Spring Mill
Multi-Modal and Land Use Study

Prepared for:

Whitemarsh Township
Montgomery County, PA

2022

G&A
Gilmore & Associates, Inc.
Engineering & Consulting Services

WHITEMARSH TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

RESOLUTION NO. 2022-16

A RESOLUTION OF WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, ADOPTING AN AMENDMENT TO THE WHITEMARSH TOWNSHIP COMPREHENSIVE PLAN OF 2003 ENTITLED "SPRING MILL MULTI-MODAL AND LAND USE STUDY"; REPEALING ALL INCONSISTENT RESOLUTIONS OR PARTS THEREOF; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, on November 20, 2003, the Board of Supervisors of Whitemarsh Township adopted the Whitemarsh Township Comprehensive Plan dated April, 2003; and

WHEREAS, by Resolution #2020-08 on February 27, 2020, the Board of Supervisors authorized the submission of a Transportation and Community Development Initiative (TCDI) grant application to the Delaware Valley Regional Planning Commission (DVRPC) to assist in the preparation of a study of the multi-modal and land use issues present in the Spring Mill portion of the Township; and

WHEREAS, in May, 2020, DVRPC awarded a TCDI grant to the Township; and

WHEREAS, Gilmore & Associates, Inc. was chosen to serve as the consultant to assist the Township in preparing said study; and

WHEREAS, the TCDI grant contract was finalized and awarded in November, 2020; and

WHEREAS, the Board of Supervisors appointed a Steering Committee to work with the consultant; and

WHEREAS, work on the study started in earnest in January, 2021 and a final draft completed in May 2022; and

WHEREAS, the final draft study was reviewed at an adveristed Public Meeting of the Whitemarsh Township Planning Commission on May 24, 2022 in accordance with Section 302(a) of the PA Municipalities Planning Code; and

WHEREAS, at the conclusion of the Planning Commission's Public Meeting, the Commission passsed a motion recommending the adoption of the Spring Mill Multi-Modal and Land Use Study by the Board of Supervisors; and

WHEREAS, the Board of Supervisors advertised and held a Public Hearing on June 9, 2022 pursuant to Section 302(b) of the PA Municipalities Planning Code; and

WHEREAS, the Board of Supervisors desires to adopt the "Spring Mill Multi-Modal and Land Use Study" as an amendment to the Whitemarsh Township Comprehensive Plan pursuant to Section 302(c) of the PA Municipalities Planning Code;

NOW, THEREFORE, be it **RESOLVED**, and it is hereby **ADOPTED** and **RESOLVED** by the Board of Supervisors of Whitemarsh Township as follows:

I. That certain document, entitled "Spring Mill Multi-Modal and Land Use Study", including all maps, charts, textual matter, and other matter intended to form a part of such document, a copy of which is attached to this Resolution as Exhibit "A", is hereby adopted as an amendment to the Whitemarsh Township Comprehensive Plan of 2003.

II. This Resolution and the action adopting it shall be recorded on the adopted amendment to the Comprehensive Plan.

III. All resolutions or parts thereof inconsistent with this Resolution are hereby repealed to the extent of the inconsistency.

IV. The provisions of the Resolution are declared to be severable. If any provision of this Resolution is declared by a court of competent jurisdiction to be invalid or unconstitutional, such determination shall have no effect on the remaining provisions of this Resolution.

V. This Resolution shall become effective immediately upon its legal adoption.

ADOPTED and **RESOLVED** this 9th day of June, 2022.

ATTEST

Richard L. Mellor, Jr., Secretary

BOARD OF SUPERVISORS OF WHITEMARSH TOWNSHIP

Laura Boyle Nester, Chair

WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY

SPRING MILL MULTI-MODAL AND LAND USE STUDY

JUNE 2022

PREPARED BY:

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

WHITEMARSH SPRING MILL MULTI-MODAL AND LAND USE STUDY

PREPARED FOR: WHITEMARSH TOWNHSIP, MONTGOMERY COUNTY

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TOWNSHIP MANAGER

RICHARD L. MELLOR

TOWNSHIP DIRECTOR OF PLANNING AND ZONING

CHARLES L. GUTTENPLAN

Funding for This Study Provided by:

TCDI
Transportation & Community Development Initiative
dvrpc

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Spring Mill section of Whitemarsh Township has long been recognized as an important transportation junction. It is an area with a rich transportation crossroads (SEPTA regional rail and bus routes, The Schuylkill River Trail (SRT), and numerous major roadways). It is also the home of the Township's limited slice of Schuylkill River waterfront. The land uses of this area are in flux. While the riverfront is currently comprised of former industrial and office uses, it is simultaneously bracing itself for a shift towards dense residential and multi-use development. With this future in mind, the challenges of this area, including dead-end streets, unsafe multi-modal intersections, and flood risk, are rising in public concern. Furthermore, a lack of public access to the waterfront and County Park has frustrated residents as they watch their riverfront succumb to private development. Change is not always negative, and development also spurs opportunities for infrastructure upgrades and new amenities. It also offers an opportunity to guide the future land use of the remaining undeveloped or underdeveloped parcels towards an accessible, economically vibrant, and sustainable future for the study area as a whole.

THE PLAN PURPOSE

The Spring Mill Area Multi-Modal and Land Use Study is being conducted to improve a regionally important junction of pedestrian, bicycle, vehicle, and commuter-train transportation options. This junction is in the Spring Mill area of Whitemarsh Township, along the Schuylkill River, and the Schuylkill River Trail (SRT), the Manayunk/Norristown Line of the SEPTA suburban commuter regional rail line, and the main roads of Hector, Lee and Washington Streets as well as North Lane. This study is funded by a Transportation and Community Development Initiative (TCDI) Grant from the Delaware Valley Regional Planning Commission.

PUBLIC PARTICIPATION PROCESS

Obtaining the input of those who reside, work, or spend time in the study area was a critical piece of this project. Given the wide range of complex considerations within the study, the project team prioritized engaging a wide range of stakeholders, steering committee members, and community members from the project's outset.

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Survey Responses

The community was engaged throughout the study through Key Person Interviews (interviewed groups are highlighted in the word cloud above), Public Presentation & Listening Sessions, and a public survey. A 22-member steering committee was also assembled to periodically review work and provide feedback based on their expertise.

The word cloud to the left highlights the most commonly cited considerations throughout all methods of public engagement during the study.

Lack of publicly available parking

Traffic throughout the study area

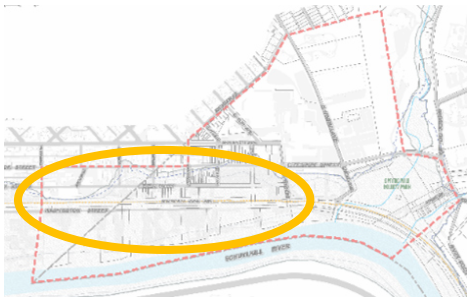
Public River Access

User conflicts along the trail

Heavy development and flooding

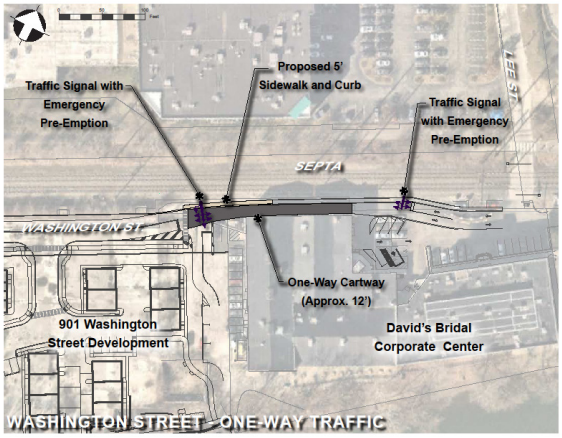
The concerns listed to the left guided the study and the eventual recommendations and conceptual designs proposed. For example, the public emphasis placed on public access and recreation within the study area broadened the focus of the study. As a result, discussions and solutions for river and recreational access are explored and recommended.

WASHINGTON & LEE STREETS & SURROUNDING CONNECTIVITY



Washington Street warranted a closer look primarily due to the current dead-end condition and the resulting access and safety issues felt throughout the study area. While it would be ideal to provide two-way traffic through Washington Street, it is currently infeasible due to the location of David's Bridal's building and their future plans for the site. While the Township should maintain a partnership with David's Bridal in the event that plans change in the future, the recommendations below offer more immediate solutions.

Additionally, with the anticipated increase in usage of the riverfront properties resulting from development and eventual installation of a riverfront walking trail, there will likely be an increase in pedestrian traffic along Lee Street from nearby residents to access the riverfront. This increase in pedestrians will need to be addressed. Specifically, the lack of connectivity of the Washington Street area to the existing sidewalk on Lee Street, and the effectiveness, or lack thereof, of the mid-block pedestrian crossing at East Hector Street. The recommendations identified below will assist in improving the multi-modal connectivity to/from the riverfront.



Preferred Mitigation Alternative

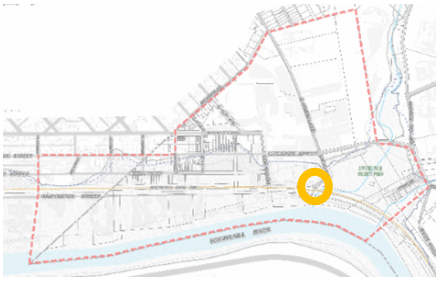
Key Opportunities	Key Constraints
FUTURE IMPROVEMENTS FROM 901 WASHINGTON STREET AND OTHER PENDING DEVELOPMENTS	DEAD-END CONDITION OF WASHINGTON STREET
SHARED PARKING	PLACEMENT OF DAVID'S BRIDAL'S BUILDING
MULTI-MODAL CONNECTIVITY TO RIVERFRONT	PROXIMITY TO SEPTA RIGHT-OF-WAY

Key Recommendations

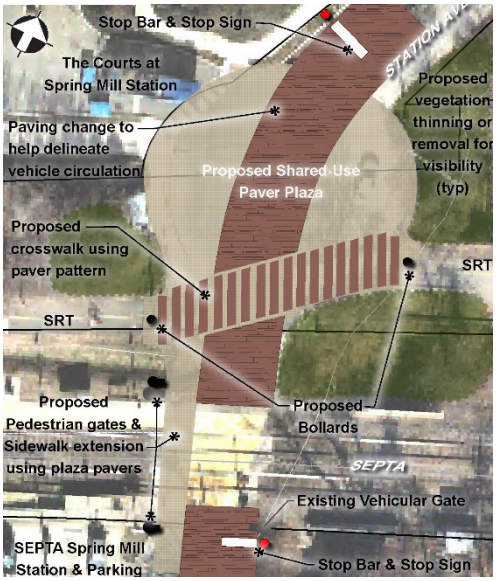
1. Install traffic signals to allow one-direction of travel at a time through Washington Street.
2. Install improvements from the preferred Washington Street Cross Section, where space allows and as opportunities arise.
3. Install Pedestrian Gates at the Railroad Crossing with improved signage, pavement markings, and intersection lighting
4. Extend curb/sidewalk on Lee St to connect existing sidewalk to SRT.
5. Install Rectangular Rapid Flashing Beacon (RRFB) and continental crosswalks at E. Hector St.

SPRING MILL JUNCTION

The Spring Mill Junction, or intersection of Station Avenue, the SRT, and the SEPTA railway, is a critical pinch point of heavy use by several different modes of transportation and a major safety concern within the study area. While there are short-term and long-term solutions that could address these issues, this study aims to recommend those that will be impactful, appropriate, and aesthetically and environmentally pleasing.



Key Constraints	Key Opportunities
LIMITED SIGHT DISTANCE AT THE JUNCTION	RECREATIONAL RIVER ACCESS
OVERGROWN VEGETATION	RIVERFRONT TRAIL ACCESS
LIMITED PUBLIC PARKING	SHARED PARKING
UNSAFE INTERSECTION	STATION AVE. VEHICULAR SAFETY & VISIBILITY
NO GATHERING SPACE FOR TRAIL AND SEPTA USERS	SIDEWALKS & TRAIL CROSSING
	PED. SAFETY AT RAILROAD CROSSING
	SRT TRAILHEAD IMPROVEMENTS



Shared Use Paver Plaza

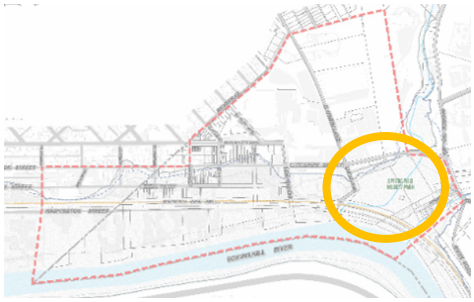
Gathering Space along Station Ave

Key Recommendations

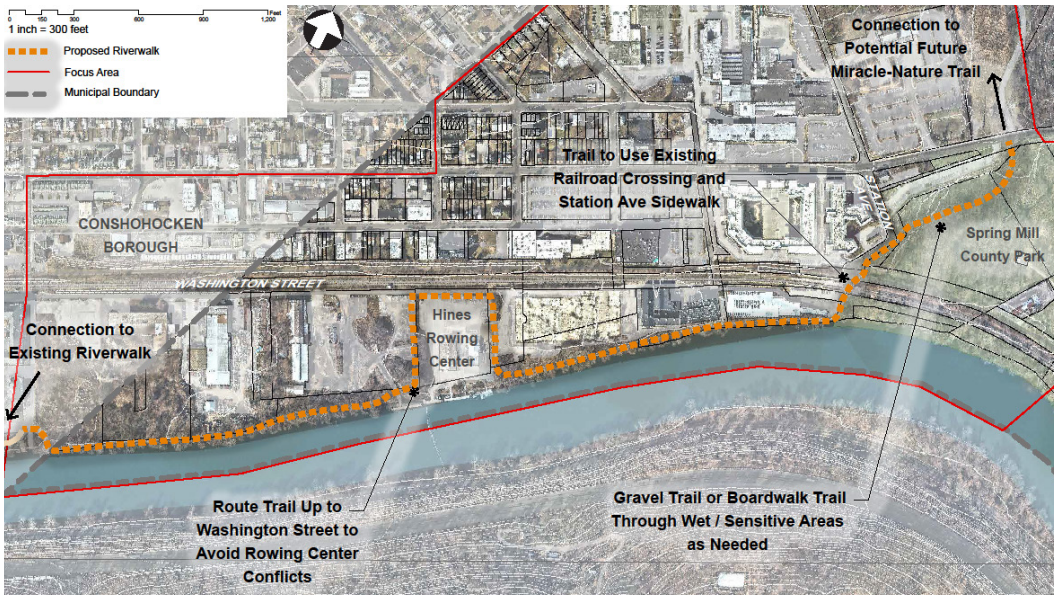
1. Create a shared-use paver plaza in the cul-de-sac and railway crossing with sidewalk and pedestrian gate over tracks
2. Create a gathering space along Station Ave with bike parking, signage, and pedestrian improvements.

SPRING MILL RIVERFRONT

Public access to the riverfront and river for recreational purposes were two secondary considerations of this study that public input pushed to the forefront. Unfortunately, it is difficult to plan recreational river access with the current ownership and uses of the David's Bridal property and other lots along the riverfront. Therefore, these recommendations focus on providing riverfront trail access, Spring Mill Park access, and buffering for incompatible uses.



Key Constraints	Key Opportunities
LACK OF PUBLIC RIVER ACCESS	PUBLIC RIVER ACCESS
INCOMPATIBLE LAND USES	PUBLIC ACCESS FOR THE SPRING MILL COUNTY PARK
LIMITED PARKING	CURRENT AND FUTURE DEVELOPMENT ALONG THE WATERFRONT
STEEP RIVERBANK AREAS	

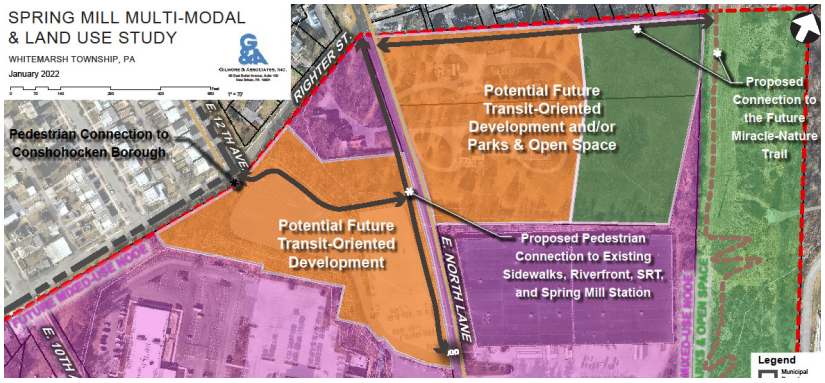


Key Recommendations

1. Install riverwalk trail.
2. Install native landscape buffering along the Sundafu Recycling boundary with the Schuylkill River Trail.

NORTH LANE

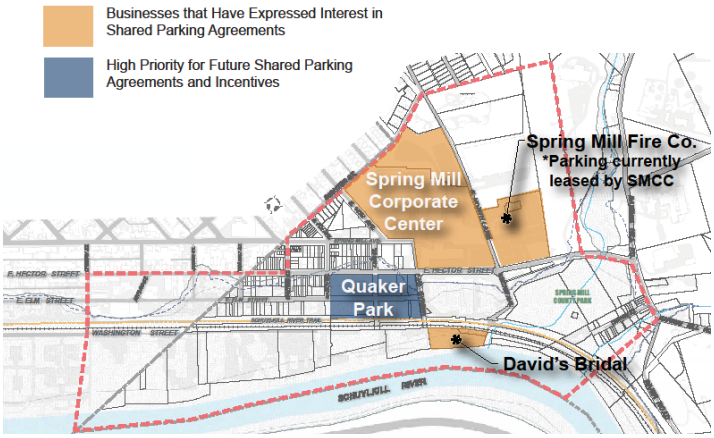
The focus along North Lane is underdeveloped parcels that have the potential to be developed in the near future. Given the placement of these parcels further uphill, and out of the 100-year floodplain, along with the proximity to the Spring Mill Corporate Center and the walkable distance to the SRT, Spring Mill Station, and the future Miracle-Nature Trail, they are good candidates for Transit-Friendly Development and Open Space preservation. Pedestrian improvements would be a good accompaniment to this potential development.



Key Constraints	Key Opportunities
STEEP TOPOGRAPHY	FUTURE DEVELOPMENT
NEARBY RESIDENTIAL PROPERTIES	FUTURE RE-ZONING
LIMITED PARKING	PROXIMITY TO SMCC
ROAD SPEED AND INCLINE OF NORTH LANE	PROXIMITY TO SRT & SPRING MILL STATION

OVERALL STUDY AREA

While the four key areas outlined above were examined in closer detail based on specific concerns and opportunities, the study area also deserved a holistic examination, particularly on the topics identified in the table below. Multiple solutions and designs were explored for each of these issues and a key recommendation for each is included below.



Issue	Key Recommendation
Multi-Modal Connections	Install ADA-compliant pedestrian infrastructure, where missing, throughout the study area
Flooding	Consider more floodplain management standards & ordinance requirements
Sense of Place	Install Hurricane Ida flood line art & educational signage
Parking	Shared parking agreements for private lots

SUMMARY & NEXT STEPS

The action plan, found in Chapter 6 of this report, breaks down the full breadth of provided recommendations by goals and objectives. From there they are prioritized by shorter- and longer-term priorities. Using the identified funding resources included in the Potential Funding Opportunities Table found in Chapter 6, the Township can explore specific grant sources that may be appropriate for each improvement.

The Goals and Objectives outlined below are each designed to incrementally work towards the project vision.

"The vision for Spring Mill is multi-faceted, accessible, economically vibrant, and sustainable with an eye towards the future and an appreciation for the area's rich history. Washington Street, Station Avenue, Lee Street, the Schuylkill River Trail, and SEPTA's Spring Mill Station will serve as the backbones of an accessible, multi-modal transportation hub. North Lane and the Riverfront will embrace planned development with careful control of flooding, and public river, recreation, and trail access. Spring Mill will improve upon the immediate needs while holding space for the future potential and possibilities."

GOAL 1: Enhance the multi-modal connectivity of Washington and Lee Streets and vicinity

- Objective 1A: Provide public access to Washington Street via Lee Street
- Objective 1B: Improve access and safety for active transportation users

GOAL 2: Evaluate a potential redesign of the waterfront and surrounding land uses

- Objective 2A: Provide public access to the river and Spring Mill County Park
- Objective 2B: Address incompatible uses along the riverfront
- Objective 2C: Develop a more walkable, flood-resilient waterfront, with a distinct sense of place

GOAL 3: Identify/evaluate the potential of undeveloped/underdeveloped parcels

- Objective 3A: Encourage transit-oriented development and open space preservation for the underdeveloped properties along North Lane
- Objective 3C: Increase and improve access to public parking in the study area

GOAL 4: Identify issues/solutions for the Spring Mill Junction of SRT, SEPTA, and Spring Mill Station

- Objective 4A: Improve safety and visibility of the Spring Mill Junction (Intersection of Station Ave, SRT, & SEPTA)
- Objective 4B: Alleviate the congestion of SRT users, SEPTA users and Café patrons along Station Ave and near the Spring Mill SRT trailhead

OVERVIEW

CHAPTER 1: OVERVIEW

The Miller's House

From its early days as a populous 1700's village built around a Grist Mill which was fed year-round by the bubbling springs, to its current status as a rare slice of riverfront in the Township and a major multi-modal transportation junction, Spring Mill has always been a key local intersection. Each passing decade has brought significant growth and development to the Spring Mill area. Today, the Miller's House, located at the intersection of Station Avenue & E. Hector Street and the building currently occupied by the Tricycle Shop along Station Avenue are the only remaining visible vestiges of the original grist mill village. However, the popularity of the SRT and SEPTA's Spring Mill Station, and the appeal of this area for developers, residents, and businesses alike, have kept it relevant well into the 21st century. Despite often being eclipsed by the larger and more rapidly developing riverfront section of Conshohocken Borough, Whitemarsh's Spring Mill is, in some ways, still a diamond in the rough. This area is rife with transportation, economic, and recreational opportunity despite being plagued by circulation conflicts, underutilization, flooding, and neglect. The value of these opportunities has been underscored in recent years by the ever-increasing use of Spring Mill as a major SRT trailhead as well as large developments and redevelopments like The Courts at Spring Mill Station and the Spring Mill Corporate Center. These multi-modal corridors and residential and office developments attract recreational users, residents, employees, and an influx of SEPTA users to an area rich in unrealized transportation, recreation, historic, residential, and business potential. However, this area is also riddled by challenges, often arising from infrastructure that has not been updated to accommodate the increased use, development, and the flooding escalated by climate change in recent years.

The initial impetus for this study was numerous transportation challenges that plague Spring Mill. Washington Street, the road closest to the Schuylkill River, dead ends before reaching Lee Street and Station Avenue, making access to this area challenging for anyone coming in from Whitemarsh Township. However, given how impactful transportation is on the study area broadly, in addition to the wider array of challenges and opportunities facing it, the focus was broadened to include the following considerations:

MULTI-MODAL TRANSPORTATION

- WASHINGTON STREET
- LEE STREET, SRT, AND SEPTA INTERSECTION
- STATION AVENUE, SRT, AND SEPTA INTERSECTION
- MULTI-MODAL CONNECTIVITY
- PEDESTRIAN CROSSINGS
- PARKING

LAND USE

- RIVERFRONT LAND USES
- DAVID'S BRIDAL LOT
- NORTH LANE UNDERUTILIZED PARCELS
- FLOODING
- RIVER ACCESS

The study area, shown on the corresponding study area map, covers Washington Street to Cherry Street in Conshohocken Borough, as well as a small section of Conshohocken Borough. It extends eastward to the Spring Mill County Park and the intersection of Center Street and Barren Hill Road. Finally, the study area extends north to the intersection of North Lane and Righter Street.

Focus Area Map

Multi-Modal Connections Studyof Washington Street and theRiverfront of Spring Mill Station

Whitemarsh Township, Montgomery County, PA

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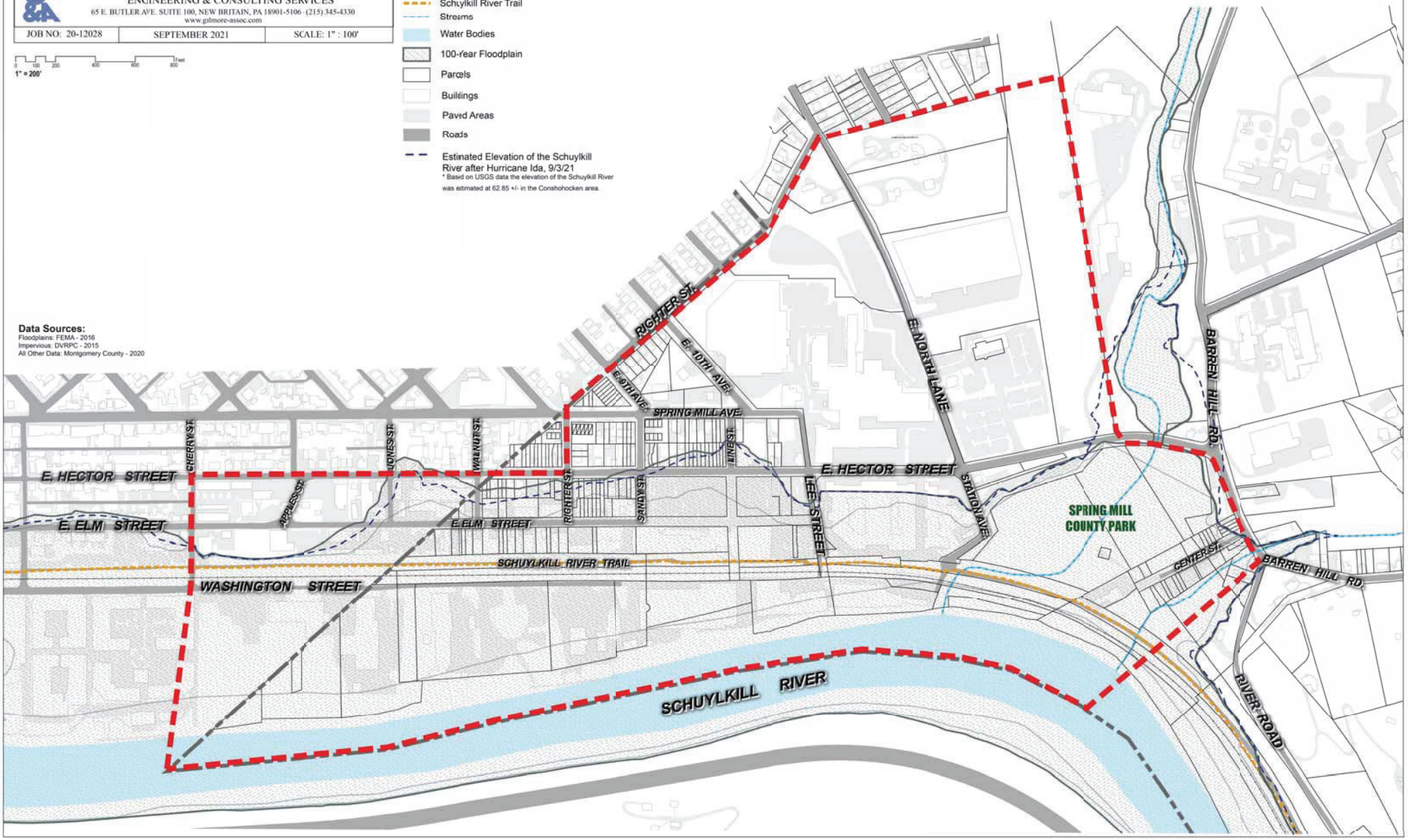
JOB NO: 20-12028	SEPTEMBER 2021	SCALE: 1" : 100'

0 100 200 400 600 800 Feet
1" = 200'

Legend

- Focus Area
- Municipal Boundary
- SEPTA Rail Line
- Schuylkill River Trail
- Streams
- Water Bodies
- 100-Year Floodplain
- Parcels
- Buildings
- Paved Areas
- Roads
- Estimated Elevation of the Schuylkill River after Hurricane Ida, 9/3/21
  * Based on USGS data the elevation of the Schuylkill River was estimated at 62.85 +/- in the Conshohocken area.

Data Sources:
Floodplains: FEMA - 2016
Impervious: DVRPC - 2015
All Other Data: Montgomery County - 2020



BACKGROUND & HISTORY

The impetus for this study began when ideas circulated over a decade ago about the possibility of connecting Washington Street from where it currently dead ends through to Lee Street. This dead-end of Washington Street has long been recognized as a circulation and safety issue, particularly as the waterfront areas of both Whitemarsh and Conshohocken have experienced rapid and dense residential development in the last few decades. Similarly, the riverfront area of Whitemarsh has long been viewed as a limited and valuable resource within the Township. Its prominence is illustrated in the two studies that have examined this area within the Township: "The 2011 Riverfront Open Space Plan" and the TCDI-funded "2016 Riverfront Plan" produced in conjunction with Conshohocken Borough. Each plan highlights a crucial aspect that will receive deeper attention in the Spring Mill Multi-Modal and Land Use Study. The 2011 plan underscores the importance of providing public access and recreational access to this unique area while protecting its limited open space. Next, the 2016 Riverfront Plan identified the condition of pedestrian, bicycle, vehicular and train connections within the vicinity of the Spring Mill Train Station, including the dead-end streets of Washington and Lee Streets. Through a TCDI grant managed by the Delaware Valley Regional Planning Commission (DVRPC), Whitemarsh Township was given the opportunity to further study the multi-modal connections of Washington Street and the riverfront at Spring Mill Station.

The SRT Trailhead at Spring Mill, Looking east

Lee Street & SEPTA Intersection, Looking north

David's Bridal Headquarters

VISION STATEMENT

The vision for Spring Mill is multi-faceted, accessible, economically vibrant, and sustainable with an eye towards the future and an appreciation for the area's rich history. Washington Street, Station Avenue, Lee Street, the SRT, and SEPTA's Spring Mill Station will serve as the backbones of an accessible, multi-modal transportation hub. North Lane and the Riverfront will embrace planned development with careful control of flooding, and public river, recreation, and trail access. Spring Mill will improve upon these immediate needs while holding space for future potential and possibilities.

STUDY GOALS AND OBJECTIVES

Goal 1: Enhance the multi-modal connectivity of Washington and Lee Streets and the vicinity

Evaluate the existing traffic patterns and demand for Hector Street, Lee Street, and Washington Street and examine options for eliminating the dead-end condition of Washington Street and the bottleneck condition of the junction of Lee Street, the SRT, and SEPTA.

Goal 2: Evaluate a potential redesign of the waterfront and surrounding land uses

Evaluate the existing and underutilized parcels and land uses in the study area, including those surrounding North Lane, David's Bridal, Quaker Houghton/Quaker Park, and Spring Mill County Park and make recommendations for potential reconfiguration, relocation, or reuse of land. These land uses are being examined, in part, to improve bicycle and pedestrian linkages, to increase connectivity along the riverfront and destinations of the Township and Borough, to implement the housing and land use recommendations of the Comprehensive Plan Selective Update, and to encourage maximum use of the Spring Mill Regional Rail Station.

Goal 3: Identify/evaluate the potential of undeveloped/underdeveloped parcels

Evaluate the existing zoning options for undeveloped/underdeveloped parcels to determine potential future uses and provide recommendations for uses that will enhance the functionality of the area. Special consideration will be given to uses that can utilize the existing transportation infrastructure such as SEPTA's Spring Mill Station and the SRT.

Goal 4: Identify issues/solutions for the Spring Mill Junction of SRT, SEPTA, Spring Mill Station

Evaluate options to improve the safety of the junction of the SRT, SEPTA rail line, and Spring Mill Station area for all modes of users.

SUMMARY OF RELATED PLANNING DOCUMENTS

While the 2011 Riverfront Open Space Plan and the 2016 Riverfront Plan were two plans which directly focused on the Spring Mill area, several others focused on the Township and the region have discussed this area or support further study of it. The junction of all major multi-modal transportation options in this study area has been identified for need of improvement and are supported by the following plans:

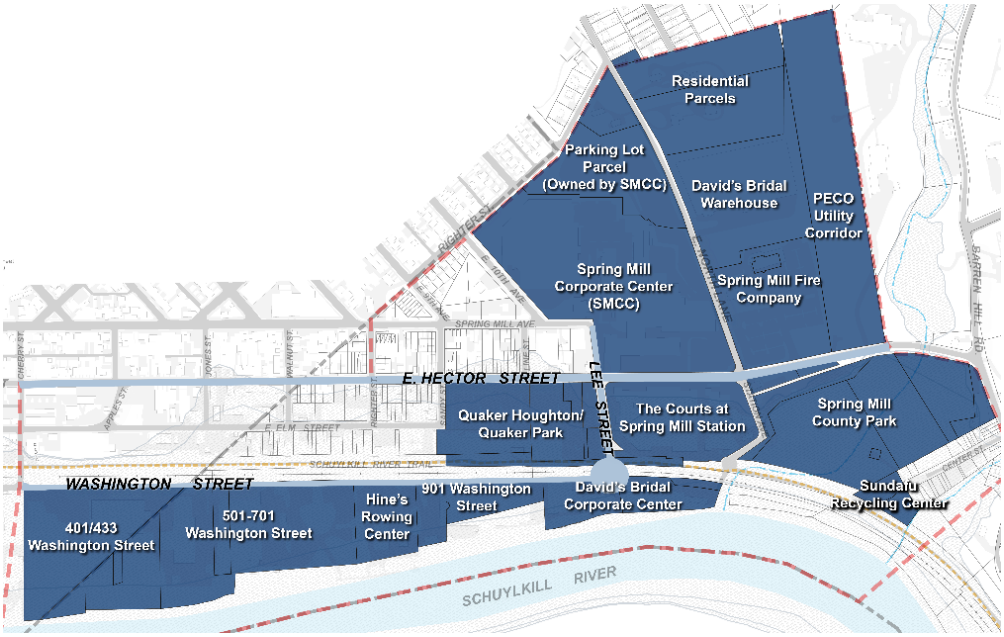
Whitemarsh Township Comprehensive Plan (Adopted Nov. 2003, Update 2020)
A Feasibility Study for the Whitemarsh Township Pedestrian and Bicycle Network Plan (2009)
The 2016 Riverfront Plan, Whitemarsh Township, Borough of Conshohocken (Adopted June 2016)
Whitemarsh Township Parks and Recreation Plan (2007)
Whitemarsh Township Open Space Plan (2006)
Roadway Analysis and Transportation Capital Improvement Plan (2006)
Montgomery County Connections 2050 Long Range Plan (2020)
Bike Montco (2018) & Walk Montco (2016)
SEPTA Cycle-Transit Plan (2015)
Gambone Property Natural Areas Stewardship Plan (2015)

See Appendix A for summaries of all related plans.

EXISTING CONDITIONS

CHAPTER 2: EXISTING CONDITIONS

Due to the study area's size, as well as its diverse land uses and physical characteristics, a better picture of existing conditions on the site can be gleaned through analyses of the individual nodes and specific considerations within the study area. Existing multi-modal transportation within the study area will be examined through Washington & Lee Streets and their connectors as well as the SRT, SEPTA railroad, and Station Avenue Junction. Traffic patterns and demand will also be analyzed for Washington Street, East Hector Street, and Lee Street. Land use within the study area will be examined based on two distinct but connected locations within the area: The Waterfront and North Lane.



WASHINGTON & LEE STREETS AND SURROUNDING CONNECTIVITY

Washington Street runs in a general east-west direction along the Schuylkill River within both Conshohocken Borough and Whitemarsh Township. Within the study area, Washington Street provides access to businesses and a rowing center. While there are several access points within Conshohocken Borough (Cherry Street, Poplar Street, Ash Street, and Harry Street), there is no current public access through Whitemarsh Township. Additionally, Washington Street is gated between the Hines Rowing Center and the property at 901 Washington Street and does not allow for through traffic. Currently, Lee Street only provides access to the David's Bridal's Corporate Office. Furthermore, the road is of substandard width and is in need of repair in many areas to provide safe, two-way traffic.

Gate at 901 Washington Street

Washington Street, Looking west

Lee Street runs in a general north-south direction from the driveway access of David's Bridal to the south, crosses East Hector Street and connects with Spring Mill Avenue to the north at the Spring Mill Corporate Center access drive. The SRT crosses Lee Street just north of the SEPTA train tracks. Lee Street is stop-controlled along the approaches to Hector Street.

TRAFFIC PATTERNS & DEMAND ANALYSIS

East Hector Street

East Hector Street (SR 3039) is a major east-west thoroughfare through this portion of the Township that connects to Barren Hill Road, which provides eventual access to Ridge Pike, a major connector from the suburbs into Center City Philadelphia. Despite the low posted speed along Hector Street (25 MPH), residents and local officials have expressed concerns regarding the safety of the pedestrian crossing at Lee Street. There is a marked crosswalk with appropriate signage, however the volume and speed of vehicles along Hector Street makes crossing difficult during peak commuting hours. This is of particular concern for pedestrians/cyclists on the northern side of Hector Street who are destined for the SRT.

According to PennDOT[1], East Hector Street has an average daily traffic volume that varies between 11,635 (west of Sandy Street) and 13,720 (east of Station Avenue) within Whitemarsh Township.

There are three SEPTA bus stops within the study area, all of which are located along East Hector Street. It is important to note that SEPTA's route 97 is proposed to be split up by the SEPTA's 2022 Bus System evaluation report, SEPTA Forward: Bus Revolution. More information on proposed changes to Route 97 can be found in Appendix T.

- **Hector St & North Ln Bus Stop:** This bus stop is serviced by SEPTA's 97 Regional Bus route. This route travels from the Norristown Transportation center into the Chestnut Hill neighborhood of Philadelphia and also stops along Butler Pike. This stop features signage and ADA-accessible curb ramps and signalized crossings but does not offer any seating or covered waiting area. However, benches and a small gathering area are located adjacent to the bus stop on property of the Courts at Spring Mill Station apartment complex.
- **Hector St & Lee St Bus Stop:** This bus stop is serviced by SEPTA's 97 Regional Bus Route. This stop features signage and ADA-accessible curb ramps, but no other amenities for riders.
- **Hector St & Apple St Bus Stop:** This bus stop is serviced by SEPTA's 97 Regional Bus Route. This stop features curb ramps without detectable warnings and a crosswalk to access the western side of Apple Street but does not have any other amenities for riders.

It should also be noted that all three bus stops are missing a loading pad. ADA accessibility for bus stops is based on the presence of a loading pad that connects the roadway at curb height with any adjacent sidewalk. An area of 5' perpendicular to 8' parallel to the curb would need to be provided to facilitate a wheelchair to board and alight the vehicle. That area can include the sidewalk width but would need to traverse a verge area.[2]

Lee Street

Lee Street provides the only access within Whitemarsh Township to the dead-end portion of Washington Street via the frontage of the David's Bridal property. It crosses both the SRT and SEPTA train tracks to

[1] Pennsylvania Department of Transportation, Traffic Information Repository (TIRe)
[2] SEPTA. https://planning.septa.org/wp-content/uploads/2021/02/SEPTA-Bus-Stop-Design-Guidelines-2019.pdf

access David's Bridal. There are existing pedestrian accommodations on the west side of the roadway. However, the sidewalk terminates at the southern driveway of Quaker Park, where pedestrians/cyclists must then traverse along the edge of the roadway to access the trail.

Washington Street

The lack of connectivity of Washington Street for through traffic is a major concern that has been expressed by both Whitemarsh Township and Conshohocken Borough, particularly for emergency vehicle access in the event of an incident. As the waterfront area continues to develop, it is critical that emergency responders have several ingress and egress options to allow various entities to respond in an emergency. Furthermore, approved proposed residential developments, including 901 Washington Street, will drastically increase the number of people accessing Washington Street. The location of the existing David's Bridal Corporate building, in conjunction with the existing SEPTA equipment and right-of-way, limit the opportunity for two-way travel at the western end of the property.

David's Bridal Headquarters

Due to the lack of accessibility, there is not much of an existing traffic demand along Washington Street. However, there is the potential to shift some of the vehicular demand from East Hector Street, if through traffic was provided along the riverfront.

SCHUYLKILL RIVER TRAIL, LEE STREET, & SEPTA JUNCTION

The area where Lee Street crosses the SRT and the SEPTA train tracks is a critical juncture that experiences a mix of uses including vehicular, pedestrian, transit and cyclists. Representatives of Montgomery County indicate that this portion of the SRT is one of the most heavily utilized sections of trail. According to a count conducted in 2017 by DVRPC, there are an average of 1,031 bicyclists and 650 pedestrians per day on the trail between Lee Street and Station Avenue. If the waterfront area was to be redeveloped, it is assumed that these numbers would only increase over time.

Lee St & SEPTA Intersection

The SEPTA regional rail line in this area provides service from Elm Street in Norristown to Center City Philadelphia. There is an existing train stop at Spring Mill, located just 500 feet east of this junction, which has an average daily ridership of approximately 450 users on a typical weekday.[3]

There are obvious safety concerns at this location due to the potential for conflicts between the various modes of transportation that intersect. Although there are existing warning signs and pavement markings, additional improvements are needed to increase the safety for all users.

[3] Average of SEPTA data from 2015, 2017 & 2019 census years

STUDY AREA LAND USE

Given the study area's sizable acreage and varied existing conditions, it should come as little surprise that land uses vary significantly throughout. For the purposes of this study's goals, we have divided the study area into two main sections: the Waterfront and North Lane, which are each examined in more detail below. In aggregate, most of the land area is a mix of office, industrial, utilities, and public open space. However, smaller parcels, which are largely single and multi-family residential, retail, and mixed-use, still occupy a significant area of the northwestern corner of the study area. While this area is not examined in detail as part of this study, the residents and businesses located here are important to consider overall. This area is home to a small, but growing, destination of retail and restaurants. These businesses attract workers, residents, and visitors from the study area and beyond. Similarly, residents here will make up a significant user group for future multi-modal improvements, recreational improvements, and new businesses that may be introduced through this study. DVPRC's *Connections 2050* Long Range Plan, spelled out a "Land Use Vision" which included the Spring Mill area as part of Conshohocken's "Town Center" growth area. Based on existing and projected resident and job growth within this study area, DVRPC designated it as part of a Town Center in 2020.[4] Similarly, the "Future Land Use Plan" in the *Whitemarsh Township 2020 Comprehensive Plan Update* reclassifies the entire study area between three broad uses: Waterfront District, Mixed-Use, and Parks and Open Space.

WATERFRONT PARCELS

The waterfront portion of the study area is comprised of several parcels which are sandwiched between the Schuylkill River and Washington Street as well as the Spring Mill County Park property. Currently, the riverfront is a mix of office and industrial uses with a small amount of public open space and utilities within Whitemarsh Township. Within Conshohocken Borough, per the 2017 Existing Land Use Map prepared as part of *The Conshohocken Borough Comprehensive Plan*, the land uses include a mix of undeveloped and industrial uses. Except for the area along the County Park property, The SRT is located along the northern boundary of all waterfront properties within the study, with little to no public access or even views of the river. Similarly, the current land uses are generally not conducive for taking advantage of the riverfront, recreation, or the influx of SRT users and rail commuters. All parcels examined as part of the waterfront are also within the Schuylkill River and/or Spring Mill Creek 100-year floodplains.

Table 1: Waterfront Land Use Zoning

Whitemarsh Zoning Classifications	
HVY	Heavy Industrial District
LIM	Limited Industrial District
Overlay Districts	
RDD-1 Subdistrict – Riverfront Development District 1	
Recreational District	

[4] DVRPC. Connections 2050 Process and Analysis Manual. 2020. Pg 53-63.

Conshohocken Zoning Classifications	
SP-2	Specialty Planned District 2
LI	Light Industrial

Per the Whitemarsh Township Zoning Ordinance, the following use regulations apply to the following districts:

Heavy Industrial District (HVY):

Buildings may be erected, altered, or used along with premises for any lawful purpose with the following exceptions:

- Extraction of mineral deposits, stockpiling, the processing of the removed materials and on-site operations appurtenant to mineral extraction

Numerous manufacturing, production, and outdoor storage uses are only permitted as an accessory use to a customarily incidental permitted use as well as the following:

- Automobile dismantling or junk establishment, unless carried on in an enclosed building
- Commercial advertising on billboards, except advertising of a business or industry conducted on the premises
- Dwellings, except such as are for the residence of a caretaker, watchman or custodian on the same lot with the principal use to which it is accessory, and located at least 10 feet from any such building

Limited Industrial District (LIM)

Allowed uses within the LIM district include, but are not limited to, the following:

- Small parcel distribution plant
- Laboratories
- Manufacturing, assembly, treatment, processing, and packaging of specific materials and products
- Offices
- Parking and garages
- Warehouse
- Restaurants
- Medical facilities
- Apartment buildings and condominiums
- Institutional district permitted use

Allowed by Conditional Use or specified design criteria:

- Age-qualified apartment buildings and condominiums
- Attached dwellings

Riverfront Development District 1 Overlay – (RDD-1)

Lots in RDD-1 are required to be a minimum of 3 Acres.

Allowed uses within the RDD-1 Overlay district include, but are not limited to, the following:

- Single and multi-family residential uses
    - Density note: residential density shall not exceed 30 dwelling units per gross acre or 50 dwelling units per acre if the building is not a freestanding parking structure, by conditional use.

- Office
- Restaurants
- Parking structures
- Mixed use
- Municipal facilities

Recreational Overlay District– (RDD-1)

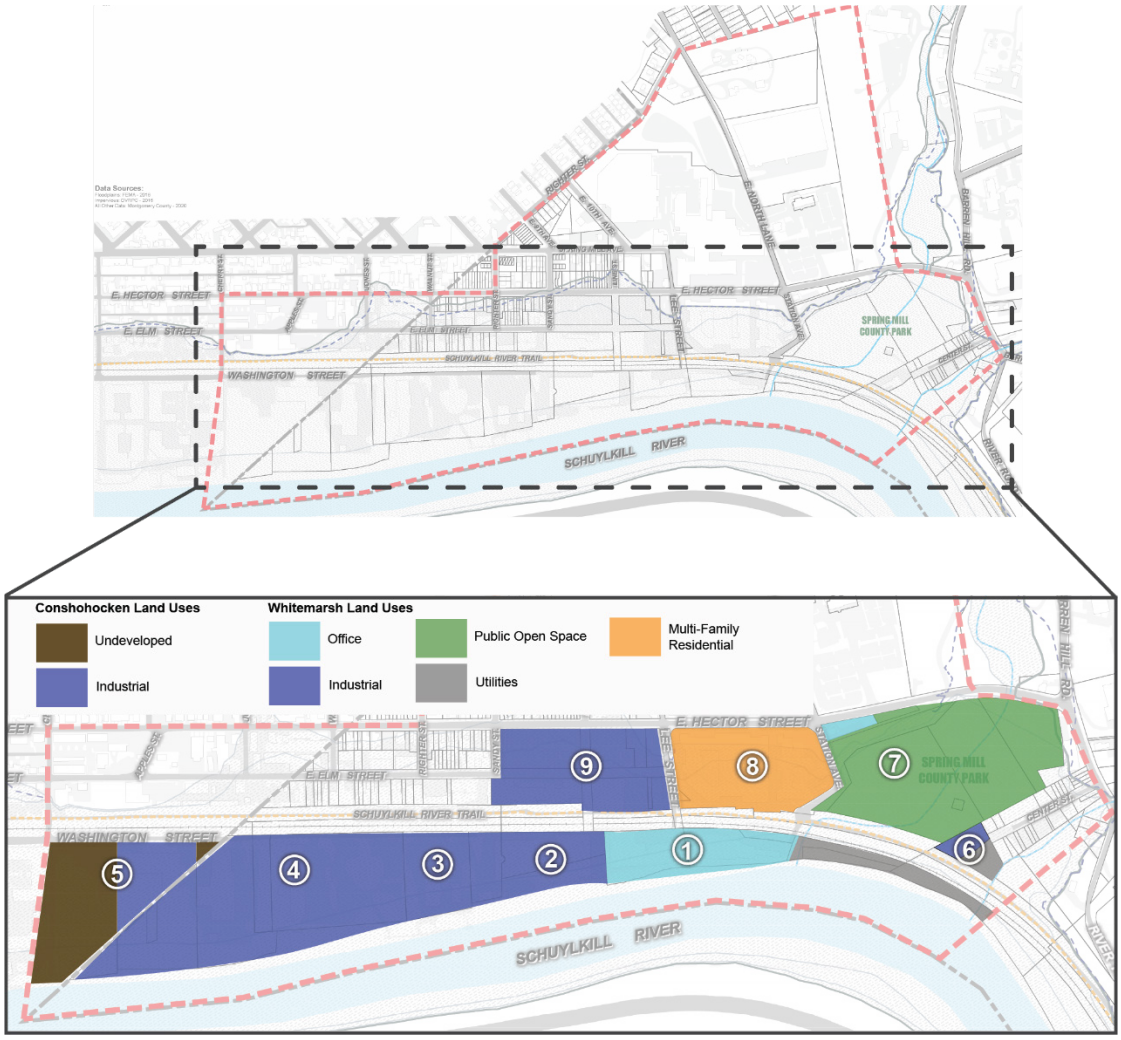
Lots in RDD-1 are required to be a minimum of 20 Acres.

- Outdoor Park or recreation facility
- Country club and accessory uses
- Museum
- Cemetery

Natural Features

Understandably, the primary natural features of this area are bodies of water and their accompanying floodplains. The Schuylkill River provides the southern boundary of this area, and the Spring Mill Creek traverses the Spring Mill County Park property to join the Schuylkill River. The 100-year floodplain covers the entirety of the waterfront area from the river up to East Hector Street in several areas, as well as the extent of Spring Mill County Park. The only significant wooded area is contained entirely within Spring Mill County Park, illustrating the nearly homogenous urban character of the remainder of the area. Geologically, the area is made up of Ledger Dolomite, Elbrook & Conestoga Limestone.

Waterfront Land Uses



1. David's Bridal Corporate Center

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Waterfront District**

The David's Bridal Corporate Headquarters is located along what would be an extension of Washington Street and has access via both Lee Street and Station Ave. The property contains a parking deck for employee use and a large office building compound. On average, it is estimated that 150-200 employees access the building and parking garage on a weekday. The use is generally consistent with the general mixed-use character of the "Riverfront District". The configuration of the site, however, causes challenges for the potential development of a river walk trail or the potential extension and connection of Washington Street.

2. 901 Washington Street

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Waterfront District**

The property adjacent to David's Bridal is currently vacant industrial land. The parcel contains a large overgrown paved area, access road, and brush and/or forested buffer along the river.

Proposed/Potential Land Development:

Land development plans have received conditional final land development approval from the Township and the applicant has received Zoning Hearing Board approval to construct a townhouse development on this property, changing the use from industrial to single-family attached residential. This development is generally consistent with the Township's *2018 Future Land Use Plan*, and the future vision for a Riverfront District. The current plans for the site incorporate a publicly accessible riverfront trail, 10 public parking spaces for the trail, and dedicated public recreation and open space land.

3. Hines Rowing Center

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Waterfront District**

The Hines Rowing Center is a recreational outlier within what is largely an industrial block of land along the riverfront. This property houses several boat clubs and provides river access via docks, as well as storage for boats and gathering spaces for rowing clubs and events. While this is an ideal use given the riverfront location and the need for recreational river access, the Rowing Center does not currently allow river access for the public. Similarly, per the Rowing Center's December 2021 Key Person Interview with the project team and previous discussions with the Township, the property owners are unlikely to allow the development of a river front trail through their property to connect to a proposed and potential future trail. The reasoning cited for this was the Rowing Center's insurance policy and potential conflicts between trail users and rowers carrying boats to the river. By legal agreement, if the rowing center does submit plans for any land development in the future, they will be required to install the riverwalk trail, in the agreed upon alignment, with any proposed improvements.

4. 501-701 Washington Street

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Waterfront District**

501 Washington Street is currently home to Dan Lepore & Sons Company, a masonry contractor. The lot contains an office building, a large multi-story warehouse, and significant paved areas for outdoor storage and vehicle maneuvering. A small portion of this lot is within Conshohocken Borough, while the vast majority is located within Whitemarsh Township.

601-701 Washington Street is currently occupied by the Underdog Landscaping Supply. The property contains considerable outdoor storage and paved areas as well as a large multi-story warehouse. The property also contains varying amounts of wooded or brush areas that buffer the Schuylkill River. The property is currently owned by Washington Street Associates.

Proposed/Potential Land Development:

A residential land development (770 apartments) has previously been presented for 601/701 Washington Street. The plans were rejected by the Zoning Hearing Board but went to court to appeal and are currently awaiting a decision. A similar alternate land development plan for apartments has also been submitted for the site.

5. 401/433 Washington Street

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Waterfront District**

401 Washington Street is located largely in Conshohocken Borough and partially in Whitemarsh Township. The lot is currently vacant, commercial land owned by Spectrum LLC. This property is comprised of a large, paved area overgrown by vegetation and forest and shrub buffer areas along the Schuylkill River. 433 Washington Street is located approximately half in Conshohocken Borough and half in Whitemarsh Township. The lot is also owned by Spectrum LLC and currently contains a one-story warehouse and significant areas of brush and vegetation that buffer the river.

Proposed/Potential Land Development:

A 598 Unit Apartment Complex land development has been proposed for this property. This plan has Zoning Hearing Board approval in Whitemarsh Township and a settlement agreement in Conshohocken Borough. It may get preliminary plan approval in the near future.

6. Sundafu Recycling Center

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Parks & Recreation**

The Sundafu Recycling Center is currently located off Center Street and adjacent to the Spring Mill County Park property with frontage along the SRT. The recycling center contains warehouse style buildings and considerable areas of outdoor storage. Despite the intensity of the recycling center's use, its proximity to residential uses, a large and ecologically valuable county park, and along a heavily trafficked regional multi-use trail are not ideal.

7. Spring Mill County Park

- ***2020 Comprehensive Plan Update Proposed*** **Future Land Use: Waterfront District**

The Spring Mill County Park property is currently entirely protected open space. The area is largely comprised of floodplain with areas of easement for SEPTA parking, Whitemarsh Township Authority's Pump Station, and a PECO right-of-way (ROW). The Spring Mill Creek runs through the property and eventually flows into the Schuylkill River. The park contains significant areas of floodplain, woodlands, and meadow areas where the PECO ROW traverses the site. There is currently no public access to the site.

8. The Courts at Spring Mill Station

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Mixed Use**

The Courts at Spring Mill Station is a large apartment complex located at the intersections of Station Ave & E. Hector St and Lee St & E. Hector St. The Complex contains two apartment buildings with 285 units and several outdoor amenity spaces. The property also houses an old mill house which is home to the Tricycle Shop Café & Bicycle Shop.

9. Quaker Houghton/ Quaker Park

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Mixed Use**

Quaker Houghton is the primary occupant of the Quaker Park business park. The property contains several large office buildings and a considerable amount of parking. The lots have frontage on E. Hector Street with additional access along Lee Street and Sandy Street as well as access to the SRT.

Surrounding Land Use Context

Bordering the waterfront area to the northwest are several blocks of smaller parcels representing a fairly even mix of residential, commercial, and industrial uses. A portion of this area is zoned C-Residential District (6,000 SF) with a Riverfront Development District Overlay (RDD-2 Sub District). Within Conshohocken Borough, this section of the study area is zoned LI – Light Industrial and BR-2 Borough Residential 2. This section benefits from having a diverse set of businesses, restaurants, and smaller employment centers mingled with denser residential uses. These dense mixed land uses foster walkability, and the area is conveniently located within walking distance of the SRT and SEPTA's Spring Mill Station. However, these uses often conflict when it comes to parking, particularly the limited shared on-street parking located in the area. It will be important to consider the varied nature of the uses in this area when weighing potential changes in use in the waterfront and along North Lane, overall.

NORTH LANE PARCELS

Several parcels in the northern portion of the study area were included in the study due to their proximity to the riverfront parcels, Washington Street, The SRT, and Spring Mill SEPTA station. They were also included because of their current uses and the potential of these parcels to change uses in the future. This section of the study area is characterized by mixed industrial, commercial, office and institutional uses with a few multi-family residential properties and one single-family detached residential property. This area contains the largest amount of existing parking within the study area. North Lane accommodates an average daily traffic volume of 5,036 just north of East Hector Street, according to PennDOT[5]. The two existing residential parcels within the study area are noteworthy due to their incompatibility with the existing land uses surrounding them and the need for careful consideration moving forward.

Table 2: North Lane Land Use Zoning

Whitemarsh Zoning Classifications	
HVY	Heavy Industrial District
LIM	Limited Industrial District
AR	Administration & Research
Overlay Districts	
RDD-2 Subdistrict – Riverfront Development District 2	

Heavy Industrial District (HVY)

See Page 9 for what is allowed by ordinance in the HVY district.

Limited Industrial District (LIM)

[5] Pennsylvania Department of Transportation, Traffic Information Repository (TIRe)

See Page 9 for what is allowed by ordinance in the LIM district.

Administration & Research (AR)

Allowed uses in the AR district include, but are not limited to the following:

- Offices for administrative, executive, professional, sales and other similar uses, the normal attributes of which do not involve the actual storage, exchange, or delivery of merchandise on the premises.
- Laboratory for scientific, agricultural, or industrial research and development.
- Conference center, on a lot of not less than 25 acres.
- Private-use heliport, subject to the provisions of § 116-33.1, when authorized as a special exception.
- Public or private golf course.

Riverfront Development District 2 Overlay - (RDD-2)

All lots in this overlay district are allowed to have smaller dimensional requirements as opposed to the RDD-1 Overlay District. Lots in RDD-2 are required to be a minimum of 6,000 SF.

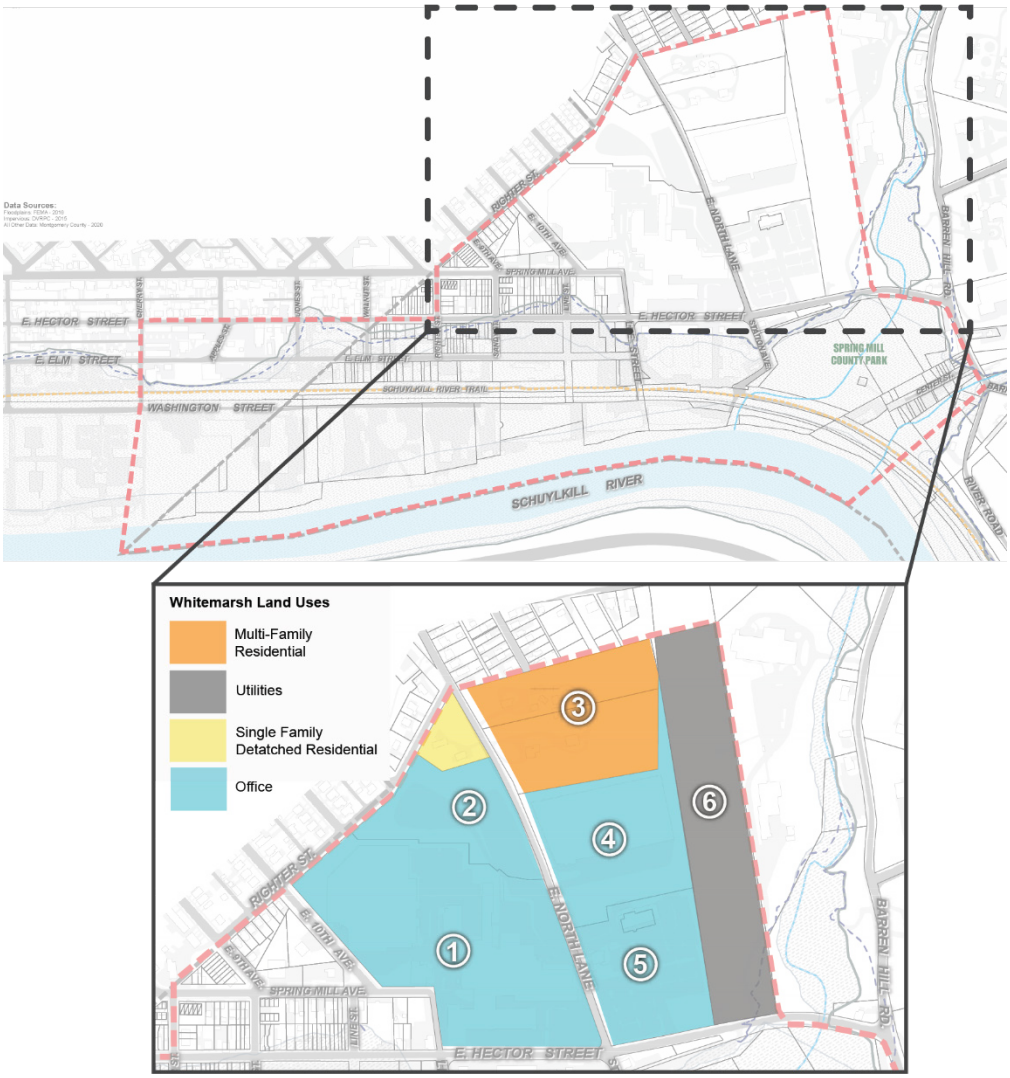
Allowed uses within the RDD-2 Overlay District include, but are not limited to, the following:

- Single and multi-family residential uses
- Retail
- Office
- Restaurants
- Parking structures
- Mixed use
- Municipal facilities

Natural Features

The parcels along North Lane are largely represented by urban land. The primary natural features are areas of moderate and severe slopes, largely located between the two Spring Mill Corporate Center Parcels, the David's Bridal Warehouse, and the PECO utility corridor. Small areas of woodland are located along the western edge of the PECO utility corridor. Geologically, the area is comprised of Wissahickon Schist, Granite Gneiss, and Hornblende Gneiss.

North Lane Land Uses



1. Spring Mill Corporate Center

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Mixed Use**

The larger Spring Mill Corporate Center lot has frontage along E. Hector Street as well as E. North Lane. It contains buildings totaling over 508,000 SF of industrial office space and several hundred parking spaces. The campus houses a variety of retail, office, and industrial businesses. It is home to numerous employment and service needs within the community and is accessible via sidewalk to the SRT and Spring Mill's SEPTA station.

2. Parking Lot Parcel (Owned by Spring Mill Corporate Center)

- ***2020 Comprehensive Plan Update*** **Proposed Future Land Use: Mixed Use**

The smaller lot located north of the Spring Mill Corporate Center is owned by the same management group as the corporate center and contains two parking lots and access roads that serve the corporate center. Moderately steep slopes surround the parking lots. This lot is accessed by E. North Lane and abuts Righter Street and E. 12th Avenue in Conshohocken Borough but is not accessible by either vehicle or foot from E. 12th Avenue at this point. There is a sidewalk running along the eastern edge of North Lane, but there is currently no safe crossing infrastructure for pedestrians to access the lot.

3. Residential Parcels

- ***2020 Comprehensive Plan Update* Proposed Future Land Use: Mixed Use**

Two residential lots, owned by the same party, are located off E. North Lane adjacent to the David's Bridal Warehouse and the PECO utility corridor, totaling about 10 acres. Both lots contain buildings which are labeled as Multi-Family Residential on the *Whitemarsh Township Open Space Plan's* "Land Use Map". It appears they are single-family homes converted into multiple units. Both lots contain a considerable amount of open space which abuts the PECO utility corridor without significant barriers such as steep slopes or woodlands.

4. David's Bridal Warehouse

- ***2020 Comprehensive Plan Update* Proposed Future Land Use: Mixed Use**

An approximately 10-acre lot containing a David's Bridal warehouse is located just south of the residential parcels along E. North Lane. The lot is almost entirely covered by a large warehouse building and adjoining paved parking and vehicle maneuvering areas. The building is surrounded by several areas of moderately severe steep slopes as well as a swath of wooded area that abuts the PECO utility corridor.

5. Spring Mill Fire Company

- ***2020 Comprehensive Plan Update* Proposed Future Land Use: Mixed Use**

The Spring Mill Fire Company lot located at the northeast corner of E. Hector Street and E. North Lane contains several buildings and adjacent parking lots and vehicle maneuvering areas. It also contains a separate building located along E. North Lane that is used as office space. The lot contains a large amount of parking, a large portion of which is currently leased to the Spring Mill Corporate Center to meet their parking requirements but is also used for events at the fire company ballroom.

6. PECO Utility Corridor

- ***2020 Comprehensive Plan Update* Proposed Future Land Use: Parks & Open Space**

A PECO Utility corridor runs along the entire eastern boundary of the study area and extends north up to Butler Pike and south through Spring Mill County Park. The utility corridor is largely open grass and field areas with PECO towers, structures, and utility lines running through it. A potential future trail (known as the Miracle-Nature Trail)

has been studied and is proposed in the utility corridor from Butler Pike to E. Hector Street within Whitemarsh Township.

CURRENT DEVELOPMENT INITIATIVES AND PLANS

The study area has been promoted by the Montgomery County Planning Commission and the Delaware Valley Regional Planning commission as a possible Transit Friendly Development Area for several years. Similarly, in 2020 DVRPC added the Spring Mill Study area to Conshohocken's Town Center Area because of its current and projected population and job growth. With this updated outlook on the study area, it is no surprise that numerous development plans have been proposed, particularly for the riverfront, and are in varying stages within the development process. See Appendix B for active land development plans.

Table 3: Pending Land Development Projects Located Within the Study Area

Development Name or Address	Acres	Plan Status
901 Washington Street – RiverPLACE **62 Townhomes**	4.8 Ac.	Conditional Final Land Development Approval
401/433 Washington Street **598 Apartment Units**	7.79 Ac. (Total) 2.91 (Whitemarsh)	ZHB Approval in Whitemarsh Settlement Agreement in Conshohocken
501/701 Washington Street **770 Apartment Units**	9.8 Ac.	Rejected by the Whitemarsh ZHB, went to court and are awaiting a decision. Has since been resubmitted with an alternate layout.
The Transition at Spring Mill **(551 E. 10th Ave.) 19 Townhomes**	1.19 Ac.	Conditional Plan Application

PUBLIC PARTICIPATION

CHAPTER 3: PUBLIC PARTICIPATION

Given the diverse residents, users, owners, and visitors of the study area, it was imperative to solicit a wide range of public input using several methods. The study area is made up of dozens of parcels and the range of considerations for this area include everything from traffic to economic development to land use and recreation. Therefore, it became clear early in the process that to truly understand the issues and opportunities for the study area a wide-reaching and robust public input process would be needed. The study kicked off by forming a diverse and representative steering committee to provide wide-ranging input and oversight on the process and its deliverables. With support from committee members, the project team released an eleven-question online public survey, held two public presentation and listening sessions, and interviewed 12 key stakeholders to gain in-depth feedback on the specific issues and opportunities that they saw within their specific focus properties and the study area as a whole. Towards the conclusion of the study, the draft report and its findings were presented to the Whitemarsh Township Planning Commission, Conshohocken's Borough Council, and the Whitemarsh Township Board of Supervisors, with opportunities for public comment at each meeting. Overall, the public participation process was essential to the study process, allowing for final conceptual plans and recommendations that account for a wide variety of factors within the study area and ultimately aim to serve local stakeholders and the Whitemarsh community as a whole.

STEERING COMMITTEE

The steering committee members were selected by the Township and project team to gather a representative sampling of Township officials, board, committee, and commission members. The committee also includes representatives from the County, SEPTA, the Fire Department, and PennDOT to address those individually controlled properties and utilities within the study area. Finally, the committee includes three representatives of businesses located within the study area. The committee met six times throughout the study process to discuss and review draft plans and report sections and to provide feedback to drive the process forward.

Table 4: Steering Committee Members

Member Name	Member Organization
Jacy Toll, Board of Supervisors Member	Whitemarsh Township
Charles L. Guttenplan, Director of Planning & Zoning	Whitemarsh Township
Sean Halbom, Township Assistant Manager	Whitemarsh Township
Debra Harris, Member	Whitemarsh Environmental Advisory Board
Richard L. Mellor, Township Manager	Whitemarsh Township
Christopher Lane, Member	Whitemarsh Open Space Committee
Kevin Kissling, Member	Whitemarsh Township Park & Recreation Board
Jack Fields	Whitemarsh Township Public Works
Christian Fassbender, Member	Whitemarsh Shade Tree Commission
Robert Dambman	Whitemarsh Planning Commission

Wayne Masters, President & Deputy Chief	Spring Mill Fire Company & Whitemarsh Emergency Services Board
Derek Lombardi, Senior Planner	DVRPC
Stephanie Cecco, Borough Manager	Conshohocken Borough
David Clifford, Parks Administrator	Montgomery County
Michelle Harris, Region 1 Manager	Montgomery County Division of Parks, Trails, and Historic Sites
Pattie Guttenplan, Assistant Director of Design & Outreach	Montgomery County Planning Commission
Susan La Penta, District 6-0 Traffic Services Manager	PennDOT
Bob Kent, Constituent Relations Coordinator	SEPTA
Kenny Rankins, Operations Planner, Service Planner	SEPTA
Alicia Bloch, General Manager	Courts at Spring Mill Station
Craig Nichols, Senior Director of Store Support	David's Bridal
Terrance Kassis, Vice President of Real Estate	David's Bridal
Dennis O'Brien	O'Brien Business Systems/Elm Street Partners

Steering Committee Site Walk

On October 4th, 2021, the steering committee met for the second time and walked the site from North Lane down Station Avenue and along Washington Street to where it dead ends. During the walk, the committee members had productive discussions and shared information, particularly for the properties or businesses they represent including David's Bridal, Spring Mill Park, the SRT, and SEPTA's Spring Mill Station. The meeting concluded at the Spring Mill Fire Company's Banquet Hall where committee members discussed findings, challenges, and opportunities moving forward.

Steering Committee Meeting Summary

Over the course of six (6) virtual meetings, the assembled steering committee reviewed site analysis plans, public input summaries, conceptual sketches, plans, recommendations, and eventually a draft of the final report. Over the course of the project, the members provided invaluable feedback and insight based on their expertise, the organizations they represent, and first-hand local knowledge. This varied input served as a constant reminder of just how diverse and important the study area is and how many important considerations overlap, including safety and emergency access, environmental concerns, parking, traffic, and recreational access. During the later meetings, the committee members reviewed and offered revisions and suggestions for plans and design alternatives. Their input and understanding are reflected in the final recommendations and alternatives that are presented. On April 11th, 2022, the steering committee members voted unanimously to recommend that the plan more forward for further consideration and adoption by the Township Planning Commission and Board of Supervisors.

See Appendix C for the Steering Committee Meeting Minutes.

PUBLIC SURVEY

The public survey was open online through Survey Monkey from November 5th through November 29th, 2021 and received **656 responses** in total. For most participants, the survey was likely their first interaction with the project. Therefore, the survey was designed to inform the public about the broad goals of the project while collecting feedback and information on a wide range of topics within the study area.

The survey asked several broad demographic questions including whether the respondent represented a household or an employee/business, a Whitemarsh or Conshohocken resident, as well as the age range of the respondent. The age range question was included to broadly gauge accessibility and better understand user needs and comfort levels.

Figure 1: Business or Household?

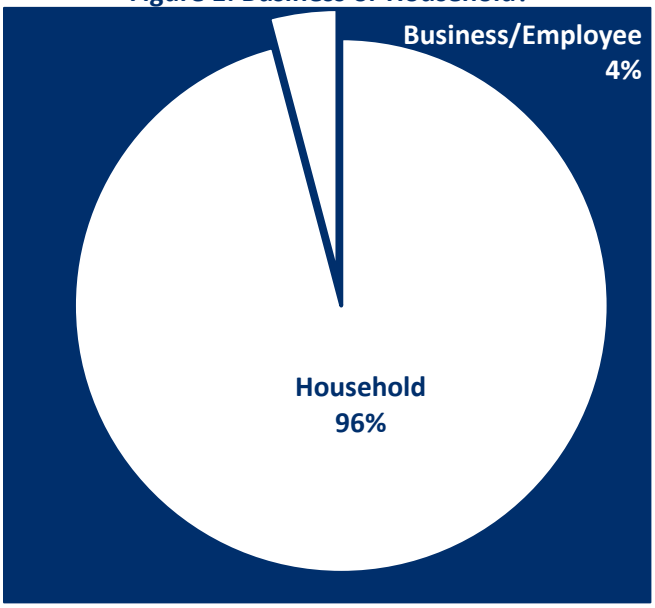


Figure 2: Which Municipality Do You Live in?

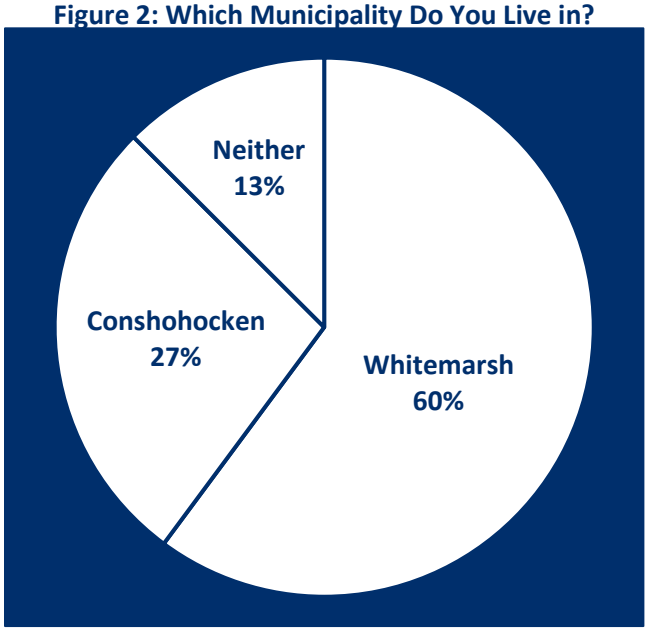


Figure 3: What is Your Age Range?

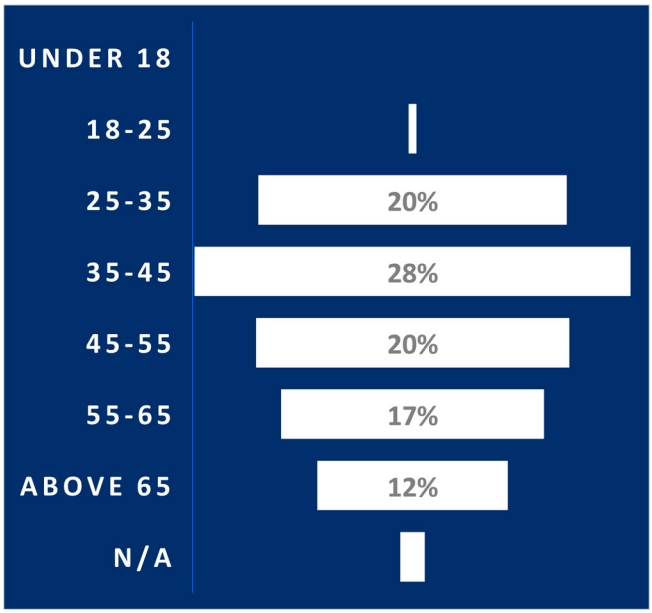
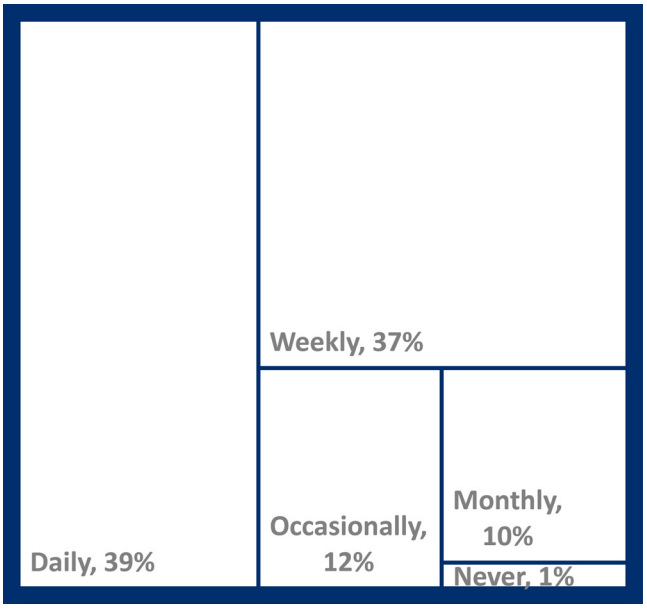


Figure 4: How Often do You Visit the Study Area?



Demographically speaking, most respondents represented a household, as opposed to a business or employee. Over half were residents of Whitemarsh Township, while just over a quarter reside in Conshohocken Borough. Nearly 70% of respondents are between the ages of 25 and 65. About 12% of respondents are above the age of 65, indicating continuing use and consideration for an aging population. Over three quarters of users visit the study area daily or weekly.

Figure 5: Current Uses Within the Study Area

As might be expected given the popularity of the SRT and the surge in use for trails and outdoor recreation during the Coronavirus pandemic, a vast majority of respondents use the study area for walking, running, and biking recreationally. On a similar note, just under 230 of the respondents selected riverfront access for recreation purposes displaying that recreation is a significant component of the study area. Commuting, both by car and train combined, was the second most frequently cited use. While the majority of these were vehicle commuters at 300 respondents, just over 200 selected train commuting. This differential may be, in part, due to SETPA's decrease in ridership during and in the aftermath of the pandemic. Societal factors aside, commuting is clearly another central use of the area. Just over one hundred respondents also selected commuting by bike or foot, representing a small but growing group of active transportation users choosing to commute via the SRT, sidewalks, and bicycle infrastructure. Thirdly, the density and commercial value of the study area can be gleaned from the roughly 300 respondents who said that they visit the study area to patronize businesses and services or work in the area. Rounding out the true mixed-use nature of this location, just over 300 responses were submitted for those who live in the study area or visit friends and family who live here. Finally, parking was a commonly selected use, with just under 200 responses. Other uses, which were mentioned through comments include access and use of the Hines Rowing Center, Conshohocken's Community Garden, and the Spring Mill Fire Company facilities.

Existing Conditions Within the Study Area

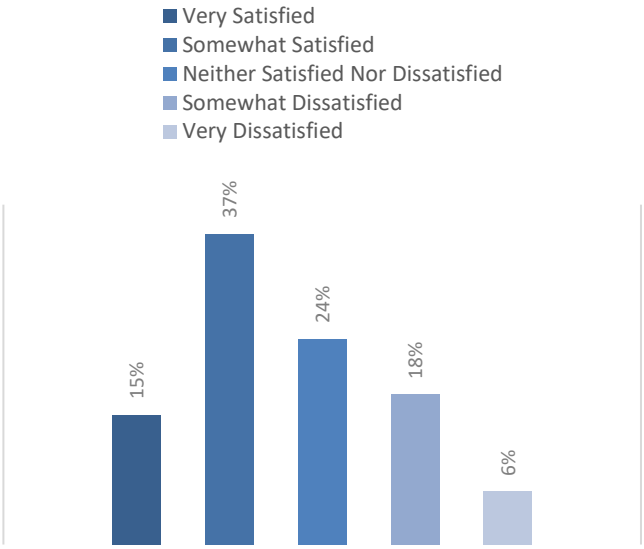


Figure 6: Vehicular Access/Driving

Survey participants were asked to rate their level of satisfaction among several aspects of the study area. These included access to amenities such as the SRT, The Spring Mill SEPTA Station, public spaces, and the riverfront. It also asked participants to examine their levels of satisfaction with parking for these amenities, as well as residences, workplaces, and businesses or services within the study area. The results for each amenity are summarized below.

Respondents were generally satisfied with vehicular access and driving throughout the study area. A quarter felt neutral, and another quarter was dissatisfied, signaling the need for some improvement.

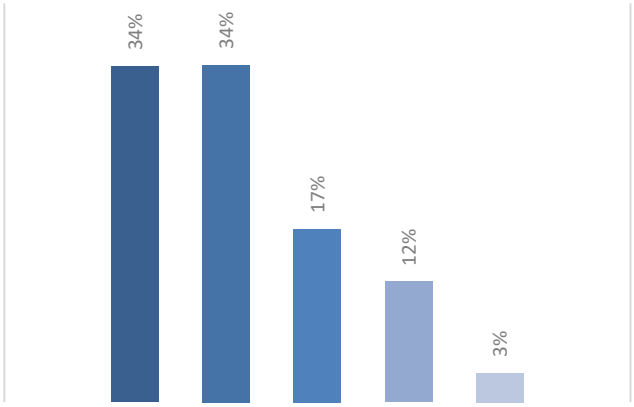


Figure 7: Access to the Schuylkill River Trail

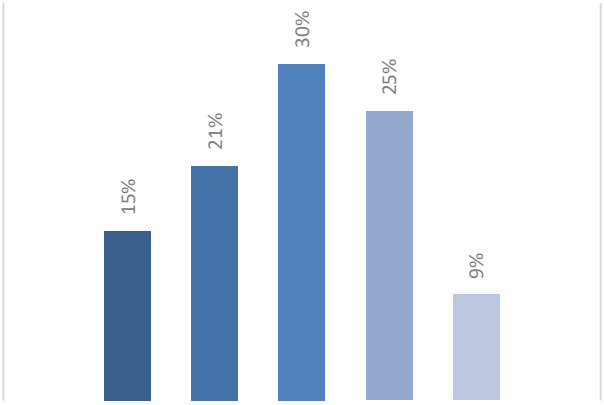


Figure 8: Parking for the Schuylkill River Trail

While a significant majority of respondents were satisfied with access to the SRT, respondents felt neutral to dissatisfied regarding parking for the trail. This response underscores the trail's popularity, while stressing the importance of access to it for multiple modes of transportation. While the lack of parking for the trail was stressed, it should be qualified by the fact that it is difficult, and in some places, unsafe to access the SRT as a pedestrian or cyclist from multiple areas throughout the Township. While parking for the trail will need to be considered, it's crucial to remember that safe multi-modal access will have greater longer-term affects and be more feasible in some cases.

