PILGRIM PARK TRAIL FEASIBILITY STUDY



A Section of the Darby Creek Trail Upper Darby Township, Delaware County, Pennsylvania





ACKNOWLEDGEMENTS

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PLAN OVERVIEW

PURPOSE

The purpose of this study is to enhance the quality of life by improving access to recreation in Upper Darby Township, to improve water quality by enhancing the riparian buffer along the Darby Creek, and to continue to build and expand the local and regional trail network. This study outlines a plan to extend the trail along the Darby Creek in the Township. This will involve closing trail gaps, and proposing connections to destinations both within and outside of the Township. The plan will investigate ways to connect to regional trail networks in adjacent municipalities.

STUDY GOALS

- Develop a safe alternative multi-use trail along the Darby Creek, within Upper Darby Township, connecting recreation and community activity nodes for pedestrians and cyclists.
- Connect the Pilgrim Park Trail proposed in this plan to the trail currently in the design development phase in the eastern portion of the Township and to the Haverford Heritage Trail system to the north.
- Increase the visibility and viability of businesses that cater to recreation and trail users by providing formalized access to commerce centers.
- Identify ways to increase public awareness of existing trails, development plans for future trails, connections and trail amenities.
- Engage Township departments; Leisure Services; Public Health, Public Works, Police, and Finance to contribute insight into the proposed trail system to ensure its stainability for future generations.



Informal Darby Creek Trail Route through Pilgrim Park



Tower Theatre Landmark in Upper Darby Township's Terminal Square Business District

FORMAT OF THIS STUDY

CHARACTER AND DEMOGRAPHICS

The study begins with a brief description of the physical character of Upper Darby Township, including the transportation network, available recreation opportunities, business districts and neighborhoods. This will be followed by an overview of population demographics in the Township. Past planning efforts that led to the creation of this study will be noted.

A potential demand analysis will conclude this section. Demand analysis will take into consideration the population demographics, businesses and community resources that can be accessed from the trail, as well as national and state wide recreation trends.

PHYSICAL INVENTORY

This report will analyze the trail corridor for physical features including floodplain, vegetation, utilities, difficult road crossings, bridges, and utility structures. The trail route will be divided into four easily identified geographical segments from east to west, beginning with the connection to the trail section currently in construction planning.

SEGMENT A. The eastern-most segment will begin with a connection to the Darby Creek Trail at Rosemont Avenue and will end with a connection to the Drexelbrook Community at the proposed new entrance on Bloomfield Avenue.

SEGMENT B. This segment will begin at the Drexelbrook Community entrance and will end at the Septa trolley station at the Drexeline Shopping Center. This section will include how to best route the trail corridor from Drexelbrook safely across the Septa trolley lines to the station.

SEGMENT C. The trail corridor plan will propose a route through the Drexeline Shopping Center and will explore options for navigating US Route 1. A study for the Pennsylvania Environmental Council was recently completed that looked into options for incorporating the Pilgrim Park Trail into the US Route 1 bridge replacement work, scheduled for 2020. The findings of this study will be reviewed.

SEGMENT D. The western-most section will connect the trail from US Route 1 into Pilgrim Park and onto Township owned land. The Township does not own land along US Route 1, so options for a trail corridor will be examined. In Pilgrim Park, the corridor is proposed to follow an existing sanitary sewer easement along the Darby Creek, ending at the Haverford Township border in Pilgrim Park. Connections to the Pilgrim Gardens neighborhood will be explored.

Current conditions for each trail section will be noted; including current surface material, the condition and width, and potential for handicap access. Areas that present obstacles to the creation of a trail will be highlighted and potential solutions proposed. The potential for trail amenities including signs, bicycle racks, comfort stations, and parking areas will be examined. Connections to Township resources and neighborhood businesses will be part of the existing conditions analysis.



Potential Trail Corridor area behind Drexeline Shopping Center



Graphic map of "The Circuit" 100 miles of existing and proposed trails extending from Philadelphia

LEGAL FEASIBILITY STUDY

This section of the report will review the parcels of land where the trail corridor may travel. Ownership of the parcels will be reviewed and potential conflicts noted. In cases where the land owner supports the trail, land agreement alternatives will be discussed. In cases where the land owner does not support the trail, alternative routes will be analyzed.

CONCEPT PLAN

The recommended trail route will be broken into the geographical segments previously described and will include the following recommendations for each segment:

- Trail corridor location, surface material and width, amenities, and accessibility improvements. Particular attention will be given to safety; both at street crossings, and streets where on-road travel may be a consideration. Alternative scenarios will be presented at highlighted areas where known difficulties may be encountered.
- Connections to existing trails and trail networks within the region will be examined. Connections to neighborhoods will be mapped. Any future development plans that impact the trail route will be integrated into the alternatives.

• Business and commercial parcels adjacent to or near the trail corridor will be identified on a map. Local business opportunities will be highlighted.

SECURITY AND MAINTENANCE

- Trail security measures for keeping the traveling public safe will be an important component of the final concept plan. Trail design will avoid creating areas with limited public visibility and accessible to police patrol and emergency vehicles. Lighting and signs will be recommended as part of the plan to ensure trail safety and to provide direction for users.
- Maintenance will be discussed in terms of cost to benefit. Maintenance considerations impact trail surfacing, trail shoulder treatments, riparian buffer restoration methods, as well as trail side amenities.

FINANCIAL FEASIBILITY

- Cost estimates for trail construction will be generated. Cost estimates will be based on current costs for construction of similar trail types. Alternates, as well as primary trail routes, will be estimated.
- Sources of funding for trails will be listed for continued exploration after the completion of this study.



Commerical and recreation areas near potential Pilgrim Park Trail crossing





Township Character & Demographics



A residential street in the Addingham neighborhood in Upper Darby Township



Lower Swedish Cabin Upper Darby Township

CHARACTER AND DEMOGRAPHICS

GEOGRAPHIC LOCATION AND CHARACTER

Upper Darby Township is a 7.62 square mile area, located in the south-eastern section of the state of Pennsylvania, in Delaware County. The Township has the small Penn Pines enclave, separated from the rest of the Township. Upper Darby Township shares its eastern border with Philadelphia County.

The Township sits on the edge of the Piedmont physiographic province, at an elevation slightly above the City of Philadelphia. The Piedmont lies between the Atlantic Coastal Plain and the Appalachian Mountains, and is identified by it's land character of low rolling foothills. The land in Upper Darby Township is gently rolling, at elevations ranging from 100' to 250'.

Soils are generally clay like and moderately fertile.

There are two watersheds in the Township, the Cobbs Creek Watershed and the Darby Creek Watershed. Cobbs Creek converges with the Darby Creek south of the Township. Darby Creek then joins the Delaware River in a tidal basin that is part of the John Heinz National Wildlife Refuge. Darby Creek is a CWF-MF (cold water fishery-migratory fish) stream. The creek is trout stocked, but the water quality is impaired by old stormwater and sanitary pipe direct discharges. A Watershed Conservation Plan was prepared for the Darby Creek in 2005.

The floodplain of Darby Creek extends into the Drexeline Shopping Center, a portion of which is prone to flooding. Mapping in the Physical Inventory section of this report shows the extents of the Darby Creek's 100 year floodplain.

The land in Upper Darby Township is predominately densely developed and urban in nature. Due to the extent of development, the amount of Township owned public park land is limited.

Upper Darby Township is comprised of several neighborhoods, the most well known and prosperous being the Drexel Hill neighborhood. Township residents represent multiple ethnic backgrounds.

Historical sites in Upper Darby Township include:

- Lower Swedish Cabin, a remnant from early Swedish settlers believed to have been built in 1654. The site, located along the Darby Creek, is listed on the National Register of Historic Places.
- Collen Brook Farm, located in the Aronmink neighborhood, is the former home of educator and political leader George Smith. The Upper Darby Historical Society has been working on the renovation of this home, built in the 1700's. The property is listed on the National Register of Historic Places.
- Sellers Hall was one of the first permanent homesteads in the Township, built in 1684 by Samuel Sellers. The site is near Terminal Square on the site of St. Mary's Parish. An historical marker designates the site.



A residential street in the Drexel Hill neighborhood in Upper Darby Township



PA Route 3 in the Terminal Square Business District. Upper Darby Township



Street in the Bywood Neighborhood Upper Darby Township

DEMOGRAPHICS

Upper Darby Township is Pennsylvania's sixth most populous municipality with a 2010 census population of 82,795 and 2017 projections estimated to be 82,912. These numbers indicate the population to be increasing slowly. The Township boasts the second highest population density amongst municipalities in the state, at an estimated 10,588 persons per square mile. *(Source: U.S. Department of Commerce)*

Population Age Groups



Income

(Source: US Dept. of Commerce, Quick Facts)





AVERAGE INCOME PER HOUSEHOLD

AVERAGE PER CAPITA



PERCENTAGE OF PERSONS IN POVERTY

Disabilities

(Source: US Dept. of Commerce, Quick Facts)





Route 1 Bridge - Potential trail underpass in cooperation with PennDOT as part of future bridge renovation project



Discussing trail routes and future connections at a public meeting





TRAIL USE DATA AND TRAIL BENEFITS

Trails are different from pathways, in that trails can be followed for extended distances and they often lead to connections with other trails or to community facilities.

