetings were held throughout the planning process. These meetings provided additional information and community feedback that contributed to the



Field reconnaissance was conducted with the consultants and committee.

2. Inventory & Analysis

development of the Limerick Township Greenway and Trails Master Plan.

The completed Greenway and Trails Master Plan was provided to the township to be utilized for future planning endeavors. It should be noted that a topographic survey of existing conditions must be prepared for any specific trail sections prior to commencing design development and construction documentation.

Public Participation Summary

Public participation is a key ingredient in the success of any community project. Public meetings are designed to inform the public of the project status; to receive input as to the desired facilities; and address questions, comments, or concerns relative to the trail and greenway development. Input received from the public meetings was discussed with the project committee throughout the planning process.

Below is a list of public meetings held by the consultants during the development of the Master Plan:

DATE	MEETING
May 10	Committee Meeting #1
June 13	Committee Meeting #2
June 21	Public Meeting #1—Brainstorming/Programming
Aug. 9	Committee Meeting #3
Sept. 13	Public Meeting #2—Initial Alignments
Oct. 10	Committee Meeting #4
Oct. 18	Public Meeting #3—Present Draft Plan
Dec. 12	Committee Meeting #5
Jan. 10	Public Meeting #4—Present Final Plan

Key Person Interviews

In compliment to public participation, individual interviews were conducted with significant landowners, township and county officials and other organizations. These are summarized below:



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Township Officials: Meetings were conducted with numerous township officials including the township manager, planning and zoning director, parks and recreation director, township engineer and members of the board of supervisors to gather information about recent and ongoing land development projects. Also discussed were planned roadway/intersection improvements and sewer projects amenable to pedestrian/bicycle accommodations. This input was used to identify opportunities and obstacles typical to trail and greenway improvements proposed by public and private developments. Recent land development plans were reviewed and assessed to determine if trail and bicycle accommodations are needed or proposed. After reviewing several land development plans, it was found that internal trails proposed by some land developments might be better utilized in alternate configurations or in some cases installed outside the project boundaries to enhance connections between the new development, existing neighborhoods, parks or other destinations. In many cases, coordinated adjustments to trail alignments can result in improved public access to destinations and increased marketing potential for the new development. This input enhanced trail alignment recommendations and prompted the addition of recommended alignments to the township's official map.

PECO: A meeting was held with the External Affairs Manager and Real Estate Specialist to review the feasibility of proposed trail alignments and requirements for trails within PECO's right-of-way. Discussions included: the status of PECO lease agreements with adjacent property owners, maintenance responsibilities, trail construction preferences, underground utilities, PECO's review process and approximate costs for a trail licensing agreement. It should be noted that this meeting was not intended to uncover all potential conflicts that may be discovered later when engineered construction plans are submitted for detailed review by PECO. Detailed meeting notes and PECO licensing application information can be found in the appendix.

Montgomery County: A meeting was held with Michael Stokes and David Clifford of Montgomery County Planning Department to gauge the status of planned county trails impacting Limerick Township. Also discussed were initial county plans for distribution of Act 13—

2. Inventory & Analysis

Marcellus Shale Natural Gas Drilling Impact Fees. The information obtained from these meetings is summarized in proceeding report sections. This data was critical to informing the planning priorities established in chapter 4.

PennDOT and Perkiomen Township: In August 2012, a meeting was held between Limerick, Perkiomen Township, PennDOT and Urban Engineers to advocate for the installation of bicycle improvements as a part of PennDOT's roadway widening and intersection improvement project along Plank/Ott/Meyers Roads in Perkiomen Township. This project has the potential to establish a critical bicycle/pedestrian connection to the Perkiomen Trail that will benefit the region. The objective of this meeting was to spur ongoing multi-municipal discussions to encourage PennDOT to construct this project as a 'complete street' as described later in this report. This project was not authorized for construction funding at the time of this writing.

Existing Planning Documents – List

Existing and on-going planning documents that contributed to the development of The Limerick Township Greenways and Trails Master Plan include:

- 2009 Limerick Township Comprehensive Plan
- 2011 Montgomery County Primary Trail Network Map
- County On-road Bicycle Routes
- PennDOT Plank/Ott/Meyers Roadway widening and intersection Improvements in Perkiomen Township
- 1989 Limerick Township Comprehensive Park, Recreation and Open Space Plan
- 2006 Perkiomen Township Open Space Plan
- 2006 Lower Frederick Township Open Space Plan
- 2006 Upper Frederick Township Open Space Plan
- 2006 Upper Providence Open Space and Environmental Resource Protection Plan

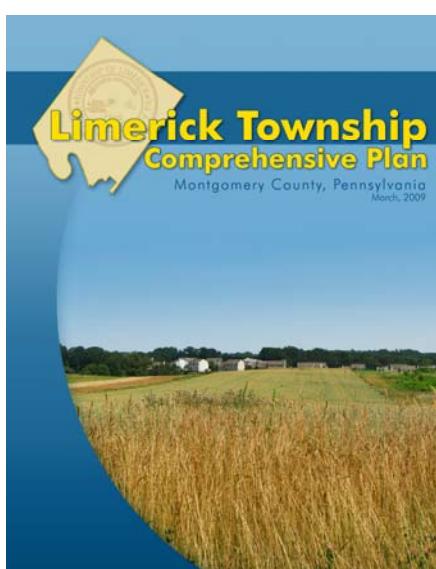
2. Inventory & Analysis

- 2006 New Hanover Township Open Space Plan
- 2008 Sanatoga Interchange Study, Lower Pottsgrove Township
- Limerick Township Zoning Ordinance
- Limerick Township Subdivision and Land Development Ordinance
- Limerick Township Official Map

Planning Documents - Summaries

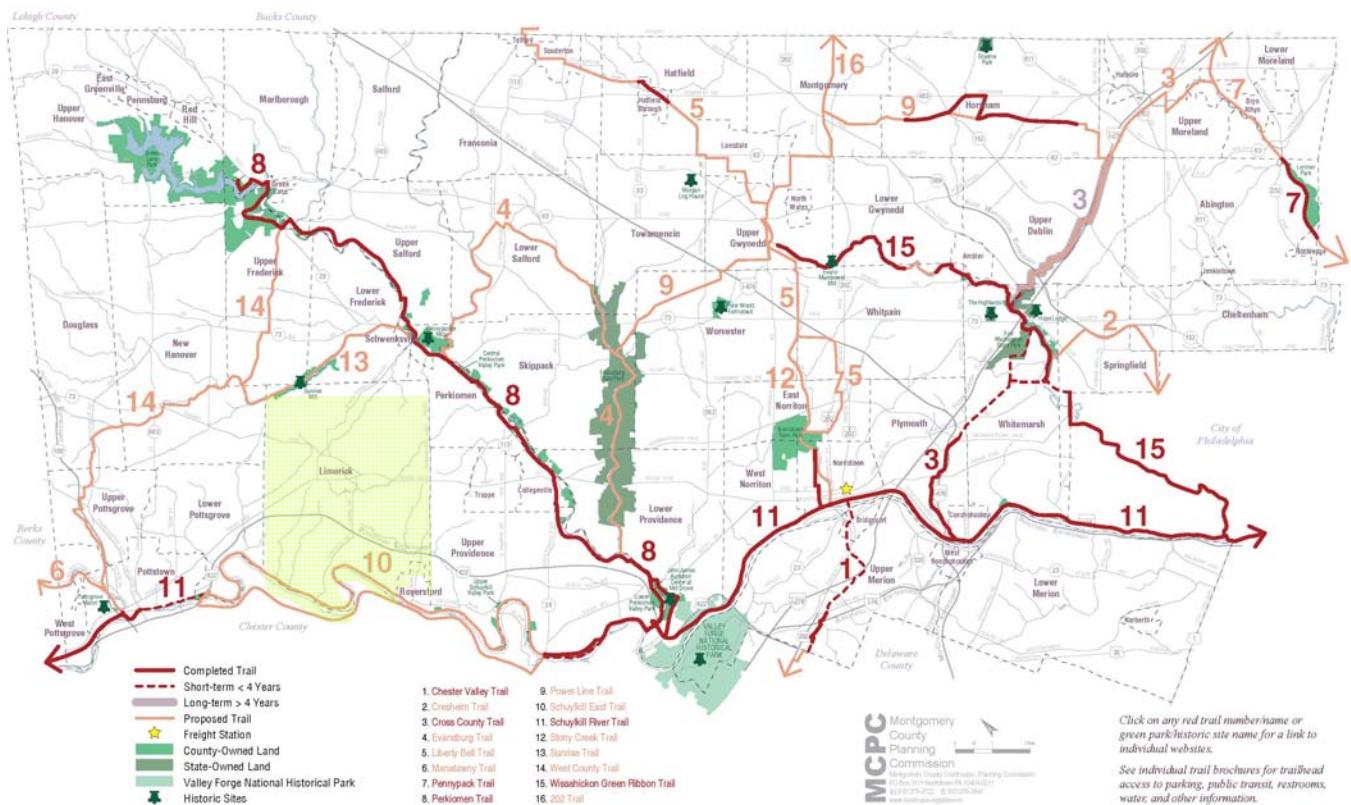
2009 Limerick Township Comprehensive Plan—Completed in March 2009, this plan recommends a course of action to help the Limerick Township prepare for the needs of its growing community. Professional analytical research and public participation identified potential problems and opportunities within the study area. Goals and objectives were established for varying issues such as; zoning, land use, open space, natural resources, cultural resources, transportation, community facilities and services, water resources, energy conservation, economic development, and housing. Key themes of the plan as they relate to trails and greenways include the following:

- Coordinate traffic safety, operational, and capacity improvements with a focus on regional corridors.
- Coordinate circulation planning with land use planning so that land use decisions are appropriate to transportation infrastructure.
- Increase opportunities to connect to public transit, and to walk, ride, or bike throughout the township.
- Pursue private, municipal, state and federal funding opportunities to implement high priority projects.
- Continue to coordinate regional transportation improvements with PennDOT, DVRPC, Montgomery County and surrounding municipalities.



2. Inventory & Analysis

MONTGOMERY COUNTY 2011 Primary Trail Network



2011 Montgomery County Primary Trail Network Map—Produced by the Montgomery County Planning Commission in February 2011, this map shows completed and proposed countywide trails and linkages as well as future implementation priorities. Proposed trails are identified as either short-term completion (less than four years), long-term completion (greater than four years), or proposed trails without an identified completion priority.

The map identifies two proposed trails within Limerick Township. These are the Sunrise Trail located at the northwest corner of Limerick Township and the Schuylkill River Trail-East located in the southern portion of the township along the Schuylkill River. Planning officials indicate that the Sunrise Trail will be constructed as a hiking trail in the distant future, and the Schuylkill River Trail-East is constrained by private land owner issues as described later in this report.

Two existing multi-use trails are located just outside the township and include the Perkiomen Trail to the northeast and the main branch of the Schuylkill River Trail to the South. Future plans call for the extension of the Schuylkill River trail from Parker Ford to US 422 in Pottstown by 2013.



County On-Road Bicycle Routes in Limerick Township.

Montgomery County On-Road Bicycle Routes—Countywide on-road bicycle routes have been identified by the Montgomery County Planning Commission through various studies. Primary bike routes as they relate to Limerick Township include Ridge Pike and Swamp Pike. Secondary bicycle routes include Township Line Road, Neiffer Road, and Game Farm Road.

PennDOT Plank/Ott/Meyers Roadway widening and intersection Improvements in Perkiomen Township (SR 4044, Section MG1, Montgomery County)—This planned PennDOT improvement project is engineered and currently seeking construction funding. Limerick, in partnership with Perkiomen Township should continue to advocate for funding this project as a 'complete street' to create an important bicycle link from the northeast corner of the township to the existing Perkiomen Trail. Planned roadway and intersection improvements include:

- Realignment of Meyers Road and Seitz Road at Township Line Road (SR 4014). Meyers Road will be realigned to intersect with Township Line Road while Seitz Road will terminate at Meyers Road. A new signal will be installed at the Township Line Road and Meyers Road intersection.
- Horizontal and vertical realignment of Meyers Road and Ott Road at the Miller/Bauman Roads intersection.
- Widening of Meyers Road and Ott Road to incorporate a 4' to 5' paved shoulder each direction. This shoulder is wide enough to accommodate bike lanes—however bicycle line striping and signs are not proposed.
- Realignment of the Ott Road intersection with SR0029. The road will be realigned to intersect SR0029 opposite of Plank Road. The road will be widened to accommodate a new four-way, signalized intersection.
- Widening of Plank Road and a new signalized intersection where Plank Road intersects Skippack Pike.

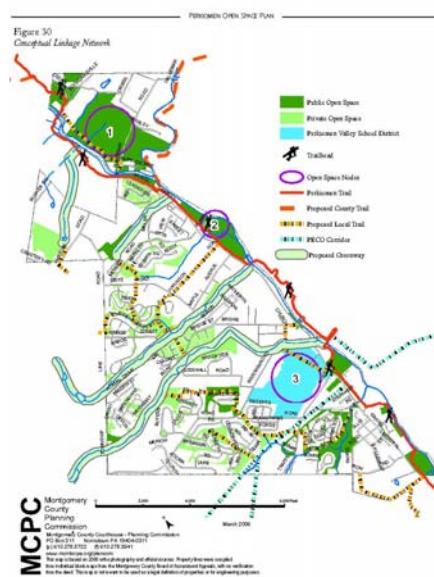
2. Inventory & Analysis

1989 Limerick Township Comprehensive Park, Recreation and Open Space Plan—This plan calls for the establishment of open space, neighborhood and community parks and trails. Open space designations mostly follow riparian corridors with the exception of a large open space area proposed in the northern portion of the township in areas now part of the Bowman Tract and Stone Hill Preserve. Planned neighborhood and community parks are dispersed across the central portion of the township near Ridge Pike and the Schuylkill River. Most of the trail alignments also follow riparian corridors or utility right-of-ways. Proposed trail designations accommodate various user groups including hikers, bicyclists and equestrians. Equestrian trails are primarily located in the northern part of the township and along gas and electric utility corridors.

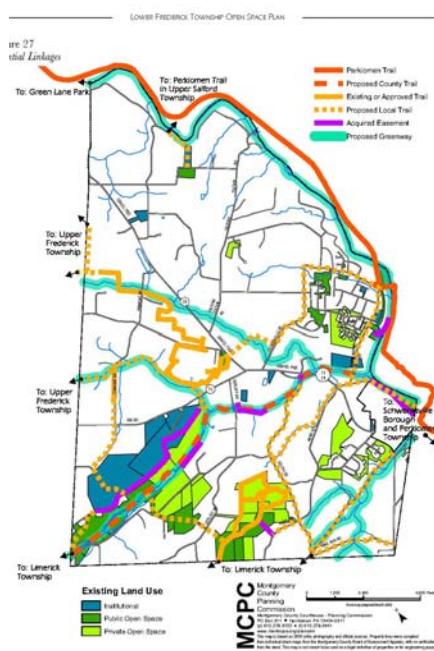
2006 Perkiomen Township Open Space Plan—Partially funded by the Montgomery County Greenfields/Green Towns Program, this plan succeeds the 1995 Open Space Plan. The plan evaluates previous goals and objectives and provides updated recommendations based on the findings. The plan studies existing township conditions including protected lands, potentially vulnerable resources, potential open space linkages, growth areas, open space needs, as well as County and abutting municipal plans.

The Linkage Network plan identifies four proposed connections to Limerick Township from the east. The first linkage is a proposed local trail along Limerick Road making a connection to the Central Perkiomen Rotary in the northeast corner of Limerick Township. The second is a proposed local trail entering Limerick Township at Township Line Road just north of Saylor Road. The third is a proposed greenway along an existing stream that enters Limerick Township at Township Line Road just north of Tanglewood Drive. Lastly, there is a proposed greenway along an existing stream entering Limerick Township at Township Line Road between Ridge Pike and Sunny Brook Road.

2006 Lower Frederick Township Open Space Plan—Lower Frederick Township borders Limerick Township to the north east. The Lower Frederick Township Open Space plan's Potential Linkages map identifies several trail connections to Limerick Township. These



Perkiomen Township Open Space Plan.

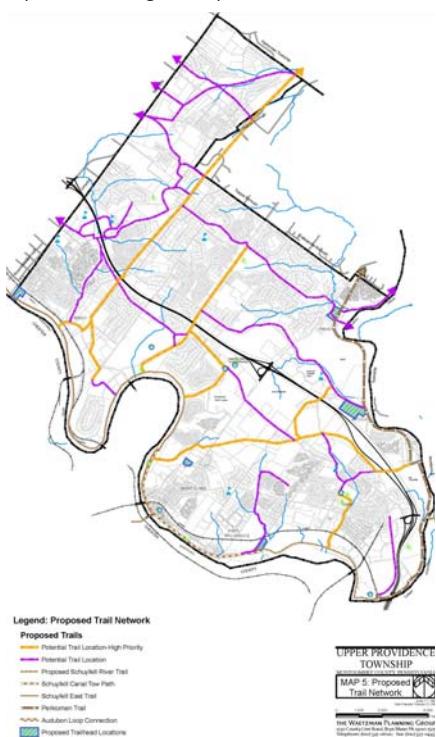


Lower Frederick Township Open Space Plan.

2. Inventory & Analysis



Upper Frederick Township Open Space Linkage Map.



Upper Providence Township Open Space and Environmental Resource Protection Plan.

connections include the Montgomery County proposed Sunrise Trail along Swamp Creek, a proposed local trail via Game Farm Road, and an existing local trail through private and public open space lands.

This plan was partially funded by The Montgomery County Green Fields/Green Towns Program in 2006, and serves as a township guide for acquiring and maintaining open space. The plan also provides recommendations for connections through existing open space via an enhanced trails and greenways.

2006 Upper Frederick Township Open Space Plan—Completed in 2006, this plan builds upon the 1994 Upper Frederick Open Space Plan and identifies areas for continued improvement. The plan studies current conditions within Upper Frederick Township, outlines open space goals and makes recommendations about natural resource protection, trail development, and management of future growth areas.

Limerick Township lies to the south of Upper Frederick Township. The plan's Open Space Linkages map identifies one trail connection to via the proposed Sunrise Trail located at the northern most corner of Limerick Township along Swamp Creek.

2006 Upper Providence Township Open Space Plan and Environmental Resource Protection Plan—This plan was partially funded by The Montgomery County Green Fields/Green Towns Program and builds upon the 1995 Upper Providence Open Space Plan. This plan identifies areas of success from the 1995 plan and areas still in need of improvement. The plan studies existing community background, demographics, natural and historic features, protected and unprotected resources, and relationship to adjacent municipalities.

Upper Providence Township borders Limerick Township to the southeast, The Open Space and Environmental Resource Protection Plan's proposed trail network identifies four linkages to Limerick Township. These linkages are identified as proposed trails and are located along Ridge Pike, the PECO right-of-way, Linfield-Trappe Road, and Lewis Road near the existing Spring-Ford High School and Spring-Ford Middle School properties. All of these linkages enter Limerick Township at various points along Township Line Road.

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2006 New Hanover Township Open Space Plan—This plan succeeds the 1999 New Hanover Township Open Space Plan and was completed to provide a framework for the development of publically accessible open spaces within the township. The plan analyzes existing township conditions and provides recommendations for implementation of open space related activities.

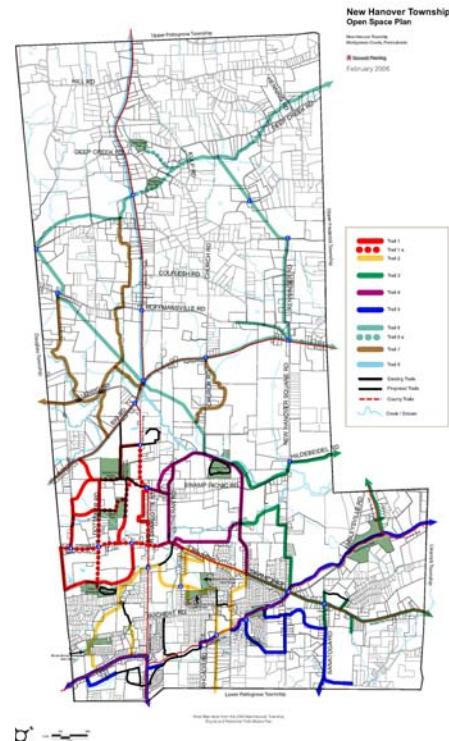
New Hanover Township lies adjacent to Limerick Township to the northwest. The New Hanover Township Open Space plan's Bicycle and Pedestrian Trails Map identifies two linkages to Limerick Township. The first is the proposed Sunrise Trail and the second is a proposed trail connector along Swamp Pike.

2008 Sanatoga Interchange Study, Lower Pottsgrove Township—This study undertook a market analysis to develop a master plan for future growth in the area of the Sanatoga Interchange located off of Route 422 adjacent to the border of Limerick Township. Lower Pottsgrove Township is under significant pressure to accommodate spin-off development associated with the Philadelphia Premium Outlets in Limerick Township. As a result, Lower Pottsgrove Township initiated the interchange area master plan to examine its development options as a means to help establish the development agenda in the area.

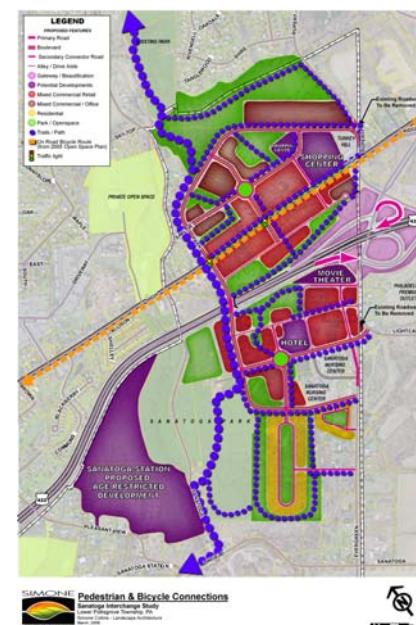
Lower Pottsgrove Township borders Limerick Township to the west. The Sanatoga Interchange Master Plan's Pedestrian and Bicycle Connections Plan identifies several linkages between the two townships. These include a proposed bicycle route and trail along Ridge Pike, a trail just north of Ridge Pike along the Hartenstine Creek and a proposed trail along Lightcap Road connecting to Sanatoga Park.

Review of Limerick Township Zoning Ordinance - The Limerick Township Zoning Ordinance provides guidance for site alteration and development within the township including regulations regarding open space, natural resource protection, and floodplain conservation. Relevant ordinance sections include:

- Protected Areas (Sec. 184-81) regulates site alterations or development on lands containing various natural features.



New Hanover Township bicycle and pedestrian networks plan.



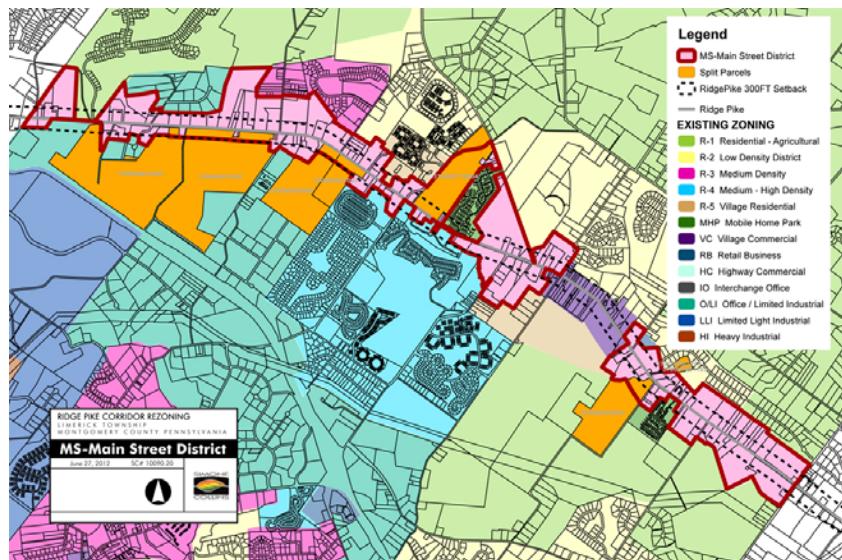
Pedestrian and bicycle connections proposed as a part of the 2008 Sanatoga Interchange Master Plan.

2. Inventory & Analysis

Natural features with specific development restrictions include floodplains, steep slopes, woodlands, lakes, ponds, wetlands, watercourses, shorelines, and topsoil removal.

- Open Space (Sec. 184-82) allows for site sensitive development that strives to protect areas of environmental significance that can be categorized as active open space, passive open space, unintended open space, agricultural open space, buffering open space, or connecting/greenway open space.
- Floodplain Conservation District (Sec. 184-186 to Sec. 184-190) is intended to prevent property loss, safety hazards, health risks, loss of life, disruption of governmental operation, and expenditure of public funds for flood relief. The section regulates development, site alterations, and other activities within floodway and floodplain areas as determined by the Flood Insurance Study for the Township of Limerick most recently revised by FEMA.

Ridge Pike & Lewis Road Zoning Updates—Limerick Township has recently adopted an overlay district for the Lewis Road corridor and a new Main Street zoning district for properties located along the Ridge Pike corridor. Both districts promote mixed-use developments with pedestrian oriented buildings and sidewalks. The intent of the Main Street District is to create a consistent zoning district by employing building and streetscape design standards along the Ridge Pike



Map showing the location of the recently adopted Main Street District.

2. Inventory & Analysis

corridor. Additionally, this district encourages mixed-use commercial development, a high level of architectural detail, increased safety through the use of fewer driveways, shared parking, and a safe combination of bus, automobile, bicycle and pedestrian routes along Ridge Pike.

Review of Limerick Township Subdivision & Land Development

Ordinance— The Limerick Township Subdivision & Land Development Ordinance provides more technical guidance for land development and subdivision construction within the township including construction requirements and design standards. Relevant ordinance sections pertaining to street and sidewalk construction include:

- Sidewalks (Sec. 155-15.D) describes requirements for sidewalks within the township. The Board of Supervisors has the authority to require a sidewalk on any street where it is deemed appropriate however, general guidelines are given as to typical placement of sidewalks. Sidewalks shall be required as deemed appropriate to connect schools, commercial centers, parks, and residential developments. Pedestrian easements may be required to make these connections outside of a road right-of-way. Four (4) foot minimum sidewalk widths are required throughout the township except for sidewalks along Ridge Pike within Limerick Village where an eight (8) foot minimum width is required. Depending on location and situation, varying buffers are required to separate the sidewalk from the street edge.

Limerick Township Official Map—Most recently revised in January 2011, the map displays existing and planned roadways, bike lanes, trails and intersection improvements. A majority of the planned trails are located in the vicinity of the US 422 Sanatoga Interchange. These trail alignments are based on trails proposed as a part of the 2008 Sanatoga Interchange Master plan in Lower Pottsgrove and Limerick Townships.



2. Inventory & Analysis

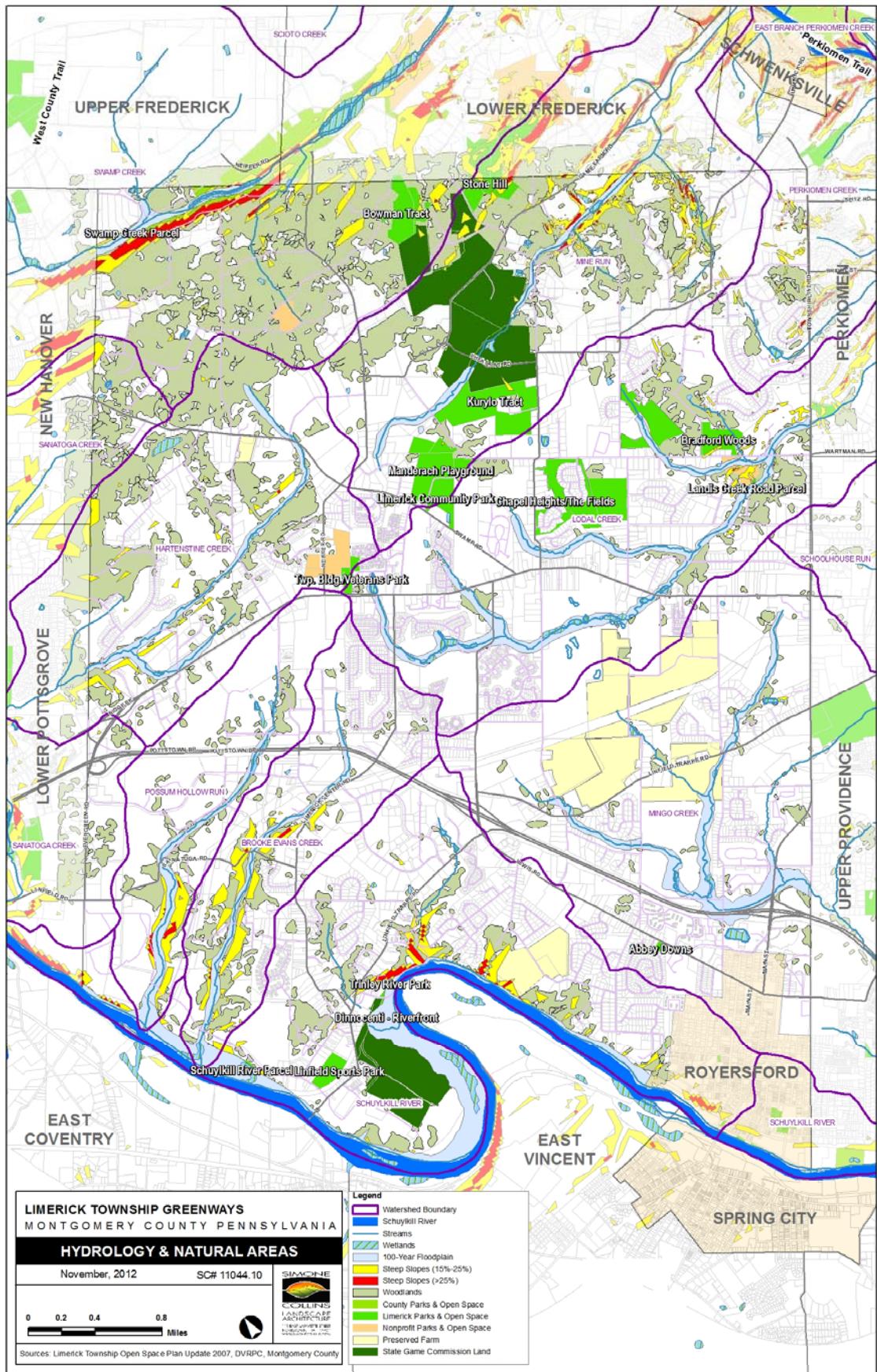


Figure 2.1 Hydrology and Natural Areas

2. Inventory & Analysis

Natural Resources “Green Infrastructure”

Hydrology & Natural Areas

Please refer to the Hydrology and Natural Areas Figure 2.1 on the previous page. This exhibit depicts the township streams, floodplains, wetlands, watershed boundaries, steep slopes, and forest cover. Generally, the streams in the southwest portion of the township flow in a southwest direction while the majority of the streams in the northeast area of the township typically flow in an eastern direction. Floodplains within Limerick Township are generally found surrounding the streams and wetlands. Wetlands within the township are typically associated with streams near the headwaters of minor tributaries.

Hydric Soils

Figure 2.2 illustrates the hydric soils found within the township. Typically, hydric soils are located in the flood plains, along streams, and in wetlands. Most of the major hydric soils are located within the wooded region in the northern portion of the township and along major stream corridors.

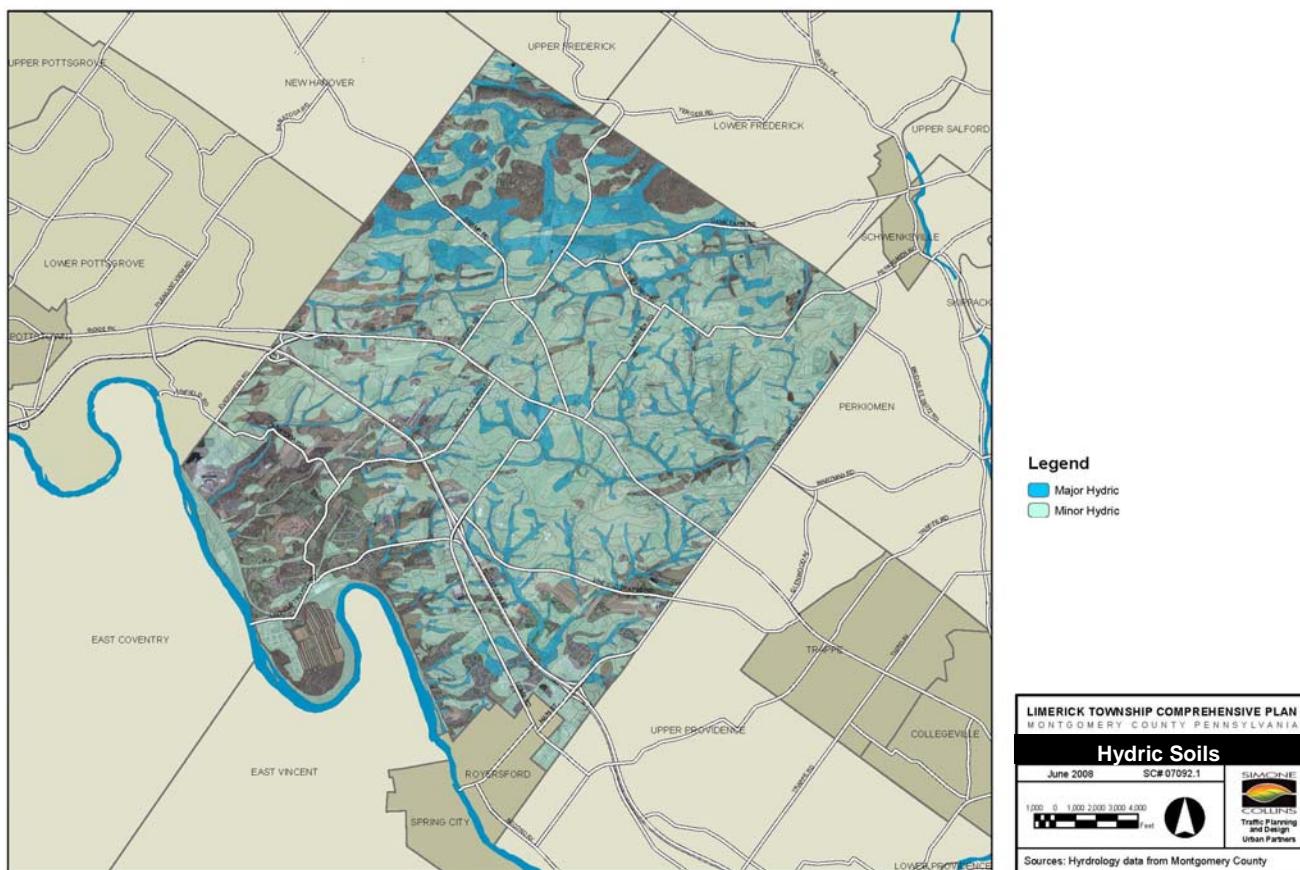


Figure 2.2 Hydric Soils

Watersheds

Eleven minor watersheds are located in the township and are part of the greater Schuylkill River major watershed. The northern portion of the township is located in the Swamp Creek, Mine Run, and Perkiomen Creek minor watersheds. This area generally drains to the northeast. The eastern portion of the township is a part of the Lodal Creek and Schoolhouse Run minor watersheds typically draining to the east. The southern portion of the township is located in the Mingo Creek minor watershed and Schuylkill River watershed generally draining to the southeast. The Brooke Evans Creek, Possum Hollow Run, Hartenstine Creek, and Sanatoga Creek minor watersheds encompass the western side of the township. This area generally drains to the southwest. Forested areas are generally located in the northern corner of the township and along the major stream corridors. Steep slopes of 15%-25% are mostly found along the major stream corridors and within the wooded areas of the township.

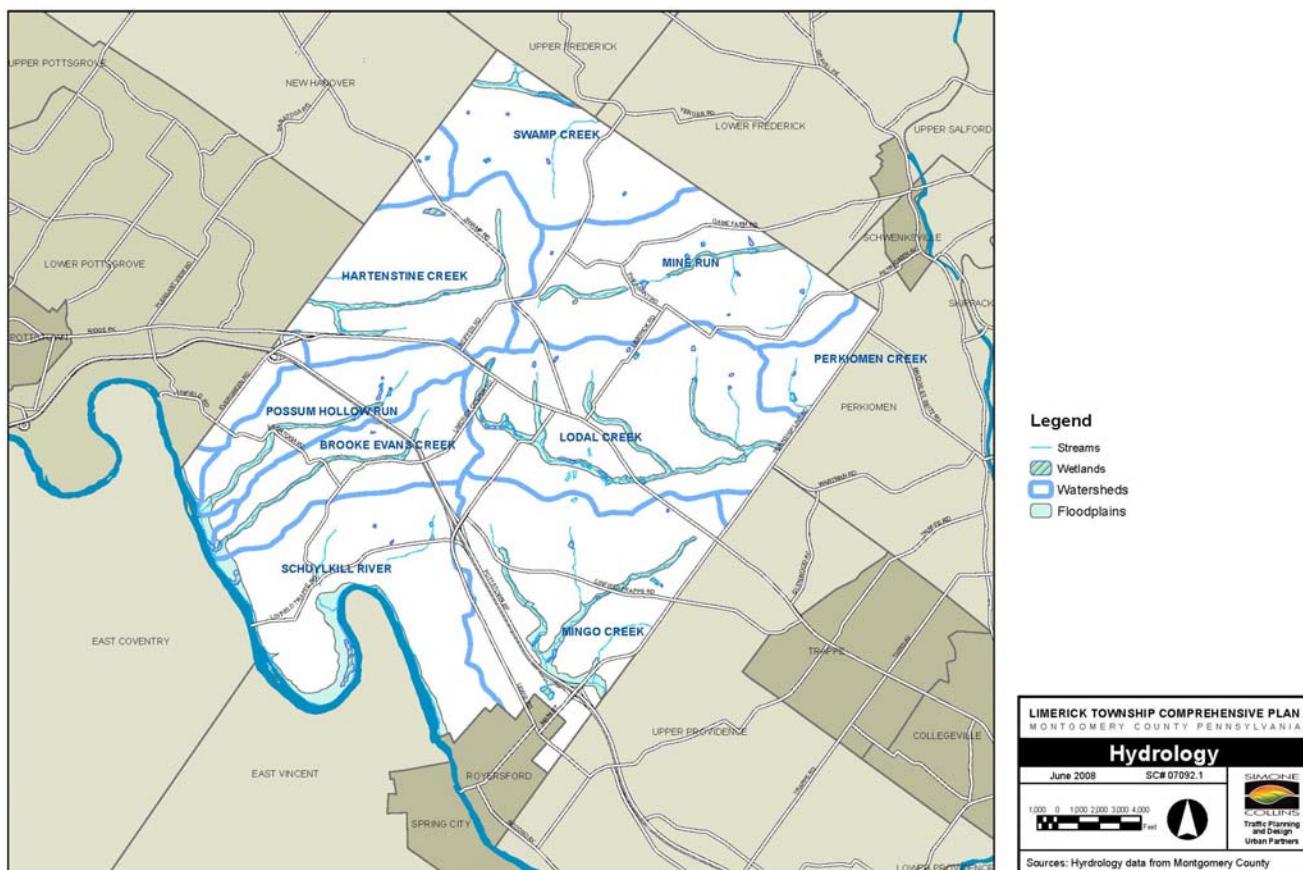


Figure 2.3 Surface Hydrology and watersheds.

2. Inventory & Analysis

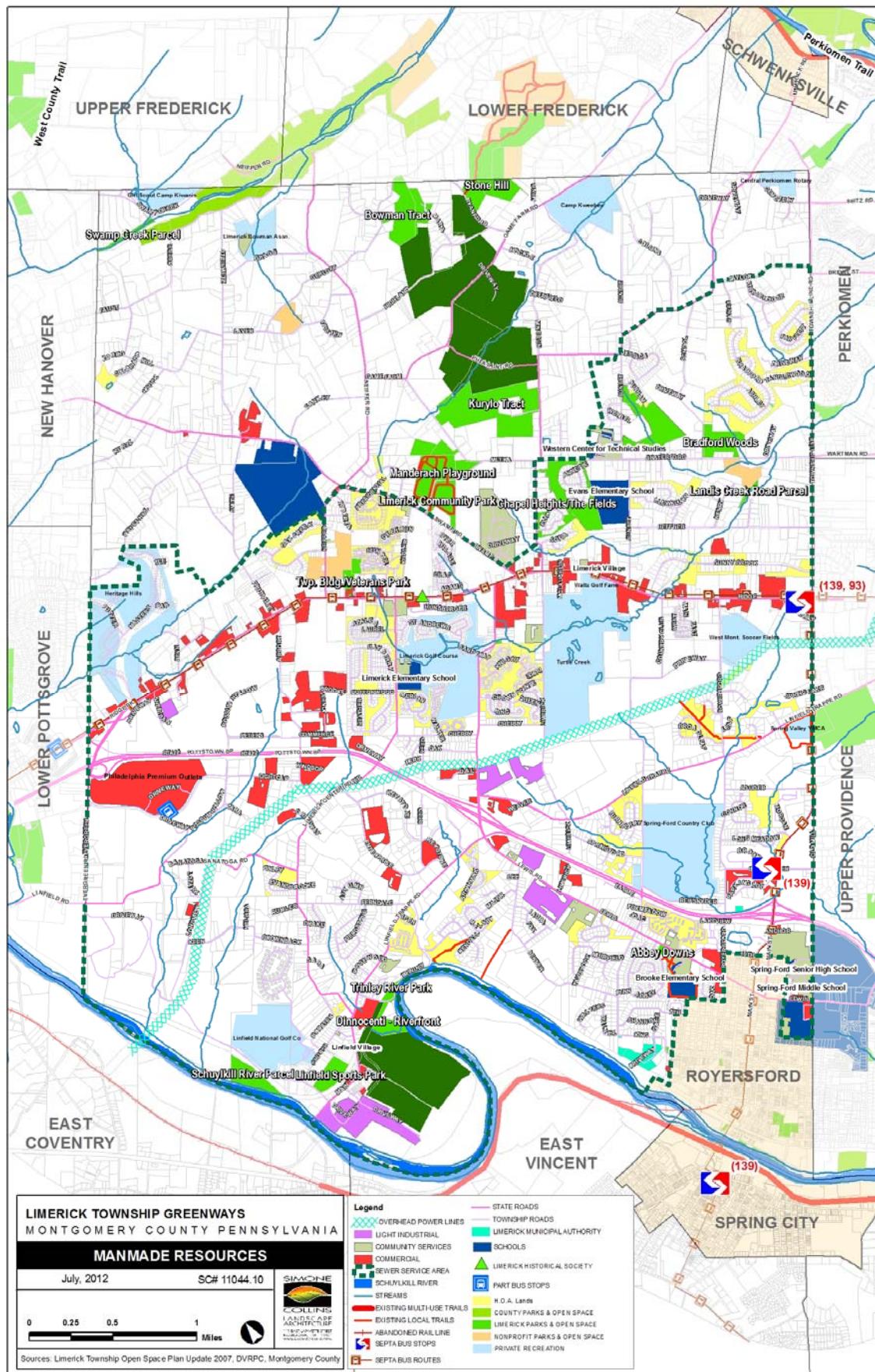


Figure 2.4 Manmade resources and destinations.

Manmade Resources – ‘Gray Infrastructure’

Please refer to Figure 2.4 showing manmade resources such as utilities, transportation, land use, trails and significant destinations.

Utilities

Utilities depicted in figure 2.4 include sewer service area and major overhead electric transmission lines. The southern portion of the township is serviced by public sewer while the northern, less developed areas of the township are not. The Limerick Township Municipal Authority facilities are located in the southeast corner of the township on King Road.

A PECO utility right-of-way passes through the township from East Coventry Township to the west to Upper Providence Township to the southeast. This right-of-way encompasses major overhead electric transmission lines that originate from the Limerick Generating Station located in the western corner of the township off of Linfield Road.

Land Use

Several of the dominant land use patterns for the township including commercial areas, light industrial areas, community services, school district lands, private recreation facilities, and Home Owner’s Association (HOA) lands are shown in figure 2.4. Commercial uses are generally found in the central and southern portion of the township, with a majority located along Ridge Pike and around the area of the US Route 422 interchanges. Light industrial uses are found in the central portion of the township near Lewis Road, Airport Road, Limerick Road, Sheridan Lane, and to the southwest along the Schuylkill River.