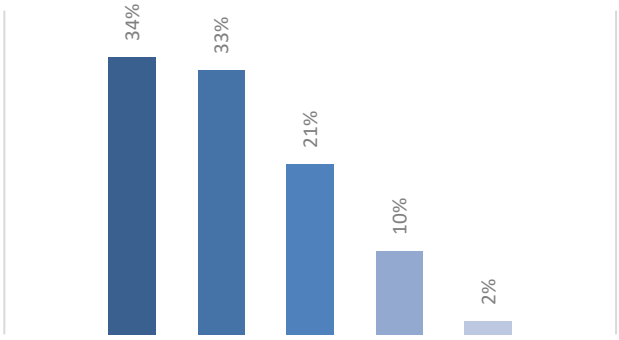


Figure 9: Access to the Spring Mill SEPTA Regional Rail Station

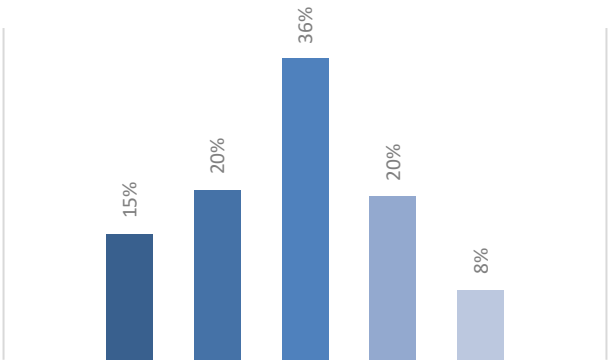


Figure 10: Parking for the Spring Mill SEPTA Regional Rail Station

Much like respondents' feelings on the SRT, there is a general level of satisfaction regarding access to the Spring Mill Regional Rail station. Opinions regarding parking for the Spring Mill Station, however, are almost evenly split. Roughly a third of respondents were satisfied with parking for the station, another third felt neutral, and the final third were not satisfied.

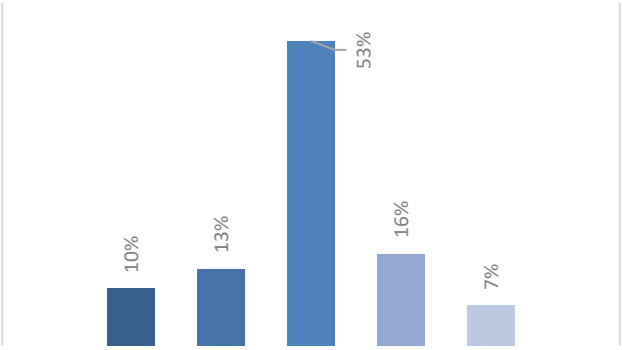


Figure 11: Parking for Residences

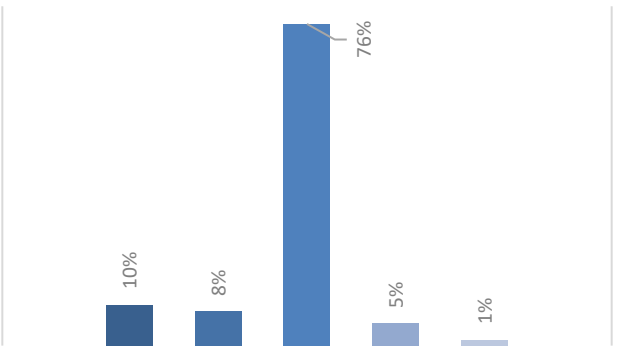


Figure 12: Parking for a Place of Employment

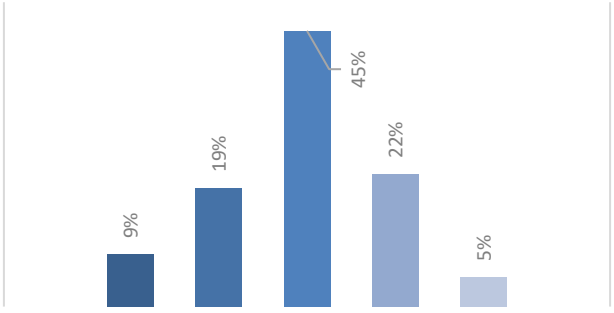


Figure 13: Parking for Businesses or Services within the Study Area

While responses for specific parking situations were mixed, a number of respondents were dissatisfied with parking for residences and for businesses and services within the study area. Most responses for each option were 'neither satisfied nor dissatisfied' indicating that respondents who did not utilize a certain type of parking, likely chose this option.

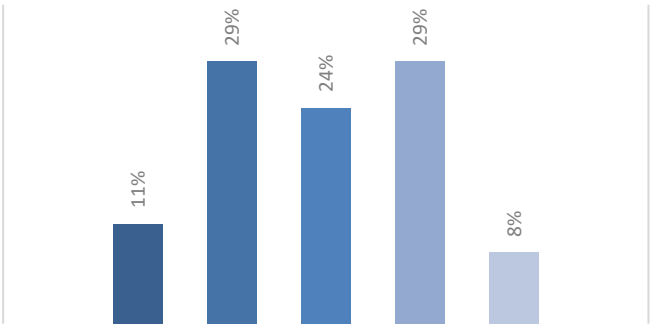


Figure 14: Public Spaces

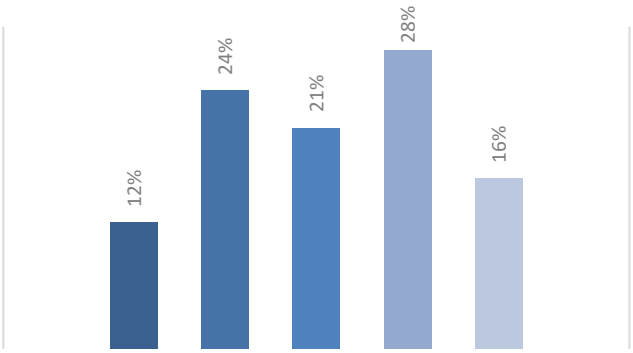


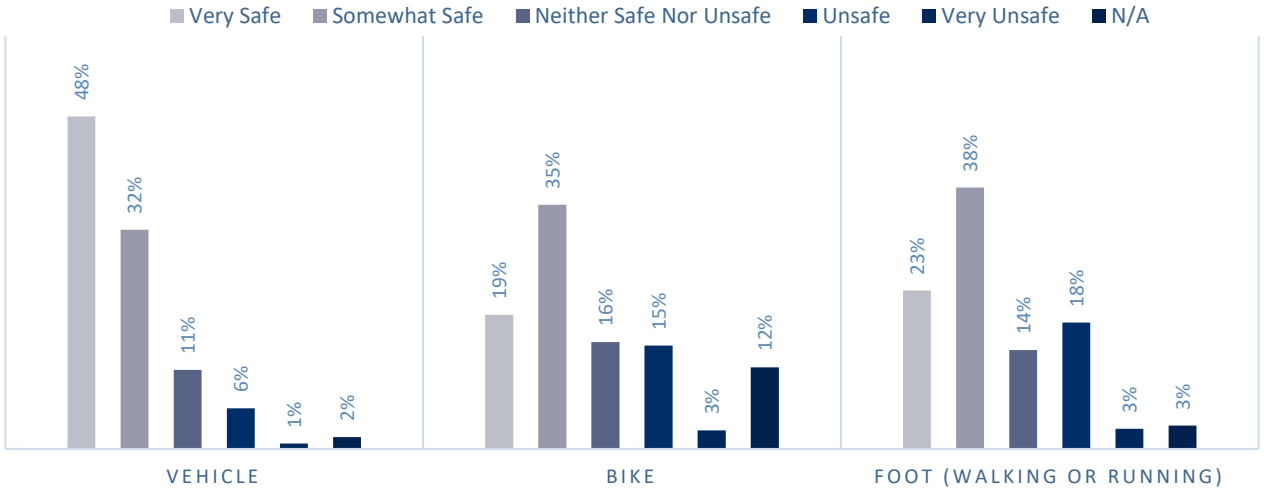
Figure 15: Access to the Riverfront

Public spaces and access to the riverfront area expectedly received more neutral to negative responses as they are two amenities that the focus area overwhelmingly lacks. Respondents were mixed, with a slight skew towards feeling satisfied with public spaces and a more significant skew towards dissatisfaction with access to the river.

Perceived Safety Within the Study Area

Users generally felt very safe accessing the study area by vehicle. In contrast, perceived safety by bike and foot received a more mixed response. Most respondents in both categories felt somewhat safe on bike or on foot. However, a smaller, but significant group of both bikers and pedestrians felt unsafe or neutral accessing the study area. Comments within the 'other' category of this question focused on pedestrian safety concerns regarding the high speeds of both vehicles and cyclists within the study area, a desire for lighting along the SRT, and concerns over the condition and lack of pedestrian and bike infrastructure within the study area.

Figure 16: Percieved Safety by Mode of Transporation



Ranking the Most Important Concerns and Proposed Solutions

Respondents were asked to rate the priority level with which a specific list of concerns and solutions for the study area should be considered. Respondents chose either "Very High Priority", "High Priority", "Neither High nor Low Priority", "Low Priority", or "Very Low Priority" for each item. A weighted average was then taken for the responses for each item, on a scale of 1-5. The closer an item is to 5, the higher it ranked as a priority for survey respondents.

Figure 17: Prioritization of Concerns

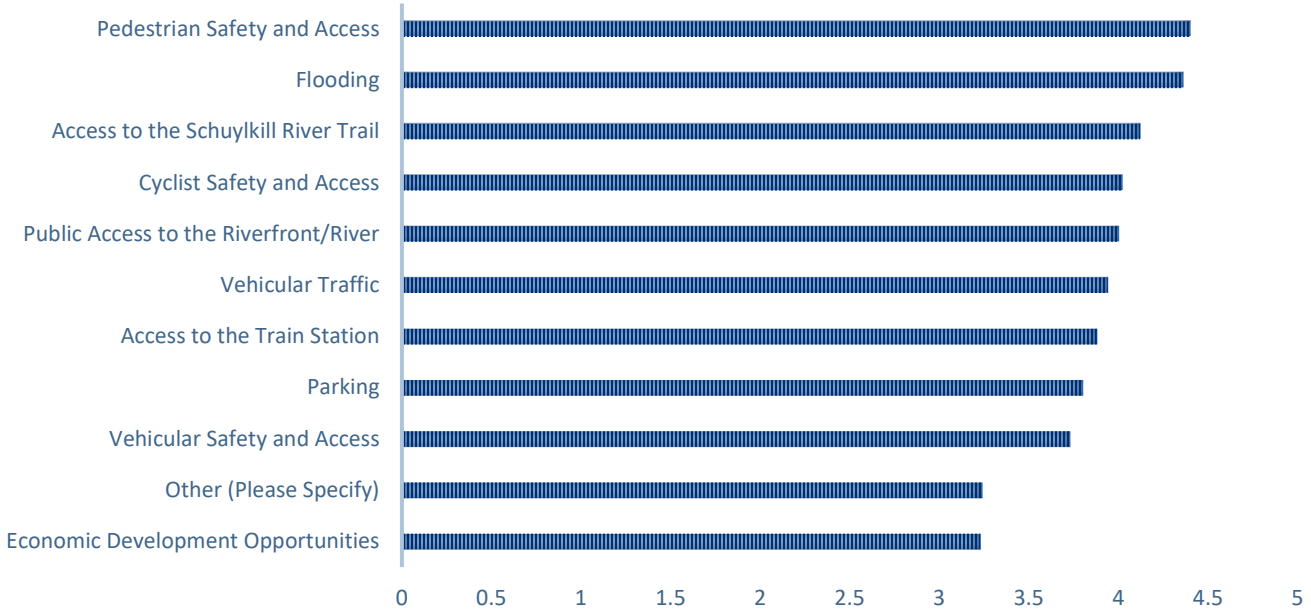
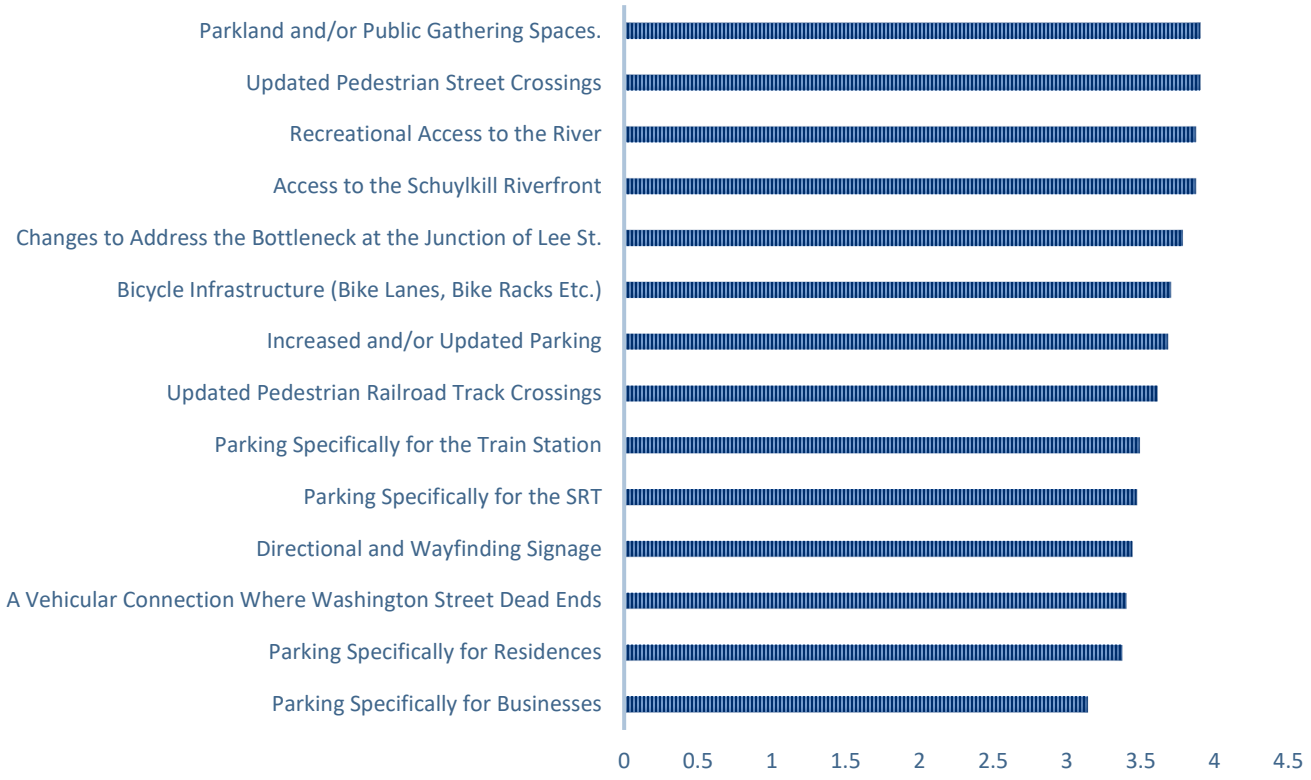


Figure 18: Prioritization of Potential Improvements



When presented with a question that asked respondents to select the priority level for various concerns within the study area, some notable trends emerged. Pedestrian safety and access, flooding, and access to the SRT ranked as the top three concerns, respectively. These were followed by cyclist access and safety, public river access, and vehicular traffic which all followed closely behind the top three. Fifty-seven (57) respondents also selected "other concerns" as priorities. The comments included a focus on flood cleanup efforts, limiting development, and addressing traffic, parking, and pedestrian access.

As for potential improvements, the weighted averages produced by the priority level of each improvement showed similarly close priority levels for most of the options. The top 5 are as follows:

Table 5: Top-Ranked Potential Improvements

	Potential Improvement	Percentage of "Very High Priority" or "High Priority" Selections
1	Parkland/Public Gathering Space	69%
2	Updated Pedestrian Street Crossings	68%
3	Recreational Access to the River	68%
4	Access to the Schuylkill Riverfront	67%
5	Road and Traffic Pattern Changes to address the bottleneck at the Junction of Lee St, The SRT, and SEPTA Tracks	65%

Funding for Potential Future Solutions

One of the final questions on the survey asked respondents about their willingness to accept a tax increase to pay for any future proposed improvements, and if so, to specify what improvements. It is important to note that in line with the conceptual nature of the study, this question is strictly hypothetical and designed to gauge the public's priority level for the wide range of solutions which may be considered for the study area. Understandably, most respondents said that they would not be willing to vote for a tax increase or are unsure about whether they would vote for one. Of the 30% of respondents who said that they would be willing to vote for a tax increase, the majority specified that they would be most compelled to do this for improvements related to active transportation, the preservation of open space, road and pedestrian safety, and riverfront access.

Additional Comments

The final question gave respondents the opportunity to share any thoughts, comments, or ideas that had not been brought up thus far in the survey questions, with 192 respondents choosing to provide comments. Comments covered a wide variety of topics from concerns about tax increases and heavy development to recreational access and flood prevention and protection. As illustrated by the word cloud above, which was created from comment responses, several themes emerged from the comments. A common comment was concern over development and a desire to stop new developments from coming in, particularly considering the flooding issues which have increased in recent years. Another frequent comment theme was heavy traffic and the impact that it has on pedestrian and cyclist safety within the study area. Finally, river access for the public as well as the preservation of open space was a focus of many comments, as was displayed by the survey results in general.

See Appendix D for full public survey results.

KEY PERSON INTERVIEWS

One-on-one or small group conversations with local stakeholders, residents, property or business owners, and interest groups are a key element of any public participation program. Due to the size and complexity of the study area, key personnel were interviewed by category. These categories represented critical groups or organizations of stakeholders within the study area. Key persons from each category were interviewed in small groups of two to four interviewees. Similarly, due to the varied considerations within the study area, each interview group were asked some general questions, but primarily encouraged to engage in a free-flowing discussion about the following:

- Interest in or relationship to the study area
- Issues or concerns that the interviewee or group has regarding the study area
- Likes or things to be preserved within the study area
- What changes should be made to the study area

The Key Persons who were interviewed, the organizations they represent and categories of each of the interview groups are as follows:

Table 6: Key Person Interviews

Key Person Name	Key Person Organization	Category
Nick Weaver	Spring Mill Fire Company	**Emergency Services**
Wayne Masters	Spring Mill Fire Company	
Ray Sokolowski	Conshohocken Borough Executive Direction of Operations	
Tim Gunning	Conshohocken Borough Fire Chief and Fire Marshal	
Lois Trench-Hines	Owner of Hines Rowing Center	**Hines Rowing Center**
Tim Woodrow	Rowing Center Engineer	
Megan Kennedy	Head Rowing Coach at Mt. St. Joseph's Academy	
Pattie Guttenplan	Montgomery County Planning Commission	**Montgomery County**
David Clifford	Montgomery County Parks & Recreation	
Michelle Harris	Montgomery County Parks & Recreation	
Bill Hartman	Montgomery County Planning Commission	
Rick Mellor	Whitemarsh Township Manager	**Municipal Managers**
Stephanie Cecco	Conshohocken Borough Manger	
Lt. Christopher Ward	Whitemarsh Chief of Police	**Police**
Richard Stemple	Whitemarsh Township Police	
Max Ryan	Alliance HP	**Spring Mill Corporate Center**
Matt Handel	Alliance HP	
Jim Marcum	CEO of David's Bridal	**David's Bridal**
Terrance Kassis	Vice President of Real Estate, David's Bridal	

Emergency Services

- Discussion focused heavily on Washington Street.
- There is interest in seeing shoulders proposed in both directions of Washington Street or a large median between lanes to allow for a pull off for emergency responders coming from both directions.
- It was generally agreed that the David's Bridal site is a major pinch point and that widening and opening the road would be beneficial to everyone, not just emergency services.
- Conshohocken is currently preparing for a sizable population increase in their riverfront section. They feel that it will be imperative to work together in emergency services to prepare for this increase, and that traffic, pedestrian, cyclist, and dog walker traffic will all be important considerations in the future for this area.
- Traffic overall was also a major focus within the interview, including the need for further study on the impacts to connecting streets if Washington Street is fully open to the public, and the traffic impacts from new developments along the river and the potential for more congestion along North Lane.
- Lighting, signage, and improved maintenance were all mentioned as immediate interventions needed to accommodate the new influx of residents.

Hines Rowing Center

- Parking, safety, and connectivity were all significant concerns for the rowing center interviewees.
- Pedestrian connectivity to and from Washington Street and particularly across the railroad tracks and accessing the SRT were all discussed.
- Interviewees did not have suggestions as to where recreation river access could be located. They cautioned that the Schuylkill's banks tend to be steep in this area and that even Conshohocken's existing ramp is a bit steep to allow for comfortable use by all users.
- The rowing center is in need of additional parking and would be interested in sharing with a private business if the lot is safe and well lit. They were also potentially interested in seeing street parking along Washington Street.
- The rowing center interviewees reiterated that any riverwalk trail would need to go around their property due to insurance and safety concerns with boats being carried to the water.
- Interviewees expressed the importance of maintenance, road-widening, connecting, and overall streetscape improvement and beautification for Washington Street.

Montgomery County

- Discussion focused largely on Spring Mill County Park and the Lee Street and Station Avenue intersections along the SRT.
- The County is open to seeing low-impact, passive improvements through the park if they do not have to pay for them or maintain them.
- The County expressed interest in the potential of offering the park to the Township for a dollar lease.
- The County was also open to the idea of a gathering space along Station Avenue for trail users but thought it should be situated near the existing cul-de-sac.
- The County reiterated that they already trim back vegetation along the SRT rights-of-way that they own and would be open to seeing more vegetation removal to improve visibility at intersections.
- The County did not think that improved or increased warning signage along the trail about intersections would make a big difference and felt that it was better to holistically redesign these junctions, if possible.

- Parking was discussed with an importance of pursuing public/private parking partnerships, particularly at Quaker Park as it would be highly accessible for trail users.

Municipal Managers

- River access was mentioned as an important consideration for Whitemarsh.
- It was agreed that parking was a significant issue in both municipalities for this area.
- The Borough supports the acquisition and continuation of Washington Street and Whitemarsh would like support from the Borough in the form of improvements to streets on their end of the study area, including Cherry Street.
- There was an interest from the Township in further discussions or potentially providing incentives to encourage Quaker Park to share parking.
- Wayfinding signage was discussed, and a desire was expressed to have a cohesive wayfinding system between the municipalities. Conshohocken has existing wayfinding signage that could be used as a template for signage.
- In general, it was agreed that with increasing development along the river, both municipalities will need to provide more amenities including recreational access.

Police

- Access to Washington Street was a significant concern, particularly for Whitemarsh as they can only currently access this street through Conshohocken.
- Elm & Righter Streets currently have a significant parking conflict and issues with the nearby concrete company needing access for large trucks.
- Center Street was discussed in regard to its right turning radius for trucks and the lack of access to the SRT due to the Recycling Center's layout.
- The police interviewees felt that Washington Street should be redesigned as two lanes with a center turning lane as it is laid out in Conshohocken.
- The Hector Street & Sandy Street intersection sees occasional crashes, which may be related to sight distance.

Spring Mill Corporate Center (SMCC)

- The lot above the main SMCC parcel was discussed extensively. SMCC representatives are willing to explore other uses and the possibility of selling this lot. The lots on this parcel are currently the least used parking spaces throughout the entire complex.
- In general, SMCC interviewees were impartial to what use is proposed on the North Lane parcel, however, they did have concerns about a parking structure here as it may block the "Gateway" view into Conshohocken.
- SMCC representatives estimated that maybe about 100 of their total occupants use the Spring Mill Station to commute to and from SMCC.
- They would like to see more bars and local dining in this area, particularly ones that would be within walking distance for their tenants.
- They were supportive of the idea of a parking structure on the fire station lot at the corner of E. Hector Street and North Lane, particularly if it could have retail uses on the first floor. They expressed interest in exploring this option independently.

- They also expressed concern that a new mixed-use building located near the corporate campus was not able to have retail and restaurant uses (due to lack of parking as required by current ordinance standards) and mentioned that this issue should be examined as part of the review and revisions to the ordinance.

David's Bridal

Given the importance of the David's Bridal property for opening Washington Street to through traffic, the project team met with representatives for two interviews. In these two interviews, discussions centered around the Company's future plans for their riverfront property and what they would be willing to consider regarding an extension of Washington Street, shared parking, and public river access.

- During the first meeting representatives emphasized that they were willing to consider any potential options, given the severe flooding issues that they have experienced.
- Representatives stated that they are currently in the process of considering a renovation to flood-proof the first floor of the building, which was damaged during Hurricane Ida.
- They expressed concerns with removing a part of the building to allow for a widening or extension of Washington Street. They felt that it would require temporary relocation for their operations and may be too disruptive. They also expressed that their business needs the building space that would likely be lost if a portion of the building was demolished.

During the second meeting, representatives were shown two conceptual sketch plans. One showed the amount of the David's Bridal building that would need to be removed to allow for full two-way access for Washington Street to Station Avenue. The second plan provided an example of how public access, the riverwalk trail, and a boat launch could be provided near the existing entrance ramp to the parking garage on the David's Bridal lot.

- Representatives had questions about safety and who would be responsible for maintaining these improvements on their property.
- Representatives requested that if these concepts are included in the plan, the report needs to state that they would only be feasible with David's Bridal's buy-in.
- Representatives seemed most willing to consider allowing the following improvements on their property
    - Stairway or access to the river's waterline/shoreline located at the bottom of the existing parking garage ramp.
    - A boardwalk trail along the river's shoreline.
- The Lee Street intersection with the SEPTA railroad tracks was discussed. Representatives feel that it needs better pedestrian crossing infrastructure and would benefit from the addition of lighting.

Summary

Overall, in many ways, the findings from the key person interviews reflect and expand upon many of the themes gleaned from other means of public feedback. The expert advice and on-the-ground findings of the interviewees helped to refine considerations within the study area and to redirect focus to critical areas**. Traffic, parking, safe multi-modal connectivity** for a variety of users shone through as top considerations. **Recreational access, gathering spaces, and local business development** were mentioned less frequently, but were still emphasized throughout several of the interviews.

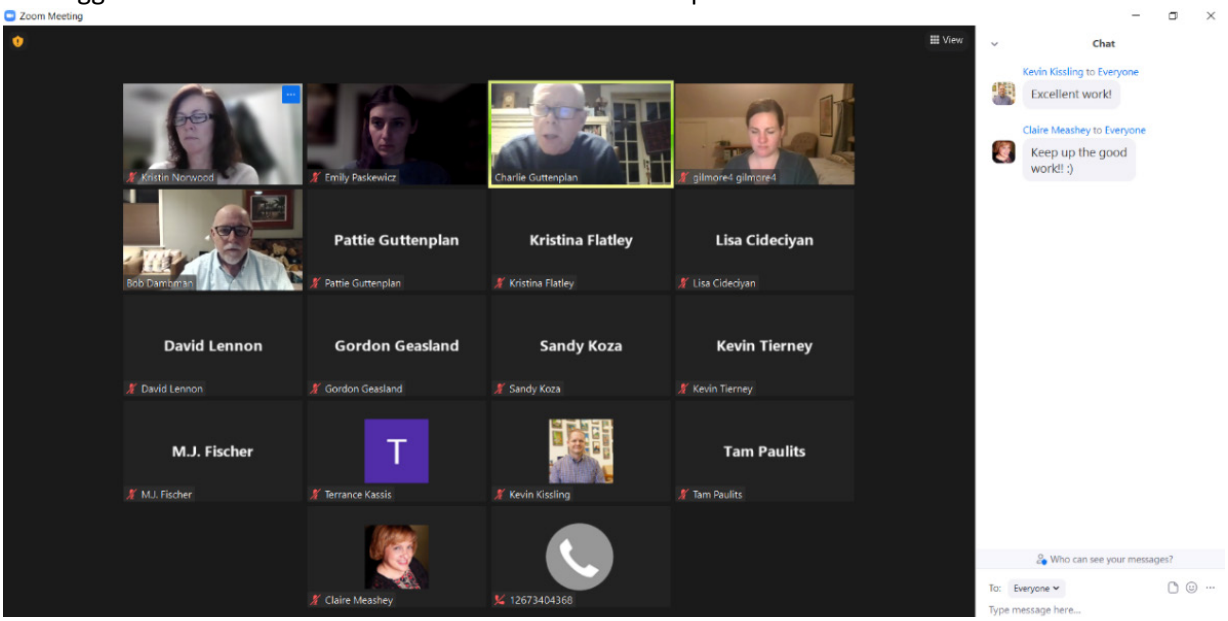
See Appendix E for Key Person Interview notes.

FIRST PUBLIC PRESENTATION & LISTENING SESSION

The first Public Presentation and Listening Session was held on December 6th, 2021, at 6:00 PM, via Zoom. 116 people pre-registered for the meeting and 44 people attended. The meeting began with a presentation by the project team that explained the study's background, purpose, and goals. The study area was shown and described in detail along with key opportunities and constraints for the many of the key locations within the study area. Following the presentation, attendees were invited and encouraged to ask questions and provide feedback on the study area and potential opportunities and concerns within it. The public offered thoughtful and insightful questions, concerns, and suggestions which informed the evolving study process. Discussion centered broadly around flooding, recreational access, the need for additional parking, and the potential outcomes of the proposed and potential future developments within the study area.

FINAL PUBLIC PRESENTATION & LISTENING SESSION

The Final Public Presentation and Listening Session was held on March 3rd, 2022, at 6:00 PM via Zoom. Twenty-six people pre-registered for the meeting and 14 participants attended. The meeting began with a presentation by the project team that explained the study's background, purpose, and goals. From there, the project team presented recommendations and conceptual plans and sketches that were created based on the study's findings. The public did not have many comments during the meeting and those that did centered around shared parking, and the process of getting a riverwalk trail installed. Some public comments were received after the meeting and included suggestions for additional recreational amenities and public art.



Final Public Presentation & Listening Session Zoom Meeting Screenshot

WHITEMARSH PLANNING COMMISSION MEETING & PRESENTATION

Study findings were presented to the Township Planning Commission at their meeting on Tuesday May 24th, 2022, at 7:00 PM. Commission members and the public were given the opportunity to ask questions and provide feedback. Commission members requested that the action plan timeframes use the same terminology as those found in the Comprehensive Plan. The Commission voted unanimously to recommend the plan for adoption, following their requested changes.

CONSHOHOCKEN BOROUGH COUNCIL MEETING & PRESENTATION

The study's findings were presented to Conshohocken Borough Council on Wednesday, June 1st 2022 at 7:00 PM. Council members and the public were given the opportunity to ask questions and provide feedback. The Borough sent a letter to the Township expressing support for the project and requesting that the Township focus on improvements to Washington Street. This letter can be found in Appendix U.

See Appendix F for Public Meeting Summaries.

OPPURTUNITIES AND CONSTRAINTS

CHAPTER 4: OPPORTUNITIES & CONSTRAINTS

An integral part of this study is the identification of areas of concern with regard to safety, accessibility and land use so that potential solutions can be presented. As part of that effort and due to the large size of the overall study limits, the study area was separated into sections based on the differing needs of each sub-area.

WASHINGTON STREET

Washington & Lee Streets – Surrounding Connectivity

This portion of the study area includes Washington Street between Cherry Street (Conshohocken Borough) and Lee Street (Whitemarsh Township). This focus area includes the development potential along the Schuylkill River, vehicular and pedestrian access for Washington Street (including two-way traffic), and the interaction between Lee Street, the SRT, and the SEPTA train tracks.

Opening Washington Street to two-way traffic would provide enhanced accessibility for both pedestrian and vehicular traffic to the riverfront section of the Township, providing various opportunities to redevelop the area into a major destination for residents and visitors if the proper mix of residential, recreational, commercial and restaurant/retail uses are realized. It would also provide a major benefit to emergency service providers who would use this corridor to access existing and future riverfront developments and the neighboring municipality, in cases where mutual aid is needed from adjacent municipalities.

The two major constraints to extending Washington Street and opening the current dead-end condition to two-way traffic are the location of David's Bridal's existing building and the close proximity to SEPTA's right-of-way and equipment. SEPTA's location and right-of-way constraints are a set concern with considerable safety implications. David's Bridal's buildings do have the potential to be renovated or partially demolished sometime in the future, but this is largely dependent on the property being sold or changing ownership.

OPPORTUNITIES

Land Use

Riverfront Redevelopment

Streetscape

Mural Wall

Public Spaces & Gathering Areas

River Access

Connectivity

Two-way Traffic

Sidewalks & Crosswalks

Driveway Along David's Bridal, Looking east

Washington Street, Looking east

Washington Street Gate, Looking west

Schuylkill River Trail, Lee Street & SEPTA Junction

OPPORTUNITIES

Land Use

Shared Parking

Trail Signage & Lighting

Trail Alignment

Connectivity

Sidewalks & Trail Crossing

Ped Safety at RR Crossing

The portion of the Schuylkill River Trail within the study area is one of the most highly utilized sections of the trail. Safety is paramount for the hundreds of daily users, both on the trail and at the crossings with the study area roadways. The proximity of the SEPTA tracks on the south side of the trail limits the scope of improvements that can be implemented. Additionally, maintenance responsibilities also prohibit the scale of any proposed improvements based on the requirements (and limitations) of the entity that would be responsible to maintain the improvements.

Another concern for this portion of the study area is the limited parking available for SRT users. Due to the various uses within the study area, parking is at a premium. In fact, parking was a concern frequently noted during public participation activities for both residents and business owners alike. This section of the trail is heavily utilized, but there is no dedicated parking for users, and the narrow width of Lee Street limits parking along the street. There is a large parking facility for the adjacent Quaker Park business offices that could offer an opportunity for a shared parking agreement, if all parties were amenable. There is currently no parking available south of the SEPTA tracks due to that area being privately owned (David's Bridal). As noted previously, acquisition of the David's Bridal property may be a long-term goal for the Township. If that were realized, the area immediately adjacent to the trail crossing should be considered for parking specifically for trail users.

Quaker Park

Pedestrian connectivity on Lee Street, both while crossing the SRT and SEPTA tracks and further up to E. Hector Street is another important opportunity. The existing Lee Street sidewalks dead end before reaching the SRT. Similarly, there is limited pedestrian crossing infrastructure at the intersection of Lee Street and E. Hector Street. Improvements to these connections and crossings could ensure safety for multi-modal users and allow SRT users to reach businesses on and around E. Hector Street and vice versa.

Lee Street & SRT Intersection

Lee Street & E. Hector St. Intersection

Lee Street Sidewalks, Looking south

Site Analysis Plan - Washington Street

Multi-Modal Connections Studyof Washington Street and the Riverfront of Spring Mill Station

Whitemarsh Township, Montgomery County, PA

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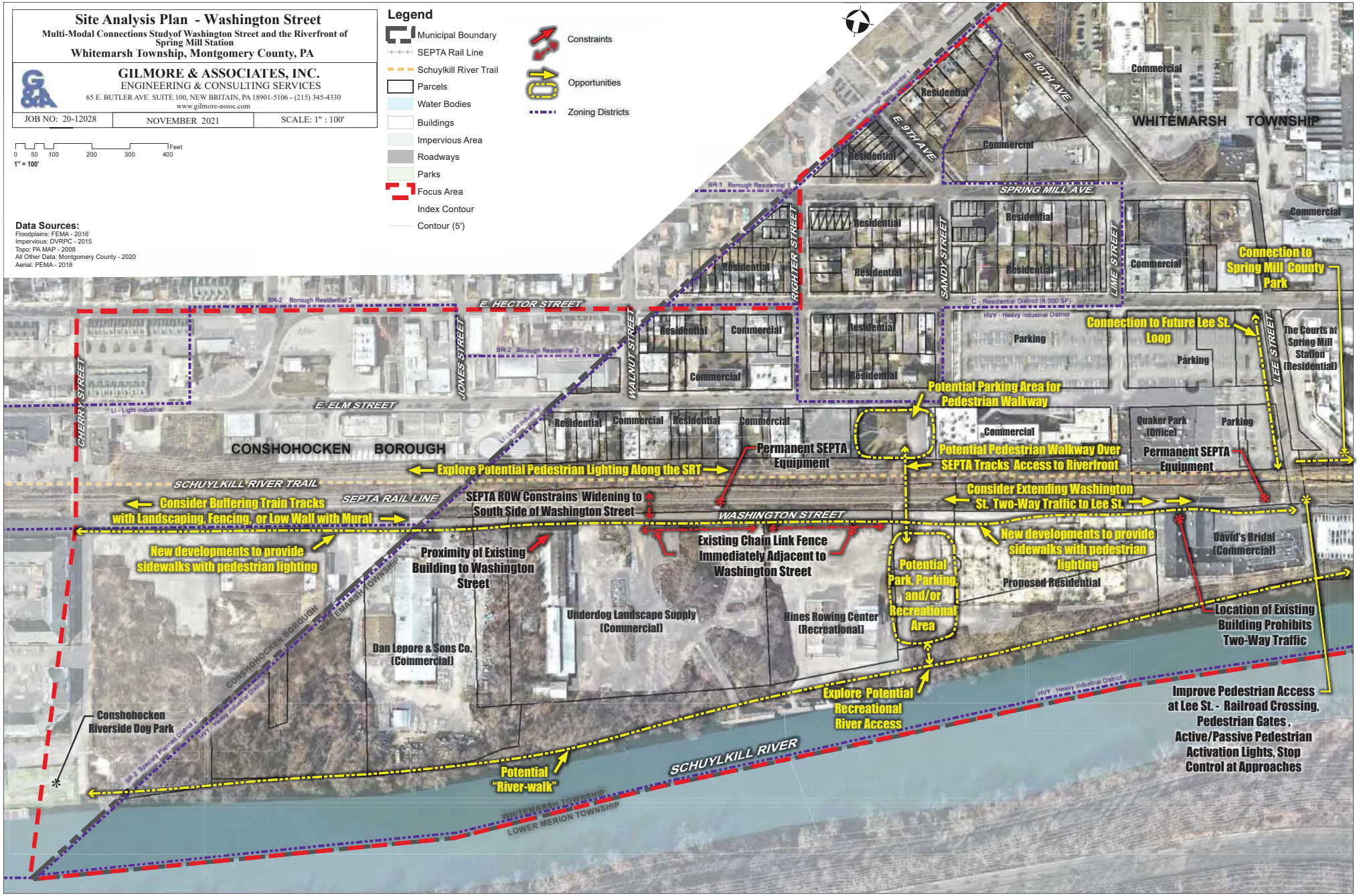
JOB NO: 20-12028	NOVEMBER 2021	SCALE: 1" : 100'

0 50 100 200 300 400 Feet
1" = 100'

Data Sources:
Floodplains: FEMA - 2016
Impervious: DVRPC - 2015
Topo: PA MAP - 2008
All Other Data: Montgomery County - 2020
Aerial: PEMA - 2018

Legend

- Municipal Boundary
- SEPTA Rail Line
- Schuylkill River Trail
- Parcels
- Water Bodies
- Buildings
- Impervious Area
- Roadways
- Parks
- Focus Area
- Index Contour
- Contour (5')
- Constraints
- Opportunities
- Zoning Districts



SPRING MILL JUNCTION

OPPORTUNITIES

Land Use

Recreational River Access

Riverfront Trail Access

Shared Parking

Connectivity

Station Ave. Vehicular Safety and Visibility

Sidewalks & Trail Crossing

Ped Safety at RR Crossing

SRT Trailhead Improvements

The focus of this sub-area is the interaction of vehicles with pedestrians/bicyclists at the junction of Station Avenue, the SRT, the SEPTA train tracks, and the SEPTA Spring Mill Station parking area. Another aspect of this analysis is the potential for recreational access to the Schuylkill River, the riverfront and the associated parking requirements. In fact, parking is a common concern that has been identified by numerous stakeholders.

Station Avenue, SRT, and SEPTA Intersection

The crux of this sub-area is the challenging intersection of multiple users and transportation types. Overgrown vegetation and the skewed angle of the intersection and trail severely limits visibility for trail users and drivers. Meanwhile, vehicles tend to cross the SEPTA tracks and accelerate through the SRT crossing, which could lead to dangerous collisions. Similarly, there is currently no pedestrian infrastructure allowing for safe crossing of the tracks by trail users, SEPTA users, or David's Bridal employees and visitors.

SRT & Station Ave. Intersection

David's Bridal Property

The area south of the Spring Mill SEPTA station between the train tracks and the Schuylkill River is privately owned by David's Bridal and accommodates their parking structure for their corporate headquarters. The property is signed with various signs indicating "Private Property", "No Trespassing", "Private Parking" and "No Fishing". The signs note that unauthorized vehicles will be towed 24 hours per day, 7 days per week. There seems to be potential for a shared parking agreement that would allow off-hours parking (weekends and weeknights) for trail users that would not conflict with the schedules of David's Bridal employees.

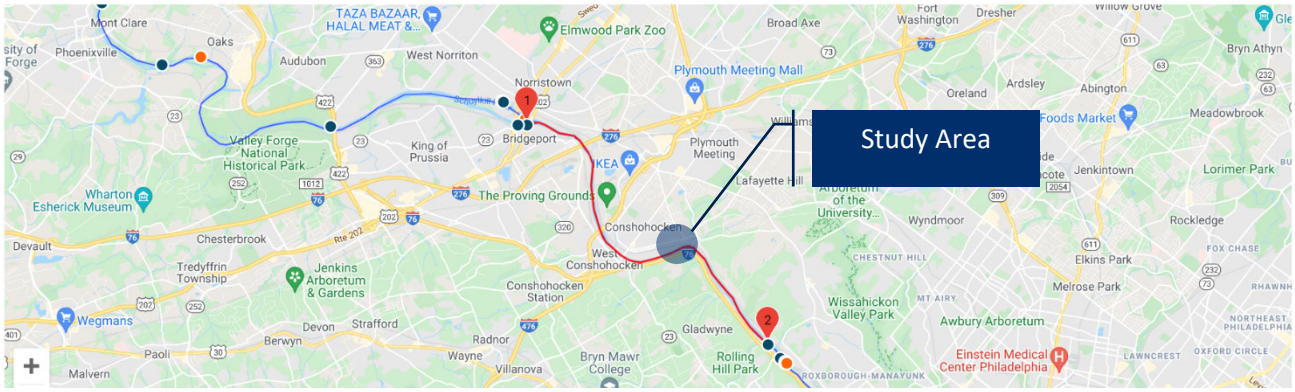
Station Ave. SRT & SEPTA Junction, Looking north

David's Bridal Parking Garage Ramp

Recreational River Access

Existing Schuylkill River Boating Access Points

Schuylkill River Greenways Interactive Water Trail Map. 2022



With the development/redevelopment of the waterfront area along Washington Street, there is an opportunity to provide recreational river access for residents and visitors. Currently, there are approximately 8 miles between the Bridgeport access to the north and Flat Rock Park access to the south along the Schuylkill River Water Trail. The Spring Mill study area is approximately midway between these boat launches which is an ideal location to fill the gap in access. While topography at the river shoreline and David's Bridal's ownership and current uses on the property may prove challenging, the public is already utilizing this area to fish and enjoy river views. It is a rare opportunity within the Township currently, that is clearly desired by the public.

David's Bridal River View

David's Bridal River View, Looking east

The land development project at 901 Washington Street will provide access to the river for emergency service personnel. This will allow for quicker responses to incidents along the Schuylkill River. However, this access will be for emergency purposes only and will not accommodate the general public. As noted previously, acquisition of the David's Bridal property could be a long-term goal for the Township which would allow for redevelopment of the waterfront area to potentially provide additional opportunities for river access for residents and visitors, as well as ample parking with the use of the existing parking garage.

Riverfront Trail

In June 2016, *The Riverfront Plan* was prepared highlighting the need for establishing a riverfront park and walking path that would traverse both Whitemarsh Township and Conshohocken Borough. Portions of the trail have been constructed within the Borough with the development of parcels along Washington

Conshohocken Riverfront Trailhead

Google Maps. August 2019

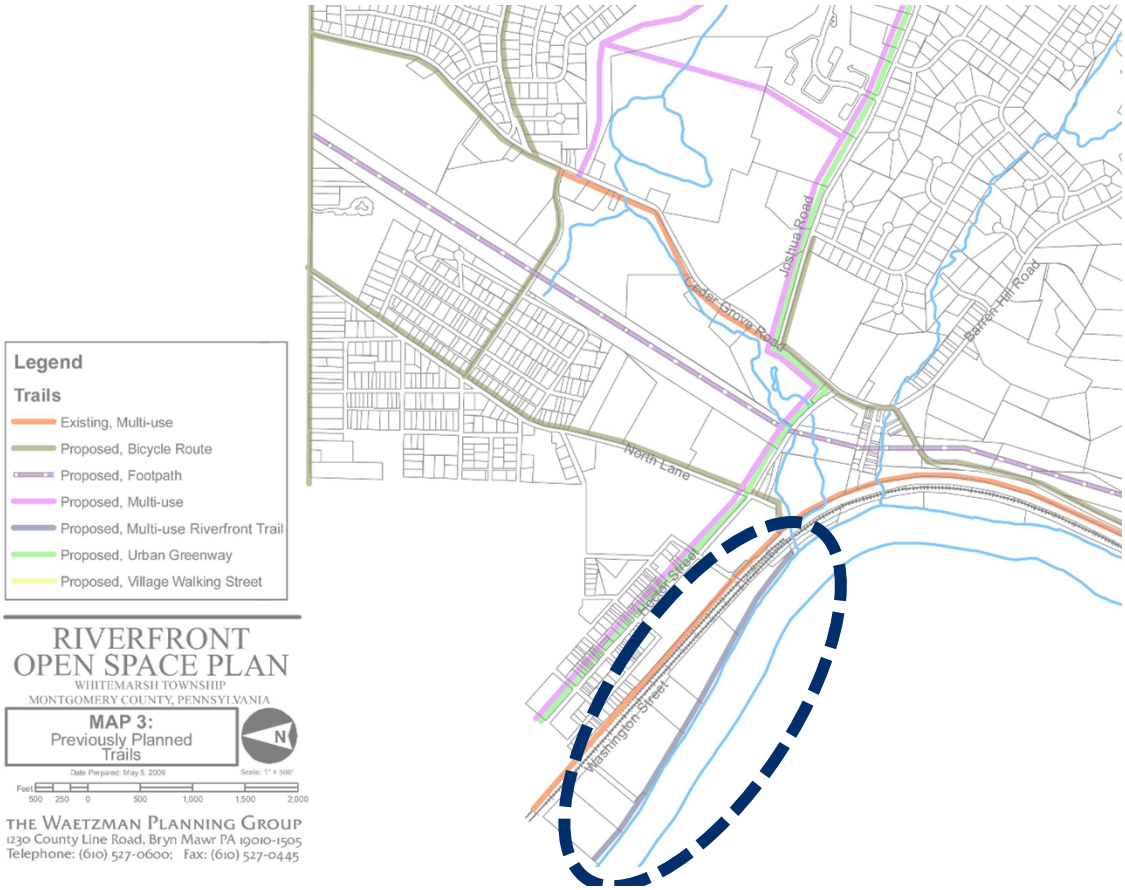
Street and provide a connection to amenities such as the Conshohocken Dog Park, as well as a scenic recreational option for residents. There is an opportunity to continue the walking path into Whitemarsh Township with the redevelopment of the parcels between the municipal boundary and Station Avenue, in accordance with the zoning ordinance for the Riverfront Development District (RDD).

One constraint for riverfront trail development is the Hines Rowing Center that is centrally located along Washington Street. Due to insurance requirements and safety and security concerns, the path is not able to cross the front of the property along the river. However, the rowing center owners have been open to the idea of a trail that would meander around their property from the riverfront to a sidewalk along Washington Street along the property frontage and then meander back to the riverfront to continue.

Hines Rowing Center

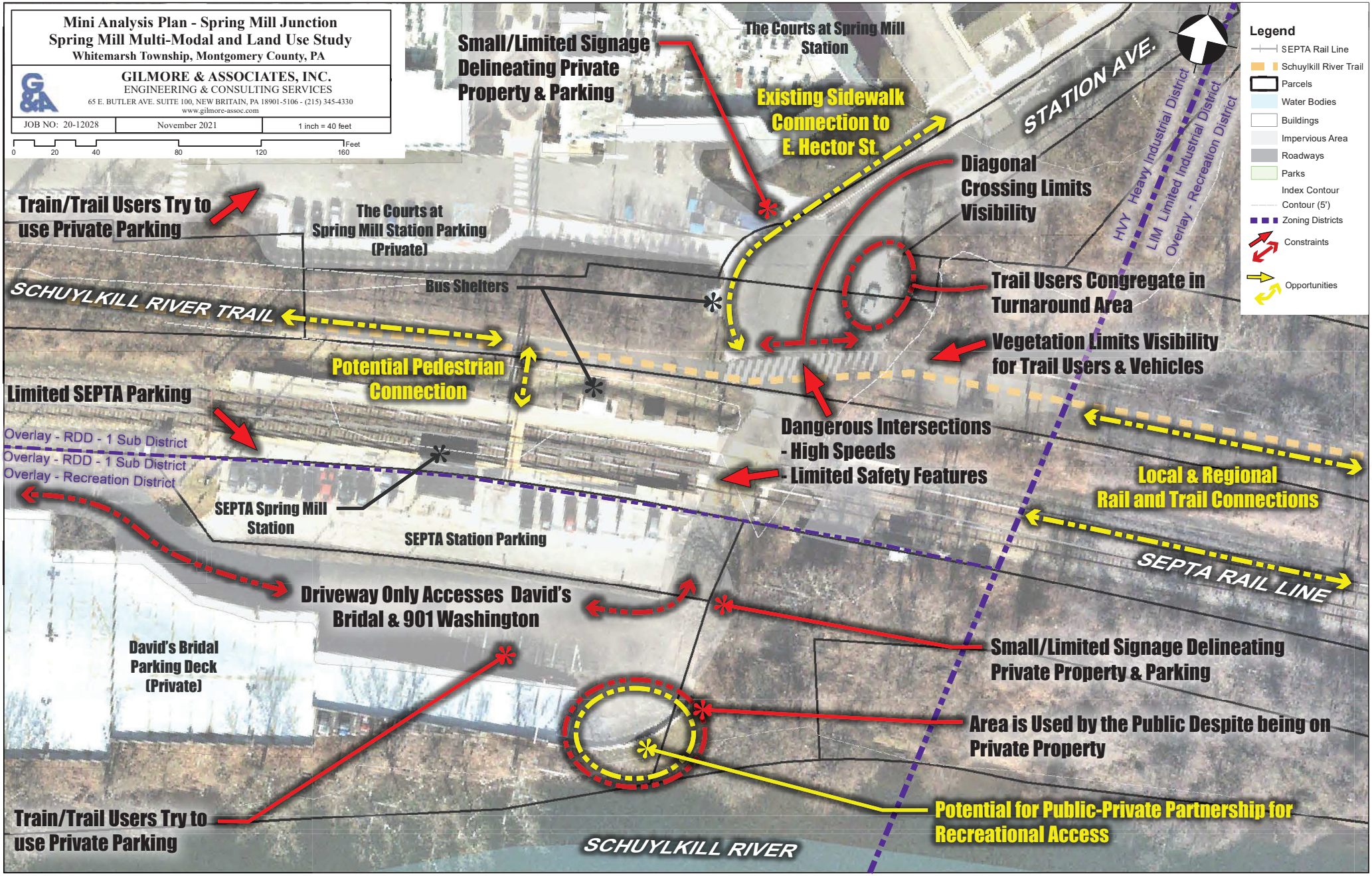
Google Maps. August 2019

The *2011 Riverfront Open Space Plan* shows the proposed riverwalk alignment (labeled in the legend as "Proposed, Multi-use Riverfront Trail") circled in a blue dashed line along the river. Due to constraints, the original alignment may require modifications. However, the concept is over a decade old and in the process of being implemented as new developments occurs along the riverfront area in Whitemarsh Township.



2011 Riverfront Open Space Plan - Proposed Multi-Use Riverfront Trail Alignment

Google Maps. August 2019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November 2021
1 inch = 40 feet
0 20 40 80 120 160 Feet
Small/Limited Signage Delineating Private Property & Parking
The Courts at Spring Mill Station
Existing Sidewalk Connection to E. Hector St.
STATION AVE.
Diagonal Crossing Limits Visibility
HVY Heavy Industrial District
LIM Limited Industrial District
Overlay - Recreation District
Train/Trail Users Try to use Private Parking
The Courts at Spring Mill Station Parking (Private)
Bus Shelters
Trail Users Congregate in Turnaround Area
SCHUYLKILL RIVER TRAIL
Vegetation Limits Visibility for Trail Users & Vehicles
Potential Pedestrian Connection
Limited SEPTA Parking
Dangerous Intersections
- High Speeds
- Limited Safety Features
Overlay - RDD - 1 Sub District
Overlay - RDD - 1 Sub District
Overlay - Recreation District
Local & Regional Rail and Trail Connections
SEPTA Spring Mill Station
SEPTA Station Parking
SEPTA RAIL LINE
Driveway Only Accesses David's Bridal & 901 Washington
David's Bridal Parking Deck (Private)
Small/Limited Signage Delineating Private Property & Parking
Area is Used by the Public Despite being on Private Property
Train/Trail Users Try to use Private Parking
Potential for Public-Private Partnership for Recreational Access
SCHUYLKILL RIVER
Legend
SEPTA Rail Line
Schuylkill River Trail
Parcels
Water Bodies
Buildings
Impervious Area
Roadways
Parks
Index Contour
Contour (5')
Zoning Districts
Constraints
Opportunities

SPRING MILL RIVERFRONT

This sub-area focuses on the existing and potential pedestrian connections available, namely the potential for passive trail access adjacent to or through Spring Mill County Park with eventual connection to the future proposed Miracle Nature Trail north of East Hector Street. Another priority is solving congestion among trail users, cyclists, and café patrons who crowd along the streets, curbs, sidewalks, and cul-de-sac of Station Avenue with nowhere to gather, while also addressing the lack of parking at this increasingly popular SRT trailhead.

OPPORTUNITIES

Land Use

Public Park Access

Public Gathering Space

Shared Parking

Floodplain Habitat Preservation and Education

Connectivity

Trail Connection to Future Miracle-Nature Trail

Trail Connection to SRT

SRT Parking Regulations in the SEPTA Parking Lot

Parking

There is a small parking lot (approximately 16 spaces) for the Spring Mill SEPTA station just south of the train tracks via Station Avenue. It is separated from the David's Bridal parking area by fencing with signage indicating private property beyond the fence. There is an overflow lot at the intersection of Station Avenue and East Hector Street, which is also signed for usage by SRT users, but only after 3pm on weekdays. There are also several public parking spaces signed along Station Avenue adjacent to the Courts at Spring Mill Station that could be used by anyone, including SEPTA riders, SRT users, or visitors to the Courts.

Spring Mill Station

Spring Mill County Park Sign

Spring Mill County Park

Spring Mill County Park is immediately adjacent to the SRT and Station Avenue. There is currently no access to the park. It is a passive park that provides an important function as a floodplain for the nearby river. However, with the eventual construction of the Miracle Nature Trail along the PECO right-of-way north of East Hector Street, there is an opportunity to provide a passive trail or boardwalk access either through the park or along the boundary with the SEPTA parking lot to connect the Miracle Nature Trail with the SRT. The design of this connection would have to consider the sensitive environmental features and challenging topography within the park. This concept would also likely require a maintenance agreement between Whitemarsh Township and Montgomery County.

User Congestion Along Station Ave.

Montgomery County has previously identified the Spring Mill trailhead as the County's most heavily used section of trail. This trailhead is lucky to have the Tricycle Café and Bike Shop a bit further up Station Avenue to provide refreshments, bike equipment, and bike services to patrons and trail users. However, the popularity and rarity of this type of amenity at a trailhead has led to heavy usage, with users and bicycles often spilling off the sidewalk onto both the street and the nearby Station Avenue cul-de-sac since there is nowhere to gather. This congestion is especially worrisome given the blind curve at the Tricycle Café and the frequency of vehicles using the roadway, particularly during peak train commuting hours with cars dropping off and pickup up riders.

Station Avenue, Looking north Towards the Tricycle Cafe

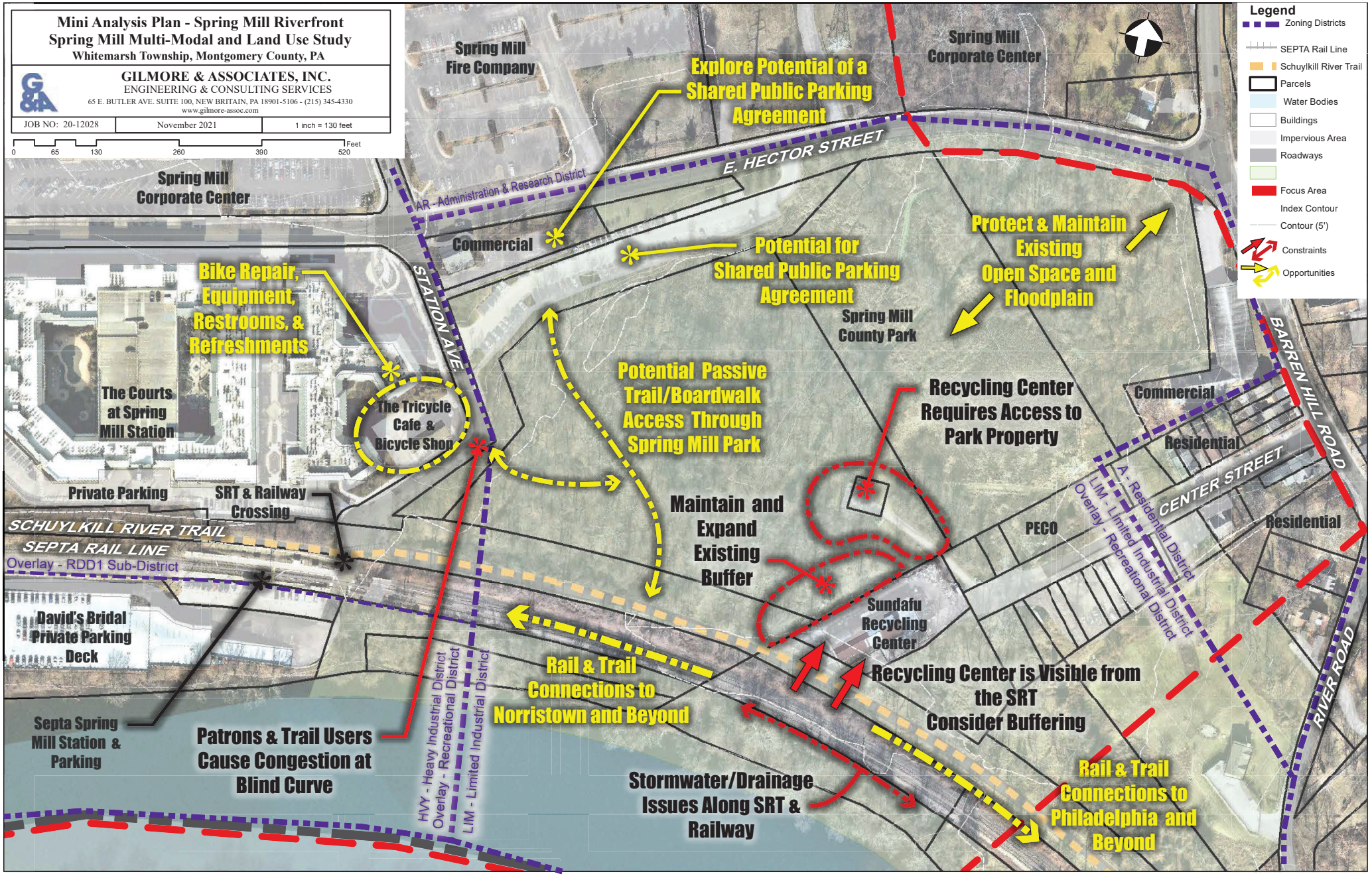
Google Maps. August 2019

Sundafu Recycling Center

The Sundafu Recycling Center is located at the end of Center Street with access from Barren Hill Road and abuts the SRT and Spring Mill County Park. While the recycling center serves a vital purpose, its location adjacent to residential properties, County parkland, and a rare stretch of riverfront and trail property is not ideal. Furthermore, there are concerns about the intensity of this use within a floodplain. Also, the recycling center is visible and potentially accessible from the trail.

Sundafu Recycling Center, Looking in from the SRT

Google Maps. August 2019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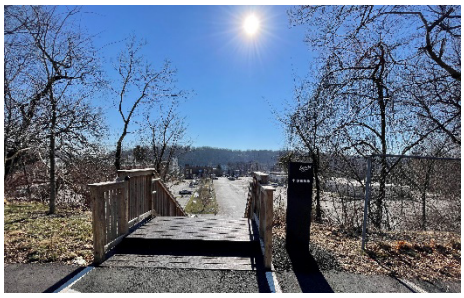
Zoning Districts
SEPTA Rail Line
Schuylkill River Trail
Parcels
Water Bodies
Buildings
Impervious Area
Roadways
Focus Area
Index Contour
Contour (5')
Constraints
Opportunities
Spring Mill Fire Company
Explore Potential of a Shared Public Parking Agreement
Spring Mill Corporate Center
E. HECTOR STREET
AR - Administration & Research District
Spring Mill Corporate Center
Commercial
Potential for Shared Public Parking Agreement
Protect & Maintain Existing Open Space and Floodplain
Spring Mill County Park
Bike Repair, Equipment, Restrooms, & Refreshments
STATION AVE
The Courts at Spring Mill Station
The Tricycle Cafe & Bicycle Shop
Potential Passive Trail/Boardwalk Access Through Spring Mill Park
Recycling Center Requires Access to Park Property
Commercial
Residential
BARREN HILL ROAD
CENTER STREET
Private Parking
SRT & Railway Crossing
SCHUYLKILL RIVER TRAIL
SEPTA RAIL LINE
Overlay - RDD1 Sub-District
Maintain and Expand Existing Buffer
PECO
A - Residential District
LIM - Limited Industrial District
Overlay - Recreational District
Residential
David's Bridal Private Parking Deck
Sundafu Recycling Center
Rail & Trail Connections to Norristown and Beyond
Recycling Center is Visible from the SRT Consider Buffering
RIVER ROAD
Septa Spring Mill Station & Parking
Patrons & Trail Users Cause Congestion at Blind Curve
HVY - Heavy Industrial District
Overlay - Recreational District
LIM - Limited Industrial District
Stormwater/Drainage Issues Along SRT & Railway
Rail & Trail Connections to Philadelphia and Beyond

NORTH LANE

This portion of the study area focuses on future development potential and strategies to effectively accommodate anticipated increases in pedestrian and/or vehicular traffic. This area was also examined for its potential to relieve some of the parking concerns closer to the waterfront area.



Staircase From Upper Parking Lots to SMCC Buildings

A key person interview with representatives from Spring Mill Corporate Center revealed an interest in further discussion on the possibility of selling their upper lot. This lot currently contains two large parking lots and has a lot of steep, challenging terrain near its boundary lines. This parcel is bounded by one residential property to the north, which could prove incompatible if it does develop in the future. Future development on this parcel would also benefit from proximity to an existing stairway and pedestrian connections to the Spring Mill Corporate Center as a place of employment and services. However, if developed, the loss of the parking spaces from these two lots would need to be carefully considered, given the current lack of parking in the study area as a whole.

A set of two lots, totaling over 10 Ac, at the far north end of the study area could also be a prime candidate for a change in use or redevelopment. These properties benefit from an existing sidewalk connection along North Lane, as well as a potential future connection to the Miracle-Nature Trail, which is proposed through the PECO Utility Corridor bordering the properties to the east. Considering this trail connection, and the sizable acreage of the two parcels, future development on this land would ideally be restricted with a considerable open space requirement. Particularly considering the overall lack of open space within the study area and the flooding challenges further south on the site that are exacerbated by heavy development, these parcels should only be developed with proper consideration for the rare resource they provide.

View from PECO Right-of-Way into North Lane Residential Lots

Pedestrian connectivity that would be needed if these parcels develop could pose challenging. North Lane is a fairly steep and heavily trafficked road. Therefore, a potential crosswalk may be difficult to safely implement. This area also struggles with its proximity to important destinations and transit hubs. It is walkable to Spring Mill Station, the SRT, and many businesses and restaurants located closer to the riverfront, but that walk would involve a fairly steep uphill walk to return to this area, which may not be comfortable or desirable for all pedestrians and cyclists.

OPPORTUNITIES

Land Use

Potential Re-Zoning

Shared Parking

Transit Friendly Development

Parks & Open Space

Connectivity

Sidewalks & Crosswalks

Destination Connections

SMCC Parking Sign

Mini Analysis Plan - North Lane
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Whitemarsh Township, Montgomery County, PA

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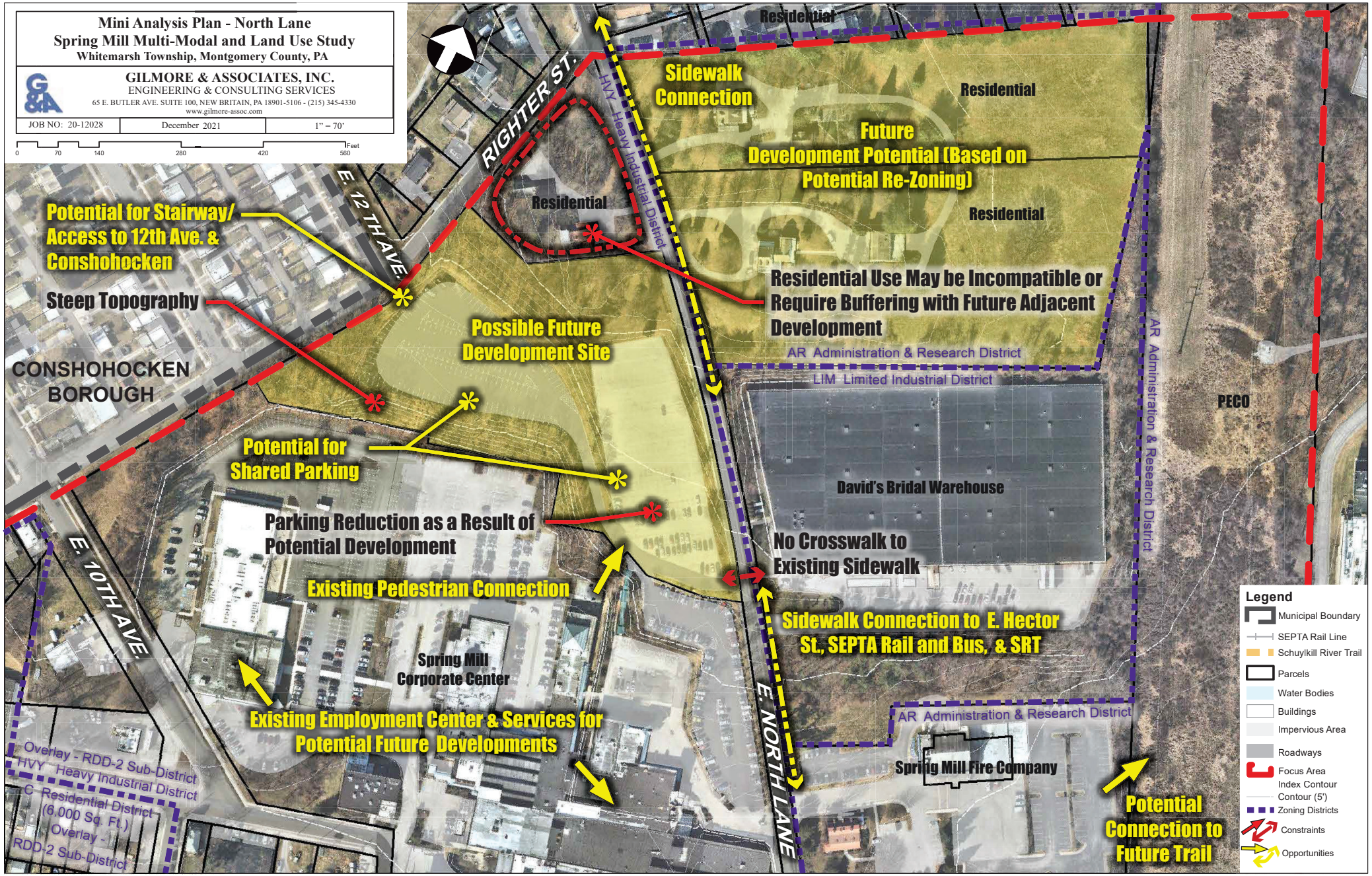
0 70 140 280 420 560 Feet



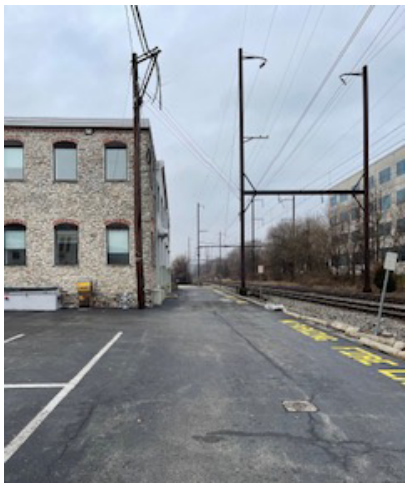
RECOMMENDATIONS

CHAPTER 5: RECOMMENDATIONS

Many options were considered to address the needs of each focus area and were discussed during the various steering committee meetings, key stakeholder interviews, and public listening sessions. Each of the options are discussed below with the preferred solutions identified.

WASHINGTON STREET

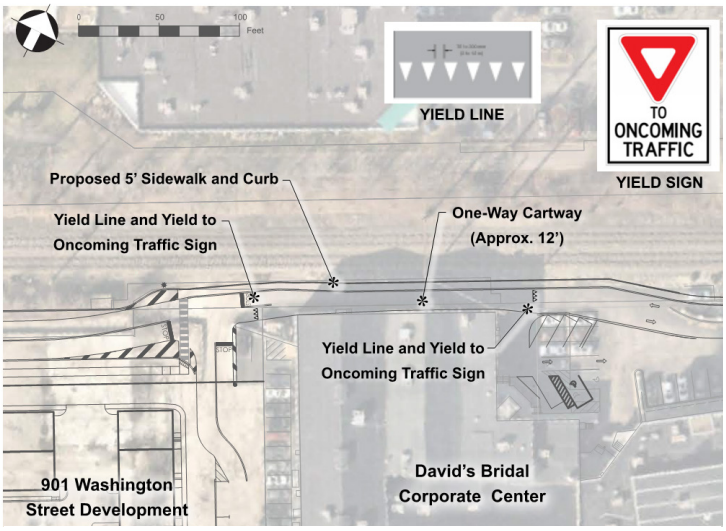
The main obstacle to providing two-way traffic along Washington Street is the proximity of the existing David's Bridal building to the SEPTA train tracks, as shown in the photo to the right. The existing width (approximately 12 feet) allows for only a single lane of travel and would likely require the removal of the existing stairway and entrance to the building within this narrowed section of road to allow through traffic. It is important to note that David's Bridal has agreed to remove the existing stairway as part of their building improvements related to the 901 Washington St. development.



David's Bridal Driveway, looking west

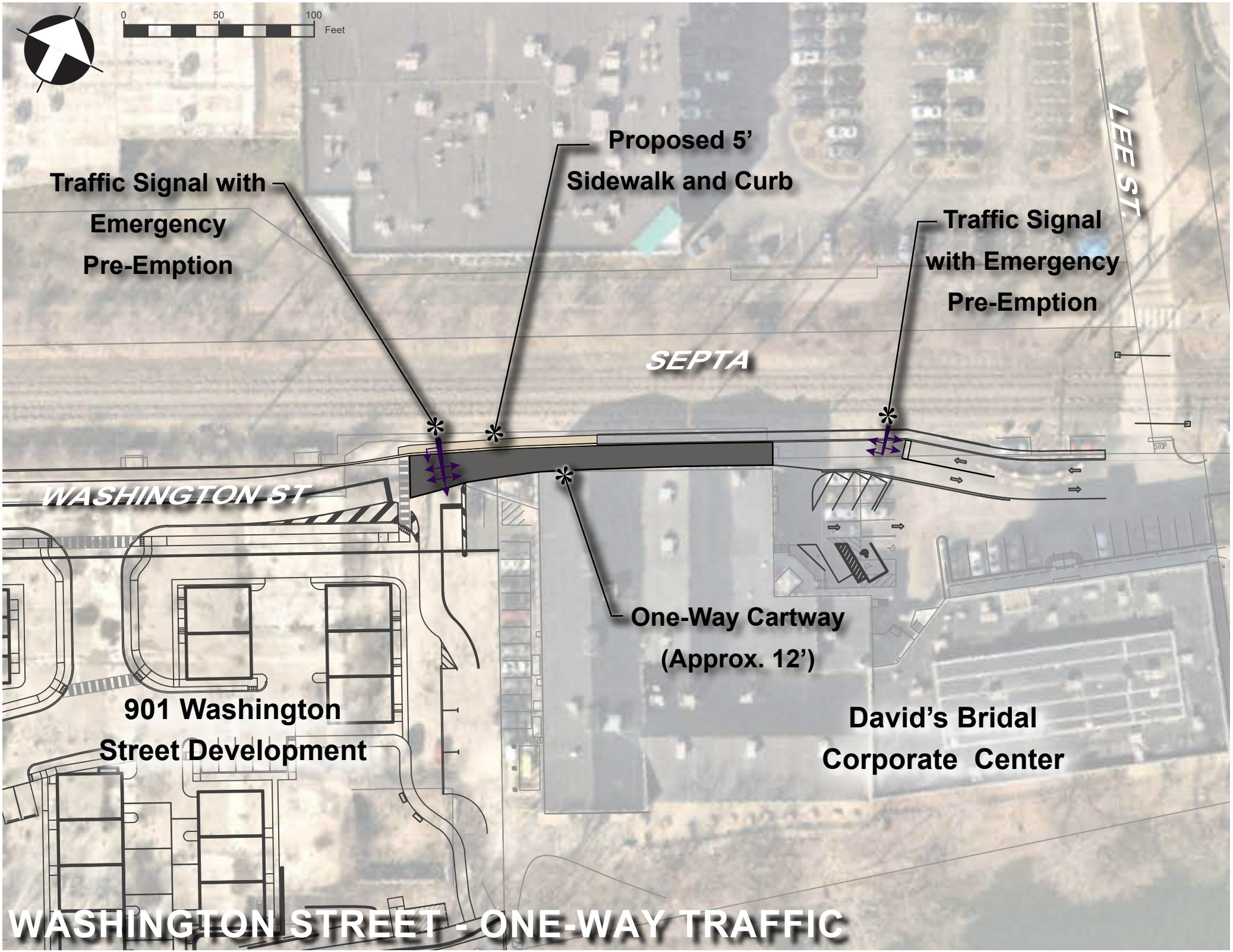
Although acquisition of the David's Bridal property may be considered a long-term goal if the opportunity arises, there are other options that could be implemented in the interim that would allow for through traffic around the existing building. Any future plans in this area would require coordination with David's Bridal, as this portion of road is currently privately owned.

The preferred option is likely also the safest option: the installation of traffic signals to allow one direction of travel at a time around the building. Signals could be installed on both approaches to the building to control flow. This would also provide an opportunity for the installation of emergency pre-emption equipment allowing first responders to access the waterfront area easily and safely from Whitemarsh Township. Design for this type of installation would have to include safeguards for potential queue spillover from the stop bar onto the SEPTA train tracks and SRT, such as queue vehicle detection and clearance timings dependent upon train arrivals. A conceptual sketch of this preferred alternative is provided on Page 47.

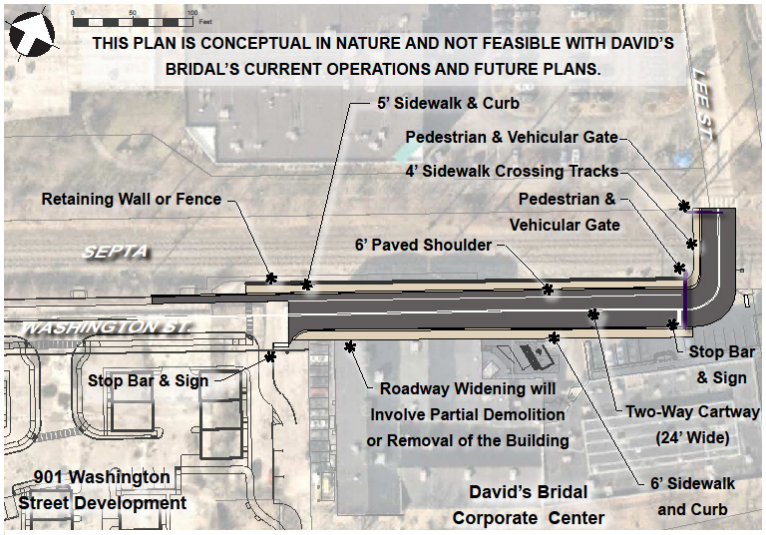


Washington Street – One-Way, Yield Option Plan

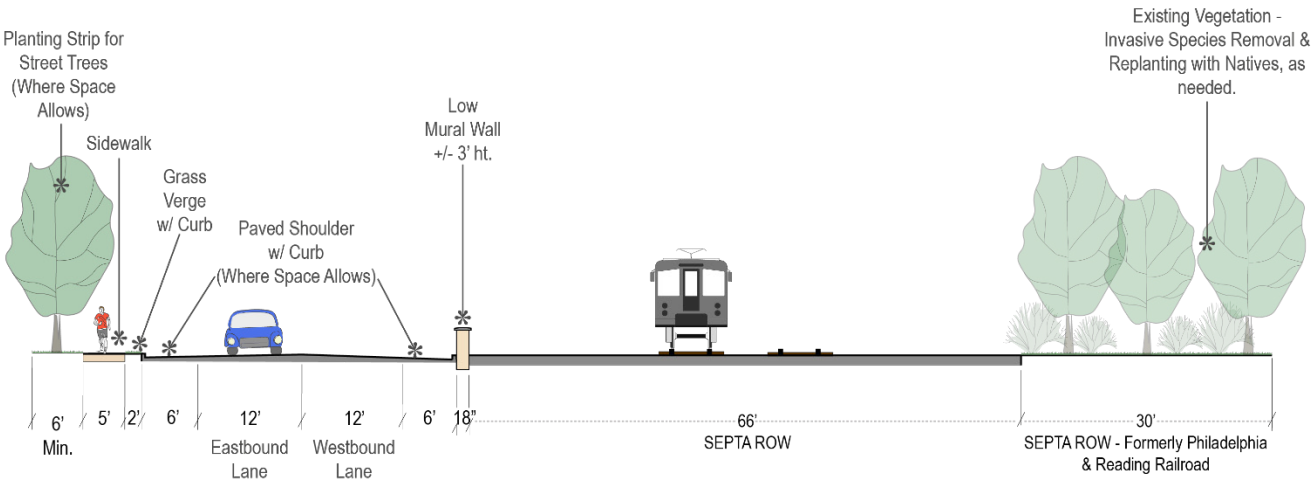
Another option considered is the installation of "YIELD TO ONCOMING TRAFFIC" signs on either side of the building. This would be the most cost-effective option that could be implemented relatively quickly and easily. However, the lack of sight distance around the building and the length of the single lane area (approx. 125 feet) would make this the least safe option. Of particular concern is the eastbound approach that would have a very limited sight line due to the location of the building and the angle of approach. The location of the eastbound yield line would be critical in the success of this implementation to maximize the view of oncoming traffic.


0
50
100
Feet
Traffic Signal with Emergency Pre-Emption
Proposed 5' Sidewalk and Curb
Traffic Signal with Emergency Pre-Emption
LEE ST.
SEPTA
WASHINGTON ST.
One-Way Cartway (Approx. 12')
901 Washington Street Development
David's Bridal Corporate Center
WASHINGTON STREET - ONE-WAY TRAFFIC

As mentioned previously, the acquisition of the David's Bridal property should be considered a long-term goal for the Township as this would expand opportunities to redevelop the parcel to be more consistent with the surrounding land uses and/or provide recreational opportunities and access to the Schuylkill River that are not possible with the current land use. Additionally, if the property were acquired, a full width travel lane option would become available for Washington Street to provide two-way travel for the entire length between Lee Street in Whitemarsh Township and Cherry Street in Conshohocken Borough, as shown in the conceptual sketch to the right.



Washington Street – Two-Way Traffic Plan



Washington Street – Typical Cross Section

The widening of Washington Street west of the David's Bridal property would provide for a dedicated pedestrian path on the south side of the road, two travel lanes with dedicated shoulders and a low wall that separates the traveled way from the adjacent SEPTA right-of-way. Where space allows, street trees and pedestrian-scale lighting could also be included to provide a more inviting path for pedestrians. The inclusion of the low wall on the north side of the street provides an opportunity for collaboration between the Township and local artists and/or school art departments to prepare a decorative design for the wall that could incorporate local historical context into the proposed improvements.