Trail Towns are communities that are located along a major trail corridor. The Trail Town program collected data in 2016 from trail users across the country using an on line survey format. Results are strongly correlated with a user survey conducted on the Delaware and Lehigh National Heritage Corridor in 2012. The data revealed that trail users generally, can be seperated into two groups. One group uses trails for recreation, exercise and socialization. Others use trails for commuting, as an alternate to public transit or a personal vehicle. Trail studies indicate that typical trail users are males, between the ages of 46-65. They use a nearby trail at least once a week, but not daily. Biking is by far the top activity on trails, followed by walking. The average time spent on a trail is over 2 hours.

It is well documented that trails benefit the overall health and economy of communities where they are located. Trails decrease traffic congestion and vehicle emissions. Businesses benefit as trail travelers look for local venues to stop along the trail for rest rooms, food and drink. Those riding longer distances requiring overnight accomodations prefer to camp, stay in a hotel, or a Bed and Breakfast. These trail riders are not commuters.

The American Community Survey (ACS) collects data on how Americans Journey to Work. The ACS data reveals that in a 20 year time period the number of people who used bicycle transortation to communte increase tripled.

The Bicycle Coalition of Greater Philadelphia (BCGP) has collected data on bicycle commuting in the City of Philadelphia with similar results. Between the years of 2005 and 2013 bicycle communing grew 260 percent. Males commute at twice the rate females do. Cyclists will seek out bike lanes and well marked streets with bicycle accomodations, and there are fewer problems between cyclists and other travelers on roads that are adapted for bicycle use. The study shows ridership has been increasing in the Philadelphia suburbs as well. Trail systems that connect to neighborhoods and business districts are important in building an alternative transportation network. The BCGP conducted a telephone survey of residents in the greater Philadelphia area in 2015 to assess their interest in trails.

• 80 percent of respondants reported using a trail for recreation or transportation



Section of the Circuit Trails map showing the Darby Creek Tral



The South Bethlehem Greenway, a successful linking of community and trail

- 60 percent of respondants would like to see a trail within 10 minutes of their home
- 44 percent of respondants reported using a trail at least once a week.
- 85 percent of respondants supported the development of new trails.

It will be important for the Township to build connections between the completed Darby Creek Trail, which will include the Pilgrim Park Trail, residential neighborhoods and commerical centers. Residents should have the option to use alternative transportation and a local trail system to access schools, parks and other community venues, as well as shopping centers and business districts.

Educational programs and marketing campaigns targeting children and families have been successful at increasing trail use amoung urban minority and low-income populations. These populations often have less access to yet benefit greatly from outdoor recreation.

EXISTING TRANSPORTATION SYSTEM AND TRAILS

A Pennsylvania Turnpike Route 476 interchange lies 3 miles to the west of Upper Darby Township and Pilgrim Park. Township Line Road, US Route 1, is a four lane highway that serves as the northern boundary of the Township. This suburban route leads to the City of Philadelphia. PA Route 3, also known as West Chester Pike in Upper Darby Township, passes through the north eastern portion of the Township. This four lane, well traveled route, serves as primary access route to the commercial business district in Upper Darby Township, and in the City of Philadelphia where it becomes Market Street.

Public transportation is readily available to Upper Darby Township residents through the SEPTA system. SEPTA (South Eastern Pennsylvania Transportation Authority) has a major multi-modal hub at 69th Street in the Terminal Square business district in the Township. A trolley station is located behind the Drexeline Shopping Center, which lies along the Darby Creek and the proposed Pilgrim Park Trail corridor.

Walkability and Local Trails

Upper Darby Township has pathway systems in several neighborhood parks and sidewalks line streets throughout the Township. The non-profit group "Friends of Upper Darby Trails" is working to plan and support construction of trails along the Darby Creek. Upper Darby Township wrote a trail feasibility study for the Naylors Run Trail in the north east portion of the township.

Regional Trail Connections

The Darby Creek Trail will continue into Haverford Township and will connect to the Montgomery County Trail system. The Montgomery County Trail System is part of the Circuit. The Circuit, a trail system with Philadelphia as it's hub, is a network of 100 miles of trails. The East Coast Greenway and the D&L National Heritage Corridor will connect with The Circuit Trails.

The Circuit Trail system has the support of over 60 businesses and government organizations. Both public and private groups are working together to implement the Circuit trails and to make them available to all residents within the greater Philadelphia region. The Darby Creek Trail is an important part of the Circuit because Upper Darby Township is located adjacent to the City of Philadelphia. The Darby Creek trail is a high priority for the expansion of the Circuit Trail system.

Upper Darby Township residents will have access to over 100 miles of trails that comprise the Philadelphia regional trail system known as "the Circuit" when the Darby Creek Trail is complete. Township residents will be able to use the trail to commute into Philadelphia and surrounding municipalities.







PHYSICAL INVENTORY



ADA compliant pedestrian crossing on Rosemont Avenue.

PROPOSED TRAIL CORRIDOR

The proposed Pilgrim Park Trail corridor has been divided into four segments, selected by identifiable existing physical features. This will allow future development to take place in economically feasible and publicly accessible segments.

SEGMENT A ROSEMONT AVENUE TO DREXELBROOK COMMUNITY

The trail corridor is proposed to begin where the Darby Creek Trail, now in the design development phase, is proposed to end; at Rosemont Avenue. An existing bridge on Rosemont Avenue was replaced in 2018 and new pedestrian crosswalks were installed at the intersection of Rosemont and Bloomfield Avenues. The Pilgrim Park Trail would cross Rosemont Avenue at the crosswalk and continue along Bloomfield Avenue towards the Drexelbrook Community and Drexelbrook Hotel Development.

Bloomfield Avenue is lined with homes, that on the west side, own land to the Darby Creek. Upper Darby Township has park land, Huey Park, on both sides of Bloomfield Avenue. The part of Huey Park that lies between Darby Creek and Bloomfield Avenue has been designated for use as a storm water infiltration area. There are 4' wide sidewalks on Bloomfield Avenue on both sides of the street, but they are incomplete, interrupted by driveways, and Bloomfield Avenue is on a slope of over 5%. This presents challenges for ADA compliance. The speed limit on Bloomfield Avenue is 25 mph. The Drexelbrook Hotel Development is now under construction. Development plans for the hotel include a new entrance on Bloomfield Avenue, and a segment of the Pilgrim Park Trail through the development. A mid-block crossing will be needed on Bloomfield Avenue at the Drexelbrook Community entrance.

A map of Existing Conditions is found on the next page.





Narrow sidewalk on Bloomfield Avenue and multiple driveway aprons. The Drexelbrook entrance can be seen at the top of the hill.

SEGMENT A ROSEMONT AVENUE TO DREXELBROOK COMMUNITY

STRENGTHS	 +ADA and Pedestrian Improvements have been made at the Intersection of Rosemont and Bloomfield Avenues +Trail route can connect to piece being installed as part of Drexelbrook Hotel Development
WEAKNESSES	 Bloomfield Avenue has a narrow cartway and limited Right of Way past the curb. Residents on Bloomfield Avenue own land to Darby Creek Existing sidewalk is less than 5' wide and is not continuous Multiple driveway aprons to cross and existing slope will make ADA compliance difficult
OPPORTUNITI	 ES +Huey Park area presents opportunity for native riparian buffer installation and educational component +Drexelbrook hotel development's new entrance will slow traffic at the curve on Bloomfield Avenue + Share the road markings can be installed on Bloomfield Avenue for cyclists riding the Darby Creek Trail
THREATS	 Residents may not support wider sidewalks and trail traffic on their street Keeping trail users on both sides of the street safe will require appropriate warning and safety signs.

SEGMENT A ROSEMONT AVENUE TO DREXELBROOK COMMUNITY EXISTING CONDITIONS PHOTOS



This portion of Huey Park at the south end of Bloomfield Avenue offers stormwater infiltration and potential educational opportunities

Residential property on Bloomfield Avenue with rear yard on Darby Creek. The Township owns no land along the creek in this segment.

When the entrance to the Drexelbrook Hotel is formalized , the Pilgrim Park Trail will be located adjacent to the entrance road.



Proposed Pilgrims Park Trail route behind the Drexelbrook Hotel development site.