Township and county owned park and open space lands, state game lands, and nonprofit park and open space lands have also been identified. The State game lands are located in the northeastern portion of the township in the area of Game Farm Road and Pheasant Road and in the southwestern portion of the site off of Linfield-Trappe Road. These state game lands are valuable natural resources that provide recreational opportunities to the township.

2. Inventory & Analysis

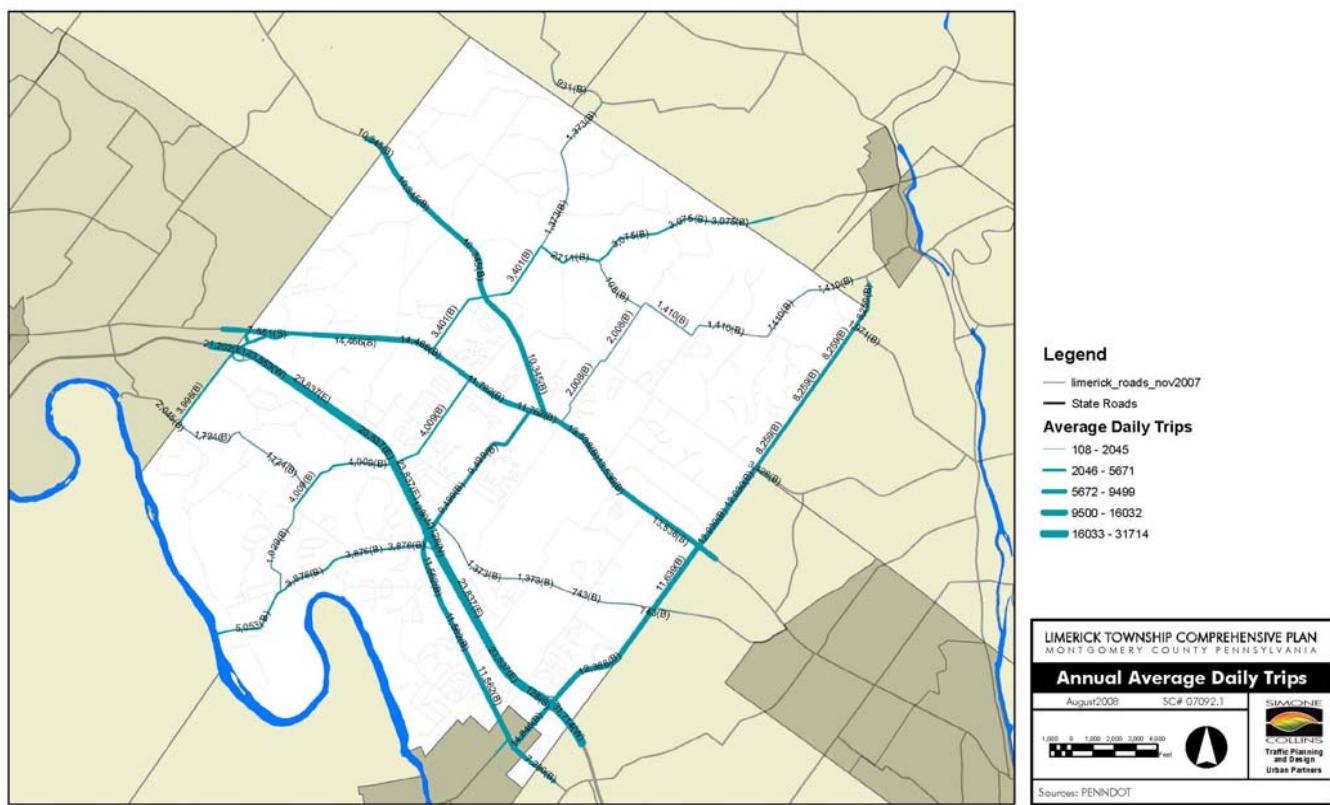


Figure 2.5 Annual Average Daily Trips

Transportation

Traffic data shown in figure 2.5 is from the 2009 Limerick Township Comprehensive Plan. Average daily trip counts were supplied by PennDOT. The heaviest traffic volume within the township was found to be along the US Route 422 corridor. Other roads with the greatest volumes include: Ridge Pike, Township Line Road, Swamp Pike and Lewis Road. Roads with significant volume include Neiffer Road, Game Farm Road, Limerick Center Road, and Limerick-Trappe Road.

Several public transportation routes are found within the township. As shown in figure 2.4, Southeastern Pennsylvania Transportation Authority (SEPTA) bus routes are located on Ridge Pike and Township Line Road. Pottstown Area Rapid Transit Authority (PART) bus stops are located at the Philadelphia Premium Outlets off Lightcap Road.

Several small-scale pedestrian trails serving local developments exist within the township. These segments serve a limited population and are disconnected from many township destinations. Existing trails are

found at the Limerick Community Park, Spring Valley YMCA, the Ashbrook Estate residential development on Linfield-Trappe Road, Brook Elementary School, and from the terminus of Major Road to Trinley Park and the Schuylkill River. Also identified are two existing multi-use trails located outside the township including the Schuylkill River Trail and Perkiomen Trail.

Greenway Destinations

Important community assets such as schools, parks, recreational facilities, and commercial centers are important destination points within a township-wide greenway system. Significant township parks include the Linfield Sports Park located off of Longview Road, Trinley River Park located off of Trinley Road, Bradford Woods located off of Graterford Road, Limerick Township Building & recreation facilities located off Ridge Pike and Limerick Community Park located off of Swamp Pike. The Limerick Community Park is home to the Manderach Memorial Playground.

Numerous commercial destinations are spread along the Ridge Pike Corridor including two large shopping centers near the intersection of Ridge Pike and Township Line Road. Other important commercial destinations are focused around the township's three US route 422 interchanges and include: the Philadelphia Premium Outlets, near the Sanatoga Interchange; Limerick Square Shopping Center near the Royersford/Trappe interchange; and, Limerick Autopark near the Lewis Road interchange. Also noteworthy is the Lewis Road corridor near Royersford which over the years has seen a steady transition from residential to commercial and office uses.

Private recreational facilities within the township include Camp Kweebec, Central Perkiomen Rotary, Limerick Golf Course, Turtle Creek Golf Course, Waltz Golf Farm, West Montgomery Soccer fields, Spring Valley YMCA, Spring-Ford Country Club, Linfield National Golf Course, Heritage Hills Golf Course, Girl Scout Camp Kiwanis and the Limerick Bowman Association. Also noted in the exhibit are schools including Limerick Elementary School, Evans Elementary School, Brooke Elementary School, Spring-Ford Middle School, Spring-Ford Senior High School, and the Western Center for Technical Studies.

2. Inventory & Analysis

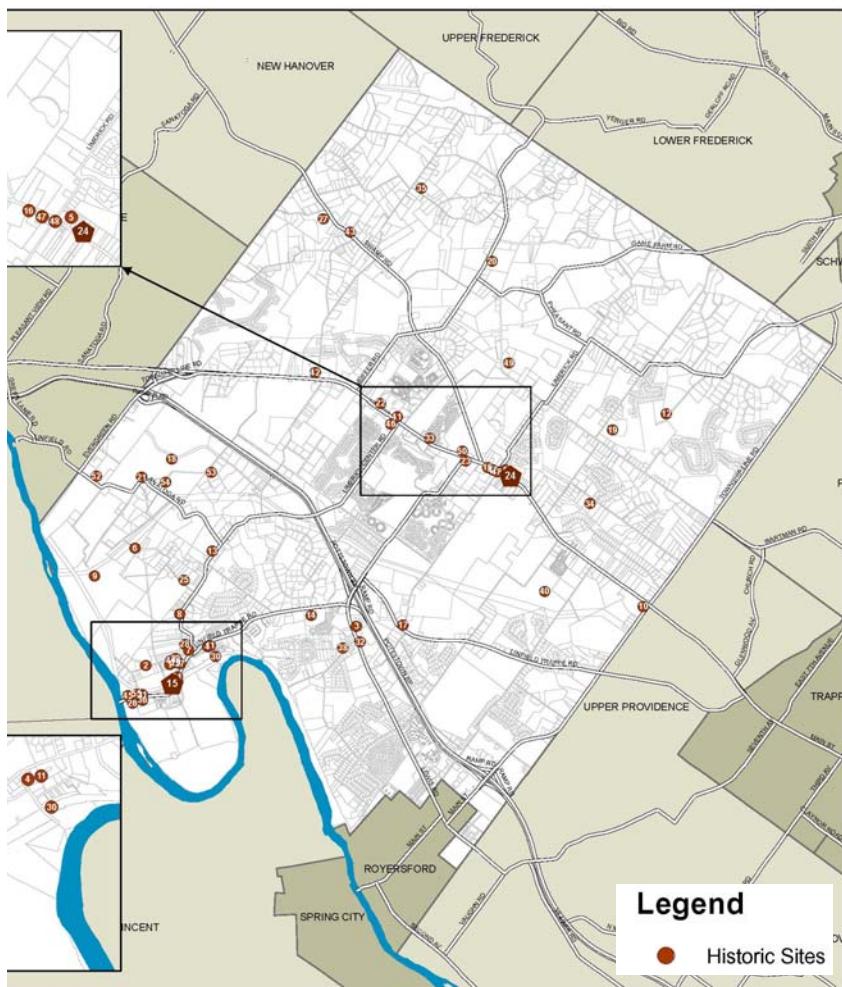


Figure 2.6 showing Historic sites. Source: Montgomery County Historic Site Survey

Historic Sites

55 historic sites have been identified by the Montgomery County Historic Site Survey. Figure 2.6 shows the locations of all historic sites within the township. Two areas with a high concentration of historic sites include Limerick Village and Linfield Village. Please refer to the township's comprehensive plan for a descriptive listing of all historic sites.

Key Issues, Opportunities, and Constraints

Environmental

Existing open space parcels within the township are few in number and under constant threat from new developments. Efforts should be made to preserve existing wooded areas in the township as a means

to reduce the risk of erosion and promote continuous wildlife corridors. One way to preserve these areas is by incorporating higher natural resource protection standards into the township zoning ordinance. The township can also solicit efforts from non-profit groups to reforest existing woodlands that are in a declining state, or riparian areas that have been subject to deforestation from erosion or human impacts. The township should conduct a study to determine which areas have the highest priority for these efforts.

Because of the high impervious cover in some areas of the township, severe erosion, poor water quality, and stormwater runoff are threats that will continue to multiply in the face of future development pressures. As less developable land becomes available, wetlands could be seen as possible development sites. Because wetlands are relatively rare in south-eastern Pennsylvania, they become essential refuges for many native and migratory animals. Wetlands play an important role in recharging groundwater and controlling stormwater runoff. Efforts should be made to preserve existing wetlands wherever possible by strengthening existing ordinances.

Existing township zoning and subdivision & land development ordinances provide limited protection for woodlands, wetlands and stream corridors, and should consider additional protective measures to preserve these sensitive natural features.

Greenway / Trail Potential

The opportunity exists to establish regional connections to the nearby Schuylkill River Trail and Perkiomen Trail.

PECO transmission lines, sewer lines and other utility rights-of-ways can also provide vital trail connections.

New residential land developments offer the most significant opportunity for the construction of pedestrian facilities and off-road trails by incorporating them into their development proposal.

Existing roadway shoulders and new roadway or sewer construction projects offer the best opportunity for on-road bike route development and walkway improvements within existing right-of-ways.

2. Inventory & Analysis

“Protective” Greenways have the potential to preserve long corridors of natural land or sensitive natural features and can serve as a placeholder for future trail plans.

Economic & Social Impacts

Numerous studies have been completed that document the substantial impact of trails, parks, and open space on local economies. A 2008 study of the Great Allegheny Passage—a trail that runs from Pittsburgh to Washington, D.C.—indicates that the trail supports businesses and spurs job creation in communities along its path. The study found that:

- Over \$40 million in annual direct spending and another \$7.5 million in wages is attributable to the trail market;
- Business owners indicate 25% of gross revenue was directly attributed to trail users; and,
- Two-thirds of owners reported experiencing some increase in revenue due to proximity of trails.

A 2010 study by the Greenspace Alliance and Delaware Valley Regional Planning Commission states that economic activity associated with protected open space in southeastern Pennsylvania resulted in more than 6,900 jobs and \$299 million in annual earnings. Additionally, researchers at the Trust for Public Land found that 255,000 Philadelphians engage actively enough in parks to improve their health. Philadelphia residents saved \$69,419,000 in health costs for the year 2007 indicating that parks and trails can increase outdoor recreational opportunities and provide added health benefits.

Limerick Township is in the position to plan for the development of parks, trails, and open space in order to benefit its local economy. Regional connections to the Schuylkill River Trail and Perkiomen Trail can provide the greatest opportunities for increased outdoor recreation related business catering to tourists and township residents. Local township trails and bicycle connections will also increase business activity and establish Limerick as a bicycle/pedestrian friendly community.

Economic Benefits of Trails and Greenways:

- Philadelphia’s park system provides the city and its residents with: \$23 million in city revenue; \$16 million in municipal cost savings; \$729 million generated in wealth for residents; and \$1.1 billion in cost savings for citizens—about 100 times the amount the city spends on parks each year.
- Studies of the Great Allegheny Passage—a trail from Pittsburgh to Washington, D.C.—indicate that average gross revenue for 2007 increased 18.8% in outdoor/trail related businesses from that of 2006.
- The Conewago and Lebonon Valley trails in Lancaster County, PA attracted an estimated 125,244 people in 2011 and pumped \$875,320 into the local economy.

(Sources: PA DCNR, Rails to Trails Conservancy)

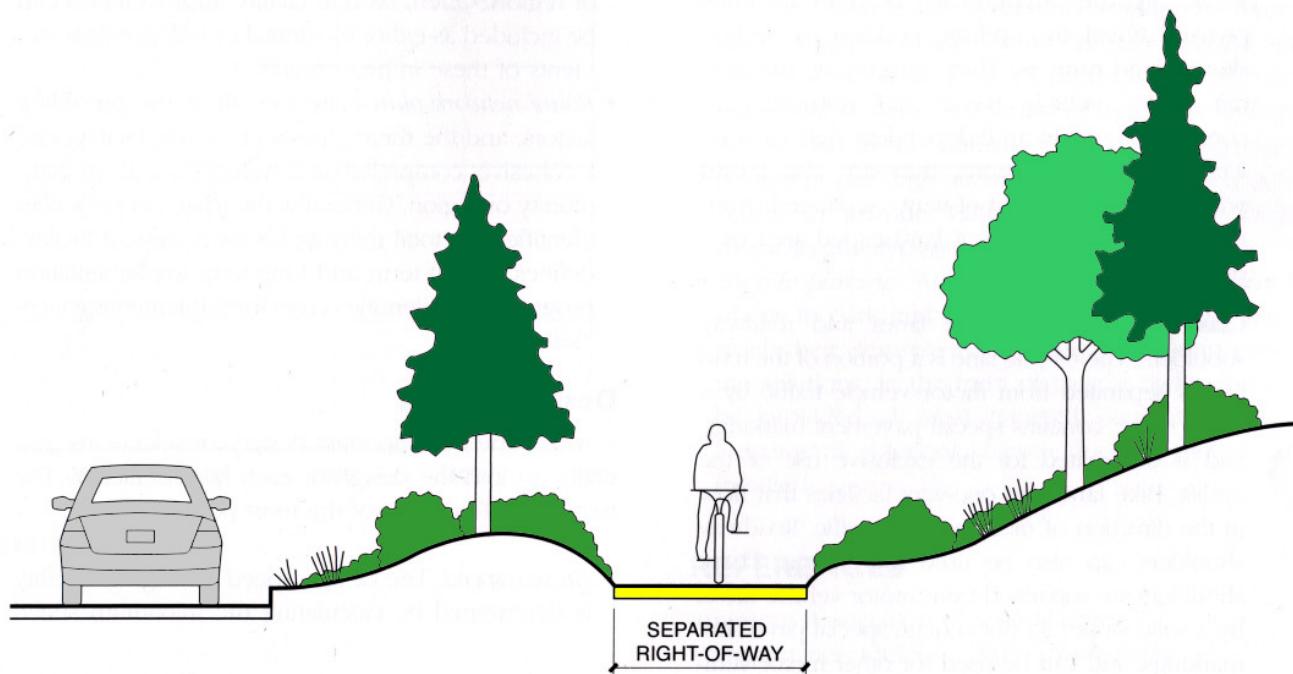
Master Plan

Trail Types – Descriptions

Bikeway Classifications

The following are nationally recognized bikeway classifications as per the American Association of State Highway Transportation Officials (AASHTO). These classifications are specific to bicycle transportation routes and do not include other pedestrian facilities such as sidewalks and off-road hiking trails which are described later in this chapter.

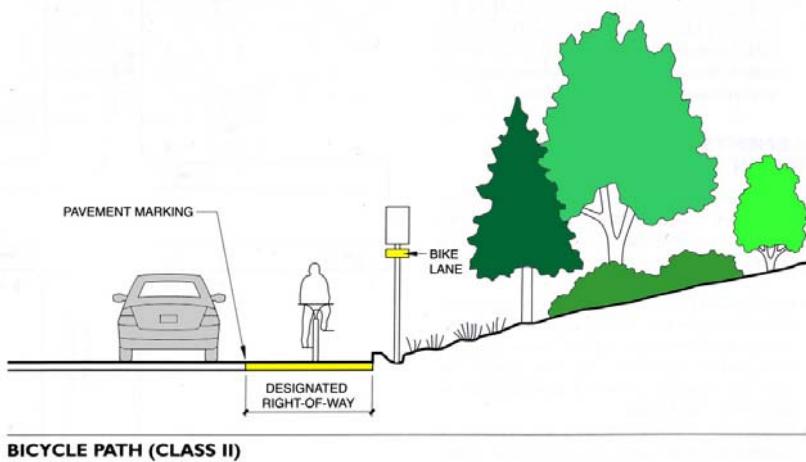
Class 1 Bikeways are completely separated from the roadway. They are also known as ‘off-road trails’, ‘greenways’, ‘shared use paths’, and/or ‘multi-use paths’.



BICYCLE PATH (CLASS I)

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Class 2 Bikeways are designated bicycle lanes within a roadway for exclusive use of the cyclist and contains special pavement markings and signage. Bike lanes are one-way in the direction of motor vehicle traffic. The common standard width for a bike lane is five (5) feet.

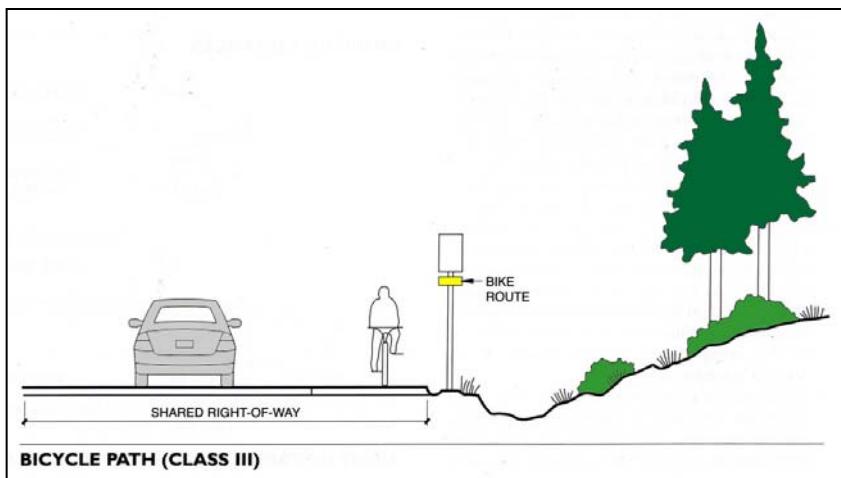


Bikeway Class 2 example.



Bikeway Class 2 example.

Class 3 Bikeways are also known as 'Bike Routes'. These offer no special accommodations for the cyclist within the road right-of-way. Signs are used to define the route and the cyclist shares the roadway with vehicular traffic.



Bikeway Class 3 example.



Multi-Use Trail example.

Multi-Use Trail (Off-Road)

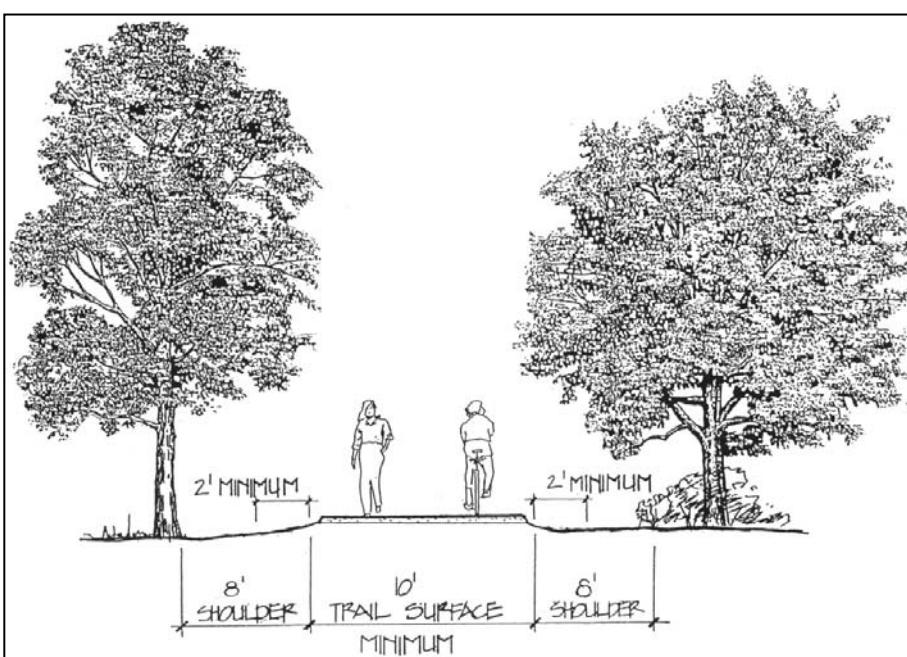
The trail type that provides for the largest population of users is a Multi-Use Trail, also known as Class 1 Bikeways (as described above). The following paragraphs provide a nationally recognized definition of a Multi-Use Trail and its typical design criteria.

The American Association of State Highway and Transportation Officials (AASHTO) defines a Multi-Use Trail or Shared Use Path as: *a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.*

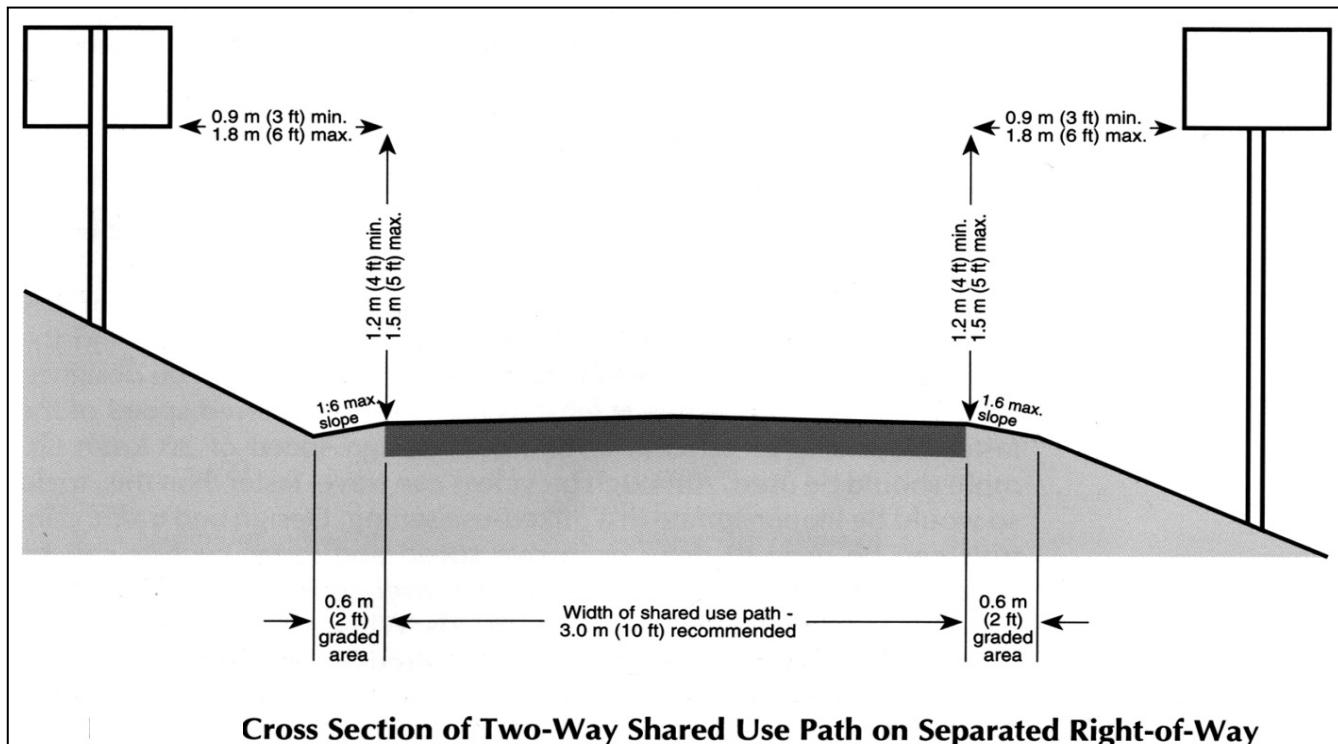
As the definition suggests, this trail type provides for a variety of trail users, depending on the trail surface paving and available right-of-way width. Another general trait of multi-use trails is universal accessibility for those with disabilities. This is due to gentle slopes, adequate widths, and smooth surfaces. Parking areas for multi-use trail segments should provide facility access in accordance with the Federal Americans with Disabilities Act (ADA) guidelines to provide for trail users with disabilities.

Both the Rails-to-Trails Conservancy (RTC) and AASHTO

recommend a multi-use trail to be ten feet (10') wide, with the minimum width for a two-way trail at eight feet (8'), and for a one-way trail at five feet (5'). Depending on the user volume, widths of twelve feet (12') or fourteen feet (14') are recommended to avoid potential conflicts. An additional two-foot (2') shoulder is recommended on either side of the trail surface to provide clearance from trees, poles, walls, fences or any other



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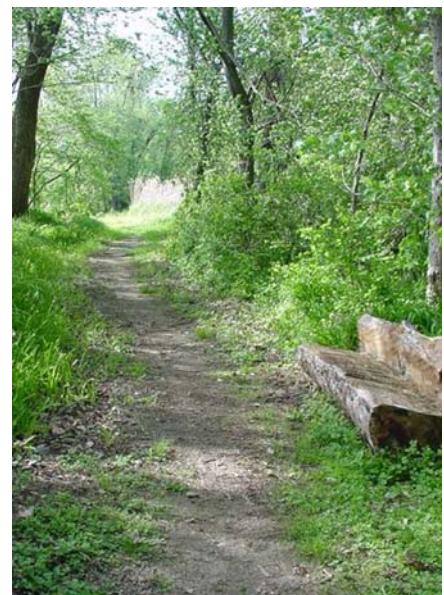
lateral obstruction. Site conditions may warrant additional safety measures such as fencing and increased shoulder widths.

Hiking Trails

A hiking trail may be defined as a recreational trail that does not meet the design requirements of a multi-use trail such as width, slopes & surfacing. An advantage of hiking trails is that they can allow for access and recreational use of the land quickly at a relatively low cost. A disadvantage of hiking trails is that they generally limit the number and type of trail users due to their minimal width, steeper slopes, and softer surfaces, and generally do not meet ADA requirements.

Trail Surface Types

Asphalt surfaces provide for the widest variety of trail users including bicyclist, walkers, joggers, wheelchair users, and in-line skaters. Initial installation costs are relatively high compared to other trail surface types. However, long term maintenance costs will remain lower than others if properly installed and maintained. Asphalt trails are preferred in flood prone areas.



Hiking Trail example.



Asphalt Trail example.

Crushed limestone surfaces 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. A crushed limestone surface can also serve as base material for an asphalt surface if trail use increases or funds become available for a surfacing upgrade. Crushed limestone surfaces should be avoided in flood prone areas or steep slopes.

Compact earth surfaces are the least expensive to install, however they limit the types and number of trail users. Compact earthen surfaces are primarily used for hiking only or horse trails adjacent to multi-use trails that receive significantly less trail user volume. Hiking trails may be considered as an alternate means to reach the more environmentally sensitive areas found within the floodplain area to provide routes to the river for environmental education, bird watching, or fishing access.

Trails and many other recreational facilities are commonly developed within floodplains to take advantage of the relatively flat land. These trails may require additional maintenance to remove debris deposited by a flood event. If a trail is placed where flood waters will have a significant erosion effect, asphalt surfaces are recommended. Trails should not be located within a *floodway*, which is where the most significant flood damage occurs.

Sources:

Guide For Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO), 1999;

Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails, Rails to Trails Conservancy (RTC), 1993.

Statewide Bicycle & Pedestrian Master Plan, Bicycling & Walking in Pennsylvania – A Contract for the 21st Century: Bicycle Guidelines, Commonwealth of Pennsylvania Department of Transportation

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Bicyclist Types

The American Association of State Highway and Transportation Officials (AASHTO), and the Pennsylvania Department of Transportation (PennDOT) both classify bicyclists into one of the following three groups:

Group A – Advanced Bicyclists – These riders generally use their bicycles as they would a motor vehicle. They are riding for transportation, convenience, and speed and want direct access to destinations with a minimum of detour or delay. They are typically comfortable riding with vehicular traffic. They prefer a sufficient operating space on the travel way or shoulder to eliminate the need for either themselves or a passing motor vehicle to shift position.

Group B – Basic Bicyclists – Less confident adult riders may also be using their bicycles for transportation purposes, e.g., to get to the store or to visit friends, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by faster motor vehicles. Thus, basic riders are comfortable riding on neighborhood streets and shared use paths and prefer designated facilities such as bike lanes or wide shoulder lanes on busier streets.

Group C – Child Cyclists – Riding on their own or with their parents, child cyclists may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreational facilities. Residential streets with low motor vehicle speeds, linked with shared use paths and busier streets with well-defined pavement markings between bicycles and motor vehicles, can accommodate children without encouraging them to ride in the travel lane of major arterials.

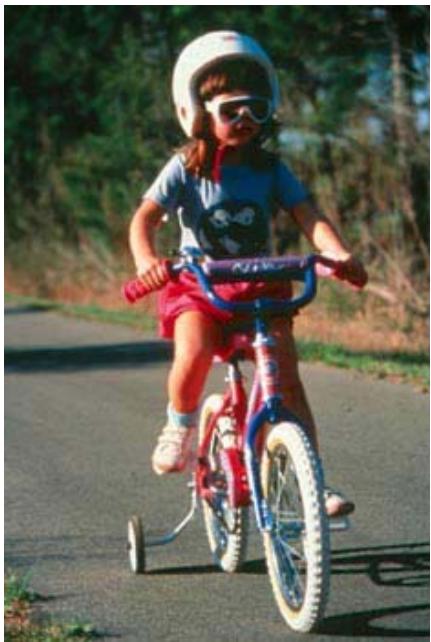
It is estimated that only 5% of bicyclists overall would qualify as Group A or Advanced Bicyclists, therefore 95% fall into either Group B or C. (Source: AASHTO - *Guide For Development of Bicycle Facilities*)



Group “A” advanced bicyclist.



Group “B” basic bicyclist.



Group "C" child cyclist.

Preliminary Trail Alternatives

The first step in the analysis and development of a greenway and trail plan is to inventory all possible alignment alternatives. The majority of alignment alternatives were identified in previous planning studies by Montgomery County. These alignments include both on-road and off-road connections that are planned as a part of a larger system of regional bicycle routes and regional trails. Additional proposed alignments for this study were suggested by the project committee and the public. Other alignments were added as part of the base mapping analysis and site reconnaissance performed by the consultant.

The initial alignment alternatives were compared to the information found within the GIS database, including parcel ownership and detailed aerial photography. This detail of base information was not available when the previous plans were developed, and allowed for a more site-specific approach to determining the actual effects each proposed alignment might have on its surroundings. The following section provides a description of the general criteria considered to analyze the initial alignments.

Alignment Selection Criteria

The following criteria were used to determine whether or not a proposed alignment could or should be included in a township-wide trails system.

Safety

All of the recommended alternatives studied are considered to have the potential to safely be included in the proposed system. Each of the on-road routes were cross referenced to existing traffic volumes and field verified for the actual roadway conditions. Some off-road connections were not field verified due to the inability for the consultant to investigate conditions on private property. These alignments should be checked at a later time for safety with respect to slopes and other miscellaneous conditions that would deem an alignment unsafe. This evaluation should be done by the township

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where potential alignments can be investigated with permission of the private landowner.

Connectivity / Continuity / Level of Service

Each of the recommended alignments need to be capable of being part of a larger system and/or provide a level of service worthy of its development. An individual trail segment that does not provide a connection between destination points or does not plug into a larger system is not recommended.

Existing Sidewalks

Many of the township neighborhoods have existing sidewalk systems. Existing sidewalks adjacent to trail alignments were inventoried and identified on the trail mapping. This inventory of existing sidewalks was used to determine if a proposed pedestrian alignment was necessary or if it would simply be duplicating an existing facility.

Private Property Impacts

Parcel boundaries and ownership information within the GIS database provide a level of information that was not readily available in previous planning efforts. By reviewing the property ownership along any potential off-road alignment, the approximate number of potential impacts can be identified, assessed, and calculated to determine whether or not an alignment should be pursued. Impacts to private properties were kept to a minimum by locating most trails within the road right-of-way.

Environmental Impacts

Trail alignments that have the potential for significant environmental impacts such as clearing of wooded areas, requiring significant grading, or disturb wetlands and/or any other sensitive ecosystems should be generally avoided.

Constructability / Cost

Engineering can provide solutions to almost anything; however the costs associated with providing an engineering solution may be

unreasonable or cost prohibitive. Alignments that require significant engineering efforts and abnormal construction costs should be generally avoided - unless it is the only solution possible for a critical trail linkage.

Proposed Greenway Connections

Through the existing conditions analysis, the public participation process, and discussions with the Study Committee, it became apparent that the township needs to take advantage of the possibilities associated with new land developments and future roadway improvements to provide the bicycle and pedestrian connections that are lacking between many of the destinations described herein and the township's residential and commercial areas.

Many of the township's newer communities have existing sidewalks, while some of the older ones do not. Some roads have adequate width to allow for bike lanes or bike routes, and others do not. This plan proposes to fill those missing links between communities and destinations.

The township improvements will establish a network for connectivity at the community level within a ½ mile walking radius of significant destinations, while the "township" development of trails and/or bike routes will connect the township to other systems on the regional level. In combination, these proposed improvements will serve the immediate needs for the majority of township residents looking for safe recreational and transportation alternatives to local destinations and then provide future connections to other systems located outside township boundaries.

Each of the following improvements is represented on the mapping in both the township-wide exhibit found at the end of this chapter and in more detail within Chapter 4: Implementation.

Township On-Road (Bikeway and Sidewalk)

These routes are intended to provide safe local connections between neighborhoods and township destinations via a combination of on-

3. Master Plan

road bikeways and sidewalks. These proposed connections will provide for both pedestrian and bicycle facilities within existing public rights-of-way and be geared for the Group B and C cyclist community that comprises the majority of township residents. The on-road bicycle facility should be developed as a Class 2 Bikeway that includes designated bike lanes where the existing right-of-way width will permit.

Some of these segments may already contain sidewalks. Including sidewalks along these routes provides added safety as these routes connect many residential neighborhoods to schools. Additionally these routes provide critical connections from the Schuylkill River Trail through the more developed, southern portion of the township to the less developed, northern areas. These routes also provide connections from Linfield Village to Limerick Village and the Ridge Pike and Lewis Road commercial corridors.

Each of these proposed segments was estimated for costs as an on-road route with addition of sidewalks or sidewalk repair where necessary. Construction requirements for the on-road improvements include asphalt shoulder improvements estimated at \$17 per square yard. Also included in the estimations are bikeway striping, wayfinding and safety signage. Construction of the pedestrian component to these proposed routes include a five (5) foot wide concrete sidewalk estimated to cost \$15 per linear foot.

Township On-Road (Cyclist Routes—No Sidewalks)

These connections are proposed as a short-term alternative to the on-road routes proposed by the County and mentioned later in this chapter. These routes will provide bicycle facilities within existing public rights-of-way and be geared for the Group “A” or advanced bicyclists. The on-road bicycle facility should be developed as a Class 3 Bikeway where the cyclist shares the road with vehicular traffic. These bike routes will offer no special accommodations for the cyclist within the road right-of-way other than signage and on-road “share the road” symbols. The roadways suggested for this network have the existing right-of-way width, low volume traffic, or low speed limit able to provide a comfortable riding experience for the advanced

cyclist and would require only minimal improvements in most cases. Due to the width of many of these roads, it is not envisioned that the Group B or C cyclists will feel comfortable on these routes even with the proposed improvements.

These routes are located in the northern, less developed portion of the township and provide a connection through the township to adjacent municipalities to the northwest, north, and northeast. In combination with other township trails, these routes form a bicycle loop within the township.

Construction requirements for these segments include asphalt shoulder improvements, site preparation, roadway striping, and wayfinding and safety signage.

Township Off-Road

These connections are proposed to provide a safe off-road recreational and transportation alternative at a township-wide level. Some of the proposed routes will only provide localized connections between other township trails and destinations, while others will extend to and connect with regional bicycle and pedestrian facilities located outside of township boundaries.

Construction requirements for these sections include site preparation / vegetation clearing (\$12/LF), earthwork (\$32/LF) & drainage improvements (\$15/LF), and an 8' wide compacted limestone dust surface over a stone bed (\$16/LF). The total estimated cost for these segments is \$75 per linear foot. Asphalt surfacing would incur an additional \$10 per linear foot.

Sidewalks

These proposed walkways will provide the necessary pedestrian linkages between neighborhoods and their destinations and be located within the public rights-of-way. A sidewalk is proposed along Linfield-Trappe Road to create a connection from Lewis Road to Linfield Village, and eventually connecting to the Schuylkill River Trail in East Coventry Township. The proposed sidewalk is proposed to be constructed of concrete and is estimated to cost \$15 per linear foot.

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Regional On-Road (Cyclist Routes)

These cyclist routes have been proposed by the County and are seen as longer term alternatives due to the large amount of improvements necessary to create safe connections on high volume roadways. These routes serve as regional connections between municipalities. Many of the roads associated with these routes are PennDOT maintained, high volume, high speed arterial roads where improvements may be more costly. Although current conditions are not safe and upgrades to improve safety would be cost prohibitive to the township, these alignments are recommended so that they might be constructed by others as a part of future roadway improvement projects. These proposed connections include Ridge Pike, Swamp Road, Neiffer Road, Game Farm Road, and Township Line Road.

These routes will provide bicycle facilities within existing public rights-of-way and are geared for the Group "A" or advanced bicyclists. The on-road bicycle facility should be developed as Class 2 or 3 Bikeways.

Regional Off-Road

There are several existing and planned trails located within or a relatively short distance from the township boundaries. These trails include the Schuylkill River Trail, Perkiomen Trail, Sunrise Trail, and the West County Trail.

The planned Sunrise and West County Trails are located along the Swamp Creek in the northwestern corner of the township. These trails are not constructed and there is no imminent timeline for construction by the County. The Perkiomen multi-use trail located about 1/2 mile northeast of the township has been constructed with a compacted stone dust surface and is popular with walkers, cyclists and equestrians alike. The Schuylkill River Trail is an asphalt surfaced multi-use trail currently connecting Philadelphia to East Coventry Township near Linfield-Trappe Road. This trail has one significant section to be constructed that will link the existing terminus at Linfield-Trappe Road to Pottstown and Reading beyond.

Intersection Improvements

Intersections requiring improvements for the safe passage of bicyclists and/or pedestrians were identified through site reconnaissance, by the study committee, and through the public participation process. There may be additional intersections not identified in this plan that will require improvements and should be identified during the design development process for the specific trail segment. Each of those intersections are identified in the mapping found at the end of this chapter and in the detailed exhibits found in Chapter 4: Implementation.

Construction requirements for these intersection improvements may include crosswalk striping, pedestrian signalization, and/or additional signage. Because the existing conditions vary widely among these intersections, costs associated with these improvements can range from \$300 to \$10,000 per intersection.

Legal Feasibility

Impacted Properties

This plan recommends the use of public and utility-owned land and/or rights-of-way and avoids trail alignments that would impact privately owned land wherever possible. However, where friendly agreements can be reached, some alignments will require the voluntary acquisition of right-of-way through either fee simple purchase, easement if possible, or by donation from a private landowner. While there are some potential short term off-road trail connection alignments identified in the mapping that affect privately-owned land, the majority of the possible private property impacts can be found within the potential long term off-road connection alignments. Some proposed alignments follow along existing utility rights-of-way for overhead electric lines or sewer easements. These rights-of-way do not currently have legal provisions to allow trail use. The township will need to renegotiate such existing easement agreements with the landowners along these rights-of-way before trail use can be permitted for public use.

3. Master Plan

Easements that will be used for public trails are eligible for both state and federal funding – provided that there is a minimum 25 year term of use in the legal agreement. The acquisition of the easements would require an eligible entity – either a unit of government such as a municipality or county, or a competent non-profit organization partner.

Properties potentially impacted by proposed trail alignments can be identified utilizing the township's GIS system and the existing parcel boundaries and property ownership information found within the GIS database.

The cost to acquire easements is difficult to estimate. The best method for determining what these costs may be would be to ascertain the average per acre real estate value of the land within which the proposed trail segment lies, multiply it by the amount of acreage to be purchased, and adjust it for the projected time of purchase. Easement values will likely differ from fee simple acquisition costs. The township will only negotiate greenway and trail improvements with private property owners who voluntarily wish to engage in specific agreements.

A model trail easement agreement has been developed by the Pennsylvania Land Trust Association that can be used by the township as a starting point document for creating easement agreements where necessary. A copy of this model easement agreement can be found in the report appendix. Other trail and land conservation related tools can be found on the PA Land Trust Association's website: <http://conserveland.org/>.

General Liability Issues

Questions are often asked about the potential liability a landowner may have when located adjacent to a publicly used trail. The Pennsylvania Recreational Use Statute protects landowners who ease their property for trail use from general liability if their property is infringed upon as a result of the public use of the trail. This act does not prevent a landowner from being sued, however it does provide protection that has been upheld numerous times by Pennsylvania courts. A copy of this statute can be found in the report appendix.

Boundary Surveys

Boundary surveys will be required for all proposed easements and/or purchases. The extent of each survey will be a matter of negotiation between the land owner and the township.

For purposes of preparing construction documents, a centerline survey with cross sections of the trail alignment every fifty to one-hundred feet, (depending on topography and existing site features), will be the minimum necessary. All proposed bridge structure and ADA ramp locations will also need to be completely surveyed.