Schuylkill River Trail, Washington Street & SEPTA Junction

Lee Street & SRT Intersection

There are opportunities for enhancements at this junction that could be relatively easy to implement at a low cost and with minimal maintenance. Items such as improved signage and pavement markings could increase the safety of the crossings by drawing attention to the potential of pedestrians/cyclists within the traveled way.

There are also higher priced improvements that could be implemented to improve the safety of the crossings, such as pedestrian gates at the rail crossing, realignment of the trail at Lee Street to remove the "jog", installing pedestrian-scale trail lighting, and installing LED lighting at the intersection. These types of improvements are more costly and involve other entities (SEPTA, Montgomery County, etc.) to implement and maintain. However, they are all viable options that should be explored as development potential, and subsequent pedestrian activity, increases in the area.

Pedestrian Crossing Arm

Pedestrian-Scale Lighting

SRT Trailhead at Lee Street, Looking west

Pedestrian accessibility is important for this area given the proximity to the SRT. Although there is existing sidewalk along the west side of Lee Street, it ends prior to the SRT junction. Therefore, the sidewalk should be extended to provide ADA-compliant access to the SRT. Additionally, the existing Lee Street crossing at East Hector Street should be reviewed to determine if improvements can be made to increase the safety of users destined for the SRT and Washington Street, especially if the riverfront parcels are developed and become an attractive pedestrian destination for area residents and visitors. Currently, the crossing has pedestrian warning signs and a traditional crosswalk. Consideration should be given to providing a Rectangular Rapid Flashing Beacon (RRFB) and continental

Existing Crossing of Hector Street

Sidewalk Dead-End on Lee Street

Sample RRFB Installation

style crosswalks to increase awareness of drivers of the potential for pedestrians within the roadway. Traffic signal warrants should also be reviewed as development increases to determine if a signal should be installed.

Table 7 – Washington Street Recommendations

Issue	Design Options Considered	Notes	Recommended Option	Estimated Budget to Implement*
Washington Street, Lee Street & Surrounding Connectivity				
Provide Two-way Traffic Connecting Washington Street to Lee Street	Yield to oncoming traffic signs	Safety concerns, least preferred option	Installation of traffic signals on both approaches to David's Bridal building and coordination with SEPTA tracks (queue)	$1,000,000**
	Traffic signals	Safest option		
	Remove a portion of David's Bridal building	Not currently feasible, preferred option if property is sold		
Washington Street Reconstruction and Streetscape Improvements	**Improved Cartway w/ Paved Shoulder**	Emergency services priority	Consider all options, where space allows	$3,000,000**
	Sidewalk	Accessibility		
	Low Mural Wall	Opportunity for public art and community involvement		
	Plantings	Street trees and grass verge		
Intersection of SRT and Washington & Lee Streets	**Improved Signage & Pavement Markings**	Install pedestrian gates for pedestrian safety	Pedestrian gates at railroad crossing with improved signage and pavement markings; intersection lighting	$275,000**
Pedestrian Accessibility	**Curb/Sidewalk on Lee St**	Accessibility	Connect existing sidewalk to SRT	$30,000**
	Improve Pedestrian Crossing at East Hector St	Accessibility	Install RRFB and continental crosswalks; review signal warrants	$30,000**

* All "Estimated Budget to Implement" costs are in 2022 dollars and are for budgetary purposes only.

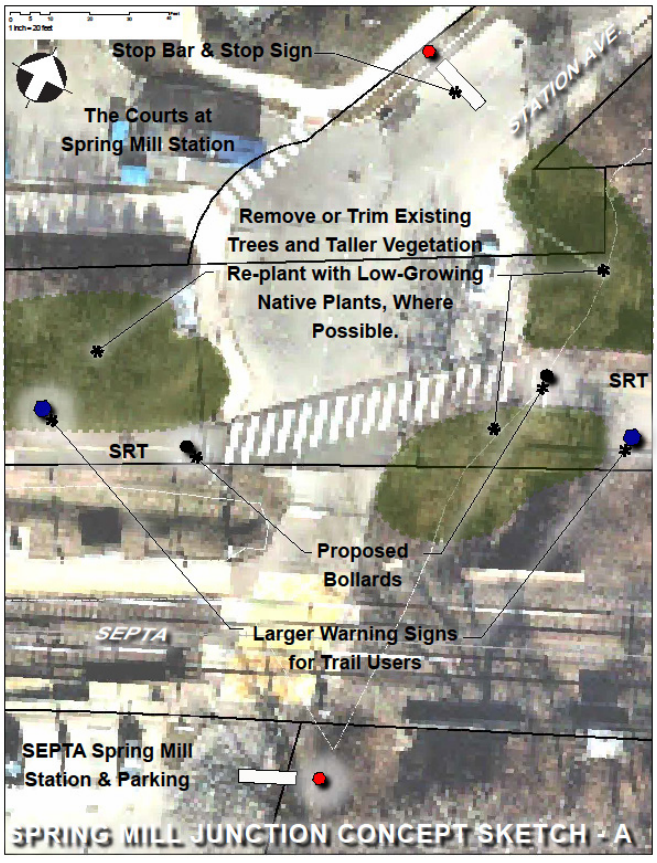
**This cost assumes full installation by the Township for budget purposes only. The goal is to have riverfront developers install portions of the improvements as they are approved for development.

SPRING MILL JUNCTION

Station Avenue Cul-De-Sac

Spring Mill Junction represents a particularly problematic pinch point within the study area. Much like access for Washington Street, the most ideal solutions here hinge upon a change in ownership or use for the David's Bridal property. One idea that was discussed with County representatives and the project team, was to change the traffic pattern to either one way running from Lee Street to Station Ave along the newly expanded Washington Street, or to close off public vehicular traffic at Station Avenue and only allow vehicular access for Spring Mill Station and any future uses on the David's Bridal Lots via Lee Street. While a design like this would be ideal from a safety perspective by minimizing potential vehicular conflicts to one intersection instead of two, it is not feasible with current land use and therefore, not presented as a recommended option. There are, however, intermediate steps that could be taken to improve safety, visibility, and aesthetics at the junction.

Immediate Option	Longer-Term Option
TRIM BACK AND REMOVE OVERGROWN VEGETATION. ADD ADDITIONAL SIGNAGE ON SRT WARNING TRAIL USERS OF THE UPCOMING INTERSECTION.	CREATE A SHARED-USE PLAZA IN THE CUL-DE-SAC WITH PAVING CHANGES. INSTALL A RAILROAD CROSSING WITH SIDEWALK AND PEDESTRIAN GATE OVER TRACKS.



While improved signage and trimming back vegetation are effective and affordable first steps, Montgomery County representatives cautioned the project team that it is unlikely to solve the issue. There are concerns that cyclists on the trail feel comfortable travelling at high speeds and generally ignore existing trail stop signs or crosswalks at intersections. The County expressed concerns that even larger or more prominent trail signage would likely be a waste of resources for its limited effects. Further review revealed the most potentially effective solution would be a combination of these two as opposed to one or the other. See Appendix G for information on invasive plants.

Vegetation needs to be removed and trimmed to improve visibility, however both vehicles and trail users need to understand that they are entering a congested shared space within this junction. Therefore, the ideal next step would be to introduce paving changes, stop signs and stop bars for vehicles entering and exiting, trail bollards, and an improved

Standard Schuylkill River Trail Bollard
Google Maps: July 2016

Paver Crosswalk
CaXT Surfaces. 2019. https://cactx.com/decorativep

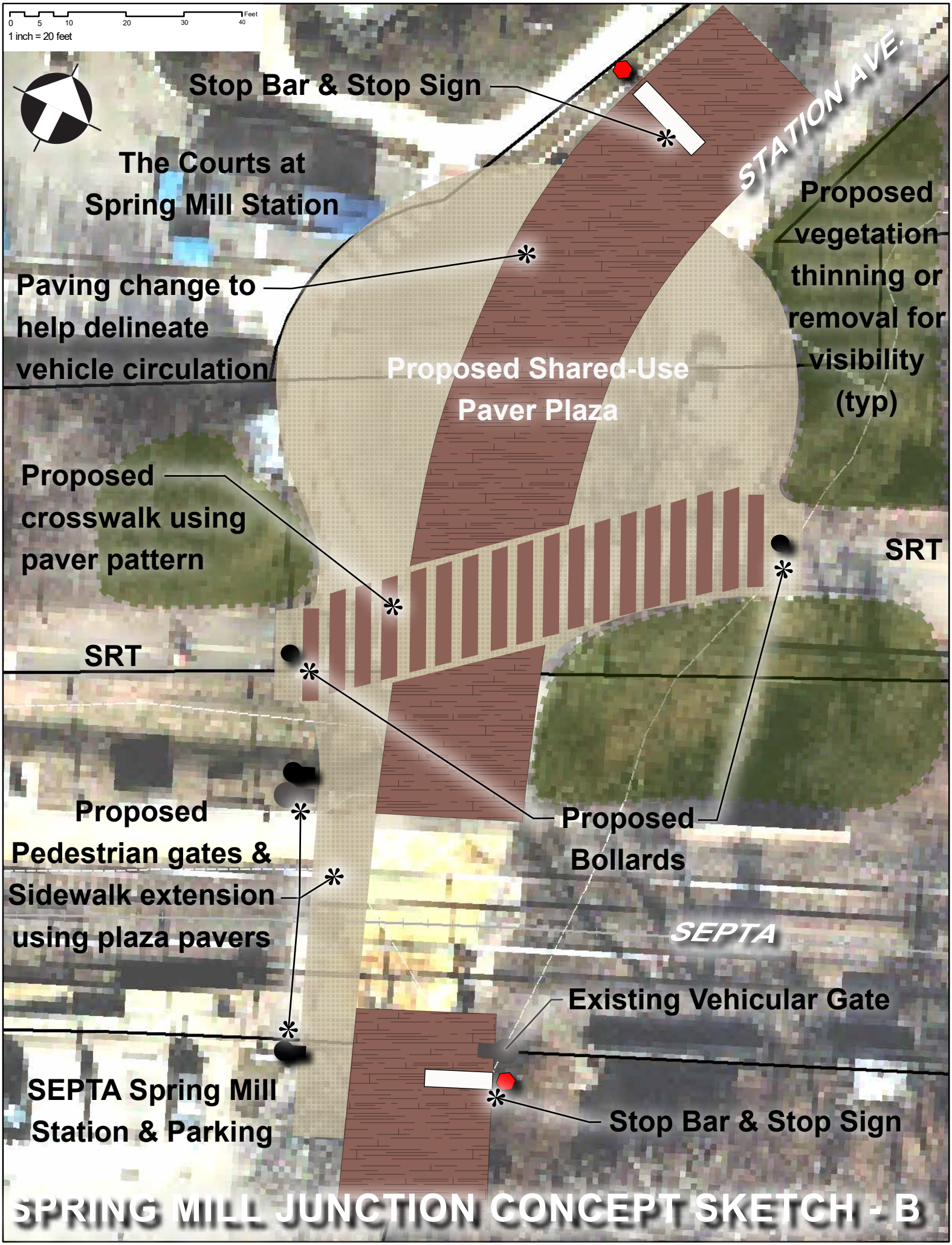
Woonerf Example – Bell Street Park, Before and After Seattle, WA
NACTO. 2014. https://nacto.org/case-study/bell-street-park-seattle/

crosswalk. Improved understanding and visibility for all users within the intersection, as well as the tactile warning of pavers aim to create an obviously different, shared space within the cul-de-sac. This concept is loosely based on the idea of a Woonerf, or shared street, in which pavers unify or help guide a shared multi-modal space. The cul-de-sac "plaza" area could even be raised by a few inches with a rolled curb ramp to provide additional indicators for vehicles about the change in uses. While the improvements of the longer-term option would come with considerable added expense, the dangerous nature of this intersection and potential for collisions warrants the additional prioritization of attention and funding.

It is important to note that because improvements here would be part of the SRT, certain paving materials, crosswalk materials, and bollards may not be an option. County representatives have specified that it would be best to use the standard bollard, shown to the left, to ensure continuity for maintenance and emergency access purposes. Similarly, while pedestrian gates, multiple bollards, and a realignment of the trail to create a forced turn for users were all discussed, it was determined that a single bollard is presently the best option from a user-safety, maintenance, and trail warning perspective.

Additionally, a designated crosswalk for the trail was identified as a necessary improvement, even for the paving and tactile changes. As it appears that the existing crosswalk striping has not been effective in stopping vehicles alone, a paver crosswalk should be considered. This would allow for another level of tactile warning for cars, while carrying the paver theme throughout the entire shared plaza space. Additional information on traffic calming using textural changes is provided in Appendix H.

Consideration should also be given to providing stop control along southbound Station Avenue prior to the crossing to reduce the speed of approaching vehicles.


0 5 10 20 30 40 Feet
1 inch = 20 feet
Stop Bar & Stop Sign
STATION AVE.
The Courts at Spring Mill Station
Proposed vegetation thinning or removal for visibility (typ)
Paving change to help delineate vehicle circulation
Proposed Shared-Use Paver Plaza
Proposed crosswalk using paver pattern
SRT
SRT
Proposed Bollards
Proposed Pedestrian gates & Sidewalk extension using plaza pavers
SEPTA
Existing Vehicular Gate
SEPTA Spring Mill Station & Parking
Stop Bar & Stop Sign
SPRING MILL JUNCTION CONCEPT SKETCH - B

Station Avenue, Looking north

Google Maps. 2019

The second key issue along Station Avenue and within the Spring Mill Junction is the congestion of trail users, SEPTA users, Tricycle Café patrons and vehicles in the area. The convergence of these frequented uses and destinations into one constrained road and cul-de-sac increases safety and traffic concerns. While the shared-use paver plaza will help to control speed and safety within the junction intersection, there would still need to be remedies for the sheer amount of people gathering in this area as they wait for rides, meet up with other trail users, or take advantage of the café amenities. Additionally, members of the public have stated that they would like to see public access to the Spring Mill County Park, located along Station Avenue to the east. These needs and challenges present an opportunity to create a gathering space which would remove these congested user groups from the roadway, where they are often forced to gather now, while providing access, views, and educational opportunities to the park. The conceptual result was a raised deck structure on the Spring Mill Park property along Station Avenue positioned to provide easy access to the café, trail, and SEPTA station. Floodproofing and mitigation would need to be considered for this area, as it is within the floodplain. But a raised deck gathering area could help avoid floodwaters while simultaneously avoiding the sensitive habitat of the park beneath. Creating a space such as this also opens up additional opportunities to provide bike parking, trash cans, and educational signage overlooking the park, all while creating a multi-purpose gathering space that could be used for future events. See Appendix I for examples of deck overlooks and gathering spaces, and Appendix J for examples of environmental educational signage.

Spring Mill Gathering Space – Conceptual Rendering

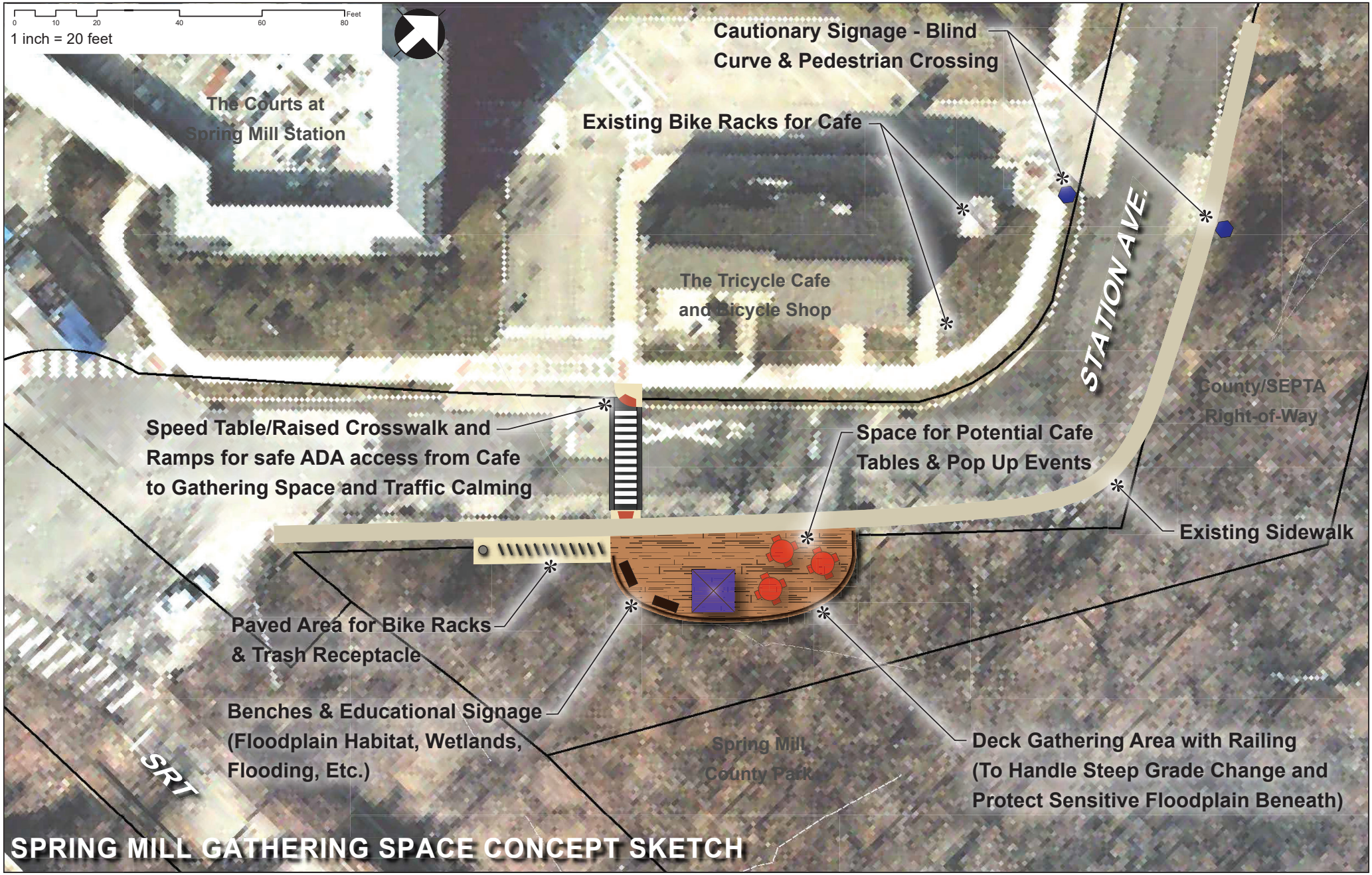

0 10 20 40 60 80 Feet
1 inch = 20 feet
Cautionary Signage - Blind Curve & Pedestrian Crossing
The Courts at Spring Mill Station
Existing Bike Racks for Cafe
The Tricycle Cafe and Bicycle Shop
STATION AVE
County/SEPTA Right-of-Way
Speed Table/Raised Crosswalk and Ramps for safe ADA access from Cafe to Gathering Space and Traffic Calming
Space for Potential Cafe Tables & Pop Up Events
Existing Sidewalk
Paved Area for Bike Racks & Trash Receptacle
Benches & Educational Signage (Floodplain Habitat, Wetlands, Flooding, Etc.)
SRT
Spring Mill County Park
Deck Gathering Area with Railing (To Handle Steep Grade Change and Protect Sensitive Floodplain Beneath)
SPRING MILL GATHERING SPACE CONCEPT SKETCH

Table 8 – Spring Mill Junction Recommendations

Issue	Design Options Considered	Notes	Recommended Option	Estimated Budget to Implement*
Spring Mill SEPTA, Schuylkill River Trail & Station Ave Junction				
Unsafe Intersection at SRT, SEPTA Tracks, Washington Street & Station Avenue	Improved Signage, Removal and Trimming Back of Vegetation and Stop Signs	County believes these will be ineffective	Experimental Tactile Plaza Pop-Up and, if successful, Installation of a Shared-Use Paver Plaza	$5,000 - $10,000 for Pop-Up. $950,000 for Installation
	Shared-Use Paver Plaza in Cul-de-Sac and Crossing with Sidewalk and Pedestrian Gate Over Tracks			
	Experimental Pop-Up Installation of a Paver Plaza to Test and Study the Concept Before Full Installation.	Technical assistance, and potentially a small amount of funding, is available through DVRPC for this.		
Congestion of Trail and SEPTA users and Vehicles along Station Avenue	**Gathering space along Station Ave. with bike parking, signage, and pedestrian improvements**	Consider speed table for ped crossing to slow vehicles before SRT crossing	Gathering Space	$150,000

* All "Estimated Budget to Implement" costs are in 2022 dollars and are for budgetary purposes only.

SPRING MILL RIVERFRONT

There are two key issues within the Riverfront area that the recommended solutions aim to address: the lack of public access, and incompatible land uses.

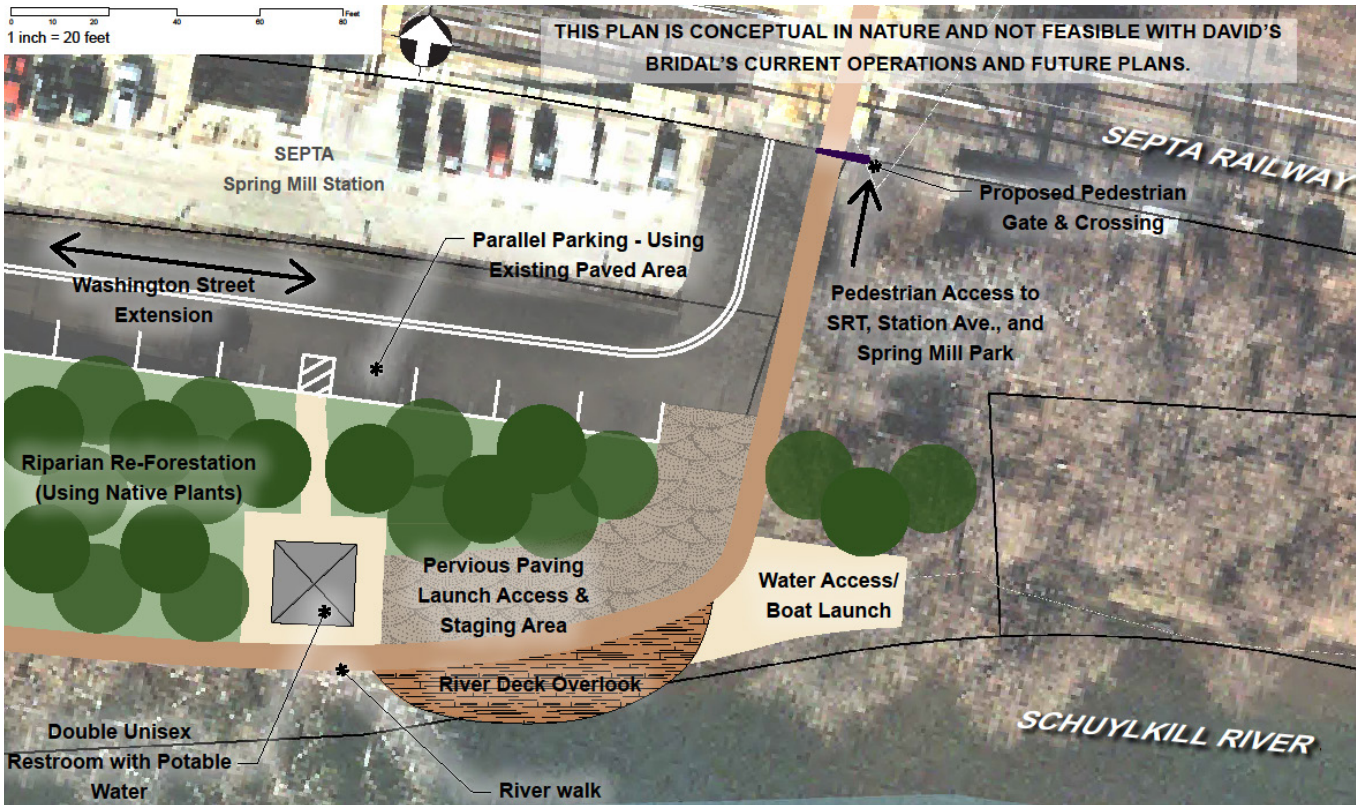
Riverfront & Recreational River Access

Riverfront access, and in particular recreational river access, came up time and time again throughout the public participation process. The public understands that Whitemarsh's riverfront is a limited resource that is already inaccessible, and likely to become even more inaccessible with the influx of private developments proposed on the existing underdeveloped riverfront lots. It is important to note that there are two different types of river access being considered and each comes with its own complexities and challenges.

Riverfront Access: Refers to access to the riverbank or water's edge which provides views of the river, gathering areas, and access for walking, running, biking, and potentially fishing.

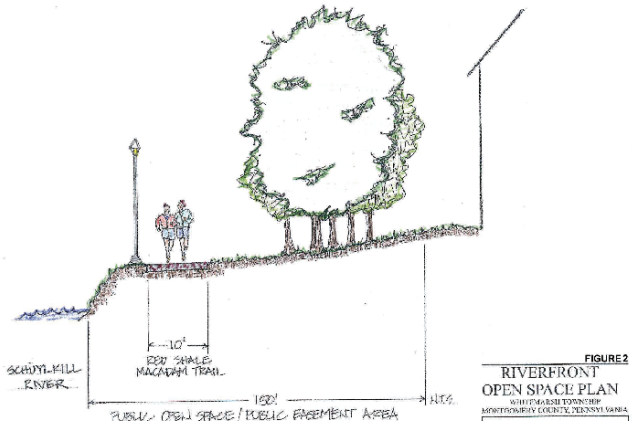
Recreational River Access: Refers to access for recreational watercraft, including canoes, kayaks, rowboats, and potentially small, motorized boats.

The most fleshed out alternative to provide recreational river access at the existing riverfront access point on David's Bridal property, is, unfortunately, not feasible in the immediate future. Providing an informal boat launch, gathering space, and potential reforestation area here would not fit with the existing uses or parking garage ramp.



Spring Mill River Access Point – Conceptual Plan

Unfortunately, due to the prevalence of private property along the river and challenging topography along the riverbanks, there is not an immediately simple or publicly accessible location in which to install a boat launch or water access point. The property at 901 Washington Street is required to install watercraft river access as part of their development; however, this access will be for emergency use only, and not for public boating. Considering the future developments that are likely to be installed along the riverfront, a more immediate and prudent option would be to encourage or even incentivize one of the developers to install a public boat launch for human-powered watercraft such as canoes and kayaks. Currently, developers for active applications along the riverfront are required to provide certain public amenities. A boat launch is currently included in an approved list of options but is not required as an amenity. Given how unlikely it is that David's Bridal's ownership or plans for their riverfront property will change in the near future, a point should be made to discuss the public desire for a boat launch with applicants along the riverfront and to incentivize and assist with its development where possible.



Riverfront Trail Conceptual Cross Section

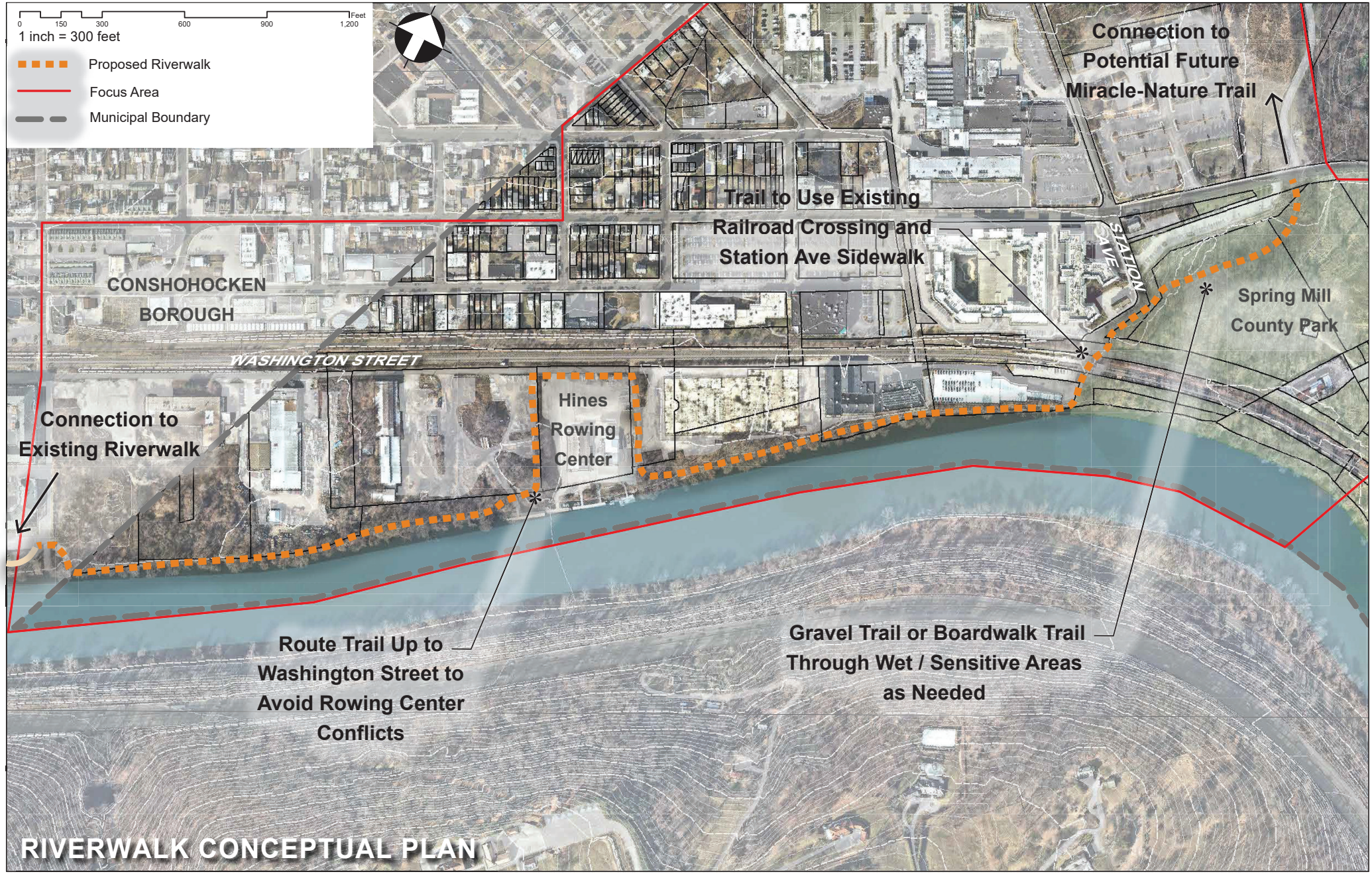
2011 Riverfront Open Space Plan, prepared by the Waetzman Planning Group

Riverfront access is already in the works for this area through the gradual installation of the riverwalk trail by developers. This trail has been proposed and discussed throughout planning documents over the last decade. The development at 901 Washington Street will be installing the first Whitemarsh section of the trail in the coming years, and Conshohocken has already installed sections of the riverfront trail on their side, to which future Whitemarsh sections will connect. Unlike the boat launch, future developers along the riverfront are required to install the riverwalk trail, which virtually guarantees partial implementation within the next few years. The recommended riverfront trail plan follows the original alignment proposed in 2011, as part of the Riverfront Open Space Plan, with modifications for the Hines Rowing Center and a connection along Station Avenue through Spring Mill County Park to the future Miracle-Nature Trail within the adjacent PECO right-of-way.

The Hines Rowing Center section of the trail, which will need to be routed up to Washington Street and back to avoid conflicts with boaters, will not be required to be installed by the property owner until they have submitted land development plans for their own separate purposes. The Spring Mill County Park section will need to be handled between the Township and the County. (See Appendix K for information on boardwalk nature trails.) David's Bridal has expressed an interest in further communication and collaboration on the section of trail on their property. Finally, the remaining sections will be vetted through the development process with current and future land development applications. The general design for this walking path should be introduced early in the process during any future land development proposals and should comply with the design standards set forth in *Guidelines for Trail Development Within Montgomery County, Pennsylvania (January 2005)*.

Potential Connection to Existing Conshohocken Riverfront Trail

Google Maps. 2019


0 150 300 600 900 1,200 Feet
1 inch = 300 feet
Proposed Riverwalk
Focus Area
Municipal Boundary
Connection to Potential Future Miracle-Nature Trail
Trail to Use Existing Railroad Crossing and Station Ave Sidewalk
STATION AVE
CONSHOHOCKEN BOROUGH
WASHINGTON STREET
Spring Mill County Park
Hines Rowing Center
Connection to Existing Riverwalk
Route Trail Up to Washington Street to Avoid Rowing Center Conflicts
Gravel Trail or Boardwalk Trail Through Wet / Sensitive Areas as Needed
RIVERWALK CONCEPTUAL PLAN

Lack of Public Access for Spring Mill County Park

Spring Mill County Park

Creating a connection for the riverwalk trail through the County Park or creating a gathering space on the park property along Station Avenue will both require collaboration with and permission from the County. It will also require careful design and planning, as the floodplain habitat within the park is ecologically sensitive and extremely rare within the study area. One way to make this process easier and guarantee public access would be for the Township to take over the County Park on a low-cost, long-term lease. This idea was discussed in a key person interview with County representatives as a potential strategy for the Township to be able to make the improvements they want, while minimizing the maintenance and oversight burden to the County. County representatives expressed a reluctance to take on the maintenance of new park improvements or to provide further maintenance for the existing park, which is already limited. This "dollar lease" could transfer a certain level of freedom to the Township to make improvements. However, it would also be a considerable undertaking when it comes to maintenance. See Appendix L for information on ground leasing for municipalities.

Incompatible Uses Along the Riverfront

The Sundafu Recycling Center property, located at the end of Center Street and adjacent to the Schuylkill River and SRT, is not an ideal use for its location given the proximity to the Spring Mill County Park and several residential properties. Unfortunately, it is also highly unlikely that this use or property ownership will change in the near future. However, it may be worth monitoring the status of the property and recycling center long-term, as it could be an ideal spot for remediation and open space preservation within an increasingly stretched floodplain. In the short-term, consideration should be given to buffering and closing off access to the portion of the recycling center that is visible from the SRT with native, flood-tolerant plants. This would provide a visual barrier between the trail and recycling center fence and operations, while also restricting access from the trail. See Appendix M for information on native plants.

Table 9 – Spring Mill Riverfront Recommendations

Issue	Design Options Considered	Notes	Recommended Option	Estimated Budget to Implement*
Spring Mill Riverfront				
Lack of public river access	Boat launch, Restroom, and Gathering Space on David's Bridal Lot	Only feasible if David's Bridal property changes ownership	Install Riverwalk Trail	$1,000,000**
	Install Riverwalk Trail			
	Encourage Developers to Install Public River Access	Is dependent upon developer's willingness and motivation		
Incompatible uses along riverfront	**Landscape Buffering of Sundafu Recycling Along SRT**		Landscape Buffering of Sundafu Recycling	$12,000
	Consider Preserving Sundafu Parcel for Parks and Open Space	Only feasible if use or ownership changes in the future		
Lack of public access for Spring Mill County Park	**Lease Spring Mill Park from the County**	Will require further consideration and discussions with County	Explore lease option for ease of constructing and maintaining Riverwalk Trail through Park	$1 Lease + Maintenance Expenses

* All "Estimated Budget to Implement" costs are in 2022 dollars and are for budgetary purposes only.

**This cost assumes full installation by the Township for budget purposes only. The goal is to have riverfront developers install portions of the improvements as they are approved for development.

NORTH LANE

In the immediate future, North Lane is poised for pedestrian updates and shared-parking agreements. Spring Mill Corporate Center (SMCC) has indicated a willingness to discuss shared parking agreements for SEPTA riders and SRT users, etc. The two parking lots on their upper North Lane property could be ideal given their underutilized nature. However, these lots would be most useful to the public if paired with pedestrian improvements including sidewalks, crosswalks, and potential connections to Conshohocken Borough and the future Miracle-Nature Trail.

SMCC Upper Parking Lot Property

Methods to encourage Transit-Friendly & Mixed Land Uses

- Adopt a more transit-friendly development ordinance
- Consider re-zoning these parcels to encourage higher densities
- Consider amending SALDO requirements to decrease parking requirements
- Consider re-zoning or amending ordinances to increase open space requirements

Longer-term, North Lane would benefit from changes in land use for several underutilized parcels. While a change in land use and character for North Lane would be dependent upon future owners and developers, there are intermediate steps that the Township can take to begin shaping this future. The first step is to think strategically about what uses would be best to serve the community, land, and context of this area. Given the proximity to the SRT, SEPTA's Spring Mill Station and several bus routes, as well as a large employment center in the form of SMCC, the underutilized parcels along North Lane are well-poised for transit-friendly forms of development. Transit-friendly development tends to include higher densities, reduced parking requirements, mixed-uses, and a heavy emphasis on connectivity to encourage walking, biking, and public transportation use. Given the concerns about parking and heavy development and land disturbance within the study area, this could be an ideal fit to encourage growth in a sustainable manner. A transit-friendly ethos could be combined with a mix of the following uses for each of the properties:

SMCC Parcel

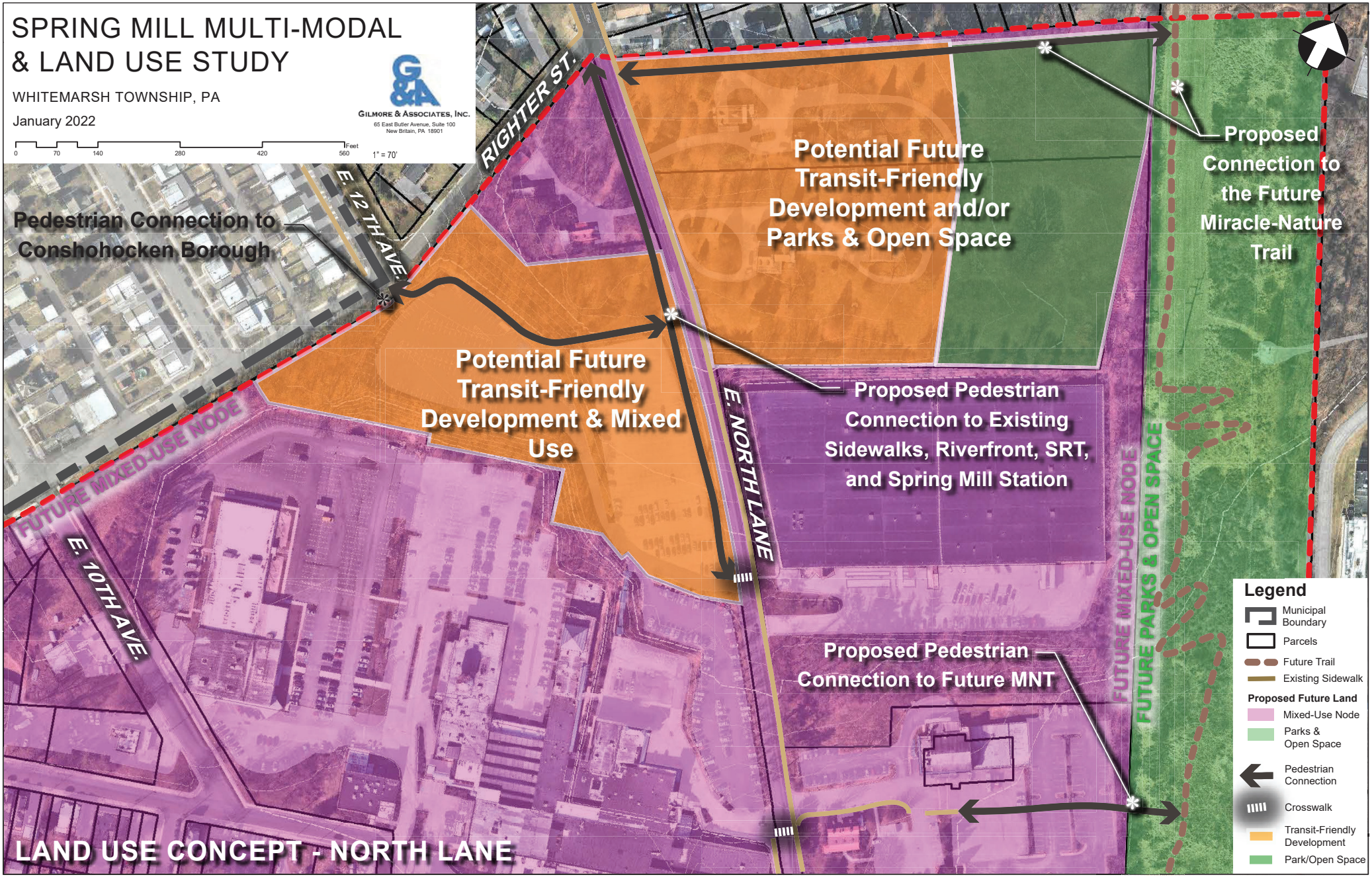
- Residential – Single-family Attached Residences (Townhomes or Small Multi-Family Buildings)
- Age-Qualified Residential
- Institutional or Academic Uses
- Food and Beverage Sales (Restaurant, Café, and Brewery)
- Fitness Center or Health Club

Residential Parcels

- Residential – Single-Family Attached Residences
- Age Qualified Residential
- Parks & Open Space
- Institutional or Academic uses
- Agriculture – Community Supported Agriculture (CSA) or Community Garden
- Food and Beverage Sales (Restaurant, Café, and Brewery)

Crest Manor, Abington Township– Transit-Friendly Single-Family Attached Development

Montgomery County. 2021


SPRING MILL MULTI-MODAL
& LAND USE STUDY
WHITEMARSH TOWNSHIP, PA
January 2022
GILMORE & ASSOCIATES, INC.
65 East Butler Avenue, Suite 100
New Britain, PA 18901
0 70 140 280 420 560 Feet
1" = 70'
RIGHTER ST.
E. 12 TH AVE.
Pedestrian Connection to Conshohocken Borough
Potential Future Transit-Friendly Development and/or Parks & Open Space
Proposed Connection to the Future Miracle-Nature Trail
Potential Future Transit-Friendly Development & Mixed Use
E. NORTH LANE
Proposed Pedestrian Connection to Existing Sidewalks, Riverfront, SRT, and Spring Mill Station
FUTURE MIXED-USE NODE
E. 10TH AVE.
FUTURE MIXED-USE NODE
FUTURE PARKS & OPEN SPACE
Proposed Pedestrian Connection to Future MNT
Legend
Municipal Boundary
Parcels
Future Trail
Existing Sidewalk
Proposed Future Land
Mixed-Use Node
Parks & Open Space
Pedestrian Connection
Crosswalk
Transit-Friendly Development
Park/Open Space
LAND USE CONCEPT - NORTH LANE

While other common land uses were considered for these lots, they were not recommended for various reasons. High-rise, or high density, apartment development would typically be ideal to locate near a major transit junction. However, given how far these lots are located from Spring Mill Station along North Lane and the proximity to numerous single-family residences outside of the study area, this type of residential use would likely be incompatible. Furthermore, retail uses, which would be a typical pairing in residential mixed-use are unlikely to attract the proper foot traffic in this area to make up for reduced parking and may also clash with residential neighbors.

Parks and Open Space is one land use, highlighted in this area by the 2020 future land use plan, that should be encouraged, particularly for the two residential parcels on the eastern side of North Lane. Not only do these two parcels represent one of the largest areas of open, undeveloped land in the study area, but they also abut the PECO right-of-way which is proposed to house the future Miracle-Nature Trail, creating an important opportunity for connection. See Appendix R for more information on transit-friendly development ordinances.

Table 10 – North Lane Recommendations

Issue	Design Options Considered	Notes	Recommended Option	Estimated Budget to Implement*
North Lane Land Uses				
Underdeveloped Parcels on North Lane	**Zoning Ordinance Amendments to Encourage Transit-Friendly Development and Mixed Uses**		Encourage Transit-Friendly Development and Parks & Mixed Uses	Administrative Time and Expenses and Possible Consultant Costs
Pedestrian Access Along and to/from North Lane	**Sidewalk Along the Western Side of North Lane and Crosswalks**		Sidewalk along the western side of North Lane, consider other connections as development or trail installation occurs	$140,000
	Pedestrian Connections to Conshohocken, and the Future Miracle-Nature Trail	Dependent Upon future property and trail development		

* All “Estimated Budget to Implement” costs are in 2022 dollars and are for budgetary purposes only.

OVERALL STUDY AREA

Multi-Modal Connections

While pedestrian improvements have been proposed at specific locations along Washington Street and the Lee Street and Station Avenue junctions, it is also important to consider the broader study area. Given the broader goal of opening Washington Street to the public and increasing mixed-uses throughout the study area, multi-modal connections, particularly pedestrian amenities, will be an important consideration. A walkable and bikeable study area would allow maximum usage of the trail, train station, future riverfront and recreational amenities, as well as current and future businesses and services. The improvements below should be considered wherever they are lacking, not up to current ADA or Township standards, or in disrepair throughout the study area

Potential Pedestrian Crossing Improvements

- Sidewalks
- Crosswalks
- Curb Ramps and Detectable Warnings
- Crosswalk Signals and Buttons

Conshohocken Wayfinding Sign Template

Forman Sign. 2018

Additionally, multi-modal connectivity throughout the study area can be enhanced by providing wayfinding signage. Wayfinding signage can help users feel more comfortable locating their destinations, particularly when it comes to encouraging walking from parking areas or amenities further north within the study area to destinations such as restaurants, the SRT and any future riverfront developments. Conshohocken Borough has recently adopted a template and style for their wayfinding signage which could be used in Whitemarsh as a tool to unify the riverfront area between both municipalities.

Sidewalk Coverage Within the Study Area

DVRPC. Sidewalk Gap Analysis Explorer. 2021

Per DVPRC's Sidewalk Gap Analysis Explorer, beyond Washington and Lee Street, the study area is lacking in connectivity on Sandy Street, Righter Street, and 10th Ave. From a bike-ability standpoint, DVRPC has classified North Lane and Hector Street as moderate or high stress roads, meaning they are not currently comfortable for the majority of cyclists. Portions of Hector St. are also fairly high regional connectivity priorities and could be a good candidate for traffic calming measures.

Flood Resilience

A large portion of the study area is located within the 100-year floodplain of the Schuylkill River and while this area has flooded previously, the damage caused by Hurricane Ida's flooding in the fall of 2021 put this fact into stark relief. Arguably, the most effective tool to mitigate flooding it to reduce development and leave the floodplain undisturbed. Given the likely development of much of the riverfront portion of the study area, other flood-proofing and mitigation measures will need to be broadly considered for the area. Some flood mitigation and resiliency methods to consider should include the following:

Design Considerations	Legislative Considerations
• CHOOSE PERVIOUS PAVEMENT, WHERE POSSIBLE • USE FLOODPROOF OR EASILY REPAIRABLE MATERIALS FOR ANY PROPOSED IMPROVEMENTS	• ADOPT HIGHER FLOODPLAIN MANAGEMENT STANDARDS TO IMPROVE FEMA RATING • AMEND ORDINANCES FOR DEVELOPMENT ALONG THE RIVERFRONT

Sense of Place

In addition to land use and multi-modal improvements, the study area could benefit from an improved sense of place. While sense of place can be created and improved in many ways, the study area in particular could benefit from improvements to activate and liven up the streetscape, create connection to a local culture or environment, and educate users about the Spring Mill Area.

Mill House Currently Occupied by The Tricycle Cafe

The history of Spring Mill and particularly the existing historic buildings within the study area are a unique feature that could be further highlighted to enhance the sense of place. The building (currently occupied by the Tricycle Café and Bicycle Shop) and the Miller's House on E. Hector and Station Ave. are both original to Spring Mill's early settlement. Educational Signage, whether at a future gathering space on Station Ave. or in other locations, could explain the backstory of these buildings and the broader mill history of the area.

Given the effects of flooding on the area and importance of understanding this area's location within the Schuylkill's floodplain, it could be beneficial to install street art which locates the water line reached by the Schuylkill River in the aftermath of Hurricane Ida. These wavy, blue pavement paint lines could be combined with educational signage to explain the impacts of flooding on the area and what the Township and individual can do to mitigate it moving forward.

Flooding Along Washington Street Following Hurricane Ida

400FootViews. 2021

0 175 350 700 1,050 1,400 Feet

1 inch = 350 feet

Flood line from Hurricane Ida (September, 2021)

Proposed Thermoplastic Street Art
(On existing Streets, Sidewalks, Paving, and Parking Lots)

In September 2021,
Hurricane Ida brought floodwaters from the Schuylkill River up to where you see this line on the pavement:

It wasn't the first flood, and it won't be the last.

Find out what we're doing and how you can help here:

SCAN ME

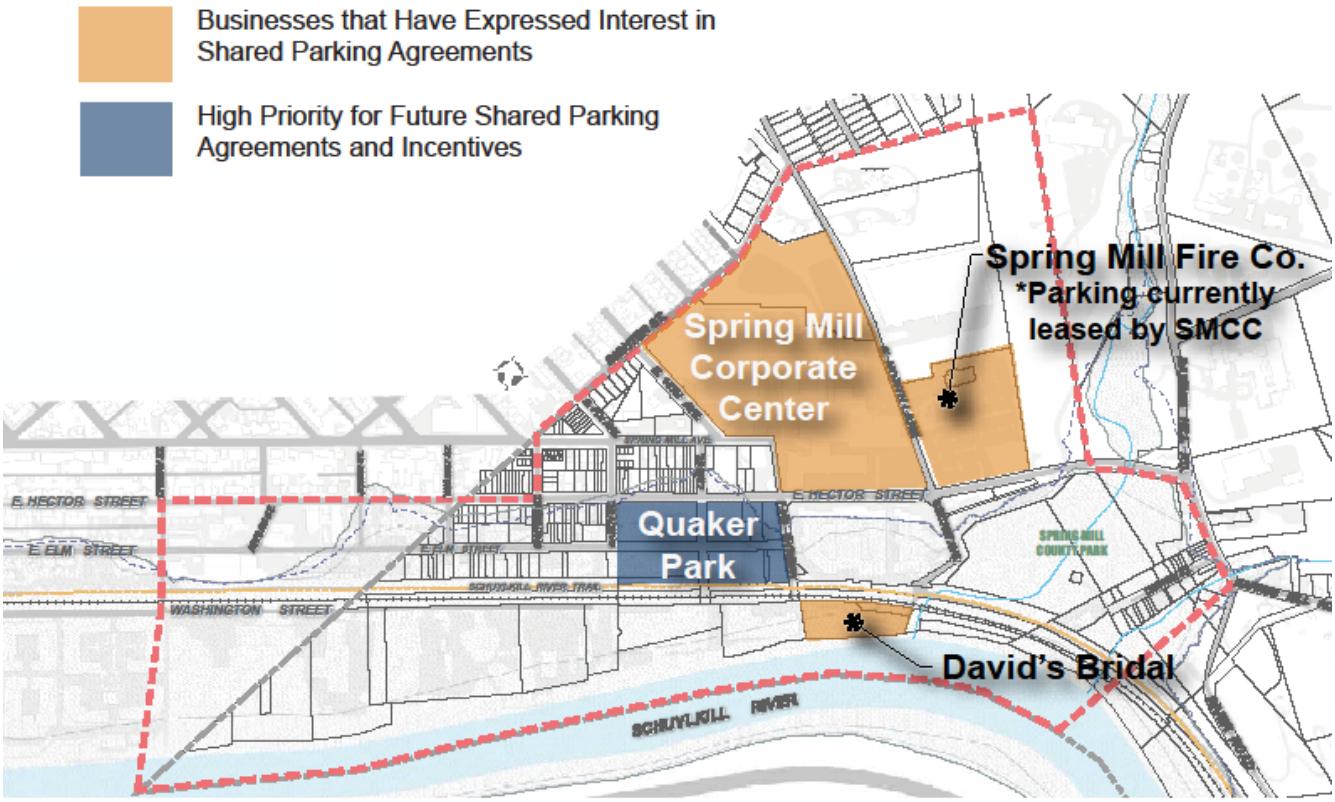
SAMPLE FLOOD LINE SIGN

JONES ST.
WALNUT ST.
RIGHTER ST.
SANDY ST.
LIME ST.
LEE ST.
E. HECTOR ST.
E. ELM STREET
STATION AVE.
SCHUYLKILL RIVER TRAIL
WASHINGTON STREET

FLOOD LINES STREET ART & EDUCATIONAL SIGNAGE - CONCEPTUAL PLAN

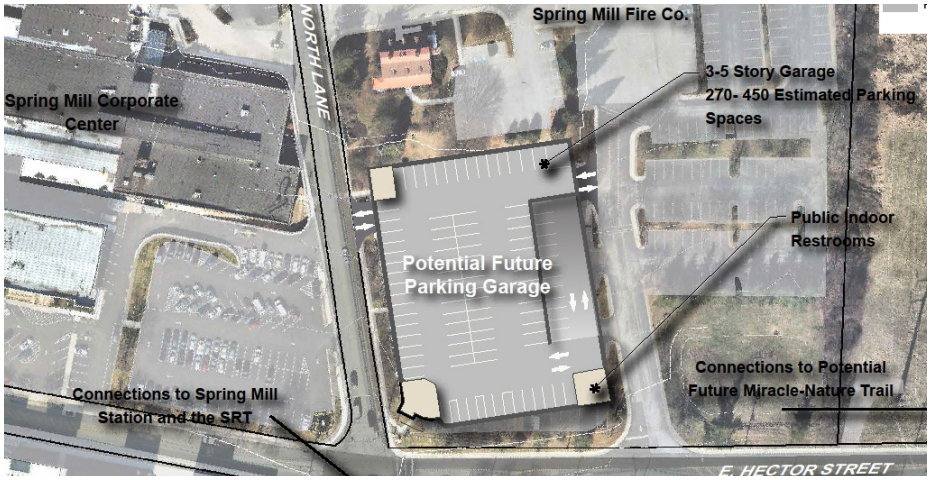
Parking

Parking is arguably one of the most commonly referenced issues within the study area. While parking issues were generally in reference to SRT and SEPTA users, parking is really an issue for users throughout the entire study area, with the exception of employees in one of the larger office complexes. In tandem with the parking issue, members of the public and steering committee frequently expressed frustration over the large amount of empty or frequently underutilized private parking within the study area. With this in mind, the preferred parking solution would be to pursue shared parking agreements with the owners or management of several of the private lots within the study area.



Study Area Shared Parking Interest Diagram

As noted above, SMCC and David's Bridal have expressed an interest in pursuing shared public parking agreements with the Township. Finalizing these agreements would be an important first step in alleviating the high parking demand within the study area. However, it should be noted that due to the business requirements on these sites, it may be difficult to secure a large amount of parking for public use during routine weekday hours. Similarly, Quaker Park's lot was identified early as an ideal spot for public parking given its proximity to the SRT and Lee Street. Unfortunately, representatives of Quaker Park did not respond to requests to meet or discuss the study area further. Despite this, it is recommended that the Township continue to attempt to contact Quaker Park representatives and to consider the best methods to financially incentivize shared parking in this and all large private lots within the study area. See appendix N for examples of shared parking agreements.



Parking Garage Conceptual Sketch

Another option for addressing the lack of parking in the study area is to study and construct a parking garage or structure on the corner of E. Hector Street and North Lane on the Spring Mill Fire Company lot. This option comes with many potential benefits, but also significant expense and a general lack of public support. Management for the SMCC, who already lease the fire company's existing parking, have expressed an interest in further exploring this option on their own, which could prove beneficial in several ways if there is still a portion of this future garage reserved for consistent public use. A future parking garage would also have the potential to incorporate mixed uses on the first floor, which would provide an opportunity for new bars and restaurants which have been mentioned as lacking in the study area. However, it is important to note that this option faced some criticism as an aesthetic eyesore, potential visibility issues at the intersection, and environmental concerns given the amount of existing parking and impervious surfaces within the study area.

Table 11 – Overall Study Area Recommendations

Issue	Design Options Considered	Notes	Recommended Option	Estimated Budget to Implement*
Overall Study Area				
Multi-Modal Connections	**Pedestrian infrastructure**		Prioritize safe pedestrian infrastructure & consider and explore all other options	Varies based on extent/number of pedestrian improvements
	Wayfinding Signage	Using a style similar to Conshohocken's could create a cohesive waterfront area.		
	Bike Share	Could be linked to Philadelphia's Indego Bikes		
	Bike Racks & Storage			
Flood Resiliency	**Adopt Higher Floodplain Management Standards**		Explore higher floodplain management standards and stricter ordinance standards for riverfront development	Administrative time & expenses and possible consultant costs
	Amend Ordinances for Development Along the Riverfront			
Sense of Place	Ida Floodline Street Art and Educational Signage		Install flood line street art and signage and explore educational signage options.	$55,000
Lack of Public Parking	Parking Structure	Expensive and not generally publicly supported	Shared parking agreements for private lots	Administrative time & expenses, potential tax cuts and leasing fees
	Shared Parking Agreements for Private Lots	Quaker Park has an ideal lot, but has not been receptive to discussions, to date		

* All "Estimated Budget to Implement" costs are in 2022 dollars and are for budgetary purposes only.

REVIEW OF STANDARDS (FEDERAL, STATE, AND LOCAL)

Each of the opportunities identified will have to adhere to local, state and federal guidelines as projects are progressed into the design phase. Although not an all-encompassing list, it is anticipated that the following regulatory requirements may potentially be necessary during the design and construction phases of the projects:

Local Ordinances/Permits

- Whitemarsh Township Zoning Ordinance
- Whitemarsh Township Stormwater Management Ordinance
- Whitemarsh Township Floodplain Ordinance
- Whitemarsh Township Subdivision and Land Development Ordinance
- Montgomery County Conservation District Erosion and Sedimentation Control Permit

County/Regional Standards

- Montgomery County Trail Design Standards
- Montgomery County Schuylkill River Trail Design Standards
- SEPTA Rail Crossing Standards

State Regulatory Requirements/Permits

- PennDOT Highway Occupancy Permit
- PennDOT Traffic Control
- PennDOT Environmental Assessment
- PA DEP National Pollutant Discharge Elimination System (NPDES) Permit
- PA DEP Chapter 105 Water Encroachment Permit
- PA DEP Wetlands/Waters of the Commonwealth Permit

Federal Regulatory Requirements/Permits

- ADA Accessibility Guidelines (ADAAG)
- USACOE Wetlands/Waters of the US Permits
- FEMA Floodplain Regulations

IMPLEMENTATION
PRIVATE PROPERTY
NO FISHING

CHAPTER 6: IMPLEMENTATION

In order to implement the recommendations identified in the study, Whitemarsh Township will need to prioritize improvements based on criteria such as immediate need, design constraints, available funding sources, etc. Through the identification of goals and objectives within each section of the study area, a timeline and action plan can be developed for implementation. Additionally, potential funding sources were researched and identified to assist the Township in prioritizing projects based on available funding opportunities.

ACTION PLAN

Table 12 – Action Plan

Whitemarsh Township Spring Mill Multi-Modal & Land Use Study	Priority	Timeframe	Responsibility
GOAL 1: Enhance the Multi-Modal Connectivity of Washington and Lee Streets and Vicinity			
Objective 1A: Provide public access for Washington Street through to Lee Street.			
• Conduct further traffic studies.	1		**M, P**
• Coordinate with SEPTA, PennDOT, David's Bridal, and 901 Washington Street Developers.	1		**M, P, S, B, D**
• Install traffic signals on both approaches to David's Bridal building and coordination with SEPTA tracks (queue)	1		**M, S**
• Work with riverfront developers to encourage installation of Washington Street streetscape improvements as proposed in the typical cross section.	2		**M, D**
• Maintain a partnership with David's Bridal to monitor the potential for a change in use or future development plans for their riverfront property to implement two lanes of through traffic along Washington Street.	1		**M, B**
• Obtain funding and install Washington Street streetscape improvements where development is unlikely to take place in the near future.	3		**M**
Objective 1B: Improve access and safety for active transportation users.			
• Coordinate with SEPTA and PennDOT for pedestrian improvements crossing the railroad tracks.	1		**M, P**
• Install pedestrian gates at railroad crossing with improved signage, pavement markings, and intersection lighting	1		**M**
• Install sidewalk and crosswalk to connect the existing Lee Street sidewalk to the SRT.	1		**M**
• Install RRFB and continental crosswalks at the existing pedestrian crossing of E. Hector and Lee Streets.	1		**M**

• Review signal warrants for the pedestrian crossing at the intersection of E. Hector Street and Lee Street.	2		**M**
GOAL 2: Evaluate a Potential Redesign of the Waterfront and Surrounding Land Uses			
Objective 2A: Provide Public Access to the River and Spring Mill County Park.			
• Maintain a partnership with David's Bridal and monitor the potential for a change in use or future development plans for their riverfront property to implement an informal boat launch or water access point.	1		**M, B**
• Require all current and future riverfront developers to install the riverwalk trail, per current plans.	1		**M, D**
• Work with David's Bridal to design and install the riverwalk trail through their property.	1		**M, B**
• Encourage riverfront developers to install an informal public boat launch or river access point.	2		**M,D**
• Explore the option of leasing Spring Mill County Park from the County	3		**M,C**
• Develop detailed design and engineering for a trail section connecting the riverwalk through Spring Mill County Park and up to E. Hector Street.	1		**M, C**
Objective 2B: Address incompatible uses along the riverfront.			
• Build a partnership with Sundafu Recycling Center owners and monitor the potential for a change of use or ownership of their property in the future.	1		**M, B, C**
• Plant a native landscape buffer of the Sundafu Recycling Center property line along the SRT.	3		**M, C**
Objective 2B: Develop a more walkable, flood-resilient waterfront, with a distinct sense of place.			
• Consider enacting more stringent floodplain management standards and consider pursuing a higher FEMA rating.	1		**M**
• Design and install Wayfinding signage to complement Conshohocken's Wayfinding signage for a cohesive waterfront.	2		**M**
• Consider installing Hurricane Ida "Floodline" street art and educational signage.	3		**M,B**
• Install safe, ADA-compliant pedestrian infrastructure, where missing, throughout the study area.	1		**M**
GOAL 3: Identify/Evaluate the Potential of Undeveloped/Underdeveloped Parcels			
Objective 3A: Encourage transit-friendly development and open space preservation for the underdeveloped properties along North Lane.			
• Consider ordinance revisions and additions to encourage Transit-Friendly Development.	1		**M, P**

• Consider methods to encourage open space preservation, obtaining parkland, and/or an easement on the large residential parcels along North Lane.	1		M, C
• Install pedestrian improvements along North Lane.	2		M
• Consider installing pedestrian connections to E. 12th Street in Conshohocken Borough and the Future Miracle-Nature Trail.	3		M, P
Objective 3B: Increase and improve access to public parking in the study area.			
• Pursue shared parking agreements with David's Bridal and Spring Mill Corporate Center.	1		M, B, C
• Continue efforts to establish a partnership with Quaker Park and incentivize a potential shared parking agreement.	1		M, C
• Consider a partnership with Spring Mill Corporate Center to install a parking structure if shared parking agreements fail or are deemed inadequate for parking demand.	2		M
GOAL 4: Identify issues/solutions for Spring Mill Junction of SRT, SEPTA, Spring Mill Station			
Objective 4A: Improve safety and visibility of the Spring Mill Junction (Intersection of Station Ave, SRT, & SEPTA).			
• Coordinate with SEPTA and the County to remove or trim back vegetation that obscures visibility at the Spring Mill Junction.	1		M, C
• Install stop bars and signs on Station Ave leading into the cul-de-sac and on the opposite entry point coming from David's Bridal and Spring Mill Station.	1		M, P
• Coordinate with SEPTA, County Representatives, and Courts at Spring Mill Station ownership to finalize a cul-de-sac and intersection design that serves all parties.	1		M, C, P, B
• Coordinate with neighboring landowners to apply for DVRPC's Expo program and to design and install a temporary pop-up version of the shared-use paver plaza to test the concept and gather info.	1		M, C, S, B
• Develop and refine detailed design and engineering plans for a shared-use paver plaza at the Spring Mill Junction.	2		M, C
• Apply for grant funding, or work with SEPTA, PennDOT, County, and Private partners to obtain funding for improvements at Spring Mill Junction.	1		M, S, P, C, B
• Install shared-use paver plaza and pedestrian crossing improvements over SEPTA tracks.	1		M, S, P,C
Objective 4B: Alleviate the congestion of SRT users, SEPTA users and Café patrons along Station Ave and near the Spring Mill SRT trailhead.			
• Work with SEPTA and the County to confirm ownership of the Right-of-Way along Station Ave.	3		M, P
• Coordinate with the County, Tricycle Café, and Courts at Spring Mill Station to develop a design for a gathering space and form a potential partnership for maintenance, programming, and funding.	3		M, C, B

• Develop and refine detailed design and engineering plans for a gathering space on the County Park side of Station Ave, opposite the Café.	3		M, N, NP
• Coordinate with the Township Environmental Advisory Board to develop educational signage about Spring Mill Park for the gathering space.	3		M
• Install a gathering space along Station Ave with pedestrian crossing to the Café.	3		M, C

Responsibility Key:

M	Municipality	**S**	SEPTA Business	**PD**	PennDOT
C	County	**B**	Neighbors	**D**	Developers

Timeframe Key:

Near-Term Short-Term Long-Term

On-Going

Timeframes are identified in the following manner:

Near-Term – These activities should commence immediately and be completed within I year.

Short-Term – These activities should be targeted for implementation within the next 3 years.

Long-Term – These recommendations often build on near and short-term actions and are generally recommended for a 3–10-year planning and implementation horizon.

On-going – These activities should commence immediately and continue to be pursued over time.

PARTNERSHIPS & FUNDING

Funding in the form of grants and loans is provided through local, state and national organizations year-round. Below is a list of potential funding sources that should be pursued for the planning, design and construction of the recommendations identified in this study. Table 13 summarizes the potential funding opportunities and their possible applicability to each of the recommended improvements. There may be other opportunities that arise, which should be fully explored by the Township as applicable.

PennDOT Transportation Alternatives Set-Aside Program (TA Set-Aside) grant

PennDOT administers funding assistance for alternative transportation programs and projects that improve accessibility and mobility, public transportation and school links, recreation and environmental mitigation.

PennDOT Multimodal Transportation Fund (MTF) grant

This PennDOT multimodal program provides financial assistance to municipalities for projects that will enhance communities, pedestrian safety and transit revitalization. Several aspects of the study area fit within the guidelines for funding through this grant.

PennDOT Municipal Liquid Fuels Program

This program allows a municipality to receive funding based on its population and the number of miles of roads on its approved liquid fuels inventory. This funding can be used by the Township for maintenance, repair, construction, or reconstruction of public roads, streets, alleys, courts, and ways, including bridges, culverts, and drainage structures for which the Township is legally responsible.

DCED Multimodal Transportation Fund (MTF) grant

The Department of Community and Economic Development also has a multimodal program similar to above, providing an additional opportunity for funding.

DCNR Community Conservation Partnerships Program (C2P2) grants

The Department of Conservation and Natural Resources offers matching grants for the planning, acquisition, construction, enhancement, and maintenance of multi-use trails and trail-related facilities.

Montgomery County's County Transportation Program (CTP) grant

Montgomery County utilizes the County Fee for Local Use Fund established by PennDOT and collected during vehicle registration renewals for the maintenance and improvements of roads, bridges, and traffic signals. Due to the limited funding available each year and the maximum award of $500,000, these projects are typically smaller in scope. Projects funded through this program must include expenses eligible through the Liquid Fuels Tax Fund.

Montco 2040 Implementation Grant

The program provides funding for projects that progress the current initiatives of the County's comprehensive plan, *Montco 2040: A Shared Vision* within the general themes of the plan: Connected Communities, Sustainable Places and Vibrant Economy. Improvements to trails, paths, sidewalks, and bicycle facilities fall within the specific focus categories eligible for funding through this program and should be fully explored.

DCED Greenways, Trails, and Recreation Program (GTRP) grant

This program allocates funds for the planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks, and beautification projects. This program provides for a maximum $250,000 award for eligible projects.

DVRPC Regional Trails Program

The Delaware Valley Regional Planning Commission provides grants up to $500,000 from the William Penn Foundation to plan, design, and construct multi-use trails which assist in completing the Greater Philadelphia's trail network, the Circuit. Projects that contribute to connecting trails across the region and provide access to waterways are also supported.

DVRPC Experimental Pop-Ups

DVRPC's Experimental Pop-Ups program, also known as Expo, offers assistance to municipalities within the Delaware Valley region to test innovative solutions to transportation problems through demonstration, or pop-up projects. DVRPC offers a variety of technical assistance to selected communities including design, implementation, and study and measure of projects that apply various pedestrian, bicycle, transit, and roadway strategies that address safety and placemaking. Technical assistance can include project management, design concepts, identifying materials, signing and striping plans, permit applications, communications, promotion, agency and stakeholder coordination, community feedback surveys, and traffic counts for various users.

PECO Green Region Open Space Program

Administered by *Natural Lands*, this program provides matching grants for municipalities in southeast PA to preserve, protect and improve open spaces. Eligible projects include passive recreation improvements such as trails or consultant fees for related design and engineering.

Redevelopment Assistance Capital Program (RACP)

The *Pennsylvania Office of the Budget* administers funds from the Commonwealth for regional economic development, civic, cultural, recreational, and historical improvements through acquisition and construction projects.

FHWA Surface Transportation Block Grants (STBG)

The Federal Highway Administration provides flexible funding that may be used by states and localities for projects on any public road, and pedestrian and bicycle infrastructure.

Table 13 – Potential Funding Opportunities

Recommended Improvement	TA Set-Aside	PennDOT MTF	DCED MTF	DCNR C2P2	Mont Co CTP	Montco 2040	DCED GTRP	Regional Trails	Green Region Open Space	RACP	STBG	DVRPC Expo
Washington Street												
Traffic Signal at David's Bridal	✓	✓	✓		✓							
Markings & signage on SRT		✓	✓	✓		✓	✓		✓		✓	
Pedestrian improvements at SEPTA tracks	✓	✓	✓		✓	✓					✓	
Roadway reconstruction	✓	✓	✓		✓	✓				✓	✓	
Spring Mill Junction												
Gathering space on Station Ave				✓								✓
River/water access				✓								
Shared-Use paver plaza in cul-de-sac										✓		✓
Spring Mill Riverfront												
Passive trail or boardwalk through Spring Mill County Park		✓	✓	✓		✓	✓	✓	✓	✓		
North Lane												
Pedestrian pavement markings/signage		✓	✓	✓		✓	✓				✓	✓

APPENDICES

APPENDICES

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Appendix A - Related Plan Summaries:

Whitemarsh Township Comprehensive Plan (Adopted November 2003, Update 2020)

This plan updated the 2003 Comprehensive Plan with a strong focus on land use and zoning updates which aim to promote smart growth, sense of place development, and viewshed, natural resource, and historic preservation. Another area of strong focus was circulation. This included recommendations for safe and connected roadway systems, complete streets and enhanced pedestrian and bicycle connectivity.

Riverfront Open Space Plan for Whitemarsh Township (Adopted July 2011 as an amendment to the Comprehensive Plan)

This plan focuses on the Schuylkill Riverfront and highlights goals to increase public access, develop active recreational opportunities, improve railroad crossing, address parking issues, and to extend Washington Street and utilize walking loops. These items are addressed in the study.

A feasibility Study for the Whitemarsh Township Pedestrian and Bicycle Network Plan also referred to as Pedestrian and Bicycle Network Plan (May 2009, adopted as an amendment to the Comprehensive Plan)

This study provides Whitemarsh with a guide to developing a network of safe walking and bicycling through side paths, sidewalks, trails, and bike lanes, to promote safe and convenient multimodal travel within local neighborhoods and to regional attractions. Recommendations include improving pedestrian connections to County trails.

The 2016 Riverfront Plan, Township Whitemarsh, Borough of Conshohocken (Adopted June 2016 by Whitemarsh Township as an amendment to the Comprehensive Plan) Prepared for the shared riverfront of Whitemarsh Township and Conshohocken Borough). This plan examines the access, usage, and development opportunities along the Schuylkill River. This plan specifically identifies goals to extend Washington Street and enhance the streetscape to improve pedestrian accessibility and safety along the riverfront.

Whitemarsh Township Parks and Recreation Plan (2007, adopted as an amendment to the Comprehensive Plan) This plan includes recommendations to improve Spring Mill Park and enhance access to the SRT, further supporting this study.

Whitemarsh Township Open Space Plan (Adopted 2006; amendments through July 2013, all adopted as amendments to the Comprehensive Plan). The key recommendations of the Township's open space plan include enhance the township's trail network, improve connections to the SRT, and create open spaces at Spring Mill, supported in this study.

Roadway Analysis and Transportation Capital Improvement Plan (Adopted January 2006) The proposed study will support the goals and recommendations of this Whitemarsh Plan by addressing multimodal accessibility and traffic congestion along Hector St and Center St.

Montgomery County Connections 2050 Long Range Plan (2020)

The key finding of this County-wide plan is the addition of the Spring Mill area into Conshohocken's existing Town Center Area. From DVRPC's perspective, this indicates that this area has either reached or is projected to reach a threshold of 10,000 residents plus jobs in each area. Additional recommendations include re-evaluating development around transportation stations to support pedestrian traffic, placement of parking facilities, and streetscape improvements.

Bike Montco (2018) & Walk Montco (2016)

These studies focus on alternative modes of transportation throughout Montgomery County, and both identify the Schuylkill River Trail as an important transportation resource. They emphasize Whitemarsh's low walkability levels and limited pedestrian access at the Spring Mill Station and expanded project site and recommend improved pedestrian accessibility.

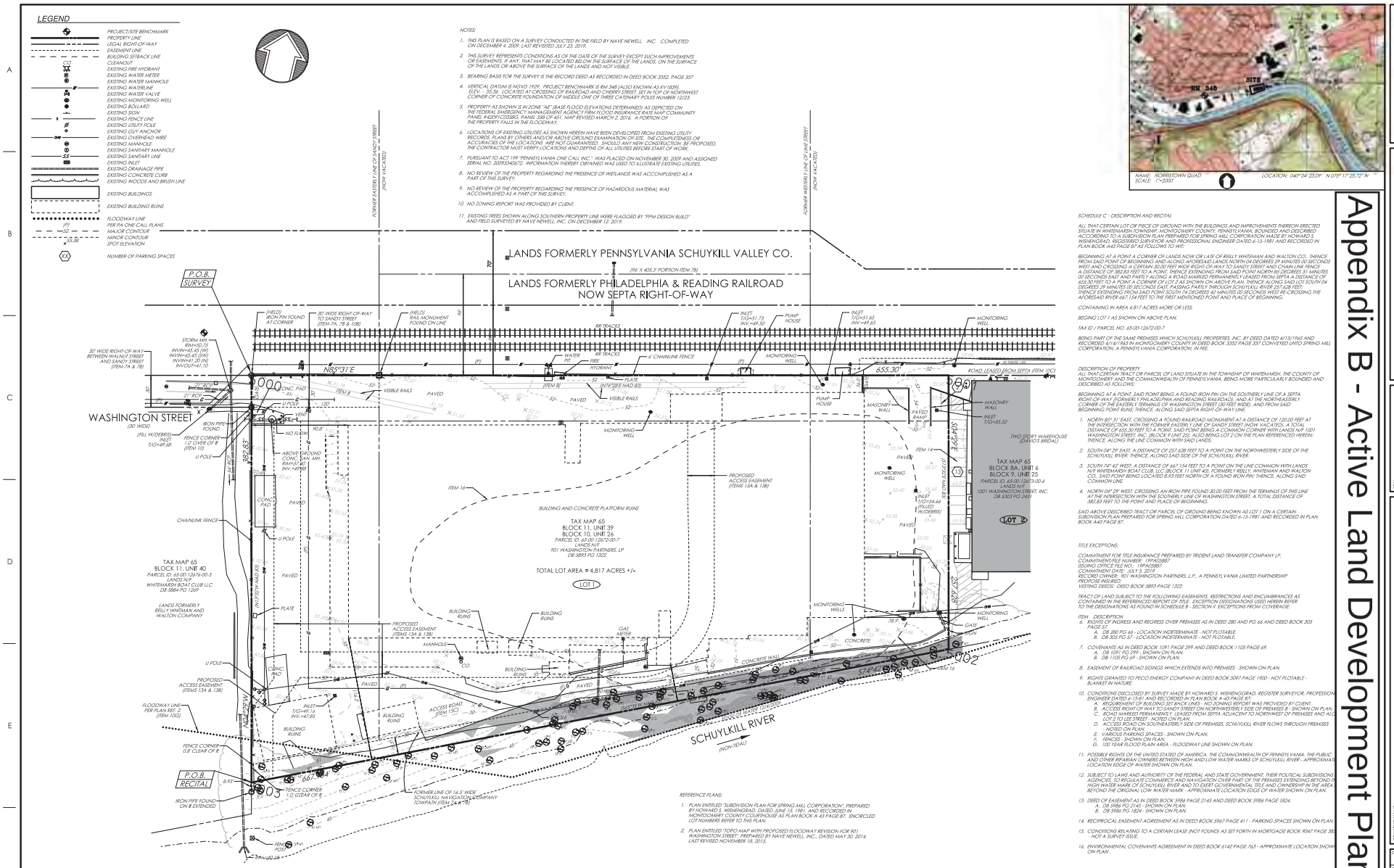
SEPTA Cycle-Transit Plan (2015)

Supportive of multimodal enhancements, specifically concerning the cycle-transit relationship, this plan examines techniques to adapt and better integrate the transit and bike networks to support a growing number of cyclists and reduce automotive use, improving the efficiency and sustainability of our transportation system. The plan proposes links with *The Circuit,* including the SFT.

Gambone Property Natural Areas Stewardship Plan (2015)

The report addresses stewardship of and potential public access to the site's natural features including inventory of natural resources and proposed conceptual trail identified. This 23.1 acre site is located just north of Spring Mill Park along the Powerline ROW and had once been an arboretum.

Appendix B - Active Land Development Plans



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SITE PLAN

901 Washington Street

TOWNHOUSE LAYOUT

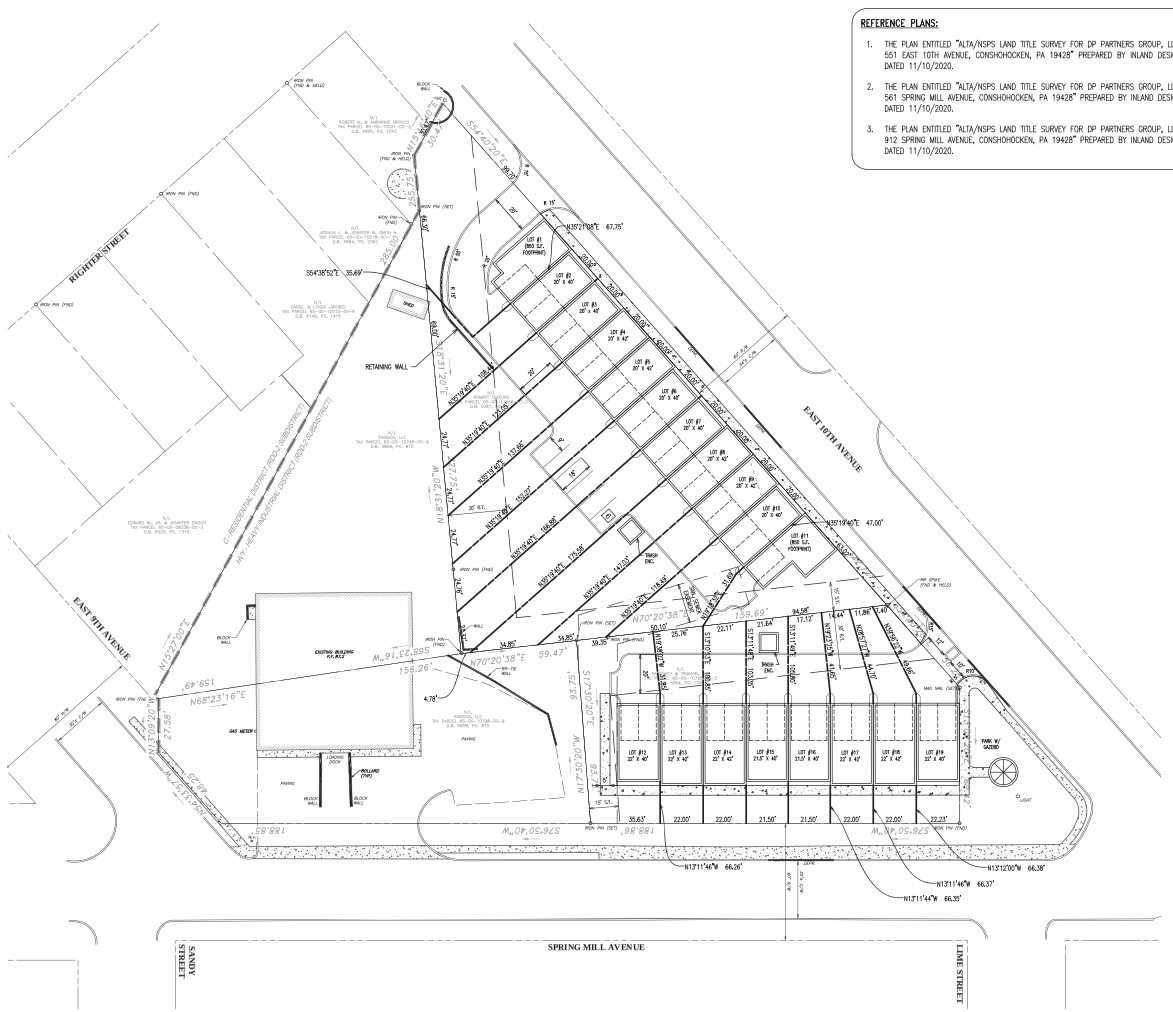
WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

RIVERplace

JAMES P. BANNON
Professional Engineer

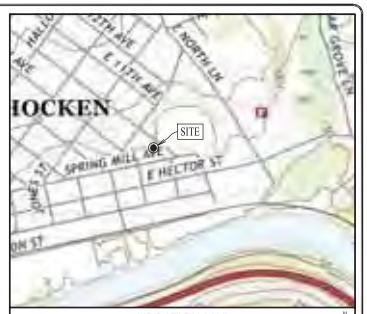
Nave Newell
Where Ideas Get Down to Earth

4 of 22



REFERENCE PLANS:

1. THE PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR DP PARTNERS GROUP, LLC. 551 EAST 10TH AVENUE, CONSHOHOCKEN, PA 19428" PREPARED BY INLAND DESIGN DATED 11/10/2020.
2. THE PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR DP PARTNERS GROUP, LLC. 561 SPRING MILL AVENUE, CONSHOHOCKEN, PA 19428" PREPARED BY INLAND DESIGN DATED 11/10/2020.
3. THE PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR DP PARTNERS GROUP, LLC. 912 SPRING MILL AVENUE, CONSHOHOCKEN, PA 19428" PREPARED BY INLAND DESIGN DATED 11/10/2020.