SEGMENT B DREXELBROOK COMMUNITY TO SEPTA STATION

Drexelbrook is a private community with commercial and residential areas. Improvement plans for the hotel under construction currently include the installation of a 5' wide paved trail from the Bloomfield Avenue entrance through the new development area along a service road and ending just east of a maintenance area in Drexelbrook. The maintenance area lies south of the residential area and abuts the Darby Creek. The Darby Creek floodway has cut deeply into the land along this trail segment. In the area of hotel construction, a gabion wall protects the parking lot from flood waters, and to the west, the development has been built up on fill to protect improvements from flood damage.

The riparian buffer in this segment is moderately to very healthy. The paved service road is wooded and shady with visible areas of material storage along the route leading to the maintenance building. At the end of the proposed trail route through Drexelbrook, the trail will have to navigate through the maintenance area and cross a heavily wooded gully that lies between the Drexelbrook Community and a Septa trolley station at the Drexeline Shopping Center. The gully slopes to the Darby Creek but is not a tributary.

A bridge crosses the Darby Creek carrying the Septa lines, but there is no opportunity for the trail to run under the bridge. To cross the tracks, an existing crossing must be utilized. The Septa right of way contains one trolley line heading in two directions. A brick station is located on the Drexelbrook side of the tracks. There is an existing pedestrian crosswalk over the tracks to the Drexeline Septa Station. The crosswalk is not ADA compliant or bicycle friendly.

A map of existing conditions in Segment B is located on Pages 24 and 25.

SEGMENT B DREXELBROOK COMMUNITY TO SEPTA STATION

+Trail location south of the Drexelbrook Community along a STRENGHTS service road and adjacent to the Darby Creek will be installed as part of the current hotel development project + Existing grades provide ADA compliance +Trail location will be easily accessible to patrol vehicles - Drexelbrook service road is used for storage of vehicles and WEAKNESSES debris, and has an isolated feel. - Crossing Septa rails and the gully presents an obstacle - Banks along the Darby Creek are steeply sloping and densely wooded, making trail placement challenging OPPORTUNITIES +Trail will be accessible to the public transportation network +Trail will be accessible to visitors and residents of Drexelbrook +Viewsheds of the Darby Creek may be possible on this segment of the trail - Septa may not support a new trail crossing at a Septa station for THREATS non Septa riders - Gully between Drexelbrook and Drexeline Septa Station will be costly to construct - Development plans call for a 5' wide "trail", which will only accomodate walkers. A typical multi-use trail is 8'-12' wide to accomodate cyclists and pedestrians. - Drexelbrook is a private development and agreements will be required for trail uses and township access.



Proposed Pilgrim Park Trail route behind Drexelbrook community on service road



24 PHYSICAL INVENTORY





SEGMENT B

25

SEGMENT B DREXELBROOK COMMUNITY TO SEPTA STATION EXISTING CONDITIONS PHOTOS



Service road and proposed trail route behind Drexelbrook Community and looking towards maintenance building

View of land area between Drexelbrook maintenance building and banks of Darby Creek

View of existing vegetated gully between Drexelbrook and Septa Station at Drexeline – looking over Septa fence towards the back of Drexelbrook apartments



View of existing vegetated gully between Drexelbrook Community and the Septa Drexeline Trolley Station looking behind the station building

Drexeline Septa Station with existing pedestrian crossing

Existing crossing at Drexeline Septa Station



Proposed Pilgrims Park Trail route behind the Drexeline Shopping Center development site.

SEGMENT C SEPTA STATION TO US ROUTE 1 CROSSING

The trail corridor in this section will separate significantly from the Darby Creek.

This section is the most urban in nature, and lies primarily within a commercial shopping center. The shopping center has been proposed for redevelopment and the Pilgrim Park Trail is a part of the redevelopment plans. Trail travelers would benefit local businesses located at Drexeline. Trail research shows that trail users like to stop at local establishments along a trail for rest rooms, food and drink.

There is no opportunity to place the trail between the shopping center and the Darby Creek due to the steep banks and the heavy flooding that occurs.

A feasibility study was written to explore the possibility of installing the trail corridor underneath a bridge on US Route 1 that is scheduled to be reconstructed. This option would have the trail leave Drexeline at the western most end, proceeding down the banks of the Darby Creek to the new bridge abutments. There are multiple pros and cons to this suggestion, both legally and in terms of related costs, maintenance and safety of trail riders.

Alternately, the trail could follow through the shopping center and users would cross at a newly installed PennDOT signalized crossing over State Road and US Route 1. Both roads are arterial corridors, four lanes each in width. The crossing time is long as vehicular traffic takes priority, but the crossing is highly visible and is close to public transportation.

An existing conditions map follows this page.





One proposal would see the trail route follow behind this billboard from the shopping center down the creek banks and under the new VS Route 1 bridge

SEGMENT C SEPTA STATION TO US ROUTE 1 CROSSING

STRENGTHS	 +Trail through the Drexeline Shopping Center will be installed as part of re-development plans + PennDOT pedestrian crossing of US Route 1 is existing +Trail route through Drexeline is ADA compliant and connects to local businesses and to public transportation
WEAKNESSES	 Darby Creek views and natural setting is lost in this segment US Route 1 is a difficult and busy crossing for trail riders Banks along the Darby Creek are steeply sloped and heavily vegetated, making navigation of them difficult and costly if under the bridge option is selected
OPPORTUNIT	IES +Trail will be accessible to the public transportation network +Trail will be accessible to places to eat, shop and rest
THREATS	 Drexeline development plans call for a 5' wide "trail", which will accomodate pedestrians. A typical multi-use trail is 8'-12' wide to accomodate cyclists and walkers. Trail traffic may be prioritized below commercial vehicular traffic. Safety and warning signs will be a priority to avoid conflicts Drexeline is a private development and agreements will be required for trail uses and township access.

SEGMENT C SEPTA STATION TO US ROUTE 1 CROSSING EXISTING CONDITIONS PHOTOS

Signalized VS Route 1 - State Road Crossing if utilized for the trail would provide an on-grade crossing



Drexeline Shopping Center fronting on State Road. New concrete on lower left is part of new crosswalk ramp



Under the US Route 1 bridge scheduled for replacement and potential trail route. Would avoid US Route 1 – State Road Crossing



Potential trail route through wooded property located on Route 1 at existing crossing

SEGMENT D US ROUTE 1 TO PILGRIM PARK

After navigating the US Route 1/State Road crossing whether on-grade or via bridge underpass, the trail will proceed around to the east or to the west of the Idle Hour Tennis Club to reach Pilgrim Park.

The underpass route would place the trail on a cantilevered deck on the Darby Creek side of the tennis club and would navigate the banks to reach the park. The on grade route would proceed through a heavily wooded lot to reach the park. Both options present significant obstacles.

In Pilgrim Park, north of the tennis club, the trail route would align with an existing sanitary sewer easement. This route is a wide cleared route, unpaved, wooded and wet, level and accessible by vehicle. Manholes are found along the easement to indicate where the sanitary line can be found. There are nice views of the Darby Creek and native trees and plants provide a healthy riparian buffer.

Large trees have fallen across the easement in places, indicating that the Township would need to check trees regularly to ensure that existing trees near the trail are stable and do not pose a danger to trail travelers. The corridor is within the Darby Creek floodplain. Soils are wet and puddling is prominent. The corridor is flanked by vegetated slopes to the north. Informal footpaths are seen along the route. Vegetation within the trail corridor is native beech, cherry, poplar and oak with few invasive species. Pockets of bamboo were found flanking the creek near the US Route 1 underpass.

An existing conditions map can be found on Pages 34 and 35.
SEGMENT D US ROUTE 1 TO PILGRIM PARK EXISTING CONDITIONS PHOTOS



Incomplete sidewalk on VS Route 1 looking southwest towards the bridge scheduled for replacement and the tennis club

Creek banks that would need to be navigated if bridge underpass trail option were accepted Tennis club facilities lie at top of the bank

Berm behind tennis club property looking from wooded lot at border of Pilgrim Park land.