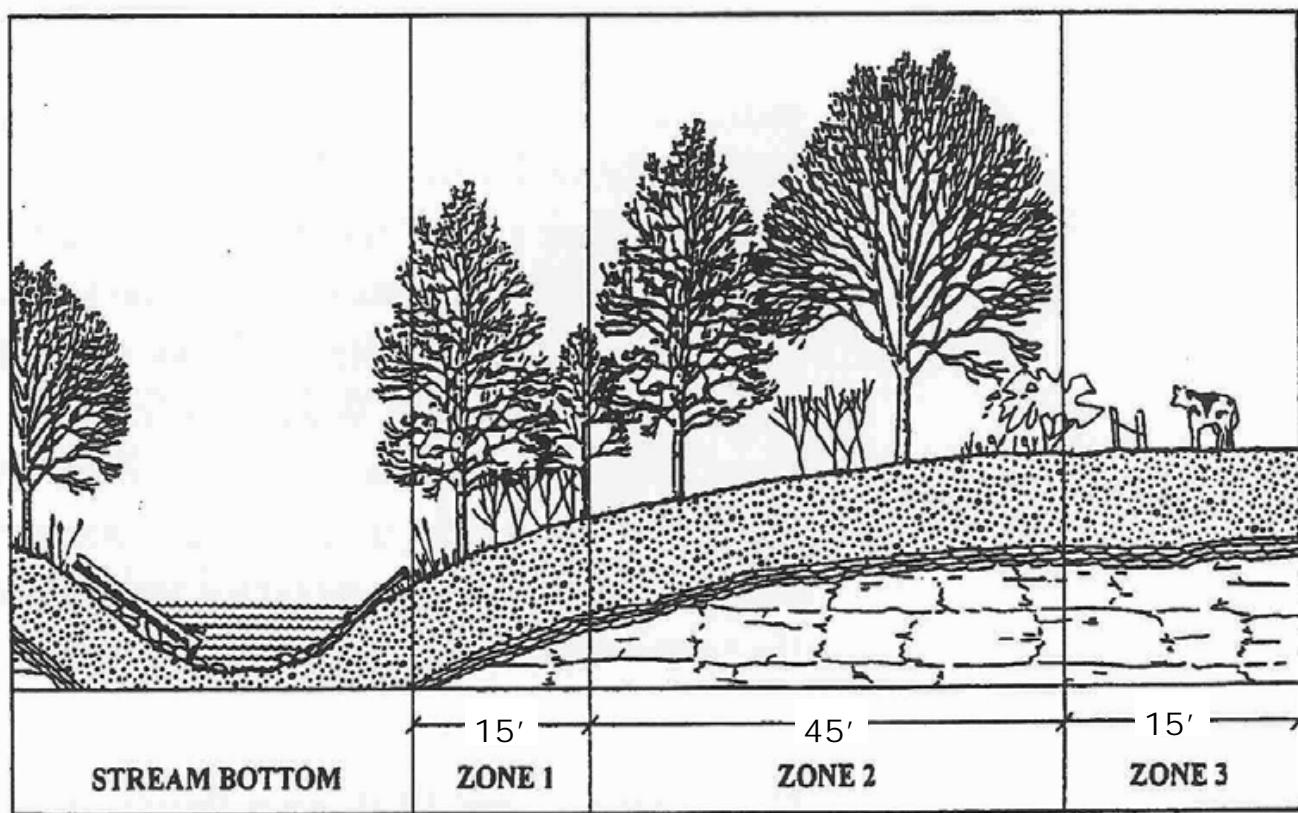
Riparian Corridor Protection

Riparian corridors within the township are exposed to ever increasing stress as new developments encroach into these areas and / or cause increased stormwater runoff. In addition to providing protection to the existing watercourses, riparian buffers also serve as wildlife corridors for the migration of birds and animals. Within the report appendix is an article entitled *“Introduction to Riparian Buffers”* which provides further explanation relative to the importance of riparian buffers, and how they can be repaired, created, and maintained.

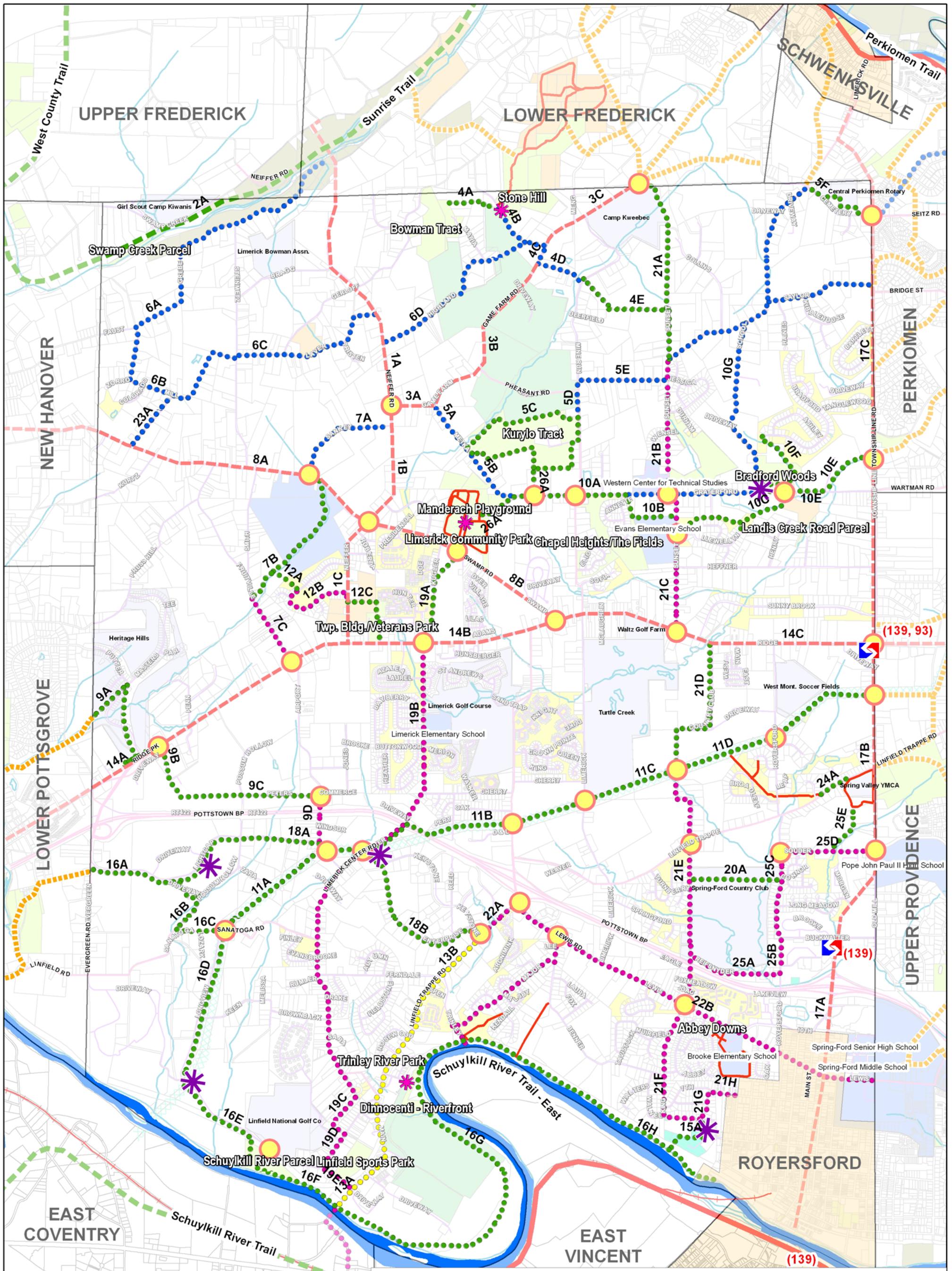
Montgomery County Planning Commission recommends a riparian buffer overlay district be included in the municipal zoning ordinance to improve water quality and reduce pollution. Riparian overlay districts seek to protect existing vegetation and requires establishment of native plant species. The recommended width of the riparian buffer should extend to 75 feet from the edge of stream and include several zones that provide many ecological and biological functions. Zone 1 consists of undisturbed forest or fast growing native trees to provide shade for the stream and to stabilize the stream embankment. Zone 2 should consist of managed woodland that allows for infiltration of stormwater runoff, filtration of sediment and nutrients, and nutrient uptake by plants. These zones are suggested to extend from the edge of stream to 15 and 45 feet respectively. Zone 3 contains primarily native grasses or meadow to help slow and absorb stormwater runoff before entering zones 1 and 2. This zone is established at 60 feet and extends to 75 feet from the

3. Master Plan

edge of stream. The establishment of a Riparian Corridor Conservation overlay district will provide added protection to all known tributaries found within the township's watersheds.



Sketch showing riparian buffer zones.



LIMERICK TOWNSHIP GREENWAYS MONTGOMERY COUNTY PENNSYLVANIA

OVERALL TRAIL MASTER PLAN

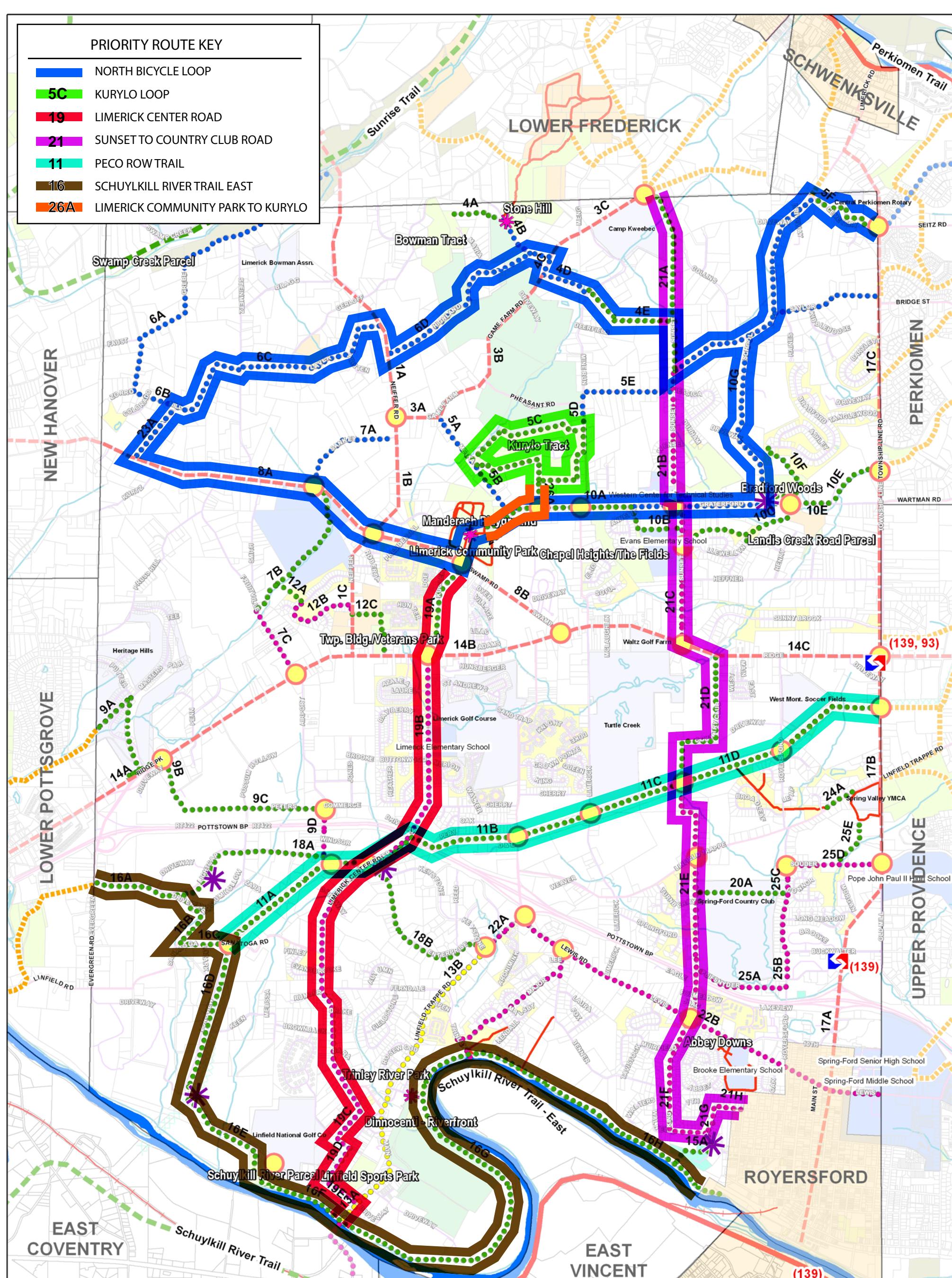
July, 2013

SC# 11044.10



0 0.125 0.25 0.5 Miles

Sources: Limerick Township Open Space Plan Update 2007, DVRPC, Montgomery County



LIMERICK TOWNSHIP GREENWAYS MONTGOMERY COUNTY, PENNSYLVANIA

PRIORITY ROUTES

July, 2013 SC# 11044.10

SC# 11044.10



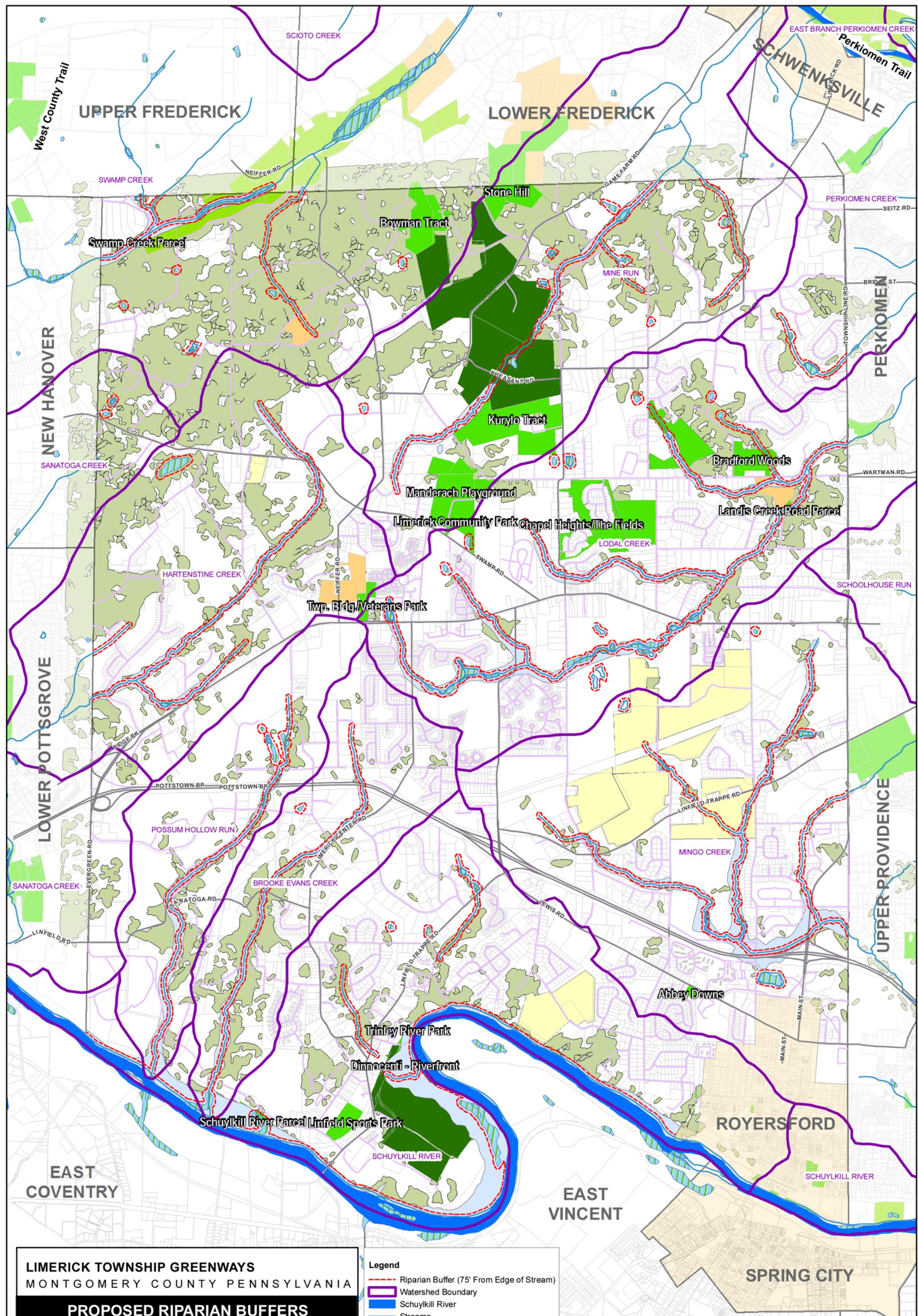
Sources: Limerick Township Open Space Plan Update 2007, DVRPC, Montgomery County

Existing Conditions

-  EXISTING TRAILHEADS
-  EXISTING MULTI-USE TRAILS
-  ABANDONED RAIL LINE
-  EXISTING NEIGHBORHOOD TRAILS
-  SEPTA BUS STOPS
-  SCHUYLKILL RIVER
-  STATE ROADS
-  TOWNSHIP ROADS
-  WATERBODIES
-  OVERHEAD POWERLINES
-  PART BUS STOPS

Recommended Improvements

The legend consists of a vertical list of items, each preceded by a colored circular icon. The items are: PROPOSED TRAILHEADS (purple asterisk), INTERSECTION IMPROVEMENTS (yellow circle), REGIONAL OFF-ROAD (green line), REGIONAL ON-ROAD (pink line), PLANNED ROUTES (orange dashed line), TWP ON-ROAD (Bikeway & Sidewalks) (purple dots), TWP ON-ROAD (No Sidewalks) (blue dots), TWP OFF-ROAD (green dots), and SIDEWALKS (yellow dots). The last item, SIDEWALKS, is followed by a large, bold, italicized label '1A TRAIL SEGMENT LABELS'.



LIMERICK TOWNSHIP GREENWAYS
MONTGOMERY COUNTY PENNSYLVANIA

PROPOSED RIPARIAN BUFFERS

July 2013

SC# 11044.10



0 0.2 0.4 0.8 Miles

Sources: Limerick Township Open Space Plan Update 2007, DVRPC, Montgomery County

Legend

- Riparian Buffer (75' From Edge of Stream)
- Watershed Boundary
- Schuylkill River
- Streams
- Wetlands
- 100-Year Floodplain
- Woodlands
- County Parks & Open Space
- Limerick Parks & Open Space
- Nonprofit Parks & Open Space
- Preserved Farm
- State Game Commission Land

Implementation

Project Partners

The following is a listing of project partners identified by the study committee and the public participation process.

- Limerick Township
- Montgomery County
- State Agencies (DCNR, PennDOT, DCED, PA Game Commission)
- PECO Energy
- Schools
- Developers
- Recreation Groups, Spring Valley YMCA
- Local Businesses

Each of these entities will likely be involved with the promotion, funding, and/or implementation of the township trail and greenway system. The township will need to continue to lead the implementation process by applying for and securing grant funds for an initial demonstration project.

Developers will be instrumental in the construction of the proposed trails where alignments are to be located within or adjacent to land tracts under future or current land development review. Trails should be included within the development plans and the township should focus on implementation projects by constructing trails and greenways as a part of their development proposal.

4. Implementation

State agencies such as DCNR and DCED will be important sources for design/engineering and construction funding. PennDOT should be involved with the improvement projects on state roadways. Local recreation groups and businesses can contribute through fund raising and/or by applying for funding as non-profit agencies.

GIS Mapping

Trail mapping for the project exhibits was created using a Geographic Information System (GIS) program. This GIS program is used as a data management and graphic tool to create the trail mapping exhibits; to calculate accurate lengths for trail segments; and, to identify impacted land parcels. Base data used in the formulation of this report was provided by Limerick Township, the Montgomery County Planning Commission (MCPC), and by the Pennsylvania Spatial Data Access (PASDA) website, including aerial photography developed as part of the PAMAP project. Each of the proposed improvement alignments shown in these exhibits have been delivered to the township in GIS format to be included as part of their on-going inventory and for future use and reference.

Plan Recommendations

Adopt this Greenway Plan as an addendum to the Township Comprehensive Plan. By doing so, the township will be able to establish a more authoritative position relative to the proposed improvements, recommendations, and implementation priorities described herein.

Revise the Official Map to include trail and bikeway alignments recommended in this plan. As permitted by the Pennsylvania Municipalities Planning Code, a municipality may adopt an official map to show streets, parks, open space reservations, pedestrian ways and easements (including bikeways, trails and sidewalks). Once the Official Map is adopted, these areas are “reserved” for the designated use and can be incorporated into future improvements and land development plans. The official filing of a land development application or other written notice to the township to develop lands containing Official Map reservations is the “trigger” beginning a one

year period during which time the township has the right to acquire reserved land for public improvements. The township may also negotiate with the applicant to build reserved improvements as a part of the land development process. Trails and greenways that are shown on the official map have a better chance of being constructed.

Limerick Township has previously adopted an official map and it should be revised to show the routes recommended in this plan. At a minimum, the priority routes discussed later in this chapter should be added to the township's official map.

The Township must ensure that the proposed improvements within this plan are included in all new land development and roadway improvement projects. The township must be vigilant to ensure that trail alignments proposed within this plan are included in the construction plans proposed by the developers as part of the land development process, and in the design plans for roadway improvements. Requiring developers to construct trails and/or pedestrian facilities to meet ordinances will allow these new residential (or commercial) developments to "plug into" the greenway trail system and eliminate the need to raise public dollars for pedestrian/trail improvements. The township will also need to be involved with the roadway design process to make sure space is made for the proposed bicycle and pedestrian facilities, including bike lanes or routes, shoulder improvements, bicycle safe grates, signage, and crossing improvements. This effort must be continuous and therefore the township should mandate that this Greenway Plan is to be referenced in the review of all land development applications and roadway design projects. The township should also coordinate with adjacent municipalities to ensure their trail plans and roadway/land developments tie into those proposed for Limerick Township.

The Township must use its municipal funds to leverage additional grant funding from state and federal sources. The township will need to apply for and receive grant funding from local, State and / or Federal sources in order to develop the proposed improvements that will not be constructed as the result of land development and roadway projects. Many State grant programs can be used as a designated match for other federal grant programs and vice versa. By leveraging funds, the township will be able to maximize the

4. Implementation

amount of constructed improvements per municipal dollar. In most cases, the township can realize a return of at least \$2.00 for every \$1.00 spent by properly leveraging their funds.

Adopt a Riparian Corridor Conservation Overlay Zoning District.

Based on the Montgomery County Planning Commission recommendations for a riparian corridor and proposed riparian buffers mapping as described in this report, a Riparian Corridor Conservation Overlay District will provide additional protection to the township's natural resources in its most sensitive locations. The zoning ordinance provides performance related criteria and protection for natural resources, however it does not provide protection for the specific geographical locations associated with the township waterways that the riparian corridor overlay district would provide.

Implementation Priorities

The implementation priorities described herein will require a multi-phased approach by various parties over many years. A combination of developer contributions, grants and other funding strategies should be perused to reduce the financial commitment by the township. Funding strategies are described in detail at the end of this chapter.

Complete the off-road trail route along the PECO utility corridor (Route 11). The PECO utility corridor right-of-way provides a relatively unobstructed 3.8 mile route traversing the township from its southwest corner near Limerick Nuclear Generating Station, to its eastern boarder near Ridge Pike. This route proposes a multi-use trail able to accommodate bicyclists and pedestrians of all experience levels. Several local examples of trails constructed within utility right-of-ways are provided in this chapter. These facilities often result in a symbiotic relationship with a trail designed to serve both trail users and the occasional utility maintenance vehicle. It is recommended that the trail be constructed with a surface of sufficient strength to accommodate utility maintenance vehicles as necessary, and in cooperation with any other requirements of the utility company.

Much of this route will be located within a portion of the PECO's right-of-way and will require a licensing agreement between PECO and the township. The township should be sure to secure a licensing



The 6.3 mile section of the Schuylkill River Trail from Cromby Station (Phoenixville) and Linfield Road (Parker Ford) is located within a PECO managed easement.



The 4.8 mile Power Line Trail in Horsham Township connects schools, parks, business centers and neighborhoods along an easement managed by PECO/Exelon.



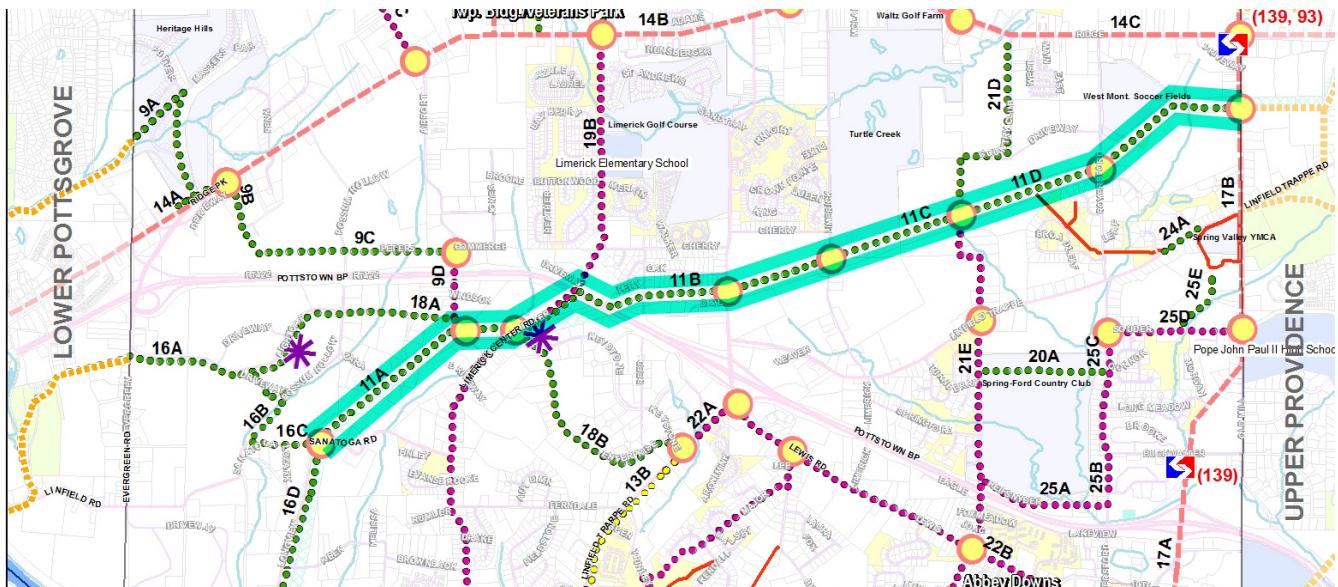
The 3.3 mile Skippack Trail is located within easements for overhead power lines to form a connection between the Perkiomen Trail and Evansburg State Park.

agreement with a minimum term of 25 years to remain eligible to receive DCNR funding, and a variety of other outside grant funding sources that require municipal control of the property in question.

PECO requires a three step process once the township decides to move forward with the construction of a trail on PECO lands: 1) The township submits engineered construction plans to PECO; 2) PECO conducts their in-house review across multiple departments; and, 3) plans are revised per PECO comments before the licensing agreement is executed. The review process typically lasts 3-4 months or longer.

Although PECO owns the right-of-way along proposed trail route 11, a few adjacent parcels have existing leases within the PECO right-of-way. Most of these leases are for agriculture or recreation uses. An in-depth evaluation property review (EPR) by PECO will be needed to identify active leases prior to developing construction documents for planned trail segments. Parcels with active leases will have to be renegotiated with willing leasees to allow trail uses within the PECO right-of-way.

PECO sometimes charges leasing fees for licensing agreements. The annual fee is typically \$800 per mile. To reduce potential leasing fees, it is recommended that the township require land development projects adjacent to the PECO right-of-way to accommodate un-built trail sections or provide trail easements as a part of their projects. If



4. Implementation

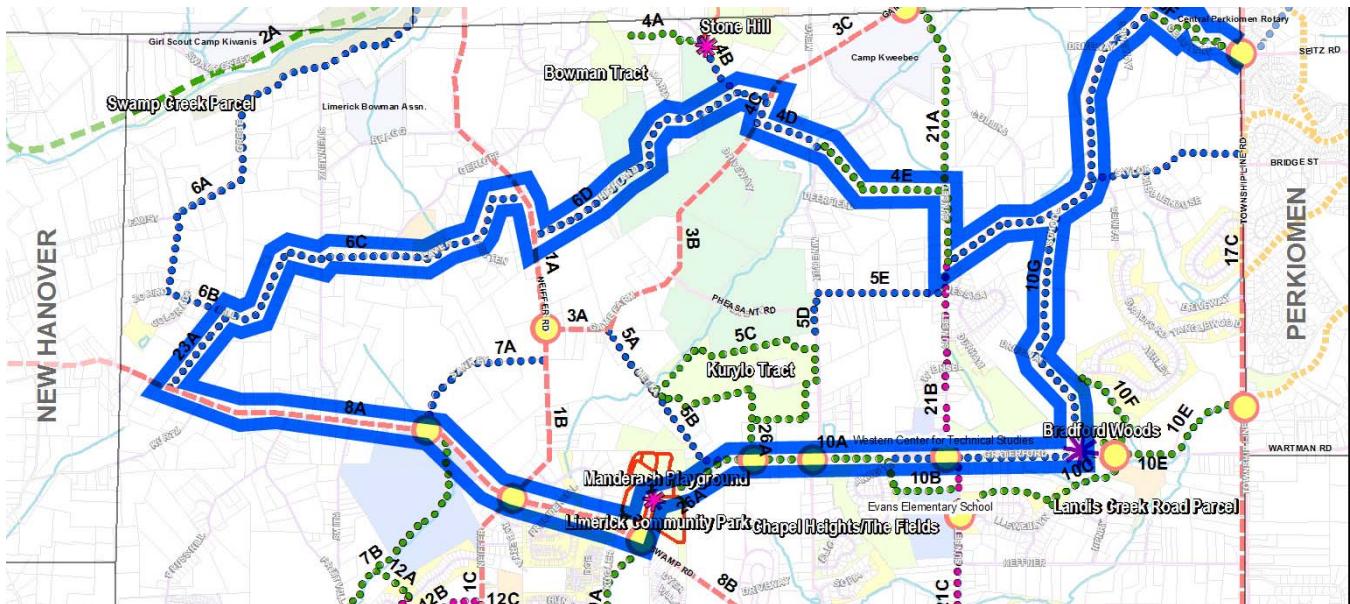
trails are provided as a part of land developments on adjacent parcels they should be designed to connect to existing or planned alignments within the PECO right-of-way. The township should conduct a detailed review to anticipate locations where trails are not likely to be accommodated by the private sector on parcels adjacent to the right-of-way, and begin the PECO review process for trail alignments anticipated within PECO's right-of-way. The township should be proactive in identifying which of these segments would be feasible as an early demonstration project so that the negotiation processes with PECO and/or private developers can proceed.

It is recommended that trail segment 11D be constructed as an initial demonstration project followed by later phases encompassing segments 11C-A to the west. Depending on funding availability, the trail segments may have to be additionally divided into sub phases. The first sub-phase for segment 11D is recommended between Township Line Road and the existing trail located at the Ashbrook Estates residential development. The proposed .9 mile sub-phase alignment links existing off-road trails, residential developments and several prominent destinations including the Spring Valley YMCA, West Montgomery United Soccer Association fields, shopping centers and planned trails and recreation facilities in Upper Providence Township. The completion of trail segment 24A and sidewalks / bike lanes along Township Line Road should be pursued to create a complete loop between the abovementioned destinations.

It is widely known that the PECO corridor is occasionally used illegally by all terrain vehicles (ATVs). ATVs are not permitted on the PECO right-of-way or township maintained trails and measures should be taken to discourage the illegal use of ATVs in this location. Some of these measures might include bollards or gates that can be removed by utility or emergency vehicles. Additionally, post and rail fencing should be provided along the width of the right-of way in locations where it abuts a roadway. As the use of this trail increases, trail users will become the 'eyes and ears' of the trail and discourage illegal activities.



A combination of roadway markings and share the road signage is a low-cost solution to enhance bicycle awareness for the proposed Northern Bicycle Loop.



Implementation priority map highlighting the proposed Northern Bicycle Loop.

Establish an on-road bicycle route system in the northern part of the Township. The Northern Bicycle Loop serves a relatively large area as it forms an approximately 11-mile loop traversing some of the township's most picturesque landscapes. The establishment of local bike routes will create bicycle awareness and galvanize interest for similar projects throughout the township. The Northern Bicycle Loop is recommended for early implementation due to the minimal improvements required to initiate the system. This route may require a multi-phased strategy with the initial phase concentrating on low-cost improvements that can be implemented quickly on low volume township maintained roadways. These initial improvements consist mainly of share the road markings and signage to enhance awareness and safety for the route. To improve the user experience, a smart phone app with an interactive map and descriptions of the route should be developed and posted on the township's website. This route is intended to provide a venue for type 'A' or advanced bicyclists with the goal of creating overall township-wide bicycle awareness and demand for the completion of other alignments linking into the Northern Bicycle Loop.

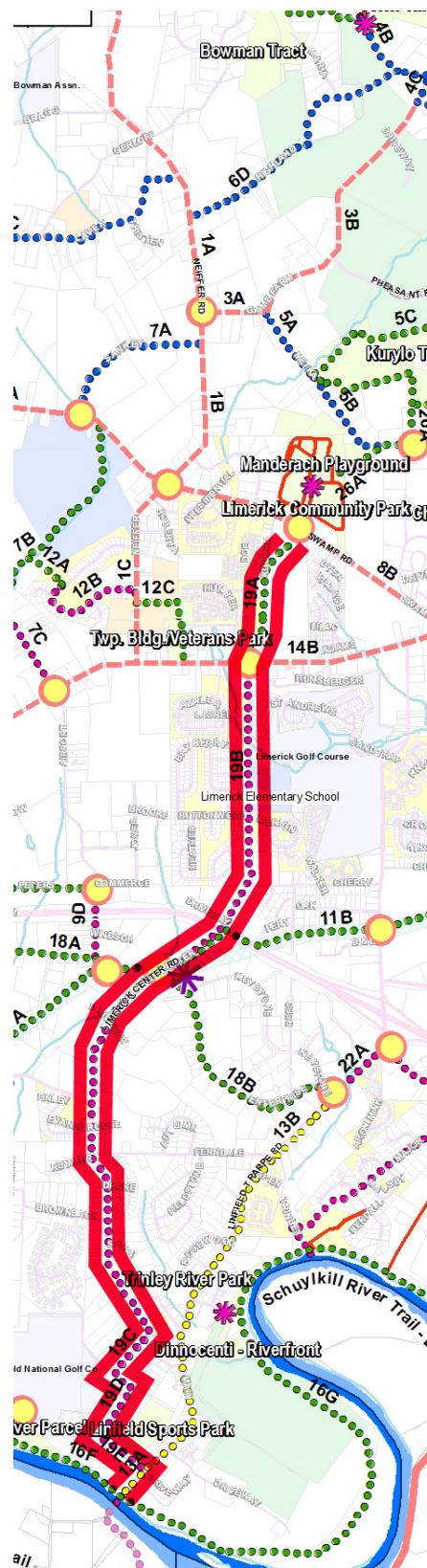
It should be noted that small portions of this route utilize proposed off-road trail segments to form a complete loop. Most of the off-road segments are anticipated to be constructed by the private sector as a part of future land developments. In the interim, on-road segments

4. Implementation

should be pursued as temporary alternatives until the off-road segments are complete.

Although this route seeks to utilize roadways with low traffic volumes and low posted speed limits, some roadways may necessitate additional safety improvements in later phases. Alignments should be evaluated to examine the necessity of additional improvements such as the reduction of posted speed limits, wider shoulders and/or bike lanes. The schedule for future improvements will be determined based on the level of demand for these facilities, safety benefits and available funding.

Complete the Neighborhood bikeway and sidewalk routes along existing roadway corridors to connect neighborhoods to destinations (Routes 19 & 21). These alignments are critical to providing a continuous bicycle and pedestrian network from many of the township's residential neighborhoods to schools, parks, golf courses and commercial centers. The existing conditions along these routes present a patchwork of existing sidewalks and few, if any accommodations for bicyclists. Existing sidewalks along this corridor are primarily associated with residential developments. The existing roadways carry medium traffic volumes, low posted speed limits and in many cases adequate width for bicycle accommodations. The proposed alignments include new pedestrian sidewalks to fill in missing gaps and share the road routes or bike lanes to accommodate cyclists. The proposed routes are located within the public right-of-way, typically will not require the acquisition of additional land, and will only require construction funding to make them happen. There are few opportunities to accommodate off-road trails along these routes due to the presence of existing residences and developed land. Where possible, off-road trail alternatives that tie into the overall system should be encouraged with willing landowners, or for parcels under consideration for land development. Since a majority of these routes are on-road, they are not likely to be funded by DCNR. However these routes would be eligible for *Safe Routes to School Transportation Enhancements* funding if a long-term Pennsylvania transportation bill is fully re-authorized as explained later in this chapter.





Implementation priority map highlighting the neighborhood bikeway and sidewalk route 21 along Country Club and Sunset Roads.

Route 19 is a priority implementation bikeway and sidewalk route located along Limerick Center and Church Roads connecting Linfield Village and the proposed Schuylkill River Trail East to Limerick Community Park. The Initial implementation phases for this route should be focused on segments 19B and 19A to provide continuous and safe pedestrian and bicycle routes from numerous residential communities to Limerick Elementary School, Limerick Golf Course and Limerick Community Park—Limerick's premiere recreation facility.

The northernmost portion of segment 19A calls for a multi-use asphalt trail connection from Ridge Pike to Swamp Pike along a re-aligned Kugler Road. The planned realignment of Kugler Road will intersect with Zeigler Road as currently shown on the township's Official map. The realigned intersection will benefit both trail users and motorists by improving connectivity, visibility and safety. This segment is partially located on an undeveloped parcel and it is anticipated that this segment and roadway and intersection improvements will be completed as a part of a future development proposal for this parcel.

Route 21 creates a township-wide connection from Royersford Borough in the south to Lower Frederick Township in the north. This route follows Country Club Road and King Road from Royersford Borough to Ridge Pike, and extends along Sunset Road from Ridge Pike to the northern boundary of the township. The northern portion of this route proposes off-road trails anticipated to be constructed as a part of a future land developments. Significant township destinations are connected along this route including the Spring-Ford Country Club, Evans Elementary School, Tuttle Creek Golf Course, Western Center for Technical Studies and Camp Kweebec.

Implement the Schuylkill River Trail East (Route 16) Early phases for this priority route should seek to establish a 5' wide earthen hiking trail between Trinley Park and Royersford (Segment 16H). Segment 16H should be considered as an early implementation / demonstration project since it provides a direct pedestrian connection between Trinley Park and Royersford Borough and the main branch of the Schuylkill River Trail in Chester County beyond. This will be a low-cost option laying the groundwork for future conversion into a

4. Implementation

multi-use trail as demand for this facility increases. This trail alignment is proposed within Norfolk Southern Railroad property. The township should begin conversations with Norfolk Southern regarding the feasibility of trail alignments through their property. Proposed trail alignments should consider site grades and relationship to the existing railroad to prevent any potential safety concerns.

It should be noted that Norfolk Southern's website states the following with regard to development within their right-of-way, *“Due to its concern for the added risks and hazards associated with the increased pedestrian and motor vehicle traffic moving adjacent to, or across active railroad tracks, the railroad will not donate, sell, lease or grant easements along its operating corridors or other property located on or adjacent to operating corridors for pedestrian walking/hiking/jogging trails, bikeway paths, parks or other recreational uses”*. While this statement indicates that trails are not a priority nor the mission of the railroad, this is a unique situation warranting consideration since there is an approximately 30 foot change in elevation separating the proposed trail from the active rail line. The change in elevation makes pedestrian and train conflicts less likely. In fact, Trinley Road exists in an identical condition to that proposed for the trail, but does not appear to be a safety concern for

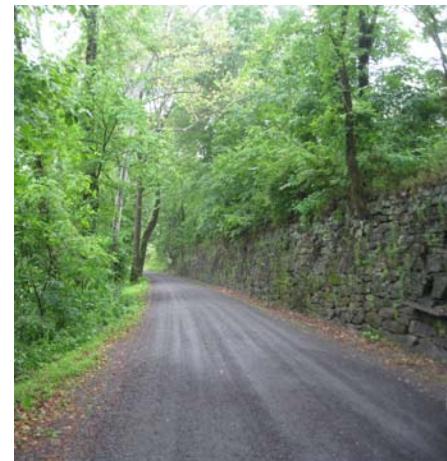
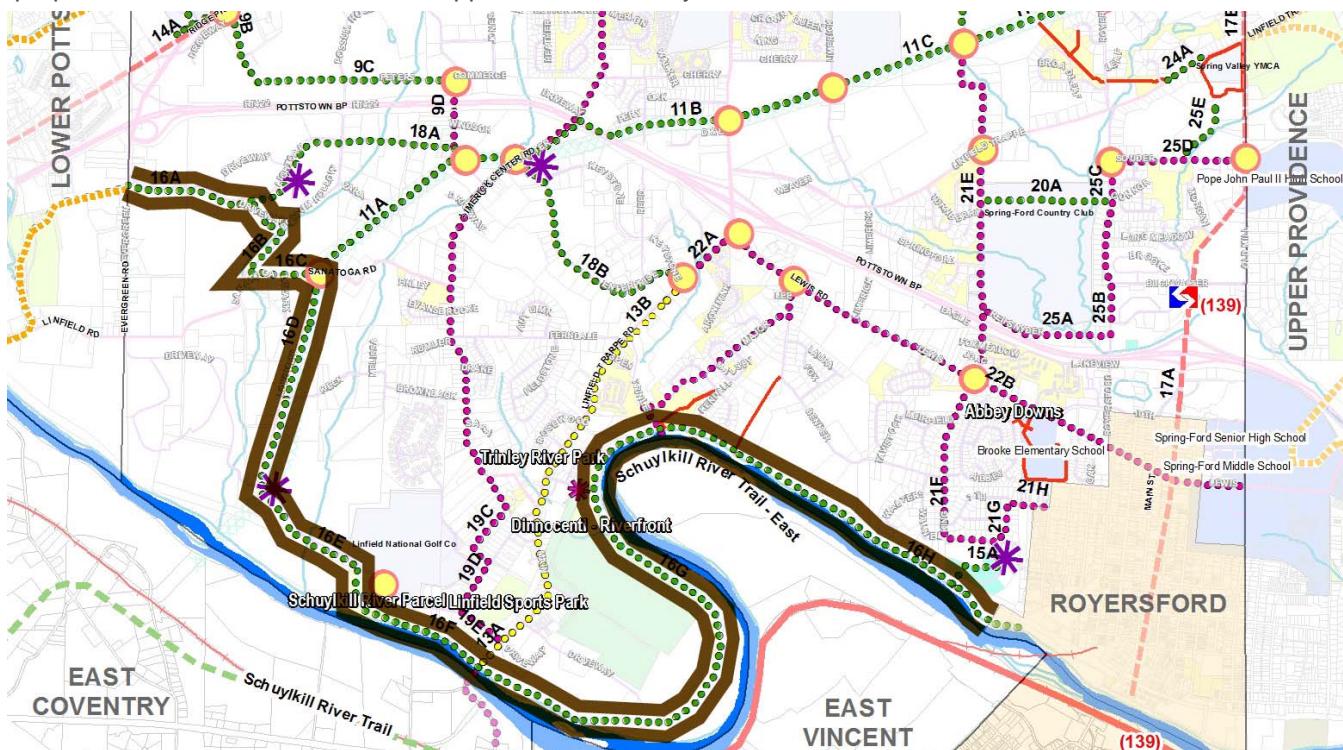


Photo of Trinley Road showing its existing location approximately 30' below the active rail lines.





Ad-hoc hiking trail east of Trinley Park along the Schuylkill River .

the railroad. Additionally, there are no proposed at grade trail crossings of the railroad right-of way.

Segment 16G connects Trinley Park to Linfield Landing. The eastern portion of segment 16G will require coordination with the PA Game Commission to safely construct a trail along the perimeter of their property. The western portion of segment 16G should be accommodated as a part of future re-development of the former distillery site in Linfield.

Segment 16F follows a gravel utility access road behind the Toll House property before traveling through the township's Schuylkill River Parcel. Sections of this trail located within the 100 year flood plain should be constructed with an asphalt surface. The section along the utility access road will require negotiation with the Columbia Gas Company to allow shared use of this access way for trail users.

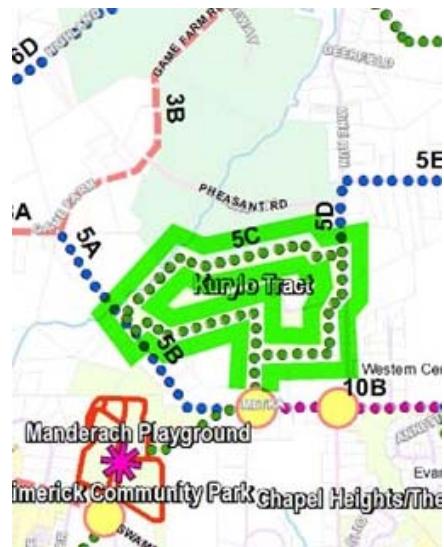
Segments 16C-E follow alongside existing roadways. The township should be attentive to any future roadway improvements for Longview and Sanatoga Roads by PECO or others to ensure the accommodation of segments 16C-D as a part of future projects. Improvements in this segment may include a widened roadway shoulder to accommodate bicyclists and/or an off-road route. Coordination with private developers will be needed to construct segments 16A-B as a part of future land developments on undeveloped parcels located on the south side of Lightcap Road opposite the Philadelphia Premium Outlets. It is recommended that an underutilized section of Possum Hollow Road be closed to vehicular traffic in favor of a multi-use trail / linear park to accommodate Segment 16C. This gravel roadway is inadequate by modern standards and appears to serve only one residence. The township should seek a partnership with this property owner to provide alternate access points, or investigate to see if the owner would be willing to sell this property to the township.