LOCATION MAP
SCALE: 1" = 800'
USGS MAP NORRISTOWN QUADRANGLE

GENERAL NOTES:

1. THIS PRELIMINARY LAND DEVELOPMENT PLAN PROPOSES THE DEVELOPMENT OF 551 EAST 10TH AVENUE (PARCEL ID 65-00-11596-00-3) & 561 SPRING MILL AVENUE (PARCEL ID 65-00-10795-00-3) WITH 19 SINGLE-FAMILY ATTACHED DWELLINGS TO BE SERVED WITH PUBLIC SEWER AND WATER.
2. THE EXISTING CONDITIONS SURVEY FOR THIS PROPERTY WAS COMPLETED BY INLAND DESIGN, INC. PLEASE SEE THE SURVEY NOTES FOR ADDITIONAL INFORMATION ON THE DATA GATHERED FOR THE TWO SUBJECT PARCELS.

SURVEY NOTES:

1. SITE ADDRESS: 551 E. TENTH AVENUE
   CONSHOHOCKEN, PA 19428
   A. PARCEL ID: 65-00-11596-00-3
   B. OWNER OF RECORD: ROBERT TEAFORD
   551 E. TENTH AVENUE
   CONSHOHOCKEN, PA 19428
   C. SOURCE OF TITLE: DEED BOOK 5081 PAGE 0417 & FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER T1319, DATED SEPTEMBER 28, 2020
2. SITE ADDRESS: 561 SPRING MILL AVENUE
   CONSHOHOCKEN, PA 19428
   A. PARCEL ID: 65-00-10795-00-3
   B. OWNER OF RECORD: RATOSKEY & TRAINOR, INC.
   3201 POTSHOP ROAD
   EAST NORRITON, PA 19403
   C. SOURCE OF TITLE: DEED BOOK 5564 PAGE 0739 & FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER T1303, DATED SEPTEMBER 21, 2020.
3. BOUNDARY INFORMATION & IMPROVEMENTS SHOWN PER FIELD SURVEY PERFORMED BY INLAND DESIGN, LLC., WEST CHESTER, PA IN SEPTEMBER THROUGH NOVEMBER, 2020.
4. TOPOGRAPHIC INFORMATION AND IMPROVEMENTS SHOWN BY PHYSICAL FIELD SURVEY PERFORMED IN SEPTEMBER THROUGH NOVEMBER, 2020 BY INLAND DESIGN, LLC., WEST CHESTER, PA. CONTOUR INTERVAL = 2 FEET.
5. HORIZONTAL ORIENTATION IS PENNSYLVANIA STATE PLANE (SOUTH ZONE) (NAD-83) OBTAINED BY GPS OBSERVATIONS ON SEPTEMBER 15, 2020.
6. ELEVATIONS BASED ON NAVD88 DATUM. VERTICAL DATUM OBTAINED BY GPS OBSERVATIONS ON SEPTEMBER 15, 2020.
7. LEGAL DESCRIPTION SHOWN HEREON IS BASED UPON CURRENT SURVEY.
8. UTILITIES SHOWN BASED ON OBSERVED EVIDENCE AT THE TIME OF THE FIELD SURVEY. LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES MUST BE VERIFIED PRIOR TO ANY EARTHMOVING ACTIVITIES.
9. THE PROPERTY IS SUBJECT TO THE FOLLOWING EASEMENTS AND RESTRICTIONS AS LISTED IN SCHEDULE B – SECTION 2 OF THE TITLE REPORT CITED ABOVE:
   A. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART 1 – REQUIREMENTS ARE MET.
   B. RIGHTS OR CLAIMS BY OTHER PARTIES IN POSSESSION OR UNDER THE TERMS OF ANY UNRECORDED LEASE OR AGREEMENTS OF SALE.
   C. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS.
   D. TITLE TO THAT PART OF THE PREMISES LYING IN THE BED AND RIGHT-OF-WAY OF ALL ROADS, DRIVEWAYS AND ALLEYWAYS IS SUBJECT TO PUBLIC AND PRIVATE RIGHTS THEREIN.
   E. COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH MAY ENCUMBER THE TITLE.

ZONING DATA TABULATION

WHITEMARSH TOWNSHIP
ZONING ORDINANCE
ARTICLE XXXVII – RIVERFRONT DEVELOPMENT OVERLAY DISTRICT (RDD)
SECTION 116-281: DIMENSIONAL REQUIREMENTS
SUBSECTION B.(2): RDD-2 SUBDISTRICT ATTACHED SINGLE FAMILY DWELLINGS

	REQUIRED (RDD-2)
MIN. LOT AREA	2,200 S.F.
MIN. WIDTH AT BUILDING SETBACK LINE	20 FEET
MIN. FRONT YARD	0 FEET
MIN. SIDE YARD	15 FEET
MIN. REAR YARD	30 FEET
MAX. BUILDING HEIGHT	35 FEET
MAX. BUILDING COVERAGE	60%
MAX. IMPERVIOUS COVERAGE	75%

APPLICANT INFORMATION

DP SPRING MILL DEVELOPERS, LLC.
967 E. SWEDESFORD ROAD, SUITE 400
EXTON, PA 19341

RECORD OWNER INFORMATION

TAX PARCEL #65-00-11596-00-3

ROBERT TEAFORD
551 E. 10TH AVENUE
CONSHOHOCKEN, PA 19428

TAX PARCEL #65-00-10795-00-3

RATOSKEY & TRAINOR, INC.
3201 POTSHOP ROAD
EAST NORRITON, PA 19403

STEEP SLOPE CALCULATIONS

WHITEMARSH TOWNSHIP
ZONING ORDINANCE
SECTION 116-169.(B) – STEEP SLOPE OVERLAY

STEEP SLOPE DISTURBANCE CALCULATIONS

SLOPE RANGE	15 – 25%	25% OR GREATER
MAXIMUM ALLOWABLE DISTURBANCE	30%	15%
TOTAL AREA OF SLOPE	468 S.F.	4,286 S.F.
AREA OF SLOPE TO BE DISTURBED	0 S.F.	568 S.F.
PERCENTAGE OF SLOPE DISTURBED	0%	13.2%

STEEP SLOPE RATIO CALCULATIONS

AREA OF 8-15% SLOPE	10,989 S.F.
TOTAL STEEP SLOPE AREA	15,743 S.F.
LOT AREA	52,235 S.F. (GROSS)
STEEP SLOPE RATIO	30.1%

SITE PLAN

SCALE: 1" = 30'

30 0 15 30 60
GRAPHIC SCALE
1 inch = 30 feet

TOTAL TRACT AREA CALCULATION

TAX PARCEL #65-00-11596-00-3
GROSS LOT AREA: 32,925 S.F. (0.756 ACRES) *
TAX PARCEL #65-00-10795-00-3
GROSS LOT AREA: 19,310 S.F. (0.443 ACRES) *
TOTAL TRACT AREA = 52,235 S.F.
* TAKEN FROM REFERENCE PLAN #1 & 2.

PARKING DATA TABULATION

WHITEMARSH TOWNSHIP
ZONING ORDINANCE
SECTION 116-282.(E) – OFF STREET PARKING & LOADING

PROPOSED USE – RESIDENTIAL
1.75 PARKING SPACES PER DWELLING UNIT IS REQUIRED.

TOTAL REQUIRED	TOTAL PROPOSED
34 PARKING SPACES	42 PARKING SPACES

LEGEND

- PROP. PROPERTY LINE
- PROP. RIGHT-OF-WAY
- EX. PROPERTY BOUNDARY
- EX. ADJOINING PROPERTY LINE
- EX. RIGHT-OF-WAY LINE
- PROP. MONUMENT
- PROP. REBAR
- PROP. EASEMENT
- PROPOSED CONTOUR
- NEW SPOT ELEV.
- EX. MINOR CONTOUR LINE
- EX. MAJOR CONTOUR LINE
- GEB2 SOILS TYPE
- SOILS LINE
- EX. CURB LINE
- PROP. CONC. CURB
- EX. ROAD/PAVEMENT
- PROP. LIGHT POLE
- PROP. SIGN
- PROP. PARKING SPACES
- EX. LIGHT
- EX. UTILITY POLE
- EX. SIGN
- (TBR) TO BE REMOVED
- PROP. TELE. LINE
- PROP. ELEC. LINE
- PROP. UTILITY POLE
- PROP. GAS LINE
- PROP. GAS VALVE
- PROP. STORM SEWER LINE
- PROP. STORM INLET
- PROP. STORM INLET ID
- PROP. SEEPAGE BED
- EX. STORM PIPE/STRUCTURE
- PROP. SAN. SEWER LINE
- PROP. SAN. SEWER LATERAL
- EX. SANITARY PIPE/STRUCTURE
- PROP. SANITARY MH. ID
- PROP. WATER LINE
- EX. WATER LINE
- PROP. WATER LATERAL
- PROP. FIRE WATER LINE
- PROP. WATER VALVE
- PROP. HYDRANT
- PROP. MANHOLE
- EX. PERC TEST
- EX. TEST PIT
- 15-25% STEEP SLOPES
- 25% OR GREATER STEEP SLOPES

LOT INFORMATION SHEET

LOT #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
LOT AREA																			
LOT WIDTH																			
LOT DEPTH																			
BUILDING AREA																			
BUILDING COVERAGE																			
IMPERVIOUS AREA																			
IMPERVIOUS COVERAGE																			

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West Chester, PA 19380
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Fax: (610) 918-9003

NO.	DATE	DESCRIPTION
1		
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3		
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8		

PRELIMINARY
SITE PLAN

CLIENT: DP SPRING MILL DEVELOPERS, LLC
PROJECT: THE TRANSITION AT SPRING MILL
LOCATION: 551 E. 10TH & 561 SPRING MILL AVENUE
WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY, PA.

DATE:	03/03/2021
SCALE:	1" = 30'
DRAWN BY:	PJK
CHECKED BY:	DPM
PROJECT NO.:	4026
CAD FILE:	02 SITE PLAN.dwg
PLOTTED:	03/03/2021
DRAWING NO.:	C02.1
SHEET:	02 OF 13

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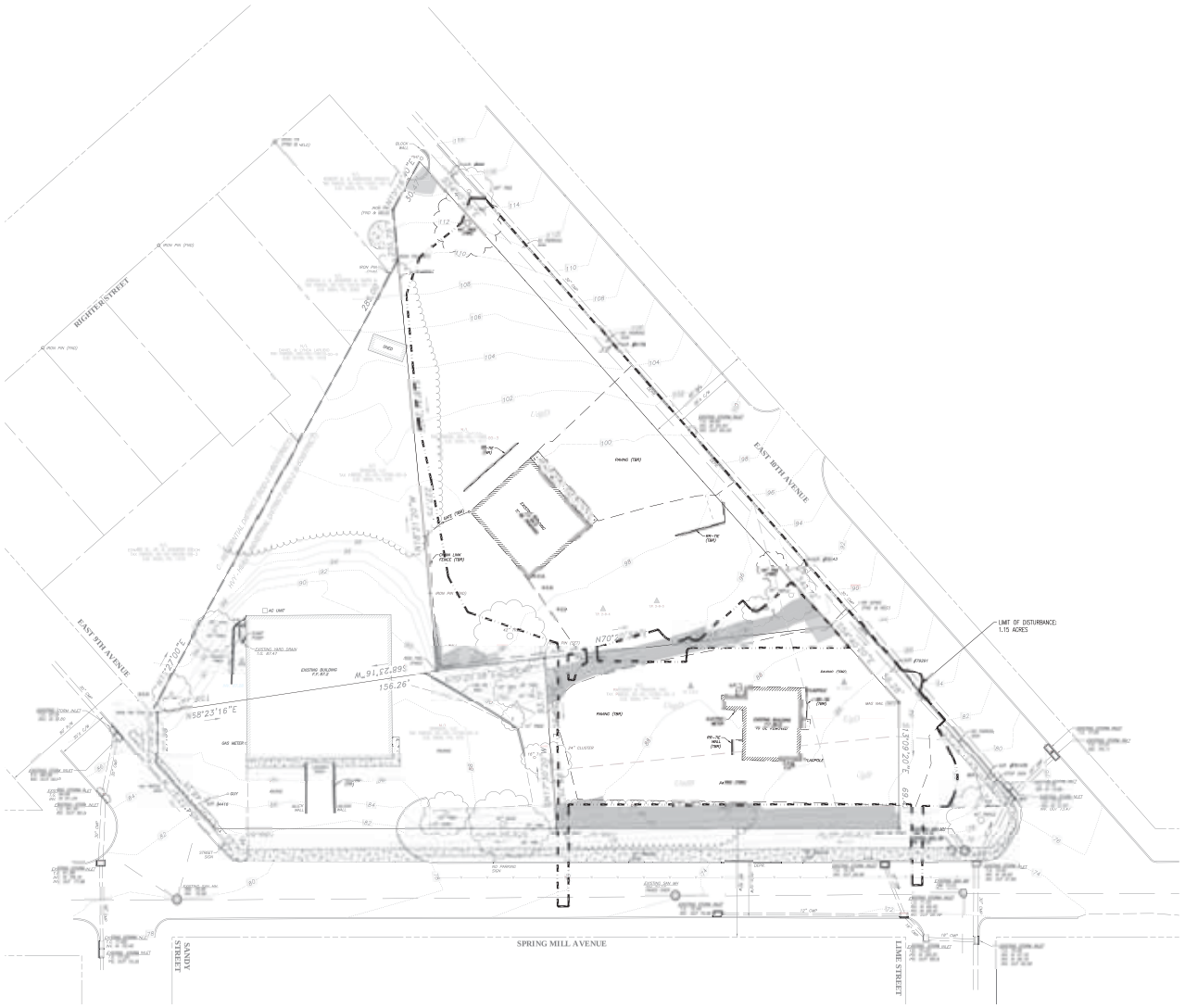

EXISTING FEATURES & DEMOLITION PLAN

SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 feet

LEGEND

- PROP. PROPERTY LINE
- PROP. RIGHT-OF-WAY
- EX. PROPERTY BOUNDARY
- EX. ADJOINING PROPERTY LINE
- EX. RIGHT-OF-WAY LINE
- PROP. MONUMENT
- PROP. REBAR
- PROP. EASEMENT
- 242 PROPOSED CONTOUR
- x 533.69 NEW SPOT ELEV.
- EX. MINOR CONTOUR LINE
- EX. MAJOR CONTOUR LINE
- GEB2 SOILS TYPE
- SOILS LINE
- PROP. CONC. CURB
- EX. CURB LINE
- PROP. EDGE OF PAVING
- EX. ROAD/PAVEMENT
- PROP. LIGHT POLE
- PROP. SIGN
- PROP. PARKING SPACES
- EX. LIGHT
- EX. UTILITY POLE
- EX. SIGN
- (TBR) TO BE REMOVED
- T PROP. TELE. LINE
- E PROP. ELEC. LINE
- G PROP. GAS LINE
- GV.W.MH PROP. GAS VALVE
- PROP. STORM SEWER LINE
- PROP. STORM INLET
- PROP. STORM INLET ID
- PROP. SEEPAGE BED
- EX. STORM PIPE/STRUCTURE
- S PROP. SAN. SEWER LINE
- L PROP. SAN. SEWER LATERAL
- EX. SANITARY PIPE/STRUCTURE
- MH 11 PROP. SANITARY MH. ID
- W PROP. WATER LINE
- W EX. WATER LINE
- WL PROP. WATER LATERAL
- FW PROP. FIRE WATER LINE
- W.V.MH PROP. WATER VALVE
- FH PROP. HYDRANT
- PROP. MANHOLE
- EX. PERC TEST
- EX. TEST PIT
- 15-25% STEEP SLOPES
- 25% OR GREATER STEEP SLOPES

SOIL TYPE(S)

- UgB – URBAN LAND, 0 TO 8 PERCENT SLOPES
- UgD – URBAN LAND, 8 TO 25 PERCENT SLOPES
- UwB – URBAN LAND UDORTHENTS, 0 TO 8 PERCENT SLOPES
- UwD – URBAN LAND UDORTHENTS, 8 TO 25 PERCENT SLOPES

REFERENCE PLANS:

1. THE PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR DP PARTNERS GROUP, LLC. 551 EAST 10TH AVENUE, CONSHOHOCKEN, PA 19428" PREPARED BY INLAND DESIGN DATED 11/10/2020.
2. THE PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR DP PARTNERS GROUP, LLC. 561 SPRING MILL AVENUE, CONSHOHOCKEN, PA 19428" PREPARED BY INLAND DESIGN DATED 11/10/2020.
3. THE PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR DP PARTNERS GROUP, LLC. 912 SPRING MILL AVENUE, CONSHOHOCKEN, PA 19428" PREPARED BY INLAND DESIGN DATED 11/10/2020.

SURVEY NOTES:

1. SITE ADDRESS: 551 E. TENTH AVENUE
   CONSHOHOCKEN, PA 19428
   A. PARCEL ID: 65-00-11596-00-3
   B. OWNER OF RECORD: ROBERT TEAFORD
   551 E. TENTH AVENUE
   CONSHOHOCKEN, PA 19428
   C. SOURCE OF TITLE: DEED BOOK 5081 PAGE 0417 & FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER T1319, DATED SEPTEMBER 28, 2020
2. SITE ADDRESS: 561 SPRING MILL AVENUE
   CONSHOHOCKEN, PA 19428
   A. PARCEL ID: 65-00-10795-00-3
   B. OWNER OF RECORD: RATOSKEY & TRAINOR, INC.
   3201 POTSHOP ROAD
   EAST NORRITON, PA 19403
   C. SOURCE OF TITLE: DEED BOOK 5564 PAGE 0739 & FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER T1303, DATED SEPTEMBER 21, 2020.
3. BOUNDARY INFORMATION & IMPROVEMENTS SHOWN PER FIELD SURVEY PERFORMED BY INLAND DESIGN, LLC., WEST CHESTER, PA IN SEPTEMBER THROUGH NOVEMBER, 2020.
4. TOPOGRAPHIC INFORMATION AND IMPROVEMENTS SHOWN BY PHYSICAL FIELD SURVEY PERFORMED IN SEPTEMBER THROUGH NOVEMBER, 2020 BY INLAND DESIGN, LLC., WEST CHESTER, PA. CONTOUR INTERVAL = 2 FEET.
5. HORIZONTAL ORIENTATION IS PENNSYLVANIA STATE PLANE (SOUTH ZONE) (NAD-83) OBTAINED BY GPS OBSERVATIONS ON SEPTEMBER 15, 2020.
6. ELEVATIONS BASED ON NAVD88 DATUM. VERTICAL DATUM OBTAINED BY GPS OBSERVATIONS ON SEPTEMBER 15, 2020.
7. LEGAL DESCRIPTION SHOWN HEREON IS BASED UPON CURRENT SURVEY.
8. UTILITIES SHOWN BASED ON OBSERVED EVIDENCE AT THE TIME OF THE FIELD SURVEY. LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES MUST BE VERIFIED PRIOR TO ANY EARTHMOVING ACTIVITIES.
9. THE PROPERTY IS SUBJECT TO THE FOLLOWING EASEMENTS AND RESTRICTIONS AS LISTED IN SCHEDULE B – SECTION 2 OF THE TITLE REPORT CITED ABOVE:
   A. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART 1 – REQUIREMENTS ARE MET.
   B. RIGHTS OR CLAIMS BY OTHER PARTIES IN POSSESSION OR UNDER THE TERMS OF ANY UNRECORDED LEASE OR AGREEMENTS OF SALE.
   C. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS.
   D. TITLE TO THAT PART OF THE PREMISES LYING IN THE BED AND RIGHT-OF-WAY OF ALL ROADS, DRIVEWAYS AND ALLEYWAYS IS SUBJECT TO PUBLIC AND PRIVATE RIGHTS THEREIN.
   E. COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS WHICH MAY ENCUMBER THE TITLE.

STEEP SLOPE CALCULATIONS

WHITEMARSH TOWNSHIP
ZONING ORDINANCE
SECTION 116-169.(B) – STEEP SLOPE OVERLAY

STEEP SLOPE DISTURBANCE CALCULATIONS

SLOPE RANGE	15 – 25%	25% OR GREATER
MAXIMUM ALLOWABLE DISTURBANCE	30%	15%
TOTAL AREA OF SLOPE	468 S.F.	4,286 S.F.
AREA OF SLOPE TO BE DISTURBED	0 S.F.	568 S.F.
PERCENTAGE OF SLOPE DISTURBED	0%	13.2%

STEEP SLOPE RATIO CALCULATIONS

AREA OF 8-15% SLOPE	10,989 S.F.
TOTAL STEEP SLOPE AREA	15,743 S.F.
LOT AREA	52,335 S.F. (GROSS)
STEEP SLOPE RATIO	30.1%

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Fax: (610) 918-9003

NO.	DESCRIPTION	DATE
1		
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3		
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8		

PRELIMINARY
EXISTING FEATURES & DEMOLITION PLAN
CLIENT: DP SPRING MILL DEVELOPERS, LLC
PROJECT: THE TRANSITION AT SPRING MILL
LOCATION: 551 E. 10TH & 561 SPRING MILL AVENUE
WHITEMARSH TOWNSHIP, MmontgomERY COUNTY, PA.

DATE: 03/03/2021
SCALE: 1" = 30'
DRAWN BY: PJK
CHECKED BY: DPM
PROJECT NO.: 4026
CAD FILE ID: Existing Features & Demolition Plan.dwg
PLOTTED: 03/03/2021
DRAWING NO.: C03.1
SHEET: 03 OF 13

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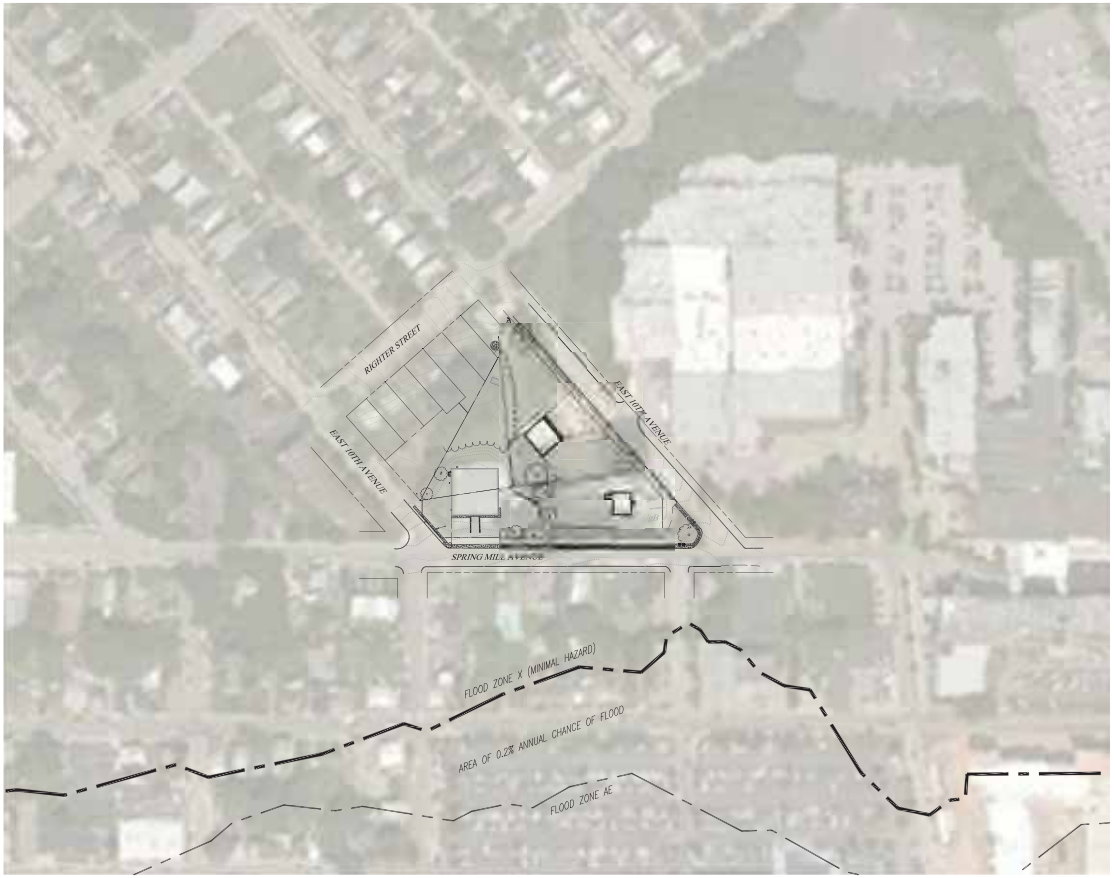

EXISTING RESOURCES & SITE ANALYSIS PLAN

SCALE: 1" = 100'

GRAPHIC SCALE
1 inch = 100 feet

ADJUSTED TRACT AREA CALCULATION

BASE TRACT AREA:	52,235 S.F.
– FLOODWAY (100%)	0 S.F.
– FLOODPLAIN (50%)	0 S.F.
– WETLANDS (90%)	0 S.F.
– 25% OR GREATER STEEP SLOPES (85%)	3,643 S.F.
– 15–25% STEEP SLOPES (25%)	117 S.F.
ADJUSTED TRACT AREA =	48,475 S.F.

LEGEND

- PROP. PROPERTY LINE
- PROP. RIGHT-OF-WAY
- EX. PROPERTY BOUNDARY
- EX. ADJOINING PROPERTY LINE
- EX. RIGHT-OF-WAY LINE
- PROP. MONUMENT
- PROP. REBAR
- PROP. EASEMENT
- PROPOSED CONTOUR
- NEW SPOT ELEV.
- EX. MINOR CONTOUR LINE
- EX. MAJOR CONTOUR LINE
- SOILS TYPE
- SOILS LINE
- PROP. CONC. CURB
- EX. CURB LINE
- PROP. EDGE OF PAVING
- EX. ROAD/PAVEMENT
- PROP. LIGHT POLE
- PROP. SIGN
- PROP. PARKING SPACES
- EX. LIGHT
- EX. UTILITY POLE
- TO BE REMOVED
- PROP. TELE. LINE
- PROP. ELEC. LINE
- PROP. UTILITY POLE
- PROP. GAS LINE
- PROP. GAS VALVE
- PROP. STORM SEWER LINE
- PROP. STORM INLET
- PROP. STORM INLET ID
- PROP. SEEPAGE BED
- EX. STORM PIPE/STRUCTURE
- PROP. SAN. SEWER LINE
- PROP. SAN. SEWER LATERAL
- EX. SANITARY PIPE/STRUCTURE
- PROP. SANITARY MH, ID
- PROP. WATER LINE
- EX. WATER LINE
- PROP. WATER LATERAL
- PROP. FIRE WATER LINE
- PROP. WATER VALVE
- PROP. HYDRANT
- PROP. MANHOLE
- EX. PERC TEST
- EX. TEST PIT
- 15–25% STEEP SLOPES
- 25% OR GREATER STEEP SLOPES

SOIL TYPE(S)

UgB – URBAN LAND, 0 TO 8 PERCENT SLOPES
UgD – URBAN LAND, 8 TO 25 PERCENT SLOPES
UudB – URBAN LAND UDORTHENTS, 0 TO 8 PERCENT SLOPES
UugD – URBAN LAND UDORTHENTS, 8 TO 25 PERCENT SLOPES

GEOLOGIC FORMATION NOTE:

LOCATION OF GEOLOGIC FORMATIONS TAKEN FROM PENNSYLVANIA DEP eMapPA, "BEDROCK GEOLOGY" DEVELOPED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, GEOSPATIAL DATA CENTER, DATED: DECEMBER 2004.

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Land Planning
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www.DLHowell.com

1250 Wrights Lane
West Chester, PA 19380
Phone: (610) 918-9002
Fax: (610) 918-9003

NO.	DESCRIPTION	DATE
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7		
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1		

PRELIMINARY
EXISTING RESOURCES & SITE ANALYSIS PLAN
CLIENT: DP SPRING MILL DEVELOPERS, LLC
PROJECT: THE TRANSITION AT SPRING MILL
LOCATION: 551 E. 10TH & 561 SPRING MILL AVENUE
WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY, PA.

DATE:	03/03/2021
SCALE:	1" = 100'
DRAWN BY:	PJK
CHECKED BY:	DPM
PROJECT NO.:	4026
CAD FILE:	01 EXISTING RESOURCES & SITE ANALYSIS PLAN.dwg
PLOTTED:	03/03/2021
DRAWING NO.:	C04.1
SHEET	04 OF 13

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GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEETING MINUTES – STEERING COMMITTEE MEETING #1

Date:	September 14, 2021
Reference:	Whitemarsh Township: Washington Street Feasibility Study Steering Committee Meeting #1 Focus Area Map Site Analysis Plan Sample Public Survey Questions G&A Project No. 20-12028

Summary

The first Steering Committee meeting for the Washington Street Feasibility Study was held on Monday, September 13, 2021 at 5:30 PM via Zoom, to introduce members to the project team, inform them about the project background and goals, review work that has been completed to date, and inform them about upcoming events. The following is a summary of the meeting:

Attendance

Rick Mellor, Charlie Guttenplan, Christopher Lane, Kevin Kissling, Debra Harris, Christian Fassbender, Robert Dambman, Wayne Masters, Stephanie Cecco, Pattie Guttenplan, Susan LaPenta, Bob Kent, Alicia Bloch, Dennis O'Brien, Michelle Harris, Kenny Rankins, Jack Fields Krista Heinrich, Kristin Norwood, Judy Stern Goldstein, and Emily Paskewicz.

Minutes

- Welcome & Introductions by K. Heinrich and J. Goldstein.
- Project Background by C. Guttenplan.
    - The concept for this study began with the Riverfront Open Space Plan. Ideas had been floated for years to connect Washington and Lee Street. A 2014 TCDI Grant produced the 2016 Riverfront Open Space Plan in coordination with Conshohocken Borough.
    - In May 2020 a TCDI grant was awarded for this study to specifically examine multi-modal connections and riverfront access within the project study area of Washington Street, Lee Street, Hector Street, and the surrounding area. The Township's 2020 Comprehensive Plan Update and its general land use recommendations prompted this current study to examine specific land uses for undeveloped or under-utilized properties.
- Project Goals by J. Goldstein.
    - Goal 1 – Enhance the multimodal connectivity and safety of Washington and Lee Street.
        - Objective: evaluate existing crossing conditions.
        - Objective: Examine options for eliminating dead-end condition of Washington Street.
        - Objective: Identify new bicycle and pedestrian linkages to increase connectivity along the river and to destinations in both Whitemarsh Township and Conshohocken Borough.
        - Evaluate existing rail and SRT Crossings to identify improvements in safety and connectivity.
        - Evaluate parking scenarios that would increase parking opportunities to

serve SRT users, others recreating along the river, patrons of Spring Mill Regional Rail Station, and employees of the many Spring Mill area businesses.

  - Goal 1 – Evaluate potential redesign of the waterfront and land uses.
    - Evaluate underutilized parcels along and near the riverfront that would implement housing and land use recommendations in the (draft) comprehensive plan selective update and encourage maximum usage of the Spring Mill Rail Station, the Schuylkill River Trail, and existing pedestrian amenities.
    - Examine options for relocating or reconfiguring the corporate headquarters of David's Bridal to facilitate circulation at a critical bottleneck and open up vistas to the Schuylkill River.
    - Develop a conceptual master plan for Montgomery County's Spring Mill Park to provide a significant riverfront destination, and enhance recreation and connectivity along the riverfront.

- Project Timeline and Next Steps by J. Goldstein
  - May 2020 – TCDI Grant Awarded
  - November 2020 – Grant Contract Finalized and Executed
  - January 2021 – Initial Site Visit
  - Early 2021 – Base Map and Site Analysis Plan Preparation
  - September 13th, 2021 – Steering Committee Meeting #1
  - October 4th, 2021 – Site Walk/Tour and Steering Committee Meeting #1
  - October 2021 – Online Survey
  - October/November 2021 – Key Person Interviews (Municipal Staff, Landowner, and Other Key Persons)
  - November 2021 – February 2022 – Public Workshops 1&2, and Additional Steering Committee Meetings.
  - Early 2022 – Study Preparation (Designs, Final Recommendations, Cost Estimates, Action Plan, Funding & Partnership Strategies).
  - Spring 2022 – Township and Borough Meetings for Adoption.
  - June 2022 – Finalize Study.
- Review of Focus Area Map & Site Analysis Plan by E. Paskewicz & K. Norwood.
  - Focus Area Map – Discussed limits of study area, and the current importance of the 100-year floodplain and the elevation of the Schuylkill River (at its crest) following Hurricane Ida on 9/3/21.
  - Site Analysis Plan – Discussed how Opportunities and Constraints are labeled on the plan and how many elements of the site can be seen both positively and negatively depending on what is eventually proposed for the site. K. Norwood reiterated that many of the initial comments and ideas on the site analysis were the result of findings from the initial site visit.
- Review of Sample Public Survey Questions by E. Paskewicz
  - Review of public survey process by E. Paskewicz and J. Goldstein. Explained that survey questions typically ask for a variety of information including basic info about respondents as well as more detailed questions regarding their feelings about the existing and future state of the study area. J. Goldstein reiterated the importance of using Likert scale questions to obtain quantitative data from the survey as opposed to general qualitative responses.
- Request for Committee Member Feedback on the Focus Area Map, Site Analysis Plan, and Sample Public Survey Questions.
  - Reiterated that E. Paskewicz will be sending an email out with all meeting documents and a reminder to email all feedback to E. Paskewicz in the next 2 weeks (by 9/28/21).

- Committee Member Feedback & Discussion

- R. Mellor – Stressed the importance of walkability and providing public access to the river as well as the issues with the cutoff of Washington Street, particularly with regards to all of the businesses, residences, and amenities that are down there.
- S. Lapenta – Expressed concern over the disconnect between Lee & Washington Street and the missing trail connection pieces between certain driveways and the trail. Reiterated that there are many areas for improvement within the focus area.
- C. Lane– Expressed the importance of open space within the focus area, given how much of the riverfront area has been developed and how valuable it currently is. Asked questions about the potential for a public park or open space, as labeled on the site analysis plan, next to the proposed residential parcel located along Washington Street. Expressed interest in giving the public access to existing underutilized private parking lots instead of building new ones and paving additional area. Also expressed an interest in boat launches and particularly the potential to offer the public access to private boat launches that currently exist along the river through some type of agreement.
    - C. Guttenplan – Explained that there are already some examples of successful shared parking in the Township currently, such as Quaker Park and E. Elm Street. Also explained the Township is currently undergoing a Zoning Amendment process, with plans to allow less parking for many uses. This may make more parking available for future public use.
- A. Bloch – Expressed concern over how the beauty of the river is being lost as a result of heavy development. Also expressed concern over how parking is being swallowed up by users, despite who owns the parking or what it has been designated for. Expressed that the train station does not have enough parking, and train commuters are using the Courts at Spring Mill Parking.
- D. Harris – Wanted to emphasize and express interest in the multi-modal aspect of the plan. Expressed in interest in how to make the train station, SRT, and related parking more usable for people who access them during the day and not just during commuting hours.
- K. Kissling – Asked if the Miracle-Nature Trail will be a part of this study and how they could potentially connect and relate. Also asked what requirements can be placed on developers to help fulfill the goals of the study. Asked if any parcels currently have approved land development plans along the riverfront in the study area.
    - Team answered that they are not explicitly connected or related since they are separate studies, but elements of them could be combined in the future to apply for funding.
    - Team answered that comments can be added to plan review letters as certain amenity and improvement requirements already exist in the ordinance. Also answered that the Township is interested in accepting land as opposed to just accepting fees. For example, at 901 Washington Street, 10% of the total area is required to be open space, which is where the circled opportunity area on the site analysis plan for a potential park comes from.
    - C. Guttenplan answered that no parcels currently have LD approvals within the study area. 901 Washington Street is nearing approval, but is not there yet.
- C. Guttenplan – Highlighted the importance of Spring Mill County Park and how potential connections to public access to this park will be an important piece of the study.
- S. LaPenta – Asked what the process is for adopting the study.
    - Team responded that that it will be approved by this committee and then taken to BOS meetings in Whitemarsh and Conshohocken for final approval. It is anticipated that it will be adopted as an amendment to the Township's comprehensive plan.

    - P. Guttenplan – Expressed that the site walk will be helpful for everyone, also expressed that access to the Spring Mill County Park will be a significant issue. Also asked if it would be helpful for the County Planning Commission to suggest design solutions, where appropriate.
        - Team responded that yes, suggested design solutions and related feedback from the planning commission would be greatly appreciated.

- Wrap-Up
    - Reminder about next Steering Committee Meeting and Site Walk on 10/4 from 4–6pm or so. Beginning on-site and potentially ending at Spring Mill Fire Hall.
    - The Team thanked the committee for their participation and feedback.

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEETING MINUTES – STEERING COMMITTEE MEETING #2 & SITE WALK

Date:	October 7, 2021
Reference:	Focus Area Map G&A Project No. 20-12028

Summary

The second Steering Committee meeting for the Washington Street Feasibility Study was held on Monday, October 4th, 2021 at 4 PM. The meeting began with a walk to some key sites within the focus area and concluded at Spring Mill Fire Co. for a light dinner and group debrief of the walk. The following is a summary of the meeting and walk:

Attendance

Jacy Toll (Whitemarsh BOS), Mark Cassel (SEPTA), Charlie Guttenplan (Whitemarsh), Derek Lombardi (DVRPC), Christopher Lane (Whitemarsh Open Space) , Kevin Kissling (Whitemarsh Park & Rec.), Debra Harris (Whitemarsh EAB) , Christian Fassbender (Whitemarsh Shade Tree) , Robert Dambman (Whitemarsh Planning Commission) , Craig Nichols (David's Bridal), Pattie Guttenplan (MCPC), Susan LaPenta (PennDOT) , Bob Kent (SEPTA), Alicia Bloch (Courts at Spring Mill), Dennis O'Brien (O'Brien/Elm Street Partners) , Jack Fields (Whitemarsh), Alison Giles (Whitemarsh), Krista Heinrich (Gilmore) , Judy Stern Goldstein (Gilmore), and Emily Paskewicz (Gilmore).

Minutes

- **Focus Area Walk**
  - Beginning at Spring Mill Fire Co., the group walked up North Lane to the parking lot parcel above Alliance/Spring Mill.
    - C. Guttenplan (Whitemarsh) explained the backstory of the parcel and the importance of developing use recommendations for the parcel as part of the study. The 2028 Future Land Use Plan in the Comprehensive Plan update identifies the parcel as part of the Mixed-Use Node.
    - The 10 Ac. parcel above the David's Bridal Warehouse on North Lane was also mentioned as a candidate for redevelopment in the future. The current owner is waiting for land use decisions so that they can redevelop.
  - The group walked down North Lane, crossed E. Hector Street and continued down Station Ave. to its intersection with the SRT and the Spring Mill SEPTA station.
    - Spring Mill County Park was discussed, as it is visible from Station Ave. Currently there is no access to the site and the County would like it to remain as floodplain habitat. They are potentially open to seeing some passive recreation and access to the site in the future.
    - Maintenance of the SRT was discussed, P. Guttenplan explained that the trail right-of-way is only 15', leaving the county with 1-2' of shoulder area to maintain with limited staff.
    - The Station Ave. crosswalk for the SRT was also mentioned as a dangerous intersection in need of safety improvements.
  - The group walked down Station Ave. to the where the David's Bridal parking deck property meets with the river.

- Group members mentioned that this is currently Whitemarsh's only river access, despite the fact that it's on private property.

- The group walked the remainder of North Lane to where it dead-ends at 901 Washington St.
  - The group confirmed that the parking structure is owned by David's Bridal, used by their employees, and does not currently have excess parking that could be rented or utilized for a private-public parking partnership.
  - The group noted that the owners of Quaker Park should be brought into discussions about a potential public-private parking partnership as their parking is often not fully utilized.
  - Circulation challenges for Washington St. in relation to the existing configuration of the David's Bridal buildings and proposed/approved circulation concept for 901 Washington St. were discussed.
- The group looked at the current state of the 901 Washington lot and discussed the land development plans (62 townhomes in a gated development), which are nearing approval.
  - C. Guttenplan (Whitemarsh) mentioned that there will be a marked pedestrian path between David's Bridal and 901 Washington. This path will look more like a bike lane than a formal separated trail and will have bollards separating it from the buildings.
  - 901 Washington St. will also include the development of a publicly accessible 12' wide walking path along the river and some parking for trail users.
- The group walked back up Washington Street, and North Lane to the Spring Mill Fire Company ballroom to debrief over a light dinner.
  - The group discussed the other properties to the west of 901 Washington St. and how several of them are also underdeveloped and may benefit from use and development recommendations moving forward.
  - The parcel to the East of Riverwalk apartments that is half in Conshohocken and half in Whitemarsh was also discussed for its former/current land development plans.
  - A. Bloch (Courts at Spring Mill) brought up the existing crosswalk for the SRT on Station Ave. and reiterated that there are already too many users and people in that area who are in conflict with vehicles.
  - K.Kissling (Whitemarsh Park & Rec.) asked if the Station Ave. circle is Township property.
    - Team answered that it is multi-jurisdictional.
  - B. Dambman (Whitemarsh Planning Commission) mentioned that traffic calming would be helpful on Station Ave. particularly something involving a change of surface texture.
  - Speed humps where you enter the David's Bridal property were also mentioned as a potential solution.
  - Because there is a current conflict with vehicles dropping off train users on Station Ave, a formal drop-off area for Spring Mill Station was also discussed as a need for the area.
  - The group discussed the success of the Tricycle Shop and consequential traffic and added conflicts that it has brought to Station Ave, as many users tend to cluster on the street. The shop has been encouraging patrons to gather behind the building instead, but unfortunately, this takes up most of their available parking spaces.

  - P. Guttenplan (Whitemarsh) mentioned the potential of a raised table design for the circle at the end of N. Lane. This would allow pedestrians to "own" the intersection and would force cars to recognize that they are entering a different environment where they need to move slower and with

more awareness.

- C. Nichols (David's Bridal) mentioned that the bend in the road by the Tricycle shop on Station Ave. is actually a blind curve, causing additional issues.
- K. Rankins (SEPTA) mentioned that SETPA would be interested from a bus standpoint in knowing the intensity of future uses as well as what would be happening with lots and parking.
- J. Goldstein (Gilmore) reiterated that since this is a TCDI feasibility study, it will result in recommendations and conceptual design suggestions, but not detailed designs.
- The group discussed how the Conshohocken portion of the study area already faces challenges with restaurant and business patrons taking up all of the street parking in front of residences that do not have private parking.
- A. Bloch (Courts at Spring Mill) mentioned a shuttle-bus idea that is currently in the process of implementation in her complex that would take residents from a dense apartment complex to downtown Conshohocken on weekends.
- J. Goldstein (Gilmore) also mentioned that it's important to remember how much of the focus area is within the 100-year floodplain, nearly all of which was inundated by floodwaters from hurricane Ida earlier in September. It will be important to plan and suggest design solutions that are able withstand inundation in the future.
- The potential of shifting parking in river developments above the ground floor was discussed.
    - C. Guttenplan (Whitemarsh) explained that currently applicants need permission to put their parking on the ground level. However, because there's nowhere else to put the parking and it's hard to construct residential properties without it, the Township is often forced to approve ground-level parking in the floodplain.
    - 901 Washington put their parking on the ground flood, but will require flood vents in the first-floor garages.

- The project team thanked the steering committee for coming out and providing input and reminded members that a date for the next meeting would be sent out by email in the coming week.

Focus Area Map

Multi-Modal Connections Studyof Washington Street and the Riverfront of Spring Mill Station

Whitemarsh Township, Montgomery County, PA

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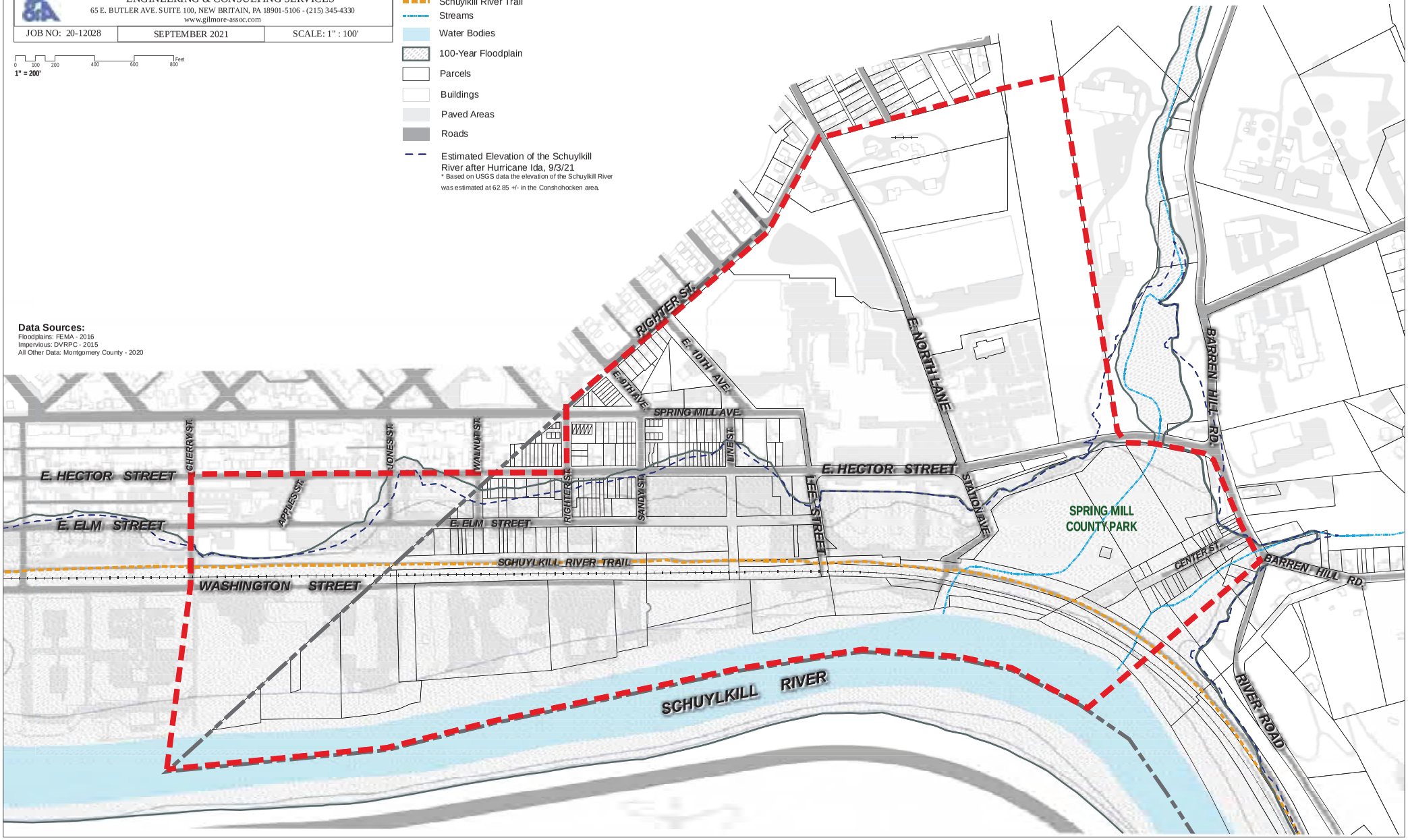
JOB NO: 20-12028	SEPTEMBER 2021	SCALE: 1" : 100'

0 100 200 400 600 800 Feet
1" = 200'

Legend

- Focus Area
- Municipal Boundary
- SEPTA Rail Line
- Schuylkill River Trail
- Streams
- Water Bodies
- 100-Year Floodplain
- Parcels
- Buildings
- Paved Areas
- Roads
- Estimated Elevation of the Schuylkill River after Hurricane Ida, 9/3/21
  * Based on USGS data the elevation of the Schuylkill River was estimated at 62.85 +/- in the Conshohocken area.

Data Sources:
Floodplains: FEMA - 2016
Impervious: DVRPC - 2015
All Other Data: Montgomery County - 2020



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MEETING MINUTES – STEERING COMMITTEE MEETING #3

Date:	December 2nd, 2021
Reference:	Spring Mill SC Meeting #3 – Agenda Packet G&A Project No. 20-12028

Summary

The third Steering Committee meeting for the Spring Mill Multi-Modal and Land Use Study was held on Monday, November 29th, 2021 at 5:30 PM via Zoom. The meeting minutes are as follows:

Attendance

Jacy Toll (Whitemarsh BOS), Charlie Guttenplan (Whitemarsh), Derek Lombardi (DVRPC), Christopher Lane (Whitemarsh Open Space), Debra Harris (Whitemarsh EAB), Christian Fassbender (Whitemarsh Shade Tree), Robert Dambman (Whitemarsh Planning Commission), Pattie Guttenplan (MCPC), Bob Kent (SEPTA), Jack Fields (Whitemarsh), Stephanie Cecco (Conshohocken), Rena Pinhas (MCPC), Michelle Harris (Montgomery County), Wayne Masters (Spring Mill Fire Co.), Kristin Norwood (Gilmore), Krista Heinrich (Gilmore), Judy Stern Goldstein (Gilmore) and Emily Paskewicz (Gilmore).

Minutes

- **Welcome**
- **Public Participation Updates**
    - Public Survey had 654 responses as of 11/29 at 5:30 pm and was set to close at 12:00 am on 11/30.
    - Public Presentation and Listening Session is to be held on 12/6 at 6:00 pm via zoom. Registration is live and committee members were encouraged to share the info and registration link with all local contacts. Committee members are welcome to attend the meeting, but not required. The team explained the format of the meeting: a virtual presentation explaining the background and goals of the project, the focus area, and a review of the site analysis plans to examine opportunities and issues with all focus locations. The meeting will conclude with a listening session, in which participants can ask questions and offer feedback and suggestions.
    - Key Person Interviews – Key Person Interviews are slated to be held throughout the month of December, and potentially into early January as needed. The list of interviewees is still being finalized between K. Heinrich and C. Guttenplan, but will encompass a wide range of organizations, landowners, and interested parties.
- **Review of Mini Analysis Plans**
  The original site analysis plan has been renamed “Washington Street” to better reflect the area it shows. Similarly, three other mini analysis plans were added to reflect the expansion of focus within the study area and to reflect committee member comment.

- Washington Street: K. Norwood discussed the overall traffic issues and opportunities on and around Washington Street, including various traffic solutions to address the narrow, dead-end nature of Washington Street and potential solutions to make the SEPTA and SRT intersection with Lee Street safer and more visible. She also discussed the potential for pedestrian improvements along 901 Washington Street.
    - W. Masters asked about emergency boat access along the river, as Whitemarsh has a need for this.
        - C. Guttenplan responded that 901 Washington Street is required by conditions of their approval to install an emergency boat ramp. It will be located on the western edge of the 901 Washington Property.
        - Team will note the location of emergency ramp on plans moving forward.
    - C. Lane asked for clarification on the extent of the 901 Washington Street property.
        - Team responded that it extends from the western edge of the David's Bridal Property to the Eastern Boundary of the Hines Rowing Center Property.
    - C. Guttenplan talked through other properties along Washington Street that have any proposed plans or pending approval:
        - 401/433 Washington Street – 598 apartment units are proposed that currently have Zoning Hearing Board approval in Whitemarsh and a settlement agreement in Conshohocken (Property is located partially in Conshohocken and Whitemarsh).
        - 601/701 Washington Street – Less dense than 401/433 and located on the current Underdog Landscaping Property. The plans were turned down by the Zoning Hearing Board but went to court where they are awaiting a decision.
        - 401 Washington Street currently only has a small office building on it and has seen a few sketch plans over the years.
    - C. Lane asked if anything will not be developed along Washington Street?
        - C. Guttenplan responded that the Hines Rowing Center property is the only site that is unlikely to ever be developed.
    - S. Cecco explained that from Conshohocken's perspective, particularly considering the amount and density of development in the Borough, traffic flow and emergency management access are the main concerns within this area.
    - W. Masters mentioned the fact that Washington street is currently gated off and inaccessible at 901 Washington and how this is a concern from an emergency management standpoint.
    - D. Harris mentioned the need for restrooms in the area and suggested providing native landscaping along the Washington Street section of the trail as well as the need for trail specific parking. She also mentioned that a lot of these ideas have been brought up in previous plans and asked if these plans were being examined or considered.
        - The team responded that previous/related plans were examined as part of the background report preparation process and that selected ideas that had been discussed in previous reports would be mentioned and expanded upon in this report to help show precedence and relevance, particularly when applying for funding down the road.

        - C. Guttenplan responded that 901 Washington is required to provide about 10 publicly available parking spaces to access the proposed riverfront trail as part of the development.
    - The potential for shared parking at Spring Mill Fire Co. was mentioned. W. Masters responded that their parking currently has a lease and is used by Spring Mill Corporate center in order to meet their occupancy requirements. While it is used by the public during the weekends and at night, it would be challenging to alter that lease for public use during the weekdays.

- **Spring Mill Riverfront Plan:** E. Paskewicz explained that this plan was created to examine the Spring Mill County Park property and surrounding uses. A big focus will be on protecting and maintaining the habitat and floodplain function of the site while looking at passive recreation opportunities including a connecting trail through the park to the Schuylkill River trail. Opportunities for shared parking in the SEPTA lot and the private lot at the corner of the Station Ave. & E. Hector were also mentioned. Issues and potential solutions for the cyclist, patron, and trail user congestion at the blind curve along Station Ave. in front the of the Tricycle Café were also discussed.
    - J. Fields mentioned that an area labeled recycling center within the Spring Mill Park property is actually the Township's Wastewater Pumping Station.
        - E. Paskewicz responded that this error would be corrected on the plans.
    - P. Guttenplan explained that the original intent of a passive trail through the County Park would be to establish a best route between the future miracle-nature trail and the Schuylkill River Trail and that this should be examined in detail as part of the study.
    - A question was asked about who would pay for any improvements made on the County Park property.
        - M. Harris explained that typically an agreement with the Township would be established for long-term maintenance and that any improvements would be fully funded by the Township.
        - J. Goldstein also mentioned that an implementation chapter within the report will address potential funding sources and recommendations.
    - D. Harris asked about the potential for a riverfront boardwalk along the County Park-owned stretch of the Schuylkill River.
        - P. Guttenplan responded that this would pose a significant construction challenge with the challenging topography along this stretch of river.
        - J. Goldstein mentioned that even with challenges, it would still be a good idea to elevate the idea and use the study to determine where it would make the most sense to put something like a river boardwalk.
    - M. Harris expressed concern about the traffic that would be added to the area from recreational boat access and mentioned that any area that feeds onto the SRT is already a source of significant congestion from trail use alone.

- **Spring Mill Junction Plan:** This plan takes a closer look at the specific intersection between Station Ave, The SRT, and the SEPTA Rail line. K. Norwood discussed traffic concerns, particularly regarding safety and potential improvements within the intersection. E. Paskewicz also mentioned that this plan

includes an opportunity for a partnership to provide recreational river or simply riverfront access on the corner of the David's Bridal property.

- The bus shelter located on the Western side of Station Ave. was discussed as the bus lines no longer provide service to this shelter specifically. It was mentioned that in flood events or other instances of rail service disruption that the stop is used to provide shuttle bus service between the closed sections of Manayunk-Norristown rail line.
- M. Harris mentioned that Station Ave. is also how County Park rangers access the SRT for maintenance. She also mentioned that there is a trail counter at this access point and the count is consistently one of the highest within the county.
- D. Harris mentioned that, in addition to trail users, vehicles who are dropping off and picking up train commuters often wait on the eastern edge of the turnaround on Station Ave.
- In response to this bottleneck and the safety challenges it presents, as well as those at the blind curve on station Ave., an idea to create an environmentally sensitive gathering space along Station Ave. on the county park property was mentioned.
    - P. Guttenplan responded that while it may be a possibility, the County would have concerns about the topography in that area as well as the potential for one development within the park to expand into more development in a sensitive area.
- J. Goldstein mentioned that if the county has additional thoughts or areas within the county park or otherwise that this study should be examining to share them with the project team to incorporate and consider as we move forward.
- J. Goldstein also mentioned the importance of looking at heavy trail use and trail users as a positive aspect and a benefit to the area rather than a hinderance.

o **North Lane Plan:** This plan examines properties with possible future development potential along North Lane and their pedestrian connections. It also considers opportunities for shared parking on the existing parking lots located North of the Spring Mill Corporate Center.

- C. Guttenplan clarified that he is in discussion with the owner of the North Lane lot highlighted on the plan, regarding Spring Mill Corporate Center's future plans and needs regarding the site.
- P. Guttenplan mentioned that the these lots could potentially be used by commuters and trail users to help fill those needs. She also mentioned that it would be ideal that any development that occurs here be transit-oriented to reduce that area's parking burden and take advantage of Spring Mill Station.
- K. Heinrich mentioned the potential to provide a staircase from 12th Ave. onto the North Lane site in order to provide easier access for pedestrians to get in and out of the borough from that area.
- B. Dambman mentioned that access to the future Miracle-Nature Trail might be better provided from the Spring Mill Fire Company site as it is a more public site that what is currently shown on the plan.

- **Review of Project Timeline**
    - o Survey closes & results compiled – December 2021
    - o 1st Public Meeting – December 6th, 2021
    - o KPI's – December - January 2021

- Steering Committee Meeting #4 – January 10th, 2022 (review public input and draft conceptual plans/sketches)
- Draft report preparations & revised conceptual plans and sketches – Mid January – February 2022
- Final Public Meeting – early February 2022
- Steering Committee Meeting #5 – early March (review full draft report and committee recommendation)
- Planning Commission Meeting – April 2022
- Board of Supervisors Meeting – May or June 2022.
- J. Goldstein stressed the importance of speaking of and offering feedback and questions as soon as possible as the report would need to be adopted by the end of June 2022 in order to keep the grant funding.
    - B. Dambman asked if the plan would need to be presented and approved to other committees beyond the planning commission.
        - Team responded that it would not be presented to other committees as all relevant groups were included as part of the steering committee and that these representatives would be reporting back to their individual committees on the project. Other committees would also be welcome to send representatives to the planning commission meeting at which the plan will be presented, if they found it helpful or necessary.
        - P. Guttenplan requested the county be included in the KPIs as they own a property that is being examined as part of the study.
            - Team responded that a representative from the county would be included for an interview.

- **Thanks, and Upcoming Meeting Reminders:**
    - Public Presentation & Listening Session – Monday, December 6th, at 6:00 pm via Zoom.
    - Next Steering Committee Meeting – Monday, January 10th, 2022, at 5:30 pm, via Zoom.

Whitemarsh Township – Spring Mill Multi-Modal and Land Use Study

Steering Committee Mtg #3
November 29, 2021; 5:30 PM

Agenda

Welcome

Old Business

- Public Participation Update

New Business

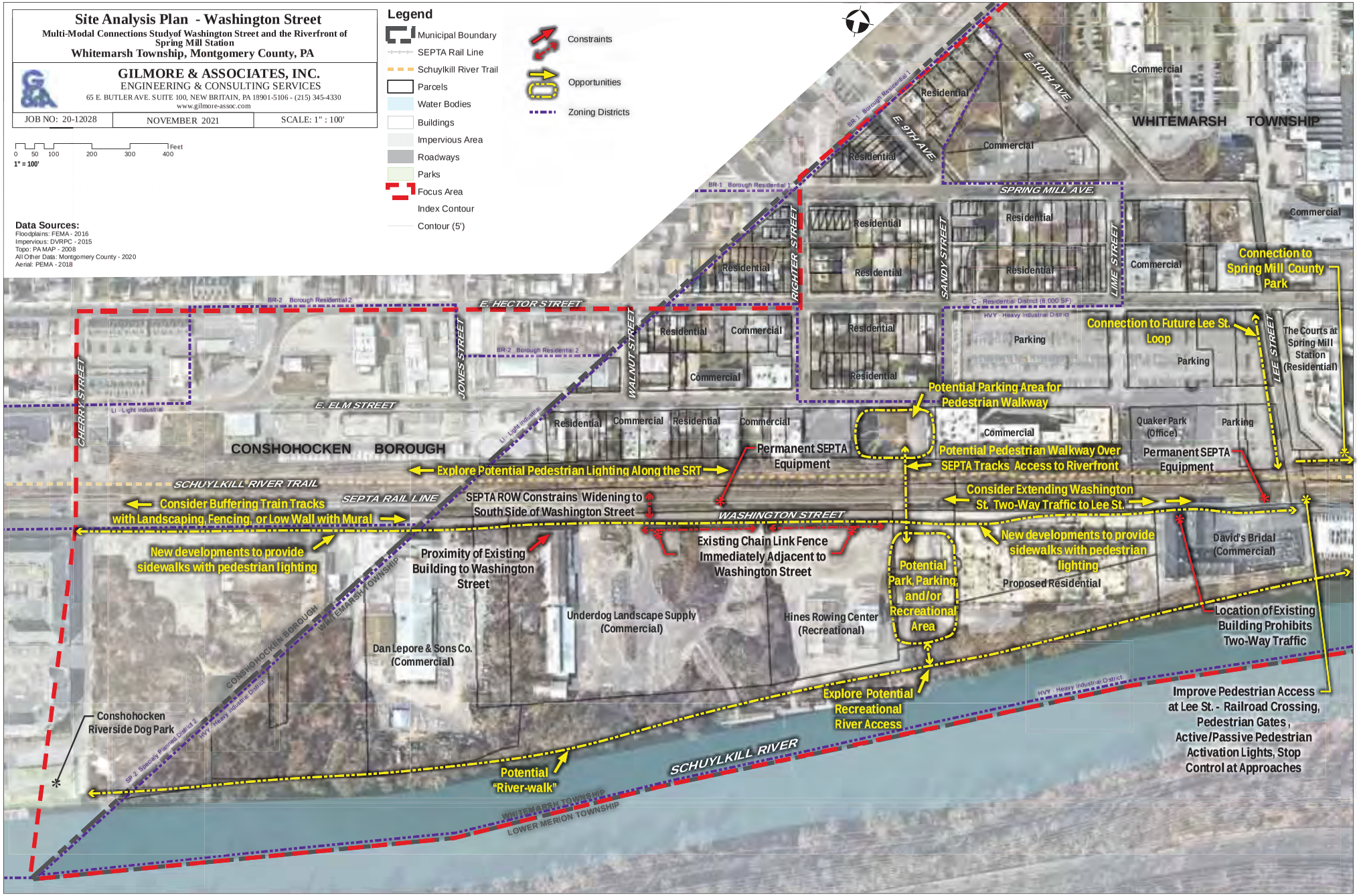
- Review of Mini Analysis Plans
- Review of Project Timeline

Thanks!

Public Presentation & Listening Session – Monday, December 6th, 2021, at 6:00 pm via Zoom.

Next Steering Committee Meeting - Monday January 10th, 2022, at 5:30 pm, via Zoom.

https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us


Site Analysis Plan - Washington Street
Multi-Modal Connections Studyof Washington Street and the Riverfront of Spring Mill Station
Whitemarsh Township, Montgomery County, PA
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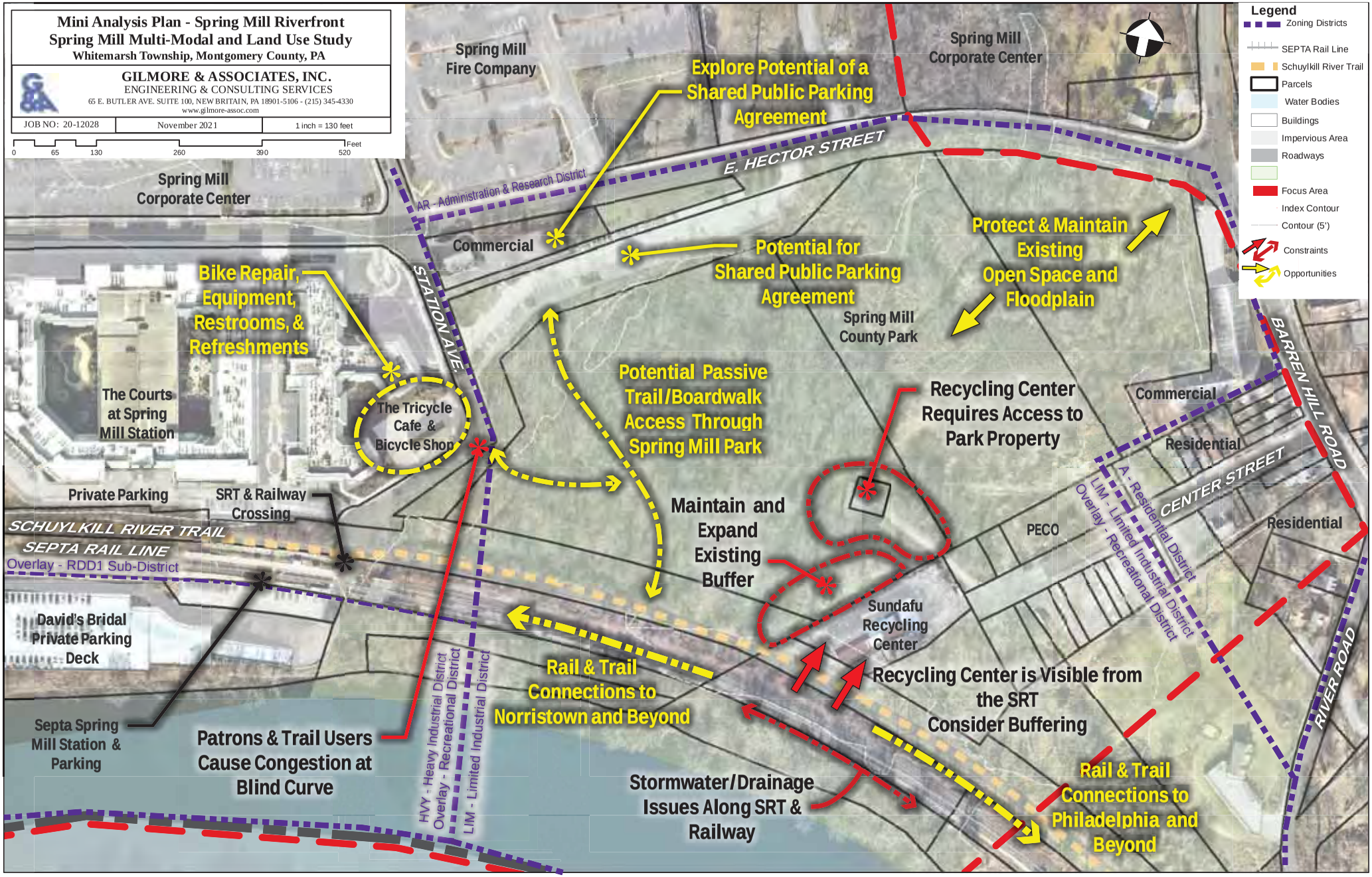
NOVEMBER 2021
SCALE: 1" : 100'
0 50 100 200 300 400 Feet
1" = 100'
Data Sources:
Floodplains: FEMA - 2016
Impervious: DVRPC - 2015
Topo: PA MAP - 2008
All Other Data: Montgomery County - 2020
Aerial: PEMA - 2018
Legend
Municipal Boundary
SEPTA Rail Line
Schuylkill River Trail
Parcels
Water Bodies
Buildings
Impervious Area
Roadways
Parks
Focus Area
Index Contour
Contour (5')
Constraints
Opportunities
Zoning Districts
WHITEMARSH TOWNSHIP
CONSHOHOCKEN BOROUGH
E. 10TH AVE.
E. 9TH AVE.
SPRING MILL AVE.
E. HECTOR STREET
E. ELM STREET
CHERRY STREET
JONES STREET
WALNUT STREET
RIGHTER STREET
SANDY STREET
LIME STREET
LEE STREET
WASHINGTON STREET
SCHUYLKILL RIVER TRAIL
SEPTA RAIL LINE
SCHUYLKILL RIVER
Residential
Commercial
Parking
Quaker Park (Office)
Connection to Spring Mill County Park
Connection to Future Lee St. Loop
The Courts at Spring Mill Station (Residential)
Potential Parking Area for Pedestrian Walkway
Permanent SEPTA Equipment
Potential Pedestrian Walkway Over SEPTA Tracks Access to Riverfront
Explore Potential Pedestrian Lighting Along the SRT
Consider Buffering Train Tracks with Landscaping, Fencing, or Low Wall with Mural
SEPTA ROW Constrains Widening to South Side of Washington Street
Consider Extending Washington St. Two-Way Traffic to Lee St.
New developments to provide sidewalks with pedestrian lighting
Proximity of Existing Building to Washington Street
Existing Chain Link Fence Immediately Adjacent to Washington Street
Potential Park, Parking, and/or Recreational Area
Proposed Residential
David's Bridal (Commercial)
Location of Existing Building Prohibits Two-Way Traffic
Underdog Landscape Supply (Commercial)
Hines Rowing Center (Recreational)
Dan Lepore & Sons Co. (Commercial)
Conshohocken Riverside Dog Park
Explore Potential Recreational River Access
Improve Pedestrian Access at Lee St. - Railroad Crossing, Pedestrian Gates, Active/Passive Pedestrian Activation Lights, Stop Control at Approaches
Potential "River-walk"
LOWER MERION TOWNSHIP


Mini Analysis Plan - Spring Mill Riverfront
Spring Mill Multi-Modal and Land Use Study
Whitemarsh Township, Montgomery County, PA
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1 inch = 130 feet
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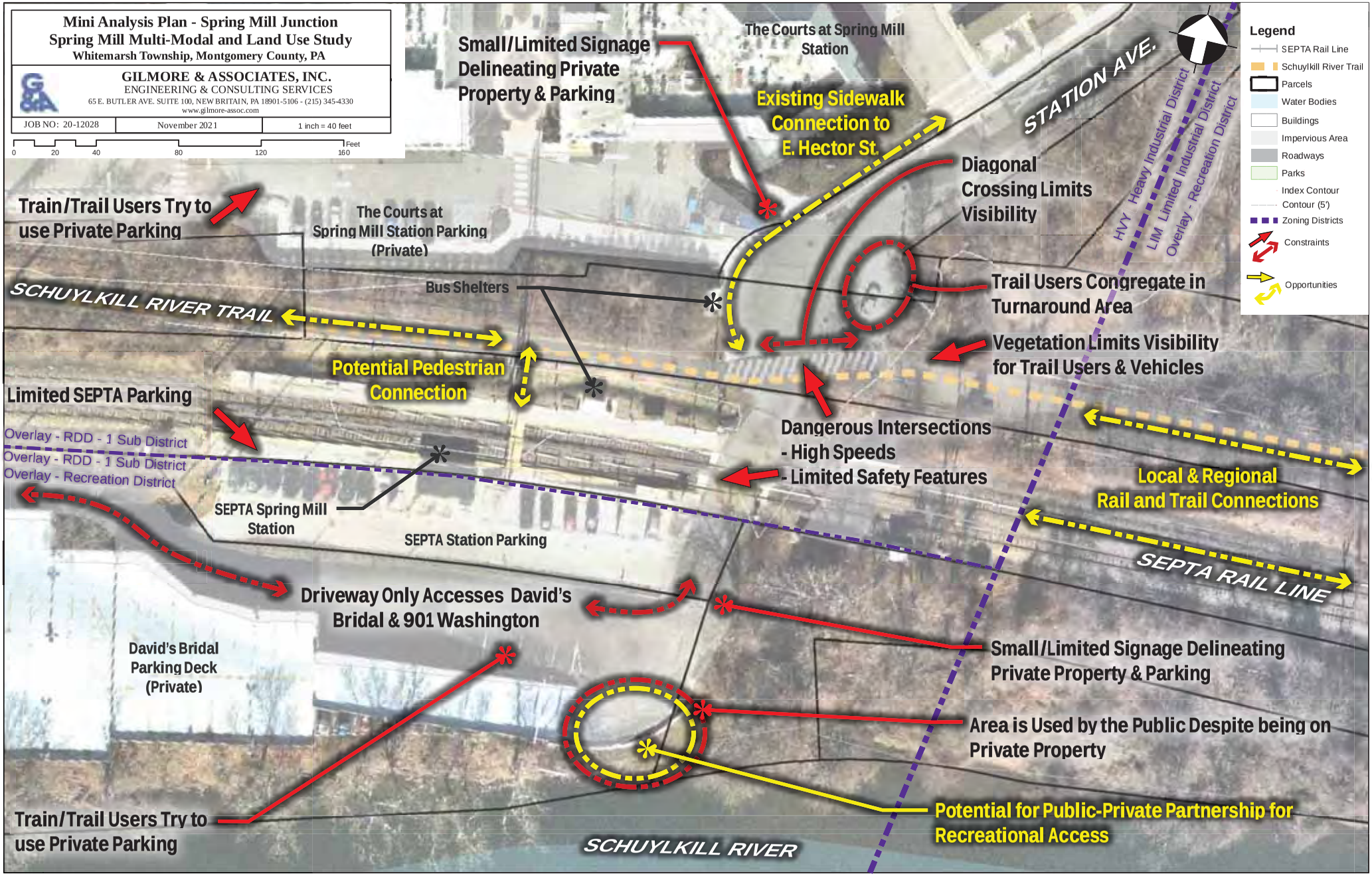
Legend
Zoning Districts
SEPTA Rail Line
Schuylkill River Trail
Parcels
Water Bodies
Buildings
Impervious Area
Roadways
Focus Area
Index Contour
Contour (5')
Constraints
Opportunities
Spring Mill Fire Company
Explore Potential of a Shared Public Parking Agreement
Spring Mill Corporate Center
E. HECTOR STREET
AR - Administration & Research District
Spring Mill Corporate Center
Commercial
Potential for Shared Public Parking Agreement
Protect & Maintain Existing Open Space and Floodplain
Spring Mill County Park
Bike Repair, Equipment, Restrooms, & Refreshments
STATION AVE
The Courts at Spring Mill Station
The Tricycle Cafe & Bicycle Shop
Potential Passive Trail/Boardwalk Access Through Spring Mill Park
Recycling Center Requires Access to Park Property
Commercial
Residential
BARREN HILL ROAD
CENTER STREET
A - Residential District
LIM - Limited Industrial District
Overlay - Recreational District
Private Parking
SRT & Railway Crossing
SCHUYLKILL RIVER TRAIL
SEPTA RAIL LINE
Overlay - RDD1 Sub-District
Maintain and Expand Existing Buffer
PECO
Residential
David's Bridal Private Parking Deck
Sundafu Recycling Center
Rail & Trail Connections to Norristown and Beyond
Recycling Center is Visible from the SRT Consider Buffering
RIVER ROAD
Septa Spring Mill Station & Parking
Patrons & Trail Users Cause Congestion at Blind Curve
HVY - Heavy Industrial District
Overlay - Recreational District
LIM - Limited Industrial District
Stormwater/Drainage Issues Along SRT & Railway
Rail & Trail Connections to Philadelphia and Beyond


Mini Analysis Plan - Spring Mill Junction
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1 inch = 40 feet
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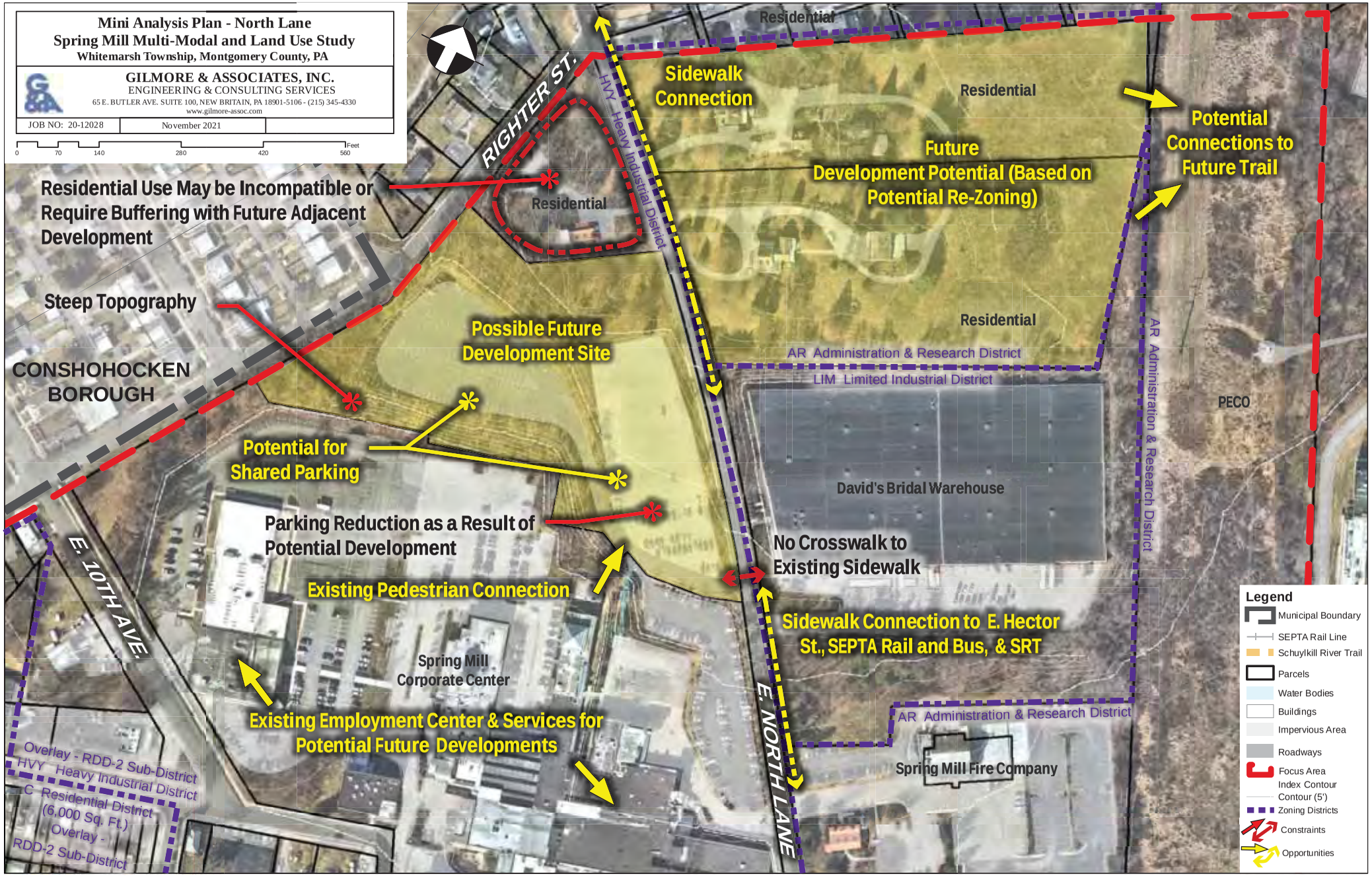
Small/Limited Signage Delineating Private Property & Parking
The Courts at Spring Mill Station
Existing Sidewalk Connection to E. Hector St.
STATION AVE.
Diagonal Crossing Limits Visibility
HVY Heavy Industrial District
LIM Limited Industrial District
Overlay - Recreation District
Train/Trail Users Try to use Private Parking
The Courts at Spring Mill Station Parking (Private)
Bus Shelters
Trail Users Congregate in Turnaround Area
SCHUYLKILL RIVER TRAIL
Vegetation Limits Visibility for Trail Users & Vehicles
Potential Pedestrian Connection
Limited SEPTA Parking
Overlay - RDD - 1 Sub District
Overlay - RDD - 1 Sub District
Overlay - Recreation District
Dangerous Intersections
- High Speeds
- Limited Safety Features
Local & Regional Rail and Trail Connections
SEPTA Spring Mill Station
SEPTA Station Parking
SEPTA RAIL LINE
Driveway Only Accesses David's Bridal & 901 Washington
David's Bridal Parking Deck (Private)
Small/Limited Signage Delineating Private Property & Parking
Area is Used by the Public Despite being on Private Property
Train/Trail Users Try to use Private Parking
Potential for Public-Private Partnership for Recreational Access
SCHUYLKILL RIVER
Legend
SEPTA Rail Line
Schuylkill River Trail
Parcels
Water Bodies
Buildings
Impervious Area
Roadways
Parks
Index Contour
Contour (5')
Zoning Districts
Constraints
Opportunities


Mini Analysis Plan - North Lane
Spring Mill Multi-Modal and Land Use Study
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November 2021
0 70 140 280 420 560 Feet
Residential
Residential
Residential
Residential
Residential
Sidewalk Connection
Potential Connections to Future Trail
Future Development Potential (Based on Potential Re-Zoning)
RIGHTER ST.
HVY Heavy Industrial District
Residential Use May be Incompatible or Require Buffering with Future Adjacent Development
Steep Topography
CONSHOHOCKEN BOROUGH
Possible Future Development Site
AR Administration & Research District
LIM Limited Industrial District
PECO
AR Administration & Research District
Potential for Shared Parking
David's Bridal Warehouse
Parking Reduction as a Result of Potential Development
No Crosswalk to Existing Sidewalk
Existing Pedestrian Connection
Sidewalk Connection to E. Hector St., SEPTA Rail and Bus, & SRT
E. 10TH AVE.
Spring Mill Corporate Center
E. NORTH LANE
Existing Employment Center & Services for Potential Future Developments
AR Administration & Research District
Spring Mill Fire Company
Overlay - RDD-2 Sub-District
HVY Heavy Industrial District
C Residential District (6,000 Sq. Ft.)
Overlay - RDD-2 Sub-District
Legend
Municipal Boundary
SEPTA Rail Line
Schuylkill River Trail
Parcels
Water Bodies
Buildings
Impervious Area
Roadways
Focus Area
Index Contour
Contour (5')
Zoning Districts
Constraints
Opportunities

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MEETING MINUTES – STEERING COMMITTEE MEETING #4

Date:	January 14, 2021
Reference:	Spring Mill SC Meeting #4 – Agenda Packet G&A Project No. 20-12028

Summary

The fourth Steering Committee meeting for the Spring Mill Multi-Modal and Land Use Study was held on Monday, January 10th 2022 at 5:30 PM via Zoom. The meeting minutes are as follows:

Attendance

Jacy Toll (Whitemarsh BOS), Charlie Guttenplan (Whitemarsh), Derek Lombardi (DVRPC), Alicia Bloch (The Courts at Spring Mill Station), Christopher Lane (Whitemarsh Open Space), Debra Harris (Whitemarsh EAB), Christian Fassbender (Whitemarsh Shade Tree), Robert Dambman (Whitemarsh Planning Commission), Pattie Guttenplan (MCPC), Mark Cassel (SEPTA), Bob Kent (SEPTA), Jack Fields (Whitemarsh), Stephanie Cecco (Conshohocken), Matt Edmond (MCPC), Craig Nichols (David's Bridal), Michelle Harris (Montgomery County), Wayne Masters (Spring Mill Fire Co.), Kristin Norwood (Gilmore), Krista Heinrich (Gilmore), Judy Stern Goldstein (Gilmore) and Emily Paskewicz (Gilmore).

