

FORT WASHINGTON OFFICE PARK – TRANSPORTATION DEMAND MANAGEMENT STRATEGIES, TRAIL CONNECTIONS AND SIDEWALK INSTALLATION PROGRAM

September 30, 2019



Prepared by:



Boles, Smyth Associates, Inc.
Consulting Civil Engineers Since 1972



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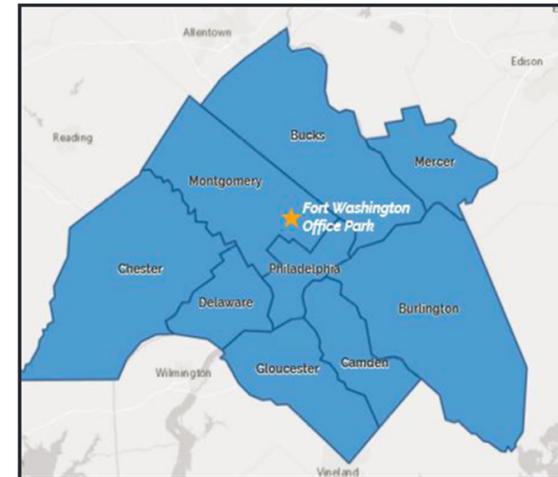
I INTRODUCTION

In 2016 Upper Dublin Township created their Municipal Authority to advance over \$30 million in transportation projects throughout the Fort Washington Office Park (FWOP) which is currently undergoing a revitalization and transformation from a pure business park into a Greater Fort Washington mixed use/multi modal community. To that end the Township has adopted a mixed use overlay zoning ordinance which allows residential and commercial uses to be developed within the Park and are currently constructing 2.5 miles of the Circuit's (Regional Trail Network) Cross County Trail which will also connect TO SEPTA's Regional Rail System located just outside the office park.

In 2017 Upper Dublin Township adopted the **FWOP Transportation Demand Management (TDM) Plan** as prepared by the Greater Valley Forge Transportation Management Association (GVF), Wells and Associates and Township staff. The plan recommended TDM strategies for pedestrian and bicyclist planning and infrastructure, more specifically that the Township should inventory the office park and surrounding areas road bicycle network, sidewalks, trails and paths; identify and prioritize improvements; and develop an implementation plan.

In 2018, the Upper Dublin Municipal Authority received a PA WalkWorks grant. The purpose of the grant is to fund the next level of planning to implement the strategies of the TDM plan mentioned above. The scope of work includes:

1. Inventory the bicycle and pedestrian facilities within FWOP and its surrounding areas,
2. Identify missing segments and or gaps in those facilities,
3. Identify any structural, right-of-way or easement issues and develop strategies to deal with them,
4. Prioritize the improvements (i.e. trail extensions, new trails, sidewalks and segments-missing links) to provide a connected network of bicycle and pedestrian facilities to meet the commuting, commerce, social,



THE FORT WASHINGTON OFFICE PARK IS LOCATED IN UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY. IT IS THE PROCESS OF EVOLVING FROM A 1950'S OFFICE PARK TO A MIXED-USE COMMUNITY THAT OFFERS A BLEND OF OFFICE, COMMERCIAL AND RESIDENTIAL USES.

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- exercise and physical activity needs of the employees, clients, customers, residents and guest of FWOP,
5. Develop an implementation plan, and
 6. Identify funding sources.

Physical Activity

Currently the FWOP is comprised of 123 properties within 536 acres and has over 11,000 employees with less than 1% commuting by bike or walking. Through the Township's land use planning initiatives and mixed use zoning efforts, the FWOP is transitioning into the Greater Fort Washington community. As part of the rezoning initiative, TDM strategies identified in the adopted 2017 Plan have been included the Upper Dublin Township Mixed Use Ordinance passed in May, 2019.

One of the main goals of TDM strategies is to promote a healthy lifestyle and provide users an alternative to the Single Occupant Vehicle with access between businesses, restaurants, retail establishments, the Township library as well as Township Parks and athletic facilities located within FWOP. Through construction of these trail extensions and connections, new sidewalk segments or missing links, the goal is to install a connected, looped bicycle and pedestrian network to serve FWOP and its surrounding neighborhoods. This will allow the various users the ability to walk or bike to these destinations or to use them for leisure or exercise purposes.