34 PHYSICAL INVENTORY



SEGMENT D



Trail corridor blocked by large fallen trees in Pilgrim Park

SEGMENT D US ROUTE 1 TO PILGRIM PARK

STRENGHTS	+Trail corridor proposed for level terrain on Township owned land +Beautiful shaded path with good views of Darby Creek +Corridor has been cleared
WEAKNESSES	 This area is on floodplain and is wet with standing water puddles Trail corridor is shared with sewer authority Vegetation management will become an important maintenance task for the Township Steep slopes to the north of the corridor make ADA connections to adjacent neighborhoods difficult
OPPORTUNITIE	 +Trail is accessible to Township personnel and vehicles +Trail corridor is wide enough to meet multi-use trail standards +Work with Haverford Township to complete trail through Pilgrim Park + Opportunity to enhance riparian buffer, improve water quality and engage environmental groups
THREATS	 Trail on floodplain will require protection from flooding Isolated area may need to be patroled to deter vandalism Township does not own property along US Route 1 to connect to Pilgrim Park land

SEGMENT D US ROUTE 1 TO PILGRIM PARK EXISTING CONDITIONS PHOTOS



Trail corridor with puddling and sanitary manholes in Pilgrim Park

Log at location where Darby Creek tributary crosses Pilgrim Park Trail corridor

Trail route through Pilgrim Park would end at Burmont Road in Haverford Township if Haverford Township continues the trail





LEGAL FEASIBILITY

SEGMENT D



Incomplete Sidewalks on Bloomfield Avenue Looking down towards Huey Park from entrance to Drexelbrook Community

SEGMENT A - ROSEMONT AVENUE TO DREXELBROOK DEVELOPMENT

The Rosemont Avenue intersection is where the Pilgrim Park section of the Darby Creek Trail will begin. This intersection was recently outfitted with ADA improved ramps and visible crosswalks.

This trail segment can not be placed along the creek due to the private ownership of the creek banks here. The trail is proposed to be located on Bloomfield Avenue, a Township owned and maintained road. The homes have short front yards, the sidewalk is not complete, navigating existing driveway aprons and utility poles will be challenging, and ADA compliance may not be feasible on this section of the trail. The Township has enough Right-of-Way to provide 5' wide sidewalks on each side of the street and the sidewalk will need to be completed on both sides to the proposed Drexelbrook Hotel Development entrance. A mid-block crossing will need to be carefully installed here to provide safe cross-over for trail travelers, with adequate warning and safety signs on Bloomfield Avenue.

The available sidewalk width will not accommodate cyclists. The speed limit on Bloomfield is 25 mph, so that share the road markings can be installed, to provide a separate path for cyclists in this short segment of the trail.

The Bloomfield Avenue segment will begin in a part of Upper Darby Township's Huey Park that drains into the Darby Creek. This land will allow the trail corridor to meander off road through the Huey Park infiltration area, a small passive area with grasses and rain garden plants. There is potential here to install Interpretive Signs educating the public about infiltration and water quality, and why it is important.

Signs may be posted in Huey Park to alert trail travelers to the conditions ahead; including slope, surface, distance and accessibility issues.



SEGMENT A



Septa station and tracks looking north

SEGMENT B - DREXELBROOK COMMUNITY TO SEPTA STATION

This segment will begin on Bloomfield Avenue at the Drexelbrook Hotel Development entrance and will continue to the Septa Trolley station behind the Drexeline Shopping Center. Drexelbrook Associates, Limited Partnership, owns all of the land between Bloomfield Avenue and the Septa Right of Way. Drexelbrook is a planned residential community that owns and maintains it's own streets and infrastructure. The owners have approved a 5' trail corridor most of the way through the property. They have stated that it is their intention to buffer residential areas from the trail and trail users.

Drexelbrook is in the process of building a hotel that will be accessed from Bloomfield Avenue. As part of the plans for the project, a 5' wide paved path that will be a part of the Pilgrim Park Trail will be constructed. The 5' trail will be completed from Bloomfield Avenue ending just east of the Drexelbrook maintenance building. The 5' path will not accomodate both bicycle and pedestrian uses. The Township will have to widen the path that Drexelbrook builds, or a bike lane might be established on the maintenance road.

The Township will have to continue with planning, engineering and development of the corridor through to the Septa station from the maintenance area, with the approval of Drexelbrook Associates. The trail corridor could continue behind the maintenance building on a thin strip of land between the building and the steep creek bank. This strip of land appears to have been built on fill. A cantilevered path, capable of handling vehicular traffic, or a tiered wall system, may need to be installed to ensure the stability of the trail. A formal agreement or easement with Drexelbrook management will need to be reached to establish trail uses, maintenance and emergency access into the future. A vegetated gully, also owned by Drexelbrook Associates, lies between Drexelbrook apartments and the Septa trolley line. The gully is an inaccessible sliver of land, currently filled with unmanaged vegetation and debris, that drains towards Darby Creek. The Gully begins north of the Septa station behind the Drexelbrook apartments and the depth of the gully deepens as it approaches Darby Creek.

The Septa trolley line runs in both directions, and has a right of way of about 40'. Septa does allow trails to be installed within their right of way as long as the trail is placed a distance of ten feet from the center line of the closest rail, and a barrier is installed between the facilities, at least three feet in height.

The Septa station track crossing should be constructed to meet ADA criteria and to avoid conflict between Septa and trail traffic. Septa was contacted for their input during this study, but a representative was not available for comment. The trolley line crossing will require an easement or agreement between the Township and Septa for use, maintenance and emergency access to the trail.

The approved development plan for the Pilgrim Park Trail from Bloomfield Avenue through the Drexelbrook development follows this page.



Septa lines and bridge over Darby Creek looking south from Septa station





SEGMENT B



Rendering of Proposed Redevelopment for Drexeline Shopping Center, Pilgrim Park Trail route would present minimal opportunites for conflict between trail travelers and vehicles.

SEGMENT C - SEPTA STATION TO US ROUTE 1 CROSSING

This segment will begin after the Septa Trolley station crossing, continue through the Drexeline Shopping Center and navigate across Route 1. The majority of this segment will be on commercial property currently owned by Drexeline Shopping Center Inc. The shopping center is proposed to be redeveloped and improved, and the trail is proposed to be constructed as part of the improvement plan.

The proposed plan for the shopping center shows the trail as a sidewalk through the built area. The trail through the shopping center will need to be wider than an average side walk to accommodate trail traffic as well as shoppers. Signs and visible crosswalks will need to be installed to avoid conflicts between vehicular traffic, pedestrian traffic and trail travelers. Cyclists would not use sidewalks designed for pedestrians. An alternate route should be designated for bicycles.

There is more than one path the trail could use to navigate the shopping center, and the route shown was selected over a route along State Road. This route avoids the multiple access and egress points to the shopping center located on State Road that present potential conflict points between vehicles and trail travelers. The route selected within the shopping area should avoid areas of heavy concentrated access to buildings, such as a grocery store. The trail route should instead be located on a route designed to prevent conflict, or on the sides of buildings.

An easement or agreement to allow for trail uses, maintenance and emergency access will need to be drawn up to protect the Pilgrim Park Trail corridor well into the future.

The plans for the route of the trail through the Drexeline Shopping Center follow this page.



SEGMENT C



Proposed elevations show potential trail placement locations under the Route 1 bridge as part of bridge reconstruction project

US Route 1, is a PennDOT road, officially known as Township Line Road and S.R. 0001. State Road is also a PennDOT street, officially known as S.R. 2026. These two streets come to an intersection in front of the Drexeline Shopping Center. For the Pilgrim Park Trail to continue past the shopping center, it will have to navigate crossing US Route 1 and State Road.

The crossing of this four lane busy suburban highway will involve either an existing on-grade crossing that was recently installed to PennDOT specifications, or a route that would lead under the US Route 1 bridge, which is proposed to be re-constructed in 2020. The on-grade crossing has been outfitted with a signal, handicapped ramps, detectable warning tiles, and bright wide crosswalks. There is a pedestrian refuge island in the intersection of US Route 1 and State Road. The crosswalks and all signs are maintained by Upper Darby Township as part of the Township's traffic signal plan.

Either option, the on-grade or the underpass, will involve an agreement with PennDOT as to the allowable trail uses, safety features, maintenance and access to the trail.

Three elevations, shown to the left, illustrate options for installing the trail as part of the US Route 1 bridge replacement project. The illustrations are taken from the Darby Creek Trail Feasibility Study Memorandum, conducted for the Pennsylvania Environmental Council, and written by Michael Baker International. This would create the trail as a physical part of the new bridge abutment.

The drawing to the right is one of two alternates shown in the PEC plan that would propose to direct the trail back up the creek bank to the tennis club property. The tennis club's response has been summarized and is recorded in Appendix A of this report.



SEGMENT C



Idle Hour Tennis Club's access road to the back courts. The PEC plan suggested a shared use on this road. The tennis club is opposed to this plan.

SEGMENT D - US ROUTE 1 TO PILGRIM PARK

The trail corridor after crossing US Route 1 will need to pass through a property fronting on US Route 1 to reach Pilgrim Park if the bridge under pass option is not selected. Upper Darby Township does not own land fronting on US Route 1 where the trail would cross. The Township may be able to purchase a wooded parcel on US Route 1 and use this land to construct the trail into Pilgrim Park. The Township has a sanitary sewer line easement on the wooded parcel. This would provide a seamless alignment with the existing crosswalk and into Pilgrim Park. This option would keep the trail on Township owned and maintained land.