Minutes

- **Welcome**
- **Old Business**
  - Public Survey had 655 responses as of 11/29 at 5:30 pm and closed at 12:00 am on 11/30.
  - Major findings of the survey were not entirely surprising. There was a heavy focus on traffic, parking, and flooding. The amount of emphasis on recreation given the focus of the study was surprising and revealing about how a sizable portion of the public interacts with the space.
  - Public Presentation and Listening Session was held on 12/6/21 6:00 pm via zoom. There were 44 attendees. Findings were similar to those of the public survey. Comments had a big emphasis on parking, flooding, development concerns, as well as recreation and access.
  - Key Person Interviews – We will be wrapping up KPI's in the coming weeks.
  - Public Participation Updates Discussion:
    - Did any user groups skew the survey in particular direction? – Not that the team saw. There were contingents from Conshohocken's Community Garden, the Hines Rowing Center, and likely a sizable portion of people included in Township Parks and Recreation's email list who responded to an email blast about the survey.
    - The emphasis on recreation and the SRT was clear. However, as committee members pointed out they are linked to the main focus of the study as users use multiple modes of transportation to access the area and the trail.

        - The suggestion for restrooms as an amenity for the study area and trail was also discussed.

- **New Business**
    - Washington Street – Yield to Oncoming Traffic Conceptual Plan
        - Members had questions about aspects of the 901 Washington Street Plans that were not shown on the sketch including the access gate and signage making it clear that that portion of Washington Street is for private access only. It was explained that the sketches are conceptual in nature and meant to explore the options for how the street could be both continued and opened up to the public and all options assume the removal of the proposed access gate shown on the 901 Washington plans.
        - Stephanie Cecco expressed general concern about the continued development along the river when there is only one road to access them that dead ends and expressed the importance of examining the options for what could be done with this road from an emergency management standpoint.
        - Safety concerns were expressed about the yield traffic option using signage and symbols only.
        - Craig Nichols expressed safety concerns for pedestrians who use the road currently if the road is opened up and made public as it is currently more or less a drive aisle for their parking lot. He also expressed that he did not have an issue with emergency vehicles doing through.
        - Wayne Masters mentioned that for this option to work for emergency services there would need to be a pull off allowing other vehicles to yield for emergency vehicles.
    - Washington Street – One Way Traffic
        - Committee members generally had less safety concerns with this plan than with the “Yield to Oncoming traffic” plan.
        - Judy Goldstein mentioned a similar example of this situation located on Rt. 611 along Riegelsville to address an area where a bridge was out.
        - Matt Edmond mentioned a similar project example that he had been involved with along Lafayette Street in Norristown. Mentioned that a quad gate needed to be installed where the trail and Lafayette Street intersected with Ford Street. The quad gate in this project was intended to avoid having traffic backing up from the signal (on a red phase) into the track area. He mentioned that a similar solution may be needed here.
        - Team to investigates gates & backups and ADT (or Average Daily Traffic) as part of these concept sketches.
    - Washington Street – Typical Cross Section
        - Pattie Guttenplan asked why there was a grass verge, sidewalk, and then street trees that aren’t located closer to the street and given its location, why they are being called street trees.
        - Kristin Norwood explained that this arrangement follows the design from 901 to maintain continuity.
        - Wayne Masters mentioned that he would like to see a buffer or shoulder for emergency services entering Whitemarsh in the Eastbound direction, as they would otherwise have to veer into oncoming traffic.
        - Bob Dambman reiterated that 901 was a tight site and this was likely the only place that street trees could go, necessitating that arrangement for the development.
        - Jack Fields mentioned that trees further off the road provide better sight lines and causes less issues with trimming and visibility.

- Deb Harris mentioned that 901 was required to have shade trees and that this is likely the arrangement that they ended up needing to be in.
- Alicia questioned the purpose of making space for the trees when the bigger focus of this area is to provide enough space for access for emergency services and the public along Washington Street.
- The team clarified that the street trees are shown and labeled on the plan as "where space allows" because it would be ideal to include them wherever they can fit. The design was created with the understanding the space along Washington Street is extremely limited and that other amenities will often need to take priority, like wide enough cartways and emergency access. However, given the conceptual and guiding nature of the plan it felt important to express the intent that they be included along the street wherever possible.
- Charlie Guttenplan clarified that there is less than a 50' ROW in most areas along Washington. Development in the ROW will be constrained regardless of ROW size by the proximity to the SEPTA ROW as there is only so much space that can be taken before we are too close to the railroad tracks.
- The team clarified that Washington Street is classified as residential road and has a 56' wide ultimate ROW. Given these constraints it will likely necessitate leaving the road centerline where it already is. The road centerline will also need to align at the municipal boundary.
- Pattie Guttenplan mentioned that there are overhead utility lines that should be included in the cross section if they are to remain above-ground.
- Mark Cassel mentioned that value of street trees and how they tend to keep speeding down, provide a sense of enclosure that changes the feel of the road, as well as having environmental benefits.
- Christian Fassbender clarified that 901 Washington was a very tight site and this arrangement was how the applicant was able to get in all of the required street trees.
- Bob Dambman asked how the paved shoulder would handle stormwater. Kristin Norwood mentioned that as we are still in the conceptual phase. That will need to be a consideration, but it will be worked out in more detail down the road.
- Note that the Whitemarsh Ordinance requires a 5' street tree planting zone.
- Kristin Norwood concluded by explaining that the team will take these comments into consideration and make changes accordingly to ensure that all the needs and constraints fit together.

o Parking Garage Concept Sketch
- Emily Paskewicz clarified by saying that the first order of business for solving parking would be continue pursuing shared parking agreements with private businesses and properties within the study area. However, given how significant of an issue is has become throughout the study area, the parking garage concept is being studied to examine another option. In the Key Person Interview with Spring Mill Corporate Center, representatives expressed interest in this concept and potentially exploring it further.
- The current conceptual garage footprint will need to be revised to allow for sight distance.
- Chris Lane expressed that a garage should be a low priority within this study. He mentioned that the SEPTA parking is never completely full anymore and that give then amount of parking existing and underutilized

in the study area, pursuing shared parking and using what is existing should be the first priority.

- Alicia Bloch mentioned that there has been an uptick with use and fullness of the SETPA lot again and that parking is always an issue within this area that needs to be addressed. She mentioned that she sees a lot of spillover of people using the Courts and Spring Mill private parking.
- Quaker Park's parking was mentioned again as a high priority for forming a partnership and establishing shared parking given that it is rarely full.
- It was mentioned that Quaker Park is no longer allowing any members of public to use its lot at all.
- Krista Heinrich mentioned that she is still working to make contact with Quaker Park to discuss this further and it is still being considered**.**
- Craig Nichols mentioned that David's Bridal would still be willing to discuss shared parking for their lots on off-hours and weekends.

o Floodlines Street Art and Educational Signage Concept Plan:

- Emily Paskewicz explained that this concept plan uses the flood line from Hurricane Ida to create street art to help users better understand the floodplain that the entire Spring Mill Area is located within. Signage with a QR code links users to a potential township landing page with more information and explanations of what the Township is doing to address flooding. It was also mentioned that this will not be the only way the project addressed flooding, but rather one piece of a broader plan to incorporate street art and build public awareness.
- Committee members asked if this was the first time something had been done like this. The team responded that similar public education project to showcase flooding have been done in other cities, but perhaps not using this specific method.
- Michelle Harris and Pattie Guttenplan expressed concern over the thermoplastic paint and slipping issues.
- Bob Dambman expressed those improvements should be flood proof and environmentally minded material should be used.
- Alicia Bloch mentioned in chat feature that the center rendering indicates that the flood waters came up much higher than they actually did.

o Land Use Concept – North Lane

- Emily Paskewicz mentioned that the representatives from Spring Mill Corporate center had shown an interest discussing a potential sale or change of use for the lot along North Lane. With development and flooding concerns in the study area, as well as the proximity to the Spring Mill SEPTA station and SRT, the North Lane lot as well as the larger lots above the David's Bridal Warehouse (which are poised for re-zoning) both of these lots seemed well suited for transit-oriented development.
- Debra Harris mentioned that if David's Bridal was interested in moving locations, this parcel could potentially be ideal.
- Craig Nichols said that this is something that David's Bridal may be willing to discuss.
- Charlie mentioned that in talks with Spring Mill Representatives there was interest in both sharing the existing parking and providing less parking moving forward. Transit Oriented Development could be a good way to support these goals.
- Charlie Guttenplan also mentioned the potential for the large lots above the Warehouse to be-zoned and either re-develop as TOD or some sort of open space with a potential connection to the future Miracle-Nature Trail.

        - Pattie Guttenplan mentioned that the county just finished up their model TOD guidelines which could be helpful when considering this option.
        - Mark Cassel mentioned that some are using the term transit supported communities in place of TOD as it is considered more inclusive. He also expressed some concerns about considering this TOD when the train station is a bit of a walk, particularly up and down a significant hill.
- **Thanks, and Reminders:**
    - The sketches discussed tonight will be emailed out to the group on Tuesday. Steering Committee members should review and provide comments and feedback to the team no later than end of business on Monday 1/17/22.

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEETING MINUTES – STEERING COMMITTEE MEETING #5

Date:	February 25, 2022
Reference:	Spring Mill SC Meeting #5 – Agenda Packet G&A Project No. 20-12028

Summary

The fifth Steering Committee meeting for the Spring Mill Multi-Modal and Land Use Study was held on Monday, February 23th 2022 at 5:30 PM via Zoom. The meeting minutes are as follows:

Attendance

Charlie Guttenplan (Whitemarsh), Derek Lombardi (DVRPC), Christopher Lane (Whitemarsh Open Space), Debra Harris (Whitemarsh EAB), Christian Fassbender (Whitemarsh Shade Tree), Robert Dambman (Whitemarsh Planning Commission), Pattie Guttenplan (MCPC), Mark Cassel (SEPTA), Bob Kent (SEPTA), Jack Fields (Whitemarsh), Matt Edmond (MCPC), Terrance Kassis (David's Bridal), Kristina Flatley (David's Bridal), Michelle Harris (Montgomery County), Wayne Masters (Spring Mill Fire Co.), Kristin Norwood (Gilmore), Krista Heinrich (Gilmore), and Emily Paskewicz (Gilmore).

Minutes

- **Welcome & Introduction of New David's Bridal Representative (Terrance Kassis) by C. Guttenplan.**
- **Review of Schedule & Timeline**
  - Following the meeting, SC members will receive a packet containing all sketches & plans discussed in the meeting. **Feedback and questions should be emailed to Emily Paskewicz by the end of the day on Friday, 2/25.**
  - Feedback will be compiled, and sketches and plans will be revised ahead of the **Final Public Presentation and listening session which will be held on Thursday March 3rd from 6 – 7:30 PM via Zoom.** The meeting will introduce new attendees to the study area and project while presenting recommendations and options for improvements and solutions to each of the study area's key issues. The public will have the opportunity to ask questions and offer feedback.
  - Revisions will be made based on public comment and a draft final report will be prepared along with all conceptual plans and sketches in early March.
  - The Township will have the opportunity to review and make revisions to the report and conceptual plans
  - **By March 28th the full draft report will be sent out to the Steering Committee Members.** Steering Committee members should plan to review the report ahead of the 6th Steering Committee Meeting.
  - **The 6th Steering Committee Meeting will be held via Zoom on April 11th at 5:30 PM.** Please make every effort to attend and come prepared to discuss and provide feedback on the draft report.
  - The report will be presented at a Planning Commission Meeting on either May 10th or May 11th.

- The plan will be presented to the Conshohocken Borough Council on June 1st.
- The plan will be presented to the Whitemarsh Board of Supervisors on June 9th.
- By late June the study will be finalized and sent to DVRPC.

- **Old Business**
  - KPI findings
    - Krista Heinrich summarized the KPI findings and noted that they are similar to the overall survey findings with a focus on traffic, parking, and safe multi-modal connectivity and some focus on recreational access and local business development.
    - Krista Heinrich explained that David's Bridal participated in two KPIs. These interviews revealed that the company is likely to begin renovations on the first floor of the building in the currently Washington Street location and is unlikely to move in the near future or be able to accommodate the kind of building removal and renovations needed to allow for two-way traffic on Washington Street on their property. Representatives did however, express a willingness to work with the Township on the project wherever possible, including examining the possibility of a riverwalk trail and boat launch or river access on their property.
- **New Business**
  - Washington Street – Two Way Traffic
    - Kristin Norwood explained that this is a conceptual plan and represents a future "best case scenario" for the Township that is not possible with David's Bridal's current operations or future plans. The plan shows two-way traffic, a 6' should and sidewalk access and pedestrian crossing improvements across the SEPTA railroad tracks.
    - Terrance Kassis expressed that David's Bridal has seen this plan and understand that it is being presented as a future conceptual ideal. However, he expressed that is it not feasible or desirable with David's Bridal's currently operations or future plans.
    - Mark Cassel asked about whether or not pedestrian gates would be provided on both sides of the tracks. Kristin Norwood answered that they are provided on the East side and would be provided on both if determined necessary. He also asked about the location of a vehicle gate and Kristin Norwood responded that the Township would be coordinating with SEPTA to provide the appropriate improvements.
  - Spring Mill Junction – Concept Sketch A
    - Emily Paskewicz explained that this plan shows areas where existing vegetation should be removed and replanted with low-growing natives to improve visibility while providing vegetative coverage for this area. The plan also proposed bollards and increased signage along the SRT and stop signs and bars for vehicles entering the cul-de-sac from either direction.
    - Debra Harris questioned the rationale behind providing native shrubs and groundcovers, which can often be higher growing than non-natives and asked if the team had considered trimming or "limbing up" existing trees to provide proper visibility. Emily Paskewicz responded that low-growing typically implies less than 3' height and that they would recommend "limbing up" healthy, non-invasive trees in place of removal wherever possible.
    - Mark asked if pedestrian access and direction throughout this area had been considered. Emily Paskewicz responded that this plan, as the "less invasive option" does not examine that, however other concepts do.

- Spring Mill Junction – Concept Plan B
  - Emily Paskewicz explained that this “higher impact” option creates a paved (or stamped concrete plaza” throughout the cul-de-sac which uses a paver change in the center and edges to redirect traffic and pedestrians and to warn vehicles in either direction that they are entering a “pedestrian first space”. The plan also recommends extending the paving 50-100’ along either direction of the trail to warn trail users of the change in uses and space.
  - The bollards were heavily discussed. Some users disliked them as trail users, and most agreed that more traditional gates were also not ideal as they create a bottleneck situation. Michelle Harris said that the SRT is currently in the process of replacing all gates with a single bollard as it is easier for maintenance, emergency access, and tends to cause less issues with bottleneck. The plans will be revised to show one bollard at both trail connections to the cul-de-sac.
  - Debra Harris expressed that the paving around the outer edge of the cul-de-sac may channelize cars to an area that most pedestrians are likely to use, causing conflict.
  - Michelle Harris also reiterated that this design should include more clear direction for vehicles and that a traditional crosswalk, of some variety would be needed in this area, regardless of the paving.
  - Mark Cassel mentioned that the Perkiomen trail in Collegeville Borough used a concrete crosswalk that seemed to work well.
  - Bob Dambman mentioned that he had seen other trails users’ boulders on the side of trails ahead of intersection to both warn users and provide a waiting/seating area. Michelle Harris expressed that they have used this strategy on other trails and liked the effect with the exception of dog walkers who use that shoulder area for a dog on the trail and cars that drive over boulders which are too small.
- Spring Mill Gathering Space Concept Plan & Rendering
  - Emily Paskewicz explained that this plan is intended to address the buildup of trail users both in the cul-de-sac and on the curb, sidewalk, and road in front of the tricycle shop. It connects up from the trail to provide a deck over the lower lying areas of Spring Mill County Park, which could offer seating, public events space, and educational signage. It is aligned across from the tricycle shop not to be used strictly by their patrons, but rather to attract the most users gathering in this area and take advantage of flatter topography on the County Park.
  - Jack Fields asked about the materials and weather floodproofing, or longevity had been considered. Emily Paskewicz responded that given the conceptual nature, materials were not selected yet, but that floodproofing measures would be an important consideration. Bob Dambman mentioned that the deck area could also be raised and use ramps to avoid flooding issues.
  - Emily Paskewicz to check if this area is in the floodplain as well as who owns the ROW that is it located in. The space is located within the floodplain and the ROW is owned by the county and likely leased to SEPTA in conjunction with SEPTA parking lot on this property.
  - Some members expressed that they liked this concept but that the long-term maintenance would need to be worked out and preformed by the Township.

- David's Bridal Lot – Public River Access Conceptual Plan
  - Emily Paskewicz explained that this plan represents a conceptual future ideal for the Township and is not currently feasible or desirable for David's Bridal's operations or future plans. The plan proposes a boat launch and staging area as well as restroom, riverwalk trail, and floodplain reforestation plantings that would replace the building and parking garage.
  - Terrance Kassis reiterated that he would like to be on record stating that this plan is not feasible or desirable for David's Bridal's immediate or future plans and that the removal of the parking garage would affect already limited parking. He also stated the David's Bridal has expressed a willingness to engage in further consideration of the riverwalk trail and a boat launch (that would likely only be accessible to the public on weekends).
  - Pattie expressed concern about the drop-off where the boat ramp is currently proposed.
  - Debra Harris expressed that she feels that the bathroom needs to be closer to the trail in order to be fully utilized.
  - Michelle Harris requested clarification on whether the boat launch is located on County property or SEPTA property. Emily Paskewicz will look into this and confirm.
  - Charlie Guttenplan expressed that even if just a boat launch and riverwalk trail were installed in the near future, the boat launch would not have proper trailer access and staging area with the currently configuration of the DB parking garage.
  - Bob Dambman expressed that most people he knows would likely use a boat launch here as a carry-in boat launch and regardless of whether there is space for a trailer or staging.
- Riverwalk Conceptual Plan
  - Emily Paskewicz explained that this plan is a revised version of a riverwalk plan that has been circulated in Township planning documents over the last decade or so. It shows a trail following the shoreline of the river and jogging up to Washington Street and around the Heinz Rowing Center property as they cannot allow the trail due to insurance issues.
  - Charlie Guttenplan explained that all developer's who proposed plans in this area are required to install some form of the trail to connect to what is existing in Conshohocken. 901 Washington will be installing it as their construction unfolds and the property on the western edge of the study are will also install a trail that connects to the existing trail in Conshohocken in the coming years.
- Concept Vignette - Sundafu Recycling Center
  - Emily Paskewicz explained that this sketch shows native plant buffering for the Sundafu Recycling Center as is currently visible from the SRT. This parcel is included as this use is generally incompatible with it's surroundings but is unlikely to change in the near future.
  - Charlie Guttenplan reiterated that there are several single-family homes located along Center Street which the recycling center is located on that most likely would not want access through the recycling center from the trail to Center Street. Therefore, he recommended filling in the "access to the trail" shown on the sketch with plantings.

- **Thanks, and Reminders:**
    - The sketches and KPI summary discussed tonight will be emailed out to the group on following the meeting. Steering Committee members should review and provide comments and feedback to the team no later than end of business on Friday 2/25.
    - Steering Committee members should be on the lookout for an email from Emily Paskewicz around 3/28, likely containing a Dropbox link, with the draft report. Please review the report ahead of the 6th Steering Committee Meeting on April 11th and come ready to discuss.

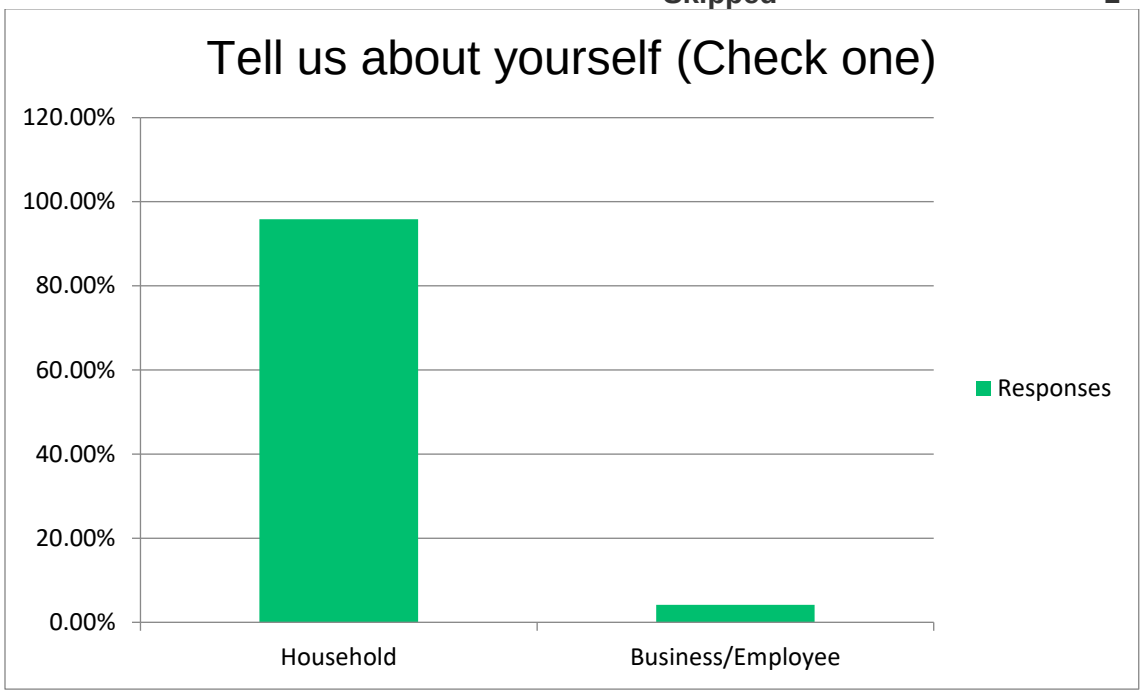
Appendix D - Public Survey Results

Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 1

Tell us about yourself (Check one)

Answer Choices	Responses	
Household	95.88%	628
Business/Employee	4.12%	27
Answered		**655**
Skipped		**1**

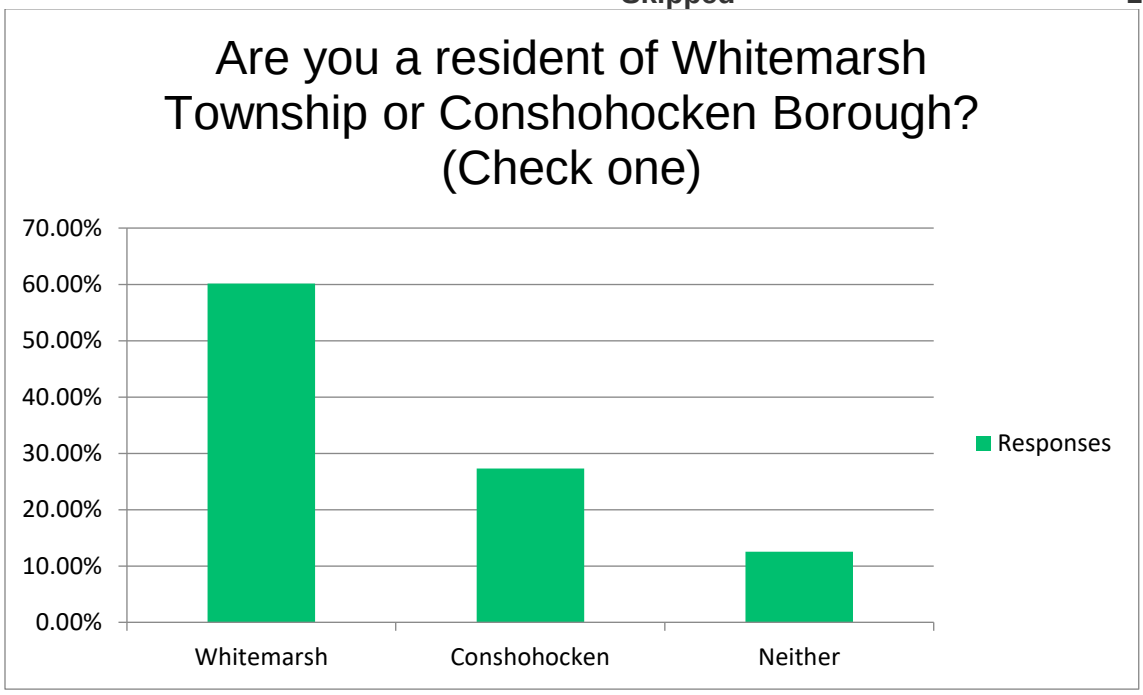


Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 2

Are you a resident of Whitemarsh Township or Conshohocken Borough? (Check one)

Answer Choices	Responses	
Whitemarsh	60.15%	394
Conshohocken	27.33%	179
Neither	12.52%	82
Answered		**655**
Skipped		**1**

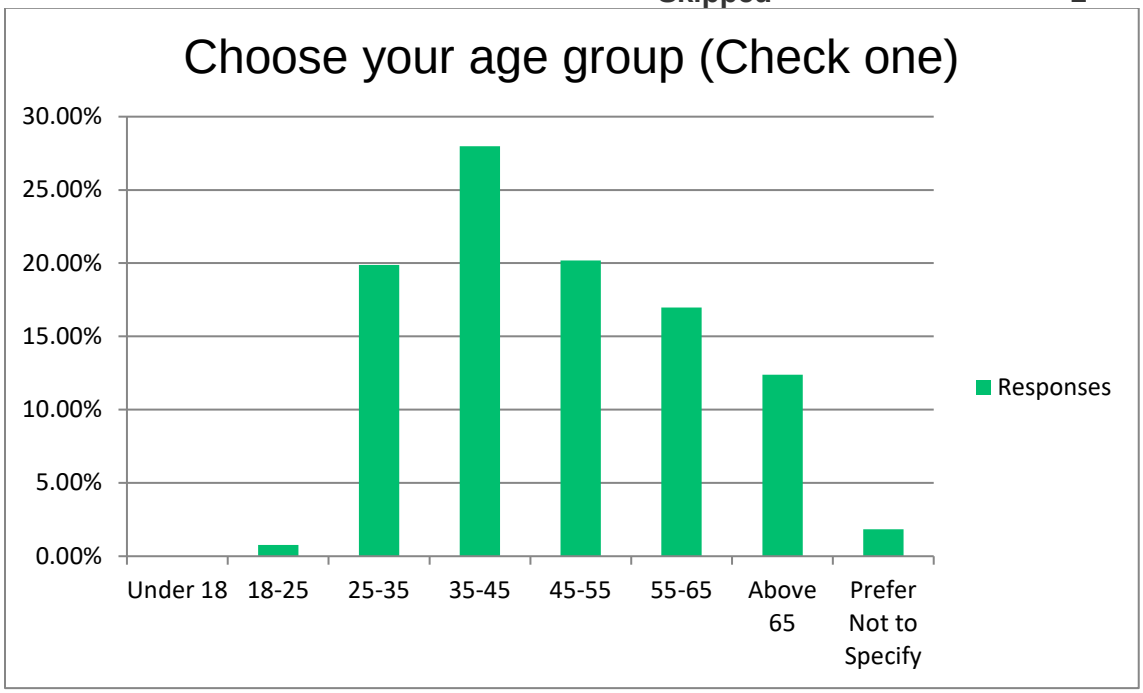


Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 3

Choose your age group (Check one)

Answer Choices	Responses	
Under 18	0.00%	0
18-25	0.76%	5
25-35	19.88%	130
35-45	27.98%	183
45-55	20.18%	132
55-65	16.97%	111
Above 65	12.39%	81
Prefer Not to Specify	1.83%	12
	Answered	**654**
	Skipped	**2**

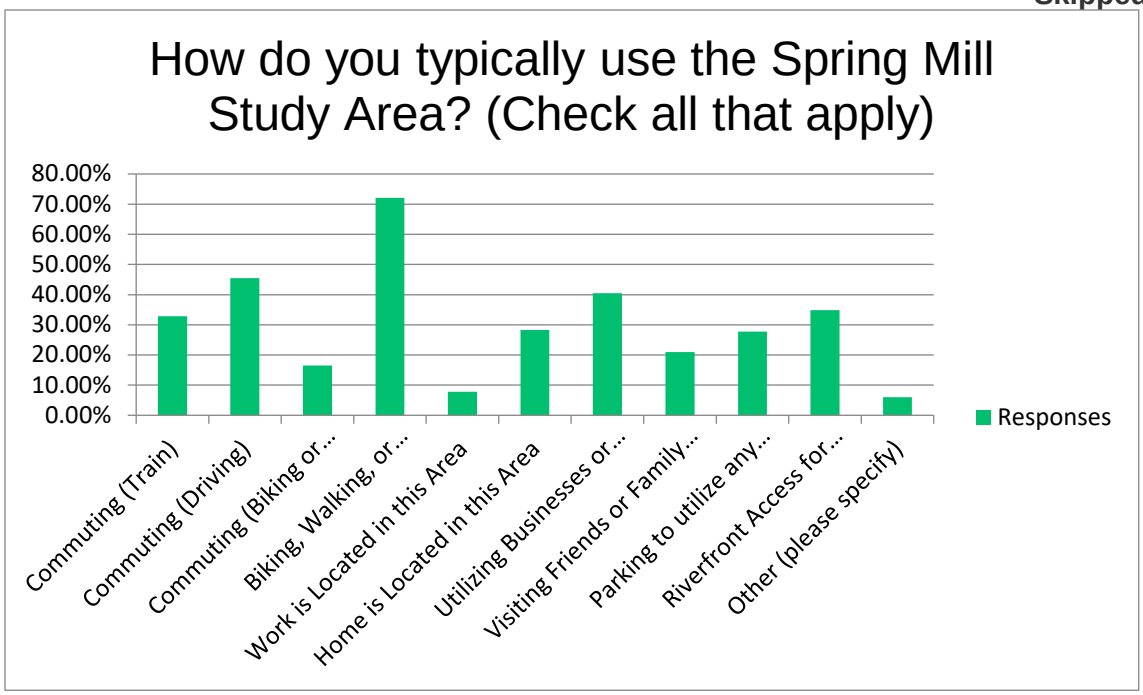


Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 4

How do you typically use the Spring Mill Study Area? (Check all that apply)

Answer Choices	Responses	
Commuting (Train)	32.82%	215
Commuting (Driving)	45.50%	298
Commuting (Biking or Walking)	16.49%	108
Biking, Walking, or Running for Recreation	72.06%	472
Work is Located in this Area	7.79%	51
Home is Located in this Area	28.24%	185
Utilizing Businesses or Services Located in this Area	40.46%	265
Visiting Friends or Family Located in this Area	20.92%	137
Parking to utilize any Features in or near the Study Area	27.79%	182
Riverfront Access for Recreational Purposes	34.81%	228
Other (please specify)	5.95%	39
	Answered	**655**
	Skipped	**1**



"Other (Please Specify) Responses"

1	Owner of residential property
2	Rowing
3	Community Garden
4	Conshohocken Garden
5	I'm part of the Conshohocken Community Garden.
6	Gardening

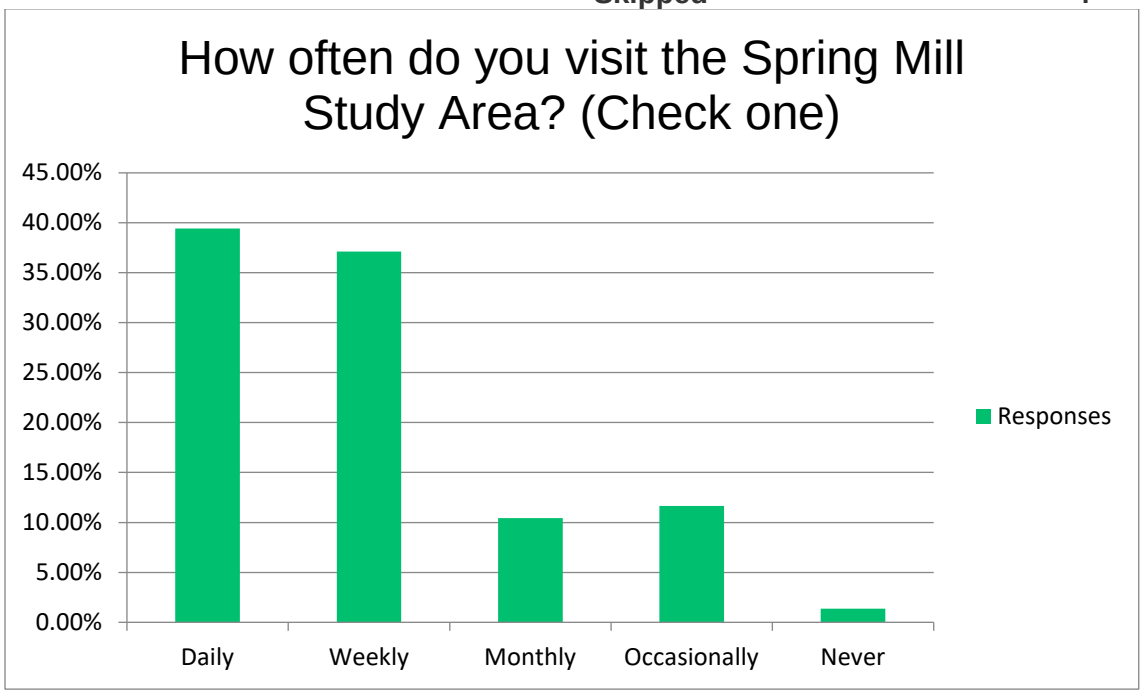
7	Access to community garden on Elm Street
8	Member Conshohocken community garden
9	Community garden located on Elm Street
10	Community garden
11	Environmental sustainability through gardening
12	Community garden
13	Train for pleasure
14	9
15	Walking to restaurants
16	Live just outside this area
17	Driving through the area to head to Schuykill or Main Line
18	Firehouse
19	Firehouse
20	Not currently using we have dinner occasionally
21	Daughter lives @ spring mill station
22	Volunteer firefighter at Spring Mill Fire CO.
23	spring mill fire volunteer
24	VOlunteer firefighter of Spring Mill Fire Co No. 1
25	Fishing, in the past I would put a small boat in at the train station
26	Driving through to get to Fayette St.
27	Volunteer fireman at Spring Mill Fire Company
28	Quiet place to go and get away from busy Main Street traffic.
29	Techinally I'm in Conshohocken but I am at the border.
30	Drive through on my way to work in W. Conshy
31	Hines Rowing Center
32	Access to area restaurants (Spring Mill Cafe, Coyote Crossing, and others.
33	Outdoor activities
34	Spring mill fire volunteer
35	I live just outside the area on Barren Hill Rd.
36	live just outside focus area
37	Taking train into town for recreational/cultural purposes.
38	Horseback riding
39	I use the paths recreationally

Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 5

How often do you visit the Spring Mill Study Area? (Check one)

Answer Choices	Responses	
Daily	39.42%	257
Weekly	37.12%	242
Monthly	10.43%	68
Occasionally	11.66%	76
Never	1.38%	9
Answered		**652**
Skipped		**4**

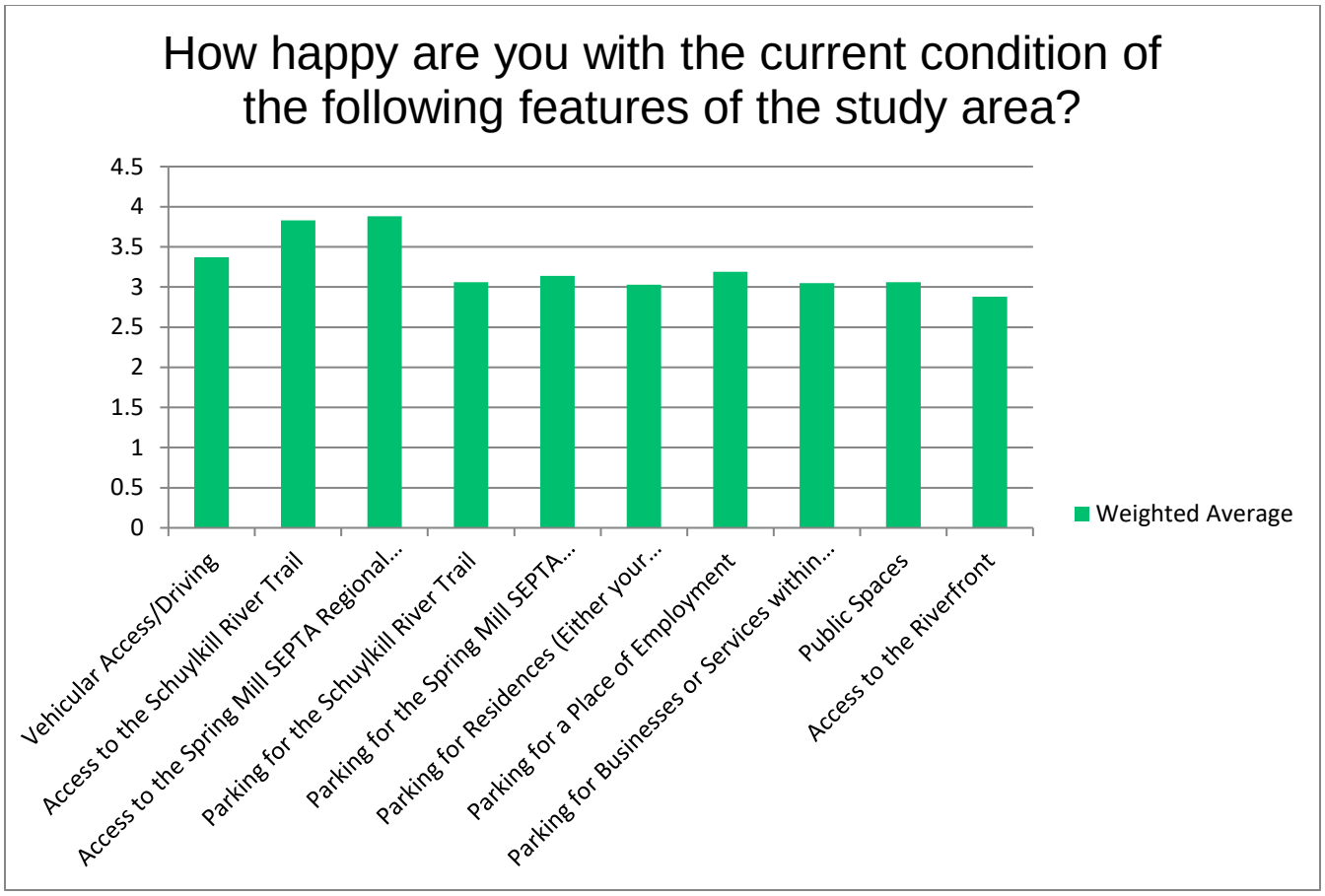


Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 6

How happy are you with the current condition of the following features of the study area?

	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied		Total	Weighted Average
Vehicular Access/Driving	15%	98	37%	234	24%	155	18%	113	6%	40	640	3.37
Access to the Schuylkill River Trail	34%	217	34%	218	17%	112	12%	78	3%	19	644	3.83
Access to the Spring Mill SEPTA Regional Rail Station	34%	220	33%	210	21%	135	10%	66	2%	11	642	3.88
Parking for the Schuylkill River Trail	15%	96	21%	133	30%	191	25%	164	9%	60	644	3.06
Parking for the Spring Mill SEPTA Regional Rail Station	15%	97	20%	131	36%	233	20%	126	8%	54	641	3.14
Parking for Residences (Either your residence or one that you visit)	10%	61	13%	82	53%	325	16%	98	7%	43	609	3.03
Parking for a Place of Employment	10%	55	8%	46	76%	436	5%	30	1%	8	575	3.19
Parking for Businesses or Services within the Study Area	9%	52	19%	118	45%	275	22%	132	5%	30	607	3.05
Public Spaces	11%	69	29%	181	24%	149	29%	181	8%	49	629	3.06
Access to the Riverfront	12%	75	24%	153	21%	131	28%	177	16%	101	637	2.88
										Answered		**654**
										Skipped		**2**

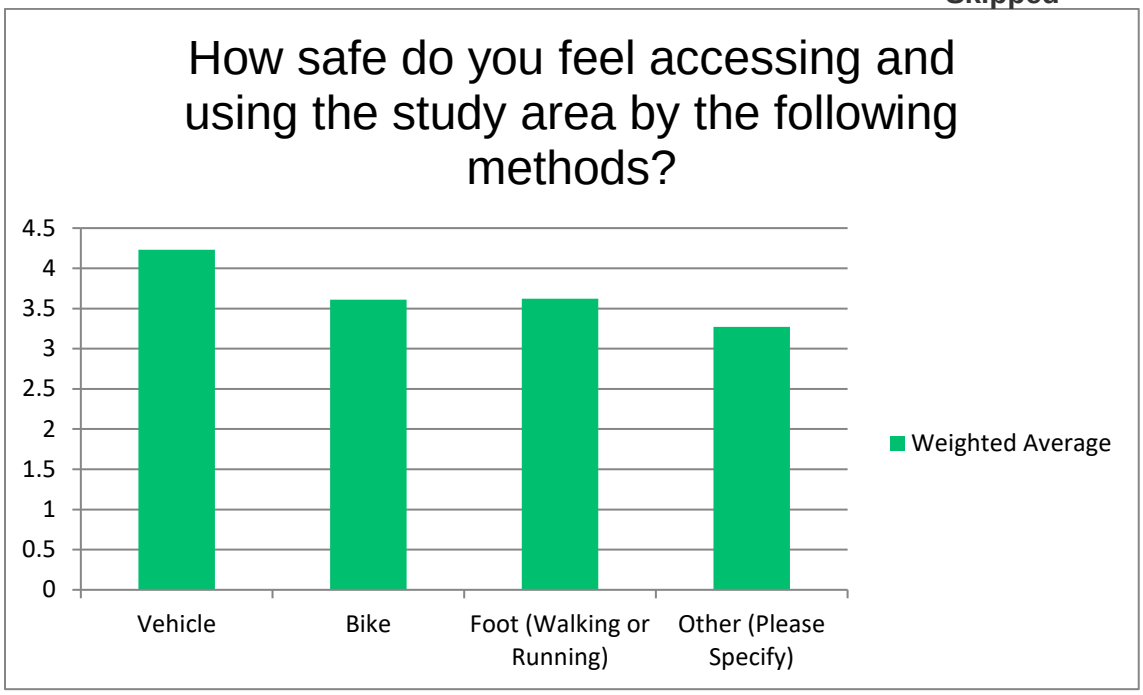

How happy are you with the current condition of the following features of the study area?
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Vehicular Access/Driving
Access to the Schuylkill River Trail
Access to the Spring Mill SEPTA Regional...
Parking for the Schuylkill River Trail
Parking for the Spring Mill SEPTA...
Parking for Residences (Either your...
Parking for a Place of Employment
Parking for Businesses or Services within...
Public Spaces
Access to the Riverfront
Weighted Average

Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 7

How safe do you feel accessing and using the study area by the following methods?

	Very Safe		Somewhat Safe		Neither Safe Nor Unsafe		Unsafe		Very Unsafe		N/A		Total	Weighted Average
Vehicle	48%	311	32%	205	11%	74	6%	38	1%	5	2%	11	644	4.23
Bike	19%	123	35%	224	16%	98	15%	95	3%	17	12%	75	632	3.61
Foot (Walking or Running)	23%	149	38%	246	14%	93	18%	119	3%	19	3%	22	648	3.62
Other (Please Specify)	6%	17	8%	25	17%	53	6%	17	2%	5	62%	189	306	3.27
Specify 'Other' Here:													34	
											Answered			**654**
											Skipped			**2**



Question 7 "Other (Please Specify)" Responses	
1	Would like more lighting.
2	Running
3	several decrepit and overgrown areas
4	Sidewalks don't exist on one sides of North Lane and other streets.
5	I did have an incident on the Friday before Memorial Day on the SRT. I did file a police report. I would like to see it patrolled more by the police.
6	Hector street sidewalk needs to be maintained near the intersection of hector and cedar grove
7	during daily light hours and with a friend
8	There should be two separate trails for biking and walking along the river. It gets much to congested with all the bikers and dangerous.
9	Not safe if you are getting off the train after dark
10	do not use this area for walking or biking
11	Intersection of Lee St and Hector St can be quite busy and difficult to cross as a pedestrian
12	Safe depends on time, light, etc.
13	people drive extremely to fast, ignore stop signs, pull over anywhere to pick up food
14	Biking/walking on trail is safe, but getting to the trail is unsafe - especially for those coming from whitemarsh where there's zero walkability in the connection & very dangerous roads
15	Auto and truck traffic crossing the SRT is very dangerous… no stop signs is not acceptable
16	Safe while on the trail. GEtting to the trail is a huge challenge with limited bridge access & limited river access.
17	Bikers can make the path unsafe.
18	Cars often ignore signs for pedestrian right of way.
19	I can't express the amount of traffic that has increased in this area since moving here. There is constant cars racing up our street. We have very young children and we don't go outside in the front. The glass repair also has their employees RACING up the alley.
20	Pedestrian crossings are dangerous, yield signs are ignored.
21	Paving and road conditions
22	NO ONE stops at the pedestrian crossing at East Hector and Lee
23	People cut through parking lots and fly across trail to catch train/pick up riders
24	Cars don't slow for pedestrians crossing Hector; an immediate-action ped crossing light should be put in!
25	Flooding
26	Bikers are reckless, cars drive too fast, parking rules not enforced. Too much traffic.
27	Outdoor activities
28	Accessing the train after parking.
29	Could be made safer early and late with better public space and lighting
30	Peope speed along Cedar Grove. Trees are not trimmed therefore a walker can not see if cars are coming.

31	Unsafe after dark
32	Appropriate yield to horses signs on trails would be helpful
33	Biking along the streets in this area is challenging and dangerous without a dedicated bike lane
34	I live just outside the study area on Joshua but enjoy walking and running the train the walk along Joshua to the study is very dangerous. Being Joshua would be the route most residents take to the study area, it probably hinders the use of the area and forces people to drive to parking lots to access the trail instead of biking walking or jogging there

Spring Mill Area Multi-Modal and Land Use Study - Public Survey

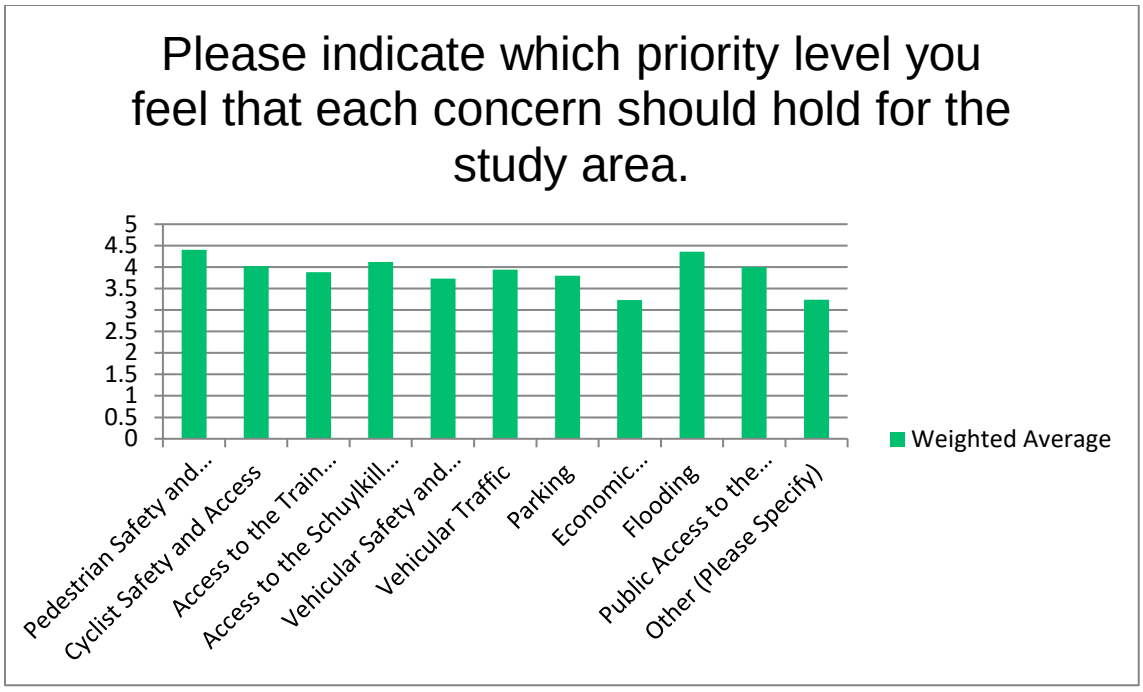
Question 8

Please indicate which priority level you feel that each concern should hold for the study area.

	Very High Priority		High Priority		Neither High Nor Low Priority		Low Priority		Very Low Priority		Total	Weighted Average
Pedestrian Safety and Access	54%	345	35%	223	8%	52	1%	9	1%	6	635	4.4
Cyclist Safety and Access	39%	251	37%	237	14%	90	5%	34	4%	26	638	4.02
Access to the Train Station	28%	174	44%	277	20%	129	6%	35	3%	16	631	3.88
Access to the Schuylkill River Trail	36%	230	45%	282	15%	94	3%	17	1%	9	632	4.12
Vehicular Safety and Access	25%	159	38%	241	25%	158	7%	45	4%	26	629	3.73
Vehicular Traffic	35%	222	36%	230	18%	116	7%	44	3%	19	631	3.94
Parking	26%	160	40%	252	24%	151	8%	48	2%	12	623	3.8
Economic Development Opportunities	18%	114	25%	157	29%	185	17%	106	11%	66	628	3.23
Flooding	56%	355	29%	181	12%	73	3%	17	1%	6	632	4.36
Public Access to the Riverfront/River	39%	246	34%	216	19%	118	5%	34	3%	19	633	4
Other (Please Specify)	23%	40	5%	8	60%	105	1%	1	13%	22	176	3.24
Specify 'Other' Here:											57	

Answered **652**

Skipped **4**



Question 8 "Other (Please Specify)" Responses	
1	Zoning-allow some additional buildings to be constructed at 434-440 North ln
2	Bikers should not be permitted on the roads, they should be required to use the trail.
3	Community Garden should be part of this discussion. It's a wonderful green space and the community loves it. Needs to remain where it is.
4	Flooding and drainage runoff
5	Slowing down traffic to make the area more desirable
6	Bike path that connects to Joshua and Barron hill
7	Overdevelopment
8	Extensive building in flood plain must stop
9	Parking permits - trail visitors occupy the little parking that is available for residents (E Elm)
10	Drivers speed on cedar grove road. Need more speed restrictions especially with many kids living on spring mill road near cedar grove barn.
11	Would like to see more public spaces, like shops and restaurants developed down that way. It'd make for a great walkable destination as well as recreational area
12	Sidewalks at cedar and hector
13	I believe there needs to be access to the river for activities such as standard up paddle boards and kayaks
14	Preservation of natural lands and creeks
15	The SRT needs to be cleaned up after recent flooding. The trail still has trash and the smell of chemicals.
16	Need another stop sign on hector between north lane and Jones st

17	Great location for a vehicular bridge to cross the river
18	People and bicycles over cars.
19	Access to the river for recreational purposes
20	Way-finding signage
21	to many housing communities with no plans for road improvement, traffic flow, or accommodating schools for huge influx of children moving into district
22	The trail is great, but we need more walkability in getting to the trail.
23	Fulfill OBLIGATION to build an "amphitheater" based on Zoning application(s) that was(were) approved.
24	Recreation
25	More waterfront access activity and business
26	BOAT RAMP IS NEEDED FOR PUBLIC SAFETY - SPRING MILL SHOULD HAVE A SAFE BOAT RAMP
27	boat ramp
28	Less traffic, less noise, leas development the better, nice and quiet neighborhood the way it is.
29	Do not over develop this fragile area
30	Clean the Spring Mill park trails it's unusable full of dog poo and now flood waste
31	Lighting in trail
32	NA
33	Dog park
34	Developers should be responsible for flood mitigation/ clean up costs as continued increases to impermeable coverage benefit them while adversely impacting residents
35	The area would be great for another river crossing point
36	Fix sewage smells from plant
37	Bathrooms & water for recreactional users!
38	Need better access to the boat houses including a second entrance where Washington Street dead ends..
39	Stop building/construction of all structures and fix our roadways and infrastructure
40	Density of development will push into Conshohocken and the residential avenues as through way. Need to make sure Whitmarsh does NOT continue to push vehicles into Conshohocken
41	N/A
42	This area needs to be developed in a responsible way. It needs to be multi-purpose for residential, business, retail, green and recreational space.
43	Flooding is going to be a problem for years. It is decreasing the value of our homes. We lost everything. Please do something!
44	Don't allow business and residential that continue to add to the parking troubles for the tax lots. We have business that don't have enough parking for there guests and that over flows into the neighborhoods.
45	We can't build in the River flood zone anymore.
46	Clean up post flooding / Indicating inaccessible roads
47	Maintaining open/natural areas

48	We could use the waterfront better!
49	I can be tough to park by the trail at Tricycle. I love more access in that area. Sometimes I park in the business area by the condos, but that may be illegal.
50	Fire company's access to the river front with boats.
51	Protection of natural resources and residential property owners. Preservation of the village atmosphere of Spring Mill.
52	make is useable wider traffic lanes more access NO MORE DEVELOPMENT
53	Green space and a flood zone
54	Overdevelopment
55	Cleanup of Spring Mill County Park - it's a horrible mess of trash from the scrap metal recycling plant.
56	Yeild signs for horse, pedestrian, bike on the multiuse trail.
57	This question did not allow me to select multiple items as very high. This area has the ability to link the commercial areas of Conshohocken and whitemarsh and if done properly that link could be through walking and biking, limiting auto use and create more economic development

Spring Mill Area Multi-Modal and Land Use Study - Public Survey

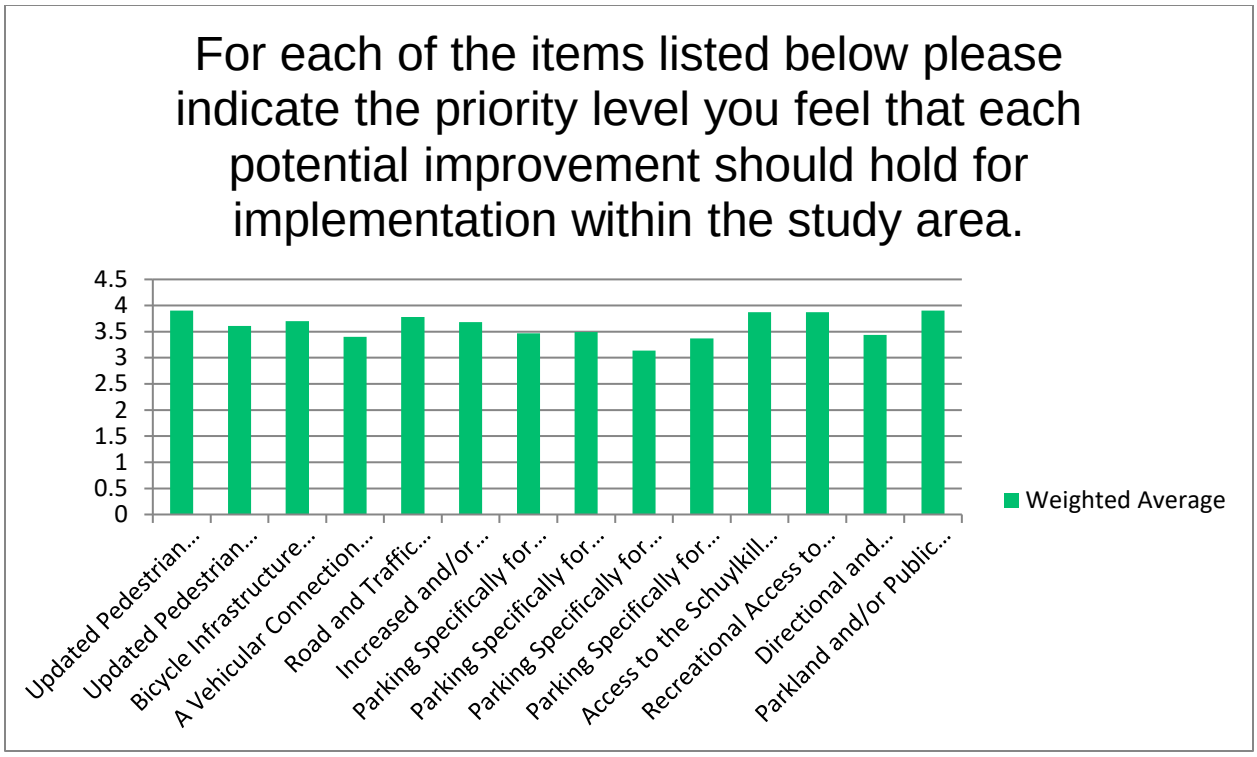
Question 9

For each of the items listed below please indicate the priority level you feel that each potential improvement should hold for implementation within the study area.

	Very High Priority		High Priority		Neither High Nor Low Priority		Low Priority		Very Low Priority		Total	Weighted Average
Updated Pedestrian Street Crossings	34%	214	34%	213	23%	144	7%	43	2%	15	629	3.9
Updated Pedestrian Railroad Track Crossings	25%	154	29%	183	32%	202	10%	63	4%	24	626	3.61
Bicycle Infrastructure (Bike Lanes, Bike Racks Etc.)	27%	169	36%	227	23%	146	9%	54	5%	34	630	3.7
A Vehicular Connection Where Washington Street Dead Ends	21%	132	24%	151	36%	229	11%	66	8%	50	628	3.4
Road and Traffic Pattern Changes to Address the Bottleneck at the Junction of Lee St., the SRT, and SEPTA Tracks	29%	183	36%	224	25%	159	4%	28	6%	35	629	3.78
Increased and/or Updated Parking	22%	137	39%	245	28%	175	6%	40	4%	27	624	3.68
Parking Specifically for the SRT	17%	106	33%	205	35%	218	9%	55	6%	35	619	3.47
Parking Specifically for the Train Station	19%	119	30%	190	36%	225	10%	60	5%	30	624	3.49
Parking Specifically for Businesses	8%	52	26%	158	46%	282	12%	75	8%	50	617	3.14
Parking Specifically for Residences	19%	115	23%	142	42%	259	11%	66	6%	37	619	3.37
Access to the Schuylkill Riverfront	32%	202	35%	220	24%	153	5%	32	4%	23	630	3.87
Recreational Access to the River	34%	212	34%	214	23%	146	5%	33	4%	27	632	3.87
Directional and Wayfinding Signage	16%	101	32%	200	36%	226	10%	61	5%	33	621	3.44
Parkland and/or Public Gathering Spaces.	33%	206	36%	224	23%	143	5%	31	3%	21	625	3.9

Answered 647

Skipped 9


For each of the items listed below please indicate the priority level you feel that each potential improvement should hold for implementation within the study area.
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Updated Pedestrian...
Updated Pedestrian...
Bicycle Infrastructure...
A Vehicular Connection...
Road and Traffic...
Increased and/or...
Parking Specifically for...
Parking Specifically for...
Parking Specifically for...
Parking Specifically for...
Access to the Schuylkill...
Recreational Access to...
Directional and...
Parkland and/or Public...
Weighted Average

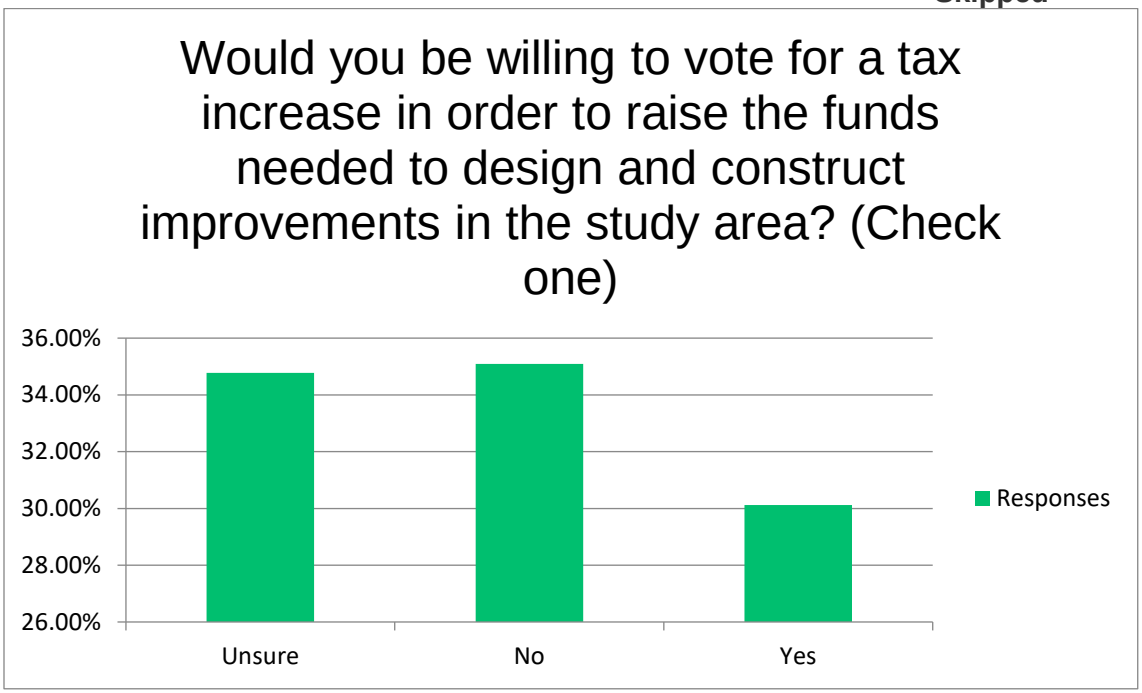
Spring Mill Area Multi-Modal and Land Use Study - Public Survey

Question 10

Would you be willing to vote for a tax increase in order to raise the funds needed to design and construct improvements in the study area? (Check one)

Answer Choices	Responses	
Unsure	34.78%	224
No	35.09%	226
Yes	30.12%	194
If 'Yes', please specify what type(s) of improvements you would be most willing to do this for:		160

Answered	**644**
Skipped	**12**



Question 10 “If 'Yes', please specify what type(s) of improvements you would be most willing to do this for:” Responses	
1	Sidewalk improvements
2	Cycling infrastructure, protected bike lanes, etc.
3	Improvements to encourage biking, walking, taking train, River recreation, and discourage use of cars.
4	Schuylkill Trail
5	I moved to the Courts at Spring Mill specifically for the Trail, the Train, and proximity to everything.
6	Permit parking for residents of 800 block E Elm Street
7	Create a public space and/or walking trails with access to the river.
8	Specifically adding traffic safety measures in the area to deter speeding in the area (speed bumps/ramps, speed monitor signs, etc)
9	Green space for building hiking and mountain bike trails.
10	More development to increase the economic growth and development of the stated area
11	Increased parking for train, fixing traffic bottlenecks
12	Riverfront areas for recreation, right now there it is difficult to access
13	You have enough tax money. Use that money to make improvements and not waste it on a survey like this one that keeps asking the same questions in different ways.
14	Recreational access to the river
15	Environmental study of the uses proposed prior to developing any more area along the river. Parking areas that are pervious to absorb water runoff. Integrated/multi-use spaces - for example, daytime/weekday parking that can be utilized for recreational parking on weekends.
16	Recreation
17	Gathering spaces, recreational spaces
18	Rail and bike improvement
19	improved traffic flow, less development, more open spaces
20	Budget the money we have. Get state funding
21	Access to the riverfront; clean up along washington street
22	Update riverfront to promote recreational and commercial business
23	Bike paths
24	Increased safety, parking & access to Schuylkill river.
25	Public parking, recreational use areas, improvements to safety, infrastructure and access to SRT
26	SRT parking, public spaces, ped crossings and cycling lanes
27	Urban development
28	Flood diversion and parking permits for residents on E Elm Street
29	Speed restrictions on cedar grove road
30	Updated pedestrian street crossings and bike infrastructure

31	We already pay an increased tax to pay for green space. Why can't we repurpose some of that money into a public space fund
32	Recreational riverfront access for the public
33	Access to waterfront
34	Traffic
35	Boat ramps for kayaks and SUP, riverfront walkway and floodwalls and bike share
36	public space and access to public space
37	Public space and safety
38	Public area to be enjoyed
39	Pedestrian pathway connecting Joshua to spring mill
40	Access to the riverfront, public gathering spaces
41	Street speed
42	Increased pedestrian safety
43	Cycling Improvements & Access/Recreational Improvements along the river
44	Trail connections North toward Ft. Washington State Park.
45	River access/view
46	Improved waterfront access, boating etc.., outdoor concerts entertainment
47	Flood control improvements, if flooding similar to what happened this summer with Ida occurs on an annual or biannual basis people and businesses will not be able to reside there. SEPTA train should have been elevated or walled off when residences originally built not sure if anything can be done now but rail needs to be protected from flooding, safeguards need to be in place to protect pedestrian/cyclists/drivers from train accidents and lastly train horns negatively impact life around rail and need controls. The marking or creation of bike lanes, expansion of Philly bike share to service SRT in Conshy and Whitemarsh and boat launch for non motorized vessels like kayaks. Also sidewalks and bike lanes linking Whitemarsh to Conshohocken
48	Create a connection for elm and Washington to be used as main roads until spring mill courts. Hector st is too congested and unsafe. Additional parking for businesses so that residents don't have to compete for parking spaces.
49	Regional rail parking, flood remediation and improved recreational access to the River trail
50	Public access
51	Lighting and and crossing lights throughout conshy
52	All
53	Expanded recreational use.
54	I would pay more in taxes to stop the insane development on the river front. That ship has sailed
55	Access to river. Safety improvements. Parking enhancements.
56	safety and access
57	Traffic improvements
58	SEPTA PARKING INCREASED
59	parking for business, restaurants, etc.
60	Repave and easier acess to Washington st.

61	Riverfront accessibility and recreational public open space
62	Yes ONLY if that money would go towards improving the area for recreational purposes (walking, hiking, biking) ; NO if the money was used to build roads over current green : wooded areas
63	non-resident
64	Any/all saftey measures, particularly 4 walkers and bikers. Reduction in traffic speed. Residence have priority on street parking.
65	Leave it to the engineers, commissioners, etc.
66	Traffic on Hector Street has been increasing exponentially over the past few years. The street was always unfriendly to pedestrians and is now towing the line of dangerous, especially during rush hour. Traffic and street adjustments NEED to be made.
67	parking for train, SRT, access to SRT
68	Parkland/public gathering spaces, access to SRT
69	Flooding
70	An actual dog park
71	Only if it is for improving parks and rec, pedestrian safety, and river front access
72	Train station parking and
73	Parking, recreational improvement s like access to riverfront, flood improvement
74	Pedestrian, river front access, park/green space
75	SRT Trail Improvements
76	I feel that the things we need don't cost anything so not sure why we would need more taxes
77	Recreational access, features and safety
78	better traffic flow, more parking, more access to waterfront
79	safety, access and useable park space
80	Gathering points such as a boardwalk and benches.
81	Sidewalks & bikelanes connecting whitemarsh to the trail, would also be interested in improving the public gathering spaces there
82	Parking for residences. Safety of street for pedestrians (cars speed excessively on spring mill between 3rd & 5th)
83	Access to Riverfront and Parking down there.
84	Pedestrian and bike safety
85	increased public recreational space and access to the trail/river
86	Making the SRT even better
87	More public /shared spaces like squares and parks. Places where people can hang out without any traffic.
88	park space and parking for residents/business
89	Improved traffic flow and access to the river.
90	Realization of the plans to build waterfront with activities and restaurants
91	We need another bridge. We also need a boat ramp for Spring Mill Fire Co. With the increase in traffic & appeal to be in the area, it is so incredibly important to make the area accessible from 76.
92	Increased parking for srt & septa, bike lanes, Parks or other public gathering spaces

93	river access
94	Options for pedestrians off of bike trail, bike trail safety, Green space,
95	Conservation / safety improvements for access
96	Adding speed bump to river road turning off of barren hill road and fixing drainage issues in front of 11 river road due to townships mistakes when drainage was put in a years ago
97	Increased public space and NO more housing developments along the river
98	Road and highway improvements that improve traffic flow.
99	Parking for SEPTA and better bike/pedestrian signs near the River front.
100	Traffic and safety improvements.
101	Pedestrian and bicycle safety upgrades
102	Train parking
103	Fix the funding issue o begin with before trying to tax people.
104	More free space/mix space with business, updated bike trails, more trains
105	Parking
106	To address pedestrian and vehicular safety and accessibility.
107	Recreational accents to the riverfront, more sidewalk along North Lane, lighting on North Lane
108	Use federal funds
109	Connect Lafayette Hill neighborhoods to the SRT at Spring Mill. Bikers must take Joshua or Barren Hill Road (both dangerous). It would also allow more access to the restaurants and businesses in Conchy.
110	Traffic congestion and pedestrians safety
111	Open space
112	pedestrian/ bike safety; Washington street connector
113	River crossing (bridge), extending washington st with Lee
114	All of the above
115	Fix sewage smell, often permeates area. Flood protection. Parking
116	More public space by river, better access to riverfront, more businesses to support local residents
117	Allow zoning for infill and incremental improvements.
118	Yes, but only for those that would make the river front and/or river more usable.
119	Bicycle access to SRT and River access including swimming.
120	More public space, preferably with waterfront access
121	Parking and pedestrian usability
122	I would if this included upgrades to Washington street
123	To finally see in the so called Spring Mill Park an area for picnicking, boat ramps along the river.
124	Better sidewalks and lighting from the train station to the T intersection at Hector/Barren Hill/Cedar Grove
125	Improved experience for runners, walkers
126	Enhanced layout for SRT access and SR accessibility for individuals

127	Improvements to traffic patterns, SEPTA station access (including increased parking), and additional parking for businesses (such as Conshohocken Brewing--would rather not have to find street parking or illegally park in business parking lots).
128	Traffic control
129	Access to SRT
130	River access for fishing/boating and open space along river
131	Parking, trail access
132	Traffic improvements. Area is a disaster at rush hour. Less so since Covid but that won't last forever.
133	Access to riverfront, boat ramps, bike share, ways to minimize SEPTA and traffic intersections and reduce SEPTA noise and Horn use
134	Residential and local business access and safety
135	Residential parking permits and public kayak rental.
136	Bike access, better parking at train station
137	There are means to generate the capital needed with out raising taxes
138	I am a Plymouth Twp. resident, near Butler Pike and hope that my township is included in improvement costs.
139	Improve the infrastructure so that the homes and businesses are protected from river overflow.
140	Pedestrian/cyclist safety
141	Recreational river access.
142	parking and recreational riverside facilties
143	River access/dock access for kayaks. Enable a kayak business
144	Landscaping
145	further access to the river; safer bike paths (particularly on Barren Hill Road) and the access roads to Barren Hill Road
146	More parkland, pedestrian safety, more green/less development
147	Increase safety and decrease traffic congestion
148	if i turns the riverfront into an accessible public amenity, yes
149	Parks by river
150	Access to the river for the public. Small amount of parking for public access to SRT.
151	Pedestrian safety improvements
152	More river access
153	Clean up the entire area listed. It is run down and basically abandoned currently. You clearly know when you leave Conshohocken and entire Whitemarsh.
154	it depends on what you are doing - we shouldnt need an increase
155	Parkland and bike lanes
156	Bike and walking Trail improvements
157	Highway and pedestrian updates and safety
158	Yeild signs for multi use trail of horse, pedestrian, bike
159	Bike share along the river trail would be nice as well as a boat ramp and native plantings to green and beautify the riverfront and clear derelict vacant buildings

160	There are plans to build a small path on the river by the townhomes being constructed at 901 Washington this path should extend to the Londonberry apartments and the new apartments being developed in Conshohocken. Safe pedestrian and bike access to the study area from Joshua. A pedestrian rail crossing by David's Bridal that would open that section of Washington Street and allow pedestrians to walk a loop between the River trail and Washington Street this would also help the boat house. A boat ramp for kayakers and paddle boarders would be very helpful and good for the community people want access to the river. Boat ramp would be very beneficial. Increasing the hours when no commuters can use the surface lot at Spring Mill

Spring Mill Study - Public Survey Results

"Please share any other comments, thoughts, or ideas that you have regarding the Spring Mill Study Area:"

1	There is a ton of traffic in that area and is expected to increase. I am a resident nearby and speeding cars have caused a concern for my Children's safety. I would love to use the study area more often and support business, but would rather go places that I could safely get to.
2	The township supervisors seem to be very intent on developing much of this area for residential living, which I question their collective wisdom due to flooding (current and future) and the strain that puts on township resources. Much of this survey relates to recreation and open spaces, which I'm very much believe should be preserved as much as possible
3	The presence of the Schuylkill trail is great, but riding around the Spring Mill Study area once you get off it, to put it bluntly, sucks, as there's no bike infrastructure. Protected bike lanes would be amazing and might encourage people in town who would otherwise drive to the station to take a bike instead. A solid bike rack in an area with a lot of visibility (to deter theft) would be ideal. Traffic calming of any sort would be nice. Inducing demand by adding lanes/parking for cars will make traffic worse for cars and inherently make cycling/walking more dangerous.
4	Put illuminating stop signs along the Schuylkill trail in specific areas so that cars will have the right away as specified
5	This area is so important to so many people.
6	Too much development! This county is ruining our beautiful area. People moved here bc it was jam packed line the city and had tons of nature and green space.e Everyday this county and township sells another bit of green space. All they care about is packing more people in and making more money, no concern for quality of life. The schools are already overcrowded and traffic is out of control all hours of the day!
7	Parking on E Elm street where residents live near the brewery is a big frustration. Bikers and brewery goers as well as bar Luca guests constantly take up parking spots.
8	We need permit parking for homeowners and taxpayers of Whitemarsh township on the 800 block of E elm street. Parking with the brewery and dog day care is a nightmare when getting home from work
9	The study area has a heavy flow of commuter traffic and many of these commuters cut through the neighborhoods to access major roads. They speed, 45mph or faster, on residential roads that are 25mph. Children walk and play on and around these streets and it's a serious safety concern.
10	I run bicycle programs at AIM Academy at 1200 River Road and have a keen interest leveraging green space to build hiking and mountain bike trails.
11	Address climate-related flooding in everything that is designed and built. Add EV charging stations and solar panels to parking lots, make surfaces permeable. Use green building codes.
12	Use of public transportation should be a priority - but people don't use it if they can't find reliable parking in close proximity to the train station. Therefore, commuter parking/garage access should be considered. And cleaning up the waterfront to clear out vacant overgrown lots would also benefit the public.