4. Implementation

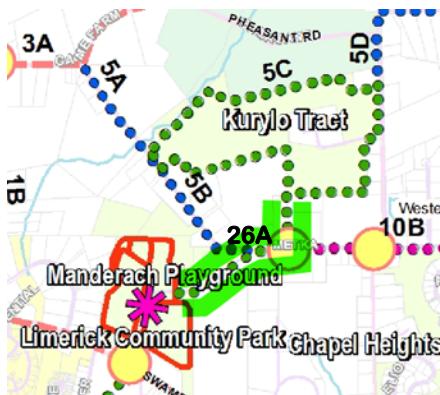
Develop a master plan for the Kurylo tract to include trails and other recreational facilities (Route 5C). The 90 acre Kurylo tract was acquired by the township in 2008 as an undeveloped open space property. Funding for acquisition was obtained through private donors and the Montgomery County Open Space Program. A condition of funding is that the property must be opened for public access via hiking trails and community gardens. The property is currently maintained as passive open space and is leased to a local farmer for the production of agricultural crops. The park is strategically located between Limerick Community Park to the south and State Game Lands to the north. A residence is located on a private parcel carved out of the center of the property. The park and private residence are accessed via a shared driveway from North Limerick Road.

This plan recommends an 8' wide stone dust loop trail around the perimeter of the property. A master plan should be developed for the loop trail, and to identify the feasibility of other trail connections as well as opportunities for community gardens, township yard waste composting center and a shared parking facility to accommodate these uses.

In the interim, it is recommended that the township establish the perimeter loop path as a mown hiking trail until funding is secured for more permanent trail facilities. In addition to opening the property to recreationalists, a mown perimeter path will serve multiple purposes. First, it will reduce unintended trespassing by hunters with the trail serving as a landmark signifying the boundary between the park and State Game Lands to the north. A defined trail will also reduce instances of park users trespassing onto the private residential parcel and reduce trespassing into the leased agricultural fields. In addition to the mown trail, signage marking the boundary of the property, trail route identification markers and access road / parking areas will be needed to better demarcate portions of this property accessible to the public. While the agricultural lease is a compatible method to maintain the property, the township should ensure that the lease allows the perimeter of the property to be used for the loop trail discussed herein.



Implementation priority map highlighting Route 5C—Kurylo Loop.



Off-road trail connection between Limerick Community Park and Kurylo Tract—Route 26A.

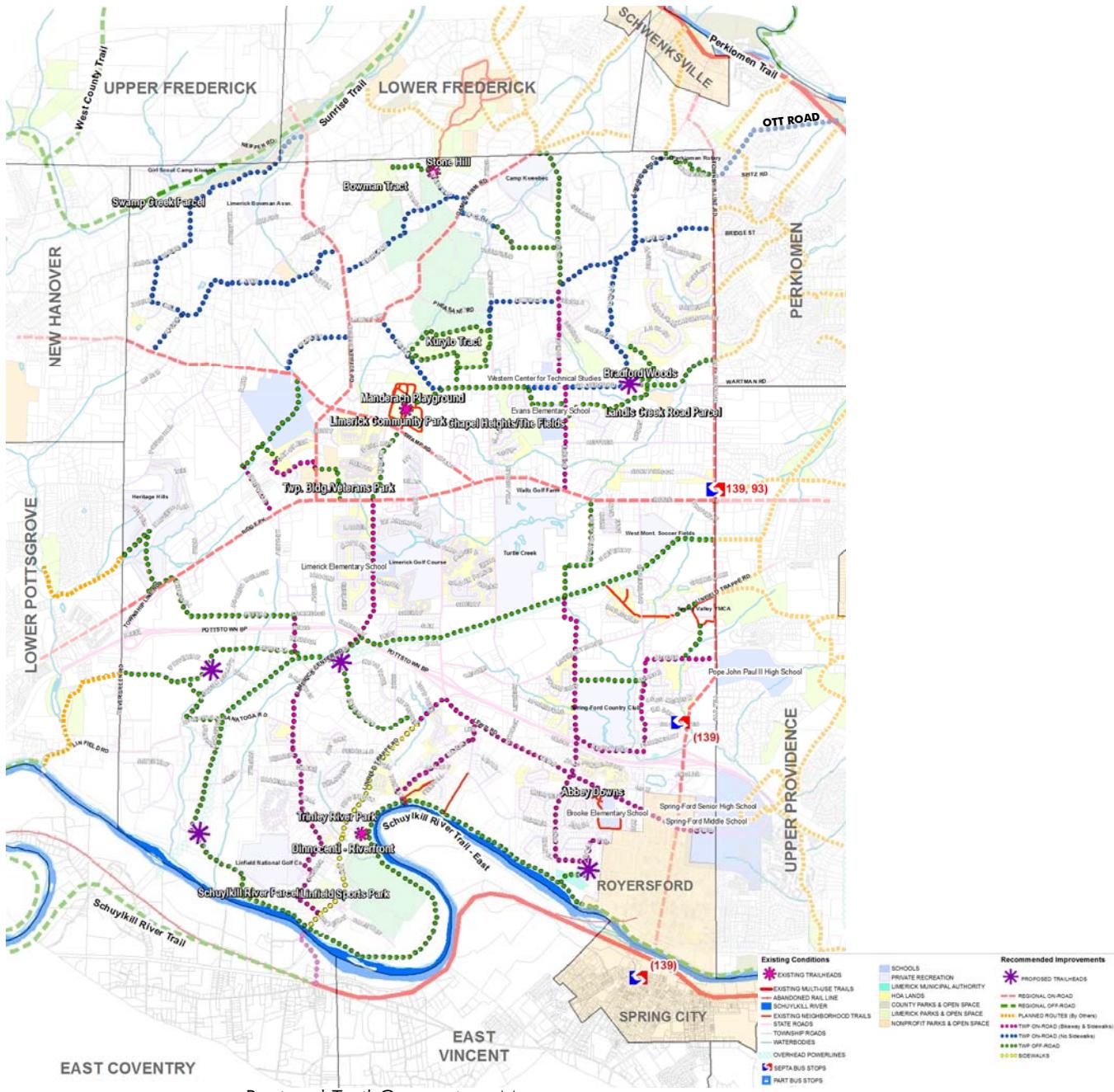
Construct an off-road trail between Limerick Community Park and the Kurylo tract. This provides a critical connection between two significant township recreational facilities by utilizing the existing right-of-way along Zeigler and Metka Roads, and an existing easement across private property. Additionally, this connection is an essential link for other trail implementation priorities including the Northern Bicycle Loop and the Neighborhood Bikeway and Sidewalk route 19. The proposed alignment of the route connects existing trails at Limerick Community Park with an off-road trail parallel to Zeigler Road at the Park's northern egress until reaching Metka Road. The trail continues within the existing right-of-way on the south side of Metka Road before crossing the road to connect to TMP 37-00-02959-00-1 where the township has previously secured a 10' wide trail easement connecting Metka Road to The Kurylo tract. This route will require a mid-block crossing on Metka Road that should include a painted pedestrian crossing, warning signage and other traffic calming measures.

Prepare Feasibility Studies / Master Plans for the Off-Road Trail Connections. The township off-road trail connections proposed with this plan will require further study to determine their feasibility, level of service, and construction requirements. Some proposed alignments follow along existing utility line easements or through privately-owned land. The township needs to assess the demand and impacts by reviewing more detailed information. Several alignments for consideration include Segment 7B along the Hartenstine Creek. The trail runs through the existing School District parcel connecting Ridge Pike and Sankey Road to the Oak Creek Development and Fruitville Road. Additionally, the off-road trails at the southwestern side of the township should be studied. These trails provide a connection from Sanatoga Park in Lower Pottsgrove Township to the Philadelphia Premium Outlets. These trails also connect the Outlets to the Schuylkill River trail, Limerick Center Road, and Linfield Trappe Road. Other proposed off-road trails include the proposed route 10C linking the Chapel Heights residential development to Evans Elementary School and Bradford Woods beyond. This trail also runs along Landis Creek connecting to planned trails in Upper Providence township. Route 4 connects Lower Frederick Township via the

4. Implementation

bikeway and sidewalk Route 21 along Sunset Road to Segment 20A and route 25 near the Spring-Ford Country Club and Upper Providence Township beyond.

Keep an eye on the opportunities to provide connections to regional trails and/or bikeway systems beyond Township borders. Extending the township-wide system beyond its municipal boundaries will provide greater transportation and recreation alternatives for all residents. These opportunities may be explored jointly by forming multi-municipal agreements with the adjacent municipalities involved



Regional Trail Connections Map.

with the potential connections. Several known possibilities for this type of connection include the Ott Road PennDOT project in Perkiomen Township and renovation of the Linfield Road/Main Street bridge connection across the Schuylkill River to East Coventry Township.

The Ott Road project begins at Cemetery Road in Limerick Township and extends to the Perkiomen Trail along a realigned Ott and Meyers Road. The township should partner with the affected municipalities to continue to advocate for this project to be constructed as a 'complete street' with painted bicycle lanes and signage to establish this as a regional multi-modal connection to the Perkiomen Trail. At a minimum, this should be designated as a 'share the road' route with appropriate signs.

The Linfield Road/Main Street bridge is an critical pedestrian/bicycle river crossing from Limerick Township to the existing section of the Schuylkill River Trail in East Coventry Township.

Estimate of Probable Development Costs

Below is a summary of the conceptual-level cost estimates to construct the priority bicycle and pedestrian facilities described in this report:

Regional Off-Road	\$311,350
Regional On-Road	\$992,423
Township Off-Road	\$9,194,455
Township On-Road (Share the Road)	\$450,915
Township On-Road (Bikeway & Sidewalk)	\$865,370
Township Sidewalks	\$206,735
Subtotal Improvements:	\$12,021,248
Contingency (20%)	\$2,404,250
Design & Engineering (20%)	\$2,404,250
GRAND TOTAL:	\$16,829,747*

*These costs do not include acquisition of properties and are based on estimated construction costs for 2012 including standard prevailing wage rates associated with the public sector. Costs will need to be adjusted at a rate of 3-4% for each year following to account for the general rate of inflation.

4. Implementation

These costs were developed by taking measurements from the GIS mapping/database and applying unit costs as based on the construction items described in Chapter Three: 'Master Plan' under the section entitled 'Proposed Greenway Connections'. Unit cost figures were established based on construction costs for similar projects and reflect prevailing wage rates that are required for public construction jobs. A detailed cost estimate spreadsheet is included in the appendix with a summary of the priority implementation site costs outlined below.

It is not expected that the burden for funding these improvements will be the sole responsibility of the township. In fact, many if not most of the proposed improvements should be developed as part of the land and/or roadway development processes where the funding is borne by the specific project budget and/or private land developer. The remainder of improvements can be funded through grant programs whereby the township can leverage their municipal funds to achieve the maximum amount of improvements per township dollar.

Priority Routes—Phased Capital Program

The implementation priorities described herein will assist the township in making decisions about where to invest capital for the construction of the priority trail routes shown on the master plan. The first segment selected for construction will likely be based on the township's ability to obtain an easement agreement with the affected land owners and available funding.

It is suggested that during the first three years, the township apply for additional funding, complete all surveying, construction documentation and obtain permit approvals for one of the priority segments described in this chapter. This strategy allows for construction to proceed as soon as funding becomes available.

Accessibility

Proposed trails and other facilities should be designed in compliance with the ADA accessibility guidelines for outdoor recreation areas where applicable. These guidelines may be found at the following website: <http://www.access-board.gov/outdoor/>

Short Term Township Administrative Priorities (1-4 years)

Action Items	Type
Hold bi-annual project committee meetings to advance implementation priorities	Ongoing
Ensure Trail Alignments Are Constructed as Part of New Land Developments	Ongoing
Coordinate with PennDOT and Adjacent Municipalities for Bicycle/Pedestrian Improvements on Ott Road and Linfield Road Bridge	Ongoing
Adopt a Riparian Corridor Conservation Overlay Zoning District	One Time
Adopt This Plan as an Amendment to the Comprehensive Plan	One Time
Add Recommended Trail Alignments to the Official Map	One Time (Completed)

Priority Routes—Implementation Strategy

	Route	Cost	Description
1-4 YEARS	Route 26A: .5 miles (Limerick Community Park to Kurylo Tract)	\$194,425	8' wide stone dust trail, crosswalks
	Route 5C: 2 miles (Kurylo Loop)	\$713,125	8' wide stone dust perimeter trail
5-9 YEARS	Route 11: 3.8 miles (PECO right-of-way)	\$1,502,125	8' wide stone dust trail, crosswalks (interim sub-phase: 1 mile stone dust trail from Township Line Road to existing trail at Ashbrook Estates-\$396,850)
	Route 19: 4.7 miles (Limerick Center Road)	\$512,855	signage, shoulder striping, complete missing sidewalk links, crosswalks
	Route 21: 5.5 miles (Country Club to Sunset)	\$914,279	signage, shoulder striping, complete missing sidewalk links, crosswalks
10+YEARS	Route 16H: 1.5 miles (Schuylkill River Trail-East)	\$245,925	5' wide compacted earth trail Trinley Park to Royersford
	Northern Bicycle Loop: 11 miles	\$933,903	includes off-road segments, trailheads, shoulder improvements (interim sub-phase to establish this route consists of signage and share the road paint markings only - \$85,000)
TOTAL PRIORITY ROUTES		\$5,016,637	

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Reference Sources:

Guide For Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO), 1999;

Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails, Rails to Trails Conservancy (RTC), 1993.

Statewide Bicycle & Pedestrian Master Plan, Bicycling & Walking in Pennsylvania – A Contract for the 21st Century: Bicycle Guidelines, Commonwealth of Pennsylvania Department of Transportation.

Regulatory Requirements

A number of permit requirements will apply to this project. These must be addressed during design and project development.

NPDES - Erosion and Sedimentation Control

Construction of these projects will typically involve the disturbance of more than one acre of earth and an NPDES Stormwater Permit for Construction Activities will be required. As part of the NPDES permitting process, the proposed stormwater management areas will be reviewed to determine that the 2-year storm event is infiltrated into the ground. In some cases, local conservation districts will waive NPDES requirements for trail projects that disturb slightly more than 1 acre of land. All project phases must comply with the stipulations of PA Code Chapter 102, Erosion and Sediment Control and are reviewed and approved by the local Conservation District prior to the start of any earthmoving project.

Land Development

Trail design is usually not specifically addressed in municipal ordinances. The township will have to decide which, if any, provisions from local requirements will be applied to this project.

Potential Funding Sources

Montgomery County Open Space Funding

Montgomery County has dedicated over \$2.8 million through 2016 for the funding of various trail projects throughout the region. The

4. Implementation

majority of this funding is already allocated to fill in missing trail segments on the Schuylkill River, Chester Valley and other regional trails. Although funding is not currently available, future County funding priorities will be focused on creating trail connections to regional multi-use trails such as the Perkiomen and Schuylkill River Trails. Since these trails are located outside the township, connections from Limerick Township should seek a multi-municipal partnership with neighboring municipalities to be better positioned to receive future County funding.

Act 13: Marcellus Shale Natural Gas Drilling Impact Fees

As of Fall 2012, all of Pennsylvania's 67 counties will share a \$72.5 million fund earmarked for competitive grants for water and sewer, local bridge improvements, local community park and recreation, Growing Greener and other municipal projects. This fund may increase or decrease over time based on the global supply and demand effecting the price of natural gas. As of October 2012, Montgomery County is projected to receive \$678,613.66. County officials are currently mulling specific options for funding allocation, but the initial funding priorities will likely be used to fill existing County funding shortfalls or for renovations of outdated facilities at existing parks. Although the current funding cycle is not likely to go towards new trail projects, the township should closely monitor the allocation of future funding cycles that might be utilized to fund new trail facilities.

DVRPC Regional Trails Program

Phase III of this program will commence in 2013 and fund the design and construction of regional trail projects. The Regional Trails Program, administered by the Delaware Valley Regional Planning Commission, with funding from the William Penn Foundation, aims to capitalize upon opportunities for trail development by providing funding for targeted, priority trail design, construction and planning projects that will promote a truly connected, regional network of multi-use trails with Philadelphia and Camden as its hub. More information about the application process for these funds will be made available in early 2013. Previous grants administered through this program required a 20% match. Funding priorities for the upcoming grant

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round will be focused on creating trail connections to regional multi-use trails such as the Perkiomen and Schuylkill River Trails. Since these trails lie outside the township, future connections from Limerick should seek a multi-municipal partnership with neighboring municipalities to be better positioned to receive this funding. For information contact Chris Lynn, DVRPC grant administrator or visit the program's website at: <http://www.dvRPC.org/RegionalTrailsProgram/>

PA DCNR Community Conservation Partnership Program

The PA DCNR Community Conservation Partnership Program (C2P2) provides funding for communities and nonprofit organizations to acquire, plan and implement open space, conservation and recreation resources, including trails. DCNR accepts grant application periods annually—usually in April. A new addition to this funding round is that projects will receive additional consideration for using “green” technology or practices. The next C2P2 funding cycle is in April 2013. State funds can be used for discrete projects or as a match to federal funds. DCNR requires a 50–50 match (cash or in kind services) to its grant awards for trail development projects. More information on this program can be found at the DCNR website: <http://www.dcnr.state.pa.us/brc/grants/indexgrantsinstruct.aspx>

PA DEP Growing Greener II

The Growing Greener Program is an environmental grant program established under the Environmental Stewardship and Watershed Protection Act. Funds are distributed among four state agencies: the Department of Agriculture to administer farmland preservation projects; the Department of Conservation and Natural Resources for state park renovations and improvements; the Pennsylvania Infrastructure Investment Authority for water and sewer system upgrades; and the Department of Environmental Protection for watershed restoration and protection, abandoned mine reclamation; and abandoned oil and gas well plugging projects. (GROWING GREENER FUNDS ARE EXPECTED TO BE SOMEWHAT REDUCED IN FISCAL YEAR 2013.)

Grants are available to a variety of eligible applicants, including

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counties, municipalities, county conservation districts, watershed organizations, and other organizations involved in the restoration and protection of Pennsylvania's environment. These grants will support local projects to clean up "non-point" sources of pollution throughout Pennsylvania.

Applicable Growing Greener projects include greenway restoration projects, such as riparian buffer planting and stream bank restoration. It may also be possible to coordinate Growing Greener grants with other grants for trail construction. More information on this program can be found at the PA DEP website: <http://www.depweb.state.pa.us/growinggreener/site/default.asp>

DCED Community Revitalization Funds

The Department of Community and Economic Development (DCED) Community Revitalization Fund is a state program that supports local initiatives that improve the stability of communities and enhance local economies. This agency has an open application period throughout the year, but applications should be submitted as early as possible in the fiscal year after June 30. The grant program covers a wide range of eligible uses including acquisition of land, buildings, and right-of-ways; trail, civic, and recreation projects; programs and developments that build capacity of the local community and relevant local organizations to better serve the needs of the community, and other reasonable and necessary expenses related to community-based activities. Active support of the district's state senator and / or state representative is critical in a successful grant application. (HOWEVER, THIS PROGRAM CURRENTLY HAS ALMOST NO FUNDING ALLOCATED FOR RECREATION ASSOCIATED PROJECTS.) More information on this program can be found at the DCED website: <http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/funding-detail/index.aspx?progId=228>

Moving Ahead for Progress in the 21st Century Act (MAP-21)

On July 6, 2012, President Barack Obama signed into law the Moving Ahead for Progress in the 21st Century Act (MAP-21), which reauthorizes the nation's surface transportation laws at current spending levels through September 2014. The law went into effect on

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October 1, 2012.

Under MAP-21, programs continue for active transportation programs, like the Transportation Enhancements, Safe Routes to School, and Recreational Trails programs.

Transportation Alternatives (TAP) - Formerly Transportation Enhancements (SAFETEA-LU)

The new Transportation Alternatives Program (TAP) will receive about \$780 million to carry out all TAP projects, including Safe Routes to School (SRTS) and Recreational Trails Program (RTP) projects across the country. This represents about a 35% reduction from historic funding levels. Under the bill, states will sub-allocate 50% of their TA funds to Metropolitan Planning Organizations (MPOs) and local communities to run a grant program to distribute funds for projects. States could use the remaining 50% for TA projects or could spend these dollars on other transportation priorities. (FUNDING FOR THESE PROGRAMS ARE PRIMARILY ALLOCATED TO EXISTING AND ONGOING PROJECTS)

Under MAP-21, the Transportation Enhancements program is renamed Transportation Alternatives Program (TAP), with the current twelve eligible activities categories consolidated into six categories. The new law makes several substantial changes to these programs including eliminating the bike/pedestrian safety and education programs, transportation museums, and the acquisition of scenic and historic easements categories.

The six new eligible project categories include:

1. Continuing existing bike/pedestrian facilities and expanding the definition of these projects;
2. Safe routes for non-drivers, including children, older adults, and individuals with disabilities;
3. Conversion of abandoned railroad corridors for trails for pedestrians and bicyclists, or other non-motorized transportation users;
4. The scenic byways category (However, the stand alone National Scenic Byways programs is completely eliminated);
5. A community improvement category that includes:

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- inventory control of outdoor advertising
- historic preservation and rehabilitation of historic transportation facilities
- vegetation management practices in transportation rights-of-way (formerly landscaping and scenic beautification)
- archeological activities related to transportation projects

6. Environmental mitigation activities to address stormwater management control and water pollution prevention, and wetlands mitigation, and to reduce vehicle-caused wildlife mortality.

(THERE IS NO INDICATION OF WHEN WASHINGTON WILL FULLY REAUTHORIZE THE TRANSPORTATION ALTERNATIVES BILL WITH LONG-TERM DEDICATED FUNDING.) The bill may allocate billions nationwide over six years and includes funding for recreational trails and parks. In Pennsylvania, the Department of Transportation (PennDOT) administers several TAP bicycle and pedestrian related programs.

Typically, a non-federal match is required to be 20% of the grant award. A strategy preferred by PennDOT is to require the local partner to prepare construction documents and obtain necessary environmental clearances, property control documents and utility relocations plans as the local match for these “pre-construction” tasks - so that the project is ready for construction using the TAP funding. The costs to prepare these documents can be the non-federal match to the MAP-21 funds, and does not necessarily need to be exactly 20% if all needed documentation can be completed for less. More information about this program can be found at the following link: <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>.

Recreational Trails Program

Under MAP-21, the Recreational Trails Program (RTP) is continued at the current funding levels under the TAP. RTP is reauthorized through Federal fiscal years 2013 and 2014 as a set aside from the new TAP. (HOWEVER, THE GOVERNOR OF EACH STATE MAY OPT OUT OF THE RTP IF IT NOTIFIES THE U.S. DEPARTMENT OF TRANSPORTATION SECRETARY NOT LATER THAN 30 DAYS PRIOR TO APPORTIONMENTS BEING MADE FOR ANY FISCAL YEAR.)

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Funds are allocated to the states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The RTP is an assistance program of the FHWA funded by the federal fuel tax. In Pennsylvania, the RTP is administered by the PA DNCR Bureau of Recreation and Conservation in consultation with the Pennsylvania Recreational Trails Advisory Board, which is composed of both motorized and non-motorized recreational trail users.

Match requirements for Pennsylvania Recreational Trails Program Grants are 80% grant money, up to a maximum of \$100,000, and 20% project applicant money. “Soft match” (credit for donations of funds, materials, services, or new right-of-way) is permitted from any project sponsor, whether a private organization or public agency.

Eligible applicants include federal and state agencies, local governments and private organizations. Funding may be used for the development of urban trail linkages near homes and work-places; maintenance of existing recreational trails; development of trail-side and trail-head facilities; provision of features that facilitate the access and use of trails by persons with disabilities; acquisition of easements for trails, or for trail corridors identified in a state trail plan; acquisition of fee simple title to property from a willing seller; and construction of new trails on state, county, municipal, or private lands. More information on this program can be found at: <http://www.fhwa.dot.gov/environment/rectrails/>

Safe Routes To School (SRTS)

Under MAP-21, the Safe Routes To School (SRTS) program is eliminated as a stand-alone program. However, SRTS projects are eligible for funding under the TAP. As such, SRTS projects are now subject to all TAP requirements, including the same match requirements – 80 percent federal funding, with a 20 percent local match.

SRTS coordinators are not required under MAP-21 but are eligible for funding under TAP. Thus, states may decide to retain their SRTS coordinators and use TAP funds to pay for them.

Environmental Education

The Pennsylvania Environmental Education Grants Program awards funding to schools, nonprofit groups and county conservation districts to develop new or expand current environmental education programming. Administered through the Pennsylvania Department of Environmental Protection, the funds are used for projects ranging from creative, hands-on lessons for students and teacher training programs to ecological education for community residents. Educational resources, including exhibits, interpretive trails, educational signage, and demonstration projects, also qualify for funding.

The US Environmental Protection Agency is another potential source of funding for environmental education programs. The US EPA awards grants of \$50,000 or less through its regional offices, and grants up to \$100,000 through its Washington, DC headquarters.

Legislative Funding

State and federal elected officials can often include items into legislation for worthy projects in their districts. A conversation between county and municipal officials and legislators is the way to begin this process. This type of funding should be targeted toward capital improvement projects.

Limerick Township

Some grant programs allow “in-kind” services in place of cash to count as a local match. It is strongly suggested that the township immediately begin to keep a detailed inventory of municipal staff and/or official time spent on township trails and greenways. Occasionally, grantors may allow time spent to date to count as part of the in-kind match for funds. This record will also demonstrate a continuing commitment on the part of the municipality to the successful implementation of the master plan. The township may in some cases choose to invest municipal funds in specific aspects of the trail and greenway development as “leverage” to secure funding from other partners.

Pottstown Area Health and Wellness Foundation

The Pottstown Area Health & Wellness Foundation (PAHWF) provides grants, programs and educational resources to the

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TriCounty community to enhance the health and wellness of area residents. The Foundation serves the residents of Pottstown Borough and those within a 10-mile radius of the borough. Since their inception in 2003, over \$11 million dollars have been awarded to over 100 organizations whose programs and services help promote healthy living. Previous and future grant opportunities are based on projects that meet the following priorities:

1. PRIORITY #1: Funding programs and solutions for long-term improvement in healthy behaviors.
2. PRIORITY #1A: Promoting healthy living through nutrition, activities and programs in public and private schools to reduce obesity and encourage healthy living.
3. PRIORITY #1B: Improving parks, programming and the built environment to increase access to physical activity.
4. PRIORITY #1C: Creating and promoting social networks involving healthy living.
5. PRIORITY #2: Funding programs for physical health and emotional well-being.
6. PRIORITY #3: Funding learning opportunities and strategic planning to strengthen non-profits.

More information for this program can be found at the following link:
<http://www.pottstownfoundation.org/pages/update-on-foundation-funding.htm>

PECO Green Region Grants

PECO's environmental grants support organizations and initiatives whose mission is to improve the quality of our environment by promoting environmental education and conservation; preserving open spaces; protecting endangered species; and encouraging individual and organizational energy efficient efforts. Green Region grants are available to municipalities in amounts up to \$10,000. The grants can be used with other funding sources to cover a wide variety of planning and direct expenses associated with developing and implementing open space programs, including consulting fees, surveys, environmental assessments, habitat improvement, and capital improvements for passive recreation, including trails.

For additional information contact Holly Harper, Green Region program administrator, at 610-353-5587 or visit <https://www.peco.com/Community/CharitableGiving/GreenRegion/Pages/GrantDetails.aspx>.

Private Foundations

Grant programs that require matching funds present an opportunity for the township to engage in targeted fundraising efforts and to partner with other organizations. There are corporations, foundations and institutions that support public works such as greenway and trail development. The competition for these funds is brisk, but the opportunities should be researched. Funding is often to non-profit organizations.

Foundations and institutions represent also represent a potential source of funding for education-related site improvements and programming. Grants are available to support student field trips, provide teacher training in science, and provide other educational opportunities. Education tied to research can increase the pool of potential funds. The science community and research institutions are the logical starting points for soliciting foundation funds.

Schools and Local Environmental Groups

Local schools and environmental groups may also be of assistance in several ways. These groups might get involved with clubs, fundraising events, and trail cleanup days. The school faculty could incorporate the trail into various curricula with students helping to develop and possibly maintain the park as part of a classroom assignment or after school club. While the amounts of funds raised may be relatively small, this process builds constituents and support that is critical to the long-term success of the trails. Likewise, local sports organizations could provide maintenance, resurfacing or other in-kind services related to the upkeep of the sports fields.

Maintenance

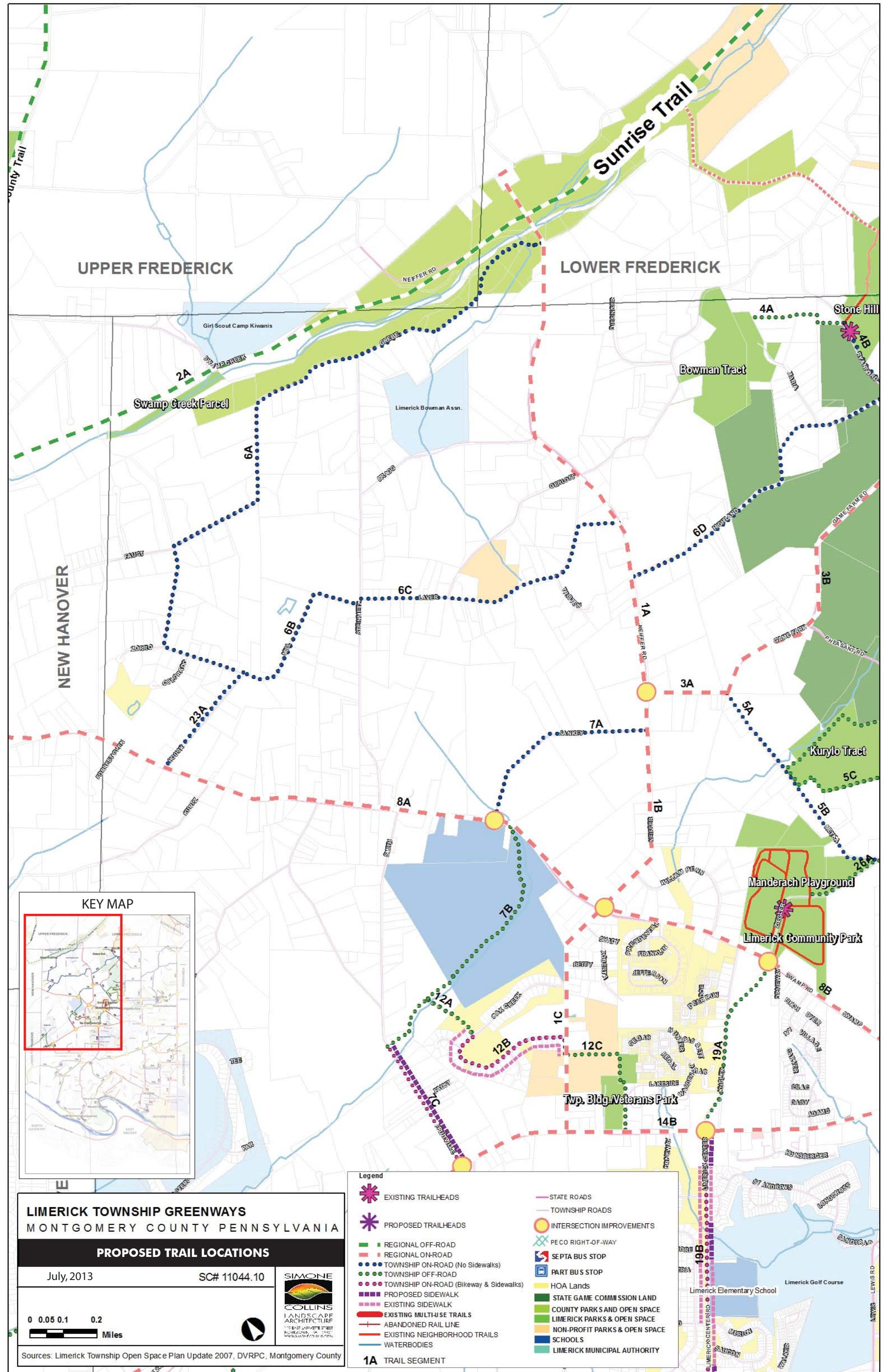
Maintenance responsibilities for off-road trail sections could be assumed by volunteer 'Friends of the Trail' or similar groups, homeowners associations, or possibly by township staff. Each of the trail operation and maintenance agreements will need to be

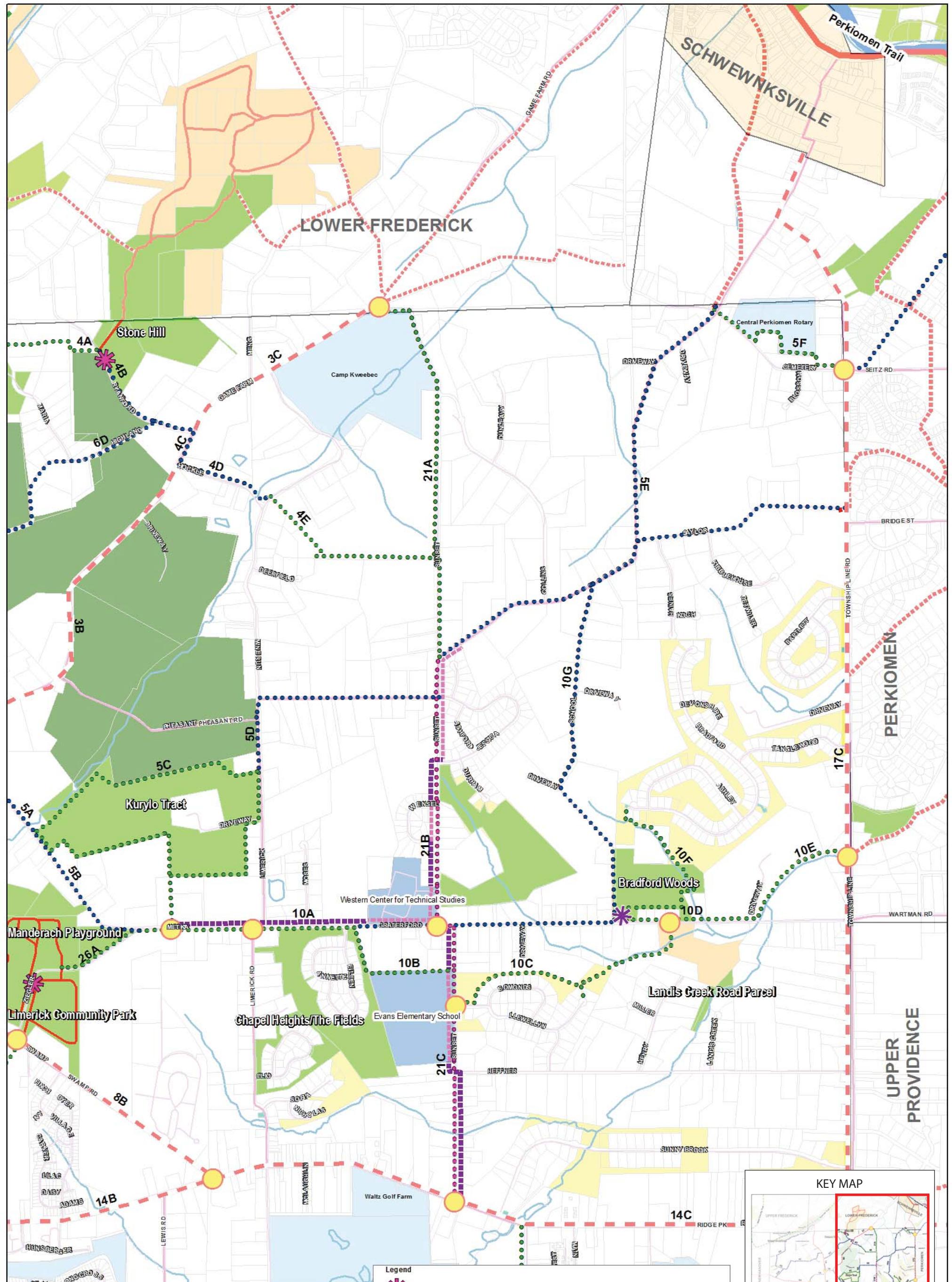
4. Implementation

developed on an individual basis by location and will determine the most appropriate entity to perform these tasks. Annual operations, maintenance and security guidelines for a typical trail can be found in the report appendix.

Appendix

- **Proposed Trail Locations—Enlargements**
- **Estimates of Probable Development Costs**
- **Public / Committee Meeting Notes and Sign in Sheets**
- **News Articles**
- **Sample Trail Easement Agreement**
- **Operation, Maintenance and Security Guidelines**
- **Introduction to Riparian Corridors**
- **Pennsylvania Recreational Use Statute**
- **PECO Meeting Notes**
- **Application for Licensing PECO Energy Company Property**
- **Conditions for Working in the Vicinity of Electrical Transmission Lines of PECO and its Subsidiaries**
- **Information Required to Evaluate Proposed Transmission Line Right-of-Way Secondary Uses of PECO and its Subsidiaries**
- **General Conditions Regulating Approved Secondary Uses for Transmission Line Rights-of-Way of PECO and its Subsidiaries**
- **Letter From Resident**

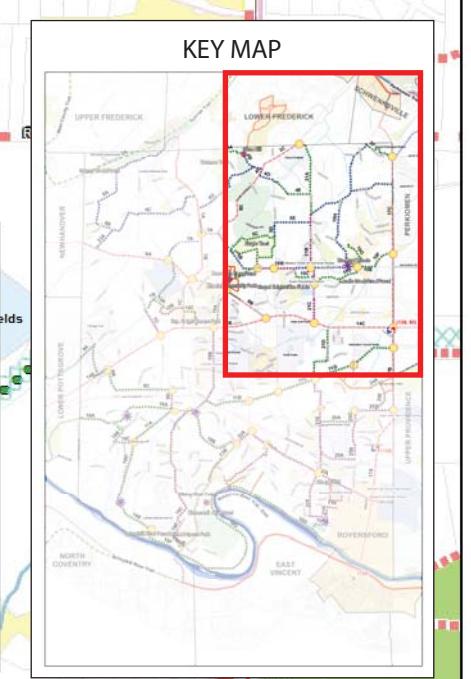


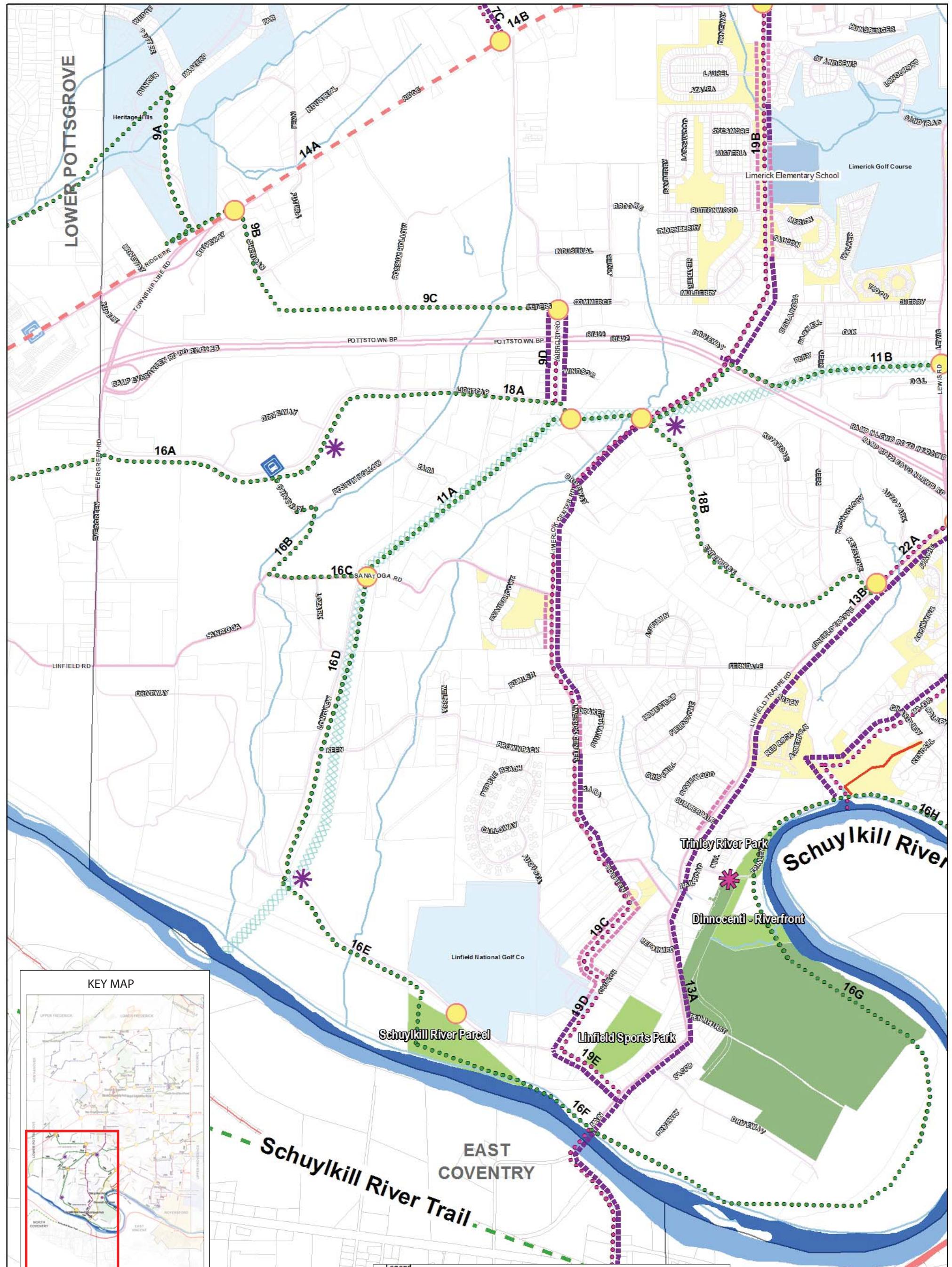


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Sources: Limerick Township Open Space Plan Update 2007, DVRPC, Montgomery County

