

## **v. Inventory and Methodology**

This section explains the process and inventory information that guided the development of the plan described above. This information is the basis for the study's design assumptions and recommendations. The information can be used as a resource by the Township and design professionals when working on the next phases of implementation. The information below contains:

- Brief descriptions of existing plans and policies that provide the basis for this plan;
- Field survey methodology and findings;
- A description of the public meetings and workshops held to gather input from Township residents;
- A discussion of likely trail network users and anticipated user demand; and
- An understanding of the potential legal issues involved.

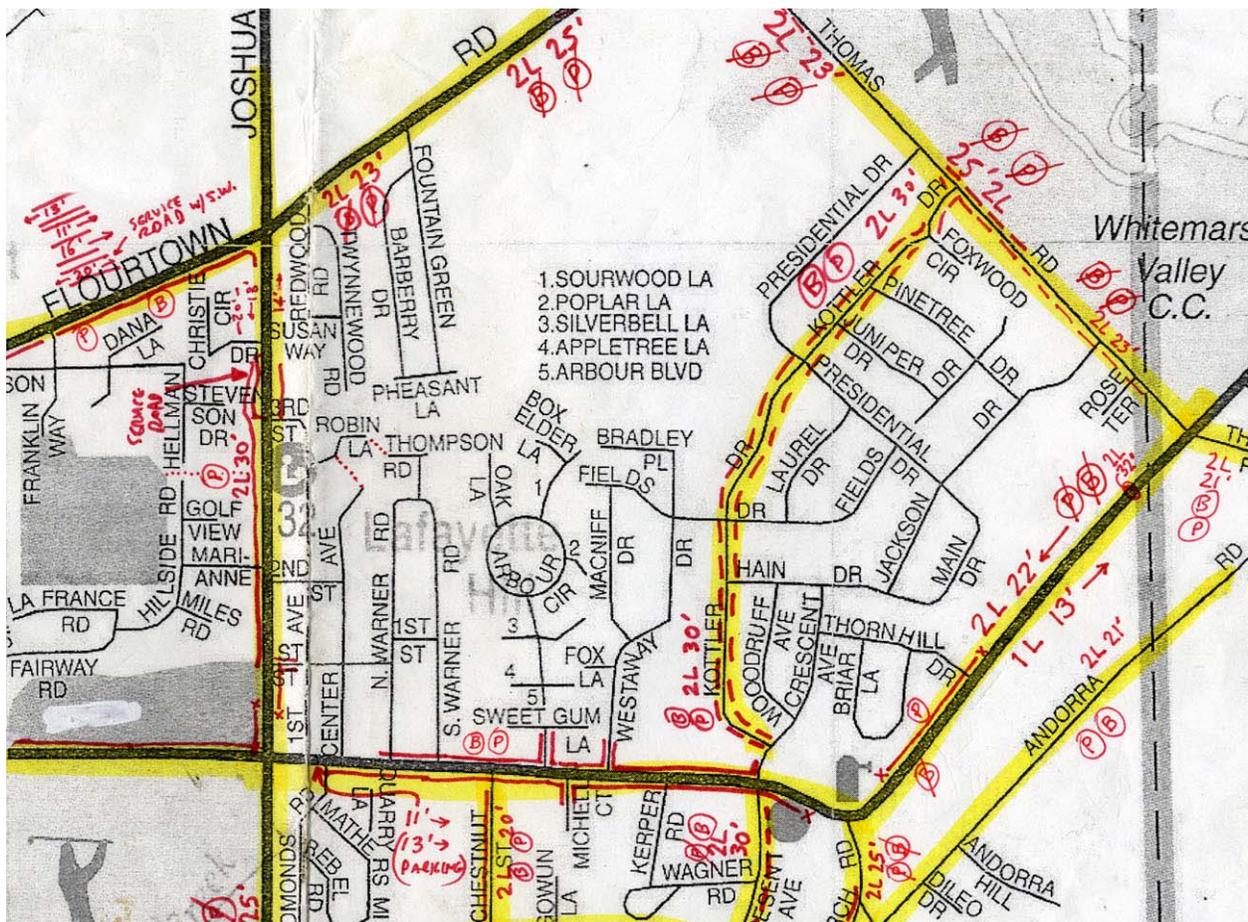
### **A. Existing Plans and Reports**

A variety of existing plans and reports were consulted in the preparation of this plan and in the considered in the planning process that led to this plan. These reports include:

- **Whitemarsh Township Comprehensive Plan (adopted November 20, 2003)**  
The Township's Comprehensive Plan is clear about the need for improved bicycle and pedestrian access throughout the Township. The Plan stresses both the transportation related advantages of a fully realized bicycle / pedestrian network and also the positive quality of life implications, both in its Transportation and its Open Space and Natural Resources chapters.
- **Whitemarsh Township Open Space Plan (adopted December 21, 2006)**  
This plan set forth priorities for protecting undeveloped tracts in the Township using a variety of strategies, including the implementation of new zoning and land use regulations, development of environmental maps, forming of strategic partnerships, fostering of public education, implementation of state-of-the art land stewardship policies, and acquisition of undeveloped land.
- **Whitemarsh Township Greenway Plan (adopted August 16, 2007)**  
This plan defines the goals of a Greenway Network as including natural resource protection, providing recreation opportunities, historic and cultural resources preservation, and providing educational opportunities. The plan proposes an Urban Greenway Network whose layout is closely matched by the trail network set forth in this report.
- **Whitemarsh Township Parks and Recreation Plan (adopted March 22, 2007)**  
As part of its thorough analysis of the Township's recreation facilities and their potentials, current and proposed trails are inventoried and recommendations made. Specific recommendations include the construction of the Silt Basin Trail through Kline Park, and the Kirby Trail from Whitemarsh Elementary School through The Hill at Whitemarsh.
- **Making Butler Pike Pedestrian Friendly (Delaware Valley Regional Planning Commission, July 2001)**  
In response to a recommendation by the Montgomery County Planning Commission, Delaware Valley Regional Planning Commission staff studied the Butler Pike Corridor to determine ways in which the walking environment may be improved. The recommendations intend to make the area served by the Butler Pike corridor a more livable community, by making the area safer and more appealing for travel on foot. In summary, continuous sidewalk along Butler Pike was proposed, reaching from North Lane near Conshohocken Borough to Militia Hill Road in Cold Point.

## B. Field Survey

The project team conducted a township-wide field survey to document the existing conditions of the township's roadways system – i.e. widths of all thru-roadways, location of existing sidewalks and on-street parking – and analyzed “in-the-field” the potential conditions for new bike routes/lanes, sidewalks/sidepaths, and trails. The map (an excerpt of which is shown below) acted as the base data for the network plan. The study focused on roadways which lead somewhere or connect to other through roadways. The Township Comprehensive Plan defines the Township's major roadways as expressways, arterials (principal and minor), collectors (major and minor), and local roads. The roads surveyed in this study included all of the arterial and collector roadways and several of the local roads which connect other roads and can serve a ‘through trip’ function. Roadways that do not connect to another thru-roadway were considered “quiet neighborhood streets” and were not surveyed. The project team recorded the following information, as shown in this portion of the survey map. It should be noted that not all measurements are present on this map, because data was often collected in successive trips.



### FIELD SURVEY

Existing Conditions	Demarcation	Description
Existing Roadways	2L, 27'	Where 2L = number of travel lanes; 27' = width in feet.
Existing Parking	Parking	As noted
Existing Sidewalks	Solid red line	Sidewalk exists on side of street as shown.
Existing Trails	Dotted red line	Off-road trail exists as shown
Existing “Bench”	Dashed red line	Areas along sides of roadways that have potential to become a sidewalk/sidepath
Pedestrian Rating	(P) or (P)	Roadway rated “Pedestrian Friendly” or “Pedestrian Un-friendly”

## C. Public and Township Meetings

In addition to regular steering committee meetings, two public meetings were held for all interested Township residents. Both meetings were held at the Whitmarsh Township building. The meetings were:

- Ideas Workshop, May 9th, 2007

This public "ideas" open workshop provided residents with an opportunity to share ideas and envision what a bicycle and pedestrian path system in Whitmarsh Township could be. 6,200 postcards were mailed, inviting the general public, business and civic associations, community organizations, religious institutions, schools and legislators to attend. This workshop was held to assist the project team in understanding resident's personal needs, concerns, ideas, and gathering other thoughts about a possible path/trail system for Whitmarsh and to gather this information before development of the trail plan had begun. In this way, the resident's concerns could be taken into account and would be a key driving force in the development of the initial drafts of the plan. The attendees were asked to mark up a map of Whitmarsh based on the following questions:

**1- Where and how do you want to go?** Residents drew lines on a base map linking starting and ending points of trips they make, or would like to make on foot, bicycle, horse or roller blades.