13	Aggressive drivers regularly crossing the SRT in certain spots put trail users in danger regularly, I would love to see that made safer as well as better access to the river in that area
14	Disclose all financial conflicts of interests between politicians and entities wanting to build in the area.
15	Please stop building in the floodplain
16	Conshohocken Community Garden has been in this space for almost 10 years. We have a wonderful membership and always have people on the waitlist. The community really appreciates the garden as it's one of the only green spaces left in the area. Builders are coming in and being allowed to build on every blade of grass. It's truly getting out of hand. The garden members participate in many of the community activities throughout the year. We also donate fresh produce to the CNC during the summer months for the needy. We also have a table during FunFest and do activities for the kids. You need to keep some green space for the community.
17	Thank you for allowing us to weigh in on this process. This is a great opportunity to update this area in a thoughtful way that takes all components into consideration.
18	Residents should have priority! Cyclists are dangerous to pedestrians thru the area under study, there should be reduced speed for cyclists through the area and I am not in favor f increasing anything for people who fly thru on the SRT and add nothing to the local community. Access to the river and the SRT for locals is not a problem.
19	With the construction of so many high rise office buildings and dwellings the traffic on Fayette St over the bridge and the ensuing back ups from the left hand turn at the Crawford light will increase greatly. We feel this area needs to be addressed sooner rather than later!!
20	Need improvement/changes to improve traffic due to increased vehicle volumes
21	Seek alternative funding before exploring tax hikes…
22	STOP DEVELOPING THE AREA!!!!!!! There is already way too much congestion in this area. The last thing we need is more development and less open spaces. It's a nightmare to drive through the area, visit residents, or businesses. Keep the area open. Make it easy to navigate whether driving, walking, or cycling. Before developing, think about the additional traffic, where people will park, etc. Stop raising taxes. Stop building.
23	This area is Whitemarsh and their tax base therefore I don't believe Conshy has any direct power or influence over what is mandated. It's unfortunate because Conshy is directly affected (whitemarsh is not) but has no real benifit
24	Really wasn't aware that there is space down there except for the srt

25	David's Bridal? Why is this type of building here. Riverfront feels wasted
26	The addition of the Courts at Spring Mill Station was a horrible decision that has ruined the small town feel of Conshy just as bad as the Sora West development. Don't ruin this beautiful area with more development & more people crowding the area.
27	Cease ability to build additional residential and commercial complex buildings. There are currently too many in a small concentrated area that impedes access for existing residents.
28	Riverfront access and separate walking and biking trails. It's not safe for either walkers or bikers at the same time
29	I would be interested in a public boat house for rowing
30	More stop signs in residential areas as traffic continues to pick up , especially in areas without sidewalks (13 and wells area) which will bear the brunt of added traffic
31	Read my lips, no new taxes!
32	The recent flood and damage to homes and businesses should be a wake up call to stop building in the flood plain.
33	The parking lot at Quaker Park office building is not open to those using SRT. Each weekend, it is just big open space that can't be used. This causes a very limited parking in the area of Spring Mill for both commuters on Septa and those using SRT.
34	Parking for residents, access to the trail, increase stop signs, flood mitigation
35	SRT path between Spring Mill station and Lee street would benefit greatly from lighting. It is extremely dark at night when leaving the station headed towards Lee St from the Norristown bound side of the tracks. Majority of the SRT through Conshy would benefit from additional lighting, but the section I mentioned specifically would benefit the most, in my opinion.
36	I would love to see the trail connector linking Butler pike with the SRT, under the existing high tension wires. (A sidewalk along that side of Butler pike is also needed) Also, while parking in the study area is probably the highest priority, don't stop there develop a public promenade with shops and restaurants. It could be so much more. Also, the Whitemarsh Police need to patrol the trail more. I had a very scary incident on the SRT last May. When running the trail I do see Conshohocken Police on that section of trail but have never seen any Whitemarsh Police. I barely see that anywhere in the township actually.
37	Our Taxes are high enough in the area and traffic is bad enough - we pay $14k at this time. We don't need more public gathering spaces or recreational areas in this area. The streets are narrow and not suitable for bike paths.
38	Beings that David's Bridal owns part of the section off of Washington where their headquarters is located and one of their buildings is so close to the road, I don't see how you can expect to open that part of the street and they have already said they would not grant an easement for having traffic go past their business. Eminent domain would mean a loss of that building, which they use daily for their products. More traffic crossing the bike path and the train tracks is not a great idea. Also, Septa will not allow a pedestrian bridge.
39	Our area is ideal for a waterfront park - time to build and makes use of the township lands
40	Access to the water is important to me as are flood controls such as walls or dykes. A boat ramp should be placed in for kayaks and SUP. A bike share along the bike path would be great. Previous industry should be turned into open spaces perhaps with

	public art new developments should have art and flood control component. Need to make it easier for pedestrians and cyclists to access river front and SRT. A path along river similar to conshy should be placed in the area. Rail should use horns less. Sidewalks added to river road cedar Grove and Joshua to access study area. Washington Street should be completed for bikes and walkers to access. Boat club should provide kayakers with access. Boat club and other entities should clean the area
41	It needs to be safe and accessible.
42	Funds are readily available from existing tax collections. There should be fiscally responsible decision making with these items a part of the the overall budget.
43	You continue to approve construction without requiring developers to chip in for road improvements/lights.
44	We have no access to the river and it is disgraceful. The river and the property along it are lovely to see but we can't enjoy it. And there is no boat launch- seriously? With a giant river along there???
45	The speed on Hector St is absolutely awful. The motorcycle speed and noise is terrible. These things need to be addressed.
46	The area needs more stop signs and stop signs and speed enforcement. It's difficult to cross Hector to reach the SRT and SEPTA station
47	Whitemarsh trails and parks are overrun with dogs. Leash laws are broadly ignored. Dogs must be banned from all public spaces.
48	The last time I road my bike on the Spring Mill area of the trail, I was advised it wasn't safe by a police officer and not to ride alone there. I haven't returned. Safety is paramount.
49	It would be nice to use the open space west of the apartment buildings and close by the helipad/walking trail for outdoor concerts and those types of entertainment, fairs, etc...
50	Keep businesses growing, good jobs are the key to everything
51	There is a viable population of native and reproducing Brook Trout in Spring Mill Creek that should be taken into account should any development take place in this specific area. This is not a common occurrence for tributaries of the Schuylkill River in our region. PA DEP has information.
52	This area if changed properly could greatly enhance life in Whitemarsh and Conshohocken. Flood control is vital for the development of the area and for people and businesses to remain. I believe it was Ida remnants this year that flooded Conshy/Whitemarsh damaging homes, business, rail and riverfront amenities. My friends and I strongly believe a bike share would help the area and can have depot/staging areas along SRT access points in study area. A boat launch would enhance and diversify river use to allow kayaks/canoes as the river is now solely being used by the boathouses. Parkland/open spaces where defunct properties are to allow people to sit by the river, potentially public art. Opening Washington street by David's bridal would allow pedestrians to walk closer to the river. A river trail linking the new development at 901 Washington to the trail at river view/Londonberry would be a beautiful walk way. Allowing users of SRT and riverfront to park more easily at commuter parking and perhaps some businesses. In general upgrades to the area that makes it more walkable by the river and easier for people in Whitemarsh to access the area via bike or foot would enhance living within township or borough. Anything opening river for activities whether walking, kayaking, biking or socializing (playgrounds, fields, sitting areas) would benefit the communities. All of these things are important

	and difficult in an area with so much congestion (rail, car, bike, food traffic converging in an area) risk to flooding and previous non wholistic development. Thank you an good luck
53	A stop light/sign on hector st in this area would help with the amount of speeding. It is dangerous for the residents to get out of their cars or cross the street.
54	Make more efficient use of existing impervious area and minimize addition of impervious area. Prevent over-development to avoid inevitable traffic issues that would ensue without connection of Washington St to hector / barren hill rd
55	We need more retail - specifically a market. Also more housing for empty nesters who do not want to be in an apartment.
56	Recent flooding shows that drainage and runoff to the trail area is a major issue.
57	This survey is 20 years too late. The residents of Whitemarsh do not want or like the development at the river front. Even the folks who live there are having regrets after going through Ida. And now more is coming. Only a "planner" could come up with something so idiotic as this survey.
58	Pay attention to what happened during Ida and how long it took to recover. This will only happen more frequently. No more new buildings, or old ones with bigger footprints. Thank you for seeking our input.
59	Fix the roads to this area!
60	Increase access to the riverfront for recreation
61	We do not need more buildings, more roads, more traffic in that area.
62	The area between SM Station and River Road should be developed as a park.
63	The area is frequently flooded; there is a dismal amount of parking particularly for the train station whose parking is also used to access the Schuylkill trail for walkers, joggers and bikers; and the traffic is horrendous. We do not need the bandages of better signage and street crossings. Politicians have taxpayers paying for that "stuff" so it looks like they are doing something. The major changes I have mentioned should be paid for by the developers who are adding to the flooding, traffic, safety and parking situations continually as both Whitemarsh and Conshohocken do not hold developers accountable and responsible for the abysmal situations their too large for the sites developments cause; rather, they are allowed to walk away after the construction is completed and they have raked in the profits.
64	Please stop building so there will not be so much flooding. We have lived here for 37 years. The more buildings going up the more flooding there is.
65	I am fine with a tax increase, provided that tax increase is unilaterally applied to all of those who live in or utilize the area as a place of business. This includes making sure those who are of the affluent persuasion, of which there are many in this area, are paying their fair share for the beautification of the area.
66	train is of limited value if you can't park at the train station and don't live close enough to walk to the train. Hard to use SRT during week because of parking problem. Need to stop developing along the river - flooding is my biggest concern for the area
67	It would be nice to have additional restaurants/local businesses to support. The Tricycle has been a great addition as cafe, but would be great to have another restaurant with a larger food menu right off the trail. Would also be nice to have outdoor facilities (picnic areas, pavilion, outdoor grills, etc.)
68	Would love to see more restaurants/shops open in the area

69	Add lights to the SRT very dark at night. Will make residents feel safer at night
70	This is an ideal location for a vehicular bridge to cross the river.
71	No more apartments or condos here, please.
72	There needs to be another stop sign along hector. During rush hour it becomes very dangerous to walk across
73	Please keep this pedestrian friendly! The trail is one of the best parts of Conshohocken
74	It's fine the way it is.
75	Concerned about parking at the vehicle road junction and the pedestrian trail. ie no parking at Wells and proposed trail.
76	This is a beautiful area and any continued improvements would be lovely.
77	The river is a big draw but we have zero access. We should have kayak/canoe launch access. More green space along the river. Perhaps places to picnic or grill. Provide comfort stations near the trail. Bathrooms, water. An amphitheater with the river as a backdrop to hold public events, concerts, movies.
78	Study-area developers should be contributing to the design and construction of public amenities, as should developers further west/north along the riverfront. The Township should nit carry the burden of Washington Street upgrades (for through traffic). That, too, should be borne by the developers along that street. The county park is hidden away. Are there trails through it? Where are the access points? Does it afford riverfront access? A riverfront trail, continuous and uninterrupted, should be a goal, as should river access for recreational purposes. How will improvements here tie into the Miracle Nature Trail? Please take an integrated approach when drafting recommendations. Look in all directions at resources and amenities. For example, the Schuylkill Center just a short distance down stream.
79	the sewage smell is bad. I live just outside this area off of Copper Beech Drive. No more construction until the sewage system is upgraded
80	These studies should have been done before all the communities on the river and all the new restaurants where approved. You are taking away the community feel that makes Conshy special. Why should I pay extra taxes for decisions that where made without the community approval?
81	Safety of all is paramount.
82	Can Whitemarsh Township step in and help with the clean up of debris from Ida that are in the sight lines from the SRT. The County won't do it because they won't go more than a few feet from the Trail. Can Whitemarsh Township do anything about the constant standing water on the side of the Trail since it seems the County does nothing there to fix this drainage problem.
83	I believe it should be very accessible to the public
84	More recreational riverfront spaces and businesses
85	If Tax was a one time charge and not abused like so many tax increases are. Senior Citizens should be exempted
86	Develop a venue in this area for entertainment. For example, a small theater that could provide live shows: plays, small concerts, dance and/or acting/dance lessons, movies.
87	I feel terribly unsafe attempting to cross over Hector St. in between Lee St. and Righter St. no matter if crossing on foot, on bike, or in vehicle. I think a lighted crossing or

	crossings would improve safety. An example of this is on 4th St. In Bridgeport by Taphouse 23 and the corner of Grove St.
88	The most important item to be accomplished is extending Washington Street so that there is access in Whitemarsh to the riverfront.
89	NO MORE MULTI-UNIT RESIDENTIAL APPROVALS!!! NONE!!!
90	Improvements on Center Street. Thank you.
91	I think before making any decisions, especially regarding tax increases, a comprehensive plan needs to be presented.
92	Incentivize use of the riverfront area for people and recreation oriented businesses (bar/restaurant), water oriented sport, etc.
93	Please look to add a cute cafe
94	Why does the township have to destroy open space to build up everywhere? We moved here to enjoy the riverfront, trees, parkland, and now it's all about building everywhere. Flooding will continue to get worse, why would anyone be surprised? Let's plan correctly for that now instead of sticking our heads in the sand yet again.
95	I thought that years ago there was a comprehensive plan to develop the waterfront and it would be amazing if my daily walks could be closer to the water or we could kayak or paddleboard on the Schuylkill there's so much space and it shouldn't be taken up by residences it should be more natural space for activities and leisure and places to go and hang out restaurants cafés etc.
96	Managed correctly there is funding available without the need for tax increases.
97	this is an area that has scene incredible investments & growth. With this growth, we have not invested in access. there is too much traffic on the dekalb street bridge. We need a second bridge, even if the bridge is for a 76W offramp into Spring Mill & a 76W on ramp. This would help improve traffic flow around the conshohocken curve allowing for traffic coming from the city to exit and traffic going west to enter.
98	Develop the park
99	Bring back the Farmers' Market!!!!
100	Seems that a plan is place and you are gauging the public's future disapproval. Do not raise taxes for residents.
101	How about some policing of the speeders on Hector Street?
102	Washington st below Cherry needs widening and to be clearly marked "Dead End"
103	Why haven't businesses in the area had to contribute more to some of these areas?
104	The corner of river road and barren hill road is insanely dangerous. Cars whip around that corner coming from hector street, a speed bump needs to be added after 11 river road to stop the speeding River road floods onto 11 river road property and needs to be fixed by township for incorrectly lifting road up when putting in drainage. The stop sign at river road turning onto barren hill road does not allow for drivers to safely turn because it is blocked by a large tree and forces cars to have to pull into oncoming traffic just to see if cars are coming from the right on barren hill. Cars are running red lights and tailgating everywhere in the spring mill study areas, where is the police presence and why are there no cameras sending tickets to cars going through the red lights? It is a sad day when the residents on river road (off of barren hill road) get excited that our road is closed because that is the only time our road is safe from speeding cars. I've already been hit pulling INTO my driveway and the fact that I have to honk my horn to stop it from happening again is crazy.

105	It's just unsafe here. If someone stayed here for more than 20 minutes they would see. We keep expressing our concerns but no avail. We cannot go in the front.
106	Historically I have walked to the spring mill train station from my home on 10th Ave to go downtown for work. My walk has me crossing hector on Lee street. During times of high traffic crossing Hector is a risky proposition and unsafe. I would love to see an improvement there. A stoplight, stop sign, or even a visable crosswalk and pedestrian yield sign.
107	I think we need to either develop or clear the space for a park near the river between spring mill station and the londonberry apartments, also washington street should extend to the train station hands down, we need multiple parallel streets for safety, ALSO river rd should NOT stop at Philadelphia it should be an alternate route from ridge
108	Rush hour traffic needs to be better controlled. Live 1/2 block from study area and haven't seen a Whitemarsh officer/patrol in over 4 years.
109	No tax increase, ever
110	We DO NOT need anymore housing in our area. We need more public space and open space. Especially with all the flooding from IDA along the river no more housing is needed
111	Make Barren Hill Rd. closed to trucks as a thruway. Enforce traffic rules for bicycles - traffic lights, stop signs, etc.
112	Lighting is an issue as cyclists ride on the dark road. We are on the road in early morning hours and daily there are cyclists without proper lighting.
113	People park illegally by Coyote Crossing daily. Perhaps the street signs can be adjusted so more parking spaces can fit into the streets to support that business. I live across the street and residents don't have places to park due to the evening restaurant crowds.
114	I would love to buy a single home in or near this area if it ever existed. The Quakertown parking lot and other large lots should be a garage so that could be a park or a retail area or some homes! We liver here now and love it but only option is apartment.
115	The Spring Mill County Park should be made into a usable green space. Pre-Covid, more parking was desperately needed for commuters; with all the the recent/new/planned development, plus forthcoming addition of parking fees at Miquon (free parking draws commuters there), I'm sure this issue will return in due time - plus trail users have become used to using the Septa lot before the designated time. The intersection at Hector, Cedar Grove and Barren Hill needs widening and/or signal adjustments for Hector (and Cedar Grove) at rush hour. It currently favors Barren Hill, which seems to have a lot of non-resident traffic. And lastly, the beautiful waterfront is all but hidden and invisible.
116	Having lights along the trail so that it can be used during dusk would be great
117	Bus and vehicular turnaround causes fast-moving traffic to swing into and across trail at foot of Station Avenue
118	Any improvement costs should be passed onto developer of site. I think this will cause a traffic and safety nightmare for residents. The area is already too built up and the developments will turn residential streets into speedway cut through a for traffic
119	Stop putting homes in flood zones you greedy fucks
120	Update the road conditions, make the best use of the light at North lane. It does not operate at the best capacity.
121	Less Housing Developments

122	I grew up in that far corner of Conshy, when the Spring Mill part of the SRT was the ONLY part. Very natural, quiet, safe. Has gotten much more use over the years. Am OK with that, but you are approving more and more apartments and I am afraid you are going to overdevelop the area to look like downtown Conshy. Would like you to keep as much open space as possible. Thank you.
123	I believe there is a lot of potential for this area, though only if the appropriate changes are made, with priority placed on increased pedestrian/cyclist access (and supporting infrastructure - streetlights, road crossings, etc.), and increases in open and green space. I also feel strong about doing so with the best interests of residents, and businesses owners alike, with no biases considered based from personal opinions of township officials.
124	When I comuted daily for work, septa parking would always fill up at spring mill and miquon. It made me miss trains and was a glaring deficiency for public transit use.
125	The Township's money could be used toward much more important issues such as stormwater.
126	Recreational accents to the riverfront, more sidewalk along North Lane, lighting on North Lane
127	It would be nice to have access to river off Washington lane. For fishing/recreation.
128	Connect Lafayette Hill neighborhoods to the SRT at Spring Mill. Bikers and Pedestrians must take Joshua or Barren Hill Road (both dangerous). It would also allow us more access to the restaurants and businesses in Conchy.
129	open up PECO space for walking
130	No more condos, apartments, or townhouses! Keep traffic out of whitemarsh.
131	The area is largely undeveloped, save for a few access points to SRT & train. Lots of through traffic to ridge pike. Ample economic opportunity to connect the riverfront, conshy & spring mill. A bridge crossing is a large project, but largely undeveloped space makes it feasible. This would result in an economic boom for the area. Existing conditions promote little activity in spring mill.
132	Spring mill Park area needs to be developed
133	There is clearly a disagreement among older residents keeping the area undeveloped and newer residents who want access to more businesses and improvements. We wouldn’t mind increase in taxes to support better road maintenance, more businesses moving into the area, and better access to public transportation
134	Hector St is extremely busy. Visibility turning onto Hector is low. Seen many accidents. Same goes for pedestrian crossings. SM Train station could use a walkway from David’s bridal to waiting area. Just a gravel path. Could function and look nicer. But overall the whole area has been improved in last 5 years and looks great.
135	I use it on monthly basis. Not enough to justify a tax increase. The bikes are my main concern cause they think everyone sees them. They have the bike path but I think they get off the bike path too soon. I was at the stop at Hector & Jones and about 10 to 12 bicyclist never stopped at teh stop sign. Good thing I didn't go out in the intersection cause they would not have been able to stop.
136	The waterfront is easily one of the highest value land opportunities in the entire Philadelphia area and it's been squandered in Conshohocken for most of my life. I currently live in the Riverwalk apartment complex, and while nice, it's not the most ideal usage of the land for the community. Large complexes on flood plains increase

	flooding, and obstruct the communities views and usage of the river. A great use of the space considered would be to promote the development of small scale, even temporary, retail space that can be used for restaurants, farmer's markets, and then possibly dismantled or moved during hurricane season. The absolute worst case scenarios are either to do nothing, or to cave to another housing complex that requires more parking. More parking is a threat to space that can be used for economic activity, enjoyment and tax revenue.
137	I absolutely love living in the Spring Mill Area. I have easy access to everything I need and I am able to live here affordably. The one major concern I have is how the spillover from all of the new apartment complexes going up is going to affect areas such as safety, parking, and overpopulation. I have lived in areas like Manayunk that are nice to visit but an absolute nightmare for parking and are becoming more and more unsafe with property damage, stolen mail, and assault. I understand the want to expand this great area, but please plan accordingly and consider the people who have lived here for years before expanding too much.
138	I work in this area and the flooding is the most devastating. The river trail has no parking in most areas.
139	High density buildings built along the river should specifically be the ones to pay for area updates.
140	Stop building please
141	Need to reduce traffic on hector st. And need access to waterfront
142	Save and plant as many trees as possible! Mitigate flooding
143	The access to boathouses is outdated and requires better access and road condtions on Washington Street. I am a Whitemarsh resident who uses both the SRT and access to the boat houses.
144	The Spring Mill Study Area is perfectly located to be dense in housing and amenities if you will allow them to be built. Focusing on parking instead of people raises rents, decreases space available for parks and recreation, and makes the area less walkable and less safe. There is way too much parking surrounding the train station, Courts at Spring Mill, and Quaker Chemical. Let's decrease the amount of required parking so we can have a safe, walkable neighborhood instead of a sea of empty parking spaces.
145	Walking along Hector towards Barren Hill Rd. past the train station is dangerous at night. It is also very dangerous for bikes.
146	For the love of God please stop developing this area!!!!
147	Traffic is an issue in this area. I'm fortunate enough to have off street parking, but most residents in the study area do not and parking is a big issue in the area, yet the twp keeps allowing more homes to be built in the area with more to come. This is going to increase the already congested traffic and parking.
148	We must be careful of over developing along the river. You've seen what a disaster that can be with recent flooding in other parts of town. More parking for train access by the courts would be ideal. Speed control on Hector street would also ensure better safety for all. People fly down that street. Put up speed cameras or speed bumps to correct. We need more opportunities for local business on this side of town, close to Bar Lucca, Conshy Brewery and the old Mill building across from the courts. Please reach out for further questions. - Sean Morrissey smorrissey317@gmail.com
149	Create an area that gives true riverfront access for fishing/boating and allows people to recreate, walk dogs etc. a park like area rather than just the woods that are there now.

150	Bulldoze the entire area and turn it into green space, parking and better roadways. An additional bridge crossing the river would be huge!!!!
151	I think a boat ramp for canoes, kayaks and StandUp paddle boards would be a great. Introducing a bike share in the area to connect Conshohocken to Manayunk for those without bikes. If possible safely Reducing horn usage of SEPTA trains perhaps a quiet zone. Increasing pedestrian opportunities from Whitemarsh to the trail and riverfront. Connecting River front trail on Conshohocken to trail being built by development at 901 Washington street. Stabilize riverfront from flooding. Remove old industrial buildings and convert to parkland or soft development monument, tennis/pickle ball courts. Open up Washington Street for Pedestrian bike and vehicle traffic by opening up the closed end. Improve plantings along river is access opened and along SRT removal of vines. Connection of miracle nature trail to SRT. Bike lane markings. If properties along river are opened a Graffiti park like Wynnewood Walls in Miami. Extended parking hours for SRT at the Spring Mill Train Station or allow spots at offices for SRT. Linking the townships to the river and the river path from Whitemarsh to Conshy would greatly enhance the township's livability
152	STOP BUILDING APARTMENTS AND HIGH RISES!!! Our roads cannot handle more traffic. Traffic and crowding is making it less safe to commute on our roads, parks are overcrowded, and the our schools are becoming ridiculously large to accommodate for you turning our township into an urban development.
153	Hector Street traffic bad with all the truck deliveries. Restaurant employees and customers take all the parking by my home. I have to park blocks away if I go out in the evening.
154	Focus on improving our natural resources and what we have in place instead of building more apartments. Once it's built up we can't go back.
155	Cross walk on North lane! Right now you have to play frogger where the hill crests to get to the sidewalk. Sidewalk down north lane is extremely narrow - cannot get stroller past utility poles). Also dangerous to cross Hector as cars don't follow road signs and drive too fast.
156	No new taxes, there are other ways to fund development. No more apartments. Benchmark other riverfront cities like Navy Yard in DC. Bethesda, MD. Many opportunities and the area is wasted space.
157	The area is perfect as is. No changes needed except 25 mph speed limit on Hector AND pedestrian crossing on Hecter
158	I like to walk along the PECO transmission lines and think it is a good idea to improve it into a trail and include a bike path.
159	Please consider the many people who lost use of their homes and businesses because of the rising river and increasing storms. We are still recovering. This should be top priority above all else.
160	The water front in Conshohocken and Springmill area of Whitemarsh township have more than enough office buildings, apartments, condos, etc. Please stop building on the water front and conserve the open space. Flooding is an issue and is only getting worse. Traffic across the Fayette St bridge to accommodate all of the people driving through town is also an issue.
161	The area as of right now seems fine to me, except for maybe some minor improvements, but I don't see the need to do a major overhaul of the entire area.
162	Stop letting the developers run this town.

163	Improved parking for train and trail, public green space, and river access (though lower priority in my mind than other items).
164	The biggest concern in the area should be the continued build up of large office and apartment buildings on the riverfront. This is a flood zone and the reduction of permeable land results in flooding over other areas immediately adjacent and downstream. We can't keep making this problem worse so that a few regional developers can make more money while the residents are forced to deal with the consequences.
165	Bikers needs to follow the rules especially saying “on your left”
166	Raising taxes for this is ridiculous. Building ten thousands apartments was supposed to "lower the tax base". Stop stealing money and just do the improvements!
167	High speed bikers are a major concern. I am happy to share the road but I feel very unsafe as a pedestrian or as a fellow biker. When traveling on Lee St on bike toward train tracks approaching SEPTA station and turning left on bike is a safety concern in the summer the trees block the view particularly a concern when there are high speed bikers.
168	Soccer complex for the children of Whitemarsh and conshy. I would support a tax raise for that project.
169	Having access to the Schuylkill River for recreational purposes would improve the quality of life in Whitemarsh.
170	Beautify and maintain it. It must get maintenance of landscaping if spending money to beautify
171	The only big concern should be vehicle traffic. Everything is already well marked and the SRT is very accessible. With increased residential occupancy and recreational use of the area, vehicle traffic will become worse.
172	My wish list would include full inclusion/disability access to spaces along the river -- it is an amazing asset that is under-valued and with limited access for those with mobility issues. Thanks.
173	Intersection of Lee St and E Hector St can be very dangerous for pedestrians, no car stops for people at cross walk.
174	I would like to see more retail, entertainment, restaurants and bars along the river. I understand this is a flood zone but it should not stop us from building out these types of things for the community.
175	It's been flooding there for a 1000 years. Everyone who decided to live there knows it. Please keep it the way it is now. I walk there, miles at a time, why does it have to change?
176	Washington street is too narrow and needs access from both directions
177	Please preserve the Open and Recreational spaces. The access to the trail and waterfront are huge boons to our community. Any enhancement to this will be worth the effort.
178	When I was growing up people would fish on river bank near the spring mill station all the time. Slowly access started to be denied to the public. With that gone, it limited the areas that was easy to walk up for the public. I would love for more public access to the river and a small amount of parking for the public to use the river or SRT. Traffic isn’t that bad and during most points in the day it’s a non issue. I would hate to see any expansion of the road way.

179	NO MORE DEVELOPMENT!
180	Please don't immediately go to tax increases. Review current budget first.
181	I'm most familiar with accessing the train station/trail via North Lane and then Hector Street, and the pedestrian accommodations are subpar in a lot of areas. A lot of sidewalks are in disrepair.
182	We live here with small children and wish for a better traffic pattern on North Lane. People drive entirely too fast for a neighborhood. Additional crosswalks would be great.
183	Thank you for letting the public participate and have a voice to be heard.
184	Spring Mill is one of the areas of Whitemarsh Township that maintains the feel of what it once was. I personally don't see the need to destroy one of the best preserved areas of the township with added parking, signage, bike lanes, additional vehicular access etc. there where no questions about protecting the springs, creeks and rivers that make the area what it is today. I live here because it is not a neighborhood, we do not have sidewalks and streetlights. What we do have is trees and rivers and creeks and animals. I would like to see some effort to keep the county parks and SRT free of debris and fix some of the safety features (fences) that were destroyed by the latest flooding. The only reason there is traffic is we are allowing dense uses to take the place of industrial (sparse occupancy) uses. We have created a problem and now the taxpayers, not the developers, have to live with and pay to fix those problems. You really want my opinion. Clean up and maintain what we already have. We don't need more.
185	I think the township should stick to improving infrastructure improvements and let free enterprise take care of the rest. Fix the roads and sidewalks in this area. Support business that wants to make changes by giving access to public lands and simplifying the approvals procedures.
186	do some thing for the people who live here - no more major townshouses or development fix the problems you created with over development - safer trails less traffic congestion
187	Grass and trees absorb water and carbon emissions. Plant trees and stop building large buildings, especially so close to the river.
188	I don't think we need to create more paved parking areas. With fewer people commuting, there seems to be less of a problem with the SEPTA parking lot filling up. There is lots of unused parking space in the private lot off Lee Street - perhaps something could be worked out with them to provide access for trail users, cyclists, SEPTA overflow. Also, a new boat launch will be constructed for the Township's emergency use -- could that also be available for public recreational use?
189	Bicyclists should not be prioritized, their self-entitlement is what causes many of the issues in this area.
190	As mentioned above, I wish something could be done about the trash and debris (some of it hazardous) that spills out from the "Sundafu" scrap metal recycling plant. I don't understand why this business has not been fined and/or forced to cleanup the disaster that has caused around it. There is illegal dumping that occurs in this area (Center St. and the area around it) on an almost daily basis and the township has never done

	anything about it. THIS, more than any trail improvements, would improve the quality of life for myself and my family.
191	Bike lanes or marking along Hector and/or Elm would potential increase safety and use. Viewing this area as part of a larger economic zone between Whitemarsh and Conshohocken. Trying to increase access to the river for recreational opportunities which was the goal of the joint township riverfront study. Plantings to beautify and green the area along the river.
192	I think the area needs to be expanded to include Joshua Road area. I feel the path that will be built along the river by 901 Washington Street should be linked to river path by the Londonberry apartments. Hector around Cedar grove is very narrow as is the sidewalk making bike and pedestrian access very dangerous. I believe if done properly and including Joshua access to the river is opened to many more township residents with sidewalks coming along ridge pike and Germantown pike sidewalks. The open space of Spring Mill should also have a clearly marked trail. It would be nice if vines could be cleared and native species planted. Lastly, perhaps a bike share station along the river would help people link Manayunk to Conshohocken a bike share station can be located along the spring mill, Conshy and miquan

Appendix E - Key Person Interview Notes

Key Person Interview: Emergency Responders

Date: January 21st, 2022 at 10 am.

Interviewers: Krista Heinrich, Charlie Guttenplan, and Emily Paskewicz

Interviewees: Nick Weaver, Wayne Masters, Ray Sokolowski, and Tim Gunning

10 AM 1/21 Emergency responders ICP1

Krista
Emily
charlie
Nick Weaver
Wayne Masters
~~Tom~~ Ray Sokolowski
Tim.

---

* ~~Bla~~ BOAT RAMP DESIRABLE
* ACCESS ALONG WASHINGTON STREET
  - DAVID'S BRIDAL PINCH POINTS
  - 3 OPTIONS WE ARE EXPLORING:
    - YIELD
    - SIGNALIZED (IF DAVID'S BRIDAL STAYS)
    - 2-WAY FULL ACCESS → WOULD REQUIRE BUILDING REMOVAL
      - MEETING W/ DAVID'S BRIDAL TODAY
      - WOULD THESE BE FLOODPROOFED? (YES)

WAYNE: HOW MUCH TRAFFIC WOULD WE ANTICIPATE IF THIS WERE OPENED? WOULD ANOTHER SIGNAL BE NEEDED AT ~~[redacted]~~ OTHER SIGNALS NEARBY.

KRISTA: DEVELOPMENTS WOULD NEED TO STUDY AS PART OF TIS

* EASTBOUND LANES WOULD NEED TO BE WIDER ~~(FOR SIGHT & SIGNAGE OPTION)~~ (FOR TYP. CROSS SECTION.) TO ALLOW VEHICLES TO PULL OVER TO ALLOW FIRE EQUIP. TO PASS
* WAYNE LIKES ARRANGEMENT IN CONSHY W/ CENTER MEDIAN.
* MAYBE WE REQUIRE SHOULDER ON SOUTH SIDE ALSO.
* TIM: 433 TO HINES GOING EASTBOUND.
* 901 WASHINGTON WILL IMPROVE WASHINGTON
* STATION AVE CUL-DE-SAC BULB.
  -CONFLICT BETWEEN MODES.
* OPTION TO MAKE STATION AVE ONE-WAY IF DAVID'S BRIDAL WERE AQUIRED
* RAY: 901 WASHINGTON TO START THIS YEAR?
  : YES-MOST LIKELY
  WITH NEW DEVELOPMENT, IN CONSHY THERE WILL BE PED CONFLICT W/ CONSHY RESIDENTS USING WASHINGTON STREET TO GET TO WHITEMARSH SIDE.
  SAY, 3,000 PEOPLE?
  POTENTIAL FOR MORE UTILIZATON, THUS MORE CONFLICT BETWEEN MODES.
  * ALOT MORE PEOPLE WILL BE IN THIS AREA
  * ALOT OF OUTSIDE PEOPLE PARKING TO ACCESS AREA / TRAIL

* AMOUNT OF PEOPLE IN THE AREA WILL GROW WITHIN NEXT FEW YEARS
  * 3,000 – 4,000 NEW PEOPLE PROJECTED

AND THEIR PETS!

* LIGHTING, SIGNAGE WILL BE CRITICAL
* SEPTA MAINTENANCE = 30' FROM ℄ OF TRAIN TRACKS. IS ALL THEY MAINTAIN.
* DAVID'S BRIDAL ACQUISITION IS CRITICAL
* DOG PARK AT DAVID'S BRIDAL, IF ACQUIRED

NORTH LANE

* TRAFFIC, PEOPLE CUT THROUGH FIRE HOUSE PARKING LOT
* OUT OF FLOODPLAIN
* ONE-WAY ROADS? IF FUTURE DEVELOPMENT COMES IN, MAY WANT TO ~~DISCUSS~~ DISCUSS
* NORTH LANE / BUTLER
* CUTTHROUGHS → 14TH AVE IS A CUTTHROUGH
* FUTURE DEVELOPMENT MAY GENERATE CUT-THROUGH TRAFFIC THROUGH SECONDARY ROADS.

SRT ACCESS

* USE ATV (CONSHY OWNED) OR GOLF COURSE
* NEED BOAT RAMPS / RIVER ACCESS. STAGING AREA.

Emergency Services KPI – 1/21/22 at 10 am.

Nicholas Weaver

Wayne Masters – Spring Mill Fire Co.

Ray Sokolowski and Tim (Conshohocken Fire)

Team Members in Attendance:

Heinrich– Explains mini analysis – knows that Wayne has already discussed concerns about Washington Street.

N.Weaver – Recommended talking to David's Bridal sooner rather than later given that many proposed solutions for the site rely on this property.

Several of the Washington Street traffic options were shown including a one way yield, a one way with traffic signal, and a two-way traffic plan. A question was asked about whether or not there would be electronics as part of the signal plan and is so how they could be mounted or installed to be flood proof. K.Norwood responded that signal boxes can be mounted on higher ground or post-mounted. She has done something similar for a site near the river in Collegeville.

A question was asked about whether or not a traffic light was being considered at the intersection of Hector and Lee to accommodate the influx of traffic on Washington that would be brought by opening it up for public access and extending.

K.Norwood responded that this was not something that they were considering at this point given the conceptual level of designs but that down the road this would need to be studied further. K.Heinrich mentioned that they could possibly place the responsibility of a traffic impact study and construction of improvements on a developer who comes in for the David's Bridal property.

It was mentioned that it is also important to consider existing traffic on Hector Street as it tends to be backed up from 7:30 – 9:30 every day.

The Washington street proposed section was discussed, and K. Norwood mentioned that the design for this section largely evolved from 901 Washington's design and constraints. W. Masters mentioned interest in seeing another 6' shoulder in the Eastbound direction along the road for Conshohocken's emergency services. The project team will be looking at modifying this section to address the south side's shoulder.

K. Norwood mentioned that on the Conshohocken side of Washington Street there are three lanes with a turning lane in the center of the road/lanes.

Tim asked about what is happening with the section of road between 433 Washington St. and the Hines Rowing Center. K. Heinrich answered that the developer for 901 is making interim improvements and milling and overlaying the street at 24-26'.

N. Weaver asked if it just 901 and 433 Washington Street that have proposed or active developments down by the river? - At the moment, yes.

The Spring Mill Junction Site Analysis plan was explained.

N.Weaver – Raised concerns that at any crossings with the SRT the bicyclists are flying. The sight distances are also pretty bad.

K. Heinrich brought up the discussion that was had with the County about potentially making Station Ave. one-way in to the SEPTA station parking lot and David's bridal as this would at least reduce the amount of potential conflicts in this area. The general impression being that all of the accidents that had occurred in this area were with cars coming out of the SEPTA lot/David's Bridal.

R. Sokolowski – Asked when construction is expected to start on 901 Washington. K. Heinrich mentioned that they are close to Township approval and would like to start construction in late 2022.

R. Sokolowski – Raised concerns about the influx of traffic (both vehicular and pedestrians) that will result from the new apartment complexes going in the Conshohocken. He estimates about 3,000 new residents to this area and assumes that it will likely lead to a new influx of accidents on Washington Street was well. He also mentioned that demographically, this influx of users is likely to want river access. He also mentioned that time is of the essence since all of these residents will likely be moving in in the next 2-3 years.

It was discussed that the improvements to 901 Washington along the road will provide some immediate relief for these issues. However, it will also be gated along Washington Street for private access. This will limit vehicular traffic issues, but pedestrians, cyclists, and dog-walkers will all be able to get through which will lead to an influx of users along Washington.

There are already issues of people using this are to park to utilize the trail.

There are also issues of vehicles currently turning into the SS culvert instead of Washington Street when coming down Cherry Street.

R. Skolowski currently sees an immediate need down here for more signage, floodproof lighting, and better maintenance in this area and along this road as SEPTA will only claim a 30' ROW on either side from the center of the railroad tracks. He also sees Washington Street as ideally only for emergency access in the future and that the road widening on the David's Bridal property really makes sense for everyone. The path from 901 will likely be attractive to dog walkers from both 901 and the new Conshohocken developments, so it may be smart to consider a dog park somewhere in the area. He also stated that while he feels confident in Conshohocken and Whitemarsh being able to handle all of the safety issues. They had no major injuries or deaths in this area following Ida. Coming up with a good plan for this area that it will be important to understand that things will change, and they will need to be prepared for this influx of people. He sees Bridgeport as talking a similar path.

R. Sokolowski also mentioned that while they can't stop the development, they are trying to manage it as best as possible and limit it where possible in the future.

There was discussion of possible hydrant issues and the need for backup hydrants along this area.

The North Lane land use plans were discussed, and interviewees were asked if they saw any major concerns with the proposed TOD parcels from a safety perspective.

No major concerns because this area is not a flood risk.

However, W. Masters expressed concern about traffic for these potential developments because of the influx of traffic that they would cause in an already congested area. Particularly with people already cutting through the Spring Mill Fire Company lot to access North Lane from Hector Street. R. Sokolowski also expressed concern about how it could cause an influx of traffic along adjacent residential streets.

It was discussed that Wells Street may become more of a cut through then it already is.

K. Norwood asked about where the emergency access was for the trail? R. Sokolowski says that they use a municipal UTV for access to the trail in emergencies. W. Masters says that Whitemarsh typically borrows Conshohocken's UTV, but that it would be helpful for the Township to get their own.

The main issue for Whitemarsh with emergency access on the trail is that it cannot be accessed using fire trucks or other large emergency vehicules.

K. Heinrich suggested that if David's Bridal does move from their current property it would be a good idea to propose a landing area for Township emergency services here.

W. Masters mentioned that if for some reason 901 cannot provide the promised emergency access that it would be good for this study to look at possible alternate areas that could provide emergency river access. This area would need space to launch multiple boats in addition to a staging area.

Key Person Interview: Hines Rowing Center

Date: December 14th, 2021 at 3:15 PM.

Interviewers: Krista Heinrich and Emily Paskewicz

Interviewees: Lois Trench-Hines, Tim Woodrow, and Meg Kennedy

Whitemarsh Township

Spring Mill Multi-Modal and Land Use Study

Key Person Interview Question Form

Name & Title: Lois Trench-Hines, Owner of Hines Rowing Center, Tim Woodrow – Rowing Center Engineer, Meg Kennedy – Head Rowing Coach at Mt. Saint Joseph's Academy

Organization: Hines Rowing Center

Date: 12/14/21 at 3:15 PM

What is your relationship to the study area? Lois – Landlady/ Property Owner of the Hines Rowing Center and Major Shareholder. Rowing Center is also named for her husband. Tim – Engineer retained by Lois to assist LD and managing adjacent Developments. Megan – Head Rowing Coach using the Rowing center 6 day a week.

How do you use the study area? Tim – family and wife use the rowing center as members and for events. Lois – Owner and landlady of the rowing center, oversees 13 rowing programs including junior, scholastic, college and masters level programs. Megan - Coaches 6 days a week here, has friends in the area, used to have an office near here, goes to restaurants within the study area, and has students use the SRT for training during the warmer months and during the day.

What do you <u>like</u> about the study area currently? Megan – Natural/ Scenic quality of the river. Lois – Rowing center exists to support the legacy of her husband and rowing as a sport within the community, regardless of surrounding or changing land uses.

What do you <u>dislike</u> about the study area currently? Lois – The traffic throughout the study area is particularly bad during rush hour times. The condition of Washington street, the width of Washington street, the lack of parking (particularly after their extra borrowed parking at 901 is no longer available due to development. Teenagers are often speeding in their vehicles, Parking issues are particularly bad during racing season, Safety issues overall. Tim – Lack of connectivity for both vehicles and pedestrians from their section of Washington Street. Lack of safe connectivity for pedestrians in this area overall. Concerns about Cherry and Lee being the only access points in times of emergency or flooding. Megan – Lack of lighting, poor paving, lack of attention in times of snow or severe weather, parking and accessibility issues for busses. SEPTA's restoration of the track bed was very jarring, a lot of white concrete.

Whitemarsh Township

Spring Mill Multi-Modal and Land Use Study

What would like to see <u>remain the same</u> within the study area? Click or tap here to enter text.

What would like to see <u>change</u> within the study area? Tim – Pedestrian connectivity along Washington and ideally across the railroad tracks. Even greater need for this given the influx of new residents as a result of development. Would like to see Washington Street connected through lee street and the David's Bridal Property. Connectivity from Washington Street to the courts at spring mill station. General streetscape improvements along Washington Street – Paving, lighting, sidewalks, curbing, street trees, pavers. Potential interest in curbing and street parking. Megan – Ideally double the width of the street, potential pedestrian access over trail tracks, Wildlife protection and buffering along tracks. Clean up and landscape, general beautification of the area. Lois – Would like to see curbing and off-street parking, potentially a drop off area.

Additional Comments: Recreational riverfront access for the public was also discussed – Megan did not have any good ideas for a site for this offhand. Mentioned that the banks are generally steep and very overgrown. The ramp that conshy put in is likely dangerous due to how steep it is. Mentioned that the grade starts leveling off from their docks and along 901 towards Conshohocken.

Shared Parking was discussed - Megan mentioned that the rowing center is generally busy from 5 am to 5:30 am and would be open to seeing if parking could be shared at a nearby private lot. Lois mentioned that she was interested in shared parking if the offsite lot is well lit and very safe.

The Riverfront walkway was discussed – Lois reiterated that it would need to go around their property due to safety and insurance. Megan mentioned that the Conshohocken installed section of the trail isn't even visible from the river. Lois is interested in working together with developers on this project though.

Flooding was discussed – Lois mentioned that after Ida they were under 11' of water. Feels that they are particularly vulnerable to severe flooding and water due to the nearby river curve. Lois says they prepared ahead and trailed boats to the spring mill fire company lot.

General Discussion Notes: The group started with a general discussion of the traffic and road improvements proposed as part of 901 Washington street development. Krista stated that the road will be widened to 2 lanes, 26' from the western edge of 901 to the edge of the Conshy border. Explained that the street will cut down to one lane along 901 and accessible only to residents via a gate. All

interviewees seem concerned about the additional traffic on Washington and the lack of width overall. Lois expects many rowing center patrons to still try to turn right when the development goes in, even though they can only go left. Mentioned it as a issue of constant education and reminders. Megan mentioned that school bus traffic will need to be considered. There was general discussion about how people walk and run on Washington, particularly during the pandemic with the SRT being so crowded. Lois was interested in seeing a third lane on Washington street for parking. Many concern about parking issues.

Key Person Interview: Montgomery County

Date: December 14th, 2021, at 3:15 PM.

Interviewers: Krista Heinrich, Charlie Guttenplan, and Emily Paskewicz

Interviewees: Pattie Guttenplan, David Clifford, Michelle Harris, and Bill Hartman

Whitemarsh Township

Spring Mill Multi-Modal and Land Use Study

Key Person Interview Question Form

Name & Title: Pattie Guttenplan – MCPC, David Clifford – County Parks and Rec, Michelle Harris – County Parks and Rec, Bill Hartman – MCPC

Organization: Montgomery County

Date: 1/10/2022, at 9 AM.

What is your relationship to the study area? County owns Spring Mill County Park, Michell and David handle park and trail maintenance, particularly for The Schuylkill River Trail.

How do you use the study area? Primarily owning the "park" property and county maintenance for the SRT.

David Clifford – in the 80's – 90's when park acquisition was being considered the initial intent was active park development. Currently due to increased flooding/development, site constraints on the site, and drainage issues and backflow from the neighboring SEPTA station lot there is no plan or major push on the county's end to further develop the park.

There is a potential to use the site for a BMP to address the SEPTA site drainage in the future.

The name Spring Mill County "**Park"** as well as the sign that says this and welcomes users is a major issue. It misleads the public and makes them upset that it is labeled as such but isn't "maintained" and doesn't offer any access or amenities for the public.

In general the County is open to allowing a trail connection through the park. They mentioned that they would need a caveat for a maintenance agreement with the Township to execute.

The County does not feel that they can maintain a trail in the park, particularly if it is a boardwalk.

Mentioned that they have done something similar to execute trails with upper providence Township and it has been successful.

Michelle – The distance from County maintenance facilities to Spring Mill is significant and severely limits what The County would be able to do as far as maintenance goes.

Runoff and stormwater management are also a significant concern for the county as far as the development of any trail goes.

Bill – Asked about PECO's changes to secondary uses within the ROW and how this would affect both the miracle nature trail and the potential need for a trail through the county park property. Team responded that PECO is currently re-evaluating their policies and that while the miracle-nature trail feasibility study has largely wrapped – the next step in trail development will be to have further discussions with PECO which are still on hold.

A potential re-design of the spring mill junction and Cul-De-Sac and the issues within this area were discussed heavily.

Discussed the potential of a gathering space along station Ave. for trail and café users.

Michelle expressed concerns about biker behavior along the trail and doesn't necessarily think that it will be used by them just because it's been constructed.

David expressed interest in the Township potentially taking on the liability of user safety by providing the gathering space.

Michelle and David both seemed to think that improvements including a gathering space would be best focused in and around the cul-de-sac.

David mentioned the lack of parking and a destination trailhead as a trail-wide issue.

The SEPTA lot is technically county-owned and leased to SEPTA. There are a handful of public parking spaces located at the Courts at Spring Mill.

Team discussed the consideration of a parking garage as well as shared parking agreements in several private lots.

Michelle mentioned that it would be really ideal to see an appropriate re-development of underdevelopment of the David's Bridal property as it could offer an ideal location for both parking and trailhead access.

Quaker Park lots and potential for shared parking – To date there has been no response or cooperation from the owners. Charlie mentioned that the most cooperation we have gotten from them in the past was providing a few angled spaces along Sandy Street. There was general agreement that there should still be a recommendation moving forward to continue trying to form a partnership with them regarding parking as it is a significant wasted resource.

There is definitely willingness on the County's part to remove vegetation and trees. The county already "beats back" some of the vegetation to the extent that it's already within their rights-of-way. Unfortunately they feel that a lot of the vegetation and trees are more so within the SEPTA and PECO properties and have complicated utility lines beneath limiting easy access and decisions on maintenance and removal.

They feel that the best "pie in the sky" option would be do redesign and realign the cul-de-sac intersection at station Ave to clear up sight lines issues.

Michelle mentioned that people coming from SEPTA and David's Bridal clear the tracks and then speed through the intersection with the SRT feeling as though they are home free.

Bill mentioned that bad angles where everything intersects was a big part of the issues and concern here. Clearing vegetation should also be a focus.

The group determined that it would also be worth examining a "pie in the sky" option where station Ave. is closed to all vehicular traffic and the only vehicular access provided is at Lee Street… this would require something education and re-navigating users, particularly for the handicapped

parking at Spring Mill station. However, this would allow for only intersection that needs to be addressed. Traffic calming and slowing measures could be added at Lee Street and there would be an easier process to slow and fairly warn trail users instead.

County reps felt that, in general, additional signage alone was not a good use of money. Signage is already cluttered and seems to be ignored on the trail as is.

The county seemed willing to look at textural changes in paving that would not require additional signage (such as speed humps).

For example, speed humps, tables, and chicanes will all involve signage.

Thermoplastic paint and crossings all need to have a git to the texture as the team has mentioned that there have been issues in the past with trail users slipping on these.

There was discussion of using the David's Bridal property garage for the public in the future and would it be accessible via the existing driveway. It was determined that the current drive is one way and would difficult, but possible to use if station ave was closed to all general traffic. It would have to be a one way in, one way out arrangement.

On the topic of recreation river access and boat launches – David mentioned that Lock 60 and USVP have recreational river access and require a massive amount of maintenance. These accesses held up to Ida but still require a lot of general maintenance and repairs.

David said that the County cannot take on maintenance or ownership of access in this area as they already have what is considered to be substandard maintenance for what they are currently responsible for.

David wondered if the Township would be interested in having a discussion down the road about owning of $1 leasing the Spring Mill County Park property with caveats about it's future use and maintenance as open space.

Michelle mentioned that as far a river access goes, you don't want people with boats crossing the trail.

Bill closed out the discussion mentioning that there is nothing wrong with letting open space be open space. particularly considering the flooding issues in this area and the lack of habitat in general.

Mont. Co KPI - 9AM 1/10/22

- Spring Mill County properties acquired in pieces. At the time, there may have been interested in creating an active or passive park, but flooding issues may have changed the view to protect as a flooding / riparian / buffer area.

- Existing sign says "park", maybe should be "open space"

- County is "open" to a trail connection through area, but would be difficult. would need to work out a maintenance agreement.

- if Whitemarsh would maintain boardwalks or trails, County would probably be more open to that.

- bike / vehicle interaction at station ave cul-de-sac.

- do we think, if there were a "gathering space" further from the curve, people would congregate there.
- No, bicyclists are "individuals", they will stop wherever they want.

- Courts @ spring mill owns tricycle shop, and leases to user.

- not a lot of parking for access to trail.

- parking ideas:
  - shared parking arrangements w/ offices
  - parking garage @ Fire station.

- David's Bridal site is an opportunity for parking / trail head etc

- offer to purchase part of Quaker park parking Lot?

- tree clearing along trail (SRT) at station?
  - county is open to it, but there are property ownership issues. would probably have to be done by township or other outside agency county does not own land

* - vehicles ~~leaved~~ leaving davids bridal ↑ on Station Ave want to clear tracks, and are at speed as reaching SRT crossing. causes bike/car crashes.

- Signage along SRT to warn bicyclists about upcoming road crossing.
- pavement changes on approach to trail. (textural or speed humps)

- SRT → @ Station Ave
  - 90° or chicanes.

- if David's Bridal were acquired, Station Ave access to SEPTA etc. could be "abandoned" for EMS access only. SEPTA then could be accessed via Lee.
  - is the access along David's Bridal parking wide enough for that?
  - one-way only?

* Access to the River for recreational purposes
* difficult for County to maintain what they have, don't want to add more maintenance responsibilities?
* does Twp. have interest in acquiring Springs Mill park?

Boat access can be problematic w/ Bike ped. interactions.

- is Sundarfu an acquisition priority for Twp?
- concerns about use in floodplain?

- Don't overlook benefit of undeveloped Land. Important for floodplain, habitat etc.

even w/ no boardwalk.

Key Person Interview: Municipal Managers

Date: January 14th, 2022, at 10 AM.

Interviewers: Krista Heinrich, Charlie Guttenplan, and Emily Paskewicz

Interviewees: Rick Mellor, Stephanie Cecco

Whitemarsh Township

Spring Mill Multi-Modal and Land Use Study

Key Person Interview Question Form

Name & Title: Stephanie Cecco – Conshohocken Borough Manager and Rick Mellor Whitemarsh Township Manager

Organization: Click or tap here to enter text.

Date: or tap here to enter text.

What is your relationship to the study area? or tap here to enter text.

How do you use the study area? or tap here to enter text.

What do you like a out the study area urrently? tap here to enter text.

What do you dislike a out the study area urrently? or tap here to enter text.

What would like to see remain the same within the study area? Click or tap here to enter text.

What would like to see hange within the study area? Click or tap here to enter text.

dditional omments: Click or tap here to enter text.

eneral Dis ussion Notes: Click or tap here to enter text.

PBG gives up company parking.

Quaker Park threw out agreements with SEPTA. Is there interest in throwing money at them in order to incentivi e shared parking. es

Rick feels that it will be hard to get support for a new parking structure.

Wayfinding Signage. Similar to what Conshy is doing. Do existing corporate center know which locations are within walking distance. Rick wants to see wayfinding signage promoted as part of this study.

Some discussion as part of the riverfront plan. On signage.

Conshy to provide their signage

Team was surprised by recreation focus.

Rick feels that there does need to be a township precense on the river.

Stephanie – respects the recreation component, but does not want to lose the traffic and access piece.

Charlie access provided by 01/ to the river – steph is frustrated with aged settlement agreement. Developer was more accommodating that expected and new proposal is better than 201 . Extension of trail and public amenities is important. EMA and flood protection elements are important. Steph feels that it is as good as it's going to get it.

Rick all this residential is great but it's important to have restaurants and services.

Steph, population shifting to 60- 0 in the next 18 months. In whom is coming from Washington street to the river. Influx of residents to a new area. o longer east and west now north and south examinations.

Conshy has historically been very blue collar. Exciting and nerve wracking cultural shift in population.

1/14 Muni mgrs KP1 10AM

- County "park" area
- County - walk years ago to discuss. County didn't seem interested.

- parks/county KP1: did not want to spend money, but not against walks if they don't maintain. may consider leasing to Twp. for a dollar.

- access to river important
- parking in area is problematic.

- David's Bridal - "fishing" area, recreation area.

- If David's Bridal were acquired
  - park/rec area
  - re-use parking garage?
  - 2-way Washington Street extension
  - active/passive recreation.
- Borough would support acquisition/continuation of Washington Street
- Conshy in the form of improvements in Conshy of Washington to Cherry Street
- Whitemarsh would like support from
- access to Schuylkill River for recreation important.
- could use open space funding to purchase

- could David's Bridal expand/move up North Street, expand onto adjacent parcel.
  - county RDA support?

- Admin/Research zoning on parcel next to David's Bridal.

- Quaker park: - parking is not shared, wasted area.
  - potential for incentives to encourage Quaker park to share parking

- there is a focus for more green / less asphalt

*wayfinding signage.

- conshohocken does wayfinding signage nicely
  - whitemarsh should coordinate signage w/ conshohocken.

- Incorporate into report: conshy sign/wayfinding standards.

- survey said: people want access to River for recreation.

- 401/433: Borough's Thought on access to River they are providing
  - they've accomodated some of the Borough's suggestions
  - like public amenities along the River.
  - ~ structure being built to adjust to flooding issues.

- Additional residential is going to "want" amenities
- conshy is "shifting" → influx towards River.

Key Person Interview: Whitemarsh Police Department

Date: December 10th, 2021, at 9 AM.

Interviewers: Krista Heinrich

Interviewees: Christopher Ward, Richard Stemple

Whitemarsh PD KPI 12/10/21 9AM

Q1. police
Q2. police
Q3. limited access to washington street have to go into conshy to get to washington street.

David's bridal access → can a fire truck could get through

stemple: david's bridal requested better access between 2 David's Bridal bldgs
Lee/Hector - ped crosswalks
David's Bridal has requested → { - updating ped crossing
- 4-way stop @ Lee & Hector?

stemple: one-way streets work as-is

Elm Street: parking conflict
* Elm & Righter
- no parking at corner signs placed
- concrete company gets big deliveries w/ trucks.

Borough garage → trash trucks.

North Lane: most ped crossings happen more south → between Fire co. & SMCC.

SMCC is growing. parking Lots used to be full. not so much now, but may come back some day.

SMCC 370+/- spaces.

Center street.

- Dr. Dewart / curb / tight radius / hard for trucks to turn
  Heetor Street & Barren Hill

- cannot access SR 1 from Center Ave

- washington street should be
  to 2 lanes w/ a center ~~lane~~ turn lane.
  ~~like~~ like in conshohocken
- Bus traffic associated w/ Hines Ramp

- as long as Boat Club use exists, "River walk" cannot be along River @ Boat Club.
  (revise map to eliminate)

- boat ramp just @ municipal boundary in conshohocken.

- Hector & Sandy: occasional crashes. possibly sight distance related.

- spring mill park: any issues

A not discussed in KPI

(*) there is an existing ped bridge along culvert near center ave on Barren Hill Road that needs repair/replacement
ADD to STUDY

Key Person Interview: Spring Mill Corporate Center

Date: December 10th, 2021, at 9 AM.

Interviewers: Krista Heinrich and Emily Paskewicz

Interviewees: Max Ryan and Matt Handel

KPI – Spring Mill Corporate Center

M. Handel and M. Ryan

Date: January 17th 2022 at 2:00 pm.

Estimated that 100 of their tenants were using the trail pre-pandemic (about 10% of tenants).

Invested significant capital in the corporate center property to improve the buildings and amenities for tenants.

They currently have a fitness operator on-site for their tenants.

They would like to see walkable bars and restaurants for their tenants from the corporate center

Corporate Center previously a deli on site. They are trying to get another food operation up and running on the corner of Hector and Lee St. They have plans to expand the existing outdoor seating/patio and potentially work with the Fire Department to close off a section of Lee Street for outdoor dining and events.

They see the Northern SMCC lot as having potential for a less dense residential use.

They would be interested in seeing and exploring further for their own use to have a parking garage on the fire company lot. They see the garage as a potential for mixed-use in addition to parking. Potential for retail and maybe even some residential.

SMCC luckily did not have any issues with Ida flooding. They feel that it's most logical to only really consider development above the flood line.

The property opposite there's on Lee Street that is currently being redevelopment was not allowed to have traditional retail uses on the first floor. They see this as a bit of missed opportunity, particularly for food or a café/bakery that could have bene used by tenants.

- This could be something to explore and consider changing through the zoning ordinance updates.

They are open to the idea of transit-oriented development on the north lot and are also open to considering additional pedestrian infrastructure on and near their lot to provide better access for pedestrians and bikes.

SMCC

1/7/22 ICPI - SPRING MILL CORP CENTER

- parking area at rear - what use does that want to be
  - do they need all that parking?
  - working on this - how does new working arrangements impact this.
- transitional area - next to residential
  - possibly Townhomes?
- indifferent to uses / structures.
- parking structure may block view to "gateway" via view into Conshy.

- upper parking area is least used (the newly paved)

- approx 1/2 per 1000 sf used SEPTA train to get to SMCC (maybe 100 people) survey taken @ 75% full (maybe of 1000 people)

* would like more of:
  - more local dining, used to have a deli, but difficult when their arent weekend / night users

- like ideat of parking structures w/ retail on Firestation corner.
- possibly Lee street continuation through SMCC

* 1st floor uses @ Lee Street Commons are retail / restaurants prohibited uses? maybe that should change

Key Person Interview: David's Bridal #1

Date: January 14th, 2022, at 10 AM.

Interviewers: Krista Heinrich, Charlie Guttenplan, and Rick Mellor

Interviewees: Jim Marcum, Terrance Kassis,

2/7/22 4PM

- Jim Marcum
- Terrance Kassis
- Rick Mellor
- Charlie Guttenplan
- Krista Hamrick

- NEED FOR A REPLACEMENT TO FILL IN FOR CRAIG IN COMMITTEE MEETING
  - Jim will suggest a few potentials

- MULTI-MODAL STUDY / LAND USE
- WASHINGTON STREET CONNECTION & PIN-POINT
- JIM MARCUM - EXPLORING OPTIONS
  1) RENOVATING FIRST FLOOR
     - RECONFIGURE BLDG.
     - USE MAT'LS ON 1ST FLR THAT ARE FLOOD "READY", CAN BE EASILY CLEANED

ABOUT 60-DAYS FROM "PULLING TRIGGER" ON A FULL RENO.

  2) MOVE OPERATION TO ANOTHER SITE??
  3) WILLING TO CONSIDER "ANYTHING"
- IMPORTANT TO KEEP DAVID'S BRIDAL IN THE TOWNSHIP
- WILLING TO CONSIDER REMOVING A PART OF BUILDING AS PART OF RENO. TO ALLOW FOR CONT. OF WASHINGTON STREET

- TEAR DOWN PROTRUSION MIGHT BE ~~[illegible]~~ TOO DISRUPTIVE, MIGHT NEED TO RELOCATE DURING THAT TYPE OF CONSTRUCTION

Key Person Interview: David's Bridal #2

Date: February 14th, 2022

Interviewers: Krista Heinrich, Charlie Guttenplan, and Rick Mellor

Interviewees: Jim Marcum, Terrance Kassis

2/14/2022 David's Bridal follow up mtg.

- safety. - vehicles entering site
  who maintains?
  - snow plow
  - sidewalk maintenance
  - accidents.

- report should mention not possible without David's Bridal buy-in

- only feasible if...

- list under alternatives
  - if building portions are removed, temporary relocation.

- at bottom of parking garage ramp. if a stairway, or access could be provided. (to waterline/shoreline) David's Bridal would/may support that.
  - maybe only available to public on weekends
  - would be open to a boardwalk along shore line.

- In our concepts, angled parking does not allow access to loading dock

- Lee street needs better PED x-ing
  - train users walk along tracks on gravel to get to Station instead of across Lee Street.
  - no lighting.

Spring Mill Multi-Modal & Land Use Study

Virtual Public Presentation & Listening Session

Join us on **Monday December 6th, 2021 at 6:00 pm (via zoom)** to learn about the goals and objectives of the Spring Mill Study and share your insights and feedback on the study area.

Please register using the link below:

https://us06web.zoom.us/meeting/register/tZYkdO6vrzIqGta81ozdHSCHxlX2QvvrN29-

For More Information on the Project:

https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us

Deana Shuler

From: mdenatale@mainlinemedianews.com on behalf of Times Herald Legals <legals@timesherald.com>
Sent: Wednesday, November 24, 2021 11:43 AM
To: Deana Shuler
Cc: Charlie Guttenplan
Subject: Re: Public Notice - Presentation & Listening Session

MEETING NOTICE
PUBLIC PRESENTATION & LISENTING SESSION
WHITEMARSH TOWNSHIP
SPRING MILL MULTI-MODAL AND LAND USE STUDY

NOTICE IS HEREBY GIVEN that the Whitemarsh Township Spring Mill Study Steering Committee will host a Public Presentation & Listening Session for the Spring Mill Multi-Modal and Land Use Study on **Monday, December 6, 2021, at 6:00 PM.** This meeting will be conducted remotely via ZOOM and participants are required to register using an email address. The study is funded, in part, by a grant from Delaware Valley Planning Commission's (DVRPC) Transportation and Community Development Initiative (TCDI).

The public is encouraged to join the meeting. Information about how to join and register can be found on the Township's' website:
https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us

The ZOOM meeting will include a listening session, during which the public will be able to ask questions and offer feedback on the study area and the project.

Persons with a disability who require an auxiliary aid, service or other accommodation to participate in the meeting should contact Whitemarsh Township at 610-825-3535.

Charles L. Guttenplan, AICP
Whitemarsh Township Director of Planning & Zoning
NTH Nov 30 a-1

On Wed, Nov 24, 2021 at 10:56 AM Deana Shuler <DShuler@whitemarshtwp.org> wrote:

Good morning-

Please advertise the attached on Tuesday, November 30, 2021 (BOX AD). Please send a confirming e-mail.

In addition, please send a copy of the proof of publication.

Thank you and Happy Holiday!

Deana

Deana Shuler

Administrative Assistant

Planning & Zoning Department

484-594-2613

dshuler@whitemarshtwp.org

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEETING MINUTES – PUBLIC PRESENTATION & LISTENING SESSION

Date: December 10, 2021

Reference: Spring Mill Area Multimodal and Land Use Study
Public Presentation & Listening Session
G&A Project No. 20-12028

Summary

The Public Presentation and Listening Session for the Spring Mill Area Multimodal and Land Use Study was held on Monday, December 6, 2021, at 6 pm, via Zoom, to inform and educate the public about the project while gathering their feedback on the study area's issues and potential solutions. The following is a summary of the meeting:

Attendance

44 Attendees
106 Registrations (on Zoom)
4 Project Team Members: Charlie Guttenplan (Director of Planning and Zoning, Whitemarsh Township, Krista Heinrich (Whitemarsh Township Engineer, Gilmore & Associates), Kristin Norwood (Senior Transportation Engineer, Gilmore & Associates), & Emily Paskewicz (Landscape Architect, Gilmore & Associates).

Minutes

- Welcome & Introductions
  - Welcome and quick explanation of the project and session by Charlie Guttenplan.
  - Project team introductions.
- Session Goals
  - Goal 1: Inform & educate about the background, goals, and timeline for the Spring Mill Multi-Modal and Land Use Study.
  - Goal 2: Gather feedback on the study area, issues, and potential solutions.
  - Goal 3: Provide info about the future timeline and how to stay engaged with the project moving forward.
- Project Location
  - K. Heinrich explained the project area map and the limits of the study area.
- Project Goals
  - Goal 1: Enhance the multi-modal connectivity of Washington Street, Lee Street, and the broader study area.
  - Goal 2: Evaluate a potential redesign of the waterfront and potential land uses.
  - Goal 3: Identify and evaluate the potential of undeveloped and underdeveloped parcels within the study area.
  - Goal 4: Identify issues and solutions for the Spring Mill Junction of the Schuylkill River Trail, the SEPTA railway and Spring Mill station, and Station Ave.

- Project History & Background
    - C. Guttenplan explained previous plans that became the impetus for further investigation in this study including the 2011 Riverfront Open Space Plan, the 2016 Riverfront Plan produced in conjunction with Conshohocken, and the 2020 Comprehensive Plan update.
- Project Status to Date
    - January 2020 – TCDI grant awarded to Township for the project.
    - January 2021 – Initial site visit and project kickoff.
    - Early 2021 – Base map and site analysis plan preparation.
    - September – Kickoff meeting with Steering Committee.
    - October – Steering committee meeting #2 and site tour.
    - November 2021 – Public survey is live online from 11/5- 11/29.
- Key Focus Areas
    - Washington Street & connecting streets.
    - SRT, Spring Mill SEPTA station, and Station Ave. intersection.
    - Spring Mill County Park area
    - North Lane.
- Site Analysis – Washington Street
    - Potential future development at 401/433 Washington.
    - Buffer between train tracks and trail could be a wall with mural from local artists, groups, or students.
    - SEPTA equipment will need to be avoided.
    - Lee Street needs improved pedestrian safety measures.
    - David's Bridal building prohibits 2-way vehicle traffic – looking at options to perhaps let one-way traffic through.
    - Condition of road along Washington Street is generally poor.
- Lee Street Intersection Photos
- Washington Street & David's Bridal Building Photos
- Washington Street along 901 Washington Photos
- Washington Street along the Hines Rowing Center & Underdog Landscaping Supply Photos
- Washington Street along 401/433 Washington Street Photos
- Site Analysis – Spring Mill Riverfront
    - Spring Mill County Park area.
        - Important environmental/floodplain area that must be protected.
        - Area is not currently accessible to the public.
        - Potential boardwalk trail/public access for passive recreation.
    - Lack of parking in the study area in general is an issue.
        - SEPTA is the owner of two parking lots in this area and could be a good partner for a shared parking agreement.
    - Spring Mill is one of the most frequently used trailheads along SRT.
    - Sundafu Recycling Center is visible from the SRT and could be buffered.
- Sundafu Recycling Center & Station Ave. Photos
- Station Ave. & E. Hector Street Photos
- Site Analysis – Spring Mill Junction
    - People use the David's Bridal's private parking frequently.
    - Currently there are many unsafe interactions between rail, trail, cyclists, and vehicles.
    - Vehicles wait to pick up train users in the turnaround area causing congestion.
- SEPTA, Schuylkill River Trail, & Station Ave. Intersection Photos
- David's Bridal Parking Deck & River Access Photos
- SEPTA Spring Mill Station Photos
- Site Analysis – North Lane
    - The study is more land use focused in this area as a result of several underdeveloped parcels.

    - Existing Spring Mill Corporate Center parking lots could be a good opportunity for a shared parking agreement, particularly for SEPTA and SRT users.
    - Connectivity along North Lane.
        - Safe street crossings and sidewalks are needed to connect these parcels to the riverfront area amenities and transportation hubs.
    - Connection to potential future Miracle-Nature Trail.
- North Lane Parcel Photos
- Project Timeline & Looking Ahead
    - Feedback from this meeting will be considered, compiled, and incorporated into the final report.
    - Key Stakeholder Interviews will be held between December 2021 and January 2022.
    - Preparation of conceptual designs, report, and recommendations.
    - Additional steering committee meetings to review work.
    - In late winter 2022 a final public presentation and listening session will be held to review final concepts and recommendations. Meeting participants were encouraged to keep an eye out for this.
- Public Feedback –
    - Participant #1 –
        - Asked if the study would consider shared parking with the lot across the street on North Lane that appears to be owned by the Spring Mill Corporate Center.
            - E. Paskewicz – It is owned by the fire company but leased to SMCC. This option has been explored in committee meetings but may be difficult with the existing lease constraints.
    - Participant #2 –
        - Asked about the 901 Washington apartment complex that's going to be built and if there is going to be additional consideration for more parking in this area after it is built?
            - C. Guttenplan – This is being examined as the development moves forward. Said they haven't yet reached the land development plan stage and to keep an eye out for future meetings.
    - Participant #3 –
        - Has serious concerns about the lack of parking for the Spring Mill SEPTA station. Is also concerned about safety and developments along the river. Is concerned that this will cause flooding issues and make it hard for emergency services to access residents along the river.
    - Participant #4 –
        - Asked if there might be kayak boat launches, SEPTA quiet zones, and flood control measures as part of the study.
            - E. Paskewicz – Yes. We are looking at boat launch possibilities.
            - SEPTA quiet zones will be considered and discussed in future meetings.
            - Flooding will be a really important consideration in the study. Any solutions will need to be sensitive and understanding of the increasing severity of flooding in this area.
    - Participant #5 –
        - Stated that they have been travelling to Marsh Creek or Valley Forge for kayak access and it would mean a lot to be able to kayak and have access only 5 minutes away from home. Also mentioned that there is a zigzag in SRT that is dangerous – at Lee Street, behind Quaker Park.
    - Participant #6 –
        - Mentioned Flood control and asked about what the team has found to date regarding options. Mentioned FEMA and asked if there were any methods to mitigate the effects of the impervious coverage in the area. Also asked about getting a better FEMA rating to show that the Township is doing all they can deal with the flooding issues.
            - E. Paskewicz – This is still being examined but no solutions have been determined yet. Impervious coverage is handled, in part, by regulations in the

Zoning ordinance and there will be recommendations to consider pervious pavement where new paving is needed in the study area.
        - K. Heinrich – Emergency response is something that the Township has worked on in this regard.
        - C. Guttenplan – The Township is in the process of updating the Zoning ordinance to address some of these issues, including impervious surfaces.
- Participant #7–
    - Asked for more information on what was happening on the County Park and Recycling Center properties.
        - E. Paskewicz - Any improvements on the park property will likely be passive recreation and minimal in nature. The recycling center is called out largely in regard to the need for more buffering
        - C. Guttenplan – The county parks department and county planning commission are represented on the steering committee and there is an understanding that this is a sensitive environmental area.
- Participant #7 –
    - Asked about the 600-unit apartment building that is being planned: Will it have public amenities and/or access? What discussions have been had with the boat club?
        - C. Guttenplan – The most recent plans for the 901 Washington St. development involved a riverfront trail that will be accessible to the public. The development is also required to provide a certain amount of publicly accessible open space. As far as the boat club goes, the trail will not go along the river as long as the current boat club use is there. The trail would need to go around the boat club and along Washington Street instead.
- Participant #8 -
    - Asked about how flooding impacts the key areas within the study area.
        - E. Paskewicz – Ida's flood line lined up with 100-year floodplain and will need to be considered in this study as it covers the vast majority of the southern half of the study area.
- Participant #9 –
    - Asked if there is the potential for outdoor gym parks similar to the "fitness court" installed recently in Conshohocken?
        - E. Paskewicz – That amenity has not been discussed specifically, but there are certainly opportunities and the potential to examine that at a few places in the study area.
- Participant #10 –
    - Asked how the project will be funded.
        - E. Paskewicz – Many funding mechanisms, particularly grants, could be used to fund improvements. Some things may be able to be funded by the Township outright. As part of the report, there will be a list of potential grants and funding sources for the Township to consider.
        - C. Guttenplan – Explained that the recommendations of the study can be used as a basis for requiring certain improvement from developers.
- Participant #11 –
    - Asked if there is an opportunity for an "on the river walk" similar to the one in Philly at the end of SRT?
        - E. Paskewicz – Yes.
        - C. Guttenplan – Through Zoning, all new developments are required to continue the river front trail. The Hines Rowing Center has safety/insurance issues with a trail through their stretch of river due to boats being carried in that area.
- Participant #12 -
    - Asked what development is planned or expected for the current residential property at the top of North Lane.
        - E. Paskewicz – No current or proposed plans that the project team is aware of. However, it is a large, underdeveloped property (10 acres between two parcels) that could potentially change hands or be developed under a new use in the future.

- Participant # 13 -
  - Asked why there has been no discussion of sharing Quaker Chemical's parking lots.
    - E. Paskewicz – It has been discussed in the Steering Committee meetings and will be considered as part of the study.
    - K. Norwood –Confirmed that it is included in the plans currently.
- Participant # 14 –
  - Asked if there is an estimated price tag associated with the project.
    - E. Paskewicz – Not at this time as this is a feasibility study, and all of the eventual solutions and recommendations will be conceptual in nature.
- Participant # 15 –
  - Asked if there is a way to incentivize owners of existing large parking lots to offer shared parking.
    - C. Guttenplan – Not that comes to mind. There may be a possible opportunity through zoning, but it could be difficult to implement due to liability issues. Said it could be examined as part of the zoning update.
- Participant # 15 –
  - Asked about parking incentives and mentioned a real estate tax break as a potential incentive for owners to share large parking lots.
    - E. Paskewicz – The team is not aware of any examples of this currently but will be investigating this as part of the study.
- Participant # 16 –
  - Stated that the murals mentioned around the SEPTA rail line with public art would be beneficial to the area.
    - K. Norwood – Agreed and stated that it will likely be a recommendation for the final report.
- Participant #15 –
  - Stated she is not in favor of walls that create barriers, particularly ones that impact views.
    - K. Norwood – The recommended strategy would be low walls, more of a safety barrier instead of a visual barrier or screen.

- Closing
  - The attendees were thanked for their time, feedback, and contribution to the study's process.
  - Reminders were given to check the project landing page for updates and to keep an eye out for a final public meeting to review recommended solutions and the final plan findings later in the winter.

Public Presentation & Listening Session

Whitemarsh Township

Spring Mill Multi-Modal and Land Use Study

Session Goals

01

Inform & Educate about the background, goals, and timeline for the Spring Mill Multi-Modal and Land Use Study.

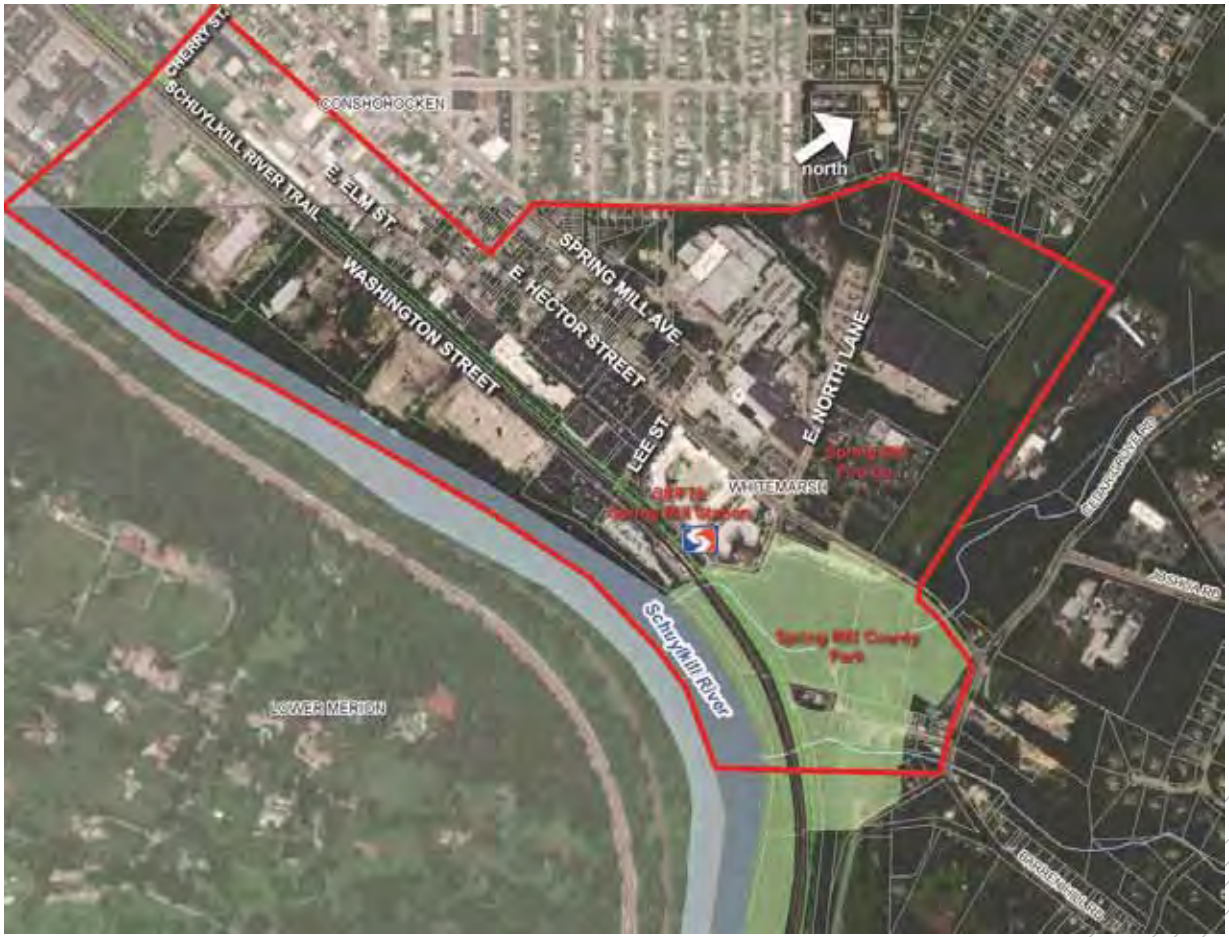
02

Gather Feedback on the Study Area, Issues, and Potential Solutions.

03

Provide info about the future timeline and how to stay engaged with the project moving forward.

Project Location



Project Goals

01

Enhance the Multi-Modal Connectivity of Washington Street, Lee Street, and the Wider Study Area.

02

Evaluate a potential redesign of the waterfront and surrounding land uses.

03

Identify and evaluate the potential of undeveloped and underdeveloped parcels within the study area.

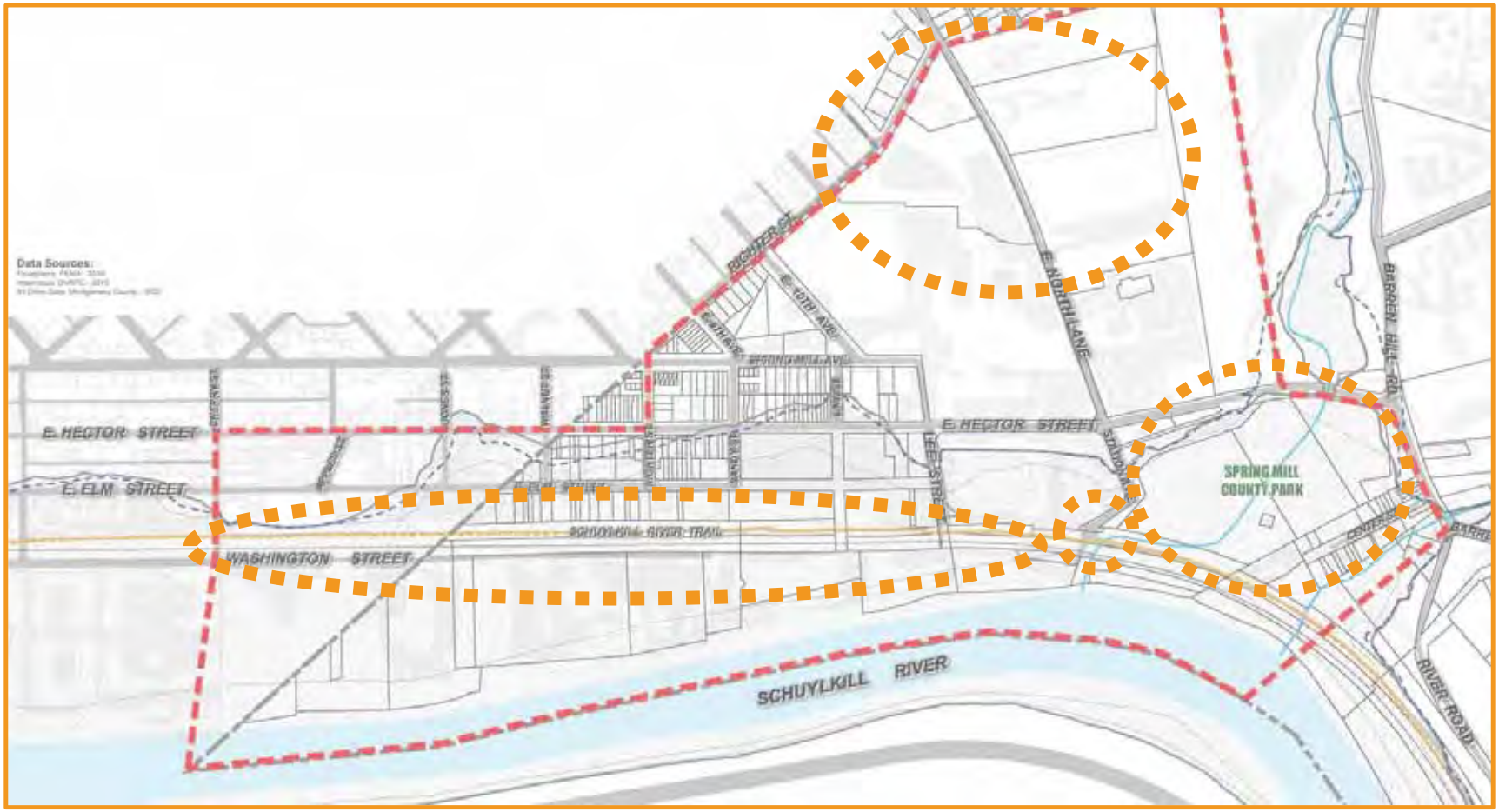
04

Identify issues and solutions for the Spring Mill Junction of The Schuylkill River Trail, The SEPTA Railway and Spring Mill Station, Station Avenue.