KEY MAP





LIMERICK TOWNSHIP GREENWAYS MONTGOMERY COUNTY PENNSYLVANIA

PROPOSED TRAIL LOCATIONS

July, 2013

SC# 11044.10

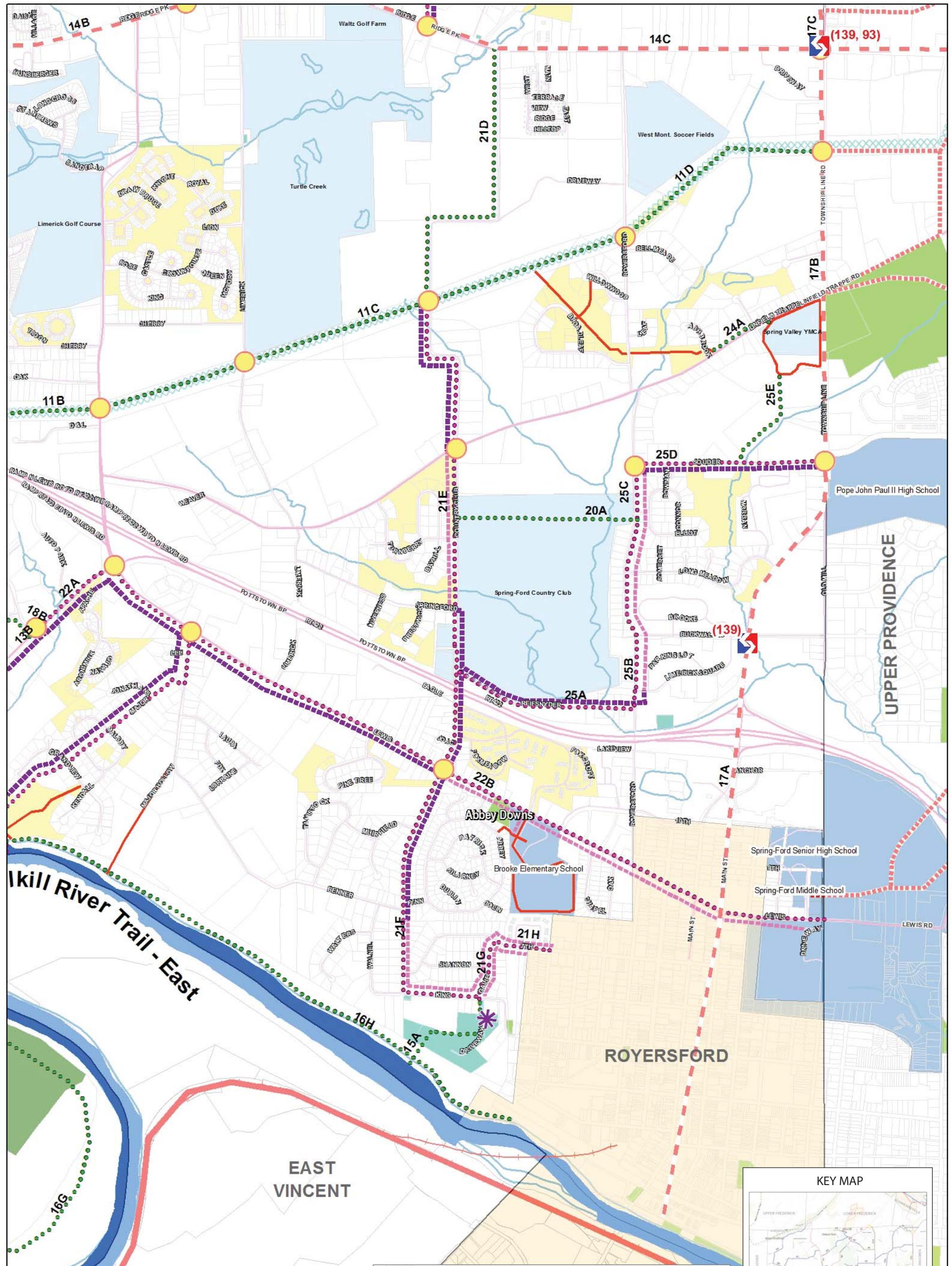


Sources: Limerick Township Open Space Plan Update 2007, DVRPC, Montgomery County

0 0.05 0.1 0.2 Miles

1A TRAIL SEGMENT

**EAST
VINCENT**



LIMERICK TOWNSHIP GREENWAYS MONTGOMERY COUNTY PENNSYLVANIA

PROPOSED TRAIL LOCATIONS

July, 2013

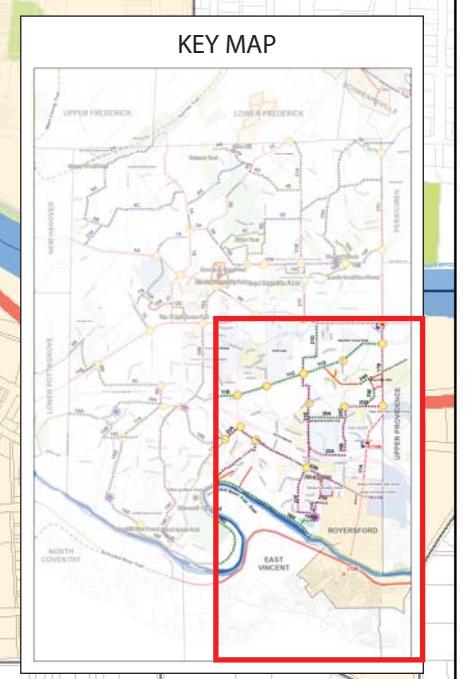
SC# 11044.10



0 0.05 0.1 0.2
Miles

Sources: Limerick Township Open Space Plan Update 2007, DVRPC, Montgomery County

Legend	
	EXISTING TRAILHEADS
	PROPOSED TRAILHEADS
	REGIONAL OFF-ROAD
	REGIONAL ON-ROAD
	TOWNSHIP ON-ROAD (No Sidewalks)
	TOWNSHIP OFF-ROAD
	PROPOSED SIDEWALK
	EXISTING SIDEWALK
	EXISTING MULTI-USE TRAILS
	ABANDONED RAIL LINE
	EXISTING NEIGHBORHOOD TRAILS
	WATERBODIES
	STATE ROADS
	TOWNSHIP ROADS
	INTERSECTION IMPROVEMENTS
	PECO RIGHT-OF-WAY
	SEPTA BUS STOP
	PART BUS STOP
	HOA LANDS
	STATE GAME COMMISSION LAND
	COUNTY PARKS AND OPEN SPACE
	LIMERICK PARKS & OPEN SPACE
	NON-PROFIT PARKS & OPEN SPACE
	SCHOOLS
	LIMERICK MUNICIPAL AUTHORITY



ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
1A	Long Term Regional	Neiffer Road (Share the Road)	Lower Frederick Twp. To Game Farm Road Part of a County proposed on-road regional connector and serves as a link between Lower Frederick Township and segment 3A (county proposed regional connector along Game Farm	PennDOT	6,683	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	4 5 3 4	EA EA EA EA	\$300 \$80 \$165 \$50	\$1,200 \$400 \$495 \$200	Share the road Striping (2/mile both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile (both directions)
1B	Long Term Regional	Neiffer Road (Share the Road)	Game Farm Road to Swamp Pike Serves as a link between segment 3A (County proposed regional connector along Game Farm Road) and Segment 8A which is a county proposed regional connector along Swamp Pike.	PennDOT	3,657	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	4 4 3 4	EA EA EA EA	\$300 \$80 \$165 \$50	\$1,200 \$320 \$495 \$200	Share the road Striping (2/mile both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile (both directions)
1C	Long Term Regional	Neiffer Road (Share the Road)	Swamp Pike to Ridge Pike Links segment 8A (County proposed regional connector along Swamp Pike) and Segment 14A which is a county proposed regional connector along Ridge Pike.	PennDOT	3,734	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	4 4 3 4	EA EA EA EA	\$300 \$80 \$165 \$50	\$1,200 \$320 \$495 \$200	Share the road Striping (2/mile both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile (both directions)
2A	Long Term Regional	Off-road Trail	Sunrise Trail The Sunrise Trail is a county proposed off-road trail. The trail serves as a link to New Hanover Township, Upper Frederick Township, and regional on-road connector Segment 1A. Outside of the Township, the trail links to the West County Trail and Perkiomen Trail.	Montgomery County New Hanover Township Upper Frederick Township	4,150	8' Wide Stone Dust Trail Signage: Wayfinding	4,150 2	LF EA	\$75 \$50	\$311,250 \$100	Earthwork, construction, materials, drainage 2/mile
3A	Long Term Regional	Game Farm Road (Share the Road)	Neiffer Road to Metka Road Part of a county proposed on-road regional connector and serves as a link between Segment 1A (On-road Regional connector along Neiffer Road) and Segment 5A (Township Share the Road trail along Metka Road).	PennDOT	1304	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	724 2 2 2 2	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$12,316 \$600 \$160 \$330 \$100	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
3B	Long Term Regional	Game Farm Road (Share the Road)	Metka Road to Hockle Road Part of a County proposed on-road regional route and serves as a link between Metka Road and Segment 3C. The trail provides a link to state game lands which lie to either side of Game Farm Road.	PennDOT	5,526	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	3,070 4 4 3 2	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$52,190 \$1,200 \$320 \$495 \$100	5' width Share the road Striping (2/mile both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
3C	Long Term Regional	Game Farm Road (Share the Road)	Ryanford Road to Lower Frederick Township Links Metka Road and Lower Frederick Township. The route passes by Camp Kweebec and connects to Segment 4F (Township off-road trail along Sunset Road) and Segments 4A and 4C (Stone Hill Preserve).	PennDOT	3,023	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements (Game Farm & Delphi) Crosswalks	1,679 4 7 3 2 1	SY EA EA EA EA EA	\$17 \$300 \$80 \$165 \$50 \$300	\$28,551 \$1,200 \$560 \$495 \$100 \$300	5' width Share the road Striping (2/mile both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
4A	Medium Term Township	Off-road Trail	Boman Tract to Ryanford Road Township off-road trail that links township open space (Boman Tract) to the existing trailhead on Ryanford Road (Stone Hill Preserve).	PA Game Commission	1,597	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	1,597 2 2	LF EA EA	\$75 \$50 \$500	\$119,775 \$100 \$1,000	Earthwork, construction, materials, drainage

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
Priority Route: Northern Bicycle Loop											
4B	Long Term Township	Ryanford Road (Share the Road)	Segment 4A to Mine Run Road Township share the road segment links the existing trailhead to Game Farm Road. The trail creates a connection to State Game lands and Township open	PA Game Commission	2,007	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: Wayfinding Trailhead Construction (Expand existing to 20 spaces) Asphalt Parking Pavement Markings Signage Bollards Concrete wheel stops Information Kiosk	1,115 2 2 777 400 2 2 20 1	SY EA EA SY LF EA EA EA EA	\$17 \$300 \$50 \$30 \$2 \$500 \$500 \$100 \$5,000	\$18,955 \$600 \$100 \$23,310 \$800 \$1,000 \$1,000 \$2,000 \$5,000	5' width Share the road Striping (2/mile both directions) 2/mile 20 spaces @ 350sf = 7000 sf/9 = 777 sy 20 spaces 5,000
Priority Route: Northern Bicycle Loop											
4C	Long Term Township	Game Farm Road (Share the Road)	Ryanford Road to Hockle Road Links Ryanford Road to Segment 4D (Township share the road route along Hockle Road).		583	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: Wayfinding	324 2 2	SY EA EA	\$17 \$300 \$50	\$5,506 \$600 \$100	5' width Share the Road Striping (both directions) 2/mile
Priority Route: Northern Bicycle Loop											
4D	Long Term Township	Hockle Road (Share the Road)	Game Farm Road to Mine Run Road Township share the road trail that links Game Farm Road to Segment 4E (Township off-road trail).		1,492	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	829 2 3 3 2	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$14,091 \$600 \$240 \$495 \$100	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
Priority Route: Northern Bicycle Loop											
4E	Long Term Township	Off-road Trail	Mine Run Road to Sunset Road Township off-road trail that links Hockle Road to Segment 4F (Township off-road trail along Sunset Road).	Private Sector	2,929	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	2,929 2 4	LF EA EA	\$75 \$50 \$500	\$219,675 \$100 \$2,000	Earthwork, construction, materials, drainage 2/mile
Priority Route: Northern Bicycle Loop											
5A	Long Term Township	Metka Road (Share the Road)	Game Farm Road to Segment 5C Township share the road segment links Game Farm Road to Township open space (Kurylo Tract).		1529	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	849 2 2 2 2	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$14,441 \$600 \$160 \$330 \$100	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
Priority Route: Northern Bicycle Loop											
5B	Medium Term Township	Metka Road (Share the Road)	Segment 5A to Segment 10A Links Township open space (Kurylo Tract) and the Limerick Community Park .		2,220	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	1,233 2 5 3 2	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$20,967 \$600 \$400 \$495 \$100	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
Priority Route 5C: Kurylo Loop											
5C	Short Term Township	Off-road Loop Trail	Metka Road to Limerick Road Township off-road loop trail through Township open space (Kurylo Tract). The trail also serves as a connection from the trailhead at the Limerick Community Park to Mine Run Road.		9479	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	9,479 4 4	LF EA EA	\$75 \$50 \$500	\$710,925 \$200 \$2,000	Earthwork, construction, materials, drainage 2/mile
Priority Route: Northern Bicycle Loop											
5D	Medium Term Township	Mine Run Road (Share the Road)	Segment 5C to Limerick Road Township share the road trail that links the Kurylo Tract to Limerick Road.		1042	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	579 2 2 2 2	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$9,841 \$600 \$160 \$330 \$100	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
Priority Route: Northern Bicycle Loop											
5E	Long Term Township	Limerick Road (Share the Road)	Mine Run Road to Cemetery Road Township share the road connector that links Mine Run Road to Sunset Road and Sunset Road to Perkiomen Township and the Central Perkiomen Rotary.		10538	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	5,854 8 8 16 8	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$99,526 \$2,400 \$640 \$2,640 \$400	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
Priority Route: Northern Bicycle Loop											
5F	Long Term Township	Off-road Trail	Limerick Road to Township Line Road Township off-road trail that runs through the Perkiomen Rotary and connects Limerick Road to Seitz Road in Perkiomen Township and Segment 17C (County proposed regional connector along Township Line Road). The trail also connects to the PennDOT Ott Road Improvement Project and the Perkiomen Trail beyond.	Central Perkiomen Rotary	2674	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	2,674 2 4	LF EA EA	\$75 \$50 \$500	\$200,550 \$100 \$2,000	Earthwork, construction, materials, drainage 2/mile
Priority Route: Northern Bicycle Loop											
6A	Long Term Township	Grebe Road (Share the Road)	Neiffer Road to Mill Road Township share the road route that serves as a link from Upper and Lower Frederick Townships to Mill Road. The route also connects to the township proposed regional connector (Segment 1A) in close proximity to County open space.		6845	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	3,803 4 7 3 4	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$64,647 \$1,200 \$560 \$495 \$200	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
6B	Long Term Township	Mill Road (Share the Road)	Grebe Road to Steinmetz Road Township share the road connector that links Grebe Road to Steinmetz and Laver Roads.		5699	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	3,166 4 7 4 4	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$53,824 \$1,200 \$560 \$660 \$200	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
6C	Long Term Township	Laver Road (Share the Road)	Steinmetz Road to Neiffer Road Township share the road connector that links Steinmetz and Mill Roads to Segment 1A (County proposed on-road connector).		4718	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	4 7 4 4	EA EA EA EA	\$300 \$80 \$165 \$50	\$1,200 \$560 \$660 \$200	Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
6D	Long Term Township	Highland Road (Share the Road)	Neiffer Road to Ryanford Road Township share the road connector that serves as a link from Neiffer Road to Ryanford Road. The trail provides access to State Game Lands.		5378	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	2,988 4 7 3 4	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$50,792 \$1,200 \$560 \$495 \$200	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
7A	Long Term Township	Sankey Road	Neiffer Road to Swamp Road Share the road segment that serves as a link from Segments 8A (County proposed (regional connector along Swamp Pike) to Segment 1B (County regional on-road connector along Neiffer Road).		3,905	Asphalt shoulder modifications Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	2,169 4 7 3 4	SY EA EA EA EA	\$17 \$300 \$80 \$165 \$50	\$36,881 \$1,200 \$560 \$495 \$200	5' width Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
7B	Short Term Township	Off-road Trail	Sankey Road to Fruitville Road Off-road segment along sewer easement passes through school district property and links Segment 8A (regional connector along Swamp Pike) to	Limerick Municipal Authority Private Sector	4,494	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	4,494 2 4	LF EA EA	\$75 \$50 \$500	\$337,050 \$100 \$2,000	Earthwork, construction, materials, drainage 2/mile
7C	Long Term Township	Fruitville Road (Bikeway & Sidewalk)	Segment 7B to Ridge Pike Share the road segment that links Segment 7B to the Oak Creek residential development and Segment 12B (Township Bikeway and Sidewalk along Oak Creek Drive.)		2,267	Asphalt shoulder modifications Concrete Sidewalk Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	1,259 2,267 2 2 5 2	SY LF EA EA EA EA	\$17 \$15 \$300 \$80 \$165 \$50	\$21,411 \$34,005 \$600 \$160 \$825 \$100	5' width New sidewalk Share the Road Striping (both directions) Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
8A	Long Term Regional	Swamp Road (Bike Lanes)	New Hanover Township to Neiffer Road Part of a County proposed on-road regional connector and serves as a link between New Hanover Township and Segment 1B which is a County proposed regional connector along Neiffer Road.	PennDOT	8,623	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements (Swamp & Sankey) Crosswalks	4,791 17,246 12 12 3 2	SY LF EA EA EA EA	\$17 \$2 \$80 \$165 \$50 \$300	\$81,439 \$34,492 \$960 \$1,980 \$150 \$600	5' width Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
Priority Route: Northern Bicycle Loop											
8B	Long Term Regional	Swamp Road (Bike Lanes)	Neiffer Road to Ridge Pike County proposed on-road regional connector that serves as a link from Segment 8A to Segment 14B (County proposed regional connector along Ridge Pike). The segment also provides a connection to the	PennDOT	6,251	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements	3,473 12,502 10 10 6	SY LF EA EA EA	\$17 \$2 \$80 \$165 \$50	\$59,037 \$25,004 \$800 \$1,650 \$300	5' width Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
9A											
9A	Medium Term Township	Off-road Trail	Lower Pottsgrove Township to Ridge Pike Township off-road trail that links Lower Pottsgrove Township to Segment 14A (County on-road regional connector along Ridge Pike) through Ravens Claw	Lower Pottsgrove Township Ravens Claw development	5,231	8' Wide Stone Dust Trail Signage: Wayfinding Intersection Improvements (Ridge & Sheridan) Crosswalks	5,231 2 1	LF EA EA	\$75 \$50 \$300	\$392,325 \$100 \$300	Earthwork, construction, materials, drainage 2/mile
9B											
9B	Medium Term Township	Sheridan Lane (Off-road - Existing Asphalt)	Ridge Pike to Peters Road Township off-road trail that links Segment 14A (County on-road regional connector along Ridge Pike) to Segment 9C along Peters Road.	Pottstown Limerick Airport	1,047	Signage: Wayfinding Bollards	2 2 1	EA EA EA	\$50 \$500 \$300	\$100 \$1,000 \$300	2/mile
9C											
9C	Medium Term Township	Off-road Trail (Off-road - Existing Asphalt)	Sheridan Lane to Airport Road Township off-road trail that connects Sheridan Lane to Segment 9D (Township bikeway and sidewalk along Airport Road).	Pottstown Limerick Airport	4,455	Signage: Wayfinding Bollards Intersection Improvements (Peters & Airport) Crosswalks	2 2 1	EA EA EA	\$50 \$500 \$300	\$100 \$1,000 \$300	2/mile
9D											
9D	Short Term Township	Airport Road (Bikeway & Sidewalk)	Peters Lane to Off-road Trail Township off-road trail that connects Peters Road to Segment 18A (Township off-road trail along Lightcap Road).	PennDOT (Coordination with PennDOT on future slip ramp & bridge projects)	1,352	Asphalt shoulder modifications Concrete Sidewalk (both sides) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Pavement Markings Intersection Improvements (Peters & Airport) Crosswalks	751 2,704 2 3 2 2,704 1	SY LF EA EA EA LF EA	\$17 \$15 \$80 \$165 \$50 \$2 \$300	\$12,769 \$40,560 \$160 \$495 \$100 \$5,408 \$300	5' width sidewalk east side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile Striped Bike Lane, each side
Priority Route: Northern Bicycle Loop											
10A	Long Term Township	Metka Road (Bikeway & Sidewalk)	Ziegler Road to Chapel Heights Township share the road connector that links Segment 10A and the Limerick Community Park to the Chapel Heights residential development and Segment 10C.		3,139	Concrete Sidewalk Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	3,139 1 6 4 2	LF EA EA EA EA	\$15 \$300 \$80 \$165 \$50	\$47,085 \$300 \$480 \$660 \$100	Share the Road Striping Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
10B											
10B	Long Term Township	Off-road Trail	Metka Road to Sunset Road Township off-road trail that links Graterford Road to the Chapel Heights residential development and Evans Elementary School.	Evans Elementary School Chapel Heights development	1,944	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Intersection Improvements (Metka & Limerick) Crosswalks	1,944 2 2 2	LF EA EA EA	\$75 \$50 \$500 \$300	\$145,800 \$100 \$1,000 \$600	Earthwork, construction, materials, drainage 2/mile
10C											
10C	Long Term Township	Off-road Trail	Sunset Road to Graterford Road Township off-road trail that links Evans Elementary School and Chapel Heights to Bradford Woods. The trail passes through H.O.A. lands and non-profit park lands.		3,953	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Intersection Improvements (Graterford & off-road trail) Crosswalks	3,953 2 2 1	LF EA EA EA	\$75 \$50 \$500 \$300	\$296,475 \$100 \$1,000 \$300	Earthwork, construction, materials, drainage 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
10D	Long Term Township	Graterford Road (Off-road)	Trailhead to Segment 10F Links Segment 10D (Township off-road trail) to the proposed trailhead at Bradford Woods and Segment 10F (Township off-road trail to Perkiomen Township).		1,906	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Trailhead Construction Asphalt Parking Pavement Markings Signage Bollards Concrete wheel stops Information Kiosk	1,906 2 2 777 400 2 2 50 1	LF EA EA SY LF EA EA EA EA	\$75 \$50 \$500 \$30 \$2 \$50 \$500 \$100 \$5,000	\$142,950 \$100 \$1,000 \$23,310 \$800 \$100 \$1,000 \$5,000 \$5,000	Earthwork, construction, materials, drainage 2/mile 20 spaces @ 350sf = 7000 sf/9 = 777 sy
10E	Medium Term Township	Off-road Trail	Graterford Road to Township Line Road Township off-road trail from Graterford Road to a planned trail in Perkiomen Township. The trail runs along Landis Creek.		1,780	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Intersection Improvements (Township Line & Off-road Trail) Crosswalks	1,780 2 4 1	LF EA EA EA	\$75 \$50 \$500 \$300	\$133,500 \$100 \$2,000 \$300	Earthwork, construction, materials, drainage 2/mile
10F	Long Term Township	Off-road Trail	Graterford Road to Bradford Road Township off-road trail through Bradford Woods. The trail connects the proposed trailhead on Graterford Road to the Municipal Authority property at the end of Bradford Road and provides access for the residents of the nearby neighborhoods to Graterford Road and trails to Perkiomen Township and Evans Elementary School.		3,166	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	3,166 2 4	LF EA EA	\$75 \$50 \$500	\$237,450 \$100 \$2,000	Earthwork, construction, materials, drainage 2/mile
10G	Long Term Township	School Road (Share the Road)	Priority Route: Northern Bicycle Loop Graterford Road to Limerick Road Township share the road trail that links the proposed trailhead at Bradford Woods to North Limerick Road.	PECO Energy	5,284	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	1 6 4 2	EA	\$300 \$80 \$165 \$50	\$300 \$480 \$660 \$100	Share the Road Striping Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
11A	Medium Term Township	PECO R.O.W.	Priority Route 11: PECO R.O.W. Off-Road Trail Sanatoga Road to Limerick Center Road Part of a Township off-road trail that runs along the PECO R.O.W. from North Coventry Township to Upper Providence Township. Segment 11A connects Longview Road and Sanatoga Road to the proposed trailhead on Limerick Center Road.	PECO Energy	5,150	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Intersection Improvements (Longview & Sanatoga) Crosswalks Intersection Improvements (PECO R.O.W. & Lightcap) Crosswalks	5,150 2 4 1 1	LF EA EA EA EA	\$75 \$50 \$500 \$300 \$300	\$386,250 \$100 \$2,000 \$300 \$300	Earthwork, construction, materials, drainage 2/mile
11B	Medium Term Township	PECO R.O.W.	Priority Route 11: PECO R.O.W. Off-Road Trail Limerick Center Road to Lewis Road On-road bikeway and sidewalk that links the south side and north side of Route 422 via an existing underpass along Limerick Center Road. The bikeway reconnects to the off-road trail north of Route 422.	PECO Energy	3,259	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	3,259 2 8	LF EA EA	\$75 \$50 \$500	\$244,425 \$100 \$4,000	Earthwork, construction, materials, drainage 2/mile
11C	Medium Term Township	PECO R.O.W.	Priority Route 11: PECO R.O.W. Off-Road Trail Lewis Road to Country Club Road Links Limerick Center Road to Segments 21C and 21D (Township on-road bikeway and sidewalk). This segment connects to Turtle Creek Golf Course.	PECO Energy	5,070	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Intersection Improvements (PECO R.O.W. & Lewis) Crosswalks Intersection Improvements (PECO R.O.W. & Limerick) Crosswalks	5,070 2 10 1 1	LF EA EA EA EA	\$75 \$50 \$500 \$300 \$300	\$380,250 \$100 \$5,000 \$300 \$300	Earthwork, construction, materials, drainage 2/mile
11D	Short Term Township	PECO R.O.W.	Priority Route 11: PECO R.O.W. Off-Road Trail Country Club Road to Township Line Road Links the Township route at Country Club Road to Upper Providence Township.	PECO Energy	6,320	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Intersection Improvements (PECO R.O.W. & Royersford) Crosswalks Intersection Improvements (PECO R.O.W. & Country Club) Crosswalks	6,320 2 8 1 1	LF EA EA EA EA	\$75 \$50 \$500 \$300 \$300	\$474,000 \$100 \$4,000 \$300 \$300	Earthwork, construction, materials, drainage 2/mile
12A	Medium Term Township	Off-road Trail	Segment 7B to Oak Creek Drive Links Segment 7B (off-road trail) to the Oak Creek residential development and Segment 12B.	Oak Creek H.O.A.	896	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	896 1 2	LF EA EA	\$75 \$50 \$500	\$67,200 \$50 \$1,000	Earthwork, construction, materials, drainage 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL			
12B	Medium Term Township	Oak Creek Drive (Bikeway & Sidewalk)	Segment 12A to Neiffer Road Links the off-road trail 12A and the Oak Creek residential development to Segment 1C (Regional on-road trail) and Segment 12C along Neiffer Road.	Oak Creek H.O.A.	1,734	Signage: Wayfinding Bollards Utilize Existing Sidewalk	2 2	EA EA	\$50 \$500	\$100 \$1,000	2/mile		
12C	Medium Term Township	Off-road Trail	Veterans Park to Neiffer Road Off-road trail that connects the Limerick Township building and Veterans Park to the Oak Creek development, Neiffer Road and Ridge Pike.		2,132	Signage: Wayfinding Bollards 8' Wide Stone Dust Trail	2 4 2,132	EA EA LF	\$50 \$500 \$75	\$100 \$2,000 \$159,900	2/mile Earthwork, construction, materials, drainage		
13A	Long Term Township	Linfield-Trappe Road (Sidewalk)	Schuylkill River Trail to Railroad Street Proposed sidewalk that connects the Schuylkill River Trail (Segment 16F) through Linfield Village to Trinley River Park.	North Coventry Township	4,128	Concrete Sidewalk Signage: Wayfinding	8,256 4	LF EA	\$15 \$50	\$123,840 \$200	sidewalk both sides 2/mile		
13B	Long Term Township	Linfield-Trappe Road (Sidewalk)	Railroad Street to Keystone Drive Proposed sidewalk that connects the Trinley River park to Segment 18B (off-road trail along Enterprise Drive) which connects to the proposed trailhead on Limerick Center Road.		5,493	Concrete Sidewalk Signage: Wayfinding	5,493 6	LF EA	\$15 \$50	\$82,395 \$300	sidewalk east side 2/mile		
14A	Long Term Regional	Ridge Pike (Bike Lanes)	Lower Pottsgrove Township to Fruitville Road Part of a County proposed on-road regional connector and serves as a link between Lower Pottsgrove Township and segment 1C (county proposed regional connector along Neiffer Road).	PennDOT Lower Pottsgrove Township	6,911	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	3,839 13,822 11 7 6	SY LF EA EA EA	\$17 \$2 \$80 \$165 \$50	\$65,271 \$27,644 \$880 \$1,155 \$300	5' width Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile		
14B	Long Term Regional	Ridge Pike (Bike Lanes)	Fruitville Road to Swamp Road Part of a County proposed on-road regional connector and serves as a link between Neiffer Road and segment 8B (county proposed regional connector along Swamp Pike).	PennDOT	7,941	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	4,412 15,882 16 10 6	SY LF EA EA EA	\$17 \$2 \$80 \$165 \$50	\$74,998 \$31,764 \$1,280 \$1,650 \$300	5' width Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile		
14C	Long Term Regional	Ridge Pike (Bike Lanes)	Swamp Road to Township Line Road Part of a County proposed on-road regional connector and serves as a link between Swamp Pike and Upper Providence Township.	PennDOT Upper Providence Township	9,393	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements (Ridge & Township Line) Signage: Wayfinding	5,218 18,786 13 7 6 1	SY LF EA EA EA EA	\$17 \$2 \$80 \$165 \$50 \$50	\$88,712 \$37,572 \$1,040 \$1,155 \$300 \$50	5' width Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile 5' width Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile		
15A	Medium Term Township	Off-road Trail	Schuylkill River Trail East to King Road Utilizes Limerick Municipal Authority property to make an off-road connection from the Schuylkill River Trail to a proposed trailhead on King Road.	Limerick Municipal Authority	1,800	8' Wide Stone Dust Trail Signage: Wayfinding Bollards Trailhead Construction Asphalt Parking Pavement Markings Signage Bollards Concrete wheel stops Information Kiosk	1,800 2 4 777 400 2 2 20 1	LF EA EA SY LF EA EA EA EA	\$75 \$50 \$500 \$30 \$2 \$50 \$100 \$500 \$100 \$5,000	\$135,000 \$100 \$2,000 \$23,310 \$800 \$100 \$1,000 \$100 \$2,000 \$5,000	Earthwork, construction, materials, drainage 2/mile 20 spaces @ 350sf = 7000 sf/9 = 777 sy		
16A	Short Term Regional	Lightcap Road (Off-road)	Priority Route 16: Schuylkill River Trail East		Evergreen Road to Possum Hollow Road	Lower Pottsgrove Township Private Sector	3,727	8' Wide Asphalt Trail Signage: Wayfinding Trailhead Construction Asphalt Parking Pavement Markings Signage Bollards Concrete wheel stops Information Kiosk	3,727 2 2,000 1,000 2 2 50 1	LF EA SY LF EA EA EA EA	\$100 \$50 \$30 \$2,000 \$50 \$100 \$1,000 \$100 \$5,000	\$372,700 \$100 \$60,000 \$2,000 \$50 \$100 \$500 \$1,000 \$5,000	Earthwork, construction, materials, drainage 2/mile 50 spaces @ 350sf = 17500 sf/9 = 1944 sy 50 spaces
		Schuylkill River Trail East Alternate	Part of an off-road trail that connects the Sanatoga Park in Lower Pottsgrove Township to the Philadelphia Premium Outlets in Limerick Township and beyond to Segment 11A (PECO R.O.W. off-road trail).										

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
17B	Long Term Regional	Township Line Road (Bike Lanes)	Rt. 422 to Ridge Pike Part of a County proposed on-road regional connector and serves as a link between Pope John Paul II High School in Upper Providence Township and the Ridge Pike regional connector (Segment 14C).	PennDOT	10,370	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements (Township Line & Souder) Crosswalks Bollards	5,761 20,740 8 14 4 1 4	SY EA EA EA EA EA EA	\$17 \$2 \$80 \$165 \$50 \$300 \$500	\$97,939 \$41,480 \$640 \$2,310 \$200 \$300 \$2,000	5' width Striped Bike Lane, each side 2/mile
17C	Long Term Regional	Township Line Road (Bike Lanes)	Ridge Pike to Perkiomen Township Part of a County proposed on-road regional connector and serves as a link between Ridge Pike to Perkiomen Township and Schwennsville Borough.	PennDOT	13,420	Asphalt shoulder modifications Pavement Markings Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	7,456 26,840 15 9 6	SY LF EA EA EA	\$17 \$2 \$80 \$165 \$50	\$126,744 \$53,680 \$1,200 \$1,485 \$300	5' width Striped Bike Lane, each side 2/mile
18A	Medium Term Township	Lightcap Road (Off-road)	Possum Hollow Road to PECO R.O.W. Provides a connection from the Philadelphia Premium Outlets and proposed trailhead to the PECO R.O.W. off-road trail (Segment 11A).	Private Sector	3,905	8' Wide Stone Dust Trail Signage: Wayfinding	3,905 1	LF EA	\$75 \$50	\$292,875 \$50	Earthwork, construction, materials, drainage 2/mile
18B	Medium Term Township	Enterprise Drive (Off-road)	PECO R.O.W. to Linfield Trappe Road Provides a connection from the the proposed trailhead along Limerick Center Road to Linfield-Trappe Road and segments 13B and 22A.	Private Sector	5,396	8' Wide Stone Dust Trail Signage: Wayfinding Trailhead Construction Asphalt Parking Pavement Markings Signage Bollards Concrete wheel stops Information Kiosk	5,396 2 777 400 2 2 20 1	LF EA SY LF EA EA EA EA	\$75 \$50 \$30 \$2 \$50 \$100 \$500 \$100 \$5,000	\$404,700 \$100 \$23,310 \$800 \$100 \$1,000 \$2,000 \$5,000	Earthwork, construction, materials, drainage 2/mile 20 spaces @ 350sf = 7000 sf/9 = 777 sy
19A	Short Term Township	Kugler Road (Off-road)	Priority Route 19: Limerick Center Road Swamp Road to Ridge Pike Off-road trail that connects the Limerick Community Park to Ridge Pike and Limerick Center Road.	Private Sector	3,031	8' Wide Stone Asphalt Trail Signage: Wayfinding Intersection Improvements Crosswalks	3,031 2	LF EA	\$100 \$50	\$303,100 \$100	Earthwork, construction, materials, drainage 2/mile
19B	Short Term Township	Limerick Center Road (Bikeway & Sidewalk)	Priority Route 19: Limerick Center Road Ridge Pike to Boraten Road Township on-road bikeway and sidewalk that links Ridge Pike to the PECO R.O.W. off-road trail (Segment 11B). The bikeway and sidewalk make connections to Limerick Elementary School and the Limerick Golf Course and many residential		14,152	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Utilize Existing Sidewalk Intersection Improvements Crosswalks	4 10,934 4 4 2 2	EA LF EA EA EA EA	\$300 \$15 \$80 \$165 \$50	\$1,200 \$164,010 \$320 \$660 \$100	Share the Road Striping New sidewalk to be added to existing 2/mile
19C	Medium Term Township	Boraten Road (Bikeway & Sidewalk)	Priority Route 19: Limerick Center Road Limerick Center Road to Church Road On-road bikeway and sidewalk that links Limerick Center Road to Church Road.		2,255	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Utilize Existing Sidewalk Intersection Improvements Crosswalks	4 489 4 4 2 2	EA LF EA EA EA EA	\$300 \$15 \$80 \$165 \$50	\$1,200 \$7,335 \$320 \$660 \$100	Share the Road Striping new sidewalk 2/mile
19D	Medium Term Township	Church Road (Bikeway & Sidewalk)	Priority Route 19: Limerick Center Road Boraten Road to Longview Road On-road bikeway and sidewalk that links Limerick Center Road to Church Road.		1,074	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Utilize Existing Sidewalk Intersection Improvements Crosswalks	4 670 4 4 2 2	EA LF EA EA EA EA	\$300 \$15 \$80 \$165 \$50	\$1,200 \$10,050 \$320 \$660 \$100	Share the Road Striping new sidewalk 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
Priority Route 19: Limerick Center Road											
19E	Medium Term Township	Longview Road (Bikeway & Sidewalk)	Church Road to Main Street On-road bikeway and sidewalk that links Church Road to the Linfield Sports Park and beyond to Main Street and Linfield Village.		1,076	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements Crosswalks	4 1,076 4 4 2 2	EA LF EA EA EA EA	\$300 \$15 \$80 \$165 \$50 \$300	\$1,200 \$16,140 \$320 \$660 \$100 \$600	Share the Road Striping new sidewalk 2/mile
Priority Route 20: Royersford Road											
20A	Medium Term Township	Off-road Trail	Country Club Road to Royersford Road Off-road trail through the Spring-Ford Country Club. The trail links the proposed bikeway and sidewalk on Country Club Road (Segment 21D) and the proposed bikeway and sidewalk on Royersford Road (Segment 25B).		2,566	8' Wide Asphalt Trail Signage: Wayfinding Bollards	2,566 2 2	LF EA EA	\$100 \$50 \$500	\$256,600 \$100 \$1,000	Earthwork, construction, materials, drainage 2/mile
Priority Route 21: Sunset to Country Club Road											
21A	Medium Term Township	Off-road Trail	Lower Frederick Township to Limerick Road Township off-road trail that connects Sunset Road to Lower Frederick Township. The trail also links to Camp Kweebec and Segment 3C (County on-road regional connector).	Private Sector	4,224	8' Wide Stone Dust Trail Signage: Wayfinding Bollards	4,224 2 2	LF EA EA	\$75 \$50 \$500	\$316,800 \$100 \$1,000	Earthwork, construction, materials, drainage 2/mile
Priority Route 21: Sunset to Country Club Road											
21B	Medium Term Township	Sunset Road (Bikeway & Sidewalk)	Limerick Road to Graterford Road Segment 21A is an on-road bikeway and sidewalk that links Segments 4F and 5D to Graterford Road. The trail provides access to the Western Center for Technical Studies at the intersection of Graterford Road and Sunset Road.		5,338	Concrete Sidewalk Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Utilize Existing Sidewalk	3,933 4 4 4 2	LF EA EA EA EA	\$15 \$300 \$80 \$165 \$50	\$58,995 \$1,200 \$320 \$660 \$100	New sidewalk to be added to existing Share the Road Striping 2/mile
Priority Route 21: Sunset to Country Club Road											
21C	Medium Term Township	Sunset Road (Bikeway & Sidewalk)	Graterford Road to Ridge Pike On-road bikeway and sidewalk that Graterford Road to Ridge Pike. The segment provides a connection to Evans Elementary School.		4,059	Concrete Sidewalk Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements (Graterford & Sunset) Crosswalks	3,042 4 4 4 3 1	LF EA EA EA EA EA	\$15 \$300 \$80 \$165 \$50 \$300	\$45,630 \$1,200 \$320 \$660 \$150 \$300	New sidewalk to be added to existing Share the Road Striping 2/mile
Priority Route 21: Sunset to Country Club Road											
21D	Medium Term Township	Country Club Road (Off-road)	Ridge Pike to PECO R.O.W. On-road bikeway and sidewalk that links Ridge Pike to the PECO R.O.W. off-road trail.		4,577	8' Wide Stone Dust Trail Signage: Wayfinding Intersection Improvements (Country Club & Ridge) Crosswalks	4,577 6 3	LF EA EA	\$75 \$50 \$300	\$343,275 \$300 \$900	Earthwork, construction, materials, drainage 2/mile
Priority Route 21: Sunset to Country Club Road											
21E	Medium Term Township	Country Club Road (Bikeway & Sidewalk)	PECO ROW to Lewis Road On-road bikeway and sidewalk that links the PECO R.O.W. off-road trail to Lewis Road. The trail makes connections to the Spring-Ford Country Club and adjacent residential developments.		7,312	Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Pavement Markings (Share the Road) Utilize Existing Sidewalk Intersection Improvements (Country Club & Linfield-Trappe) Crosswalks	5175 4 8 1 4 4 4	LF EA EA EA EA EA EA	\$15 \$80 \$165 \$50 \$300	\$77,625 \$320 \$1,320 \$50 \$1,200	New sidewalk added to existing Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile Share the Road Striping 2/mile
Priority Route 21: Sunset to Country Club Road											
21F	Medium Term Township	King Road (Bikeway & Sidewalk)	Lewis Road to Galie Way On-road bikeway and sidewalk that links Lewis Road and Segments 22A and 22B to King Road. The segment connects to the proposed trailhead at the Limerick Municipal Authority property.		4,316	Concrete Sidewalk Signage: Wayfinding Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Pavement Markings Utilize Existing Sidewalk Intersection Improvements (Country Club & Lewis) Crosswalks	2211 2 9 5 8,632 4	LF EA EA EA EA EA	\$15 \$50 \$80 \$165 \$2 \$300	\$33,165 \$100 \$720 \$825 \$2 \$1,200	New sidewalk added to existing 2/mile Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions Striped Bike Lane, each side 2/mile
Priority Route 21: Sunset to Country Club Road											
21G	Medium Term Township	Galie Way (Bikeway & Sidewalk)	King Road to 7th Street On-road bikeway and sidewalk that links King Road to 7th Street.		914	Signage: Wayfinding Pavement Markings Signage: W16-1 Share the Road Utilize Existing Sidewalk	2 1,828 2	EA EA EA	\$50 \$2 \$80	\$100 \$2 \$160	2/mile Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
Priority Route 21: Sunset to Country Club Road											
21H	Medium Priority Township	7th Street (Bikeway & Sidewalk)	Galie Way to Royersford Borough On-road bikeway and sidewalk that links 7th Street to Royersford Borough.		801	Signage: Wayfinding Pavement Markings Signage: W16-1 Share the Road Utilize Existing Sidewalk	2 1,602 2	EA EA EA	\$50 \$2 \$80	\$100 \$3,204 \$160	2/mile Striped Bike Lane, each side Post mounted, at intersections, both directions + 2/mile
Priority Route: Northern Bicycle Loop											
22A	Medium Term Township	Linfield-Trappe Road (Bikeway & Sidewalk)	Keystone Drive to Lewis Road Share the road route that connects Segment 13B to Lewis Road (Segment 22B).	Private Sector	1,329	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Intersection Improvements (Linfield-Trappe & Keystone) Crosswalks	2 1329 2 3 2 1	EA LF EA EA EA EA	\$300 \$15 \$80 \$160 \$165 \$50	\$600 \$19,935 \$495 \$100	Share the Road Striping New sidewalk Post mounted, at intersections, both directions + 2/mile Post mounted, at intersections, both directions 2/mile
22B	Medium Term Township	Lewis Road (Bikeway & Sidewalk)	Country Club Road to Royersford Borough On-road bikeway and sidewalk that connects Limerick Center Road to Country Club Road.	Private Sector	8,766	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Pavement Markings Utilize Existing Sidewalk	4 5596 4 2 2 17,532	EA LF EA EA EA LF	\$300 \$15 \$80 \$160 \$165 \$50	\$1,200 \$83,940 \$320 \$330 \$100 \$2	Share the Road Striping New sidewalk 2/mile Striped Bike Lane, each side
23A	Long Term Township	Houck Road (Share the Road)	Swamp Road to Mill Road Segment 23A is an on-road share the road trail that connects Mill Road to Ridge Pike.		1905	Pavement Markings (Share the Road) Signage: Wayfinding Intersection Improvements (Cemetery & Township Line) Crosswalks	2 2 2	EA EA EA	\$300 \$50 \$300	\$600 \$100 \$600	Share the Road Striping 2/mile
24A	Medium Term Township	Linfield-Trappe Road (Off-road)	Ashbrook Drive to Spring Valley YMCA Off-road connector along Linfield-Trappe Road that links the Spring Valley YMCA to the existing neighborhood trail at Ashbrook Estates residential development.	Spring Valley YMCA	1,002	8' Wide Asphalt Trail Signage: Wayfinding	1,002 1	LF EA	\$100 \$50	\$100,200 \$50	Earthwork, construction, materials, drainage 2/mile
25A	Long Term Township	Reifsnyder Road (Bikeway & Sidewalk)	Country Club Road to Royersford Road On-road bikeway and sidewalk that links Segment 21D and the Spring-Ford Country Club to Royersford Road.		2,762	Pavement Markings (Share the Road) Concrete Sidewalk Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding	2 2,762 2 6 2	EA LF EA EA EA	\$300 \$15 \$80 \$160 \$165 \$50	\$600 \$41,430 \$100	Share the Road Striping 2/mile
25B	Long Term Township	Royersford Road (Bikeway & Sidewalk)	Reifsnyder Road to Segment 20A On-road bikeway and sidewalk that links Reifsnyder Road and Segment 20A.		2,800	Concrete Sidewalk Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: Wayfinding Utilize Existing Sidewalk	240 2 2 2	LF EA EA EA	\$15 \$300 \$80 \$160 \$50	\$3,600 \$600 \$160 \$100	New sidewalk to be added to existing Share the Road Striping 2/mile
25C	Long Term Township	Royersford Road (Bikeway & Sidewalk)	Segment 20A to Souder Road On-road bikeway and sidewalk that connects Segment 20A (off-road trail) to Souder Road (Segment 25D).		807	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Utilize Existing Sidewalk Intersection Improvements (Royersford & Souder) Crosswalks	4 2 3 2 1	EA EA EA EA EA	\$300 \$80 \$165 \$50 \$300	\$1,200 \$160 \$495 \$100 \$300	Share the Road Striping 2/mile

ESTIMATE OF PROBABLE DEVELOPMENT COSTS

Segment ID	Priority	Road Name	Description	Partners	Length (Ft.)	Proposed Improvements	QTY	UNIT	UNIT COST	TOTAL	
25D	Long Term Township	Souder Road (Bikeway & Sidewalk)	Royersford Road to Township Line Road On-road bikeway and sidewalk that links Reifsnyder Road (Segment 25C) to Township Line Road (Segments 17A and 17B). The route also links the Spring Ford Country Club to Pope John Paul II High		2,825	Pavement Markings (Share the Road) Signage: W16-1 Share the Road Signage: W11-1 Bicycle Crossing Signage: Wayfinding Concrete Sidewalk Intersection Improvements Crosswalks	4 4 4 2 2,825 2	EA EA EA EA LF EA	\$300 \$80 \$165 \$50 \$15	\$1,200 \$320 \$660 \$100 \$42,375	Share the Road Striping 2/mile New sidewalk to be added to existing
25E	Medium Term Township	Off-road Trail	Souder Road to Spring Valley YMCA Segment 25E is an off-road trail that connects Souder Road to the Spring Valley YMCA neighborhood trail.	Private Sector	1545	8' Wide Stone Dust Trail Signage: Wayfinding	1,545 2	LF EA	\$75 \$50	\$115,875 \$100	Earthwork, construction, materials, drainage 2/mile
26A	Short Term Township	Ziegler Road (Off-road)	Priority Route: Limerick Community Park to Kurylo		2,583	8' Wide Stone Dust Trail Signage: Wayfinding Intersection Improvements (Metka & off-road trail) Crosswalks	2,583 2 2	LF EA EA	\$75 \$50 \$300	\$193,725 \$100 \$600	Earthwork, construction, materials, drainage 2/mile

TOTAL REGIONAL OFF ROAD	\$311,350
TOTAL REGIONAL ON ROAD	\$992,423
TOTAL TOWNSHIP OFF ROAD	\$9,194,455
TOTAL TOWNSHIP ON ROAD (SHARED)	\$450,915
TOTAL TOWNSHIP ON ROAD & SIDEWALK	\$865,370
TOTAL SIDEWALKS ONLY	\$206,735

Subtotal	\$12,021,248
Contingency (20%)	\$2,404,250
Design & Engineering (20%)	\$2,404,250
TOTAL	\$16,829,747

KEY:

Implementation Strategy

Short Term Priorities (1-4 Years)

Medium Term Priorities (5-9 Years)

Long Term Priorities (10+ Years)

Long Term Priorities (10+ Years)



Limerick Township Greenways and Trail Network Plan

Committee Meeting #1 Notes

SC#: 11044.10

Date / Time: Thursday, May 10 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

Keith G. Daywalt, Planning Commission
Rick Fidler, Streetscape and Buffering Committee
Steven Krauss, Park and Recreation Committee
Dominic Martorana, Park and Recreation Committee
Thomas J. Neafcy, Jr., Board of Supervisors
Brian E. Reiter, Open Space Committee

Justin Keller, Simone Collins (SC)
Peter Simone, SC

Meeting Agenda:

1. Introduction of the Project Consultants & Committee
2. Process / Project Schedule
3. Project Scope and Goals
4. Review of Background of Trails in Limerick Township
5. Your Ideas & Comments

Meeting Notes:

1. The following are suggested revisions for the existing conditions map:
 - SC to add PECO power line to existing conditions mapping.
 - SC to add transit locations to map.
2. The committee asked the consultants to investigate the following trail connections:
 - The planned Schuylkill River Trail East with the Perkiomen Trail.
 - Rick F. stated that a hiking trail from Trinley Park to Royersford could be an early implementation project. SC to verify land ownership in this area.
 - A trail connection should be provided through the Kurylo Tract to connect Limerick Community Park and State game lands.
 - Trail connections to all schools.