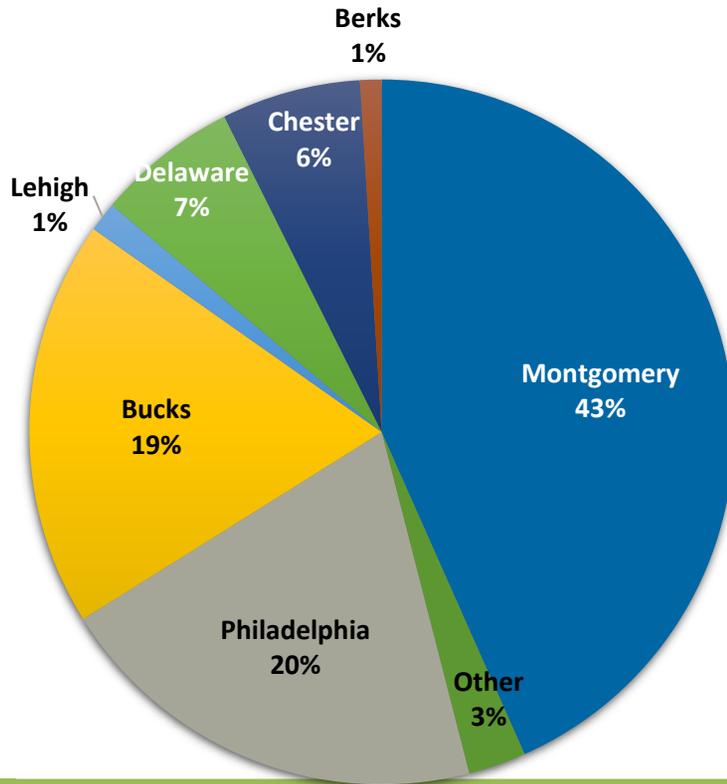
Data Collection and Community Input

The 2017 TDM Plan effort included public meetings, surveys and a focus group session with Stakeholders. The Authority will continue this effort by holding two public meetings, one at the beginning to introduce the goals of this project and to obtain initial Stakeholder input and one towards the end to review the findings and recommendations before a final report is submitted.

The data collection for this effort has built upon the 2017 TDM Plan. Methodology to complete that study included public meetings (2), individual surveys of commuters, companies and property owners, focus group session with a variety of large employers and stakeholder interviews with regional and local representatives from both the private and public sectors. Geospatial analysis of employee addresses and vehicle information to identify employee commuting patterns and the multimodal transportation options available to them is available.

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This data collection effort will utilize Final Design level base mapping which was obtained through an aerial flight of the FWOP. This mapping is being used or has been used to design seven funded construction projects within the FWOP to reconstruct bridges, replace a culvert, institute a Road Diet and install 2.5 miles of the Cross County Trail. The mapping is continually being updated to expand the existing utility layout, Right of Way and property line network, and As-Built conditions from recently constructed projects. This AutoCad base mapping allowed for inventory of the existing trail and sidewalk network, preparation of conceptual layouts of trail and sidewalk connections, and determination of right of way/easement requirements.



Major Tasks Description

The project deliverable will be a stand-alone report which will serve as an addendum to the 2017 TDM Plan which will concentrate on developing the recommended "Pedestrian and Bicyclist Planning and Infrastructure" strategies.

Task 1 - Data Collection and Inventory (March and April, 2019).

This task provides the data to determine the existing pedestrian and bicycle infrastructure, as well as determines the width of the facility and condition of the surface. This task will also ensure the Stakeholder list that has been maintained by the Municipal Authority is current and add interested near neighbors.

COMMUTERS TRAVEL TO THE FORT WASHINGTON OFFICE PARK FROM 24 COUNTIES PER A SURVEY BY GVF WITH PARTICIPATION BY 1,109 EMPLOYEES FROM 46 COMPANIES. OF THESE, 94 % DRIVE ALONE WITH ONLY 3% TAKING TRANSIT. 42% OF COMMUTERS LIVE BETWEEN 5 – 14 MILES FROM WORK.

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Task 2 - Stakeholder Input and Prioritization (May, 2019)

This task will advertise and hold a Stakeholders Kick-off Meeting to present the project, review the "Pedestrian and Bicyclist Planning and Infrastructure" strategies, and obtain input on trail and sidewalk connection priorities.