**2- What are your destinations?** Residents marked their origins/destinations with a dot, and capital letters as follows:

**H** = Home   **O** = Office Bldg   **C** = Commercial/Retail   **R** = Restaurant   **W** = House of Worship  
**S** = School   **M** = Musuem/Other Cultural and Arts Institutions   **P** = Park/Recreation Site   **T** = Transit Stop

**3- What obstacles do you face in walking or bicycling?** With a zig-zag red line, residents marked and noted problems such as difficult crossings, sidewalks which end suddenly, and unsafe roads.

**4- Existing off-road trails you know.** To help the project team plan a possible system, residents marked in black existing off-road trails they knew that make travel possible on foot or horseback.

Approximately 37 residents attended this meeting and provided input to the study committee.

- Design Workshop, September 17, 2007

Once a first draft of a trail network was developed by the project team and the steering committee, the general public was invited to attend a design workshop to see the draft network and offer suggestions relating to it. This workshop provided the public with a hands-on opportunity to review and evaluate the initial findings and recommendations of the bicycle/pedestrian path study.

The project team recapped the findings from the previous "Ideas" Workshop. The team presented the Draft Plan and then took comments and questions from the attendees. Numerous suggestions for specific improvements were mentioned and various questions were asked. Out of over 50 attendees, few negative comments were heard, mostly dealing with questions of the impact of trails on privacy, security, taxes, and littering. The vast majority of the comments were positive toward the plan, with many specific suggestions for which projects should be the highest priority and additional ways to improve the plan.

Approximately 55 residents attended this meeting, and provided their input to the study committee.

## D. Usage Feasibility

As discussed above, Whitemarsh Township is a diverse suburban community with a mix of residential development types ranging from relatively high density multi-family complexes near Conshohocken and Lafayette Hill to relatively dense single family neighborhoods also in proximity to Lafayette Hill, to large-lot single-family properties and estates in the eastern part of the Township. Commercial uses in the Township are generally located in close proximity Conshohocken Borough, along Ridge and Germantown Pikes, and along Bethlehem Pike. Given the mix of housing types located throughout the Township, one can assume a mix of incomes and ages among residents. Some township residents likely depend on walking or bicycling to get to work, for shopping, and/or for running errands. Most Township residents do not depend on walking or cycling but would like to have the option available, both for transportation and for recreation.

The proposed bicycle / pedestrian plan is intended to create opportunities for walkers and cyclists from both recreational and transportation perspectives. Recreational opportunities (parks and trails) and commercial and educational facilities tend to be distributed across most of Whitemarsh Township; this plan endeavors to provide access to all.

Future developments in Whitemarsh Township should be planned in conjunction with this bike/pedestrian plan. It will be important to coordinate each change and new development with this plan to ensure that they will complement and extend the bike/pedestrian plan, achieving community connections that are part of the vision for this plan.

## E. Legal Feasibility (Ownership Status)

An excellent overview of legal feasibility, especially for trails, was written by the Brandywine Conservancy Environmental Management Center in 1997. *The Community Trails Handbook* describes the importance of the balance between Ownership, Management and Liability. This chapter takes one through the options for ownership and possession of trails, different managing agencies, Liability and Risk Management, and Recreational Use Statues (RUS) and describes the limited immunity from liability of trails. The URL for the Brandywine Conservancy is <http://www.brandywineconservancy.org/> and their other contact information is as follows:

For more information send email to [emc@brandywine.org](mailto:emc@brandywine.org), call 610-388-2700, or write to Environmental Management Center, Brandywine Conservancy, P.O. Box 141, Chadds Ford, PA 19317

The Pennsylvania Landowner Liability Act, amended in 2007, specifically encourages landowners to make lands available to the public for recreation purposes – including trails – by limiting landowners’ liability.

### Ownership Status

In general, this study did not identify particular individual landowners along any proposed routes as this is typically a task where the municipality is involved. The GIS parcel information that was provided for use in this study was not precise enough to determine clear property boundaries or ownership. This type of data is adequate for a feasibility study at the township planning level but more detailed surveys will be needed at the implementation stage. As well, right of way lines and dimensions of roadways that can be found in the GIS data are not adequate for engineering purposes, but are fine for general planning purposes. The only way to be assured that rights of way, easements, and property lines are correct is to have a field survey completed for the corridor and research property deeds, and right of way records for each segment of each route.