If the option to purchase the property along US Route 1 is rejected, the Township's options are limited to working with the tennis club to access Pilgrim Park. A July 2018 Feasibility Study Memorandum commissioned by the Pennsylvania Environmental Council to analyze a best route for the trail's US Route 1 crossing recommended using the tennis club's maintenance road as a shared use with trail travelers.

The tennis club was not contacted during the preparation of that plan. In November of 2018, representatives from Upper Darby Township and their consultant team met with the tennis club board members, to discuss the potential of a shared use scenario. The tennis club members were adamantly opposed to the idea of opening their roadway to trail traffic. They have many reasons which can be read in the appendix to this report. The board members suggested as an alternative, to build a cantilevered path along the creek, set back at least 5' from their access road and connecting with Pilgrim Park land at a point past tennis club property. The board also suggested that a land swap might be possible, but the club would need to be adequately compensated to build a new access road and courts. This option would require an easement agreement for use, maintenance and emergency access between the township and the tennis club.



SEGMENT D



Footpath created by visitors to Pilgrim Park from residential area to the north. This plan will recommend to formalize at least one footpath.

When the corridor reaches Township owned Pilgrim Park land, it will follow a wide existing cleared sanitary sewer easement that parallels the Darby Creek. The easement runs along the creek and into Haverford Township. Upper Darby Township can coordinate with Haverford Township to bring the trail through Pilgrim Park to Burmont Road, and a pedestrian crosswalk leading to a parking lot now exists. If Haverford Township does not improve their piece of the trail, Upper Darby Township should install signs and a turning area to alert trail travelers that the formalized Pilgrim Park Trail does not continue past that point.

NEIGHBORHOOD AND BUSINESS CONNECTIONS

The Township owns little land on the trail corridor, outside of Pilgrim Park, where a parking lot could be installed. A few designated trail parking spots might be able to be created in the Drexeline Shopping Center as part of the trail use agreement between the Township and the Drexeline management. The shopping center businesses stand to gain the most economically from direct access to the trail.

The Drexelbrook Hotel may consider providing spots for trail users who travel and stay overnight. Drexelbrook stands to benefit economically from the trail as well, as they do provide direct access.

Pilgrim Park abuts a large residential neighborhood. The Aronimink Swim Club, a private club, is located between Pilgrim Lane and Reservoir Road. Pilgrim Lane is missing a segment, and the land where the street would continue abuts Pilgrim Park land. Either end of Pilgrim Lane could be used as a beginnig point for a spur trail to provide a connection to the Pilgrim Park Trail for residents of this development. The spur trail would need to navigate the woods and slopes leading down to the Darby Creek. The location for this potential neighborhood connection is shown on the following page, at the northern dead end of Pilgrim Park Lane.



SEGMENT D





CONCEPT PLAN



Share The Road marking, as proposed for use on Bloomfield Avenue.

PROPOSED PILGRIM PARK TRAIL CORRIDOR

The proposed Pilgrim Park Trail corridor has been divided into four segments to allow future development to take place in economically feasible and publicly accessible segments. ADA criteria will be met for each segment, unless existing conditions make this unfeasible, in which case signs will be posted to clearly inform trail users as to the conditions ahead.

The following tables provide a break down for each of the four segments that will identify:

- the type of user each trail is designed to accommodate,
- the proposed trail segment surface material,
- the proposed trail length and width,
- the slope of the trail segment,
- support facilities with quantities and locations such as: Street Markings: Share the Road, Crosswalks Signs: Warning, Directional, Informational, Interpretive Structural Elements: Bridges, Walls, Fence, Lighting, Cameras Furnishings: Benches and Bike Racks Landscaping: Street trees, Riparian buffer, Native infiltration

It is important to keep in mind that much of this trail is proposed to be developed by others and the Township will have to negotiate to realize the full potential and benefit of the Darby Creek Trail as a multi-use trail and community asset. Developers should be made aware of the potential benefits to their residential communities and local businesses, and to the benefits trail users play in promoting the safety and well being of trail corridors. As part of "The Circuit" system, developers should also be made aware of funding and trail design assistance and standards.





SEGMENT A TRAIL CONCEPT FEATURES ROSEMONT AVENUE TO DREXELBROOK COMMUNITY

Roseme	Rosemont Avenue to Drexelbrook Community								
	User	Surface	Length	Width	Slope				
HUEY PARK				-	•				
Provide Accessible Trail	Pedestrian	Paved	250 LF	8'	0-5%, ADA Compliant				
	Pedestrian	Paved	100 LF	8'	5-10%, existing				
BLOOMFIELD AVENUE	_								
Renovate and Widen Existing Sidewalks	Pedestrian	Concrete	60 LF	5'	5-10%, existing				
Provide Continuous Sidewalk	Pedestrian	Concrete	535 LF	5'`	5-10%, existing				
SUPPORT FACILITIES		Location		Quantity	Description				
Share the Road Markings: 1/300 LF Bloomfield Ave, 1 every 300 LF		00 LF	4	Thermoplastic					
Crosswalk with ADA Ramps and DWS Tiles	Bloomfield Ave, Mid Block			1	ADA compliant				
Interpretive Sign	Huey Park			1	Public Education				
Directional Signs	Bloomfield-Rosemont Intersection			1					
	Drexelbrook E	Intrance		1	Trail Route and Distances				
Warning Signs	On Bloomfield Avenue before and after Crosswalks			6	Standard Safety Yellow				
Share the Road Signs	Bloomfield Ave. before Street Markings Begin			2	Standard Safety Yellow				
Informational Sign-Trail Conditions	Exiting Huey Park			1	Custom Design				
-	Exiting Drexelbrook			1					
Informational - Drexelbrook	Entering Drexelbrook			1	Rules for Drexelbrook				
Street Lighting on Bloomfield	At Crosswalks				Township Standard				
ADA compliant Benches	Huey Park, Drexelbrook Entrance			5	Vandal Resistant				
Native Upland Planting	Huey Park at Darby Creek			.75 AC	Trees, Shrubs, Grasses and Perennials				



Rendering of Pilgrims Path Trail through Huey Park with riparian buffer and infiltration area planting improvements and Share -the-Road markings on Bloomfield Avenue for cyclists.



60 CONCEPT PLAN



SEGMENT B

SEGMENT B TRAIL CONCEPT FEATURES DREXELBROOK COMMUNITY TO SEPTA STATION

Drexelbrook Community to Septa Station								
	User	Surface	Length	Width	Slope			
Drexelbrook Community to Septa Station								
Entry to Maintenance Facility	Multi-Use	Paved	160 LF	10' Min.	0-5%, ADA Compliant			
Maintenance Facility to Septa Station	Multi-Use	Paved	720 LF	10' Min.	0-5%, ADA Compliant			
GULLY CROSSING - ALTERNATE 1								
Cantilevered Walk behind Maintenance	Multi-Use	Decking	270 LF	10' Min	0-5%, ADA Compliant			
Bridge over Gully to Septa Station	Multi-Use	Decking	105 LF	10' Min	0-5%, ADA Compliant			
GULLY CROSSING - ALTERNATE 2		_						
Tiered Wall behind Facility to Station	Multi-Use	Paved	375 LF	10' Min	Steep Creek Banks			
Fill gully behind wall and build trail	Multi-Use	Paved	375 LF	10' Min	0-5%, ADA Compliant			
SUPPORT FACILITIES		Location		Quantity	Description			
Trail Delineation Striping	Drexelbrook S	Drexelbrook Service Road			Thermoplastic			
ADA Compliant Crossing	Crossing Septa Rails			1	As per Septa Agreement			
Warning Signs	Approaching Septa Station			2	Standard Safety Yellow			
Stay On Trail Signs	In Drexelbrook on Service Road			2	Standard Safety Yellow			
Informational - Drexelbrook	Crossing into Drexelbrook			1	Rules for Drexelbrook			
Alt 1 - Cantilevered Deck	Behind Maintenance - Drexelbrook			270 LF	Boardwalk with Railing			
Alt 1 - Bridge	Between Maintenance & Septa			105 LF	Pre-Engineered Single Span			
Alt 2 - Wall	From Behind Maintenance to Septa			375 LF	Modular Structural Block			
Alt 2 - Fill and Drainage Pipe	Between Maintenance & Septa				Fill Gully for infiltration			
Overhead Safety Lighting	At Septa Station				Determine in Design Phase			
	In Drexelbrook				Drexelbrook Standard			
ADA compliant Benches Good Overlooks in Drexelbrook		2	Vandal Resistant					
Native Upland Planting	Gully Area between Septa and Maintenance Facility			.5 AC	Trees, Shrubs, Grasses and Perennials			



Proposed Pilgrims Park Trail route behind Drexelbrook maintenance facility on cantilevered walk



Proposed Pilgrims Park Trail route behind Drexelbrook maintenance facility on tiered wall system

SEGMENT B





Elevation of land area between Drexelbrook Community and Septa trolley line rails, showing proposed Pilgrim Park Trail



Rendering of proposed Pilgrim Park Trail adjacent to Septa trolley line tracks at Drexeline Station, looking south towards the station.