Task 3 - Design of TDM Strategies (April through September, 2019)

Based on the previous tasks, conceptual designs have been developed to connect missing segments of trail and sidewalks, widen and/or replace low quality existing infrastructure, determine additional bike/pedestrian crossing requirements and determine potential locations for bike parking/bike repair facilities.

Task 4 - Presentation of TDM Strategy Designs (August and September, 2019)

This task will advertise and hold the second Stakeholders meeting to present the conceptual designs and engage the Stakeholders regarding priorities. The task included elements of the draft report during a presentation to the group.

Task 5 - Final Report (October, 2019)

This task will incorporate the results of the second Open House and finalize the report which will be amended to the 2017 TDM Plan. When the conceptual designs are prioritized through Stakeholder input, then potential funding sources will be identified.

Throughout the project, the Municipal Authority has been briefed at their monthly meetings. A formal presentation will be made to the Upper Dublin Township Municipal Authority on October 4th 2019. It is anticipated that there will also be at least one presentation to the Upper Dublin Township Board of Commissioners.

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Support

The Township Municipal Authority has the support of the Township Commissioners and their Planning, Parks & Library Committee, as well as the Fort Washington Business Alliance and the original Stakeholders that participated in the TDM planning and supported its findings and recommendations.

Expansion of the Cross County Trail and implementation of local trail and sidewalk connections to the regional trail system is also consistent with Montgomery County's Bike Montco Plan and fully endorsed by Montgomery County.

II Project Objectives

The first goal of the project is to identify initial TDM strategies for pedestrians and bicycles that may be implemented in the Fort Washington Office Park as it transitions to a mixed-use community. The second goal of the project is to expand upon the pedestrian and multi-use trail options available within the office park now that the Cross County Trail is fully funded within the 2.5 mile as well as to identify local sidewalk and multi-use trail connections within the office park that may be linked to the Cross County Trail. Through these goals, a Complete Streets Policy for Upper Dublin Township is being developed. A draft is included in this report.

The following objectives have been established:

- a) Identify Transportation Demand Management (TDM) pedestrian and bicycle strategies for Fort Washington Office Park.
- b) Identify TDM strategies that will advance Fort Washington Office Park's transition into the Greater Fort Washington District.
- c) Ensure all initiatives address Americans with Disabilities Act (ADA) accessibility.
- d) Ensure all initiatives actively consider the health benefits.
- e) Advance one site specific private property owner agreement for a bike repair station.
- f) Advance one site specific private property owner agreement for a bike sharing location.
- g) Prioritize local bicycle connections to the Cross County Trail.
- h) Prioritize local pedestrian connections to the Cross County Trail.
- i) Explore funding mechanisms for implementation.

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III Project Stakeholders

A stakeholder’s group has been assembled and held their first meeting on May 2, 2019. A second meeting was held on September 26, 2019 at the Upper Dublin Township Building. The membership of the group includes representatives of the Fort Washington Office Complex, Local Land Developers, Local, County and Regional Planning Organizations, Local and County Governments, Health Organizations, the Disabled Community and members of the Pennsylvania Legislature.

Individual/Organization	Name	Gov. Body	Education	Econ. Dev	Planning	Public Health	Mun. Auth.	Advocacy Groups & SEPTA	Employers
Upper Dublin Township	Paul Leonard, Twp Mgr	X		X					
Upper Dublin Twp Municipal Auth.	Robert Pesavento, President						X		
Montgomery County Plan. Comm.	Andrew Besold				X				
Mont. Co Health & Human Serv.	Tara Gaudin, Exec. Director					X			
DVRPC	Amy Bernknopf Transit, Bike & Ped				X				
State Senator Vincent Hughes	via Toni Marchowsky	X							
State Rep Thomas Murt	via Bill Dixon	X							
State Rep Ben Sanchez	via Morgan Selkirk	X							
Abington-Jefferson Health	Meg McGoldrick, President					X			
Temple University Ambler	Dr. Vicki Lewis McGarvey		X						
Toll Brothers	Amanda Amos								X
Fort Washington Business Alliance	Glenn Griffin, President			X					
Aon	Samelia White								X
SofterWare Inc.	Dr. Nathan Relles, President								X
Upper Dublin School District	Dr. Yanni via Kim Schuler		X						
ADA Advocate	Melissa Monser							X	
SEPTA	Mark Cassel & Harley Cooper							X	
TOTALS		4	2	2	2	2	1	2	3

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IV TDM Strategies – Bike Repair Stations

The 2.5 mile section of Cross County Trail through the Fort Washington Office Park is part of the regional Circuit Trails. The trail will provide commuters an alternate means of transportation from the surrounding neighborhoods and direct access from the SEPTA Regional Rail Station located on Pennsylvania Avenue. It is beneficial for the bike commuter to know there are designated locations where space and materials for bike repairs may be made.