The following table outlines legal considerations for each type of route:

### LEGAL FEASIBILITY

Topic	BICYCLES	SIDEWALKS/PATHS	TRAILS
<b>Rights of way</b>	<ul style="list-style-type: none"> <li>All within Public Right of Way</li> </ul>	<ul style="list-style-type: none"> <li>Many in Public Right of Way</li> <li>Right of Way may need widening</li> <li>Easement could be pursued</li> </ul>	<ul style="list-style-type: none"> <li>Typically not in existing Right of way</li> <li>Highway Occupancy Permit necessary at PennDOT Intersections</li> <li>Easement best tool</li> </ul>
<b>Necessary Coordination</b>	<ul style="list-style-type: none"> <li>Township Agency</li> <li>PennDOT</li> </ul>	<ul style="list-style-type: none"> <li>Township Agency</li> <li>PennDOT</li> <li>Adjacent Landowners</li> </ul>	<ul style="list-style-type: none"> <li>Township</li> <li>PennDOT</li> <li>Landowners</li> </ul>
<b>Greatest Obstacles</b>	<ul style="list-style-type: none"> <li>Legal on all roads but Expressways</li> </ul>	<ul style="list-style-type: none"> <li>Owners may not be amenable if improvements don't sensitively relocate elements found in legal Right of Way</li> <li>Owners may not be amenable to widened R/W</li> </ul>	<ul style="list-style-type: none"> <li>Non amenable owners</li> <li>If a County or PennDOT owned trail then Eminent Domain can be used</li> </ul>
<b>Greatest Liability</b>	<ul style="list-style-type: none"> <li>Township or PennDOT if not maintained well</li> <li>Rider must be on facility designed consistent with the Rules of the Road as described in Chapter 11 of the Uniform Vehicle Code (UVC)</li> <li>Same status of liability as without bike lanes</li> </ul>	<ul style="list-style-type: none"> <li>If child walks in street then Township liability if maintained or not</li> <li>If Child walks on sidewalk then owner's liability if left not maintained</li> </ul>	<ul style="list-style-type: none"> <li>Improper maintenance</li> <li>Improper signage</li> <li>Improper design</li> <li>Limited liability available</li> </ul>

#### Recommended Acquisition Techniques

Much of the proposed network will be located within existing roadways and rights of way. This approach minimizes both impacts to private properties and impacts to adjacent natural historic and environmental landscapes. The portions of routes and trails that would require venturing beyond the existing public right of

way will necessitate interface with private properties where negotiations with private property owners will be needed.

This study recommends the use of acquisition techniques similar to the recently completed Perkiomen Trail (in Montgomery County). It is Whitemarsh Township, PennDOT or Montgomery County's responsibility to negotiate easements, rights-of-way, and set costs for necessary acquisition of land. This study cannot compare acquisition prices as this has typically been the responsibility of the governing jurisdiction. However, several of the preferred acquisition techniques that have proven mutually amenable to municipalities and property owners are described below:

### **Easement**

Municipalities across the nation have been very successful in negotiating with property owners in securing easements and rights-of-way for similar projects on both state and national levels. Easements may be drafted based upon agreements with property owners to permit conveyance of recreational facilities across private properties with limited liability to the property owner. The legal terms of easement agreements can vary based on the type and use of property as well as the proximity of historic, cultural or environmental features. Generally, easements are defined spaces that overlay existing property, zoning, and land use for the specific intent and use proposed. Very similar in nature to storm water conveyance easements, trail and recreation easements permit conveyance and allow use of public activity across a defined space within or across a property. Typically, the municipality will secure the easement in the form of a formal agreement recorded by the County in the form of a written description or legally surveyed and deeded description. Expenses incurred for easement requested by the municipality are typically covered or reimbursed by the municipality.

### **License Agreement**

Similar to easements, a municipality may determine (through negotiations with property owners) that a non-specific easement may be desired to permit location of a trail across subject properties. This type of license agreement would secure trail location and functions for a specific period of time rather than producing a permanent agreement between parties specified and recorded in the land deed.

### **Fee Simple Purchase**

Municipalities can also negotiate with property owners for outright purchase of property for public use. Following negotiations with property owners and upon determination that easement or license agreement is not amenable, land transfer through monetary purchase is possible. From the municipalities' standpoint, this is often the most costly solution given the time required to process subdivision and land development plans, prepare parcel survey and prepare and record new deeds.