Pilgrim Park Trail Feasibility Study





A portion of the plan for proposed renovations to the Drexeline Shopping Center.

Plan view of proposed Pilgrim Park Trail route through this portion of the shopping center has been overlaid onto that plan, with the trail shown in red.

Trail traffic is shown offset from the existing sidewalk and pedestrian traffic which would remain routed on the existing sidewalks.

Trees and shrubs are proposed to beautify the trail corridor along this heavily trafficked area.
SEGMENT C TRAIL CONCEPT FEATURES SEPTA STATION TO US ROUTE 1 CROSSING

Septa Station to US Route 1 Crossing							
	User	Surface	Length	Width	Slope		
DREXELINE SHOPPING CENTER							
Through the Shopping Center	Multi-Use	Paved	1300 LF	10' Min.	0-5%, ADA Compliant		
To Crosswalk on State Road.							
Sidewalk on State Road	Pedestrian	Concrete	190 LF	6' Min.	0-5%, ADA Compliant		
Multi-use trail adjacent to sidewalk	Multi-Use	Paved	190 LF	10' Min.	0-5%, ADA Compliant		
US ROUTE 1 CROSSING - ALTERNATE 1							
Use Existing PennDOT Signalized ADA compliant crosswalk	Multi-Use	Paved	140 LF	10' Min	0-5%, ADA Compliant		
US ROUTE 1 CROSSING - ALTERNATE 2							
Navigate creek bank to bridge abutment	Multi-Use	Paved	670 LF	10' Min	Determine in Design Phase		
Use proposed bridge abutment	Multi-Use	Concrete	170 LF	10' Min	0-5%, ADA Compliant		
SUPPORT FACILITIES		Location		Quantity	Description		
Trail Delineation	Drexeline Shopping Center			As per Development Plans			
ADA Compliant Crossings	In Shopping (Center			As per Development Plans		
	Crossing US F	Route 1/ State	e Road	2	In Place - PennDOT		
Warning Signs	Approaching	PennDOT Cro	osswalks	2	Safety Yellow		
	At Trail Crossi	ings in Drexel	ine	4	Safety Yellow		
Alt 1 Informational Signs	In Shopping Center		3	Locations of Businesses			
Alt 2 Informational Signs	At trail to Bridge Underpass		1	Trail Conditions			
Directional Signs	On State Road		1	Distances to City, Other			
Overhead Safety Lighting	Bridge Underpass and Approach			PennDOT Standard			
	In Drexeline S	hopping Cen	ter		Drexeline Standard		
ADA Compliant Benches	In Drexeline-a	at possible ov	erlooks	2	Vandal Resistant		
Alt 1 Planting	Street trees along State Road			As per Development Plans			



Rendering provided by Drexeline Development illustrating the Pilgrim Park Trail corridor where it meets the Septa station.



Rendering provided by Drexeline Development illustrating the Pilgrim Park Trail corridor along the creek bank behind the shopping center.



70 CONCEPT PLAN

Upper Darby Township **Pilgrim Park Trail** SEGMENT D Pilgrim Park **US Route 1 Crossing** to Pilgrim Park Upper Darby Township Existing Sidewalk 10' Wide Multi-Use Trail Alternate Multi-Use Trail Lis Pours **10'** Wide Cantilevered or Tiered Wall Multi-Use Trail Existing Crosswalk 10' Contours **Idle Hour** Ω State Ro **Tennis** Club Darby Creek ---- Tributary Municipal Boundary Township Owned Recreation Springfield **Private Recreation Drexeline Shopping** Township **Center Inc.** Vacant Mozino Property Bridges 0 Z Creek Feet 200 0

SEGMENT D

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SEGMENT D TRAIL CONCEPT FEATURES ROUTE 1 CROSSING TO PILGRIM PARK

US Route 1 Crossing to Pilgrim Park							
	User	Surface	Length	Width	Slope		
US ROUTE 1 CROSSING - ALTERNATE 1							
Through Vacant Wooded Property	Multi-Use	Paved	575 LF	10' Min.	0-5%, ADA Compliant		
US ROUTE 1 CROSSING - ALTERNATE 2							
Cantilevered Trail to Pilgrim Park	Multi-Use	Decking	1100 LF	10' Min.	Determine in Design Phase		
PILGRIM PARK							
Use Existing Sanitary Sewer Easement	Multi-Use	Paved	2515 LF	10' Min	0-5%, ADA Compliant		
Create U-Turn or Connection	Multi-Use	Paved		15' Radius	Determine in Design Phase		
NEIGHBORHOOD CONNECTION							
Switchback path to private swim club	Multi-Use	Paved	500 LF	8' Min	5-10%		
SUPPORT FACILITIES		Location		Quantity	Description		
Warning Signs		Approaching End of Trail (until Haverford Township connects)		2	Safety Yellow		
	Approaching	Approaching US Route 1 Crosswalk		1	Safety Yellow		
Alt 2 Informational Signs	After Bridge L	Inderpass		1	Trail Conditions		
	After Bridge L	Inderpass		1	Tennis Club - No Tresspass		
Directional Signs	At end of Trai	At end of Trail		1	Distance to Burmont Road		
Informational Sign	At Intersection	At Intersection of Connection Path		1	Trail Conditions		
Tributary Crossing	Culvert or Sho	Culvert or Short Bridge		1	Determine in Design Phase		
Overhead Safety Lighting	In Pilgrim Parl	In Pilgrim Park			Determine in Design Phase		
Alt 1 - Vacant Property	Through woo	Through wooded property			Determine in Design Phase		
ADA compliant Benches	In Pilgrim Parl	In Pilgrim Park			Vandal Resistant		
Planting	Pilgrim Park	Pilgrim Park		.5 miles	Riparian Buffer Enhancement		



Rendering showing Pilgrim Park Trail Alternate 2, after the US Route 1 bridge underpass using a cantilevered deck to connect the trail past the tennis club property to Pilgrim Park



Rendering of Pilgrim Park Trail through vacant wooded parcel on US Route 1 after crossing



Rendering of Pilgrim Park Trail in Pilgrim Park at bridge over Darby Creek tributary showing connecting path to Pilgrim Gardens and Pilgrim Lane

SEGMENT D

TRAIL CONSTRUCTION

The proposed Pilgrim Park Trail corridor has, in some segments, areas that will require additional geo-technical study and structural engineering to be designed safely for long term stability and public use. General trail construction methods can be used on the majority of the corridor where the Township will be responsible for design and installation.



areas where it is desirable to improve water quality through infiltration. Photo shows close up of a rubber-granite pervious pavement.

may be protected by designing a deep area of stone sub-base to collect water.

A raised trail may be a consideration where a paved trail would impede water flow, such as in a wetland area.

Piers: install 36'

below

grade (typ.)

CONCEPT PLAN 74

TRAIL SIGNS

The proposed Pilgrim Park Trail corridor will have a multitude of signs, some required and some at the Township's discretion. Warning and safety signs, rules and no tresspass signs may be required by law and property owners. Wayfinding and Directional signs can inform the public as to trail conditions, or where to find adjacent places of interest or places to find refreshment. Interpretive signs can inform the public about the rationale behind a trail feature.



EXAMPLE OF INFORMATIONAL AND WAYFINDING SIGN

EXAMPLE OF INTERPRETIVE AND EDUCATIONAL SIGN





ESTIMATE OF PROBABLE COSTS



Local trail groups can provide in-kind services, and help to generate public interest and support

TRAIL COSTS

The following pages contain estimates for typical multi-use type trails. The estimates are entitled probable costs, because they are based on the mapping and information provided, so the lengths and dimensions are calculated as close as they can be given the general nature of the information available. The estimates are useful as a starting place, the design development phases generate much more refined numbers.

Design development for the trail will involve detailed studies as to soil types, bedrock, any species of concern or historical remnants that exist within the trail corridor. The proposed elevated boardwalks and retaining walls will involve structural engineering and soil probes to ensure support piers are safely installed and will be structurally able to withstand flood waters. Permitting costs will be higher where the trail is cantilevered over the Darby Creek floodplain The costs of engineering, testing, and permitting are unknown until the project phases are more fully defined and trail corridor options selected. Trail surface materials are many, the trail may be bituminous pavement in some sections, or pervious pavement in others; pervious pavement using recycled materials is more expensive but is a more environmentally conscious choice. The sections being developed by others as 5' wide trails will need to widened to 10', to accomdate a regional multi-use trail that will become more popular in the years after it is installed. Expenses that are not known, but may add a significant cost are noted in each phase.