There are multiple vendors and types of Bike Repair Stations available depending upon the location (ie. indoor vs outdoor) and price point. They generally range in price from \$1500 to \$6000 not including the cost of the concrete pad. Since these stations would be installed along the Cross County Trail, which will be owned and maintained by Montgomery County, this project is consulting with operators of Bike Repair Stations along the Chester Valley Trail and Schuylkill River Trail.

This project is striving to obtain Legal Agreements with two private property owners along the Cross County Trail where a Bike Repair Station may be constructed in the near future. Along with a Township-owned property, a short term goal of this project is to provide stations in the east, middle and west sections of the office park.

The following figures show potential locations at 375 Commerce Drive where LifeTime Fitness is located, 520 Virginia Drive where the Upper Dublin Township Library will open in Spring, 2020 and 1100 Virginia Drive which has the largest office use in the office park.



BIKE REPAIR STATION & BIKE SHARING LOCATION



LIFETIME FITNESS



BIKE REPAIR STATION & BIKE SHARING LOCATION



1100 VIRGINIA DRIVE



POTENTIAL BIKE REPAIR STATION

POTENTIAL BIKE SHARING LOCATION

UPPER DUBLIN TOWNSHIP LIBRARY AND COMMUNITY CENTER

VIRGINIA DRIVE

HIGHLAND AVENUE

BIKE REPAIR STATION & BIKE SHARING LOCATION



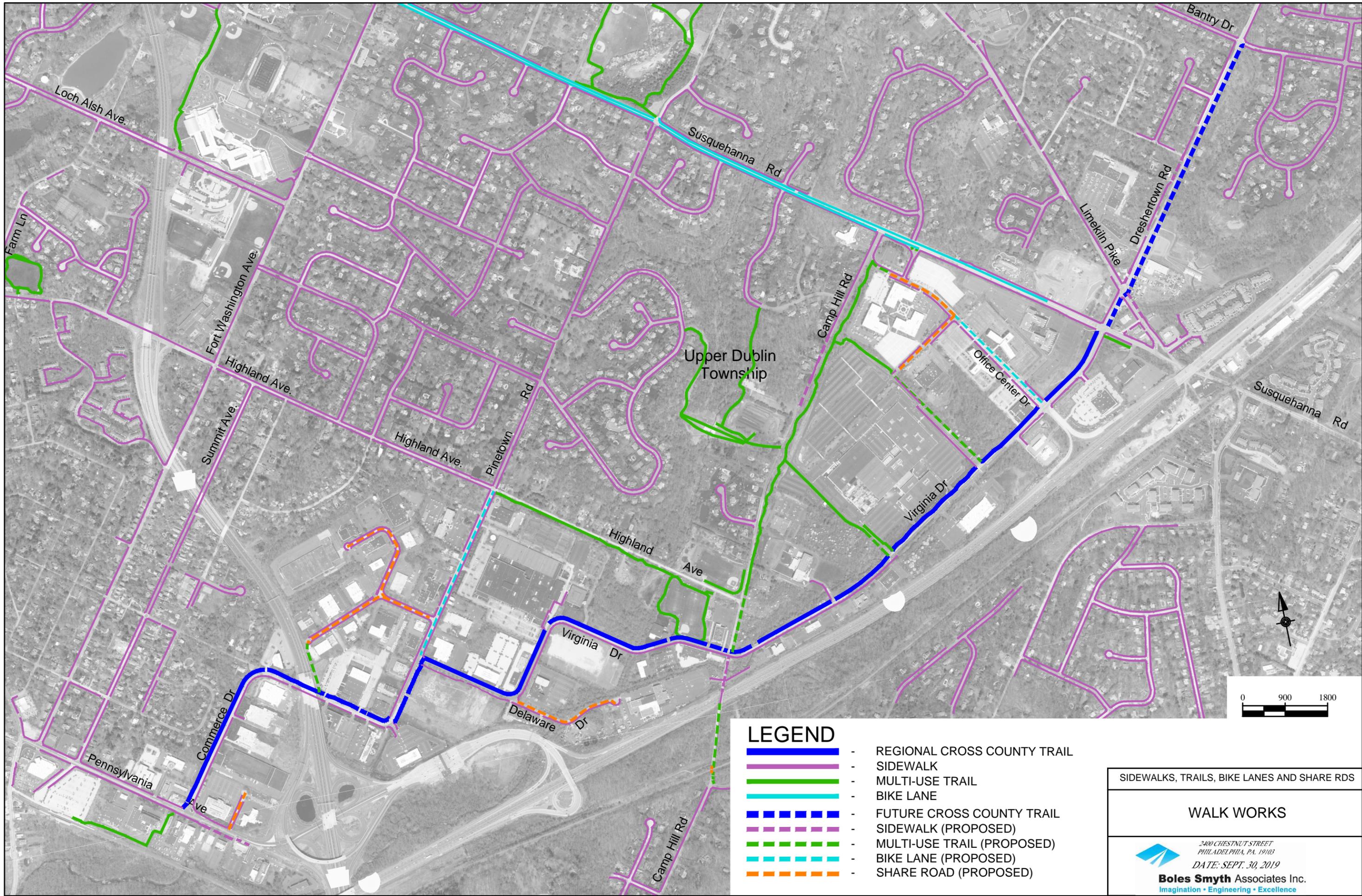
520 VIRGINIA DRIVE

V TDM Strategies – Bike Share Facilities

While Bike Repair Stations are a short term initiative for implementation within the Fort Washington Office park, a Bike Share Program is a long term initiative that has potential for a higher conversion of commuters from Single Occupancy Vehicles to bicycling. Key to the development of this TDM strategy is linking the Fort Washington SEPTA Regional Rail Station to the Cross County Trail so as to provide a last-mile connection to the office park. There is also a SEPTA Bus Route through the office park. Therefore, bike share locations are being proposed at existing bus shelter locations to promote bus transit use.