### **Security and Risk Management Plan (Primarily for any off-road trails)**

**Safety and Risk Management:** Experience at other trails shows that trail owners have not experienced significant safety, crime or liability problems. Research suggests that the more heavily a trail is used, the fewer problems there will be regarding safety and risk. However, in a litigious society, the Township should take the necessary steps to provide both a safe trail for the users and to protect themselves from liability claims wherever possible.

**Safety in Design and Development:** Any facilities developed using federal money, such as Transportation Enhancement or Safe Routes to School funds, must be designed and developed in accordance with federal and state standards. As noted earlier, these include the standards of AASHTO (American Association of State Highway and Transportation Officials), and of PennDOT.

All hazardous conditions and attractive nuisances should be identified and removed where possible during the design and construction of the Trail. Those that cannot be removed should have warning signs posted.

Existing structures with safety devices that are in poor condition should be a top priority for repair or replacement.

As entrances are developed with signage, and when pamphlets and guidebooks are published, clear mention should be made that the trail or portions thereof, while open to the public, are not yet fully developed, and that users must exercise necessary care when using the trail.

**Tree Trimming for Sight Lines and Safety:** Most vehicular collisions occur at intersections, often because one or both parties did not see the other. Trees and brush should be cut back as necessary at this and other intersections where sight lines are impaired. Special attention should be paid at points where the links join roads at grade at a sharp angle.

In addition, trees adjacent to the Trail should be evaluated annually for the removal of unhealthy, dead and hazardous limbs, or entire trees.

**Maintenance:** One of the most effective ways that the managing agency can provide safe trail conditions and protection from liability is through a conscientious maintenance management system. An on-going maintenance program will help to remove trail hazards with the potential for causing accidents and injuries. The maintenance management program should include regular inspections for trail safety.

In addition to reducing trail hazards, documentation of trail maintenance activities is essential in combating possible liability claims. Through written records of good maintenance practices, the managing agency will be able to build a case against negligence accusations.

Trail managers report that professional, well-trained staffs are critical to keep trails safe and secure. Well-trained people are in the best position during the course of their normal work functions to identify and report hazards.

**Liability:** Pennsylvania's state law for the "Recreational Use of Land and Water" (68 P.S. 477-1 to 477-7) limits the liability of property owners who make their land available to the public for recreational use. Although this law does protect the managing agencies to a large extent, they still need to be concerned with this issue.

A recent case in Philadelphia challenged this law with the courts finding in favor of the plaintiff and holding the City of Philadelphia responsible for an injury. However, the decision was based upon the view that the injury resulted from a poorly maintained element of a developed recreational facility. Because this is a recent case, the impact of the case on the limitation of liability act is not known. Thus, a good risk management plan, including maintenance needs, is imperative for the Trail operating agency.

Because of the cost of liability insurance, Whitemarsh Township and PennDOT should retain ownership of the right of way that facilities are located within, with management through an agency or department such as the Parks and Recreation or Public Works Department. Public/private partnerships regarding trail ownership and management are common.

The managing agency should develop an incident reporting system to document injuries and accidents on the trail. In addition, the managing agency should develop a complaint management system. Both systems will help the trail in terms of safety management as well as public relations if the staff deals courteously and swiftly with the people involved.

**Trail Security:** While security generally increased with heightened trail use, vandalism and littering generally decrease significantly with heightened volume of users and local 'ownership' develops. The managing agency should work out cooperative agreements regarding security and protection for the trail. The local police department should determine how a facility should be patrolled within their own jurisdiction. Telephone numbers for police and emergency personnel should be posted at major access points. A trail entrance design includes easily removable bollards for access by emergency and law enforcement vehicles. These bollard "gates" should be lockable.

## **Bicycle Parking**

Currently, the relative absence of bicycle parking at many multi-family residential, recreational, and commercial locations makes bicyclist feel unwelcome. It is recommended that Whitemarsh Township encourage the provision of bicycle parking where appropriate. For example, the Township could provide additional bicycle racks at the Township Building and at Township parks. The Township could work with the Colonial School District and Montgomery County to provide bicycle parking facilities at local schools and county parks. Finally, the Township should work with developers of any future commercial or multi-family residential developments to strongly encourage the provision of bicycle parking facilities.