Costs may be offset by applying to a multitude of trail grant, recreation and greenway grant programs. PA DCNR, DCED, ACT 13 Legacy Fund, and PennDOT are some of the state grant programs that typically provide funding for trails. The Darby Creek Trail has a Friends group, with a web page that provides updates on progress in both planning and construction. The Circuit Trails organization may be able to provide help in finding funding sources as well.

Rosemont Avenue to Drexelbrook Community						
	Description	Unit		Unit Cost	Total Cost	
Huey Park Trail	8' Boardwalk	350	LF	350	\$122,500.00	
	8' Paved Walk	60	LF	60	\$3,600.00	
Bloomfield Ave	5' Sidewalks	640	LF	50	\$32,000.00	
BIOOITIIIeld AVe	New 5' Sidewalk	300	LF	80	\$24,000.00	
Road markings	Share the Road	4	ΕA	300	\$1,200.00	
	Crosswalk w. Ramps & DWS Tiles	1	LS	2600	\$2,600.00	
	Std Warning/Street	8	ΕA	350	\$2,800.00	
Signs	Interpretive	1	ΕA	2500	\$2,500.00	
	Custom Wayfinding	5	ΕA	500	\$2,500.00	
Benches	ADA compliant	4	EA	2000	\$8,000.00	
Huey Park Planting	Riparian Buffer/wetland	1	LS	32000	\$32,000.00	
Lighting	TBD in design phase					

\$233,700.00

Drexelbrook Community to Septa Station						
	Description	Unit		Unit Cost	Total Cost	
	Multi Use Trail to be					
Drexelbrook Community	installed by Drexelbrook					
,	Associates	1500	LF	0	\$0.00	
	5' Paved Trail Widening					
Drexelbrook Community	by Township if					
	Drexelbrook Trail is 5'	1500	LF	60	\$90,000.00	
From End of Drexelbrook S	egment to Septa Station	1				
Alt 1. Deck & Bridge	Cantilevered Deck w.					
	Steel/Concrete Piers	300	LF	1500	\$450,000.00	
	Bridge to Septa Station	100	LF	1500	\$150,000.00	
Alt 2. Tiered Wall	Tiered Wall	8000	FF	40	\$320,000.00	
	Paved Trail	4000	SF	20	\$80,000.00	
	Fill in Gully	1	LS	150000	\$150,000.00	
Signs	Std Warning/Street	4	ΕA	350	\$1,400.00	
	Custom Wayfinding	1	EA	500	\$500.00	
Lighting in Drexelbrook	TBD in design phase					
\$551 900 00 - \$691 900 00						

<u> \$551,900.00 - \$691,900.00</u>

Note: Estimates are based on general information taken from County and Township mapping sources and do not include costs for engineering, testing or permitting

Upper Darby Township



The Township will need to work with Drexelbrook Development and Septa to complete the Pilgrim Park Trail





Upper Darby Township will need to work with MCB Real Estate, owners of the Drexeline Shopping Center, and PennDOT, to complete the Pilgrim Park Trail.

Septa Station to US Route 1 Crossing						
	Description	Unit		Unit Cost	Total Cost	
Drexeline Shopping	Multi Use Trail to be					
Center	installed by Drexeline	1300	LF	0	\$0.00	
Dravalina Shanning	5' Trail widening by]	[
Drexeline Shopping	Township if Drexeline	l				
Center	Trail is 5' wide	1300	LF	60	\$78,000.00	
From end of Drexeline Seg	gment along State Road t	to Exis	ting	Crosswalk		
Adjacent to sidewalk	Multi use Trail	190	LF	115	\$21,850.00	
Landscaping	Street trees & Shrubs	1	LS	10000	\$10,000.00	
Benches Near Crossing	ADA Compliant	2	ΕA	2000	\$4,000.00	
Signe	Std Warning/Street	2	ΕA	350	\$700.00	
Signs	Custom Wayfinding	4	EA	500	\$2,000.00	
\$38,550.00						
If Bridge Underpass Option is selected. Trail down to bridge from Drexeline						
Trail from Drexeline to						
Bridge	Multi-Use Paved Trail	700	LF	135	\$94,500.00	
				\$38,550.	00 - \$172,500.00	

Although this section is largely being paid for by the Drexeline Shopping Center, the Township would be responsible, if the bridge underpass option is selected for the costs associated with navigating the creek banks from the end of the Drexeline property to the bridge abutment. This will involve some grading and vegetation removal, and walls or a deck of sorts may be necessary, due to the heavy flooding that occurs in this area. The Township would also be responsible for the development of the trail to the full width of 10' should the Drexeline redevelopment plan only provide for a 5' wide trail.

The cost above only reflects the cost to construct a paved trail, once the corridor has been designed, engineered, prepared and stabilized.

	US Route 1 Crossing to Pilgrim Park						
	Unit Cost	Total Cost					
ALT 1 - Through Vacant Wooded Property to Pilgrim Park							
Multi-Use Paved Trail 600		LF	115	\$69,000.00			
ALT 2 - Navigate Creek E	Bank to Pilgrim Park						
	Multi-Use Paved Trail	400	LF	135	\$54,000.00		
	Cantilevered Deck	700	LF	1500	\$1,050,000.00		
IN PILGRIM PARK	Multi-Use Paved Trail stabilized to be protected from flooding	2515	LF	150	\$377,250.00		
Signs	Std Warning/Street	3	ΕA	350	\$1,050.00		
	Custom Wayfinding	3	ΕA	500	\$1,500.00		
Tributary Crossing	Single Span Bridge	1	LS	10500	\$10,500.00		
Benches	ADA Compliant	6	ΕA	2000	\$12,000.00		
Landscaping	Riparian Buffer Enhancement	1	LS	20000	\$20,000.00		
Lighting	TBD Design Phase						

Note: Estimate does not include cost to purchase vacant property **\$491,300.00 - \$1,526,300.00**

Note: Estimates are based on general information taken from County and Township mapping sources and do not include costs for engineering, testing or permitting

In this last trail segment, if the bridge underpass option is selected, there will be costs associated with navigating the creek banks from the end of the bridge abutment to Pilgrim Park. This will involve some grading and vegetation removal, and walls or a deck of sorts may be necessary, due to the heavy flooding that occurs in this area. More importantly, the Idle Hour Tennis Club does not want the trail on their property, or trail travelers making noise or riding past disturbing tennis players. This means the trail corridor must be placed with a healthy vegetated buffer or fence between the tennis road and the trail, and would most likely require building a boardwalk/cantilevered type trail.

The costs listed provide a range to construct the trail as it has been conceptualized. The costs represent current costs to construct a trail, once the corridor has been designed, engineered, prepared and stabilized.



Rendering illustrating a concept for the end point of the Pilgrim Park Trail if the trail does not continue immediately into Haverford Township. Viewsheds, like the one shown in this rendering, should be located along the trail route for visitors to relax and enjoy their surroundings.



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APPENDIX A

Meeting Minutes for the Informal Meeting with Board Members of the Idle Hour Tennis Club Concerning the Pilgrim Park Trail Feasibility Study

Meeting was held at the Idle Hour Tennis Club Clubhouse, on November 7, 2018 at 3 PM.

The meeting was attended by Dan Lutz, Upper Darby Township Engineer; Jeff Gentile, Director of Licenses and Inspection; two persons from the consulting firm URDC, and five board members from Idle Hour Tennis Club.

The meeting was initiated with an informal greeting between consultants and the members gathered in the clubhouse. The consultants brought an aerial map of the tennis club site, including the Drexeline Shopping Center, showing a proposed trail route marked with a bright green dash and an orange dash to designate an alternate trail route.

The consultant opened the meeting by explaining that the purpose of the study was to ascertain if a trail is feasible, followed by a brief overview of the typical trail planning process, to demonstrate that the planning process begins with a feasibility study. The study would then be followed by many long years of legal negotiations, permitting and construction documentation before a trail can actually be built. The consultant also explained that this type of study presents options for a trail corridor, but is by no means a construction document.

The question was raised as to who is funding the trails effort, from planning through to construction. The consultant explained that the Township is funding this feasibility study, with assistance from a PA DCNR grant, and that for construction purposes, grant funding can be obtained from Pennsylvania DCED and DCNR. The consultant also then explained that trails are an important initiative for the state; the state of Pennsylvania is home to one of the longest rail trails in the country, the Great Allegheny Passage (GAP). The GAP rail trail connects to the East Coast Greenway, a trail that will ultimately connect NYC and points down south, with the City of Philadelphia's circuit trails, a system of 100 miles of trails. The Darby Creek Trail is a part of "The Circuit". The Pilgrims Park Trail segment that is the focus of the current study, is part of the Darby Creek Trail.