The Bike Repair Station locations shown on the previous pages are also designated as potential locations for Bike Share facilities. In addition, the proposed location shown on the next page was presented at Stakeholder Meeting #2. As discussed at the first Stakeholder Meeting, the selection of the Bike Share Program is critical to the success of the program. While it is beyond the scope of this effort to implement a Bike Share Program, the Stakeholder group is committed to continuing its efforts exploring different funding sources in moving forward.

Next steps for this TDM strategy are based on discussion with two operators of Bike Share Programs. They recommend a Feasibility Study to assess goals, get further Stakeholder input, evaluate the preparedness of an entity to host the program, discuss potential business models, analyze financial component based on experience in other area, plan for station locations, develop an initial Operations Plan and discuss marketing. From there, Requests for Proposals and implementation would follow.



LEGEND

- ▬ REGIONAL CROSS COUNTY TRAIL
- ▬ SIDEWALK
- ▬ MULTI-USE TRAIL
- ▬ BIKE LANE
- - - FUTURE CROSS COUNTY TRAIL
- - - SIDEWALK (PROPOSED)
- - - MULTI-USE TRAIL (PROPOSED)
- - - BIKE LANE (PROPOSED)
- - - SHARE ROAD (PROPOSED)

SIDEWALKS, TRAILS, BIKE LANES AND SHARE RDS

WALK WORKS


 2400 CHESTNUT STREET
 PHILADELPHIA, PA. 19103
 DATE: SEPT. 30, 2019
Boles Smyth Associates Inc.
 Imagination • Engineering • Excellence

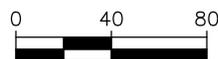
VI Existing Inventory of Sidewalk & Trail and Proposed Connections

As shown on the following figure, the Fort Washington Office Park has an existing robust network of multi-use trails and sidewalks. With the addition of a regional Circuit Trail being completed in 2021, it is critical to maximize access to the trail from the surrounding community. There are several incomplete paths to this Cross County Trail which translates to potential users not transitioning to bike or walking commuter choices. These missing links also restrict trail use from those that may be trying to promote a healthy lifestyle. This project has identified priority trail connections.