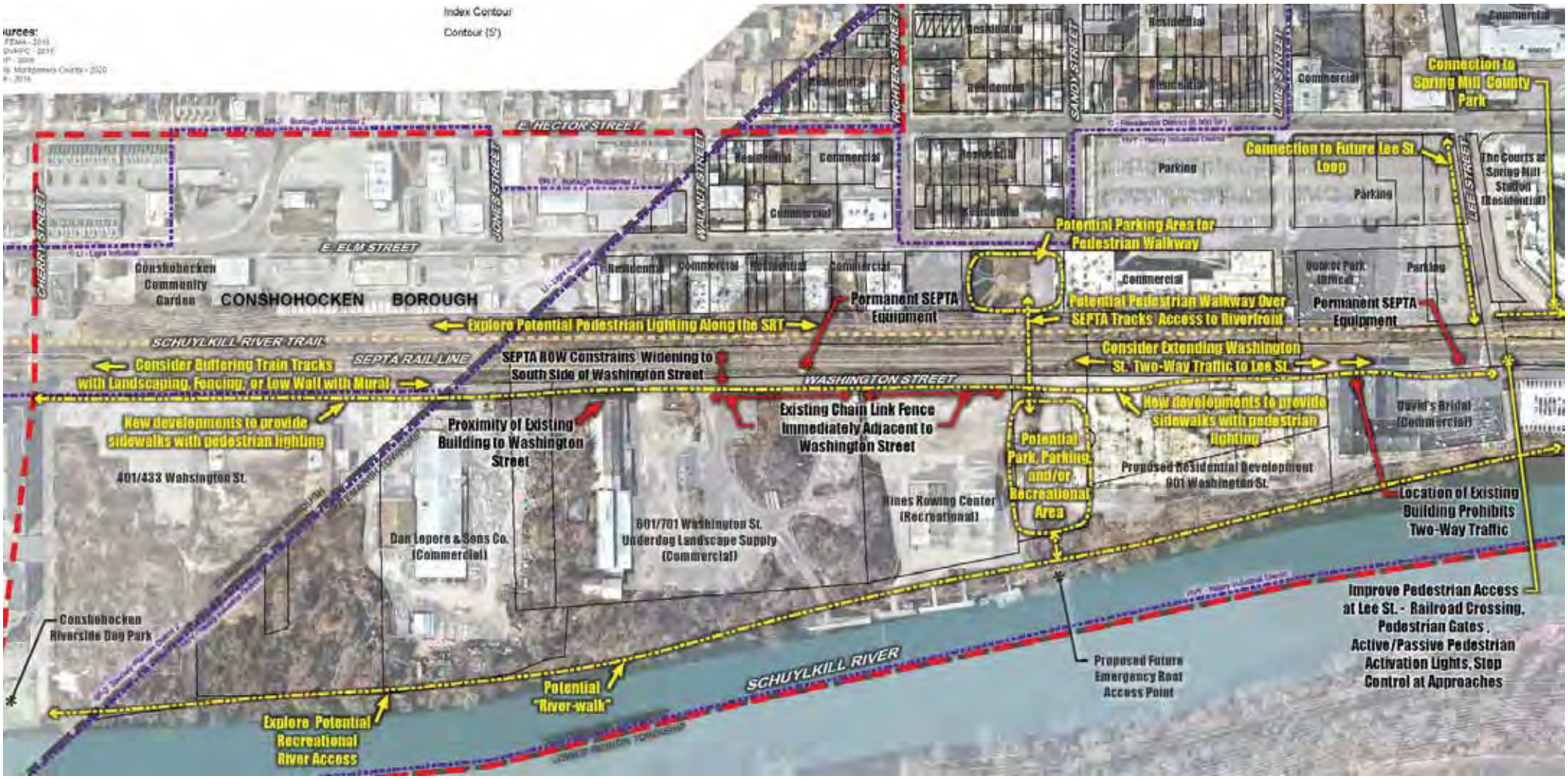
Project History & Background

- Early Ideas to Connect Washington & Lee Street
- 2011 Riverfront Open Space Plan
- 2016 Riverfront Plan (Conshohocken & Whitemarsh)
- 2020 Comprehensive Plan Update and General Land Use Recommendation

Project Status to Date

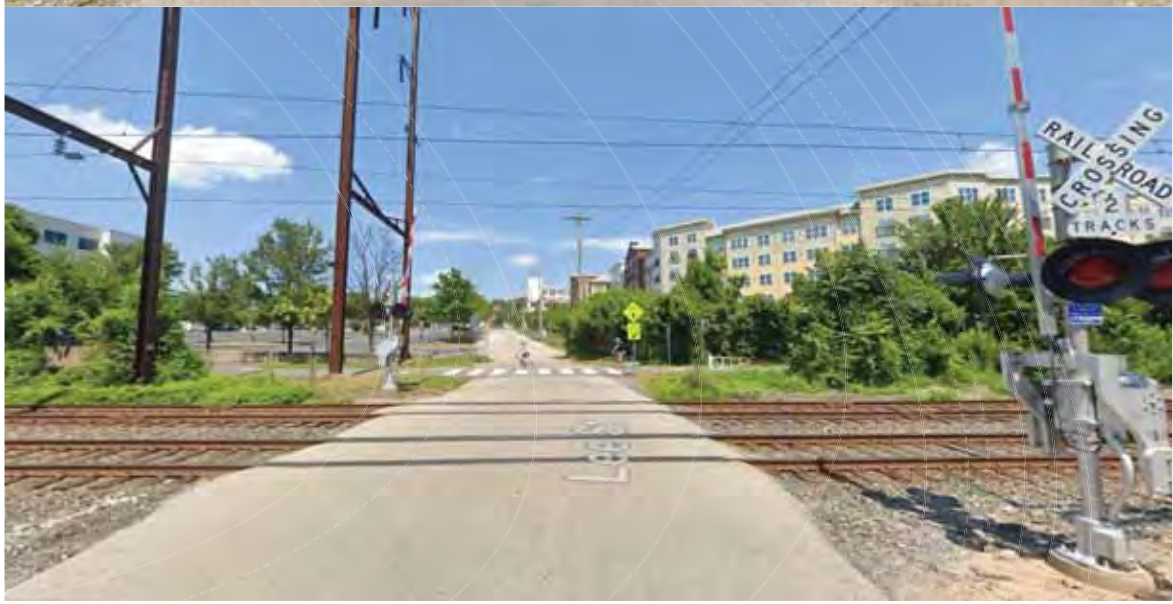


Key Focus Areas



Site Analysis – Washington Street

Lee Street Intersection

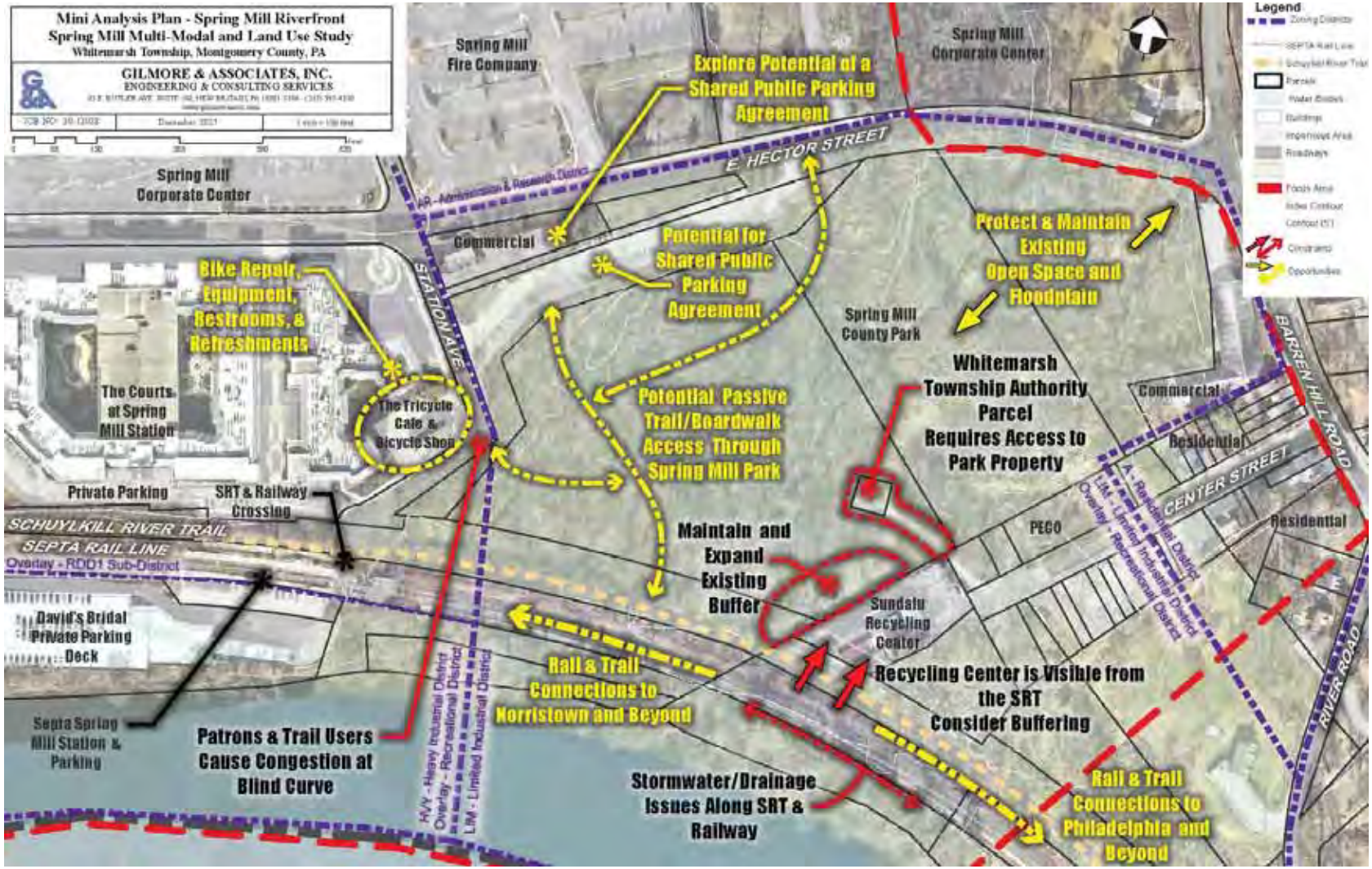


Washington Street & David's Bridal Building

Washington Street - Along the 901 Washington Street Property

Washington Street along the Hines Rowing Center & Underdog Landscaping Supply

Washington Street along 401/433 Washington Street



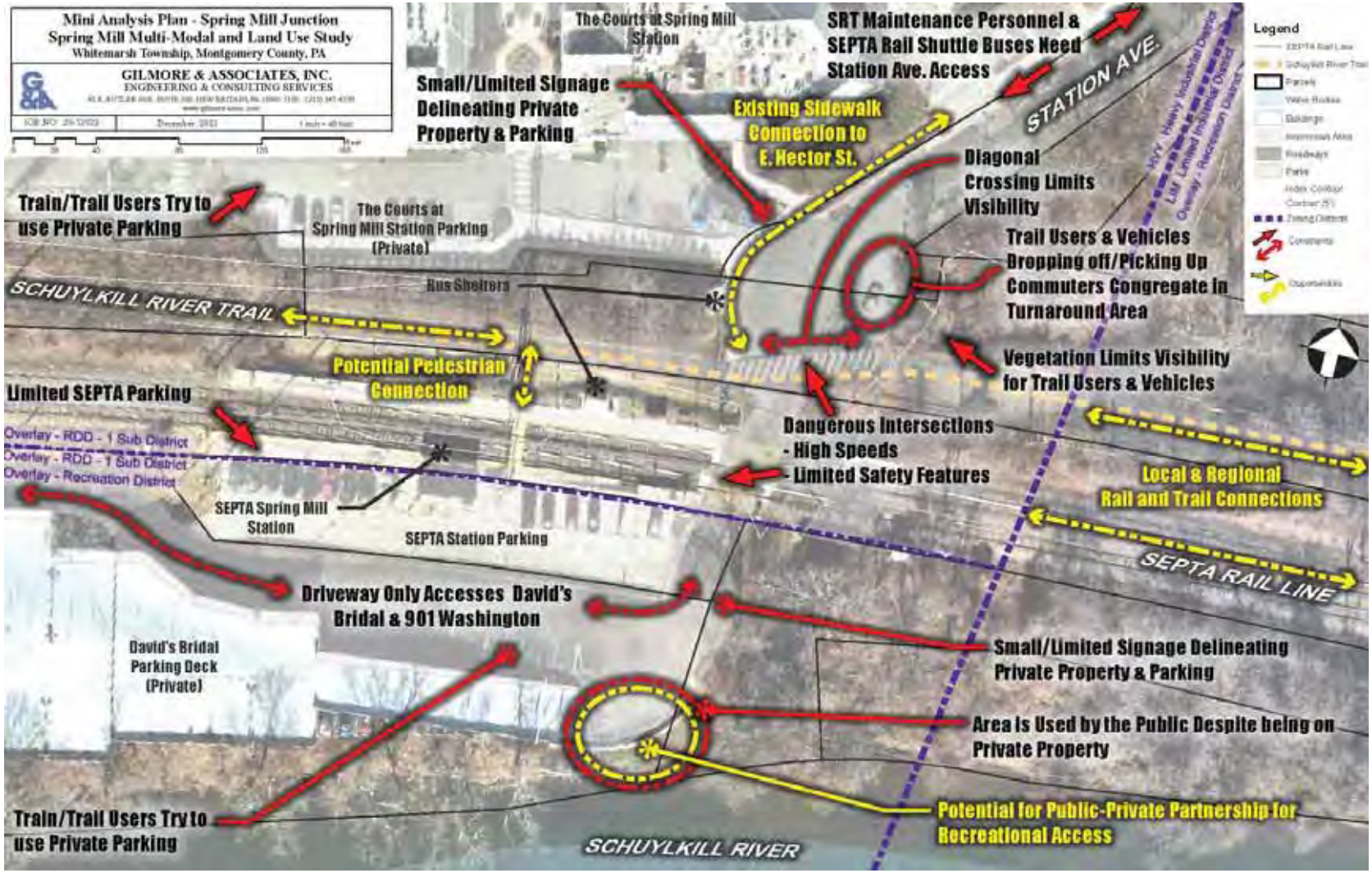
Site Analysis – Spring Mill Riverfront

Station Avenue – Tricycle Cafe

Spring Mill County Park
– From E. Hector St.

Sundafu Recycling Center
– From SRT

Station Avenue & E. Hector Street

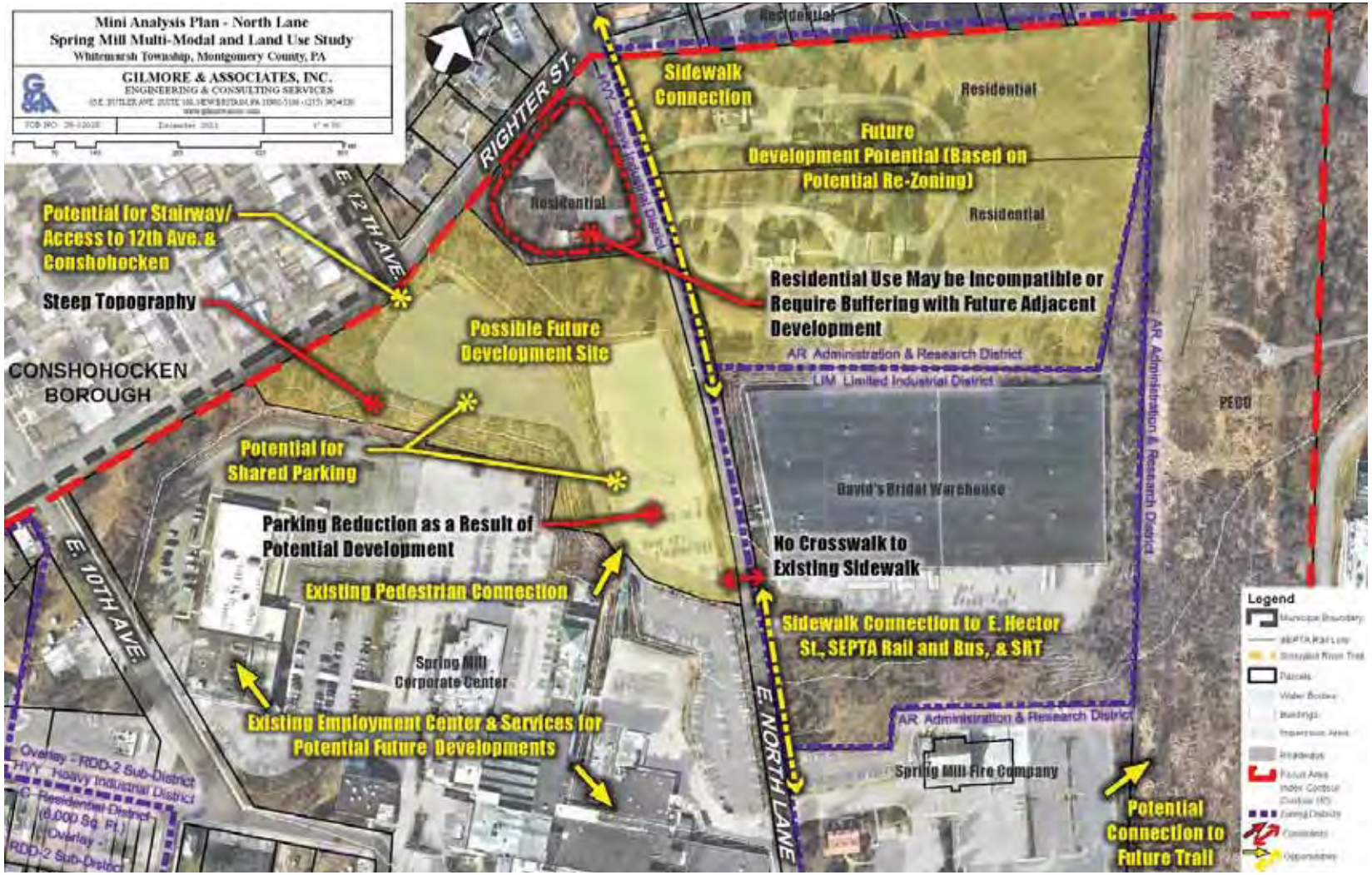


Site Analysis – Spring Mill Junction

SEPTA, Schuylkill River Trail, & Station Avenue Intersection

David's Bridal Parking Deck & River Access

SEPTA Spring Mill Station



Site Analysis – North Lane

North Lane

Project Timeline – Looking Ahead

- Feedback from this meeting will be compiled, considered, and incorporated into conceptual designs, recommendations, and the final report
- Key Stakeholder Interviews – December 2021
- Additional Steering Committee Meetings to review work as we move forward
- Preparation of final report, conceptual designs and recommendations
- Late Winter 2022 - Final Public Meeting to Review Concepts & Recommendations
- Information & Updates can be found on the project landing page within the Township website:
  - https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us

Public Feedback

Raise your hand (via Zoom) and we will call on you to unmute and speak

Or - type comments/questions/feedback into the chat feature.

Thank you!

Spring Mill Multi-Modal & Land Use Study

Virtual Final Public Presentation & Listening Session

Join us on **Thursday, March 3rd 2022 at 6:00 pm (via zoom)** to learn about the findings and recommendations from the Spring Mill Study and to share your insights and feedback.

Please register using the link below:

https://us06web.zoom.us/meeting/register/tZMpf-yorDMoEtBwjMxNflr4F07JDUtDk6xq

For More Information on the Project:

https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us

Thursday, February 24, 2022

timesherald.com

MEETING NOTICE
FINAL PUBLIC PRESENTATION & LISENTING SESSION
WHITEMARSH TOWNSHIP
SPRING MILL MULTI-MODAL AND LAND USE STUDY

NOTICE IS HEREBY GIVEN that the Whitemarsh Township Spring Mill Study Steering Committee will host a Final Public Presentation & Listening Session for the Spring Mill Multi-Modal and Land Use Study on **Thursday March 3rd, 2022, at 6:00 PM**. This meeting will be conducted remotely via ZOOM and participants are required to register using an email address. The study is funded, in part, by a grant from Delaware Valley Planning Commission's (DVRPC) Transportation and Community Development Initiative (TCDI).

The public is encouraged to join the meeting. Information about how to join and register can be found on the Township's' website: https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us

The ZOOM meeting will include a listening session, during which the public will be able to ask questions and offer feedback on the findings and recommendations of the study.

Persons with a disability who require an auxiliary aid, service or other accommodation to participate in the meeting should contact Whitemarsh Township at 610-825-3535.

Charles L. Guttenplan, AICP
Whitemarsh Township Director of Planning & Zoning
NTH Feb 24 a-1

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEETING MINUTES – FINAL PUBLIC PRESENTATION & LISTENING SESSION

Date: March 7, 2022

Reference: Spring Mill Area Multimodal and Land Use Study
Final Public Presentation & Listening Session
G&A Project No. 20-12028

Summary

The Final Public Presentation and Listening Session for the Spring Mill Area Multimodal and Land Use Study was held on Thursday, March 3rd, 2022, at 6 pm, via Zoom, to inform and educate the public about the project while gathering their feedback on the findings and recommendations of the study. The following is a summary of the meeting:

Attendance

13 Attendees
4 Project Team Members: Charlie Guttenplan (Director of Planning and Zoning, Whitemarsh Township, Krista Heinrich (Whitemarsh Township Engineer, Gilmore & Associates), Kristin Norwood (Senior Transportation Engineer, Gilmore & Associates), & Emily Paskewicz (Landscape Architect, Gilmore & Associates).

Minutes

- Welcome & Introductions
  - Welcome and quick explanation of the project and session by Charlie Guttenplan.
  - Project team introductions.
- Session Goals
- Understanding Conceptual Planning Studies
  - E. Paskewicz explained that this a planning study and therefore all plans and sketches are conceptual in nature. The project team will be presenting sketches that are not currently feasible but that represent an ideal future scenario. These are included to have plans on record if situations should change in the future that would make these options feasible.
- Project Location
- Project Goals
- Project History & Background
  - C. Guttenplan explained previous plans that became the impetus for further investigation in this study including the 2011 Riverfront Open Space Plan, the 2016 Riverfront Plan produced in conjunction with Conshohocken, and the 2020 Comprehensive Plan update.
- Project Status to Date
- Key Focus Areas
- What are Conceptual Alternatives?
- Site Analysis – Washington Street

    - Potential future development at 401/433 Washington.
    - Buffer between train tracks and trail could be a wall with mural from local artists, groups, or students.
    - SEPTA equipment will need to be avoided.
    - Lee Street needs improved pedestrian safety measures.
    - David's Bridal building prohibits 2-way vehicle traffic – looking at options to perhaps let one-way traffic through.
    - Condition of road along Washington Street is generally poor.
- Lee Street Intersection Photos
- Washington Street & David's Bridal Building Photos
- Washington Street along 901 Washington Photos
- Washington Street along the Hines Rowing Center & Underdog Landscaping Supply Photos
- Washington Street along 401/433 Washington Street Photos
- Preferred Future: Washington Street Conceptual Sketch, Two-Way
- Preferred Future: Washington Street Typical Cross Section
- Immediate Future: Washington Street Conceptual Sketch – One-Way, Signalized
- Site Analysis – Spring Mill Riverfront
    - Spring Mill County Park area.
        - Important environmental/floodplain area that must be protected.
        - Area is not currently accessible to the public.
        - Potential boardwalk trail/public access for passive recreation.
    - Lack of parking in the study area in general is an issue.
        - SEPTA is the owner of two parking lots in this area and could be a good partner for a shared parking agreement.
    - Spring Mill is one of the most frequently used trailheads along SRT.
    - Sundafu Recycling Center is visible from the SRT and could be buffered.
- Sundafu Recycling Center & Station Ave. Photos
- Station Ave. & E. Hector Street Photos
- Conceptual Sketch: Spring Mill Gathering Space
- Immediate Future: Sundafu Recycling Center Conceptual Buffering
- Site Analysis – Spring Mill Junction
    - People use the David's Bridal's private parking frequently.
    - Currently there are many unsafe interactions between rail, trail, cyclists, and vehicles.
    - Vehicles wait to pick up train users in the turnaround area causing congestion.
- SEPTA, Schuylkill River Trail, & Station Ave. Intersection Photos
- David's Bridal Parking Deck & River Access Photos
- SEPTA Spring Mill Station Photos
- Preferred Future: Spring Mill Junction Conceptual Plan
- Immediate Future: Spring Mill Junction Conceptual Plan
- Preferred Future: Spring Mill River Access Conceptual Plan
- Immediate Future: Riverwalk Conceptual Plan
- Site Analysis – North Lane
    - The study is more land use focused in this area as a result of several underdeveloped parcels.
    - Existing Spring Mill Corporate Center parking lots could be a good opportunity for a shared parking agreement, particularly for SEPTA and SRT users.
    - Connectivity along North Lane.
        - Safe street crossings and sidewalks are needed to connect these parcels to the riverfront area amenities and transportation hubs.
    - Connection to potential future Miracle-Nature Trail.
- North Lane Parcel Photos
- Preferred Future: North Lane Land Use

- Transit-Oriented Development Examples
- Overall Study Area – Concepts & Recommendations
- Multi-Modal Infrastructure
- Pedestrian Crossing Improvement & Wayfinding Examples
- Preferred Future: Shared Parking
- Future Alternative: Parking Garage
- Flood Resiliency: Recommendations
- Flooding Education & Community Art Recommendations
- Project Timeline & Looking Ahead
- Public Feedback –
    - Participant #1 –
        - Stated that their home just missed getting flooded during Ida. Asked why Quaker Park does not want to share their parking? They also stated that Quaker Park's parking rarely looks fully utilized and that it seems like a missed opportunity.
        - E. Paskewicz responded that while the project team shared this sentiment, they needed to respect the fact that this parking is privately owned by Quaker Park. However, part of the study's recommendations would be to continue making efforts to reach out to Quaker Park's management and to potentially seek out ways to financially incentive shared parking for this lot in particular.

    - Participant #2 –
        - Asked about the section of the riverfront trail that 901 Washington's developers would be required to install and questioned what the process would be to get the trail installed around the Hines Rowing Center property.
        - C. Guttenplan responded that while the Rowing Center is supportive of the trail, they have not pursued land development and if they don't pursue land development they can't be compelled or required to install the trail.
- Closing
    - The attendees were thanked for their time, feedback, and contribution to the study's process.
    - Reminders were given to check the project landing page for updates and upcoming meetings with the Planning Commission and Board of Supervisors.

Final Presentation & Listening Session

Whitemarsh Township

Spring Mill Multi-Modal and Land Use Study

Session Goals

01

Inform & Educate about the background, goals, and timeline for the Spring Mill Multi-Modal and Land Use Study.

02

Gather Feedback on the Recommended Solutions and Conceptual Options for the Study Area.

03

Provide info about the future timeline and how to stay engaged with the project moving forward.

Understanding Conceptual Planning Studies

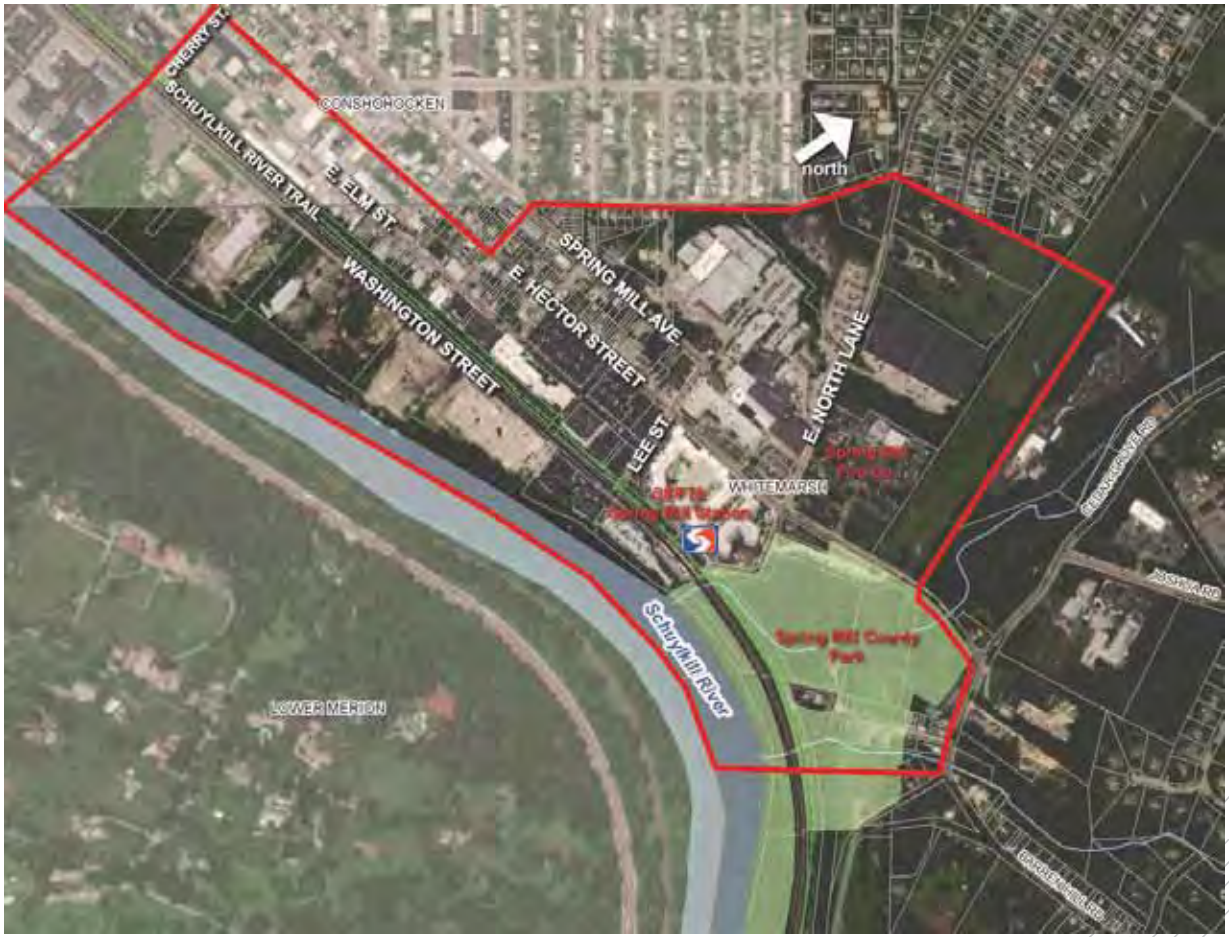
WHAT THIS CONCEPTUAL PLANNING STUDY PROVIDES:

- Analysis of a wide variety of characteristics for the Study Area holistically, as well as several specific areas of focus within the Study Area.
- An analysis of opportunities and constraints within these areas.
- Conceptual sketches & plans and recommended alternatives to address key issues and constraints within the study area.
- Recommendations for further study and additional recommendations for solutions that have come out of past planning studies.

WHAT THIS CONCEPTUAL PLANNING STUDY **DOES NOT** PROVIDE:

- A one-size-fits-all solution to any given issue with the study area.
- Detailed engineering plans or detailed cost estimates.

Project Location



Project Goals

01

Enhance the Multi-Modal Connectivity of Washington Street, Lee Street, and the Wider Study Area.

02

Evaluate a potential redesign of the waterfront and surrounding land uses.

03

Identify and evaluate the potential of undeveloped and underdeveloped parcels within the study area.

04

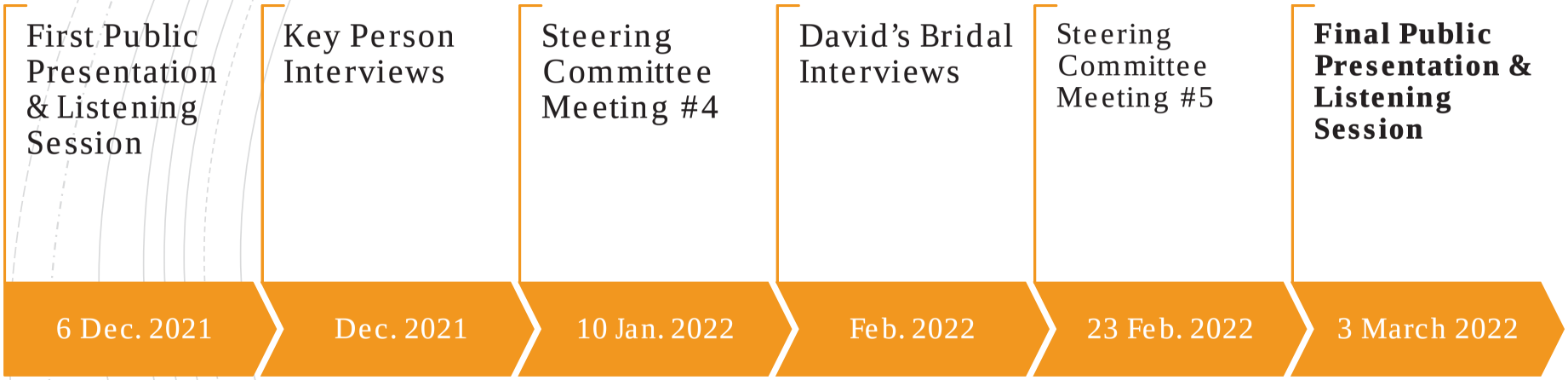
Identify issues and solutions for the Spring Mill Junction of The Schuylkill River Trail, The SEPTA Railway and Spring Mill Station, Station Avenue.

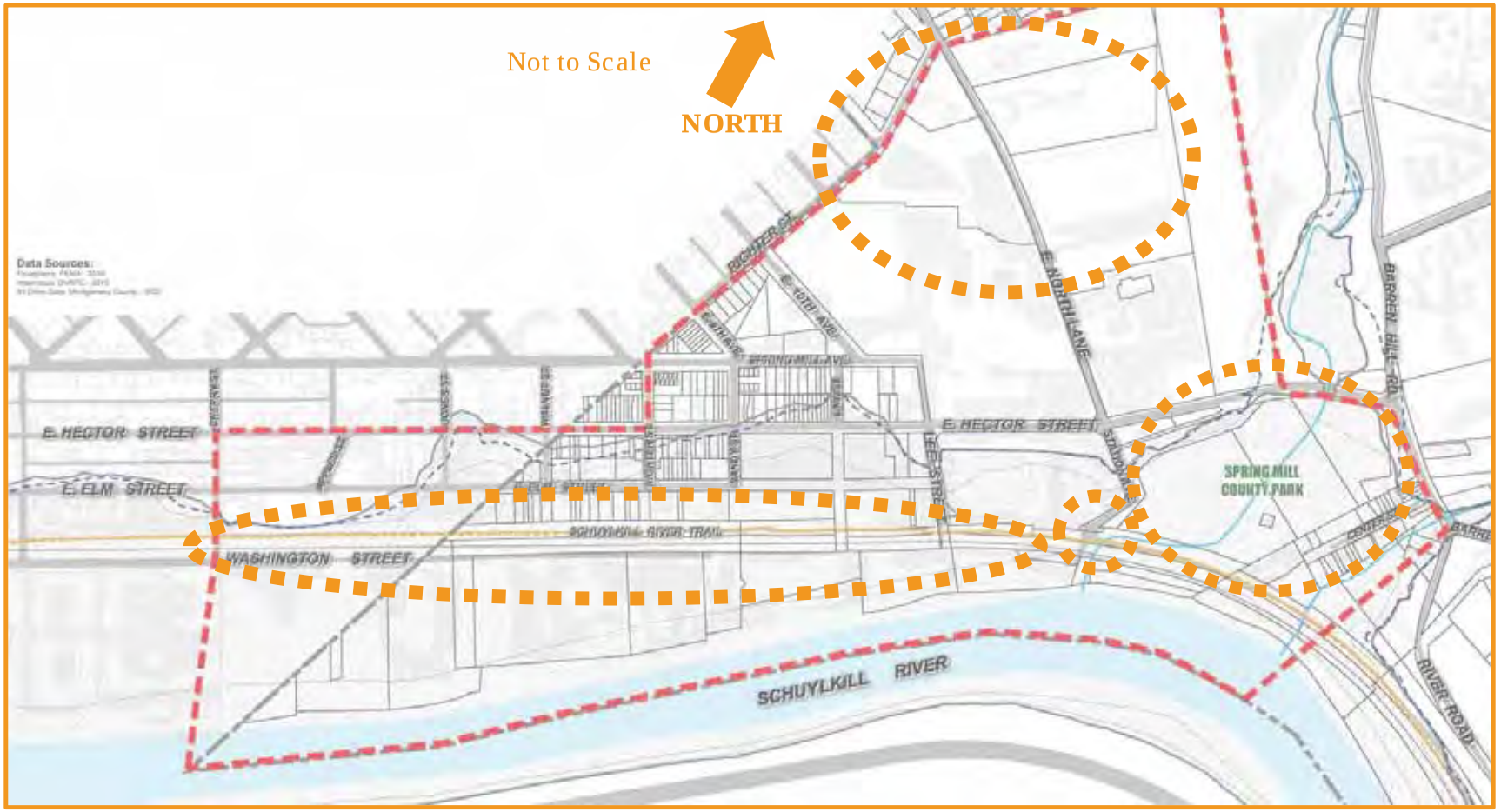
Project History & Background

- Early Ideas to Connect Washington & Lee Street
- 2011 Riverfront Open Space Plan
- 2016 Riverfront Plan (Conshohocken & Whitemarsh)
- 2020 Comprehensive Plan Update and General Land Use Recommendation

Project Status – 2020 - December 2021

Project Status – December 2021 to Date





Key Focus Areas

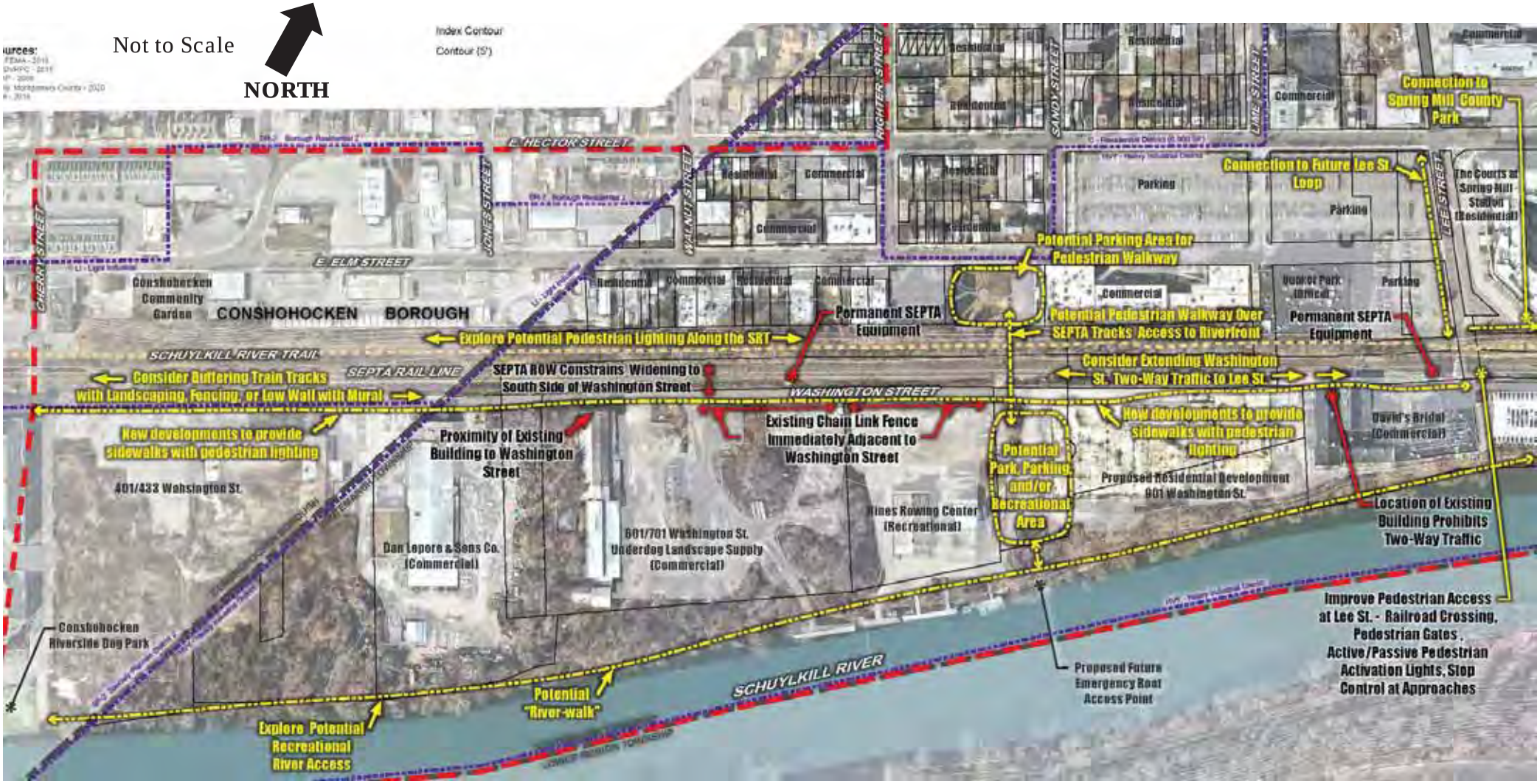
What are Conceptual Alternatives?

“PREFERRED FUTURE” ALTERNATIVE

- These sketches and plans show recommended ideal future improvements that are currently infeasible based on current ownership, land use, or other constraints.
- These alternatives are included in the study to provide a future ideal scenario and to have concepts on record in the study if circumstances change in the future.

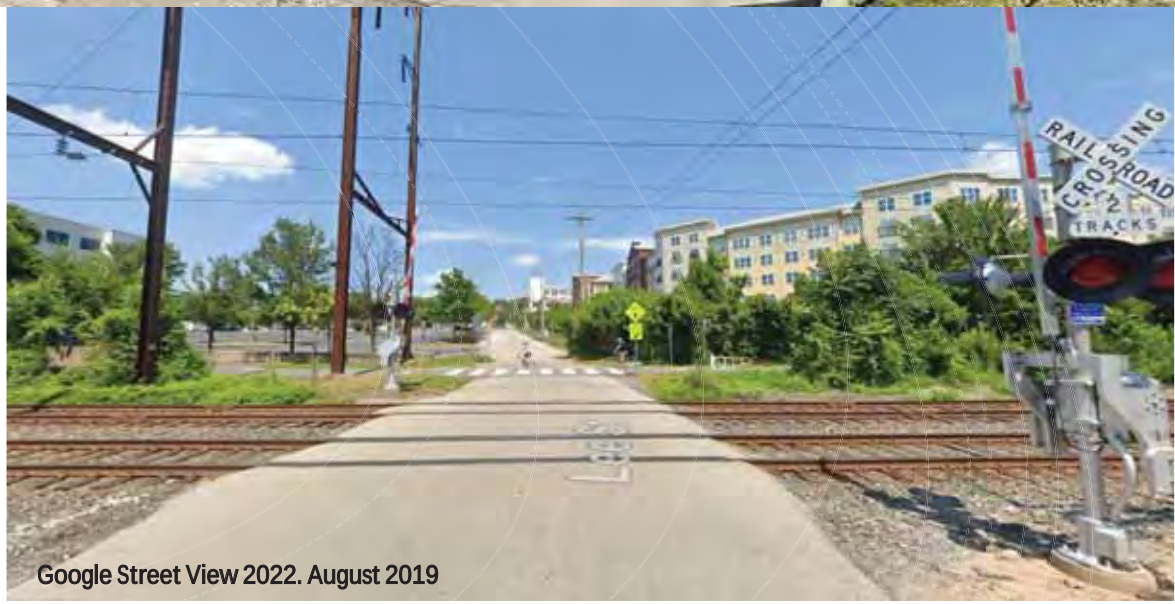
“IMMEDIATE FUTURE” ALTERNATIVE

- These sketches and plans show improvements that could either be implemented immediately or soon.
- Based on safety concerns, budgeting, and Township priorities, these alternatives provide shorter-term solutions for issues within the Study Area.



Site Analysis – Washington Street

Lee Street Intersection



Google Street View 2022. August 2019

Washington Street & David's Bridal Building

Washington Street - Along the 901 Washington Street Property

Google Street View 2022. August 2019

Google Street View 2022. August 2019

Washington Street along the Hines Rowing Center & Underdog Landscaping Supply

Google Street View 2022. August 2019

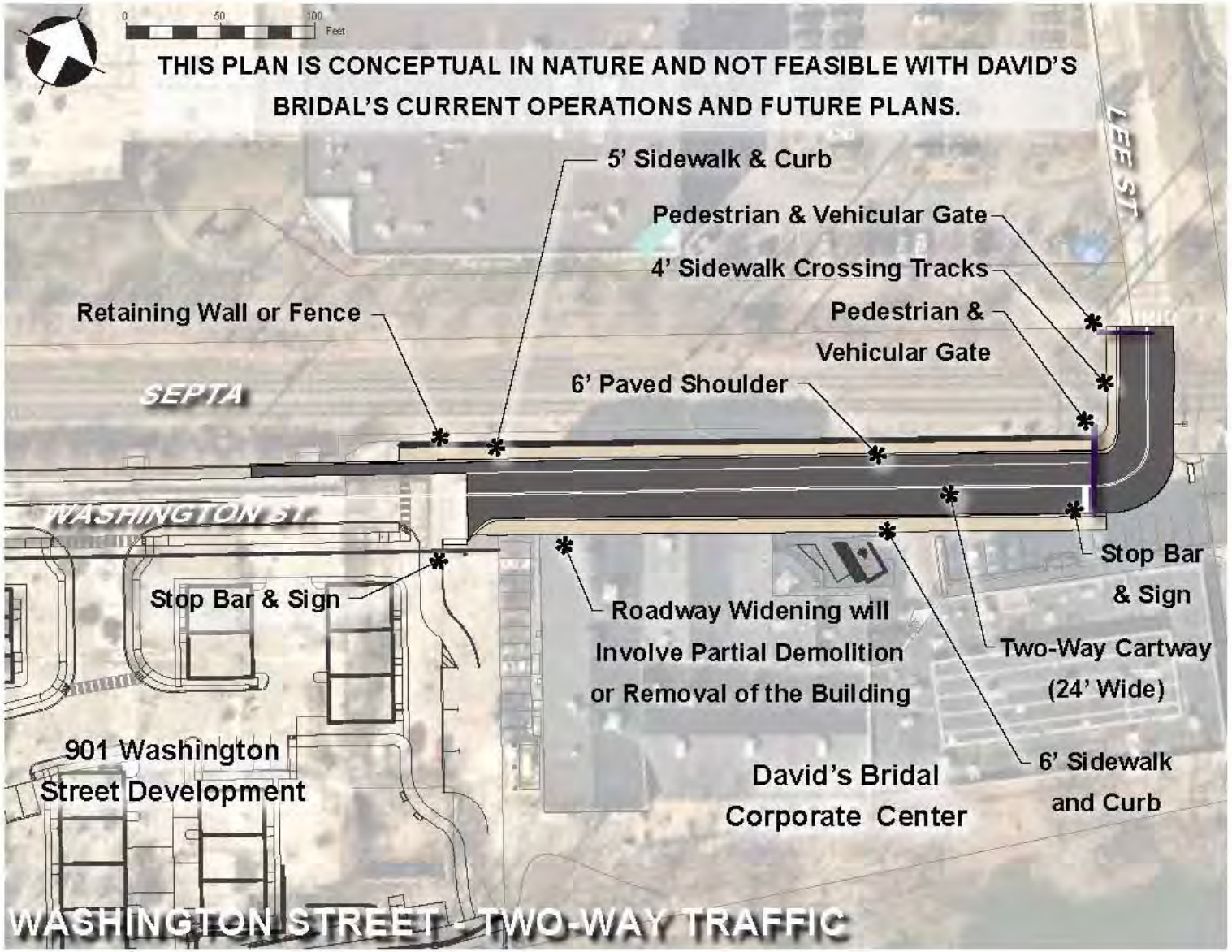
Google Street View 2022. August 2019

Washington Street along 401/433 Washington Street

Preferred Future: Washington Street Conceptual Sketch

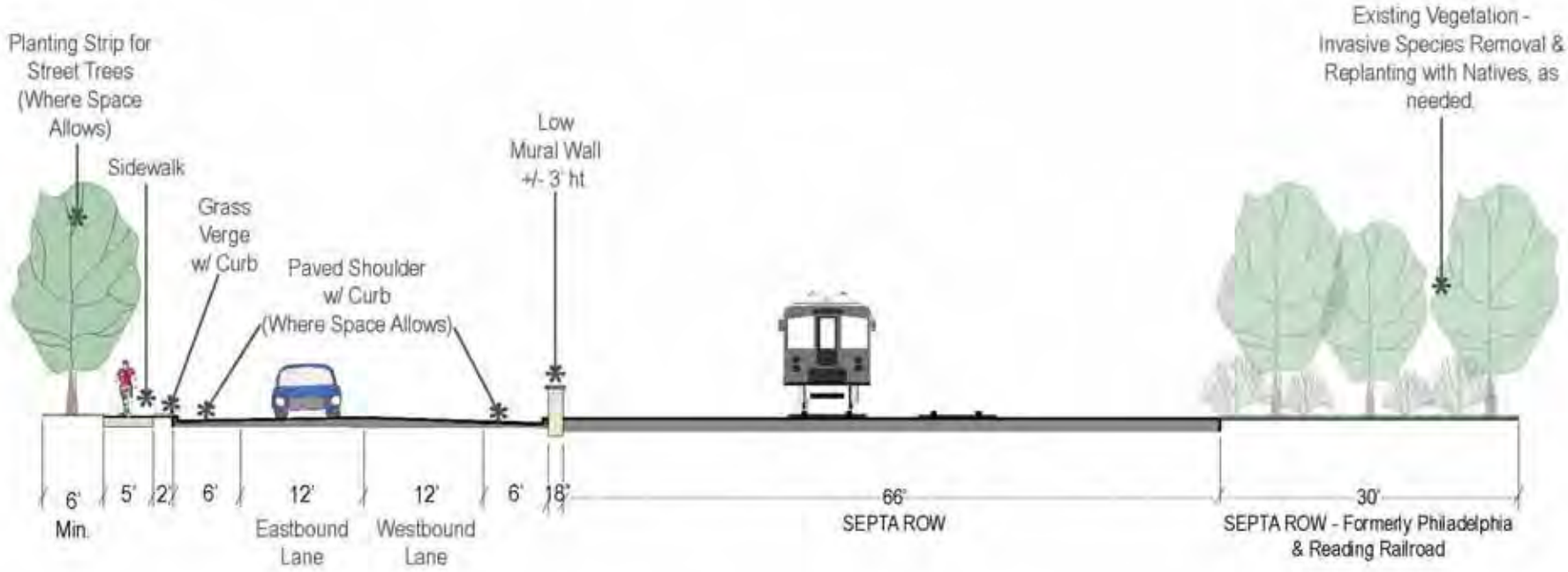
Two-Way Traffic

- This conceptual sketch is shown as a “Preferred Future” alternative because it would require full or partial demolition of the David’s Bridal existing building, located on Washington Street.
- This option is not feasible or desirable for David’s Bridal’s current operations or future.
- This conceptual sketch shows public access and connection through Washington Street’s current dead, sidewalks, and crossing improvements for the SEPTA railroad tracks.


0
50
100
Feet
THIS PLAN IS CONCEPTUAL IN NATURE AND NOT FEASIBLE WITH DAVID'S BRIDAL'S CURRENT OPERATIONS AND FUTURE PLANS.
LEE ST.
5' Sidewalk & Curb
Pedestrian & Vehicular Gate
4' Sidewalk Crossing Tracks
Retaining Wall or Fence
Pedestrian & Vehicular Gate
SEPTA
6' Paved Shoulder
WASHINGTON ST.
Stop Bar & Sign
Stop Bar & Sign
Roadway Widening will Involve Partial Demolition or Removal of the Building
Two-Way Cartway (24' Wide)
901 Washington Street Development
David's Bridal Corporate Center
6' Sidewalk and Curb
WASHINGTON STREET - TWO-WAY TRAFFIC

Preferred Future: Washington Street Typical Cross Section

- The improvements shown on this cross section will not be possible on all areas along Washington Street.
- This option is not feasible or desirable for David's Bridal's current operations or future.
- This graphic shows the ideal cross-section of Washington Street including the following:
  - Two-way traffic
  - A sidewalk
  - Paved road shoulder
  - A low wall to separate the train tracks and the road



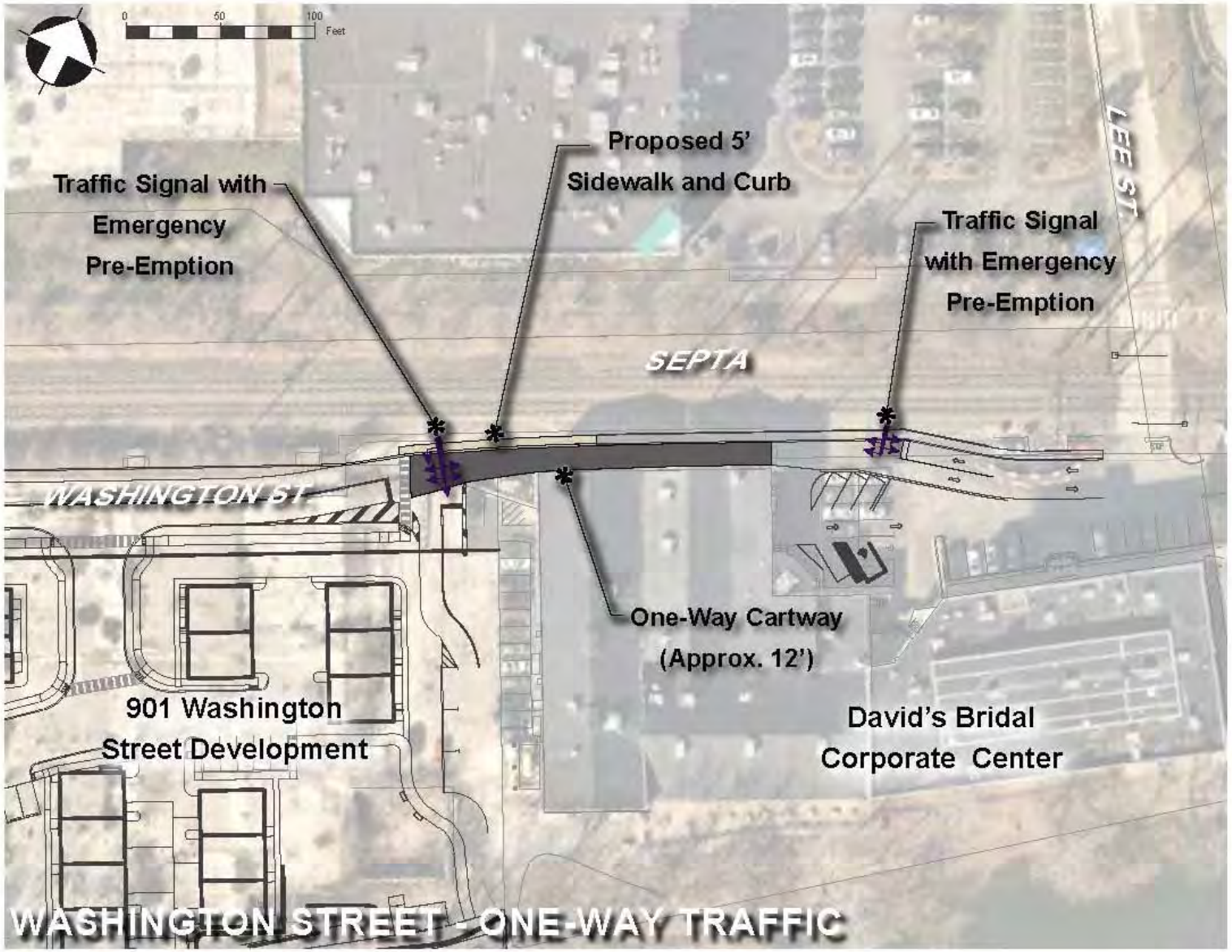
WASHINGTON STREET - TYPICAL CROSS-SECTION

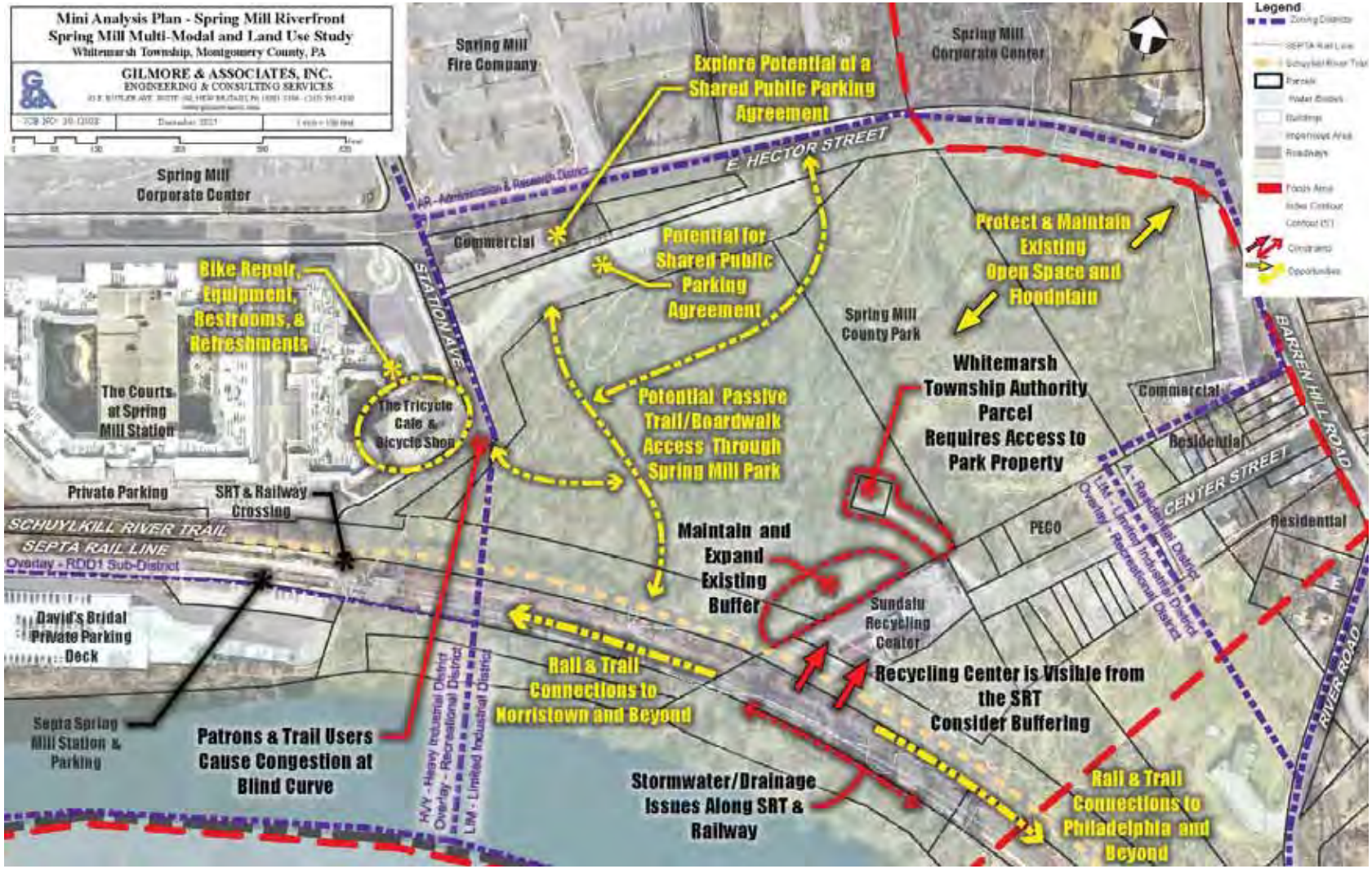
0' 10' 20'

Immediate Future: Washington Street Conceptual Sketch

One-Way, Signalized

- This conceptual sketch includes one-way directional traffic access for the public through Washington Street using traffic signals along each approach.
- This option would provide a more immediate solution for allowing traffic through Washington Street to Lee Street and ending the current dead-end condition of the roadway.
- This sketch would not involve building removal, demolition, or significant disruptions for David's Bridal.


0
50
100
Feet
Traffic Signal with Emergency Pre-Emption
Proposed 5' Sidewalk and Curb
Traffic Signal with Emergency Pre-Emption
LEE ST
SEPTA
WASHINGTON ST
One-Way Cartway (Approx. 12')
901 Washington Street Development
David's Bridal Corporate Center
WASHINGTON STREET - ONE-WAY TRAFFIC



Site Analysis – Spring Mill Riverfront

Station Avenue – Tricycle Cafe

Google Street View 2022. August 2019

Google Street View 2022. August 2019

Google Street View 2022. August 2019

Spring Mill County Park – From E. Hector St.

Google Street View 2022. August 2019

Sundafu Recycling Center – From SRT

Google Street View 2022. August 2019

Station Avenue & E. Hector Street

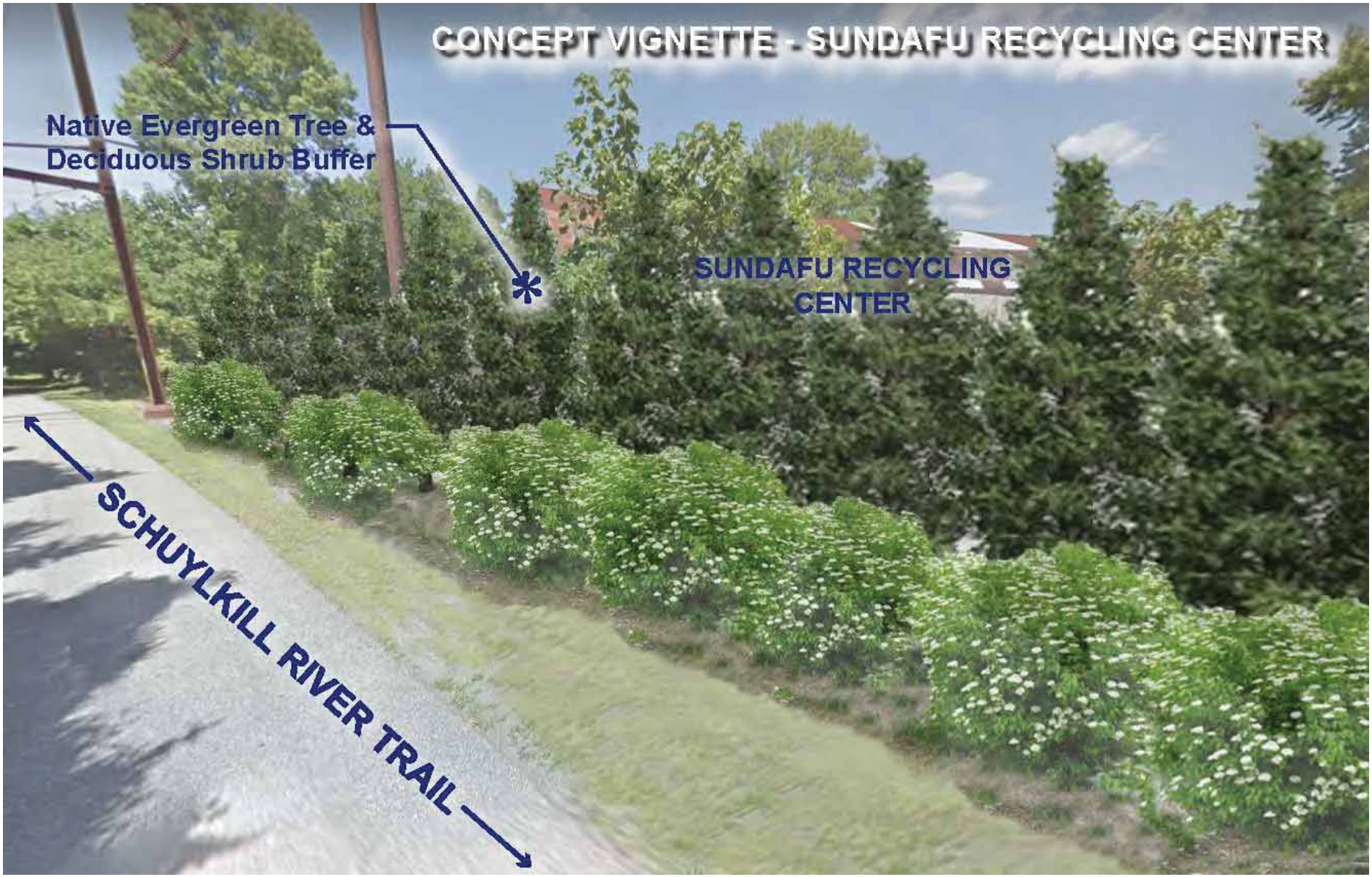
Conceptual Sketch: Spring Mill Gathering Space

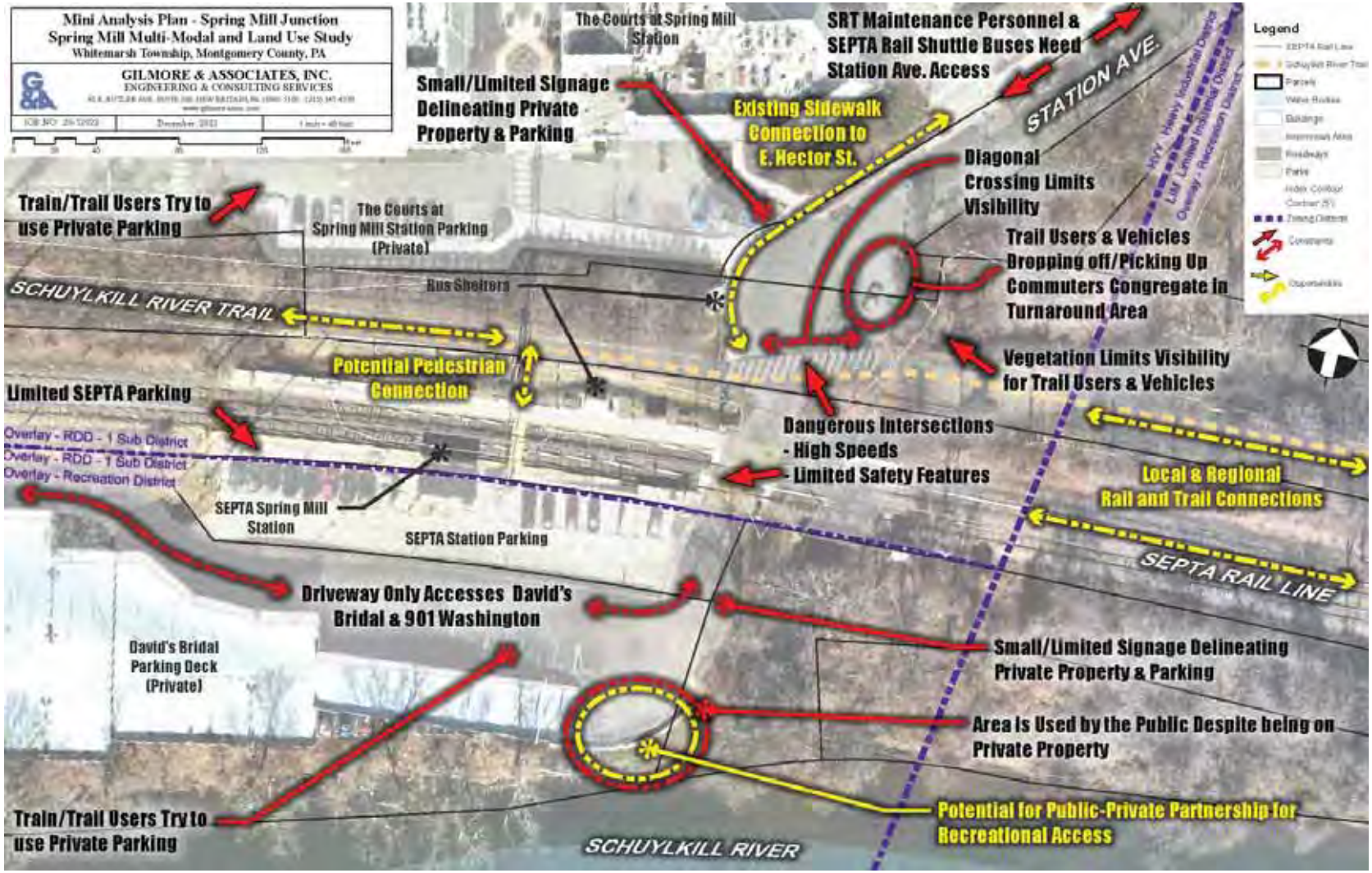
- This plan and sketch provide a gathering space on the Spring Mill County Park property across from the Tricycle Shop Café to allow trail users, café patrons, SEPTA users, and the general public with a place to gather.
- This gathering space aims to avoid the crowding of trail users along Station Ave. and within the cul-de-sac.

1 inch = 20 feet
The Courts at
Mill Station
Cautionary Signage - Blind
Curve & Pedestrian Crossing
Existing Bike Racks for Cafe
The Tricycle Cafe
and Bicycle Shop
STATION AVE
County/SEPTA
Right-of-Way
Crosswalk and Ramps for safe ADA
access from Cafe to Gathering Space
Space for Potential Cafe
Tables & Pop Up Events
Existing Sidewalk
Paved Area for Bike Racks
& Trash Receptacle
Benches & Educational Signage
(Floodplain Habitat, Wetlands,
Flooding, Etc.)
SRT
Spring Mill
County Park
Deck Gathering Area with Railing
(To Handle Steep Grade Change and
Protect Sensitive Floodplain Beneath)
SPRING MILL GATHERING SPACE CONCEPT SKETCH

Immediate Future: Sundafu Recycling Center Conceptual Buffering

- Sundafu recycling center's use often conflicts with its neighboring park, trail, and residential properties.
- Providing native buffering and closing off access to the Trail from the recycling center will screen unsightly views and prevent trail users from wandering either into the recycling center or nearby residential properties.


CONCEPT VIGNETTE - SUNDAFU RECYCLING CENTER
Native Evergreen Tree &
Deciduous Shrub Buffer
SUNDAFU RECYCLING
CENTER
SCHUYLKILL RIVER TRAIL



Site Analysis – Spring Mill Junction

SEPTA, Schuylkill River Trail, & Station Avenue Intersection

Google Street View 2022. August 2019

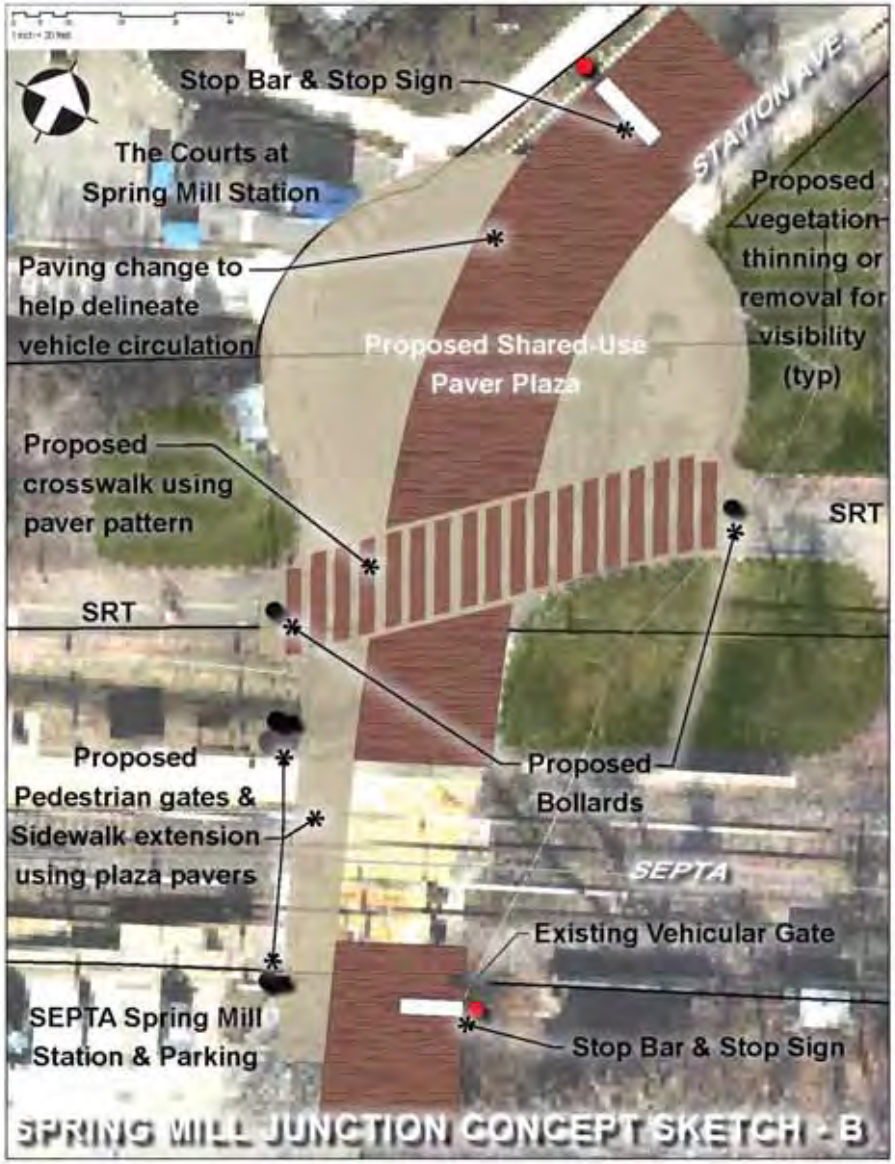
David's Bridal Parking Deck & River Access

SEPTA Spring Mill Station

Google Street View 2022. August 2019

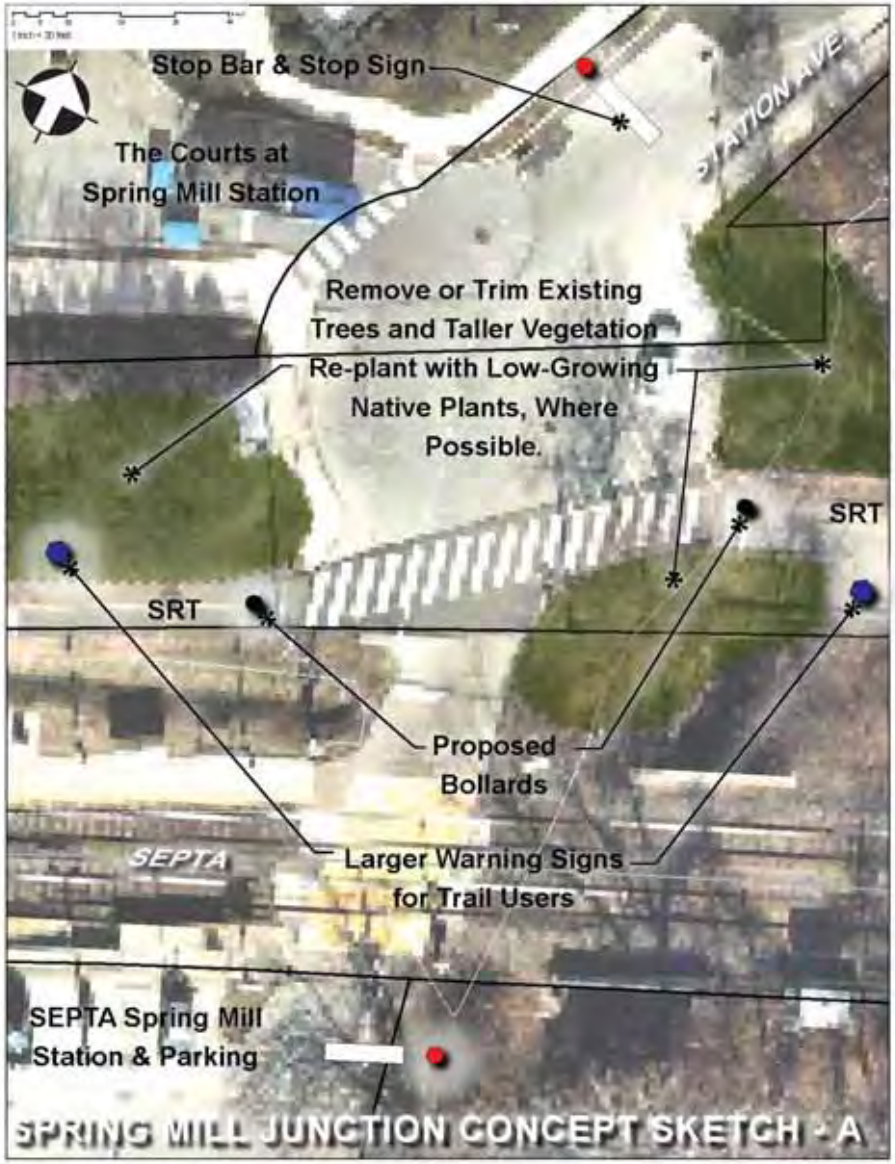
Preferred Future: Spring Mill Junction Conceptual Plan.

- This concept includes paving changes, an improved crosswalk, vehicular stop bars, and bollards at the intersection points of the SRT with Station Ave.
- This concept is shown as a preferred alternative for the potential impacts it could have on safety, visibility, aesthetics, and the reduction of speeds for all users throughout this intersection. However, it is also likely to involve significant cost, construction, and disruption throughout this area.


Stop Bar & Stop Sign
STATION AVE
The Courts at
Spring Mill Station
Proposed
vegetation
thinning or
removal for
visibility
(typ)
Paving change to
help delineate
vehicle circulation
Proposed Shared-Use
Paver Plaza
Proposed
crosswalk using
paver pattern
SRT
SRT
Proposed
Pedestrian gates &
Sidewalk extension
using plaza pavers
Proposed
Bollards
SEPTA
Existing Vehicular Gate
SEPTA Spring Mill
Station & Parking
Stop Bar & Stop Sign
SPRING MILL JUNCTION CONCEPT SKETCH - B

Immediate Future Alternative: Spring Mill Junction Conceptual Plan

- This plan involves lower-cost and more immediate and implementable solutions for this intersection.
- These include stop bars, removal or cutting back of vegetation, bollards at the entrances to the SRT intersection, and larger, improved warning signage for the SRT.


Stop Bar & Stop Sign
STATION AVE
The Courts at
Spring Mill Station
Remove or Trim Existing
Trees and Taller Vegetation
Re-plant with Low-Growing
Native Plants, Where
Possible.
SRT
SRT
Proposed
Bollards
SEPTA
Larger Warning Signs
for Trail Users
SEPTA Spring Mill
Station & Parking
SPRING MILL JUNCTION CONCEPT SKETCH - A

Preferred Future: Spring Mill River Access Conceptual Plan

- This conceptual sketch is shown as a “Preferred Future” alternative because it assumes the removal of the David’s Bridal existing parking garage and circulation patterns.
- This option is not feasible or desirable for David’s Bridal’s current operations or future.
- This plan shows a boat launch or water access to the Schuylkill River, a restroom, the installation of the riverwalk trail, parking, a river deck, and a staging area.

1 inch = 20 feet
THIS PLAN IS CONCEPTUAL IN NATURE AND NOT FEASIBLE WITH DAVID'S BRIDAL'S CURRENT OPERATIONS AND FUTURE PLANS.
SEPTA
Spring Mill Station
SEPTA RAILWAY
Proposed Pedestrian Gate & Crossing
Parallel Parking - Using Existing Paved Area
Washington Street Extension
Pedestrian Access to SRT, Station Ave., and Spring Mill Park
Riparian Re-Forestation (Using Native Plants)
Pervious Paving Launch Access & Staging Area
Water Access/ Boat Launch
River Deck Overlook
SCHUYLKILL RIVER
Double Unisex Restroom with Potable Water
River walk
DAVID'S BRIDAL LOT - PUBLIC RIVER ACCESS CONCEPTUAL PLAN

Immediate Future: Riverwalk Conceptual Plan

- This conceptual plan builds on various planning documents over the last decade that have proposed a trail along the river in Whitemarsh Township that connects to the existing trail in Conshohocken Borough.
- This sketch proposes relocating a portion of trail to Washington Street and using Spring Mill County Park and Station Ave. to connect to the potential future Miracle-Nature Trail.
- This trail is required to be installed by any developer who plans to build along Whitemarsh Township's portion of the riverfront.