The consultant then explained the proposed route of the Pilgrim Park Trail corridor, beginning with an explanation of a section of the Darby Creek Trail that is currently in the initial design phase; beginning at Swedish Cabin and ending at the new Rosemont Avenue Bridge. The Pilgrim Park Trail would begin at the Rosemont Avenue crosswalk and follow up Bloomfield Ave. to the Drexelbrook property. The problem of limited rights of way and creating a trail on Bloomfield Ave. were briefly discussed. The consultant then continued to explain the proposed trail corridor through Drexelbrook and across the Septa Trolley line, which will be challenging, and into the Drexeline Shopping Center. The Zoning Plan for the proposed redevelopment of the shopping center and the proposal for the trail through the shopping center.

were discussed. The consultant led the discussion into the next section of the trail corridor, which could potentially involve the Idle Hour Tennis Club property. The consultant brought up a study that had been created for the trail to be constructed underneath a new bridge as part of the bridge abutment structure. This bridge is proposed to be built and installed on Route 1 by the year 2020 by PennDOT. The trail route would then work up the hill from under the bridge to merge with the road that the tennis club uses to access the back courts.

The consultants asked if the tennis club board had been contacted concerning this plan to use their access road as part of the Pilgrim Park Trail. The tennis club board members responded that this was the first they were hearing of it. One board member had printed and studied the proposed plan.

The board then stated emphatically that they would not be in favor of sharing their access road with trail users for the following reasons:

1. The access road is on Idle Hour property and they maintain it to meet the needs of the club. It is used to access the rear courts, and during events large groups of people walk the access road to get to the back courts for meets, lessons and other gatherings. Parents of children who are engaged in lessons at the club walk the access road with their children to the courts. As large groups or vehicles could be on the access road at any time, this presents a safety concern.

2. The courts to the back of the club are used all winter, unlike the courts that lie closer to the clubhouse. So the access road is used all year long. Sharing the access road with trail users is an opportunity for user conflict, and tennis club members must have priority on tennis club property.

3. Trail users would present a liability to the club if an accident occurred on the trail on tennis club property. The club is a 501-C-7, or a non-profit organization that pays membership fees. All monies collected are used to support the needs of the club. Increased liability insurance costs would not be an acceptable use of membership fees.

4. Nuisance users, like those that would drop trash or damage tennis club property, is a concern if the public was allowed to have access through the property. The consultant talked about studies that show that vandalism and littering issues drop in frequency and severity with development of a trail. This typically happens because users police each other, criminal activity is difficult to hide on a busy trail corridor, and because a multi-use trail corridor is accessible to municipal police than is a remote wooded area with no formalized access. Trails are paved and made to be driven on for maintenance and for security.

A question was raised as to how wide a trail is typically. The consultant responded that a multi-use trail best width is 10 - 12 feet. This provides adequate room for two way travel of both pedestrians and cyclists.

5. Club members brought up the fact that tennis requires a level of deep concentration and any distractions are not welcome. Trail users, including families, cyclists and dog walkers, would prove too distracting for those engaged in games, lessons, practices or tournaments.

6. The board reviewed the plans showing the trail under the Route 1 Bridge again, explaining that while they have stated they are not open to either option, they are especially not open to the alternate that showed they would lose parking spaces. They stated the club cannot afford to give up parking spaces under any conditions.

The discussion then moved towards options for the trail corridor to be installed on tennis club property, but not using the access road. There was much discussion about the potential of creating a cantilevered deck located five feet towards the creek side of the tennis court property; or crossing the trail over into Springfield Township and negotiating the route with several homeowners in Springfield before crossing back over Darby Creek into Pilgrim Park. The orange dash alternate shown on the consultants plan was discussed as a possibility. This alternate would use an on-grade crossing of Routes 1 and State Road. Concerns of safety for those crossing this very busy intersection were shared by all.

Then the discussion moved back to the club property and the potential to swap land with the Township. A scenario was discussed where the Township would condemn and purchase the access road land, and the club would then build a new road adjacent to the existing one, with buffering in-between the courts and the trail. The club would lose two courts under this scenario and the Township would provide land in Pilgrim Park for the construction of two new courts.

The board applauded the Township's desire to create a trail and they are in favor of trails, but the proposed plan to use their access road is not acceptable to them. The board members requested a public record of their position to deny the trail corridor to be installed on tennis club lands that would require a shared use of the existing access road between the tennis club members and trail users.

As such these meeting minutes will be a part of the Pilgrim Park Trail Feasibility Study, a public document.



APPENDIX B

PILGRIM PARK TRAIL FEASIBILITY STUDY PUBLIC MEETING MINUTES.

UPPER DARBY TOWNSHIP SENIOR CENTER . DECEMBER 20, 2018 FROM 5 PM to 7:30 PM

Approximately 30 people attended this meeting, which was advertised on the Township's website and in the local newspaper. Attendees included several members of council, the mayor, the key study committee members, the newly elected state representative, members of the Friends of Upper Darby Trails and from the Greater Philadelphia Bike Coalition. 20 people signed the Sign-In Sheet and 15 people completed surveys. The meeting was an open house style, the welcome table presented a map of the entire proposed trail route. Many stopped there for an overview of the proposed route, before proceeding to the detailed mapping of the trail sections, renderings and survey.

Comments received where positive and supportive. They are divided into the Segments of the trail.

SEGMENT A

1. Residents who live on Bloomfield Avenue came to learn about the proposed trail route on that street. They do not want the trail behind their homes, or a wide trail in front of their homes. They report that vehicles speed down the street at speeds that greatly exceed the posted speed of 25 MPH.

2. A passive park, with stormwater infiltration areas, as proposed for Huey Park was well received.

3. Pervious pavements should be considered where the soils are continually wet.

SEGMENT B This section received no specific comment.

SEGMENT C

1. There was comment about the proposed pathways through the Drexeline shopping center being wide enough. The current proposal calls for a 5' wide trail; not wide enough for multi-use two way travel.

2. Different surfaces would be preferred along the trail route.

3. The US Route 1 crossing on grade looks to be safer than the alternate route proposed to travel under the US Route 1 bridge.

SEGMENT D

1. The Riparian Buffer all along the trail route should be enhanced where possible.

2. People asked if the trail would impede the current flow of stormwater into the creek.

3. The trail should continue into Haverford Township.

NOTE: A gentleman from Haverford Township attended the meeting. He said the Township had just completed their Trail Feasibility Study and was interested in working with Upper Darby Township to develop the Pilgrim Park Trail through Pilgrim Park.

4. Making connections to residential neighborhoods is a great idea.



The Survey provided to meeting attendees is shown to the left. There were 15 respondents to the survey. The number of responses to each question is shown in the box.

Results show that most who attended the meeting use existing trails in the Township and in the region. All types of trails were acceptable to respondents, who use trails for many different types of activities. Walking and Enjoyment of Nature received the most positive response, which aligns with the PA SCORP.

Only a small percentage reported using trails to commute, but that would most likely increase as the Township's trail system grows and connects to places of business and to public transportation.

Residents are overwhelmingly in support of the Township's interest in developing this trail. Pilgrim Park Trail Feasibility Study RECREATION ENJOYING CYCLING TIME WITH 8 14 7 12 NATURE FAMILY 5. DO YOU SUPPORT THE DEVELOPMENT OF THE DARBY CREEK TRAIL IN UPPER DARBY TOWNSHIP? YES NO 14 1 NAME. UPPER DARBY TOWNSHIP RESIDENT. 14 YES NO 7- Drexel Hill 1 -Kirklyn 1 - Hill Crest IF A RESIDENT OF UDT, 3 - Bywood IN WHICH NEIGHBORHOOD DO YOU RESIDE? 1 - Garrettford AGE GROUP: $\begin{array}{c} \text{GROUP:} \\ \text{Under 18} \underline{1} \\ \text{66-75} \underline{5} \end{array} \begin{array}{c} 1 \\ \text{Over 75} \underline{X} \end{array} \begin{array}{c} 2 \\ \text{31-50} \underline{5} \\ \text{51-65} \end{array} \begin{array}{c} 2 \\ \text{51-65} \end{array} \begin{array}{c} 2 \\ \text{51-65} \end{array}$ GENDER: 7- Male 7- Female
 SIZE OF FAMILY LIVING IN SAME HOUSEHOLD:

 1 __X ____2-4 ___14 ___5-7 ____1 MORE THAN 7 ____X
Comments: Add Restrooms **THANK YOU**

2



90