1. Extension of the Cross County Trail beyond the 2.5 mile office park is a priority. Future construction of the trail along Virginia Drive from Susquehanna Road to Limekiln Pike and along Dreshertown Road from Limekiln Pike to Beacon Hill/Bantry Road will link multiple residential neighborhoods to the trail within the office park and with the SEPTA Fort Washington Regional Rail Station on Pennsylvania Avenue. This 0.65 mile trail extension requires extensive complimentary road work, culvert replacement and grave relocations from a private cemetery. However, through a planning effort completed in 2018, a grant application was prepared and design of the project has been awarded through a Delaware Valley Regional Planning Commission Regional Trails program. As design gets underway, additional grants for construction have been submitted for this estimated \$4.65 Million project.
2. Camp Hill Road is a critical link to the Fort Washington Office Park. North of the office park there is an existing asphalt trail that terminates approximately 800 feet before reaching the Cross County Trail. Along the road south of the office park, no sidewalk or trail exists although there are multiple dense residential developments in this area. From this section of Upper Dublin Township this is the only route directly into the office park due to the existence of the PA Turnpike and Norfolk Southern Rail line that both serve as a barrier for access. With the Cross County Trail construction, the need for safe bike and pedestrian access is critical. Providing a sidepath extension from the north and a sidewalk, Share the Road facility from the south have been proposed. A grant application was made this past year to PA Department of Community and Natural Resources for this project and we await selection results.
3. Office Center Drive is a wide road that intersects the Cross County Trail and Virginia Drive. It serves office buildings and does not require two lanes in each direction. Therefore, bike lanes are recommended for Office Center Drive which will create a bike circle track with the existing bike lanes on Susquehanna Road and the Cross County Trail.
4. Pinetown Road is a similar wide road with one lane in each direction. It serves as a feeder route to the office park. Bike lanes or creation of a sidepath are also recommended along this route.



BIKE SHARING LOCATION



FT WASHINGTON TRAIN STATION

VII Complete Streets Policy

The following is the Draft Complete Streets Policy which will be presented to the Upper Dublin Township Municipal Authority and Upper Dublin Township Board of Commissioners in Fall, 2019.

1.0 VISION

Complete streets are defined by this policy to enable safe access for all users.

Upper Dublin Township, Montgomery County, Pennsylvania, along with its Municipal Authority will develop and maintain safe, accessible, Township or Authority owned roads, bicycle trails, pedestrian paths/sidewalks and facilities that support all users. The Complete Streets policy will guide decision making during the planning and design of Township and/or Municipal Authority improvement projects for roads, trails, paths and other Township owned facilities, as well as projects and initiatives of its partners, developers and other external stakeholders.

2.0 PRINCIPLES

The Complete Streets policy will promote safe, accessible, and integrated transportation options that balance the needs of all users and modes, including but not limited to pedestrians, bicyclists, transit riders, motorist (including motorcyclists), freight carriers, emergency and transit vehicles.

2.1 Serve all users and modes

The Complete Streets policy will promote safe, accessible, and integrated transportation options that balance the needs of all users and modes, including but not limited to pedestrians, bicyclists, transit riders, motorists (including motorcyclists), freight carriers, emergency and transit vehicles.

2.2 Utilize best practice design criteria and context sensitive approaches

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Upper Dublin Township’s Complete Streets standards will balance the safety of all users while considering a project’s physical setting as well as scenic, aesthetic, and historic concerns, Township standards and accepted design principles for the appropriate transportation use.

2.3 Promote sound environmental design

This Complete Streets policy will promote best management practices of stormwater management, environmental design and place making. It is also intended to incorporate environmental mitigations as required by permitting agencies or where practicable if permits are not required when implementing Complete Streets designs.

2.4 Apply to all phases of a project, particularly during planning and design

Complete Street designs shall be considered during the planning and design phases of Township/Authority-led street, highway, bridge, trail and sidewalk projects, to the greatest extent practicable. Township representatives shall define important Complete Street design elements in cooperation with local and regional projects.

2.5 Be consistent with Township plans and other agencies

Complete Streets shall help achieve specific goals articulated in Upper Dublin Township’s, 2010 Comprehensive Plans, Upper Dublin Township’s “Open Space and Environmental Resource Protection Plan; 2017 “Addendum Pertaining to FWOP of the Comprehensive Plan (Alternative Transportation and the 2017 “FWOP Transportation Demand Management Plan,” Pedestrian and Bicyclist Planning and Infrastructure.”