- A trail connection through the Natural Lands Trust property located on Neiffer Road.
- School property to Bradford Woods and Sunset Trail.
- The committee asked the consultants to look at locations for equestrian trails. Specifically, connections should be made between horse farms in the northern part of the Township and the Perkiomen Trail.

3. The committee asked that proposed trail segments be identified in phases with logical beginning and ending points.

- Segments should connect residential neighborhoods to SEPTA stations, employment or shopping centers. Dead ends should be avoided.
- Implementation should be prioritized to construct the easiest connections and those that will have the most benefit to local residents.

4. The consultants advised the committee to continue to look for ways to bring trails over or under 422 and incorporate trails and sidewalks as a part of future bridge or underpass projects.

5. Dan K. stated that as currently written, most Township sewer easements do not allow trail access.

6. SC to meet with township staff June 7th @ 9:00 AM to discuss the following:

- Recent land developments with existing or proposed trails or sidewalks.
- Inclusion of trail uses in future sewer easements. SC to research examples of sewer easement language permitting trails, and discuss future sewer projects where this could be applied.
- The pump station project at Graterford Road was identified a project where trails could be allowed on sewer easements.

7. The committee asked that trails avoid the overuse of signage or “sign pollution”. The Schuylkill River Trail crossing at Main Street in Spring City was cited as an example of sign pollution. The consultants stated that municipalities have little control over signs for trails located on, or crossing a State owned road.

8. The committee stated that the PECO right-of-way is often trespassed by ATV's and asked the consultants for ways to mitigate illegal ATV activities. The consultants stated that illegal ATV activities typically decrease once these areas are used by more people for recreation. Peter S. stated that the greenway plan could include a designated ATV area to provide a venue for these users.

9. The following was discussed to publicize the project meetings:

- Township has included a meeting advertisement in the newsletter
- Township to post meeting information on website
- SC to draft press release for Township use in local papers
- SC to develop a flyer
- Township to send meeting invitation with flyer to local bike and hiking clubs
- Township to ask Mercury reporter Evan Brandt to write a story about the Township's greenway plan.

10. It was agreed that the following should be done to promote public awareness / understanding of the project:

- The committee asked the consultants to educate the public on the health, environmental, and economic value of trails and greenways.

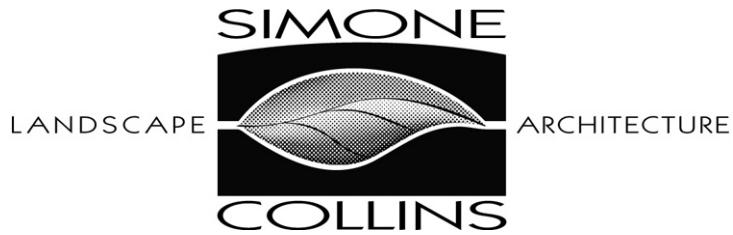
- Tom N. to provide to SC with findings of a recent DCNR study on the economic value of trails on nearby property values.
- SC has identified the following purpose / mission for the project:
"The Limerick Township Greenway and Trail Network Master Plan will examine opportunities for new pedestrian and bicycle routes throughout the Township that will link parks, open space, schools, residential areas and employment centers, as well as to connect to regional transportation and recreational trails. The master plan is intended to offer Limerick residents close-to-home transportation options and recreational and fitness opportunities."
- The consultants should be prepared to respond to questions about trail and greenway maintenance responsibilities prior to the first public meeting. **The Township is to provide SC with an estimate of the annual expenditures per household for the trail network it currently maintains.** SC will compare the existing maintenance expenditures to the expenditures anticipated for trails proposed as a part of the plan.
- The committee asked the consultants to update the population trends to reflect the 2010 census.

11. SC to check ownership status of former trolley line between Sanatoga and Linfield Village.
12. After the meeting, the consultants set a date for a Township greenways tour on May 25, 2012.
13. **Please see enclosed the updated meeting schedule revised to avoid conflicts with Park and Recreation Meetings.**
14. **The next committee meeting is scheduled for June 13, 2012 @ 7:00 PM.**
15. **The next public meeting is scheduled for June 21, 2012. @ 7:00 PM.**

Enc: Project Schedule

Meeting Schedule

<u>DATE</u>	<u>COMMITTEE MEETING</u>	<u>PUBLIC MEETING</u>
May 10, 2012	#1	
June 13	#2	
06-21-12		#1 – Brainstorming/ Programming
August 9	#3	
September 11	#4	
09-13-12		#2 – Initial Alignments
October 10	#5	
10-18-12		#3 – Present Draft Plan
December 13	#6	
01-10-2013		#4 – Present Final Draft



Limerick Township Greenways and Trail Network Plan

Committee Meeting #2 Notes

SC#: 11044.10

Date / Time: Wednesday, June 13 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

Keith G. Daywalt, Planning Commission

Rick Fidler, Streetscape and Buffering Committee

Patti Kaufman, Park and Recreation Committee

Dan Kerr, Township Manager

Steven Krauss, Park and Recreation Committee

Dominic Martorana, Park and Recreation Committee

Thomas J. Neafcy, Jr., Board of Supervisors

Brian E. Reiter, Open Space Committee

Justin Keller, Simone Collins (SC)

Peter Simone, SC

Summary:

The consultants presented the existing conditions map for the committee's review and comment. Also discussed were the outcomes of previous meetings with Montgomery County Planning Commission regarding the status of the County's existing and planned trail alignments, and Limerick Township staff regarding trails as a part of recent land developments. Areas devoid of trails were identified and potential trail alignments were discussed.

Meeting Notes:

1. It was reported that the Chapel Heights Phase II open space may have never been recorded by the County and should be designated as Township owned open space. SC will revise the maps indicate this area as Township open space.
2. Various Township sewer easements should be revised to allow trail access. The sewer easement at Whinnie's school was mentioned as one such easement that should be revised to allow trails. SC to show a trail alignment in this location, and review sewer easement language.

3. It was recommended that the consultants add the locations of all existing trails in Township parks and H.O.A. lands prior to public meeting #1.
4. It was stated that the Township should be prepared for questions about the cost of trail maintenance prior to public meeting #1.
5. It was recommended that the Township contact Evan Brandt of the Mercury and the Limerick Patch to promote the first public meeting.
6. Tom N. recommended that prior to public meeting #1 SC should contact Kenneth Ernest at DCNR to obtain information on trails increasing nearby property values.
- 7. The next committee meeting is scheduled for 7:00PM, August 9th, 2012.**

Respectfully submitted,

Simone Collins
Landscape Architecture



Peter M. Simone, RLA, FASLA
Principal



Justin Keller
Project Manager



Limerick Township Greenways and Trail Network Plan

Public Meeting #1 Notes

SC#: 11044.10

Date / Time: Thursday, June 21/ 7:00 PM

Location: Limerick Township Municipal Building

In Attendance: See attached sign-in sheet

Summary:

The consultants conducted a brief presentation to discuss the project schedule, project goals, benefits of trails and greenways, trail types / user groups and trail planning to date. The consultants then presented the existing conditions map showing existing destinations and trails along with proposed County trail alignments. The meeting was then opened for public comment and discussion.

Meeting Notes:

1. An attendee stated that some time ago the Township was offered a grant but could not come up with the 10% match. A budget plan should be in place to take advantage of future grant opportunities as they arise.
2. An attendee asked how much it costs the Township to maintain its existing trails. It was stated that Township trail maintenance is very little when compared to the overall Township budget.
3. It was stated that Metka Road should be considered for an on-road bike route to connect various recreation destinations as bikers already heavily use it.
4. In general, most feel the Township needs more sidewalks.
5. It was mentioned that there is an existing easement to access the Kurylo tract from Metka Road. The consultants are aware of this easement and will show it as a proposed trail alignment.
6. It was stated that some Township roads currently have bike lane markings. It was later determined that these were likely informal / unauthorized markings by local bike clubs.

7. An attendee asked how the Township would address proposed trail alignments on private land if the landowner doesn't want them. Pete S. stated that this study will seek to minimize proposed trails across private properties, and that the Township would never consider eminent domain for trails. He added that this is a long-range plan with the intent to create a system of interlinking trails and even if some trails are proposed on private property the landowner could eventually change to someone more amenable to allowing trail access.
8. Tom N. stated that the Board of Supervisors goal is to create most of the proposed trail and open space network through private sector land developments.
9. Those in attendance welcomed the Township pursuing a paved shoulder to accommodate bicycles as a part of the Bridge Street Road replacement project by Penn DOT.
10. It was stated that during the land development for Bradford Woods the open space was dedicated to the Township but may have never been recorded by the County. GIS records indicate that the current owner of this open space is HERITAGE BRADFORD WOODS LP.
11. A proposed trail connection to Royersford was suggested along Country Club Road to King Road and 5th street. This would be the preferred alternative to avoid high traffic volumes on Main Street.
12. A member in attendance suggested that trailheads be shown on the proposed trail plan.
13. A member in attendance voiced concerns over the policing of ATVs once trails are constructed and added that illegal ATV access is currently a problem. Pete S. stated that signage and bollards should be installed to deter ATVs, and added that once more trail user are present they will become the eyes and ears to deter these illegal activities.
14. It was noted that the Schuylkill River Parcel has been heavily used by ATVs in the past. More recently, the Township has installed a gate to deter these uses. Peter S. mentioned that although probably not appropriate for Limerick, more remote areas of the state are creating ATV parks with DCNR funds to provide legal outlets for these users.
15. Those in attendance asked for the timeframe to construct the trails proposed by this project. It was stated that the construction of trails will be over many phases over a long time. The rate of implementation is largely dependent on the amount of available grant funding and willingness of the private sector and Penn DOT to implement trails as a part of new developments or roadway projects.
16. It was stated that the Township should solicit volunteers for trail maintenance. Tom N. suggested bringing in non-violent inmates from Graterford Prison for maintenance work. This was previously done successfully for work on other Township open space properties.
17. A concern was raised about the vehicle and pedestrian safety at the Swamp Pike and Kuglar/Ziegler Road intersection. Justin K. stated that this intersection was added to the Township's official map so that it can be aligned with Ziegler road in the future.

18. It was stated that Game Farm Road is dangerous due to the lack of an improved shoulder.
- 19. The Township will post meeting notes and the PowerPoint presentation on its website.**

Respectfully submitted,

Simone Collins
Landscape Architecture



Peter M. Simone, RLA, FASLA
Principal



Justin Keller
Project Manager

Enc: Public Meeting #1 Sign-In Sheet

Limerick Greenways and Trails Master Plan

Public Meeting #1

Thursday, June 21st, 7:00 PM

NAME	ADDRESS	PHONE	EMAIL
LARRY PIASECKI	SAVATOGA RD. POTTERSON PA		
Andrew Piesacki	Savatoga Rd. Potterton PA		
Lyn Braddock	Wester Rd. Schuylerville	609-287-5737	lbraddock@con
DAVID KARST	1205 Duquesne CT	610-212-8684	
Carol Carlson	120 Second Rd.	410-489-1442	
Heleg M. Wells	266 Township Line Rd	610-287-8914	
Bill Miller	59 Kings Rd. Linneick	610-310-4889	
Elsie Sullivan	40 Presidential Dr. Linneick	610-287-5154	dewan4@comcast.net
Susan Methie	199 Methie Rd	610-281-9019	skmetka@verizon.net
Brian REITER	14 Grandview Dr. Royersford	610-948-6806	
Dominic Mastrocana	49 Keen Rd. Linfield	610-531-9132	
Viv Bawtisch	112 Alea Circle	484-919-6377	
Toni K. East	103 C. Lupfield Dr.	215-499-7042	Thomas.Kathy@comcast.net
Tin HANSBERRY	231 N. Lincoln Rd	610-731-8798	TAHANSBERRY@YAHOO.COM
Julia MacIntosh	851 H. Lincoln Rd	215-239-0070	Mjouney@yahoo

Limerick Greenways and Trails Master Plan

Public Meeting #1

Thursday, June 21st, 7:00 PM

SIMONE COLLINS • LANDSCAPE ARCHITECTURE
119 East Lafayette Street, Norristown, PA 19401



Limerick Township Greenways and Trail Network Plan

Committee Meeting #3 Notes

SC#: 11044.10

Date / Time: Thursday, August 9, 2012 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

Rick Fidler, Streetscape and Buffering Committee

Patti Kaufman, Park and Recreation Committee

Dan Kerr, Township Manager

Steven Krauss, Park and Recreation Committee

Dominic Martorana, Park and Recreation Committee

Thomas J. Neafcy, Jr., Board of Supervisors

Justin Keller, Simone Collins (SC)

Peter Simone, SC

Summary:

The consultants presented a draft of initial on and off-road trail alignments for discussion with the committee.

Meeting Notes:

1. Steve K. suggested a North South alternative to get from Limerick Community Park to the Schuylkill River Trail East using Limerick Center Road. The maps will be updated to show this route.
2. Members in attendance agreed that a share the road designation is appropriate for Limerick Center Road since it already has existing sidewalks.
3. It was suggested that the road noted as Bridge Street is mislabeled. This label should be shifted to the road to the south.
4. Trailheads will be revised to graphically differentiate existing versus proposed.
5. The following were presented as alternatives to the County's on-road trail alignments. Township Line Road alternative: School Road to North Limerick Road. Game Farm Road alternative: Highland or Sunset Road. Linfield Trappe Road alternative: Limerick Center Road or Major Road.
6. New on-road trail alignments were also suggested for Fruitville, Pheasant, Houck, Grebe, Laver and Sankey roads.
7. It was agreed that a simplified trail alignment map showing the main trail routes is needed for the next public meeting.

8. SC to prepare a public meeting #2 press release for the Mercury and PATCH media outlets.
9. **The committee meeting scheduled for September 11, 2012 is cancelled.**
Alternatively, the committee is asked to review the initial trail alignments and offer comments prior to public meeting #2 on 9/13/2012. SC to send a revised map by 9/7/12.
10. **The next public meeting is scheduled for 7:00PM, September 13th, 2012.**
11. **The next committee meeting is scheduled for 7:00PM October 10th, 2012.**

Respectfully submitted,

Simone Collins
Landscape Architecture



Peter M. Simone, RLA, FASLA
Principal



Justin M. Keller
Project Manager



Limerick Township Greenways and Trail Network Plan

Public Meeting #2 Notes

SC#: 11044.10

Date / Time: Thursday, September 13 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

See Attached Sign-in Sheet

Meeting Agenda:

1. Introduction of the Project Consultants & Committee
2. Process / Project Schedule
3. Project Scope and Goals
4. Review Initial Alignments
5. Break into Groups to Review and Comment on Initial Alignments

Meeting Notes:

1. Tim H. stated that there are often hunters on the Kurylo tract. He mentioned that there might be conflicts if trails are constructed on the Kurylo tract since this property is open to hunters and located adjacent to the Game Farm State Game Lands. SC to verify if hunting is allowed on open space properties preserved by the Township.
2. An attendee asked that the plan identify low-cost trail segments for early implementation. He added that an established system would create more demand for trails. Some early implementation projects suggested were:
 - Share the road routes incorporating signage for cyclists along with reduced vehicle speed limits on select routes.
 - Implementation of critical off-road segments that could serve as a catalyst for others.
3. An attendee asked if the proposed plan for the Schuylkill River Trail – East (SRT-E) allows bikes. The consultants explained that the interim phase for the SRT-E is to establish it as a hiking trail since a bike connection is proposed along Linfield Road to connect to the main branch of Schuylkill River Trail already in place in Chester County. Plans will include a phase for the SRT-E to consider multi-use trail in the future.

4. A n attendee asked if Lewis Road includes accommodations for bicycles. It was explained that the new ordinance for Lewis Road requires sidewalks to be constructed by private developers as a short-term solution. The long-term solution calls for on-road bicycle lanes proposed by this plan.
5. Tom N. stated that the goal of the board of supervisors is to use the trail plan to facilitate trail construction by private developers when a trail segment is shown across a development parcel.
6. An attendee voiced her preference for more passive parks and open space.
7. An attendee expressed a desire to see the Township adopt riparian buffer ordinances to protect streams and wildlife. The study will recommend and include model riparian buffer ordinances.
8. An attendee asked if steps would be taken to enhance safety and privacy for residents adjacent to trails. Pete S. stated that statistics indicate that crime rates on trails are not typically higher than the surrounding neighborhood. In addition, most proposed alignments do not run behind residential properties. Regardless, standards will be provided for screening and buffering trails. The specific locations of such screening will not be detailed in this study and will need to be determined for each trail section through the design development and final engineering process.
9. The Township website will post a copy of the meeting presentation and the map of initial alignments.

10. The next committee meeting to review the DRAFT plan is scheduled for 7:00 PM October 10th, 2012.

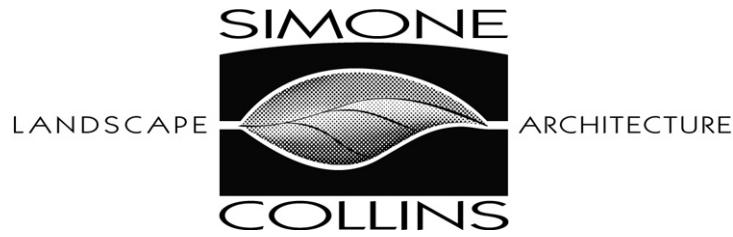
11. The next public meeting to review the DRAFT plan is scheduled for 7:00 PM October 18, 2012.

Limerick Greenways and Trails Master Plan

Public Meeting #2

7:00 PM, Thursday, September 13, 2012

NAME	ADDRESS	PHONE	EMAIL
DATH WOLF	476 Whiff Rd.	610-287-7223	dathingwolf@ad.com
Mark Fischer	327 Azimint Dr.	610-517-6620	feinot2@gmail.com
Dan Shalkowski	55 CEDAR CT	267-218-0031	dshalkowski@gmail.com
RICK FISHER	47 BEAVER RD	610-948-9548	
ELAINE DE WAN	110 PRESIDENTIAL DR.	610-287-5154	dewan4@comcast.net
Andrew Prosecki	3345 Santosa Rd	.	
LARRY PIASECKI	"		
Patricia Kaufman	2423 Rosewood Trail		
ALVIN GOLDEN	154 HESPERUS RD	609 488-3491	ALBSEENMAYL@VERIZON
Kent Ellen Bork	33 Eileen Lane		
Kris Bachsch	112 AREA CIRCLE		
Dominic Mestorana	99 Keen Rd Linfield	610 551 9132	
Lin Braddict	216 Neiger Rd	610 287 5373	lbraddict1c@aol.com
Tim Hansberry	231 N. Lineback Rd	610-721-8788	TAHANSBERRY@YAHOO.COM
Margaret Schiney	476 Pebble Beach Drive	610-495-1988	
David Fillman	1 Grebe Road	610-310-7312	david@fillmanengineering.com
Mel Bonwell	23 Llewellyn		



Limerick Township Greenways and Trail Network Plan

Committee Meeting #4 Notes

SC#: 11044.10

Date / Time: Wednesday, October 10, 2012 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

Keith Daywalt, Planning Commission

Patti Kaufman, Park and Recreation Committee

Dominic Martorana, Park and Recreation Committee

Thomas J. Neafcy, Jr., Board of Supervisors

Justin Keller, Simone Collins (SC)

Summary:

The consultants reviewed the draft of initial trail alignments, cost estimates, implementation priorities, and a previewed the agenda for the upcoming public meeting.

Meeting Notes:

1. Tom N. suggested that PECO bring their engineer to the meeting to discuss options for trails within the PECO right-of-way. This meeting is scheduled for 10:00 AM, November 27th at PECO offices in Plymouth Meeting.
2. Justin K. asked the committee for recommendations for early implementation priorities. A majority of the committee preferred the following: Trinley Park to Royersford (16H); Kurylo loop and connector (5C), (10A); and, the PECO right-of-way (11).
3. The Park and Recreation Committee is currently looking into possible uses for the Kurylo Tract including trails, a yard waste composting area, formalized entrance and shared parking for all uses. In the interim, an earthen/mown perimeter loop trail was suggested as a low-cost option to open the property to users while also demarcating the property boundary. The lease renewal for this property should be reviewed to ensure these uses are allowed in concert with the present agricultural uses.
4. The committee asked the consultants to attempt to get a meeting with Norfolk Southern to discuss the possibility of trails within their right-of-way. **SC will contact the Norfolk Southern and advise the committee of any developments.**

5. Tom N. suggested that trails running adjacent to residential areas be separated from private property by a post and rail fence.
6. A committee member asked if underground gas pipelines were identified as potential trail alignments in the plan. Justin K. stated that gas pipelines are not identified as potential alignments because gas easements do not typically allow trials running parallel to gas lines within their easement.
7. **The next public meeting is scheduled for 7:00PM, October 18th, 2012.**
8. **The next committee meeting is scheduled for 7:00PM December 12th, 2012.**

Respectfully submitted,

Simone Collins
Landscape Architecture



Peter M. Simone, RLA, FASLA
Principal



Justin M. Keller
Project Manager



Limerick Township Greenways and Trail Network Plan

Public Meeting #3 Notes

SC#: 11044.10

Date / Time: Thursday, October 18 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

See Attached Sign-in Sheet

Meeting Agenda:

- Introduction of the Project Consultants & Committee
- Process / Project Schedule
- Project Scope and Goals
- Review base analysis data
- Review trail categories and DRAFT trial alignments
- Review implementation priorities
- Q&A followed by suggestions for projects / implementation priorities

Meeting Notes:

1. An attendee suggested a partnership with the Spring Valley YMCA for segments 11D and 26A which tie into the trail systems at the YMCA.
2. A member in attendance was in agreement with the trail priorities set by the plan and suggested focusing on the Kurylo or PECO or Schuylkill River Trail – East as early implementation priorities.
3. An attendee advocated for more unimproved open space that can accommodate various passive uses. Additionally desired, is an open space set aside for all terrain vehicle (ATV) uses. Pete S. explained that in more remote areas, the state has established designated ATV parks.
4. It was suggested that a regional map be prepared to show connections outside the Township.
5. **The next committee meeting to review the DRAFT plan is scheduled for 7:00 PM December 12th, 2012.**
6. **The next public meeting to review the DRAFT plan is scheduled for 7:00 PM January 10, 2013.**

Greenways and Trails Master Plan

Public Meeting #3

7:00 PM, Thursday, October 18, 2012

SIMONE COLLINS • LANDSCAPE ARCHITECTURE
119 East Lafayette Street, Nantucket, PA 12401



Limerick Township Greenways and Trail Network Plan

Committee Meeting #5 Notes

SC#: 11044.10

Date / Time: Wednesday, December 12, 2012 / 7:00 PM

Location: Limerick Municipal Building

In Attendance:

Keith Daywalt, Planning Commission

Rick Fidler, Streetscape and Buffering Committee

Steven Krauss, Park and Recreation Committee

Thomas J. Neafcy, Jr., Board of Supervisors

Brian E. Ritter, Open Space Committee

Justin Keller, Simone Collins (SC)

Peter Simone, SC

Summary:

The consultants fielded comments and questions from the committee on the DRAFT plan. Next, early implementation projects based on available grant funding were discussed. The consultants also suggested strategies for advancing the goals of the project by adding trails to the official map, continuing periodic committee meetings and pursuing conversations with Norfolk Southern.

Meeting Notes:

1. The consultants will send letters to all adjacent municipalities and request they review and comment on the draft plan in light of existing and planned trails in their municipalities.
2. The group discussed a two-pronged approach for implementing trail priorities. One strategy is to pursue links to the regional trails such as the Schuylkill River and Perkiomen trails. A regional strategy would likely require cooperation from adjacent municipalities, and likely require more upfront costs than local connections. Another strategy is to focus on creating local trail connections linking township parks that will eventually tie into the regional system.
3. Keith D. suggested prioritizing regional trails. Rick F. added that it may be easier to obtain William Penn funding for regional connections.
4. Rick F. suggested that a trail be established on the Kurylo property before a grant linking the Community Park to Kurylo is requested. Dan K. added that the

link from the Community Park to Kurylo could be constructed by the private sector as a condition of nearby land developments.

5. Rick F. suggested working with the Game Commission to extend a trail from Kurylo to the Stone Hill Preserve along the edge of Game Commission Land.
6. Dan K. expressed that the township has a finite budget to prepare grants for trails and these funds have to be used judiciously.
7. Another regional trail effort discussed was the Schuylkill River East from Trinley Park to Royersford. The consultants mentioned that this alignment is on Norfolk Southern property and most grants require municipal control of the property for a minimum of 25 years. Previous attempts to engage Norfolk Southern in a dialogue about this trail opportunity have been unsuccessful. SC will continue to efforts to engage Norfolk Southern in this conversation.
8. Most in attendance agreed that the easiest way to implement trails is to start with small segments linking township parks that over time will tie into the regional system through both public and private investment.
9. The committee should be proactive to advance trail efforts beyond the completion of this study. It was suggested that the committee meet 2-3 times a year to discuss implementation progress and new opportunities.
10. The consultants and committee tentatively decided to hold the final public meeting for the project as a part of a joint meeting with the Planning Commission and the Board of Supervisors. This meeting was tentatively scheduled for January 15th, 2013. Dan K. to confirm this date and issue a public advertisement for the meeting.
11. Rick F. recalled that Limerick's original open space plan recommended raising real estate transfer taxes to generate dedicated open space funding. Up to .25% can be allocated from this tax and used toward open space. However, there isn't an option to enact this tax since it is currently capped at 2%. The School District and Township are each allocated .5% of this tax and any additional revenue must be split equally. The remaining 1% goes to the County or State.
12. Another option to raise revenue for open space would be to raise the Earned Income Tax by a maximum of .25%. This would need approval by voter referendum.
13. Once the plan is finalized and adopted, the township will begin the process for adding all trail alignments to the official map in February 2013.
14. SC will conduct a site tour of the Kurylo Tract in late December to gather additional information in anticipation of a future grant application.
15. SC will schedule a meeting/site tour with DCNR in January 2013 to review potential grant applications.

Respectfully submitted,

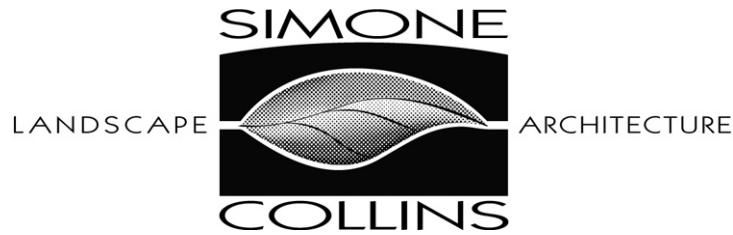
Simone Collins
Landscape Architecture



Peter M. Simone, RLA, FASLA
Principal



Justin M. Keller
Project Manager



Limerick Township Greenways and Trail Network Plan

Public Meeting #4 Notes

SC#: 11044.10

Date / Time: Tuesday, January 15 / 7:00 PM

Location: Limerick Municipal Building

Background:

At the regularly scheduled Board of Supervisors meeting, Justin Keller and Peter Simone conducted an overview presentation of the recommended trail and greenway alignments and associated costs. In attendance were members of the project committee, Planning Commission, Parks and Recreation Committee and the public. It was noted that this plan will be implemented over the next 20 years.

Meeting Notes:

1. An attendee asked why some of the recommended routes were shown on high volume roadways and expressed some safety concerns for these alignments. Justin K. responded that these many of these are bike routes proposed by the County. Although, these routes cannot be accommodated safely with the current roadway configuration, the alignments were left in the plan to inform future roadway projects of the intent to develop these as on-road bicycle routes. It is envisioned that the early planning will lead to new designs that safely accommodative bicycles as PennDOT or others conduct future roadway improvement projects.
2. **The consultants will provide a copy of the final presentation for posting on the Township's website.**



Limerick Township

2012 Fall Newsletter

Limerick Township
Municipal Building
646 West Ridge Pike
Limerick, PA 19468

610-495-6432
www.limerickpa.org



Board of Supervisors

Kara Shuler, Chairman

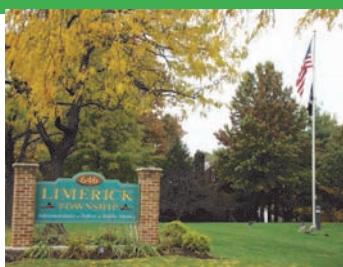
Joseph St. Pedro,
Vice-Chairman

Elaine DeWan

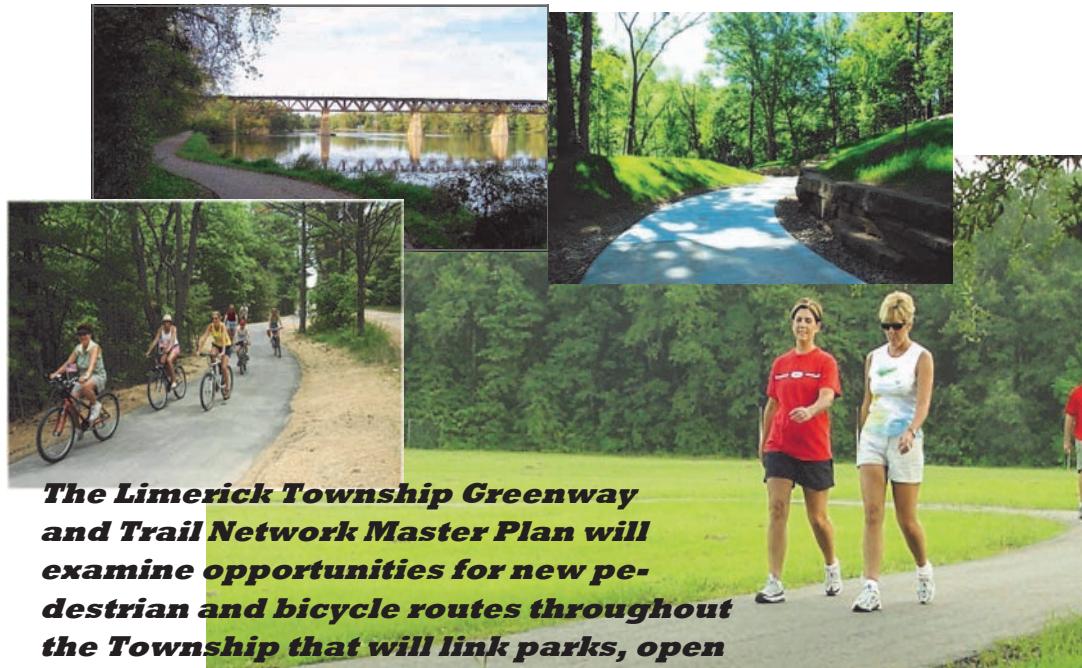
Kenneth W. Sperring, Jr.

Thomas J. Neafcy, Jr.,

Limerick Township
*A Great Place to
Live, Work & Play!*

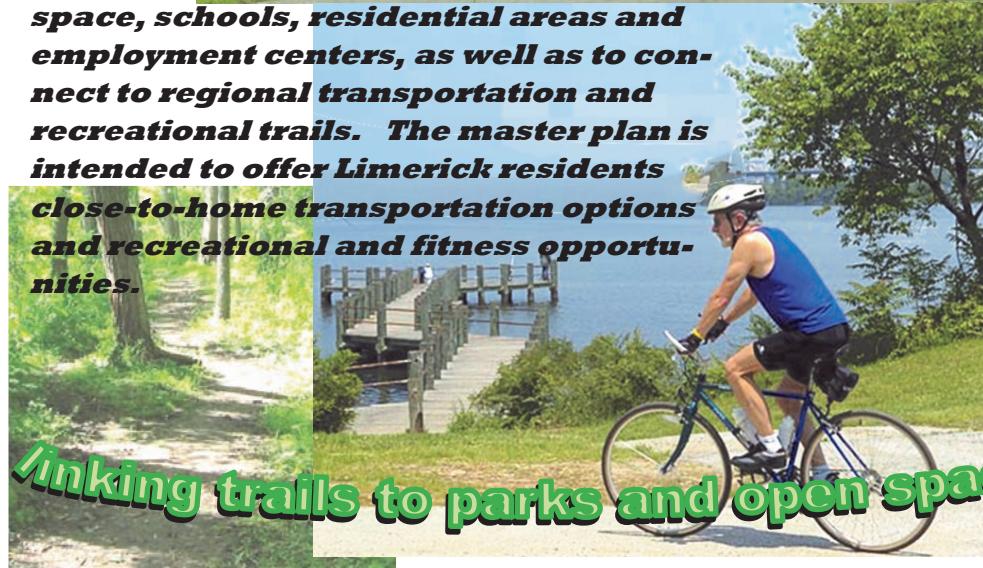


Greenways and Trails



The Limerick Township Greenway and Trail Network Master Plan will examine opportunities for new pedestrian and bicycle routes throughout the Township that will link parks, open space, schools, residential areas and employment centers, as well as to connect to regional transportation and recreational trails. The master plan is intended to offer Limerick residents close-to-home transportation options and recreational and fitness opportunities.

Linking trails to parks and open space



Message from the Chairman

All who call Limerick Township home know what a great place this is to live and raise a family. However, the community parks, athletic fields, open space, emergency services and convenient road networks did not occur overnight. All have been built over several decades by the Boards of Supervisors who had the vision to plan and build for future generations. I am proud to be part of this current Board who also takes our governing obligations very seriously in providing for both the current residents and those yet to come. While financial challenges remain in dealing with the continuing economic downturn, Limerick Township remains financially stable with an AA+ Bond Rating. The strong business plan established in 2006 to reduce costs, seek efficiency of operations, and plan for the future, continues to successfully guide the entire organization. Because of this stability, Limerick has been able to undertake two important capital infrastructure projects which will benefit both current and future generations. The Lewis Road Corridor Improvement Project and the Linfield Sports Park Grading Project to construct multi-purpose playing fields are both ongoing as of the writing of this newsletter. Look for an update of these projects in future newsletter editions.

Another important initiative featured on the cover of this edition is the Greenways and Trails Network Master Plan study currently underway. This Master Trail Plan is the next step in several planning efforts the Township has undertaken since 2006, such as the Comprehensive Plan, Lewis Road and Ridge Pike Zoning and Streetscape studies, Sanatoga Improvement Plan, and an Emergency Services Study. When the trail plan is completed, the Township will have in place a blueprint on how to establish a link from the Perkiomen River Trail to the Schuylkill River East Trail, along with options for links to parks and open space. Residents are invited to attend a Public Meeting on September 13, 2012 at 7:00 PM at the Limerick Township Municipal Building at which time an update on the status of the planning efforts will be provided, and input taken from those in attendance.

I also hope to see everyone on Saturday, September 22, 2012 for our Annual Community Day Event. Special thanks to the Spring-Ford Chamber of Commerce and all the sponsors who have supported this event. There are many activities for all age groups, and this is a wonderful opportunity to celebrate Limerick Township as a great place to live, work, and play.

I wish everyone a wonderful and safe Fall season!!

Kara Shuler, Chairman, Limerick Township Board of Supervisors



The image is a flyer for an American Red Cross Blood Drive. It features a large red cross logo and the text "American Red Cross" in a bold, black, sans-serif font. Below this is a photograph of two young boys hugging. To the left of the photo is a large, stylized, hand-drawn-style word "Donate". The background of the main text area is white with a red border. To the right of the main text area is a white box with a red border containing the event details.

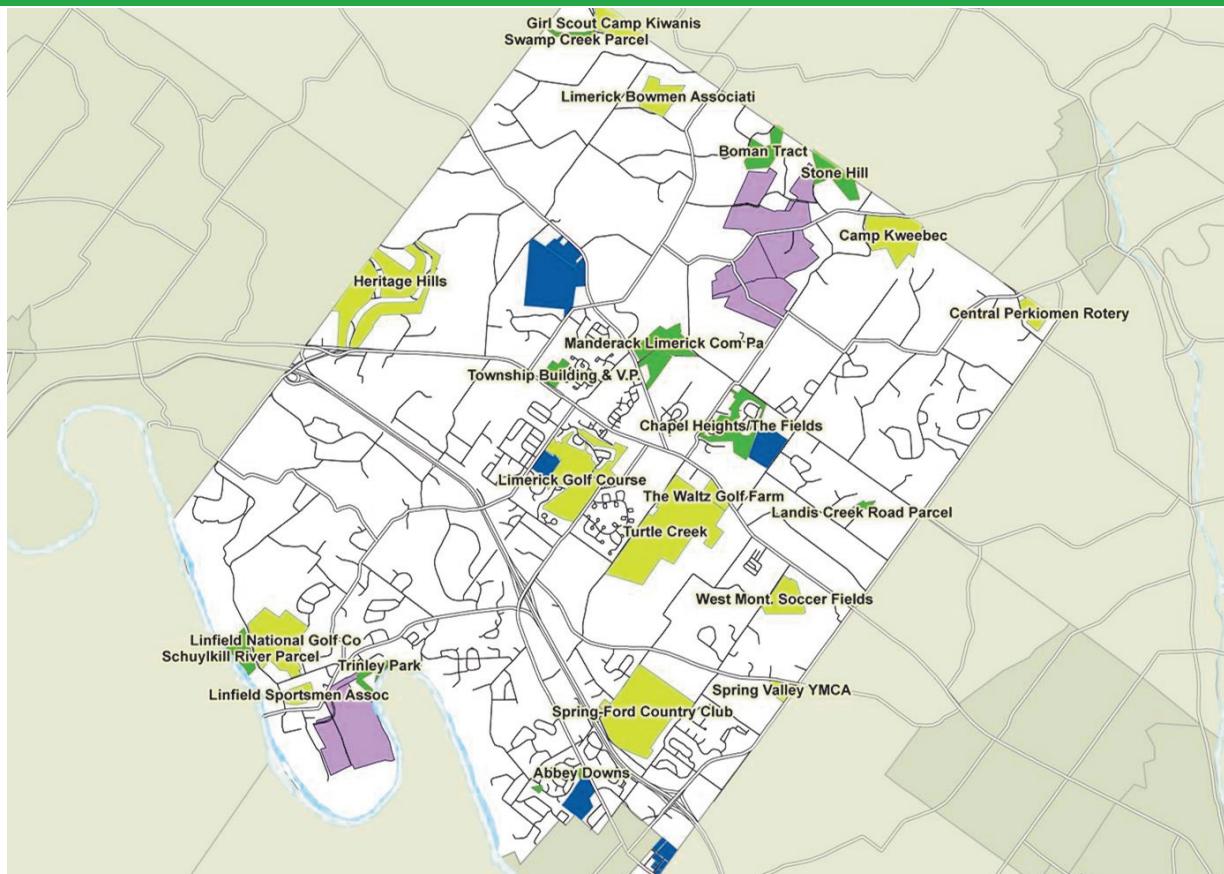
LIMERICK TOWNSHIP
American Red Cross Blood Drive
Thursday, Sept. 13, 2012
12 Noon to 5:00 P.M.
646 W. Ridge Pike

Appointments are preferred.
For an appointment please call:
Donna Serpiello at 610-495-6432 or
Sign up online at redcrossblood.org
Enter Sponsor Code 02213346

Limerick Greenways ad Trails Master Plan

In March of this year the Township began a study on how best to incorporate a greenway and trail network throughout the Township. Primary considerations are –provide a link of current open space parcels and parks within the Township; provide a link between the Perkiomen River Trail and the Schuylkill River Trail proposed for the east side of the river; and provide Limerick residents links to the many existing networks of trails that Montgomery County has to offer. When completed, this long term study will provide a master plan blueprint which will guide the Township over many years in securing funding and developer commitments toward the goal of constructing the trail network.

Limerick Township's inventory of current parks and open space to be linked via a trail network



Many may ask why trails are important and why should the Township use tax dollars to study and possibly construct trails when the need and cost for police, emergency services and road maintenance is increasing. The economic and political realities of the day places greenways and trails in a new context—one that transforms parks and open space from “nice” to “essential”. Study after study points to the utter importance of greenways, parks and open space as to:

- Quality of life
- Health and mental well being
- Increased productivity /fewer sick days/decreased health care costs
- Economic growth and vitality
- Attract and keep residents and businesses
- Improve the quality of the environment
- Protect and enhance natural resources
- These factors are of interest to all sectors of society

Limerick Greenways and Trails Master Plan

Beginning on May of this year, a volunteer Advisory Panel appointed by the Board of Supervisors met to outline the goals and objectives of the study. The Panel developed the following outline of issues which to guide them through the anticipated 8 month study.

GOALS

Goals and priorities for the project -

- Develop a Master Plan
- Provide Recreation Opportunities

FACTS

Existing Features-

- Large township
- Few existing trails
- Many busy roads

CONCEPTS

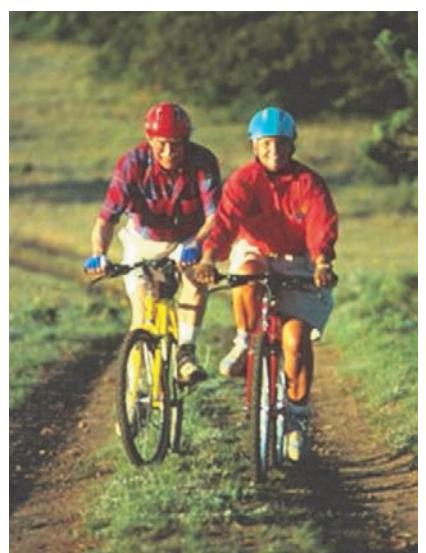
Ideas for attaining project goals-

- Provide for all types of users
- Provide hiking-only trails
- Make sure trails are SAFE
- Protect homeowner privacy

Since the initial meeting the Advisory Panel is focused on the following specific tasks :

- Inventory existing trail and greenway networks, natural and manmade “hubs” an municipal/county trail planning completed to date..
- Develop a “vision” for proposed greenway “types” including conservation greenways, recreational opportunities, and transportation greenways.
- Develop an action plan to prioritize implementation of the Master Plan, identify roles and responsibilities, develop order of magnitude costs identify potential pilot projects.