Complete Streets recommendations will consider objectives and goals of current State, Regional, County and Municipal plans as well as those of other relevant agencies.

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2.6 Achieve Public Policy Goals

This Complete Streets policy will be used to improve public health by supporting people who cannot or do not drive to travel independently and safely. It will also advance economic development and promote investment and equal opportunities in all the Township's communities.

3.0 IMPLEMENTATION

Each Township department and the Municipal Authority will be involved to assist in development of appropriate implementation standards and guidelines to be incorporated into the Complete Streets policy whenever practicable.

3.1 Internal Use of This Policy

“Internal Use” is defined as any situation involving the Township or Authority led construction or reconstruction of Township or Authority owned assets that are funded either partially or fully through the Township’s or Authority’s capital budget and whose project delivery is managed by Township or Authority staff.

Complete Streets design guidelines will be integrated into decision making whenever changes are proposed for a Township or Authority owned roadway, property, or facility and when new infrastructure is proposed.

This Complete Streets policy shall apply to all transportation related elements of Township or Authority capital improvement projects. It shall apply to all Township departments, commissions and agencies, as well as to the Municipal Authority. As the Township constructs and/or renovates buildings and other facilities, transportation access by all anticipated modes shall be considered.

This Complete Street policy shall apply to any development or redevelopment of property within Upper Dublin Township as an element of the Land Development process.

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This Complete Streets policy shall apply to transportation related projects on Montgomery County owned facilities if Township or Municipal Authority funding is directly included in the project funding. Montgomery County's Complete Streets policy may be substituted for Upper Dublin Township's policy if there is consensus between Montgomery County and Upper Dublin.

This Complete Streets policy shall apply to transportation related projects on state owned facilities if Township or Municipal Authority funding is directly included in the project funding. The Pennsylvania Department of Transportation's Complete Streets policy may be substituted for Upper Dublin Township's policy if there is consensus between PennDOT and Upper Dublin.

The design of new, rehabilitated, or reconstructed Township owned roads and bridges shall consider the current and future demands for all modes.

- a. Township roads and bridges designated as part of the bicycle network in the Township's Comprehensive Plan (or its successor) shall be built/reconstructed with off-street or on-street bicycle amenities, per Township plan guidelines.
- b. Whenever practicable, repaving of Township roads designated as part of the bicycle network shall be considered for on-street bicycle amenities, per Township plan guidelines.
- c. When no bicycle and/or pedestrian demand is anticipated, facilities shall be constructed so as not to preclude bicyclists or pedestrians should future development generate new demand.
- d. Emergency repairs of road and bridges that require redesign and replacement shall also consider the needs of all modes per this Complete Streets policy to the extent that public safety is not compromised to repair the facility.
- e. The construction of new American with Disabilities Act (ADA) compliant sidewalks will be given extra consideration in areas of the Township designated as "Recommended Areas for Sidewalks" per Township Plans.
- f. Planning and design of transportation improvements shall be compliant with ADA standards unless there is a justification provided and approved by Upper Dublin Township that is based on the most current Technically Infeasible Form (TIF) parameters accepted by PennDOT in these instances.
- g. Sidewalks, bicycle routes, and roadways shall remain clear and passable during routine maintenance and repair of Township facilities. If sidewalk or bicycle routes exist and are required to be included in the Work Zone along Township owned roadways then pedestrians and bicyclists shall be accommodated during construction consistent with PennDOT Publication 236 Traffic Control Guideline standards.

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3.2 External Use of this Policy

“External Use” is defined as any situation involving the construction or reconstruction of any physical assets by outside organizations or entities, in which these entities build or own the assets and the Township’s role is secondary or participatory.

Upper Dublin Township will request Complete Streets elements in all public-sector infrastructure projects, planning efforts, and policy formation being undertaken by the Township’s partners. Examples of public-sector infrastructure projects include, but are not limited to:

- a. Involvement in transportation capital projects led by partners such as PennDOT, SEPTA, Pennsylvania Turnpike Commission and Montgomery County.
- b. Assistance in writing zoning and subdivision & land development ordinances, and other municipal policies.

Upper Dublin Township will advocate for Complete Streets elements in all private-sector and non-profit efforts where the Township has regulatory involvement. Examples include, but are not limited to:

- a. The issuance of highway occupancy permits
- b. Health department permits
- c. Subdivision and land development plans

4.0 PERFORMANCE MEASURES

Upper Dublin Township, through its Community Planning and Zoning Department will track the progress of the Complete Streets policy implementation on Township or Municipal Authority owned facilities and make the results publicly available. Performance measures can include, but are not limited to:

- a. Increase in linear feet of new and/or repaired sidewalk.
- b. Increase in the number of marked crosswalks, ADA-compliant curb ramps, pedestrian signal heads, pedestrian push buttons, flashing signals, signs, and other relevant pedestrian safety improvements.
- c. Increase in linear feet of new multi-use trail or sidepath facilities.
- d. Increase in the number of bus shelters, concrete pads, benches, and other relevant bus stop amenities.

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- e. Decrease in the number of reported bicycle and pedestrian crashes on all roadways located within Upper Dublin Township.
- f. Decrease in the number of reported vehicle crashes on Township owned roads.
- g. Increase in the number of public, quasi - public and private projects that incorporate the Complete Streets Policy, Complete Streets elements and other relevant public policy efforts into their plans.

5.0 EXCEPTIONS

5.1 General Exception Guidelines

All Complete Streets accommodations may not be practical due to factors beyond the Township's control. Exceptions to the Complete Streets policy may be considered when any one of the following occur:

- a. The existing and future (25 year horizon) projected vehicular traffic volumes on a particular roadway or facility are so low that certain modes do not need to be specifically addressed and/or are already addressed by the current design.
- b. The existing and future (25 year horizon) projected bicycle and pedestrian volumes as well as transit need are so low that one or more of these modes do not need to be specifically addressed.
- c. The cost or impacts for accommodation is excessively disproportionate to the current or future need, which is defined by the FHWA at the time of the adoption of this policy as exceeding twenty percent of the cost of the larger project¹.
- d. There is an existing or proposed parallel facility with sufficient accommodations, or it is more feasible and/or less costly to locate the proposed accommodations on an alternate route. Compared to the original route, the alternative shall not increase travel distance for pedestrians by more than $\frac{3}{4}$ mile and/or for bicyclists by more than 1 mile.²

5.2 Procedures for Approving Exceptions

All exceptions to this policy must be recommended by the Township Engineer and approved by the Township Board of Commissioners in consultation with other relevant Township departments and/or its Municipal Authority.

Written findings and supporting data must be provided for all exceptions and made publicly available.

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5.3 Public Availability of Exceptions

Exceptions under consideration shall be included as part of a project’s public open houses to the greatest extent possible. Exceptions and their related discussions shall be documented and the justification for each exception will be summarized in a report and made available to the public.

6.0 STANDARDS AND GUIDELINES

Guidelines and standards may include, but not are limited to:

- I. American Association of State Highway Officials (AASHTO) A Policy on Geometric Design of Highways and Streets (Green Book).
- II. AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities
- III. AASHTO Guide for the Development of Bicycle Facilities
- IV. Public Right-of-Way Accessibility Guidelines (PROWAG)
- V. American’s with Disabilities Act Accessibility Guidelines (ADAAG)
- VI. PennDOT Design Manual 2, Publication 13M, current edition
- VII. PennDOT Smart Transportation Guidebook (<https://www.dvrpc.org/reports/08030A.pdf>)
- VIII. American Planning Association Complete Streets: Best Policy and Implementation Practices (<https://www.planning.org/publications/report/9026883/>)
- IX. Institute of Transportation Engineers (ITE) Traffic Calming Measures and Walkable Urban Thoroughfares
- X. Manual on Uniform Traffic Control Devices (MUTCD)
- XI. SEPTA Bus Stop Design Guidelines: <http://septa.org/strategic-plan/reports/SEPTA-Bus-Stop-Design-Guidelines-2012.pdf>
- XII. SEPTA Cycle-Transit Plan: <https://www.septa.org/sustain/pdf/cycletransitplan15.pdf>)
- XIII. National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
- XIV. NACTO Urban Street Design Guide
- XV. NACTO Transit Street Design Guide
- XVI. U.S. Forest Service Trail Accessibility Guidelines (FSTAG)
- XVII. U.S. Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG)

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¹Accommodating Bicycle and Pedestrian Travel: A Recommended Approach, FHWA,
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design.cfm

²These distances were calculated using an assumed travel speed of 3mph for a pedestrian and 12 mph for a bicyclist.