A key objective of the study is to ensure the general public has the opportunity to review all the information and offer their input. On June 21st, the Township advertised and held the first in a series of four public meeting. This meeting reviewed the initial concepts and desired goals and those in attendance offered valuable feedback on what they believe should be incorporated into the study. The second public meeting is scheduled for Thursday September 13th at 7pm at the Limerick Township Building. All residents are invited to attend to review the status of the plan and see the initial trail and greenway concepts. The following is the proposed project schedule. This may change so please visit the Township’s website at www.limerickpa.org to view updates of the plan and project schedule.



Project Schedule:

Sept. 13	Public Meeting #2 - Initial Alignments
Oct. 10	Committee Meeting #4
Oct. 18	Public Meeting #3 - Present Draft Plan
Dec. 13	Committee Meeting #5
Jan. 10, 2013	Public Meeting #4 - Present Final Plan

LIMERICK THANKS THE DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES AND PECO FOR ASSISTING IN THE FUNDING OF THE GREENWAYS AND TRAILS MASTER PLAN



Limerick has received a \$25,000 grant from DCNR toward the \$50,000 cost of the study. DCNR is the primary source of state support for Pennsylvania recreation, parks and conservation initiatives. Grant funding from the DCNR assists hundreds of communities and organizations across Pennsylvania to plan, acquire and develop recreation and park facilities, create trails and conserve open space.

"Our grant investments work to bolster our vision for the health of our families, the vibrancy of our communities, the strength of our economy and our quality of life in Pennsylvania," DCNR Deputy Secretary Cindy Dunn said. "These grants allow us to partner with communities so that they can expand and improve the wonderful assets that make the places we call home vibrant and attractive."

In addition, Limerick Township is also one of 18 municipalities who received a 2012 Green Region Grant from PECO. The \$7,500 grant award will be used to offset the Township's \$25,000 match required of the DCNR grant.

Since 2004, PECO Green Region has funded more than 144 projects across Southern Pennsylvania. The program provides grants for projects focusing on open space preservation, improvements to parks and recreation resources, and environmental conservation. Projects include the development of recreation trails, the purchase of open space, planting of trees and other vegetation.

"I am thrilled that we have provided more than \$1 million and sustained nearly 10 years of successful environmental grant funding for our local municipalities through the Green Region program," said Craig Adams, PECO president and CEO. "The success of this program reflects PECO's commitment to environmental preservation."



The Board of Supervisors wishes to thank the residents who have volunteered their time on the Citizens Advisory Panel.

Kris Bautsch
Keith Daywalt
Rick Fidler
Patti Kaufman
Steven Krauss
Dominic Martorana
Brian Reiter

Monday, June 18, 2012

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THE MERCURY / A7

LIMERICK

Township to hold meeting about trails master plan

By Mercury Staff

LIMERICK — The township is looking to develop a Greenways and Trails Master Plan, beginning with a public meeting June 21.

The public meeting — sched-

uled for 7 p.m. at the municipal building — will feature an overview presentation of the project's goals and an open discussion “to solicit ideas and to address any questions about the master plan,” a release from Limerick Township said.

The Greenways and Trails Master Plan will seek ways to

link parks, open space, schools, residential and business areas with new bike and walking paths. Attempts to link existing trails and paths will be made, as well.

“The master plan is intended to offer Limerick residents close-to-home transportation

options and recreational fitness opportunities,” the township said. In addition to the June 21 meeting, a future meeting is scheduled for Sept. 13, Oct. 18 and Jan. 10. Simone Collins Landscape Architecture Inc., from Norris-

Township, will “facilitate the community visioning process” and will provide their expertise in shaping the plan.

The Pennsylvania Depart-

ment of Conservation and

Natural Resources will fund

the project along with Limerick

Township.

TRAIL EASEMENT AGREEMENT

THIS TRAIL EASEMENT AGREEMENT (“this Agreement”) dated as of _____ (the “Agreement Date”) is by and between _____ (“the undersigned Owner or Owners”) and _____ (the “Holder”).

Article I. Background

1.01 Property

The undersigned Owner or Owners are the sole owners in fee simple of the property described in Exhibit “A” (the “Property”). The Property is also described as:

Street Address:

Municipality:

Parcel Identifier:

County:

State: Pennsylvania

1.02 Easement Objectives

The purpose of this Agreement (the “Easement Objectives”) is to establish an Easement Area (defined below) within the Property in which a trail may be established and used by the general public for outdoor recreation and education (the “Trail”).

1.03 Easement Area; Easement Plan

The portions of the Property that are the subject of this Agreement (collectively, the “Easement Area”) are shown on the plan attached as Exhibit “B” (the “Easement Plan”). The Easement Area is also described as [ADD DESCRIPTION, EG., a twenty-foot wide strip of land running from the northwest border to the southern border of the Property.]

1.04 Consideration

The undersigned Owner or Owners acknowledge receipt of the sum of \$1.00 in consideration of the grant of easement to Holder under this Agreement.

Article II. Grant of Easement

2.01 Grant of Easement and Right-of-Way

By signing this Agreement and unconditionally delivering it to Holder, the undersigned Owner or Owners, intending to be legally bound, grant and convey to Holder an exclusive easement and right-of-way over, under, and across the Easement Area in perpetuity, for the purposes described in the Easement Objectives, subject to the limitations and reserved rights of Owners set forth in this Article.

2.02 Limitation on Activities and Uses

(a) Use

Access to the Easement Area by the general public is subject to the rules, regulations and/or limitations established by Holder to regulate Trail activities (the “Access Restrictions”). Included in the Access

Restrictions is a prohibition on the use of motorized vehicles except in the case of emergency or in connection with the construction, maintenance, or patrol of the Easement Area or by persons who need to use motor-driven wheelchairs.

(b) Disturbance

Soil, rock, and vegetative resources may be removed, cut or otherwise disturbed only to the extent reasonably necessary to accommodate construction, maintenance and patrol of the Trail and maintenance of access to the Easement Area. When vegetative cover is removed, it must be restored as soon as reasonably feasible by replanting with grasses or native species of trees, shrubs, and plant materials.

(c) Construction

Prior to commencing initial construction of the Trail or relocation of more than 200 linear feet of the Trail within the Easement Area, Holder must:

- (i) Provide Owners with at least 30 days notice.
- (ii) Obtain certificates evidencing liability insurance coverage with respect to Holder and all Persons entering the Property for the purpose of construction.
- (iii) Obtain, at Holder's cost and expense, all permits and approvals required for the construction.

2.03 Limitation on Improvements

Improvements within the Easement Area are limited to the following:

(a) Trail

- (i) The Trail, including steps and railings and other trail surface structures as well as bridges and culverts for traversing wet areas within the Easement Area.
- (ii) The Trail may not exceed _____ (##) feet in width.
- (iii) The Trail may be covered, if at all, by wood chips, gravel, or other porous surface, or paved or covered with other material as may be required by applicable law.

(b) Accessory Facilities

- (i) A reasonable number of benches, picnic tables, and wastebaskets.
- (ii) Signs to mark the Trail; to provide information regarding applicable time, place, and manner restrictions; to indicate the interest of Holder and Beneficiaries in the Easement Area; and for interpretive purposes.
- (iii) Fencing, gates and barriers to control access.

2.04 Reserved Rights of Owners

The easement granted to Holder under this Agreement is exclusive. This means that Owners have no rights to enter or use the Easement Area except to exercise rights accorded to the general public and except as provided in this Article. Owners reserve the following rights:

(a) Owner Access

Owners may enter the Easement Area by foot at any time except when construction and maintenance activities could present a danger.

(b) Mitigating Risk

Owners may cut trees or otherwise disturb resources only to the extent reasonably prudent to remove or mitigate against an unreasonable risk of harm to Persons on or about the Easement Area; however, Owners do not assume any responsibility or liability to the general public for failing to do so.

(c) Hunting

Owners may close public access to the Easement Area for public safety reasons from the Monday after Thanksgiving through the month of December so as to reasonably accommodate hunting by or under control of Owners within the Easement Area.

(d) Owners' Enforcement Rights

Owners reserve the right to take any action permitted under law to remove from the Property persons entering the Easement Area for purposes other than set forth in the grant of public access under this Article.

2.05 Rights of Beneficiaries

The Persons identified below are beneficiaries of this Agreement (each, a "Beneficiary") and have the right to exercise the same rights, powers and privileges as are vested in the Holder under this Agreement:

- As of the Agreement Date, there are no Beneficiaries of this Agreement.

Article III. Other Legal Matters

3.01 Enforcement

If Holder determines that this Agreement is being or has been violated then Holder may, in addition to other remedies available at law or in equity, do any one or more of the following:

(a) Injunctive Relief

Seek injunctive relief to specifically enforce the terms of this Agreement; to restrain present or future violations of this Agreement; and/or to compel restoration of recreational resources destroyed or altered as a result of the violation.

(b) Self Help

Enter the Property to remove any barrier to the access provided under this Agreement and do such other things as are reasonably necessary to protect and preserve the rights of Holder under this Agreement.

3.02 Warranty

The undersigned Owner or Owners warrant to Holder that:

(a) Liens and Subordination

The Easement Area is, as of the Agreement Date, free and clear of all Liens or, if it is not, that Owners have obtained and attached to this Agreement as an exhibit the legally binding subordination of any mortgage, lien, or other encumbrance affecting the Easement Area as of the Agreement Date.

(b) Existing Agreements

No one has the legally enforceable right (for example, under a lease, easement or right-of-way agreement in existence as of the Agreement Date) to use the Easement Area for purposes inconsistent with Easement Objectives or to prevent Holder from exercising any one or more of its rights under this Agreement.

(c) Hazardous Materials

To the best of Owner's knowledge, the Easement Area is not contaminated with materials identified as hazardous or toxic under applicable law (collectively, "Hazardous Materials") and no Hazardous Materials have been stored or generated within the Easement Area.

3.03 No Duty or Expense by Owners

Owners are not responsible for construction or maintenance of improvements in the Easement Area except for improvements resulting from Owners exercising a reserved right. Holder must promptly pay as and when due all costs and expenses incurred in connection with construction and maintenance of improvements in the Easement Area.

3.04 No Charge for Access

No Person is permitted to charge a fee for access to or use of the Easement Area.

3.05 Immunity under Applicable Law

Nothing in this Agreement limits the ability of Owners, Holder or any Beneficiary to avail itself of the protections offered by any applicable law affording immunity to Owners, Holder or any Beneficiary including, to the extent applicable, the Recreational Use of Land and Water Act, Act of February 2, 1966, P.L. (1965) 1860, No. 586, as amended, 68 P.S. §477-1 *et seq.* (as may be amended from time to time).

3.06 Responsibility for Losses and Litigation Expenses

(a) Public Access Claims; Owner Responsibility Claims

If a claim for any Loss for personal injury or property damage occurring within the Easement Area after the Agreement Date (a "Public Access Claim") is asserted against either Owners or Holder, or both, it is anticipated that they will assert such defenses (including immunity under the Recreational Use of Land and Water Act) as are available to them under applicable law. The phrase "Public Access Claim" excludes all claims (collectively, "Owner Responsibility Claims") for Losses and Litigation Expenses arising from, relating to or associated with (i) personal injury or property damage occurring prior to the Agreement Date; (ii) activities or uses engaged in by Owners, their family members, contractors, agents, employees, tenants and invitees or anyone else entering the Property by, through or under the express or

implied invitation of any of the foregoing; or (iii) structures, facilities and improvements within the Easement Area (other than improvements installed by Holder).

(b) Indemnity

If immunity from any Public Access Claim is for any reason unavailable to Owners, Holder agrees to indemnify, defend and hold Owners harmless from any Loss or Litigation Expense if and to the extent arising from a Public Access Claim. Owner agrees to indemnify, defend and hold the Holder harmless from any Loss or Litigation Expense if and to the extent arising from an Owner Responsibility Claim.

(c) Loss; Litigation Expense

- (i) The term "Loss" means any liability, loss, claim, settlement payment, cost and expense, interest, award, judgment, damages (including punitive damages), diminution in value, fines, fees and penalties or other charge other than a Litigation Expense.
- (ii) The term "Litigation Expense" means any court filing fee, court cost, arbitration fee or cost, witness fee and each other fee and cost of investigating and defending or asserting any claim of violation or for indemnification under this Agreement including in each case, attorneys' fees, other professionals' fees and disbursements.

Article IV. Miscellaneous

4.01 Governing Law

The laws of the Commonwealth of Pennsylvania govern this Agreement.

4.02 Binding Agreement

This Agreement is a servitude running with the land binding upon the undersigned Owner or Owners and, upon recordation in the Public Records, all subsequent Owners of the Easement Area or any portion of the Easement Area are bound by its terms whether or not the Owners had actual notice of this Agreement and whether or not the deed of transfer specifically referred to the transfer being under and subject to this Agreement. Subject to such limitations (if any) on Holder's right to assign as may be set forth in this Agreement, this Agreement binds and benefits Owners and Holder and their respective personal representatives, successors and assigns.

4.03 Definition and Interpretation of Capitalized and Other Terms

The following terms, whenever used in this Agreement, are to be interpreted as follows:

- (i) "Owners" means the undersigned Owner or Owners and all Persons after them who hold any interest in the Easement Area.
- (ii) "Person" means an individual, organization, trust, or other entity.
- (iii) "Public Records" means the public records of the office for the recording of deeds in and for the county in which the Easement Area is located.
- (iv) "Including" means "including, without limitation".
- (v) "May" is permissive and implies no obligation; "must" is obligatory.

4.04 Incorporation by Reference

Each exhibit referred to in this Agreement is incorporated into this Agreement by this reference.

4.05 Amendments; Waivers

No amendment or waiver of any provision of this Agreement or consent to any departure by Owners from the terms of this Agreement is effective unless the amendment, waiver or consent is in writing and signed by an authorized signatory for Holder. A waiver or consent is effective only in the specific instance and for the specific purpose given. An amendment must be recorded in the Public Records.

4.06 Severability

If any provision of this Agreement is determined to be invalid, illegal or unenforceable, the remaining provisions of this Agreement remain valid, binding, and enforceable. To the extent permitted by applicable law, the parties waive any provision of applicable law that renders any provision of this Agreement invalid, illegal, or unenforceable in any respect.

4.07 Counterparts

This Agreement may be signed in multiple counterparts, each of which constitutes an original, and all of which, collectively, constitute only one agreement.

4.08 Entire Agreement

This is the entire agreement of Owners, Holder and Beneficiaries (if any) pertaining to the subject matter of this Agreement. The terms of this Agreement supersede in full all statements and writings between Owners, Holder, and others pertaining to the transaction set forth in this Agreement.

INTENDING TO BE LEGALLY BOUND, the undersigned Owner or Owners and Holder, by their respective duly authorized representatives, have signed and delivered this Agreement as of the Agreement Date.

Witness/Attest:

Owner's Name:

Owner's Name:

[NAME OF HOLDER]

By: _____

Name of signatory:

Title of signatory:

Acceptance by Beneficiary:

[NAME OF BENEFICIARY]

By: _____

Name:

Title:

This document is based on the model Trail Easement Agreement (9/26/2007 edition) provided by the Pennsylvania Land Trust Association.

The model on which this document is based should not be construed or relied upon as legal advice or legal opinion on any specific facts or circumstances. It should be revised to reflect specific circumstances under the guidance of legal counsel.

COMMONWEALTH OF PENNSYLVANIA:

COUNTY OF : _____

ON THIS DAY _____, before me, the undersigned officer, personally appeared _____, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____, Notary Public

Print Name: _____

COMMONWEALTH OF PENNSYLVANIA : _____

SS

COUNTY OF : _____

ON THIS DAY _____ before me, the undersigned officer, personally appeared _____, who acknowledged him/herself to be the _____ of _____, a Pennsylvania non-profit corporation, and that he/she as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by her/himself as such officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____, Notary Public

Print Name: _____

Operation, Maintenance, and Security

Maintenance

Annual trail maintenance costs as estimated by the National Park Service can typically run from \$500 per mile for low-use trails to \$5,000 per mile for high-use trails. It is anticipated that sections of the Lower Paxton Township Greenway will experience both levels of use, equalizing in relative terms to an average “moderate” trail use.

Typical trail maintenance tasks include clearing fallen trees across trails, removing dangerous trees or limbs, bridge inspections, maintaining adequate shoulder clearances along trail, cleaning drainage structures, repairing erosion and damaged trail surfaces, removing invasive plant species, trash pick-up and removal, undertaking periodic inspections, and other associated tasks.

Experience on other trails has shown that with the aid of volunteers, these maintenance costs can be brought down significantly. The utilization of volunteer labor is an important component in managing a trail. The cleaning of drainage swales, drainage structures, and trash pick-up and removal along the trail are important volunteer tasks that can have immediate positive results.

Maintenance Task Schedule:

The following is an outline of the trail maintenance tasks that should be performed annually to maintain the trails in safe condition. Some tasks such as trash pick-up, drainage structure cleaning, plantings and other maintenance tasks can be completed by volunteers. This work should be coordinated with appropriate township staff. Professional maintenance personnel from the township’s public works departments best perform material-intensive tasks requiring larger equipment.

December, January and February

- Trails maintenance work in the winter months can continue dependent on weather conditions. Typical winter trail work may include:
- Trash pick-up and removal.
- Removal of dangerous trees or tree limbs.
- Clearing free-hanging vines on trees in ROW
- Minor repairs to trails (erosion repair, etc.)
- Inspect and repair/replace signs, etc as needed.
- Minor repairs to structures, fences, and bridge railings.
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

March

- Trash pick-up and removal.
- Trail-wide inspection for winter damage. Schedule repair work over the next two to three months.
- Obtain bare-root and other tree and shrub plant materials for spring revegetation projects.
- Install spring plantings (continue into April.)
- Distribute / post information about major trail repair and expansion projects for the spring
- Remove downed trees as required.
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

April

- Bridge / Structure inspections (every other year) - staggered schedule
- Trash pick-up and removal.
- Complete tree and shrub plantings.
- Complete herbaceous and ground cover plantings.
- Begin major trail improvement project(s).
- Prepare and seed areas to prevent erosion.
- Remove downed trees as required.
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

May

- Trash pick-up and removal.
- Complete spring plantings.
- First spraying of invasive species.
- Continue trail repair.
- Remove downed trees as required.
- Mow and trim (first time)
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

June

- Trash pick-up and removal.
- Continue trail repair.
- Plan for fall planting.
- Remove downed trees as required.
- Keep drainage ways clear and clean out culverts as required

- Keep bridge deck surfaces clear and fencing/railing free of vegetation

July

- *Trash pick-up and removal.*
- *Continue trail repair.*
- *Undertake second spraying of invasive species.*
- *Remove downed trees as required.*
- *Mow and trim (second time)*
- *Keep drainage ways clear and clean out culverts as required*
- *Keep bridge deck surfaces clear and fencing/railing free of vegetation*

August

- Trash pick-up and removal.
- Continue trail repair.
- Distribute / post information about major trail repair and expansion projects for the fall
- Remove downed trees as required.
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

September

- Trash pick-up and removal.
- Continue trail repair.
- Undertake third spraying of invasive species.
- Remove downed trees as required.
- Mow and trim (Third time)
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

October

- Trash pick-up and removal.
- Continue trail repair.
- Complete fall planting of balled and burlapped trees in “structured” areas (i.e. trail heads, picnic areas.)
- Plan for spring planting.
- Remove downed trees as required.
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

November

- Trash pick-up and removal.
- Continue trail repair.
- Remove downed trees as required.
- Keep drainage ways clear and clean out culverts as required
- Keep bridge deck surfaces clear and fencing/railing free of vegetation

Maintenance should not be deferred. Deferring maintenance for short-term savings is a faulty strategy with a poor chance of long-term success. Most funding agencies do not fund operational costs. If the trail quality deteriorates and does not provide a high quality recreation experience, it will lose popular support and thus funding. Maintenance costs will only increase and must be planned for by the Township and any management partners.

Operations and Security

As uses of each trail section increases, both operations and security of the trail will become somewhat easier. Initially, while trail use is low, there may be a greater occurrence of unwanted activity. Littering, vandalism and underage drinking are typical negative activities that occur on some trails. As runners, hikers, cyclists and other trail users populate the trail, they will become the eyes and ears of "authority". Increasing numbers of trail users will have cell phones. People engaged in negative activities will not wish to be seen performing these activities and they usually will go elsewhere. This has been the general experience on trails across the country.

Trail users also help the Township maintain and operate the trails. When there are problems, trail users notify the township about the issue. This is a beneficial process that leads to the smooth operation of the trail. It is important that municipal office phone numbers and e-mail addresses be posted at the various trail heads and trail connection access points as a part of trail signage.

There will inevitably be injuries that occur on the trail. The multi-purpose sections of the trail will be designed to be accessible by police vehicles and ambulances to deal with these occurrences. Municipal maintenance vehicles, such as pickup trucks, will also access the trail for periodic inspections or maintenance. Bollards, gates and other vehicular controls will keep out private motor vehicles.

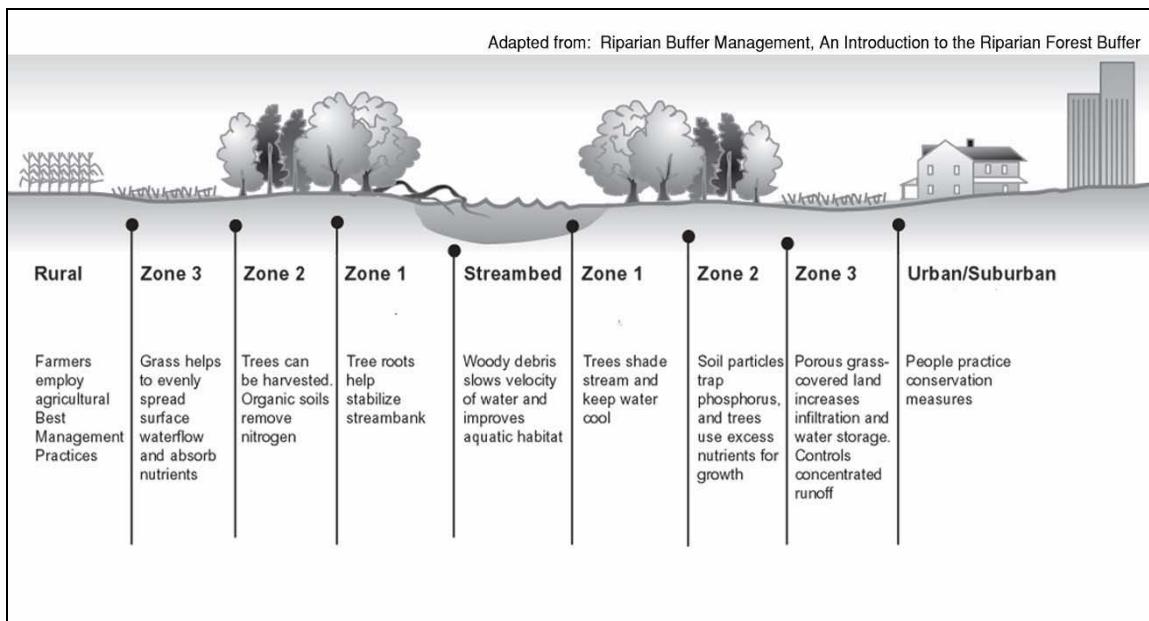
Introduction to Riparian Buffers

A riparian buffer is defined as an area of vegetation that is maintained along the banks of a river or stream. Riparian buffers act to protect water quality and provide a transition zone between aquatic resources and upland land uses. There are numerous ecological and environmental benefits associated with the establishment and maintenance of riparian buffers.

Perhaps the most important function of a riparian buffer is to filter pollution and sediment laden stormwater runoff before the water enters into a watercourse. The vegetation of a riparian buffer acts to slow the rate of runoff allowing for non-point sources of pollution such as sediment, nutrients, and pesticides to settle out prior to the stormwater entering a river or stream. Depending on the width and type of riparian buffer, it is estimated that 50 to 100% of the suspended sediments and nutrients can settle out and be absorbed by the riparian buffer plant materials. The roots of the riparian buffer vegetation also act to stabilize stream embankments and prevent erosion.

Riparian buffers also allow for stream flow regulation and groundwater recharge. By slowing the rate of stormwater runoff, established riparian buffers can reduce peak stream flows resulting in reduced downstream flooding. By slowing the velocity of stormwater, riparian buffers allow for more stormwater to infiltrate the soil and recharge the groundwater aquifer.

Riparian buffers provide important benefits to aquatic ecosystems. The tree canopy of a forested riparian buffer shades the stream, helping to keep water temperatures cool. Leaf litter and woody debris that enter a stream provides food and habitat for organisms critical to the aquatic food chain and woody debris provides in-stream cover for fish species. Riparian buffers also act to provide important habitat and migratory corridors for many species of terrestrial wildlife.



Riparian Buffer Zones

Riparian buffers are often defined as having three distinct zones.

The first zone is known as the streamside zone. The purpose of this buffer zone is primarily to stabilize the stream embankment and provide habitat for aquatic organisms. The streamside zone is best managed as an undisturbed forest with mature canopy to shade the watercourse. The width of the first zone is generally a minimum of 15' wide.

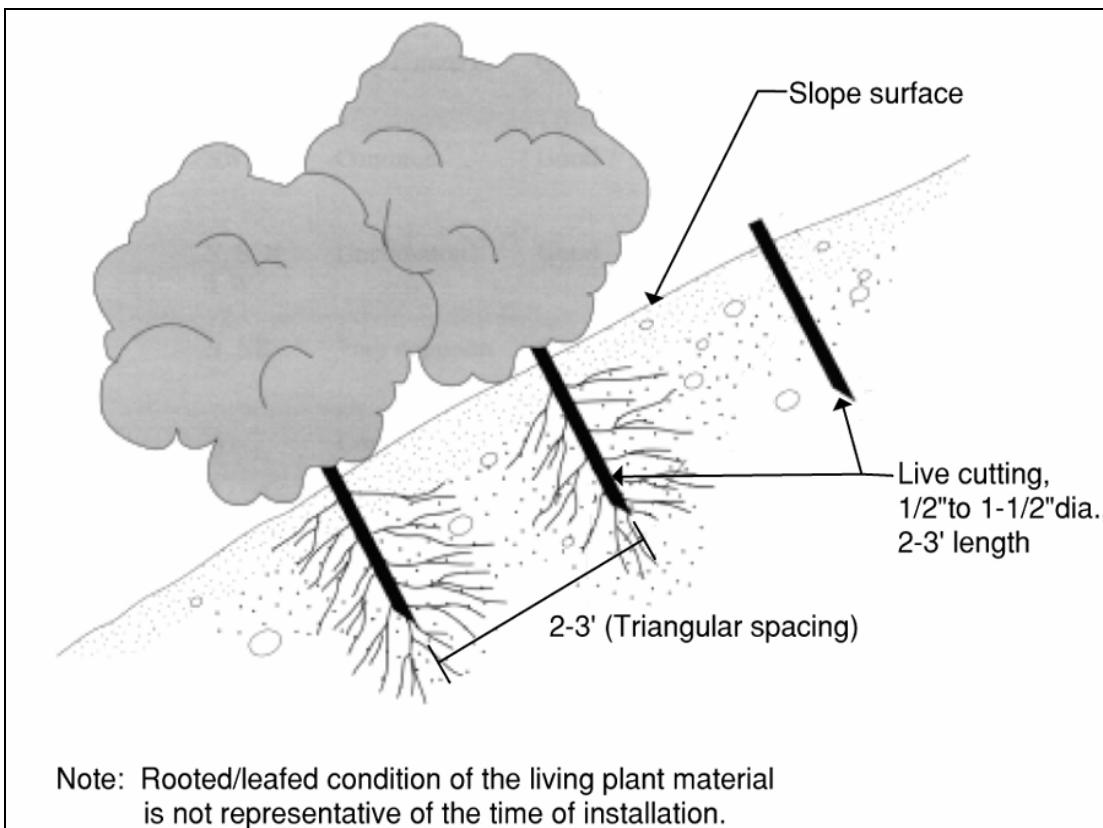
The second zone, also known as the middle zone, is located immediately upslope from the streamside zone. The primary riparian buffer function of the middle zone is to remove, transform, or store nutrients, sediments or other pollutants. This zone is typically wider than the streamside zone and it is estimated that between 50 to 80% of sediment runoff from upland fields can be removed through the middle zone. The middle zone can be maintained as a managed forest with periodic tree harvesting to ensure nutrient uptake by vigorous tree growth. The middle zone can also contain clearings that allow for recreational use. The width of the second zone may vary, however it generally a minimum of 60' in width.

The third zone or outer zone is farthest from the watercourse and located directly upslope of the middle zone. This zone is the farthest removed from the watercourse and is therefore an area that can be used for other low impact land uses. The outer zone is considered a runoff control zone that acts to disperse concentrated stormwater flow prior to water flowing into the middle zone. The outer zone can be maintained with a native grassland or meadow that acts to filter sediment suspended in stormwater flow. It is important to note that grassland and meadow areas require periodic maintenance to remove sediment,

reestablish vegetation, and to remove channels that may form which allow concentrated stormwater flow to enter middle zone. The third zone is typically a minimum of 20' in width.

The level of effectiveness of a riparian buffer is dependent upon many factors including the type of vegetation that comprises the buffer, the width of each buffer zone, and the overall distance between the watercourse and varying upland land uses. It is generally agreed that a forested area of native plant materials with an established tree canopy, understory, shrubs, and herbaceous plant layer provides the highest level of effectiveness in protecting stream ecology.

There are many varying opinions on the minimum buffer width needed to effectively protect the aquatic resources for various riparian buffer objectives such as sediment removal or stream bank stabilization. The minimum width of a buffer relates directly to specific buffering objectives. For example, to successfully remove sediment from upland stormwater, the minimum riparian buffer width may need to be 100' to 150' in width while a minimum buffer width of 50' may be sufficient if the objective is solely to stabilize stream embankments. A minimum riparian buffer width necessary for "watercourse dependent" wildlife may extend from 300' to 600' from the waters edge. Considering the relationship of the riparian buffer to upland land uses, it is generally agreed that providing the widest buffer possible will result in the realization of the full range of benefits that can be provided by riparian buffers.

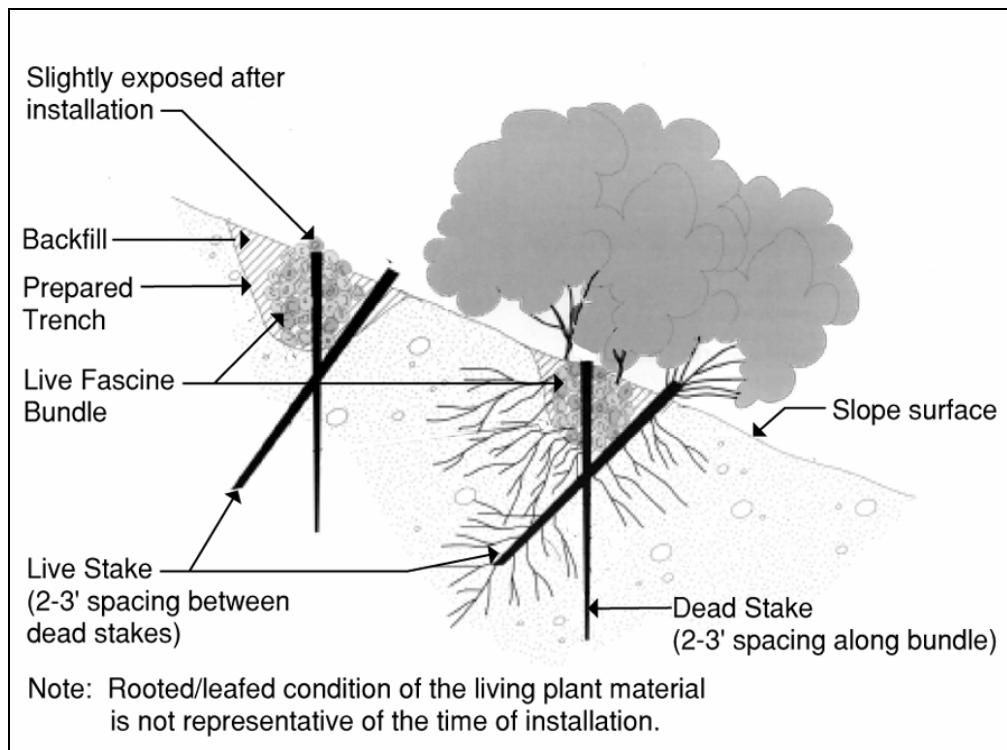


Live Staking

Live staking is simply the installation of dormant, woody, plant cuttings at a right angle into a moderately sloped stream embankment. Live stakes can be collected from existing stands of vegetation or can typically be purchase in lengths from 12" to 3'. The diameter of the stake is typically greater than one inch to allow the stake to be driven into the soil with a deadblow hammer. A piece of steel rebar is often used to create a pilot hole prior to driving the live stake into the streambank. When installing live stakes, it is important that at least 70% of the stem is buried and only 30% is exposed so that the stake is forced to produce roots. The stakes should be installed 2 to 3 feet apart, using triangular spacing to provide a density that ranges from two to four stakes per square yard. Planting must be done during the months of December through March when the stakes are dormant. It is estimated that a volunteer can install up to 50 live stakes or 12 to 25 square yards per hour.

Live stakes provide minimal initial structural slope protection however, as the live stakes develop roots, the streambank is reinforced against erosive forces. Erosion control matting or organic mulch is often used in coordination with live stake installation to provide immediate surface erosion control. Live staking is considered a very effective means of bank stabilization that can be accomplished with minimal amounts of labor. As a biotechnical erosion control method, live staking is often installed in coordination with other control methods such as brush layering and fascines. Excluding labor, a cost estimate for live stake installation

is approximately \$12 a square yard based on the purchase of 3' length stakes and installation at a density of 4 stakes per square yard with erosion control matting.



Fascines

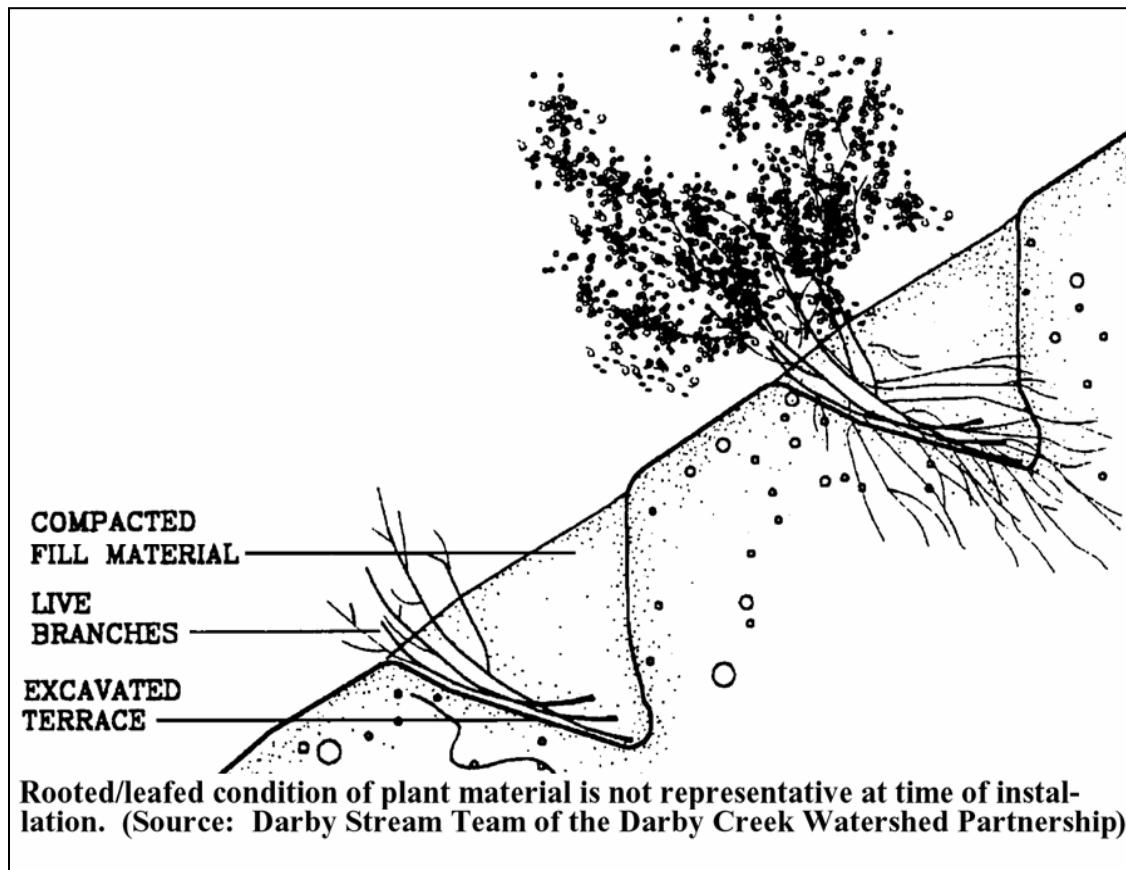
Fascines are tied, linear bundles of branches or whips that are buried lengthwise in trenches that are excavated along the contour of the stream embankment.

Fascines are generally 4" to 12" in diameter, consist of individual branches that are approximately 1" in diameter and approximately 8' in length. The trench for a fascine is excavated to a width of one or two inches greater than the diameter of the fascine and backfilled after the fascine is placed and covered with soil.

Installation typically includes anchoring the fascine in the trench by driving live stakes or dead stakes through the fascines into the soil. Fascines can be installed from 3' to 5' apart parallel to the stream depending on the slope of the existing embankment.

Organic mulch or erosion control fabric is often installed in coordination with fascines to help reduce soil erosion while the fascine becomes established and to retain soil moisture. Similar to live staking and branch layering, plant material for fascines can be collected from established stands of vegetation or fascines or fascines can be purchased from nurseries that supply streambank stabilization plant materials. Excluding labor for installation and hand trenching, a cost estimate for materials for fascine installation is approximately \$21 a square yard based upon purchase of 8" to 12" diameter length bundles of vegetation. This

cost estimate includes the installation of erosion control matting and is based upon a fascine spacing of 3' parallel to the stream.



Brush Layering

Brush layering, also known as branch layering, consists of live woody plant material placed into the stream embankment face along small trenches that are excavated along the contour of the stream embankment slope. Brush layering is completed with live woody material that will easily develop roots. Installation is typically completed between the months of December and March when the live woody material is dormant. Branch cuttings, typically $\frac{1}{2}$ " to 2" in diameter, are layered 2-3' deep within the excavated trench with two-thirds of basal material then covered with soil. It is important that the branches are long enough to reach the back of a 2' to 3' deep trench that is dug into the stream embankment and to allow six to twelve inches of upper growth to be exposed. Trench spacing can vary from 4' to 10' apart parallel to the edge of the stream. Brush layering is typically conducted on slopes up to 1.5H:1V, or in highly eroded gully areas. Similar to live staking and fascines, plant material for brush layering can be collected from established stands of vegetation or brush bundles can be purchased from nurseries that supply streambank stabilization plant materials. It is estimated that one laborer can install approximately 6-17' of brush layering in one hour. Excluding labor for installation and hand trenching, a cost estimate for

materials for branch layering is approximately \$45 a square yard based on purchase of 3' length bundles of vegetation. This cost estimate includes installation of erosion control matting.

Biotechnical Erosion Control Installation

Before installation, individual sections of eroded streambank must be analyzed to determine the slope of the streambank, solar orientation, and the availability of soil moisture. It is important that an individual with experience in biotechnical erosion control is consulted to assist in identifying the problems affecting the streambank to be stabilized and to determine goals for individual slope stabilization projects. Record keeping, installation data and post-installation monitoring are important to establish a record of implementation that can be used to determine the most successful interventions for particular riparian conditions. Additionally, pre-installation planning is important to ensure that plant material can be gathered or acquired from nursery sources. Live stakes, brush layering, and fascines installations can all be completed with native plant materials that establish quickly from cuttings and are adapted to riparian conditions.

Riparian Buffer Implementation and Management

The suggested method of instituting riparian buffer improvements and management is through the use of civic, community, and conservation organizations, many subsidized by government and private funding. Involving these organizations is important to educate the community to the benefits and importance of establishing riparian buffers within the Township's watershed. The use of community groups and volunteer labor also helps to limit the burden of riparian buffer establishment and maintenance on Township personnel. It is important to consider that many riparian buffer activities will require technical assistance of Township Park or Public Works personnel for implementation and management activities that require the operation of equipment or application of herbicide.

Growing Greener

The Growing Greener Program was signed into law by Governor Tom Ridge in 1999. Growing Greener provided investment of millions of dollars over five years to preserve farmland and protect open space; clean up abandoned mines; restore watersheds; and provide new and upgraded water and sewer systems. In 2002, the state legislature added additional monies to the program due to its great popularity. Four different agencies are involved in helping communities "grow greener" under the Environmental Stewardship & Watershed Protection Act: Departments of Environmental Protection, Agriculture, Conservation and Natural Resources and PENNVEST. Of these four agencies, the Department of Conservation and Natural Resources or the Department of Environmental Protection could fund riparian buffer improvement projects within the Township. The Act authorizes grants for acid mine drainage abatement, mine cleanup

efforts, abandoned oil and gas well plugging and local watershed-based conservation projects. These projects can include: watershed assessments and development of watershed restoration or protection plans, implementation of watershed restoration or protection projects, stormwater management wetlands, riparian buffer fencing and planting, streambank restoration and agricultural "best management practices" (BMP's).

Clean Water Act Section 319

Clean Water Act Section 319(h) funds are provided to designated state and tribal agencies to implement their approved non-point source management programs including a variety of components such as technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and regulatory programs. Each year, EPA awards Section 319(h) funds to states in accordance with a state-by-state allocation formula that EPA has developed in consultation with the states.

Local schools may also be of assistance in several ways. The student body can get involved with clubs or fundraising events. Faculty can incorporate riparian buffers and stream ecology into various curricula. Amounts of funds raised by civic groups or schools may be relatively small, but this process builds constituents and support that is critical to the long-term success and protection of the Township waterways.

References:

FISRWG 1998. Stream Corridor Restoration: Principles, Processes, and Practices. By the Federal Interagency Stream Restoration Working Group.

Hoag, J. Chris. 2000. Costs And Considerations Of Streambank Bioengineering Treatments. USDA - Natural Resources Conservation Service

PA Department of Environmental Protection. Pennsylvania Stream Relief, Planting Pennsylvania's Streamsides: A Plan for Restoring and Conserving Buffers Along Pennsylvania Streams.

Palone, R.S. and A.H. Todd (editors.) 1997. Chesapeake Bay riparian handbook: a guide for establishing and maintaining riparian forest buffers. USDA Forest Service, Radnor, PA.

Sorvig, K and Thompson J.W. 2000. Sustainable Landscape Construction: A Guide to Green Building Outdoors.

Pennsylvania Recreational Use Statute

PENNSYLVANIA STATUTES
TITLE 68. REAL AND PERSONAL PROPERTY
CHAPTER 11. USES OF PROPERTY
RECREATION USE OF LAND AND WATER

477-1. Purpose; liability

The purpose of this act is to encourage owners of land to make land and water areas available to the public for recreational purposes by limiting their liability toward persons entering thereon for such purposes.

477-2. Definitions

As used in this act:

- (1) "LAND" means land, roads, water, watercourses, private ways and buildings, structures and machinery or equipment when attached to the realty.
- (2) "OWNER" means the possessor of a fee interest, a tenant, lessee, occupant or person in control of the premises.
- (3) "Recreational purpose" includes, but is not limited to, any of the following, or any combination thereof: hunting, fishing, swimming, boating, camping, picnicking, hiking, pleasure driving, nature study, water skiing, water sports, cave exploration and viewing or enjoying historical, archaeological, scenic, or scientific sites.
- (4) "CHARGE" means the admission price or fee asked in return for invitation or permission to enter or go upon the land.

477-3. Duty to keep premises safe; warning

Except as specifically recognized or provided in section 6 of this act, an owner of land owes no duty of care to keep the premises safe for entry or use by others for recreational purposes, or to give any warning of a dangerous condition, use, structure, or activity on such premises to persons entering for such purposes.

477-4. Assurance of safe premises; duty of care; responsibility, liability

Except as specifically recognized by or provided in section 6 of this act, an owner of land who either directly or indirectly invites or permits without charge any person to use such property for recreational purposes does not thereby:

- (1) Extend any assurance that the premises are safe for any purpose.
- (2) Confer upon such person the legal status of an invitee or licensee to whom a duty of care is owed.
- (3) Assume responsibility for or incur liability for any injury to persons or property caused by an act of omission of such persons.

477-5. Land leased to State or subdivision

Unless otherwise agreed in writing, the provisions of sections 3 and 4 of this act shall be deemed applicable to the duties and liability of an owner of land leased to the State or any subdivision thereof for recreational purposes.

477-6. Liability not limited

Nothing in this act limits in any way any liability which otherwise exists:

- (1) For wilful or malicious failure to guard or warn against a dangerous condition, use, structure, or activity.
- (2) For injury suffered in any case where the owner of land charges the person or persons who enter or go on the land for the recreational use thereof, except that in the case of land leased to the State or a subdivision thereof, any consideration received by the owner for such lease shall not be deemed a charge within the meaning of this section.

477-7. Construction of act

Nothing in this act shall be construed to:

- (1) Create a duty of care or ground of liability for injury to persons or property.
- (2) Relieve any person using the land of another for recreational purposes from any obligation which he may have in the absence of this act to exercise care in his use of such land and in his activities thereon, or from the legal consequences of failure to employ such care.

Pennsylvania's Recreational Use of Land and Water Act



INTRODUCTION

Pennsylvania has a law that limits the legal liability of landowners who make their land available to the public for free recreation. The purpose of the law is to supplement the availability of publicly owned parks and forests by encouraging landowners to allow hikers, fishermen and other recreational users onto their properties. The Recreational Use of Land and Water Act ("RULWA"), found in Purdon's Pennsylvania Statutes, title 68, sections 477-1 et seq., creates that incentive by limiting the traditional duty of care that landowners owe to entrants upon their land. **So long as no entrance or use fee is charged, the Act provides that landowners owe no duty of care to keep their land safe for recreational users and have no duty to warn of dangerous conditions.** Excepted out of this liability limitation are instances where landowners willfully or maliciously fail to guard or warn of dangerous conditions. That is, the law immunizes landowners only from claims of negligence. Every other state in the nation has similar legislation.

PEOPLE COVERED BY THE ACT

The "owners" of land protected by the Act include public and private fee title holders as well as lessees (hunt clubs, e.g.) and other persons or organizations "in control of the premises." Holders of conservation easements and trail easements are protected under RULWA if they exercise sufficient control over the land to be subject to liability as a "possessor." (See *Stanton v. Lackawanna Energy Ltd.* (Pa. Supreme Ct. 2005)) (RULWA immunizes power company from negligence claim where bike rider collided with gate that company had erected within the 70-foot wide easement over mostly undeveloped land it held for power transmission)).

LAND COVERED BY THE ACT

Although on its face RULWA applies to all recreational "land"—improved and unimproved, large and small, rural and urban—in the last 15 years or so, Pennsylvania courts have tended to read the Act narrowly, claiming that the legislature intended it to apply only to large land holdings for outdoor recreational use.

Courts weigh several factors to decide whether the land where the injury occurred has been so altered from its natural state that it is no longer "land" within the meaning of the Act. In order of importance:

(1) Extent of Improvements – The more developed the property the less likely it is to receive protection under RULWA, because

recreational users may more reasonably expect it to be adequately monitored and maintained;

- (2) Size of the Land – Larger properties are harder to maintain and so are more likely to receive recreational immunity;
- (3) Location of the Land – The more rural the property the more likely it will receive protection under the Act, because it is more difficult and expensive for the owner to monitor and maintain;
- (4) Openness – Open property is more likely to receive protection than enclosed property; and
- (5) Use of the Land – Property is more likely to receive protection if the owner uses it exclusively for recreational, rather than business, purposes.

SITE IMPROVEMENTS

The following cases focus on the nature and extent of site improvements that might negate RULWA immunity:

- The state Supreme Court ruled that the Act was not intended to apply to swimming pools, whether indoor (*Rivera v. Philadelphia Theological Seminary* (Pa. Supreme Ct. 1986)) or outdoor (*City of Philadelphia v. Duda* (Pa. Supreme Ct. 1991)).
- RULWA immunity does not cover injuries sustained on basketball courts, which are "completely improved" recreational facilities (*Walsh v. City of Philadelphia* (Pa. Supreme Ct. 1991)).
- Playgrounds are too "developed" to qualify for immunity (*DiMino v. Borough of Pottstown* (Pa. Commonwealth Ct. 1991)).
- Playing fields generally are held not to be "land" within the protection of the Act (*Brown v. Tunkhannock Twp.* (Pa. Commonwealth Ct. 1995) (baseball field); *Seifert v. Downingtown Area School District* (Pa. Commonwealth Ct. 1992) (lacrosse field); *Lewis v. Drexel University* (Pa. Superior Ct. 2001, unreported) (football field); *but see Wilkinson v. Conoy Twp.* (Pa. Commonwealth Ct. 1996) (softball field is "land" under RULWA)).

- An unimproved grassy area at Penns Landing in Philadelphia was deemed outside the Act's scope, given that the site as a whole was highly developed (Mills v. Commonwealth (Pa. Supreme Ct. 1993); compare Lory v. City of Philadelphia (Pa. Supreme Ct. 1996) (swimming hole in "remote" wooded area of Philadelphia is covered by RULWA)).

RULWA immunity has been found in several cases where people were injured at outdoor sites containing limited improvements:

- An earthen hiking trail in a state park is not an improvement vitiating the Act's immunity (Pomeren v. Commonwealth (Pa. Commonwealth Ct. 1988)).
- The owner of property containing a footpath created by continuous usage, which led down to the Swatara Creek, has no duty to erect a warning sign or fence between his property and the adjacent municipal park (Rightnour v. Borough of Middletown (Lancaster Cty. Ct. of Common Pleas 2001)).
- A landscaped park containing a picnic shelter is still "unimproved" land for RULWA purposes (Brezinski v. County of Allegheny (Pa. Commonwealth Ct. 1996)).
- An artificial lake is just as subject to RULWA protection as a natural lake, although the dam structure itself is not covered (Stone v. York Haven Power Co. (Pa. Supreme Ct. 2000)).
- An abandoned rail line in a wooded area is covered by RULWA, even where the plaintiff fell from a braced railroad trestle (Yanno v. Consolidated Rail Corp. (Pa. Superior Ct. 1999)(but may no longer be good law after Stone)).

Uncertainty about what constitutes an improvement under the Act reportedly has had a dampening effect on efforts to improve public access to outdoor recreation sites. Public and private landowners are concerned that installation of fishing piers, boat docks, parking facilities, or paths and ramps for wheelchair use will strip much-needed RULWA immunity from otherwise protected land. A bill introduced in the state Senate in the late 1990s attempted to clarify that public access improvements would not affect immunity under the Act, but the legislation was not successful.

FAILURE TO WARN

As noted above, although negligence liability is negated by the Act, a landowner remains liable to recreational users for "willful or malicious failure to guard or warn" against a dangerous condition. To determine whether an owner's behavior was willful, courts will look at two things: whether the owner had actual knowledge of the threat (e.g., was there a prior accident in that same spot); and whether the danger would be obvious to an entrant upon the land. If the threat is obvious, recreational users are considered to be put on notice, which precludes liability on the part of the landowner. In a recent drowning case, for example, landowner Pennsylvania Power & Light Company

claimed immunity under RULWA. The judge, however, sent to the jury the question of whether PP&L was willful in not posting warning signs. A previous tubing accident had occurred in the same location, and there was testimony that the dangerous rapid where the drowning occurred was not visible to people tubing upstream (Rivera v. Pennsylvania Power & Light Co. (Pa. Superior Ct. 2003)).

GOVERNMENTAL IMMUNITY

Interestingly, Pennsylvania's governmental immunity statutes, the Tort Claims and Sovereign Immunity Acts, shield municipalities and Commonwealth agencies from claims of willful misconduct. Liability only may be imposed upon these entities for their negligent acts. But, as noted above, where an injury occurs on "land" within the meaning of RULWA, the law shields landowners from negligence suits. In essence, public agencies are granted complete immunity for many recreational injuries. (See Lory v. City of Philadelphia (Pa. Supreme Ct. 1996)(city immune for both its negligent maintenance of recreational lands and its willful failure to guard or warn of hazards on that property)).

RECREATIONAL PURPOSE; PUBLIC ACCESS

Though not all recreational land is covered by the Act, the law's definition of "recreational purpose" is broad enough to include almost any reason for entering onto undeveloped land, from hiking to water sports to motorbiking. (See Commonwealth of Pa. v. Auresto (Pa. Supreme Ct. 1986)(RULWA covers snowmobile injury)). This is true even if the landowner has not expressly invited or permitted the public to enter the property. However, where the land is open only to selected people rather than to the public in general, this will weigh against RULWA immunity. (See Burke v. Brace (Monroe Cty. Ct. of Common Pleas 2000)(lake located in a subdivision and open only to homeowner association members and guests is not covered by RULWA)).

NO USER FEE

Finally, charging recreational users a fee (which is different than accepting payment for an easement) takes the property out from under the Act's protection.

Copies of this fact sheet may be obtained from:

PA Department of Conservation and Natural Resources
Bureau of Recreation and Conservation
Rachel Carson State Office Building
P.O. Box 8475
Harrisburg, PA 17105-8475
Telephone: (717) 787-7672
Fax: (717) 772-4363
www.dcnr.state.pa.us





Limerick Township Greenways and Trail Network Plan

Meeting with PECO

SC#: 11044.10

Date / Time: Tuesday, November 27, 2012 / 10:00 AM

Location: Limerick Municipal Building

In Attendance:

Diana Gaiser – Real Estate Specialist, PECO
Suzanne S. Ryan – Regional External Affairs Manager, PECO
Justin Keller, Simone Collins (SC)
Dan Kerr, Limerick Township

Summary:

The consultants and representatives from PECO Energy reviewed the draft trail alignment – route 11 – proposed within the PECO right-of-way. Representatives from PECO provided valuable insight regarding the process for establishing trails within their right-of-way.

Meeting Notes:

1. PECO owns the right-of-way along proposed trail route 11, but some adjacent parcels have existing leases of the PECO right-of-way. Most leases are for agriculture or recreation uses. One example mentioned was the West Mont Soccer Association lease for soccer fields within PECO right-of-way. It was noted that some of the leases date back to the 60s or 70s and may not be active. An in-depth evaluation property review (EPR) by PECO will be needed to identify active leases prior to developing construction documents for planned trail segments.
2. Parcels with active leases will have to be renegotiated with willing leasees to allow trail uses within the PECO right-of-way.
3. The following is a general outline of the PECO review process required prior to an easement agreement and construction of trail facilities. The PECO review typically takes 3-4 months or longer.
 - A detailed plan is prepared showing the proposed trail alignment and construction methods and details.
 - The plan is submitted to PECO for an EPR.
 - Assuming there are no conflicts with existing leases, PECO forwards the plan to eight PECO engineering groups for their review and comment.
 - Once plans are revised to the satisfaction of the reviewers, and previous lease agreements are rectified, a lease agreement between PECO and the Township is executed.

4. PECO typically gives discounts for municipal leases, however the potential for future land appreciation is factored into the lease amount.
5. PECO will also examine future growth prospects for the utility corridor when making a decision to grant a lease for a trail use.
6. It was estimated that the annual lease fee for the proposed 3.8-mile section (Route 11) within the PECO right-of-way is approximately \$3,000. PECO is willing to allow lease terms of up to 25 years in-line with requirements for DCNR grants and other public funding sources.
7. PECO requires the licensees to conduct the following maintenance responsibilities for trails within their right-of-way. The licensee is responsible for policing and maintaining the trail and all areas adjoining the trail. Maintenance items include picking up trash left from the public. The licensee is not required to mow the entire width of the right of way. PECO has a Vegetation Management cycle that includes mowing the PECO right of way. PECO does not deviate from this maintenance schedule and PECO will not maintain it other than at the scheduled time. Therefore, the municipality may be responsible for periodic mowing to maintain a clear trail shoulder.
8. PECO allows a variety of trail construction methods and pavement surfaces within their right-of-way. The construction methods and trail surfaces are subject to detailed review by all PECO engineering groups for conflicts with underground utilities such as ducts, pipelines, retention basins, etc. and clearance to towers and overhead wires.
9. It was noted that a 36" water line supplying the Limerick Nuclear Generating Station is in conveyed along PECO's right-of-way in Limerick Township. Proposed trail plans should depict the location of the water line relative to the location of the proposed trail. Trail alignments in vicinity of the water line will have to be reviewed and approved, not only by PECO but also by Exelon Generation.
10. PECO representatives distributed the following documents outlining procedures and specifications for a trail licensing agreement:
 - Application for Licensing PECO Energy Company Property
 - Specifications and Conditions for Working in the Vicinity of Electrical Transmission Lines of PECO and its Subsidiaries
 - Information Required to Evaluate Proposed Transmission Line Right-of-Way Secondary Uses of PECO and its Subsidiaries
 - General Conditions Regulating Approved Secondary Uses for Transmission Line Rights-of-Way of PECO and its Subsidiaries.

Respectfully submitted,

Simone Collins
Landscape Architecture



Justin M. Keller
Project Manager

APPLICATION FOR LICENSING
PECO ENERGY COMPANY PROPERTY

DATE: _____ APPLICANT'S PHONE: _____

APPLICANT'S NAME: _____

ADDRESS: _____

DESCRIBE REQUEST: _____

LOCATION: _____

(Street, County, Township, etc.)

PROCESSING FEE: \$500.00 (Payable to PECO Energy Company)

PECO ENERGY CONTACT: Diana Gaiser PHONE: 215-841-5382

FILE: _____ MAP NO.: _____

APPLICANT'S SIGNATURE(s): _____

INSTRUCTIONS

- (1) Read entire Application and sign both copies.
- (2) Draw plan showing the area you would like to license and include the necessary information as shown on example.
- (3) Return one signed copy of this Application along with your plan and processing fee and mail to:

PECO Energy Company
Real Estate & Facilities
2301 Market Street, N3-3
Philadelphia, PA 19101
Attention: Diana Gaiser

GENERAL INFORMATION

- (1) Upon receipt of this completed Application and the processing fee, we will process your request for license and will contact you as soon as possible.
- (2) Our Annual Fees vary based on the use requested; your contact will discuss these fees with you.
- (3) Fences and outdoor sheds are prohibited on PECO Energy Company property unless written consent is first obtained from PECO Energy Company.
- (4) Unacceptable Uses of PECO Energy Company Property:

4.1 All motor powered recreational vehicles including:

- (a) Mini-bikes
- (b) Dune Buggies
- (c) Motorcycles
- (d) Go-carts
- (e) Drag Racing
- (f) Snowmobiles
- (g) All Terrain Vehicles

4.2 Swimming Pools

4.3 Hunting or target shooting

4.4 Kennels

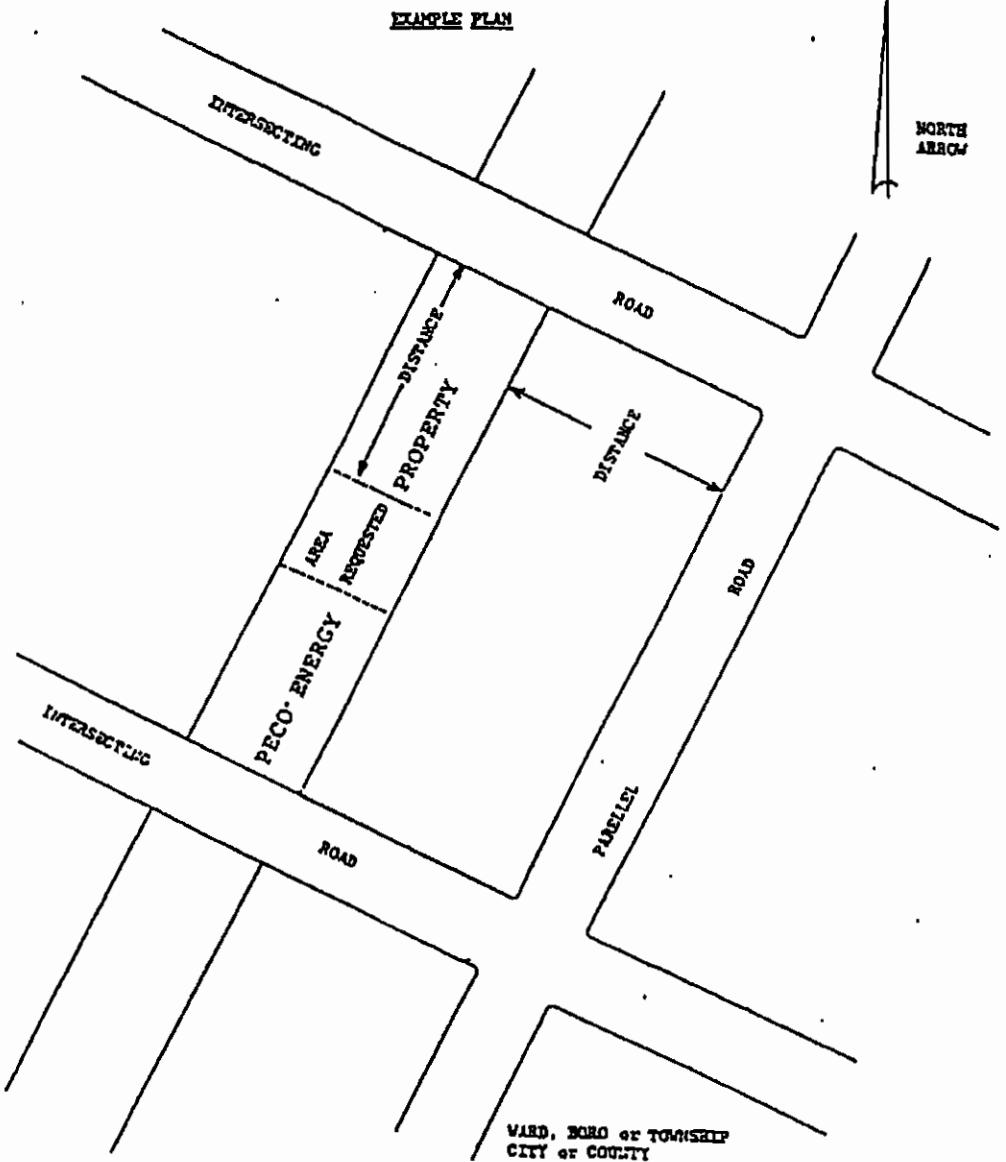
4.5 Storage or use of explosives, hazardous materials, or combustible materials

4.6 Junk Yards

4.7 Landfills

4.8 Gasoline pumps and/or storage tanks

4.9 Retention Basins



PLEASE INCLUDE THE FOLLOWING:

1. North Arrow
2. Two (2) Intersecting Roads with Names
3. One (1) Parallel Road with Name
4. PECO Energy Property
5. Ward, Borough or Township
6. City or County
7. Area Requested
8. Approximate Distances

**CONDITIONS FOR WORKING IN THE VICINITY OF
ELECTRIC TRANSMISSION LINES OF
PECO AND ITS SUBSIDIARIES**

CONTACT WITH POWER LINES CAN RESULT IN DEATH OR SERIOUS BURNS

**CALL PECO AT 610-648-7926 or 7913 BEFORE WORKING IN THE
VICINITY OF PECO ELECTRIC TRANSMISSION LINES**

1 DEFINITIONS: As used in this Standard:

- 1.1 PECO means PECO and its subsidiaries.
- 1.2 Contractor means natural person, firm, business association, company, partnership, corporation, tenant, lessee, grantee or licensee who or which is controlling or performing the job or activity that necessitates the approval and notification required by this standard.
- 1.3 In the vicinity of PECO electric transmission lines means construction or other work activities on or adjacent to rights-of-way or easements that contain PECO electric transmission lines, including but not limited to any use of cranes, booms, hoists, ladders or other equipment or items that might come within the clearance distances set forth in Table I, below.

TABLE I
Clearance Distance to Transmission Lines

<u>Nominal Operating Voltage</u>	<u>PECO Recommended Distance</u>		<u>OSHA (1926.1408) Regulatory Distance</u>		
	<u>(volts)</u>	<u>(feet)</u>	<u>(meters)</u>	<u>(feet)</u>	<u>(meters)</u>
500,000	35	10.7	25	7.7	
230,000	25	7.7	20	6.1	
138,000	20	6.1	15	4.6	
69,000	15	4.6	15	4.6	
34,000 and below	12	3.7	10	3	

2 APPROVAL: All contractors engaged in construction or other work activities on PECO rights-of-way must obtain the specific advance written approval of PECO Real Estate Department, 2301 Market Street, Philadelphia, Pa. 19101, Telephone (215) 841-5471.

**CONDITIONS FOR WORKING IN THE VICINITY OF
ELECTRIC TRANSMISSION LINES OF
PECO AND ITS SUBSIDIARIES
ELECTRIC CONSTRUCTION STANDARDS**

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- 3 **CONTRACTOR'S DUTY AND RESPONSIBILITY:** It is the contractor's duty and responsibility to ensure that all construction or other work activities in the vicinity of PECO electric transmission lines shall be performed in accordance with the latest applicable federal, state and local statutes and regulations governing the safe operation of cranes, booms, hoists, ladders or other equipment and safe work practices of personnel in the vicinity of electric transmission lines.
- 4 **RESPONSIBILITY FOR SUB-CONTRACTORS:** The prime contractor shall be responsible for supplying copies of the S-7070 to all sub-contractors and determining that the sub-contractors are familiar with the information contained therein.
- 5 **NOTIFICATION:** In addition to the advance approval required in paragraph 2, the contractor shall contact PECO in accordance with the following schedule:
 - 5.1 As soon as possible, but no less than thirty (30) calendar days before construction or other work activities are to start, if at any time any construction or work activities may or could take place in the vicinity of PECO electric transmission lines, the contractor shall contact PECO New Business Group (800-841-4141) and Transmission and Substations OHT Supervisor, Overhead Transmission Center, 1040 Swedesford Road, Berwyn, Pa. 19312, Telephone 610-648-7926 or 610-648-7913. After this notification, PECO will review the project and coordinate with the contractor on what precautionary safety measures, if any, are appropriate: If transmission line outages are required, the contractor and representatives of the T&S will work together to develop a tentative schedule.
 - 5.2 The contractor shall also contact the T&S OHT Supervisor at 610-648-7926 or 7913 at least ten (10) working days before construction or other work activity is to begin to confirm scheduling and arrangements.
 - 5.3 If at any time during construction or other work activities, a previously unanticipated need for equipment or personnel in the vicinity of PECO electric transmission lines occurs, the contractor shall immediately contact the OHT Supervisor at 610-648-7926 or 7913. Construction or other work activities in the vicinity of PECO transmission lines without prior notice to PECO in accordance with paragraphs 5.1 and 5.2 is potentially dangerous and is absolutely forbidden.
 - 5.4 In addition to electric transmission lines, PECO rights-of-way and easements may also contain distribution lines. Contractor shall treat all overhead power lines as energized and potentially dangerous.

**CONDITIONS FOR WORKING IN THE VICINITY OF
ELECTRIC TRANSMISSION LINES OF
PECO AND ITS SUBSIDIARIES
ELECTRIC CONSTRUCTION STANDARDS**

Page 1 of 3 Revised 5/2011

Contractor shall notify PECO at 610-648-7926 or 7913 if at any time any construction or other work activities may or could take place in the vicinity of any overhead power lines.

5.5 In the event of any contact with PECO facilities, the contractor shall call the PECO System Operations at 215-841-5144 as soon as possible.

6 **OUTAGES:**

6.1 PECO shall determine the available time periods for line outages in the event de-energizing conductors is necessary. If the contractor insists on a specific day or time for an outage which results in the use of inefficient generation, the contractor shall reimburse PECO for the additional generating costs, as determined by PECO System Operations Division.

6.2 If an emergency occurs on the PECO system during a scheduled line outage period and that line is required to maintain system integrity, the contractor shall, within one hour, make the transmission line available for PECO's use and shall cease work within the vicinity of the line.

7 **REIMBURSEMENT BY CONTRACTOR:** PECO shall be reimbursed by the contractor for all costs and expenses incurred in implementing any precautionary safety measures.

8 **BLASTING:** No blasting shall be permitted in the vicinity of transmission line facilities without specific advance written approval by PECO. Notification of intent to blast shall be made in accordance with paragraph 5.2.

9 **EXCAVATIONS:**

9.1 No one shall excavate closer than 35 feet to PECO transmission structures or anchors without specific advance written approval by PECO. Notification of intent to excavate shall be made in accordance with paragraphs 5.1 and 5.2.

9.2 Contractors shall comply with the provisions of the Pennsylvania or Maryland One-Call Systems. In Pennsylvania, call 1-800-242-1776. In Maryland, call 1-800-257-7777.

**CONDITIONS FOR WORKING IN THE VICINITY OF
ELECTRIC TRANSMISSION LINES OF
PECO AND ITS SUBSIDIARIES
ELECTRIC CONSTRUCTION STANDARDS**

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- 10 **GROUNDING SYSTEM:** The contractor shall notify the OHT Supervisor in the event he/she or any subcontractor uncovers or destroys any transmission line grounding leads. The repairs to this equipment shall be made by PECO personnel at the contractor's expense. Contractors and their personnel shall not touch, handle or attempt to repair any exposed or severed grounding leads.
- 11 **STORAGE:** No buildings, storage sheds, trailers, combustible or hazardous materials shall be placed or stored under a transmission line conductor or within 50 feet of a structure.
- 12 **CLEAN-UP OPERATIONS:** After completing construction, the contractor shall remove all unused material and debris, re-establish all roads and trails and return the right-of-way to its original condition within thirty (30) calendar days of work completion. The contractor shall notify PECO at the address described in paragraph 5.1 upon completion of the clean-up operations so that PECO may arrange an inspection to assure compliance with these requirements.

**CONDITIONS FOR WORKING IN THE VICINITY OF
ELECTRIC TRANSMISSION LINES OF
PECO AND ITS SUBSIDIARIES
ELECTRIC CONSTRUCTION STANDARDS**

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INFORMATION REQUIRED TO EVALUATE PROPOSED TRANSMISSION LINE RIGHT-OF-WAYS SECONDARY USES OF PECO AND ITS SUBSIDIARIES

PECO considers proposed secondary uses of transmission line rights-of-way in accordance with its electric construction standards S-7072, "Secondary Uses for Rights-of-Way Along Electric Transmission Lines of PECO and its Subsidiaries" and S-7074, "General Conditions Regulating Approved Secondary Uses for Transmission Line Rights-of-Way of PECO and Its Subsidiaries" respectively. In order to properly evaluate these proposed secondary uses, PECO requires that certain information be submitted to its Real Estate Department as follows:

1.0 PRELIMINARY PLANS

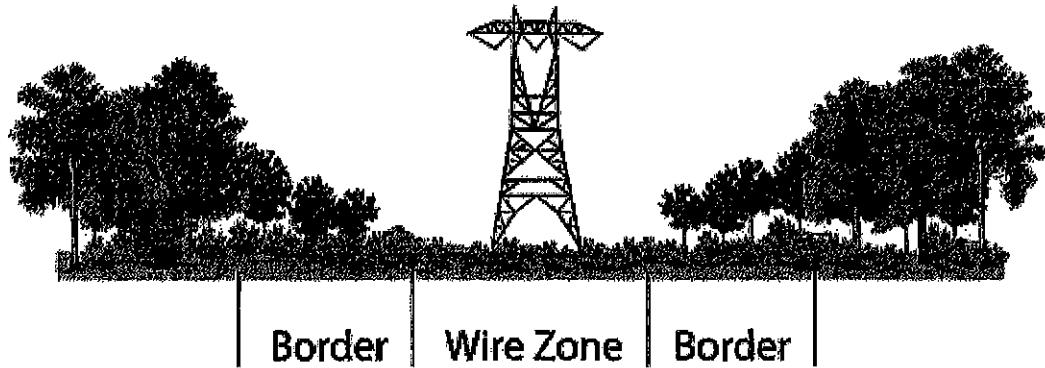
PECO will accept for review and comment a preliminary sketch or concept plan prepared in advance of formal drawings for the purpose of determining the feasibility of a particular right-of-way use. This plan shall indicate the proposed use and general location in relation to PECO's facilities. Six (6) copies of this preliminary report shall be submitted to PECO Real Estate Department, 2301 Market Street, Philadelphia, PA 19101.

2.0 FINAL DRAWINGS - Submission of the final drawings shall be required before PECO will consider granting final approval of the project and before any work may begin on PECO property. Six (6) copies of the final drawings containing the following information shall be submitted for approval to the PECO Real Estate Department:

- 2.1** Location of all PECO transmission and distribution structures, including identification numbers, poles, guys manholes, and all underground facilities.
- 2.2** Grade elevations at the base of all PECO facilities.
- 2.3** Proposed road and parking lot details including location, type of construction, grade elevations, drainage plans, and the location of any curbs, sidewalks or protective barriers.
- 2.4** The location and height of all proposed street lights.
- 2.5** Wherever necessary, include both existing and final grades on the plans.
- 2.6** Where plantings are proposed, the location, the height above final grade at maturity, the number and the species shall be specified.

SECONDARY USES FOR RIGHTS-OF-WAY ALONG ELECTRIC TRANSMISSION LINES OF PECO AND ITS SUBSIDIARIES ELECTRIC CONSTRUCTION STANDARDS

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- 2.7 The diagram above provides guidance for planting within the electric transmission right-of-way. Grasses and herbaceous plants are permitted in the wire zone. Trees may not be planted in the wire zone. Small growing trees or shrubs may be permitted in the border zone of the right-of-way.
- 2.8 The location, size, and, depth of all proposed underground facilities such as water and sewer lines shall be specified.
- 2.9 All plans shall be drawn to a suitable scale and elevations shall be referenced to U.S. Coast & Geodetic datum or other datum acceptable to PECO.

3.0 SAFETY - All plans and drawings, preliminary and final, involving work in the vicinity of PECO electric lines must include the following:

CONTACT WITH POWER LINES CAN RESULT IN DEATH OR SERIOUS BURNS. TREAT ALL OVERHEAD POWER LINES AS ENERGIZED AND POTENTIALLY DANGEROUS. All contractors and subcontractors must obtain copies of PECO Energy Electric Construction Standard S-7070, "Conditions for Working In the Vicinity of Electric Transmission Lines of PECO and Its Subsidiaries" and comply with its provisions.

**SECONDARY USES FOR RIGHTS-OF-WAY ALONG
ELECTRIC TRANSMISSION LINES OF
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ELECTRIC CONSTRUCTION STANDARDS**

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4.0 REFERENCES

4.1 PECO Construction Standards

- 4.1.1** S-7070: "Conditions for Working in the Vicinity of Electric Transmission Lines of PECO and Its Subsidiaries"
- 4.1.2** S-7072: "Secondary Uses for Rights-of-Way along Electric Transmission Lines of PECO and Its Subsidiaries"
- 4.1.3** S-7074: "General Conditions Regulating Approved Secondary Uses for Transmission Line Rights-of-Way of PECO and its Subsidiaries."

**SECONDARY USES FOR RIGHTS-OF-WAY ALONG
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PECO

S-7073

GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES FOR TRANSMISSION LINE RIGHTS-OF-WAY OF PECO AND ITS SUBSIDIARIES

CONTACT WITH POWER LINES CAN RESULT IN DEATH OR SERIOUS BURNS

**CALL PECO AT 610-648-7926 OR 610-648-7913 BEFORE WORKING IN THE
VICINITY OF PECO ELECTRIC TRANSMISSION LINES**

The following GENERAL CONDITIONS regulate approved secondary uses of PECO transmission line rights-of-way, whether owned in fee or controlled by easement. The acceptable non-transmission line uses are summarized in PECO Electric Construction Standard S-7072, "Secondary Uses for Rights-of-Way Along Electric Transmission Lines of PECO and Its Subsidiaries."

1.0 UNDERSTANDING

- 1.1** User understands that PECO's business includes construction, installation, maintenance, operation and use of structures, fixtures, facilities and instrumentation, with appurtenances, which now exist or which may hereafter be placed on the right-of-way, which are used or useful for the generation, conversion, transmission or distribution of electricity, or gas or telecommunications services.
- 1.2** User agrees to comply with all requirements of any of the constituted public authorities, and with the terms of any federal or state statute or local ordinance or regulation applicable to the use of the right-of-way, and agrees to indemnify and hold PECO harmless from penalties, fines, costs or damages resulting from User's failure to do so.
- 1.3** User understands that PECO, its successors and assigns, shall have the right to continue to use its rights-of-way for the purposes listed in paragraph 1.1 hereof. PECO reserves the right to require User to relocate or remove any installations, improvements, or plantings. Any relocation or removal shall be accomplished in accordance with the terms and conditions of User's written lease agreement, if applicable, or in accordance with terms and conditions specified by PECO.

2.0 APPROVAL

All proposed secondary uses of PECO rights-of-way shall be subject to the prior written approval of the PECO Real Estate Department, 2301 Market Street, Philadelphia, PA 19101, Telephone (215) 841-5471. All related notifications, submissions and requests for approval, unless otherwise specified, shall be directed to the PECO Real Estate Department.

GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES FOR TRANSMISSION LINE RIGHT-OF-WAY OF PECO AND ITS SUBSIDIARIES

ELECTRIC CONSTRUCTION STANDARDS

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S-7074

3.0 SAFETY AND CLEARANCES

CONTACT WITH POWER LINES CAN RESULT IN DEATH OR SERIOUS BURNS. User shall treat all overhead power lines as energized and potentially dangerous. If at any time, construction or other work activities in the vicinity of PECO transmission lines may occur, User and all contractors and subcontractors must obtain from the PECO Real Estate Department the current version of PECO Electric Construction Standard S-7070, "Conditions for Working in the Vicinity of Electric Transmission Lines of PECO and Its Subsidiaries" and must comply with its provisions. **Construction or other work activities in the vicinity of PECO transmission lines without prior notice to PECO in accordance with the S-7070 is potentially dangerous and is absolutely forbidden.**

4.0 DRAWINGS

Prior to the start of any construction on the right-of-way, User shall submit to PECO, for its approval, plans prepared in accordance with Electric Construction Standard S-7073, "Evaluation of Proposed Transmission Line Rights-of-Way Secondary Uses."

5.0 RELOCATION

User must obtain the prior written approval of PECO Real Estate Department for any relocation of PECO facilities. Approved relocations shall be performed only by PECO or its agents at Users sole cost and expense.

6.0 INSTALLATION

- 6.1** User agrees that all construction work performed by User or its agents within the right-of-way shall be performed in accordance with accepted engineering practices. User understands that PECO may require the bonding and/or grounding of improvements to eliminate the effects of induced voltage.
- 6.2** User agrees that no charge or assessment for the installation of any underground facility shall be made or imposed upon any part of PECO's right-of-way through which any underground facility passes and User shall save PECO harmless from any such charge or assessment at User's sole cost and expense. PECO shall be permitted to connect to Users facilities without a connection charge.

**GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES
FOR TRANSMISSION LINE RIGHT-OF-WAY OF PECO AND ITS
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S-7074

7.0 EXCAVATIONS

- 7.1** There shall be no construction or excavation within 25 feet of any tower, steel pole structure, wood pole structure or guy anchor without the prior specific written approval of PECO. No construction or excavation shall be permitted in the area between a pole or structure and its associated guy wire anchor. User shall exercise care to prevent cave-ins which could disturb PECO facilities.
- 7.2** User shall comply with the provisions of the Pennsylvania or Maryland One-Call Systems. In Pennsylvania, call 1-800-242-1776. In Maryland, call 1-800-257-7777.
- 7.3** To prevent injuries, User is required to cover all open ditches at night or whenever otherwise unattended.
- 7.4** User agrees that any trenches dug during the installation or subsequent repair of underground facilities shall be properly planked to insure PECO's access across its right-of-way at all times.

8.0 IMPROVEMENTS

User, at Users sole cost and expense, shall install and maintain any public improvements required or necessary for the proposed use, such as sewer or water main extensions, curbs, sidewalks or roadway paving. User also agrees that no charge or assessment shall be made or imposed upon any part of PECO's right-of-way arising or resulting from Users improvements.

9.0 ACCESS

- 9.1** At all times, User shall provide an access route at least 16 feet wide for ingress and egress of PECO vehicles as necessary for the construction and maintenance of its structures and facilities within the right-of-way and adjacent premises, unless this provision is waived in writing by PECO.
- 9.2** When permission is granted by PECO for a highway, road or driveway to cross its right-of-way at an elevation different from the existing elevation of the right-of-way, the construction shall include a ramp from each side of the road to meet the existing right-of-way elevation. Access ramps shall be at least 16 feet wide with a maximum grade of 15%.

10.0 GATES

All fencing within the right-of-way shall include a 16 foot wide gate(s) or wire barricade(s) as described in PECO Electric Construction Standard S-7071, "Right-of-Way Fences, Gates and Barricades."

11.0 LOCKS

PECO shall have the right to install its own lock on any gates within the right-of-way. User shall provide, at its sole cost and expense, a dual/multiple locking system for this purpose.

GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES FOR TRANSMISSION LINE RIGHT-OF-WAY OF PECO AND ITS SUBSIDIARIES

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12.0 EXPLOSIVES

User shall not use or store explosives or flammable materials in any form within the right-of-way.

13.0 DRAINAGE

In order to prevent erosion or other drainage problems and to prevent dirt from being placed above any concrete tower foundations, User shall not alter the grade of the right-of-way except as approved under paragraph four hereof.

14.0 PARKING LOTS AND DRIVEWAYS

PECO shall have the right to use any driveway or parking lot located within the right-of-way without being responsible for any damage caused thereto. User shall construct driveways and parking lots to withstand the weight of vehicles which distribute 38,000 pounds per axle.

15.0 LIMITATION OF DAMAGES FOR PLANTINGS

If required by PECO, User shall remove or relocate plantings blocking access to PECO facilities within 30 days after receiving notice. If prior notice cannot be given or if such removal or relocation is not timely completed, PECO shall gain access to its facilities and compensation for damage to User, if any, shall not exceed pro rata rental for the portion of the right-of-way used by PECO for its corporate purposes.

Where plantings are installed without the prior written consent of PECO, User shall remove or relocate plantings as requested by PECO. No compensation will be paid by PECO for this work.

16.0 UNDERGROUND FACILITIES

- 16.1** The installation of any underground facilities required by User shall be completed at User's expense, in accordance with the Erosion and Sedimentation Control Regulations of the Pennsylvania Department of Environmental Resources (PA- DER) or any other environmental regulatory agency or governmental agency, and with the minimum possible damage to the ground within the PECO right-of-way.
- 16.2** Any underground installation shall meet applicable standards for minimum cover unless otherwise specified by PECO. PECO reserves the right to require greater than minimum cover. User is aware PECO intends to cross over underground facilities with vehicles generally weighing 38,000 pounds per axle, and the pipeline(s) shall be installed accordingly. PECO does not warrant that any approved or specified cover will protect the pipeline(s).

**GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES
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- 16.3 User shall furnish engineering plans of pipeline cathodic protection systems for PECO review and approval prior to installation. Cathodic protection interference tests shall be performed on the completed facility at the expense of User. User shall furnish any other information required by PECO.
- 16.4 User shall take special care to avoid leakage at pipe joints or seepage into open ditches during the construction, installation, use, maintenance, repair, renewal, removal or replacement of the pipeline(s).
 - 16.4.1 In the event of a leak or a spill involving gasoline, oil or other toxic or hazardous materials or pollutants, User agrees to satisfy all requirements specified by, PECO, the PA DER, the Environmental Protection Agency (EPA), or any environmental regulatory agency or other governmental agency for the cleanup of said leak or spill. User further agrees to assume full responsibility for the cost of the cleanup and any future liability resulting from the leak or spill.
- 16.5 All proposed pipeline or metallic communication line installations which will longitudinally occupy any transmission line right-of-way for a distance greater than 200 feet must have an inductive interference study completed at Users sole cost and expense and reviewed by PECO prior to construction of the proposed facility.
 - 16.5.1 At a minimum, inductive interference study shall include the following:
 - 16.5.1.1 Induced voltage on the proposed facility at emergency rating of each transmission line (individually) on the right-of-way.
 - 16.5.1.2 Induced voltage on the proposed facility at emergency rating of each distribution line (individually) on the right-of-way.
 - 16.5.1.3 Induced voltage on the proposed facility at emergency rating of all electric lines on the right-of-way.
 - 16.5.1.4 Induced voltage on the proposed facility during a fault (both phase to ground and three phase) on each transmission line on the right-of-way. Faults on the electric transmission lines shall be located at either end of the proposed facility to be installed on the right-of-way and at the middle of the occupation. Fault studies shall also be conducted at any additional locations specified by the PECO engineer.
 - 16.5.1.5 If the proposed facility to be installed on the right-of-way is a bare metal structure (i.e. metal pipe), User shall supply to PECO voltage gradient plots of the area around any transmission structure within 50 feet of the facility. If the voltage gradients around any electric structure increase, User, at its sole cost and expense, must install mitigation prior to the proposed pipeline installation.

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- 16.5.2 Electric transmission and distribution facilities will be added or removed from the right-of-way from time to time. Before PECO adds or removes facilities, the owners of any pipeline or metallic communication line on the PECO right-of-way shall be responsible for completing an initial or revised inductive interference study, submitting it to PECO for review and installing required mitigation, including on PECO's facilities, and at Users sole cost and expense, in a timely manner.
- 16.5.3 User shall maintain all inductive interference mitigation systems in good operating condition and check for proper operation once each year.

17.0 MARKINGS FOR UNDERGROUND FACILITIES

In order to minimize the number of future dig-ins, User shall be required, as part of any underground installation, to install and maintain at Users expense, permanent markers to identify the location of the underground facility. Pipelines and other similar installations shall be marked where the line enters and exits the right-of-way, at intermediate points along straight runs of pipe and at all angle points where the line changes direction.

18.0 BARRIERS

User shall take precautions to protect PECO structures and facilities, including but not limited to protective barriers. The location of any protective barriers shall be delineated on plans prepared by User and approved by PECO.

19.0 DAMAGE TO PECO FACILITIES

User shall be responsible for any damage caused to PECO facilities and shall be required to reimburse PECO for the cost of repairing the damage. All such damage shall be promptly reported to PECO System Operations, 800-841-4141.

20.0 OUTDOOR ADVERTISING

User shall furnish plans for PECO's prior approval. Plans must show both horizontal and vertical views of Users proposed structure(s) in relationship to PECO facilities.

21.0 INSPECTIONS

User understands and agrees that PECO or its authorized agents have the right to enter the right-of-way at any time for any corporate purpose.

GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES FOR TRANSMISSION LINE RIGHT-OF-WAY OF PECO AND ITS SUBSIDIARIES

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22.0 RESTORATION OF PROPERTY

User agrees upon completion of any work done to: (1) restore the ground to a condition at least equal to that existing prior to such installation, including but not limited to back filling, properly tamping and reseeding the surface of the ground above the facilities and, if necessary, refilling and reseeding following any subsequent settlement of the ground in order to maintain the drainage pattern existing prior to such installation; and (2) repair and put into good condition to the satisfaction of PECO, any and all fences and other improvements injured thereby, and landscaping damaged during the course of users work.

23.0 REFERENCES

23.1 PECO Electric Construction Standards

- 23.1.1** S-7070 - "Conditions For Working in the Vicinity of Electric Transmission Lines of PECO Energy Company and Its Subsidiaries"
- 23.1.2** S-7071 - "Rights-of-Way Fences, Gates and Wire Barricades of PECO and Its Subsidiaries"
- 23.1.3** S-7072 - "Secondary Uses For Rights-of-Way along Electric Transmission Lines of PECO and Its Subsidiaries"
- 23.1.4** S-7073 - "Information Required to Evaluate Proposed Transmission Line Rights-of-Way Secondary Uses of PECO and Its Subsidiaries"

GENERAL CONDITIONS REGULATING APPROVED SECONDARY USES FOR TRANSMISSION LINE RIGHT-OF-WAY OF PECO AND ITS SUBSIDIARIES

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PECO

S-7074

August 8, 2013

Daniel Kerr
Limerick Township
646 West Ridge Pike
Limerick, PA 19468

Mr. Kerr,

This letter is regarding the proposed placement of trails under the PECO powerlines between Sanatoga Rd. and Airport Rd. We have property on both sides of the PECO powerlines, and under contract, my family has the legal right to maintain and farm the land. A public trail would infringe upon this right. We are strongly opposed to trails in this Township.

Sincerely,



Andrew Piasecki
3345 Sanatoga Rd.
Pottstown, PA 19464
610-495-5521