1 inch = 300 feet
Proposed Riverwalk
Focus Area
Municipal Boundary
Connection to Potential Future Miracle-Nature Trail
Trail to Use Existing Railroad Crossing and Station Ave Sidewalk
CONSHOHOCKEN BOROUGH
WASHINGTON STREET
STATION AVE
Spring Mill County Park
Hines Rowing Center
Connection to Existing Riverwalk
Route Trail Up to Washington Street to Avoid Rowing Center Conflicts
Gravel Trail or Boardwalk Trail Through Wet / Sensitive Areas as Needed
RIVERWALK CONCEPTUAL PLAN

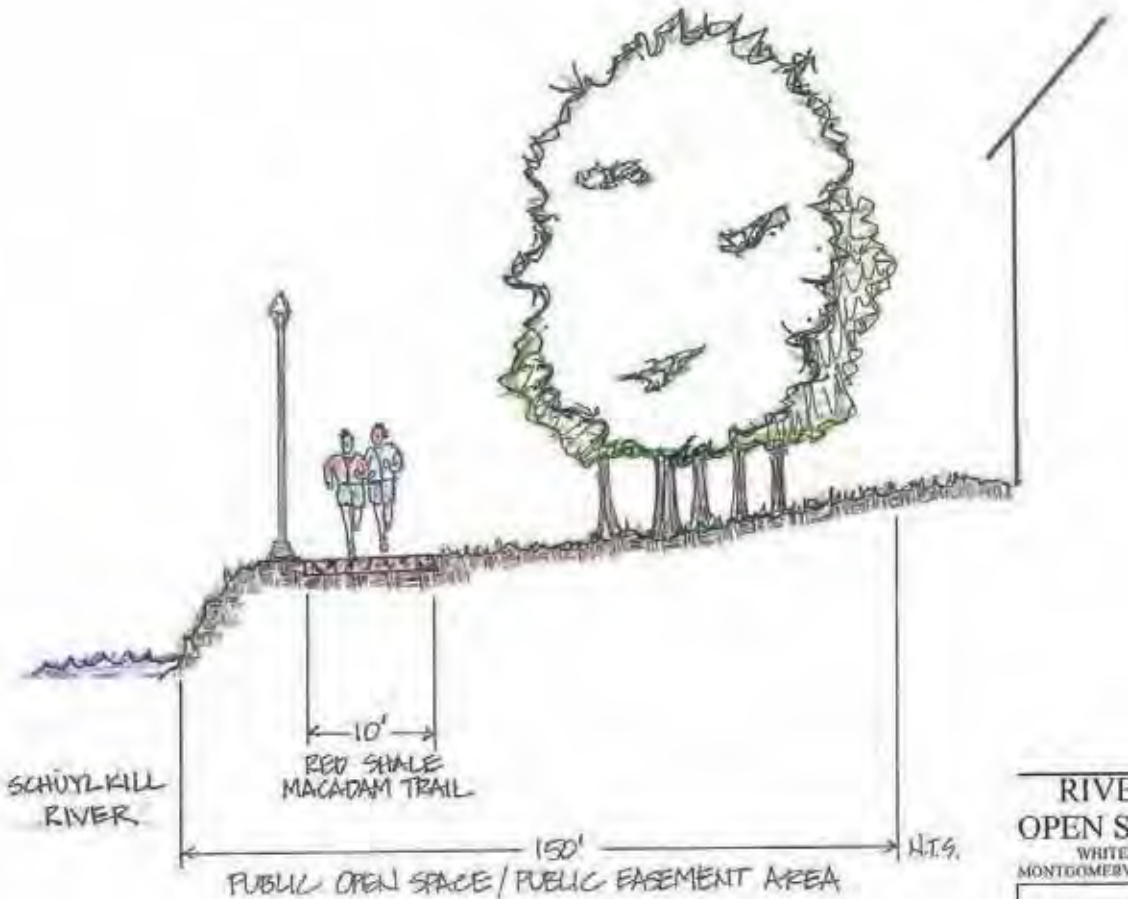


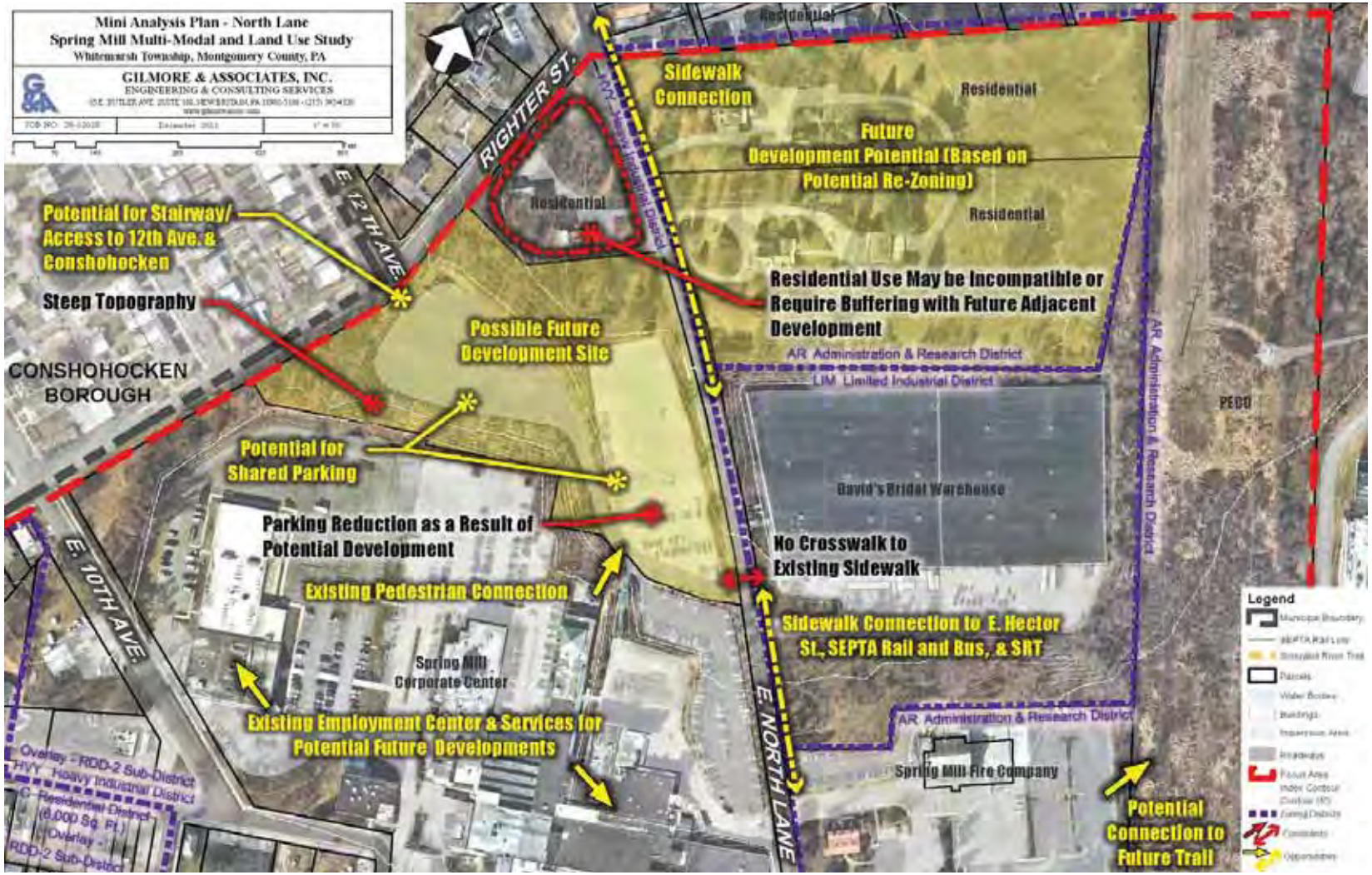
FIGURE 2

RIVERFRONT OPEN SPACE PLAN

WHITEMARSH TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

RIVERFRONT TRAIL
Cross Section

THE WAETZMAN PLANNING GROUP
1230 County Line Road, Bryn Mawr PA 19010-1505
Telephone: (610) 527-0600 Fax: (610) 527-0445



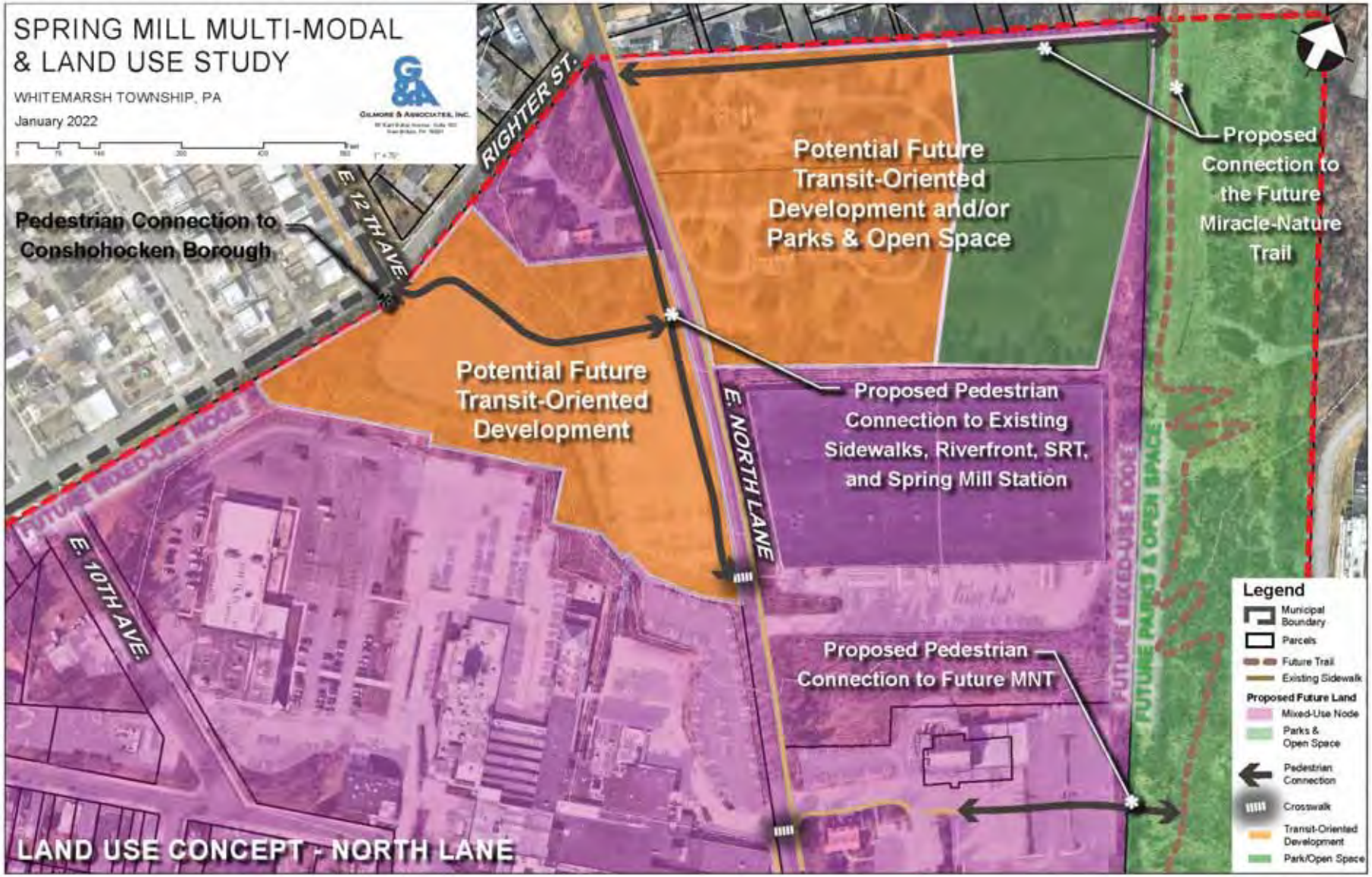
Site Analysis – North Lane

Google Street View 2022. August 2019

North Lane

Preferred Future: North Lane Land Use

- This plan assumes that Spring Mill Corporate Center sells their upper property (currently containing two parking lots) and two residential lots along North Lane are sold or change uses.
- This plan imagines transit-oriented development, and additional open space as well as improved pedestrian connections from these lots to the Spring Mill SEPTA Station, E. Hector Street, and the potential future Miracle-Nature Trail.


SPRING MILL MULTI-MODAL
& LAND USE STUDY
WHITEMARSH TOWNSHIP, PA
January 2022
GILMORE & ASSOCIATES, INC.
RIGHTER ST.
E. 12TH AVE.
Pedestrian Connection to Conshohocken Borough
Potential Future Transit-Oriented Development and/or Parks & Open Space
Proposed Connection to the Future Miracle-Nature Trail
Potential Future Transit-Oriented Development
Proposed Pedestrian Connection to Existing Sidewalks, Riverfront, SRT, and Spring Mill Station
E. NORTH LANE
FUTURE MIXED-USE NODE
FUTURE PARKS & OPEN SPACE
E. 10TH AVE.
Proposed Pedestrian Connection to Future MNT
LAND USE CONCEPT - NORTH LANE
Legend
Municipal Boundary
Parcels
Future Trail
Existing Sidewalk
Proposed Future Land
Mixed-Use Node
Parks & Open Space
Pedestrian Connection
Crosswalk
Transit-Oriented Development
Park/Open Space

The Courts at Spring Mill Station
Whitemarsh Township

Crest Manor
Abington Township

Overall Study Area – Concepts & Recommendations

Multi-Modal Infrastructure

- Bring all pedestrian crossings up to ADA standards and include the following, if applicable:
  - Detectable Warnings & Ramps
  - Crossing Signals
  - Cross Walks
- Install wayfinding and directional signage to help pedestrians navigate, understand distances, and encourage walking and biking.

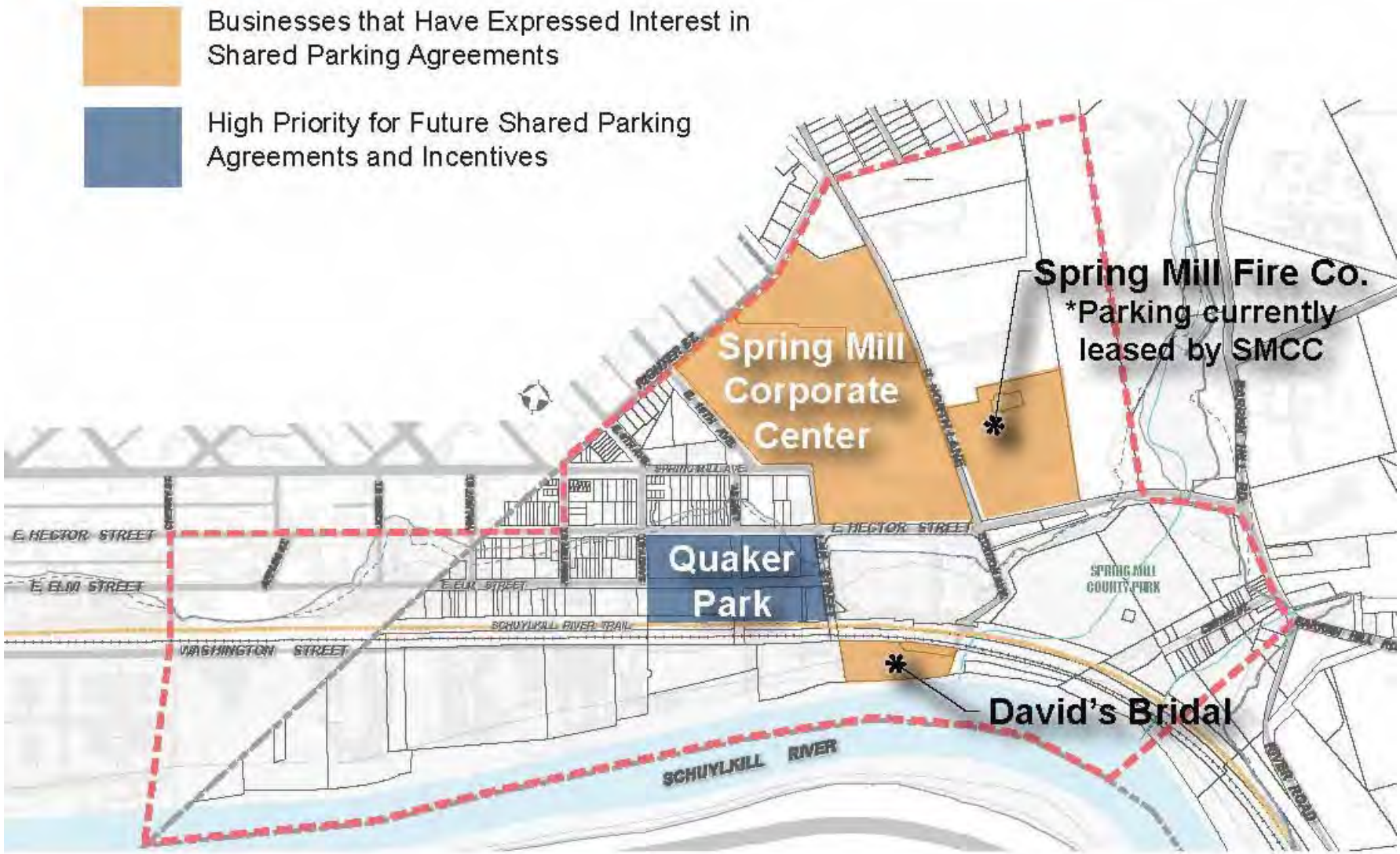
Pedestrian Crossing Improvements

Sample Wayfinding Signage

https://www.flickr.com/photos/cdharrison/2544066941/ on Flickr

Preferred Future: Shared Parking

- Several private businesses throughout the study area have expressed an interest in working with the Township to further discuss shared parking on their private lots.
  - Spring Mill Corporate Center
  - David's Bridal
- To date, contact has not been made with Quaker Park to discuss shared parking. Establishing communication and incentivizing shared use of this lot is recommended as a priority for parking, given its location.


Businesses that Have Expressed Interest in Shared Parking Agreements
High Priority for Future Shared Parking Agreements and Incentives
Spring Mill Corporate Center
Spring Mill Fire Co.
*Parking currently leased by SMCC
Quaker Park
David's Bridal
E. HECTOR STREET
E. ELM STREET
E. ELK STREET
WASHINGTON STREET
SCHUYLKILL RIVER TRAIL
SCHUYLKILL RIVER
SPRING MILL COUNTY PARK
RIVER ROAD

Future Alternative: Parking Garage

- This parking garage would utilize existing parking lot space that is currently leased by Spring Mill Corporate Center from the Spring Mill Fire Company to build a parking structure with the potential for retail or mixed uses on the ground floor.
- This plan is not considered a preferred alternative due to the prevalence of existing underutilized parking within the study area, the costs, and the potential disturbances of this type of development.
- This conceptual plan is included to provide an alternative parking solution, if shared parking is found to be infeasible or not enough to keep up with demand in the future.

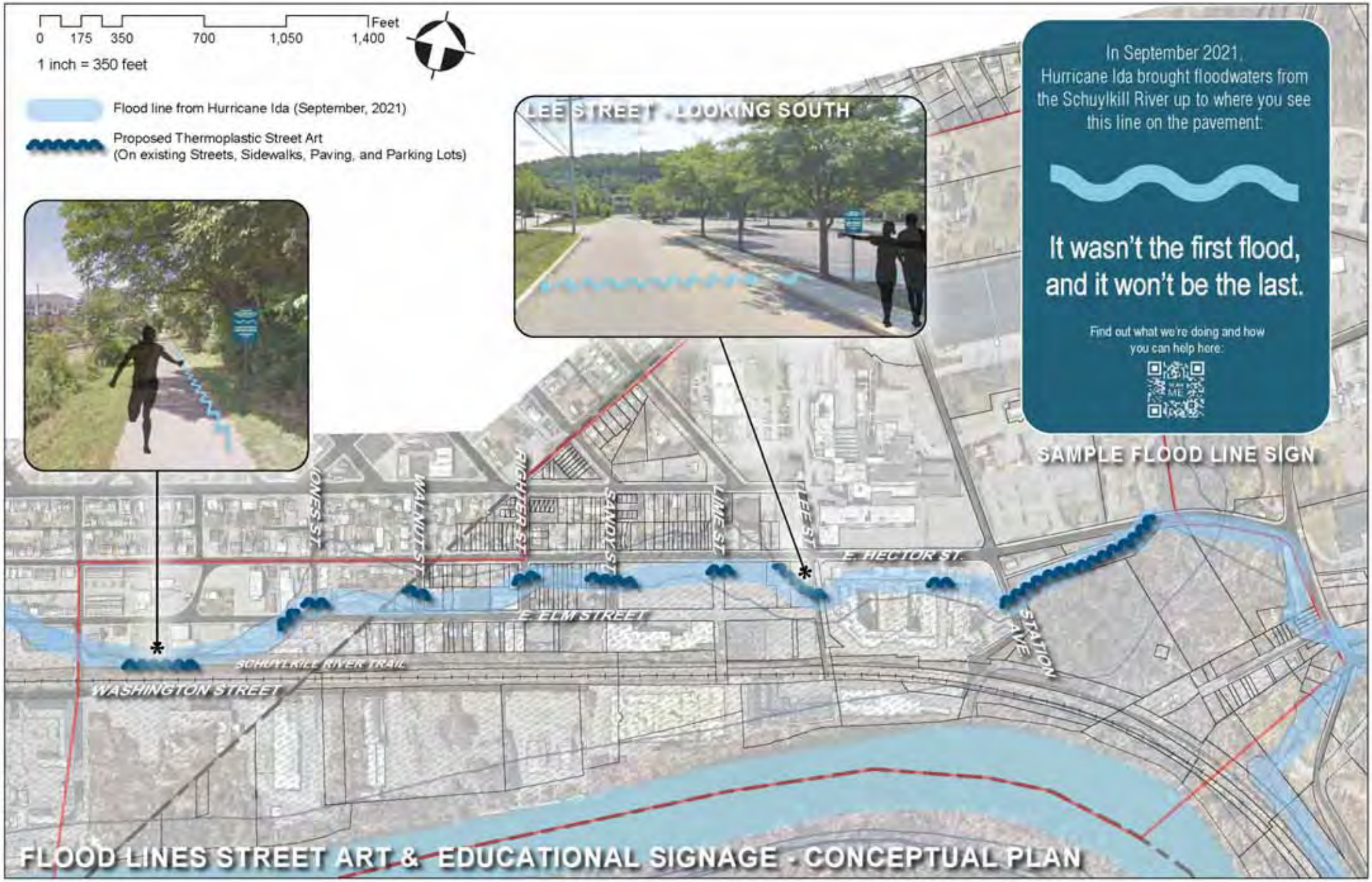
Legend
INDEX
INTER
Parcels
Building
Other
Road
Spring Mill Fire Co.
Spring Mill Corporate Center
E. NORTH LANE
3-5 Story Garage
270- 450 Estimated Parking Sapces
Public Indoor Restrooms
Potential Future Parking Garage
Connections to Potential Future Miracle-Nature Trail
Connections to Spring Mill Station and the SRT
E. HECTOR STREET
PARKING GARAGE CONCEPT SKETCH

Flood Resiliency: Recommendations

- Implement stringent impervious, re-vegetation, and open space requirements for developers wishing to develop along Washington Street.
- Consider installing or recommending pervious pavers wherever new paving is deemed necessary.
- Install new improvements using floodproof or easily repairable materials.
- Adopt higher floodplain management standards (then FEMA minimum requirements) to pursue a higher rating through FEMA's Community Rating System.

Flooding Education & Community Art Recommendations

- The conceptual flowlines plan using street paving to delineate the extent of Hurricane Ida's floodwaters in the study area within public paved surfaces.
- The street paving is accompanied by educational signage and a QR code linking users to a proposed Township website to educate users about local flooding and learn more about what can be done to reduce and mitigate flooding and its negative effects.


0 175 350 700 1,050 1,400 Feet
1 inch = 350 feet
Flood line from Hurricane Ida (September, 2021)
Proposed Thermoplastic Street Art
(On existing Streets, Sidewalks, Paving, and Parking Lots)
LEE STREET - LOOKING SOUTH
In September 2021,
Hurricane Ida brought floodwaters from
the Schuylkill River up to where you see
this line on the pavement:
It wasn't the first flood,
and it won't be the last.
Find out what we're doing and how
you can help here:
SAMPLE FLOOD LINE SIGN
JONES ST
WALNUT ST
FRONTIER ST
SANDY ST
LIMES ST
LEE ST
E. HECTOR ST.
E. ELM STREET
STATION AVE
SCHUYLKILL RIVER TRAIL
WASHINGTON STREET
FLOOD LINES STREET ART & EDUCATIONAL SIGNAGE - CONCEPTUAL PLAN

Project Timeline – Looking Ahead

- Feedback from this meeting will be compiled, considered, and incorporated into the draft conceptual sketches & report.
- Draft Report Preparation
- April 2022 – Steering Committee Meeting to review draft report
- May 2022 – Presentation of report to the Whitemarsh Township Planning Commission.
- Early June 2022 – Presentations to Conshohocken Borough Council and Whitemarsh Township Board of Supervisors
- Preparation and submission of Final Spring Mill Study Report.
  - https://www.whitemarshtwp.org/573/Spring-Mill-Area-Multi-Modal-and-Land-Us

Public Feedback

Raise your hand (via Zoom) and we will call on you to unmute and speak

Or type comments/questions/feedback into the chat feature.

Thank you!

Appendix G - Invasive Plants - DCNR

Home
Introduction to the Tutorial
Introduction to the Problem
Invasive Plants in PA - List & Fact Sheets
Text only navigation and tutorial guidance questions
Introduction to Management
Management Philosophy and Goal Setting
Inventory, Mapping and Ranking (Assesment)
Management Tools
Species Management & Control
Prevention & Early Detection
Management Planning
Monitoring & Evaluation
Restoration
Resources
Suggestions

Invasive Exotic Plants In Pennsylvania List

The basis for this list was the DCNR Invasive Plants in Pennsylvania list created as a brochure in 2000. The list was expanded to include species that were identified by the DCNR Land Managers Survey on Invasive Plants that was conducted in 2004, as well as species that were recommended for inclusion by experienced field botanists and ecologists working in PA. The list includes noxious weeds that are problematic for natural areas and those that are problematic for agricultural situations only were omitted.

An important note about this list is that it has been developed strictly for educationand information purposes. It is neither intended nor approved for use as a regulatory tool. Some plants on this list are important to agriculture, horticulture, and other commercial purposes. They are included on this list because they have been identified as having established in natural areas or have been identified as Watch List species (see below).

The primary purpose of this list is to identify those plants that are invasive and cause damage to native plant communities. The intention is to foster early detection so that land managers can implement management actions to prevent exotics from becoming established. It is also intended to educate land managers and the public in an effort to eliminate the use of invasives in landscaping, restoration and enhancement projects.

Clicking the Fact Sheet or Management & Control link will open more information for each species.

Trees (6)

Norway maple	*Acer platanoides*	Fact Sheet	Management & Control
Sycamore maple	*Acer pseudoplatanus*	Fact Sheet	Management & Control
Tree-of-heaven	*Ailanthus altissima*	Fact Sheet	Management & Control
Princess tree	*Paulownia tomentosa*	Fact Sheet	Management & Control
Callery pear	*Pyrus calleryana* (and all cultivars)	Fact Sheet	Management & Control
Siberian elm	*Ulmus pumila*	Fact Sheet	Management & Control

Shrubs (19)

European black alder	*Alnus glutinosa*	Fact Sheet	Management & Control
Japanese barberry	*Berberis thunbergii*	Fact Sheet	Management & Control
European barberry	*Berberis vulgaris*	Fact Sheet	Management & Control
Russian olive	*Elaeagnus angustifolia*	Fact Sheet	Management & Control
Autumn olive	*Elaeagnus umbellata*	Fact Sheet	Management & Control
Winged Euonymus	*Euonymus alatus*	Fact Sheet	Management & Control
Border privet	*Ligustrum obtusifolium*	Fact Sheet	Management & Control
Common privet	*Ligustrum vulgare*	Fact Sheet	Management & Control
Amur honeysuckle	*Lonicera maackii*	Fact Sheet	Management & Control
Morrow's honeysuckle	*Lonicera morrowii*	Fact Sheet	Management & Control
Bell's honeysuckle	*Lonicera morrowii* x tatarica	Fact Sheet	Management & Control
Standish honeysuckle	*Lonicera standishii*	Fact Sheet	Management & Control
Tartarian honeysuckle	*Lonicera tatarica*	Fact Sheet	Management & Control
Common buckthorn	*Rhamnus cathartica*	Fact Sheet	Management & Control
Glossy buckthorn	*Rhamnus frangula*	Fact Sheet	Management & Control
Multiflora rose	*Rosa multiflora*	Fact Sheet	Management & Control
Wineberry	*Rubus phoenicolasius*	Fact Sheet	Management & Control

Japanese spiraea	*Spiraea japonica*	Fact Sheet	Management & Control
Guelder rose	*Viburnum opulus* var. opulus	Fact Sheet	Management & Control

Forbs/Grasses (25)

Goutweed	*Aegopodium podagraria*	Fact Sheet	Management & Control
Garlic mustard	*Alliaria petiolata*	Fact Sheet	Management & Control
Cheatgrass	*Bromus tectorum*	Fact Sheet	Management & Control
Spotted knapweed	*Centaurea maculosa* (syn. C. biebersteinii)	Fact Sheet	Management & Control
Greater celandine	*Chelidonium majus*	Fact Sheet	Management & Control
Canada thistle	*Cirsium arvense*	Fact Sheet	Management & Control
Poison hemlock	*Conium maculatum*	Fact Sheet	Management & Control
Crown vetch	*Coronilla varia*	Fact Sheet	Management & Control
Hairy willow herb	*Epilobium hirsutum*	Fact Sheet	Management & Control
Tall fescue	*Festuca elatior*	Fact Sheet	Management & Control
English ivy	*Hedera helix*	Fact Sheet	Management & Control
Orange day-lily	*Hemerocallis fulva*	Fact Sheet	Management & Control
Giant hogweed	*Heracleum mantegazzianum*	Fact Sheet	Management & Control
Dame's rocket	*Hesperis matronalis*	Fact Sheet	Management & Control
Purple loosestrife	*Lythrum salicaria, L. virgatum*	Fact Sheet	Management & Control
Japanese stilt grass	*Microstegium vimineum*	Fact Sheet	Management & Control
Star-of-Bethlehem	*Ornithogalum nutans, O. umbellatum*	Fact Sheet	Management & Control
Wild parsnip	*Pastinaca sativa*	Fact Sheet	Management & Control
Beefsteak plant	*Perilla frutescens*	Fact Sheet	Management & Control
Reed canary grass	*Phalaris arundinacea*	Fact Sheet	Management & Control
Common reed	*Phragmites australis* ssp. australis	Fact Sheet	Management & Control
Japanese knotweed	*Polygonum cuspidatum, P. sachalinense*	Fact Sheet	Management & Control
Lesser celandine	*Ranunculus ficaria*	Fact Sheet	Management & Control
Narrow-leaved cattail	*Typha angustifolia*	Fact Sheet	Management & Control
Hybrid cattail	*T. x glauca* (T. ang. x T. latifolia)	Fact Sheet	Management & Control

Vines (7)

Fiveleaf akebia	*Akebia quinata*	Fact Sheet	Management & Control
Porcelain-berry	*Ampelopsis brevipedunculata*	Fact Sheet	Management & Control
Oriental bittersweet	*Celastrus orbiculatus*	Fact Sheet	Management & Control
Japanese honeysuckle	*Lonicera japonica*	Fact Sheet	Management & Control
Mile-a-minute weed	*Polygonum perfoliatum*	Fact Sheet	Management & Control
Kudzu	*Pueraria lobata*	Fact Sheet	Management & Control
Periwinkle	*Vinca minor*	Fact Sheet	Management & Control

Aquatics (3)

Eurasian water-milfoil	*Myriophyllum spicatum*	Fact Sheet	Management & Control
Curly pondweed	*Potamogeton crispus*	Fact Sheet	Management & Control
Water chestnut	*Trapa natans*	Fact Sheet	Management & Control

Total = 60

Watch List (16)

These are species that are known to be widespread problems in other Mid-Atlantic states and have recently been reported, by experienced field botanists and a recent DCNR Survey conducted for State Parks and State Forests, as being established in some natural areas in PA. In addition, some of these species are significant problems in adjacent states and appear to be 'on the move' towards PA. Contact DCNR - Bureau of Forestry for assistance if you are dealing with a species that we have not included in this list.

Butterfly bush	*Buddleja davidii*	Fact Sheet	Management & Control
Climbing euonymus	*Euonymus fortunei*	Fact Sheet	Management & Control
Japanese hops	*Humulus japonica*	Fact Sheet	Management & Control
Hydrilla	*Hydrilla verticillata*	Fact Sheet	Management & Control
Miscanthus	*Miscanthus sinensis*	Fact Sheet	Management & Control
Japanese pachysandra	*Pachysandra terminalis*	Fact Sheet	Management & Control
Corktrees	*Phellodendron* spp.	Fact Sheet	Management & Control
Rough bluegrass	*Poa trivialis* L.	Fact Sheet	Management & Control

Bee-bee tree	*Tetradium daniellii*	Fact Sheet	Management & Control
Siebold viburnum	*Viburnum sieboldii*	Fact Sheet	Management & Control
Linden viburnum	*Viburnum dilatatum*	Fact Sheet	Management & Control
Doublefile viburnum	*Viburnum plicatum*	Fact Sheet	Management & Control
Black swallow-wort	*Vincetoxicum nigrum*	Fact Sheet	Management & Control
Japanese wisteria	*Wisteria floribunda*	Fact Sheet	Management & Control
Chinese wisteria	*Wisteria sinensis*	Fact Sheet	Management & Control
Yucca	*Yucca flaccida*	Fact Sheet	Management & Control

Return to top of Page

A pressing problem

Recognition of the problem of invasive plants is growing, at the same time as damage to native ecosystems is mounting. Identifying invasive plants and understanding the potential damage they can cause is essential to stopping their spread and protecting native vegetation. Recent publications and websites specifically about invasive plants and a good field guide can help you identify and manage invasive plants. Try to learn as much as possible about this issue. The Internet is an excellent way to access the rapidly growing body of information on this topic.

For more information

Contacts

PA Department of Agriculture, www.agriculture.state.pa.us/agriculture/cwp/view.asp?a=3&q=127347&agricultureNav=|

Penn State University Cooperative Extension Office Directory, www.extension.psu.edu/extmap.html.

Sea Grant Pennsylvania, www.pserie.psu.edu/seagrant/seagindex.htm.

Control

Alliance for the Chesapeake Bay - *Citizens Guide to the Control of Invasive Plants in Wetland and Riparian Areas*, http://www.acb-online.org/pubs/projects/deliverables-251-1-2005.pdf.

PA DCNR - *Invasive Exotic Plant Tutorial for Natural Land Managers*, www.dcnr.state.pa.us/forestry/invasivetutorial/index.htm .

Maryland Native Plant Society *Control of Invasive Non-Native Plants: A Guide for Gardeners and Homeowners in the Mid-Atlantic Region*, http://mdflora.org/publications/invasives.htm.

Identification of Invasive and Native Plants

Alliance for the Chesapeake Bay *Common Invasive Plants in Riparian Areas*, www.dep.state.pa.us/dep/deputate/watermgt/wc/subjects/streamreleaf/Docs/Invasive%20Plants.pdf.

Borman, S., R. Korth and J. Temte. 1997. *Through the Looking Glass: A Field Guide to Aquatic Plants.* Wisconsin Lakes Partnership. 248 pp.

Bowman's Hill Wildflower Preserve *Fact Sheets*, www.bhwp.org/native/invasive_plants.htm

Brown, Lauren. 1979. *Grasses, An Identification Guide*. Boston: Houghton Mifflin. ISBN# 0-395-27624-1.

National Park Service, and U.S. Fish and Wildlife Service. 2002. *Plant Invaders of Mid-Atlantic Natural Areas.* www.nps.gov/plants/alien/pubs/midatlantic/

National Wildlife Federation *Native Gardening and Invasive Plants Guide*, http://enature.com/native_invasive/invasives.asp.

Newcomb, Lawrence. 1977. *Newcomb's Wildflower Guide*. Boston: Little, Brown, and Co. ISBN# 0-316-60441-0.

PA DCNR - *Invasive Exotic Plant Tutorial for Natural Land Managers*, www.dcnr.state.pa.us/forestry/invasivetutorial/index.htm.

Petrides, G.A. 1988. *A Field Guide to Eastern Trees*. Boston: Houghton Mifflin; Petersen Field Guide Series, No. 11. ISBN# 0-395-90455-2.

Rhoads, A.F. and T.A. Block. 2000. *The Plants of Pennsylvania, An Illustrated Manual.* University of Pennsylvania Press, Philadelphia. ISBN#0-8122-3535-5

Rhoads, A.F. and T.A. Block. 2004. *Trees of Pennsylvania: A Complete Reference Guide.* University of Pennsylvania Press, Philadelphia.

USDA Forest Service *Invasive Plants Field and Reference Guide: An Ecological Perspective of Plant Invaders of Forests and Woodlands*, www.fs.fed.us/r9/wildlife/nnis/invasive-species-field-guide.pdf.

Westbrooks, R.G. 1998. *Invasive Plants: Changing the Landscape of America, Factbook.* Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW); Washington, CD.C. 109 pp., U.S. Government Printing Office, Washington, D.C. 20402

Management

Federal Interagency Committee for the Management of Noxious and Exotic Weeds, www.fws.gov/ficmnew.

Invasive Plants in Pennsylvania

Commonwealth of Pennsylvania
Edward G. Rendell, Governor
Department of Conservation & Natural Resources
Michael DiBerardinis, Secretary

What is an invasive plant?

"Invasive plant" is a name for a species that has become a weed pest, a plant which grows aggressively, spreads, and displaces other plants. Invasive plants tend to appear on disturbed ground, and the most aggressive can actually invade existing ecosystems. Invasive plants are generally undesirable because they are difficult to control, can escape from cultivation, and can dominate whole areas. In short, invasive plant infestations can be extremely expensive to control, as well as environmentally destructive.

A small number of invasives are "native," meaning they occurred in Pennsylvania before settlement by Europeans but became aggressive after the landscape was altered. However, most invasive plants arrived from other continents and are often referred to as "exotic," "alien," "introduced," or "non-native" invasives. An aggressive plant freed from its environmental, pest, and disease limits, can become an invader of other ecosystems. This brochure lists the most troublesome invasive plants that occur in Pennsylvania and impact native plant communities.

Characteristics of invasive plants

Invasive plants are noted for their ability to grow and spread aggressively. Invasive plants can be trees, shrubs, vines, grasses, or flowers, and they can reproduce rapidly by roots, seeds, shoots, or all three. Invasive plants tend to:

- not be native to North America;
- spread, reproducing by roots or shoots;
- mature quickly;
- if spread by seed, produce numerous seeds that disperse and sprout easily;
- be generalists that can grow in many different conditions; and
- be exploiters and colonizers of disturbed ground.

Impact of invasive plants

The primary reason to *not* landscape with invasives is that they are degrading our native environments. In fact, second only to habitat loss, invasives are a major factor in the decline of native plants. Plants like Kudzu, Purple Loosestrife, and Garlic Mustard are displacing native plants and degrading habitat for native insects, birds, and animals. Endangered, rare, and threatened native species of plants and animals are especially at risk because they often occur in such small populations that make them particularly vulnerable.

Another reason to avoid invasives is that invasive plants, even when grown in a cultivated yard, can spread, escape, and cause landscape maintenance weeding problems for years to come. In urban and suburban areas there is a good chance that the worst weeds on your property are escaped plants, like Japanese Honeysuckle, Multiflora Rose, Japanese Knotweed, and Oriental Bittersweet. In yards, gardens, fields, and parks these plants are very expensive to control.

What can I do?

The best insurance against future problems is to avoid the use of known invasive plants and educate others about the problems of invasives. This brochure lists many of the plants that are invasive in Pennsylvania. Plants on this list should be avoided because they can escape cultivation and aggressively move into surrounding ecosystems. One way to avoid invasives is to choose plants that are native to your area. Natives often are adapted to a specific environmental niche, and have natural controls that keep them in balance.

Minimize landscape disturbance. Invasive plants thrive on bare soil and disturbed ground where the native plant community has been displaced. The key to controlling invasives is to protect healthy native plant communities .

Use fertilizers wisely. Proper site preparation begins with a soil test before applying fertilizer. High nitrogen levels sometimes give an advantage to invasive species that are better adapted to using plentiful nutrients for explosive growth. For soil fertility, try using organic, slow-decomposing compost and mulches.

Have a land management plan for maintenance over time. Lawns, gardens, meadows and woodlands are maintained using vastly different techniques, but they all will need to be monitored and invasive plants removed. Land management plans provide guidelines on monitoring, assist in prioritizing removal and prevention goals and help track the progress of control work.

Scout your property annually for invasives or other problems. The best way to control invasive species populations is to prevent their spread. Prevention includes preventing them from going to seed, preventing them from spreading vegetatively and preventing soil disturbance or other factors that would promote their growth. Listed in this brochure are further resources to help property owners.

Early detection of invasive plant populations minimizes the cost and effort needed to control them. Effective scouting or monitoring ensures problems are found while they are still small and easily controllable. Remove invasives when their densities are low or they still cover a small area. Invasive plant control works best where there is a functioning native plant community still in place, which can move back into the empty niche. Control options should be taken before invasive plants go to seed. They include mechanical removal by cutting or hand pulling, and herbicide control by trained individuals or homeowners carefully following label directions.

Replace invasive plants with native or non-invasive species. Invasives are good at exploiting bare soil and empty niches. When you remove an invasive plant, unless there is another plant substituted, the invasive will tend to come back (either by seed or resprouting). What grows at a site in the future depends largely on what is planted there now. It is important to fill that niche with a desirable plant that will provide seed for the future.

Remove invasives first when their densities are low. This gives the most immediate success because invasive plant control works best where there is a functioning native plant community still in place which can move right into the empty niche.

- Avoid using known invasive plants
- Minimize landscape disturbance
- Protect healthy native plant communities
- Use fertilizers wisely
- Have a land management plan for maintenance over time
- Scout regularly
- Remove invasive plants when they are present in low numbers or when they are confined to a small area before they become a problem
- Dispose of removed invasive plants wisely
- Replace invasive plants with native or noninvasive species
- Clean equipment that has been used in an area having invasive plants

Norway maple

Tree-of-heaven

Invasive Plants in Pennsylvania

The species below are serious threats to our native ecosystems. Many have been designed as "Noxious Weeds" by the PA Department of Agriculture and are also a major concern to our agricultural community.

SCIENTIFIC NAME	COMMON NAME	PLANT FORM	NOTES
Aegopodium podagraria	Goutweed	Flower	Commonly planted in the past and escaped; spreads aggressively by roots
Alliaria petiolata	Garlic mustard	Flower	Invasive in many states; spreading aggressively in woodlands by seed
Carduus nutans	Musk thistle	Flower	PA Noxious Weed
Cirsium arvense	Canada thistle	Flower	PA Noxious Weed
Cirsium vulgare	Bull thistle	Flower	PA Noxious Weed
Datura stramonium	Jimsonweed	Flower	Sometimes cultivated; spreads by seed, PA Noxious Weed
Galega officinalis	Goatsrue	Flower	PA and Federal Noxious Weed
Heracleum mantegazzianum	Giant hogweed	Flower	PA and Federal Noxious Weed; sap can cause burning blisters
Hesperis matronalis	Dame's rocket	Flower	Planted in gardens; escaped and naturalized along roads; spreads by seed
Lythrum salicaria, L. virgatum	Purple loosestrife	Flower	Garden escape which has become invasive in many states; PA Noxious weed
Myriophyllum spicatum	Eurasian water-milfoil	Flower	Invasive in many states; aquatic
Ornithogallum nutans, umbellatum	Star-of-Bethlehem	Flower	Common garden plant which has widely escaped
Pastinaca sativa	Wild parsnip	Flower	Found commonly along roadsides; widespread and abundant; spread by seed
Perilla frutescens	Beefsteak plant	Flower	Garden escape; widespread mostly along roadsides; spreads by seed
Polygonum (Falopia) cuspidatum	Japanese knotweed	Flower	Invasive in many states; difficult to control; spreads by roots and seeds
Ranunculus ficaria	Lesser celandine	Flower	Spreads by roots and shoots; can be very aggressive in wetlands
Trapa natans	Water chestnut	Flower	Wetland plant; should not be introduced as it will escape, spread, and naturalize
Bromus tectorum	Cheatgrass	Grass	Annual grass; very invasive throughout the west; spreads by seed
Microstegium vimineum	Japanese stilt grass	Grass	Annual grass; invasive in many states; spreading through woodlands by seed
**Miscanthus sinensis*	Maiden grass	Grass	Commonly planted ornamental grass which can escape and spread by seed
Phalaris arundinacea	Reed canary grass	Grass	Aggressive wetland grass; native and introduced strains; widespread and abundant
Phragmites australis	Common reed	Grass	Native and introduced strains; wetland grass which can form huge colonies
Sorghum bicolor ssp. drummondii	Shattercane	Grass	Grass; PA noxious weed
Sorghum halepense	Johnson grass	Grass	Grass; PA noxious weed; spreads by roots and seeds
**Berberis thunbergii*	Japanese barberry	Shrub	Escaped from cultivation and invasive in many states; spread by birds
Berberis vulgaris	European barberry	Shrub	Escaped from cultivation; spread by birds
Elaegnus angustifolia	Russian olive	Shrub	Escaped from plantings and invasive in many states; spread by birds
Elaeagnus umbellata	Autumn olive	Shrub	Escaped from plantings and invasive in many states; rapidly spread by birds
**Euonymus alatus*	Winged Euonymus	Shrub	Escaped from plantings; invasive in moist forests
Ligustrum obtusifolium	Border privet	Shrub	Escaped from cultivation; seeds spread by birds
Ligustrum vulgare	Common privet	Shrub	Planted very commonly in the past and escaped; invasive in many states
Lonicera maackii	Amur honeysuckle	Shrub	Escaped from plantings; seeds spread by birds
Lonicera morrowii	Morrow's honeysuckle	Shrub	Escaped from plantings and invasive in many states; seeds spread by birds
Lonicera morrowii x tatarica	Bell's honeysuckle	Shrub	Escaped from cultivation
Lonicera standishii	Standish honeysuckle	Shrub	Escaped from plantings; seeds spread by birds
Lonicera tatarica	Tartarian honeysuckle	Shrub	Escaped from plantings; seeds spread by birds
Rhamnus catharticus	Common buckthorn	Shrub	Becoming a problem in PA
Rhamnus frangula	Glossy buckthorn	Shrub	Becoming a problem in PA
Rosa multiflora	Multiflora rose	Shrub	Invasive in many states; seeds spread by birds; PA noxious weed
Rubus phoenicolasius	Wineberry	Shrub	Common bramble; not cultivated; spreads by seed
**Spiraea japonica*	Japanese spiraea	Shrub	Frequently planted; escaped in some areas
**Viburnum opulus var. opulus*	Guelder rose	Shrub	Resembles native *Viburnum trilobum* which it replaces; both are cultivated and planted
**Acer platanoides*	Norway maple	Tree	Commonly planted and escaped; invasive in many states; wind spreads prolific seeds
Acer pseudoplatanus	Sycamore maple	Tree	Escaped from cultivation ; wind spreads prolific seeds
Ailanthus altissima	Tree-of-heaven	Tree	Invasive in many states; wind spreads prolific seeds
Paulownia tomentosa	Empress tree	Tree	Prolific seeds fall to start new seedlings
**Pyrus calleryana*	Callery pear	Tree	Commonly planted street tree; becoming a problem as an escape
Ulmus pumila	Siberian elm	Tree	Escaped from cultivation
Akebia quinata	Fiveleaf akebia	Vine	Escaped from cultivation and becoming a major problem in the Philadelphia area
Ampelopsis brevipedunculata	Porcelain-berry	Vine	Escaped from cultivation; spread by birds
Celastrus orbiculatus	Oriental bittersweet	Vine	Escaped from cultivation and invasive in many states; spreading rapidly (by birds)
Lonicera japonica	Japanese honeysuckle	Vine	Invasive in many states
Polygonum perfoliatum	Mile-a-minute vine	Vine	Range expanding, PA Noxious weed
Pueraria lobata	Kudzu	Vine	Invasive in many states; PA Noxious weed

This list of invasive species is not meant to be definitive, but rather a guideline to some of the most troublesome species that degrade native plant communities in Pennsylvania. These species were chosen from a more extensive list compiled from adjacent state or regional lists of invasive plant species. Input was sought from experienced individuals familiar with Pennsylvania's flora from a field perspective. For a more extensive list of invasive species, please contact DCNR, Bureau of Forestry, P.O. Box 8552, Harrisburg, PA 17105-8552.

SITUATIONAL INVASIVES: Some plants become problematic invasive species to a given area. For example, some species are commonly planted for quick groundcover but can be a serious problem when planted, seeded or discarded near native herbaceous communities. These situational invasives require greater care and monitoring when planted near native plant communities. These species include: *Crown-Vetch, Coronilla varia; English Ivy, Hedera heli; *Tall fescue, Festuca elatior;* *Orange day-lily, *Hemerocallis fulva, Periwinkle, Vinca minor; and Chinese and Japanese wisteria, Wisteria sinemsis and W. floridbunda.*

(ASTERIX): An asterix (*) denotes that the species has cultivars that are not known to be invasive. Cultivars are cultivated varieties of plant species bred for predictable attributes like shorter height, showier flowers, or colored foliage. An example is Norway Maple 'Crimson King' grown for its reddish leaves; this cultivar is not known to be invasive. Another example are the day lilies which have a host of cultivars that are not known as invasives. If you choose to plant a cultivar of an invasive species, ask a PA certified horticulturalist (PCH), your Penn State extension agent, or a professional horticulturalist about the cultivar's potential to be invasive.

Mile-a-minute vine

Purple lossestrife

Japanese knotweed

Printed on recycled paper

Revised from brochure completed in 04/00 8100-pa-dcnr3077 4/06

Invasive Plants in Pennsylvania

Invasive plants are plants which grow quickly and aggressively, spreading and displacing other plants. Invasives are usually introduced by people either accidentally or on purpose, into a region far from their native habitat.

[What is an Invasive Plant?](#)
[What Can I Do?](#)

[Moderate Threats](#)
[Serious Threats](#)
[Threats to Southeastern Pennsylvania](#)

[Other Sources](#)

What is an Invasive Plant?

"Invasive plant" is a name for a species that has become a weed pest, a plant which grows aggressively, spreads, and displaces other plants. Invasive plants tend to appear on disturbed ground, and the most aggressive can actually invade existing ecosystems. Invasive plants are generally undesirable because they are difficult to control, can escape from cultivation, and can dominate whole areas. In short, invasive plant infestations can be extremely expensive to control, as well as environmentally destructive. A small number of invasives are "native," meaning they occurred in Pennsylvania before settlement by Europeans but became aggressive after the landscape was altered. However, most invasive plants arrived from other continents and are often referred to as "exotic," "alien," introduced," or "nonnative" invasives. An aggressive plant freed from its environmental, pest, and disease limits, can become an invader of other ecosystems.

Characteristics of Invasive Plants

Invasive plants are noted for their ability to grow and spread aggressively. Invasive plants can be trees, shrubs, vines, grasses, or flowers, and they can reproduce rapidly by roots, seeds, shoots, or all three. Invasive plants tend to:

- not be native to North America;
- spread, reproducing by roots or shoots;
- mature quickly; if spread by seed, produce numerous seeds that disperse and sprout easily;
- be generalists that can grow in many different conditions;
- and be exploiters and colonizers of disturbed ground.

Impact of Invasive Plants

The primary reason to **not** landscape with invasives is that they are degrading our native environments. In fact, second only to habitat loss, invasives are a major factor in the decline of native plants. Plants like Kudzu, Purple Loosestrife, and Garlic Mustard are displacing native plants and degrading habitat for native insects, birds, and animals. Endangered, rare,

and threatened native species of plant and animals are especially at risk because they often occur in such small populations that make them particularly vulnerable.

Another reason to avoid invasives is that invasive plants, even when grown in a cultivated yard, can spread, escape, and cause landscape maintenance weeding problems for years to come. In urban and suburban areas there is a good chance that the worst weeds on your property are escaped plants, like Japanese Honeysuckle, Multiflora Rose, Japanese Knotweed, and Oriental Bittersweet. In yards, gardens, fields, and parks these plants are very expensive to control.

What Can I Do about Invasive Plants?

The best insurance against future problems is to avoid the use of known invasive plants and educate others about the problems of invasives. This web site lists many of the plants that are invasive in Pennsylvania. Plants on this list should be avoided because they can escape cultivation and aggressively move into surrounding ecosystems. One way to avoid invasives is to choose plants that are native to your area. Natives often are adapted to a specific environmental niche, and have natural controls that keep them in balance.

Minimize landscape disturbance. Invasive plants thrive on bare soil and disturbed ground where the native plant community has been displaced. The key to controlling invasives is to protect healthy native plant communities.

Use fertilizers wisely. Proper site preparation begins with a soil test before applying fertilizer. High nitrogen levels sometimes give an advantage to invasive species that are better adapted to using plentiful nutrients for explosive growth. For soil fertility, try using organic, slow-decomposing compost and mulches

Have a land management plan for maintenance over time. It makes sense when designing a property to plan for future maintenance. Lawns are maintained by weekly mowing, while gardens are often hand-weeded. Meadows in Pennsylvania may need to be mowed every year. Woodlands are probably the lowest-maintenace landscape, but they too will need to be monitored and invasive plants removed.

Scout your property annually for invasives or other problems. The best way to control invasives is prevention, and prevention can only happen through vigilance. Listed on this web site are resources to help property owners.

Remove invasives before they are a problem. Effective scouting or monitoring means that problems are found while they are still small and easily controllable. For instance, do not let invasive plants go to seed. Mechanical removal through digging or cutting is preferred. Large populations of invasives may need to be stopped chemically with spot applications of herbicide by trained individuals or by homeowners carefully following label instructions.

Replace invasive plants with native or noninvasive species. Invasives are good at exploiting bare soil and empty niches. When you remove an invasive plant, unless there is another plant substituted, the invasive will tend to come right back. What grows in the future depends largely on what is there now; so it is important to fill that niche with a desirable plant that will provide seed for the future.

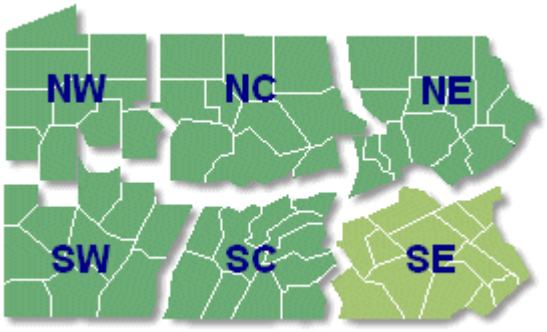
Remove invasives first when their densities are low. This gives the most immediate success because invasive plant control works best where there is a functioning native plant community still in place which can move right into the empty niche.

- Avoid using known invasive plants
- Minimize landscape disturbance
- Protect healthy native plant communities
- Use fertilizers wisely
- Have a land management plan for maintenance over time
- Scout (and keep scouting)

- Remove invasives before they become a problem
- Replace invasive plants with native or noninvasive species
- Remove invasives first when their densities are low

Moderate Threats

The following species are invasive plants that are known to invade our native plant communities and are deserving of our vigilance.



Pennsylvania Regions

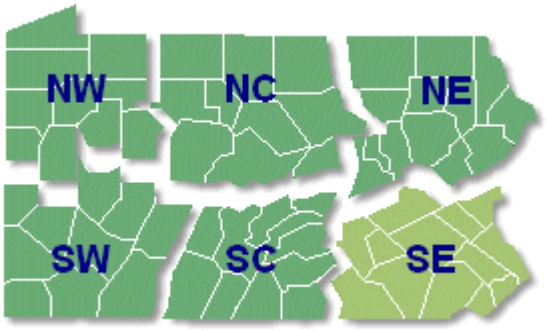
Six Pennsylvania Regions were used to show state distribution:
SE = Southeast **SC** = Southcentral **SW =** Southwest
NE = Northeast **NC** = Northcentral **NW** = Northwest
Freq. = Frequent Occ. = Occasional Rare

Scientific Name	Common Name	Plant Form	Pennsylvania Distribution
Aegopodium podagraria	Goutweed	Flower	Freq: SE; Occ: SC, SW, NE, NC, NW
Notes: Commonly planted in the past and escaped; spreads aggressively by roots			
Bromus tectorum	Cheatgrass	Grass	Freq: SE, SC; Occ: SW, NE, NW; Rare: NC
Notes: Annual grass; very invasive throughout the west; spreads by seed			
Hesperis matronalis	Dame's rocket	Flower	Freq: SE, SC, SW, NE; Occ: NC, NW
Notes: Planted in gardens; escaped and naturalized along roads; spreads by seed			
Myriophyllum spicatum	Eurasian water-milfoil	Flower	Freq: SE, NW; Occ: NE; Rare: SC, SW
Notes: Invasive in many states; aquatic			
Ornithogallum nutans, umbellatum	Star-of-Bethlehem	Flower	Freq: SE, SC, SW
Notes: Common garden plant which has widely escaped			
Pastinaca sativa	Wild parsnip	Flower	Freq: SE, SC, SW; Occ: NE, NC, NW
Notes: Found commonly along roadsides; widespread and abundant; spread by seed			
Perilla frutescens	Beefsteak plant	Flower	Freq: SE, SC
Notes: Garden escape; widespread mostly along roadsides; spread by seed			
Phalaris arundinacea	Reed canary grass	Grass	Freq: SE, SC, SW; Occ: NE, NC, NW
Notes: Aggressive wetland grass; native and introduced strains; widespread and abundant			
Ranunculus ficaria	Lesser celandine	Flower	Freq: SE; Rare: SC, SW
Notes: Spreads by roots and shoots; can be very aggressive in wetlands			
Berberis thunbergii	Japanese barberry	Shrub	Freq: SE, SC, NE; Occ: SW, NC, NW
Notes: Escaped from cultivation and invasive in many states; spread by birds			
Berberis vulgaris	European barberry	Shrub	Freq: SE; Occ: SC, SW, NE, NC, NW
Notes: Escaped from cultivation; spread by birds			
Elaegnus angustifolia	Russian olive	Shrub	Occ: SE, SC, SW
Notes: Escaped from plantings and invasive in many states; spread by birds			
Ligustrum obtusifolium	Border privet	Shrub	Freq: SE, SC; Occ: SW, NE, NW; Rare: NC
Notes: Escaped from cultivation; seeds spread by birds			
Ligustrum vulgare	Common privet	Shrub	Freq: SE, SC; Occ: SW, NE
Notes: Planted very commonly in the past and escaped; invasive in many states			
Lonicera morrowii x tatarica	Bell's honeysuckle	Shrub	Occ: SE, SC, NW
Notes: Escaped from cultivation			
Rhamnus catharticus	Common buckthorn	Shrub	Freq: SE, SC; Occ: SW
Notes: Becoming a problem in PA			

Rhamnus frangula	Glossy buckthorn	Shrub	Occ: SE, SC, SW, NE, NC, NW
Notes: Becoming a problem in PA			
Rubus phoenicolasius	Wineberry	Shrub	Freq: SE, SC; Occ: SW
Notes: Common bramble; not cultivated; spread by seed			
Ulmus pumila	Siberian elm	Tree	Occ: SE, SC; Rare: SW
Notes: Escaped from cultivation			
Akebia quinata	Fiveleaf akebia	Vine	Occ: SE; Rare: SC
Notes: Escaped from cultivation			
Ampelopsis brevipedunculata	Porcelain-berry	Vine	Occ: SE, SW
Notes: Escaped from cultivation			

Serious Threats

The species below are the most serious threats or worst offenders to our native ecosystems. Many have been designed as "Noxious Weeds" by the Pennsylvania Department of Agriculture and are also a major concern to our agricultural community.



Pennsylvania Regions

Six Pennsylvania Regions were used to show state distribution:
SE = Southeast **SC** = Southcentral **SW =** Southwest
NE = Northeast **NC** = Northcentral **NW** = Northwest
Freq. = Frequent Occ. = Occasional Rare

Scientific Name	Common Name	Plant Form	Pennsylvania Distribution
Alliaria petiolata	Garlic mustard	Flower	Freq: SE, SC, SW, NW; Occ: NE
Notes: Invasive in many states; spreading aggressively in woodlands by seed			
Carduus nutans	Musk thistle	Flower	Freq: SE, SC, SW, NE, NC, NW
Notes: PA noxious Weed			
Cirsium arvense	Canada thistle	Flower	Freq: SE, SC, SW, NE, NC, NW
Notes: PA noxious Weed			
Cirsium vulgare	Bull thistle	Flower	Freq: SE, SC, SW, NE, NC, NW
Notes: PA noxious Weed			
Datura stramonium	Jimsonweed	Flower	Freq: SE, SC, SW; Occ: NE
Notes: Sometimes cultivated; spreads by seed, PA Noxious Weed			
Galega officinalis	Goatsrue	Flower	Rare: SE
Notes: PA and Federal Noxious Weed, on location in SE PA			
Heracleum mantegazzianum	Giant hogweed	Flower	Rare: NW
Notes: PA and Federal Noxious Weed, sap can cause burning blisters			
Lythrum salicaria, L. virgatum	Purple loosestife	Flower	Freq: SE; Occ: SC, SW, NE, NC, NW
Notes: Garden escape which has become invasive in many states; PA noxious Weed			
Microstegium vimineum	Japanese stilt grass	Grass	Freq: SE; Occ: SC
Notes: Annual grass; invasive in many states; spreading through woodlands by seed			
Phragmites australis	Common reed	Grass	Freq: SE; Occ: SC, SW, NE, NW
Notes: Native and introduced strains; wetland grass which can form huge colonies			
Polygonum (Falopia) cuspidatum	Japanese knotweed	Flower	Freq: SE; Occ: SC, SW, NE, NW; Rare: NC
Notes: Invasive in many states; difficult to control; spreads by roots and seeds			
Sorghum bicolor ssp. drummondii	Shattercane	Grass	Freq: SE; Occ: SC, NC

	Notes: Grass; PA noxious Weed		
Sorghum halepense	Johnson grass	Grass	Freq: SE; Occ: SC, SW, NE, NW
	Notes: Grass; PA noxious Weed; spreads by roots and seeds		
Elaeagnus umbellata	Autumn olive	Shrub	Freq: SE, SC; Occ: SW; Rare: NE, NW
	Notes: Escaped from plantings and invasive in many states; rapidly spread by birds		
Lonicera maackii	Amur honeysuckle	Shrub	Occ: SE, SC, NW
	Notes: Escaped from plantings; seeds spread by birds		
Lonicera morrowii	Morrow's honeysuckle	Shrub	Freq: SE, SC, SW; Occ: NE, NC, NW
	Notes: Escaped from plantings and invasive in many states; seeds spread by birds		
Lonicera standishii	Standish honeysuckle	Shrub	Occ: SE
	Notes: Escaped from plantings; seeds spread by birds		
Lonicera tartarica	Tartarian honeysuckle	Shrub	Freq: SE, SC, SW; Occ: NE, NW
	Notes: Escaped from plantings; seeds spread by birds		
Rosa multiflora	Multiflora rose	Shrub	Freq: SE, SC, SW; Occ: NE, NC, NW
	Notes: Invasive in many states; seeds spread by birds; PA noxious Weed		
Acer platanoides	Norway maple	Tree	Freq: SE; Occ: SE, SW
	Notes: Commonly planted and escaped; invasive in many states; wind spreads prolific seeds		
Ailanthus altissima	Tree-of-heaven	Tree	Freq: SE, SC; Occ: SW
	Notes: Invasive in many states; wind spreads prolific seeds		
Celastrus orbiculatus	Oriental bittersweet	Vine	Freq: SE, SC, SW; Rare: NE, NW
	Notes: Escaped from cultivation and invasive in many states; spreading rapidly (by birds)		
Lonicera japonica	Japanese honeysuckle	Vine	Freq: SE, SC; Occ: SW, NE
	Notes: Invasive in many states		
Polygonum perfoliatum	Mile-a-minute vine	Vine	Freq: SE; Rare: SW
	Notes: Range expanding; PA Noxious Weed		
Pueraria lobata	Kudzu	Vine	Freq: SE; Rare: SW
	Notes: Invasive in many states; PA Noxious Weed		

Other Sources

Recognition of the problem of invasive plants is growing, at the same time as damage to native ecosystems is mounting. Identifying invasive plants and understanding the potential damage they can cause is essential to stopping their spread and protecting native vegetation. Recent publications specifically on invasive plant control and a good field guide can help identify and avoid planting invasive plants. Try to learn as much as possible about this issue. The Internet is an excellent way to access the rapidly growing body of information on this topic.

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Internet

Brooklyn Botanic Garden www.bbg.org

Morris Arboretum PA Flora Project www.upenn.edu/paflora

Plant Conservation Alliance, Alien Plant Working Group www.nps.gov/plants/alien

Natural Areas Association www.naturalarea.org

New England Wild Flower Society www.newfs.org/invasive/invasive.htm

U.S. Department of Agriculture, Invaders Database System Noxious Weeds in the U.S. & Canada
invader.dbs.umt.edu/noxious_weeds

VA Dept. of Conservation and Recreation, Invasive Alien Plant Species of Virginia
www.dcr.state.va.us/dnh/invproj.htm

Appendix H - Traffic Calming from FHWA Course on Bicycle and Pedestrian Transportation

Signing and Pavement Markings

Installation of directional, warning, and informational signs and pavement markings should conform to the *Manual on Uniform Traffic Control Devices* (MUTCD) guidelines, as applicable (see figure 20-17). Traffic-calming devices may be new to many people in the United States, and the signs and markings will help minimize confusion and traffic conflicts.

(This picture shows bicyclists not wearing helmets.
FHWA strongly recommends that all bicyclists wear helmets.)

Figure 20-17. Photo. These pavement markings at a median refuge delineate the crossing for motorists and provide visible cues to sighted pedestrians as to the location of the roadway edge.

Consider the following when designing signing and pavement markings:

- A part of the sign/pavement marking approach to mitigating traffic in residential areas includes painting of stripes/lines on the roadway and other patterns that are designed to have a psychological impact on drivers. Although such patterns are basically intended to slow vehicles rather than reduce traffic, they should make passage over residential streets less desirable than if the roadway were untreated, in effect, encouraging the use of alternative routes.

- Many of the patterns tried have had only marginal success. In a few cases, the average speed increased slightly. A pattern that is successful is that of painting transverse bands. Painted lines are applied to the road at decreasing intervals approaching an intersection or "slow-down" point. They are intended to give the impression of increasing speed and motorists react by slowing down.

- In Drachten, The Netherlands, engineers are experimenting with removing all traffic signs and markings at intersections, thus forcing each vehicle, bicycle, and pedestrian movement to be negotiated individually toward a result of lower speeds and fewer crashes.

Pavement Texturing and Coloring

The use of paving materials such as brick, cobbles, concrete pavers, or other materials that create variation in color and texture reinforces the identity of an area as a traffic-restricted zone (see figure 20-18). Detectable markings are also used at curb ramps, blended transitions, raised crossings, etc.

Figure 20-18. Photo. Pavement treatments can be applied to the entire traffic-calmed area or limited to specific street uses.

The following issues should be considered regarding pavement texturing and coloring:

- The choice of materials should ensure that they do not pose a danger or deterrent to bicyclists or persons with disabilities. Cobbles present special difficulties, particularly for vehicles with narrow wheels and without the benefit of suspension. Such treatment is particularly discouraging for bicyclists on steep slopes, making it harder to maintain momentum when riding uphill. Thus, as a general rule, cobbles should not be employed. Similarly, pavers with chamfered edges impair a bicyclist's stability and should be avoided.

- The color and texture of the street surface are important aspects of the attractiveness of many residential streets. The variation from asphalt or concrete paving associated by most people with automobile territory signals to the motorist that he or she has crossed into a different residential zone where pedestrians and bicyclists can be expected to have greater priority.

20.5 Traffic-Calming Impacts

Chapter 5 of the Institute of Transportation Engineers (ITE) report, titled *Traffic Calming: State of the Practice*, contains a synthesis of traffic-calming impacts experienced in the United States and Canada.[(1)] The report draws from detailed information collected on traffic-calming programs in 20 featured communities, another 30 communities surveyed less extensively, and a parallel Canadian effort by the Canadian ITE (CITE) and the Transportation Association of Canada (TAC). The following information and tables were derived exclusively from this source.

Appendix I – Deck/Overlook Examples

Dixon Meadow Preserve – Whitemarsh Township

Beaver Marsh – Cuyahoga Valley National Park

14 The steel arbor in the wetland is composed of recycled steel panels from the site, which provides shade, shelter, frames views, and shapes spaces.

Shanghai Houtan Park

the Finneran and Haley property is redeveloped, it is anticipated that Washington Street would be extended the full width of its property (this has been shown to the Township Planning Commission in an unofficial sketch plan presented prior to the publication of this Plan). The final leg of the extension to tie it back to Hector Street and Spring Mill Avenue would need to be made through the property of David's Bridal. Some rearrangement of existing improvements on this site, would be necessary; engineering study would be required to determine exactly how this connection could be made.

- Explore Potential River Crossing. A proposed river crossing is included in some recent Lower Merion plans, which would go from Flat Rock Park in Lower Merion to Fairmont Park (at the foot of Shawmont Street), east of the Township/City boundary. Some type of river access between Riverbend Environmental Center, also in Lower Merion and The Schuylkill Center for Environmental Education, just outside the Township in Philadelphia, has also been discussed (possibly a dock on either side of the river at these locations to allow water access from one to the other).

Signage

- Provide Way-Finding Signage. A consistent way-finding sign system should be provided to let trail users know where comfort and commercial facilities are located. Such a signage system would be uniform throughout the riverfront area and possibly with the rest of the Schuylkill River corridor. The Schuylkill River National & State Heritage Area (SRNHA) already uses a uniform sign design on their trails in the River corridor; which they have provided to the Township for use if the Township wishes to do so. Such a signage system would alert trail users to facilities either along the trail or nearby; these could include public facilities as well as nearby commercial facilities. Directional arrows and number of blocks or distance in miles or fractions thereof, would be included. (A sample sign design is shown in *Figure 6.* This design is based one of the SRNHA designs, and incorporates the Whitemarsh Township seal.)

Figure 6: Way-finding Sign Example

- Install Interpretive Stations/Signage. There are a variety of natural habitats, unique vegetative areas, and other natural conditions found along the riverfront, particularly from Spring Mill south toward the city. Some simple signage identifying these features for the trail user, with some explanation of their significance and why they are found in their respective locations, is envisioned. The signs would be of a consistent, naturalistic design and could be of similar design to the way-finding signs. (An example of such a sign is shown in *Figure 7.* This example describes what an observer can expect to see in a wetland area.)

Figure 7: Interpretive Sign Example

COMMON QUESTIONS:

CONSTRUCTING WETLAND BOARDWALKS AND TRAILS

Prepared by:

Jon Kusler
Association of State Wetland Managers, Inc.

In Cooperation With:

The International Institute for Wetland
Science and Public Policy

PREFACE

This guide was prepared for land trusts, watershed councils, federal, state, and local land management agencies, landowners and others interested in wetland education, ecotourism or related subjects. The summary is based upon a series of studies and workshops conducted by the Association of State Wetland Managers (ASWM) including a survey of approximately 100 wetland interpretive sites in preparing a publication J. Kusler et. 1993 Wetland Interpretation and Ecotourism, Association of State Wetland Managers. Most of these sites involved the construction of a boardwalk and trail. This guide is also based upon three ecotourism workshops conducted by the ASWM and inputs from many individuals who have constructed wetland boardwalks and trails over the last decade.

Preparation of this guide was funded by the U.S. Environmental Protection Agency, Region 2, Division of Wetlands. The opinions expressed in the document are the author's and do not necessarily reflect the view of the sponsoring organizations and groups.

Photos by Jon Kusler, Association of State Wetland Managers, Inc., Berne, New York

COMMON QUESTIONS:
CONSTRUCTING WETLAND BOARDWALKS AND TRAILS

What purposes may wetland boardwalks and wetland trails serve?

A. Boardwalks into wetlands and trails adjacent to wetlands allow the public, students, teachers, and others to see the "hidden" world of wetlands. Wetlands are of great interest to students, scientists, and the general public, but few individuals venture into them due to the dense vegetation, standing water and deep organic soils. A few enter with canoes or waders. But alternative and more convenient means of access—boardwalks and trails—are needed by the rest.

Across the Nation, hundreds of federal and state government natural resource agencies, land trusts, and local governments have constructed boardwalks in wetlands and trails adjacent to and paralleling wetland boundaries in adjacent uplands. Particularly well known boardwalks and trails include the Anhinga Trail in the Everglades, Corkscrew Swamp trail in Florida, Huntley Meadows boardwalk in Alexandria, Virginia and the boardwalks in Plum Island National Wildlife Refuge, Massachusetts.

Boardwalks and trails are usually combined. Trails are often designed as loops around wetlands or to provide visual access to portions of larger wetlands. Boardwalks are typically parts of such broader trail systems although boardwalks and trails may also be "stand alone" efforts.

Boardwalks and trails may be used to:

- Help educate the public concerning wetland beauty and functions and help build support for protection and restoration of wetlands and related resources,
- Facilitate bird watching and ecotourism, and
- Facilitate science education and research at all academic levels.

Constructing boardwalks and trails can also be a partnership-building exercise. Projects like this can bring land trusts, conservation commissions, and other locals together with tangible end products.

What are the key elements of a boardwalk or trail?

A. Key elements include:

- Access trail or road to wetland boardwalk or trail, parking area (often needed), and open kiosk with map and explanatory materials,
- The boardwalk and/or trail,
- A signing system for marking the trail and points of interest including kiosk at the beginning of the trail, and
- Informational brochures.

An interpretative center may also be constructed but this requires much more commitment of funds and staffing.

Young bird watcher

In what circumstances are boardwalks needed? How many?

A. Boardwalks and trails are not needed for every wetland. But even a single boardwalk and/or wetland trail in a community can "open up" wetland education and public understanding for all of the wetlands within the community. Trails rather than boardwalks may suffice to provide visual access to a wetland (e.g., birding) if there is raised ground around the wetland or adjacent to the wetland (e.g., many depressional wetlands, riverine wetlands). However, boardwalks are often needed where adjacent lands are flat and the wetland manager wishes to provide access to the wetland for bird watching, other nature watching, public education, or research. Not all efforts to construct boardwalks need also involve construction of trails or vice versa. However, longer wetland-related trails utilize at least raised walkways (planks, logs, rocks) or short boardwalks to cross low lying areas.

What overall steps should be followed in constructing a boardwalk and/or trail system?

A. Useful steps for a state, local, or federal wetland owner, land trust, other environmental organization, corporation, or private landowner include:

- Form a working group,
- Identify objectives,
- Inventory the wetland area and adjacent lands to determine possible locations for the boardwalk and trail,
- Design the boardwalk and/or trail,
- Obtain necessary permits (if any),
- Raise necessary monies,
- Construct the trail and boardwalk,
- Put up signs and interpretative materials, and
- Maintain the trail and boardwalk.

How do you form a working group?

Railings are important

A. Often a single enthusiastic individual such as a land trust member, member of a local conservation commission, member of a "friends of…." or simply an interested bird watcher or member of the public can take the lead in organizing a working group. The group can be part of or drawn from other groups--a conservation commission, a group of bird watchers, a group of land trust members, the staff of a park, or local teachers and students. What is important is identifying and gaining the support of motivated individuals who are willing to work on the trail or boardwalk. A working group typically provides the expertise and volunteer labor force needed to construct and maintain a boardwalk and/or trail.

Federal and state natural resource management agencies (park, wildlife refuge) with staff, expertise, and funding have constructed boardwalks and trails without an external working group. Instead, they rely on an internal team of workers. A working group is a particularly important step for construction of boardwalks and trails on private lands or lands owned by local governments and land trusts where unpaid volunteers must play an essential role.

What sorts of expertise is desirable in such a working group?

A. The types of expertise desirable for such a working group include:

- An engineer or architect (help with boardwalk, trail design, acquiring materials),
- A biologist or botanist (inventory of the wetland, layout of the boardwalk or trail, development of signs, brochure),
- A carpenter or similar construction expert (get materials, supervise construction),
- A teacher (signs, brochure), and
- Other volunteers to construct the boardwalk and trail.

Not all of these types of expertise will always be available. However, at least one individual with expertise in wetland plants and animals is needed to help inventory the wetland and assist with layout and design, signing, and preparation of interpretive materials. A construction advisor with knowledge of building construction practices including any design codes is also important, particularly for larger boardwalks. Such an expert can help address a variety design considerations as well supervise procurement of materials and actual construction.

What factors should a working group consider in establishing objectives?

A. The working group needs to decide upon the intended audience and goals for the trail and boardwalk. What is the group to achieve with the boardwalk and/or trail? Who is the intended audience? Bird watchers? Student researchers? The broader public? How many will use the boardwalk at one time? Is the boardwalk and/or trail to be handicapped accessible? If so, somewhat different designs will be needed for both a boardwalk and a trail.

"...deciding where to place a boardwalk in a wetland or trail adjacent to a wetland and in designing the boardwalk the working group should inventory and prepare notes..."

It is helpful for the working group to visit one or more existing wetland boardwalks in the area to help establish objectives and to secure design ideas and tips before design and construction of their own boardwalk.

What should the working group inventory in the wetland and adjacent area?

A. In deciding where to place a boardwalk in a wetland or trail adjacent to a wetland and in designing the boardwalk, the working group should inventory and prepare notes on the following sorts of features. A detailed air photo, topographic map, or wetland map may be used as base map. Important features observed with a field visit can often be sketched directly on the base maps and notes can be placed on the map or attached. Multiple copies of the base map are helpful if more than one person is carrying out the evaluation.

The group or individual undertaking the inventory may be able to carry out a portion of the inventory from the upland immediately adjacent to the wetland. But, he or she will also need to get out into the wetland in waders or a canoe or boat to carry out some portions of the inventory. If in a northern climate, he or she may be able to walk around the wetland on the ice in the winter. Depth of water and soils can also be measured through holes in the ice. Of course, birds, animals, and some plant species will not be visible this time of the year.

Features needing to be inventoried include:

1. Features along the possible route of the boardwalk:
    a. Depth of water?
    b. Vegetation along the route?
    c. Wildlife observed or anticipated along the route?
    d. Are there connections to existing paths, greenways, roads, and parking lots for the boardwalk or trail?
    e. Are the high areas within wetland or adjacent area? It often easiest to construct a boardwalk or trail linking high points in a wetland although this may also not be the best location to observe other wetland features.

2. Features which may/should be visible from the boardwalk and trail:
    a. What type of vegetation is found within the wetland? Where? What is marsh? Shrub? Forested?
    b. What types of birds, fish, other animals are found within the wetland or adjacent area? Where are they best observed?
    c. Where are the most beautiful areas and most beautiful vistas within the wetland and adjacent area? Where?
    d. Where is the open water? How deep is it? What can be seen looking down into the water?
    e. Are there shell mounds, other cultural features? Where?

3. Limitations upon boardwalk and trail construction:
    a. Where are endangered and sensitive plant and animal species (if any) or other species needing special protection located?
    b. How deep and how consolidated are the organic soils? Deep, unconsolidated soils pose problems for boardwalk construction except for floating structures.
    c. Is the area subject to flooding including possible wave, ice action? How high will the water get? How much velocity?
    d. Are there distractions such as utility lines, roads, houses, litter visible from particular areas?

What overall considerations should guide design of a boardwalk?

A. The location, length, width, height of the boardwalk and whether there will be observation platforms and towers, and other design features should reflect a variety of considerations.

- The design must, of course, reflect available funds. With little or no money, a small, narrow boardwalk may only be possible; with more money, a longer and wider boardwalk may be possible; with even more an observation tower and blind may be added.
- The boardwalk should bring users into contact with key features of the wetland (see objectives) while, simultaneously avoiding impacts to sensitive plants and animals.
- The boardwalk should be located to show varied habitats and biodiversity. For example, if possible, the boardwalk should show shrub, marsh, forested wetland and open water.
- The boardwalk should be wide enough to comfortably allow (at the absolute minimum) the passage of two large adults (perhaps with baby carriages)—a minimum of forty-eight inches.
- The boardwalk must be strong enough to support anticipated loads with a safety feature. Risk factors will of course vary. Risks may be low for a boardwalk only six inches above a marsh with no or little open water. Risks may be great for a boardwalk over deep, open water (with, perhaps, a few alligators). Architectural and engineering design manuals should be used to provide guidance. For example, a single four-foot wide and eight-foot long span should, in general (there are exceptions) be able to support a minimum of 2,000 pounds (10 two hundred pound adults).
- The boardwalk may include additional features such as viewing blinds or observation platforms and towers to provide panoramic views of the wetland, facilitate bird watching, or facilitate other nature watching.

Architectural design

- The boardwalk should use construction materials that will resist rot and other deterioration.
- The boardwalk must be designed to withstand flooding, wave action, and ice (in the North).
- The boardwalks must, in most instances, have railings or fencing. This is particularly true where small children may use the boardwalk.
- The boardwalk should be architecturally interesting. Curves are more interesting than long straight areas but also require more expertise and funds.

How much will a boardwalk cost per lineal foot?

A. Costs will, of course, depend upon the width, height, and construction materials used. Costs will also depend upon the railing system (if any) and whether there will be blinds, observation decks, or towers. Costs will depend upon whether volunteer or expert, professional labor is used or what combination of the two.

Per lineal foot costs may be lower than $20 if volunteer labor is used for a four foot wide, pressure treated boardwalk with eight foot sections utilizing four-by-four pilings, two by eight rafters, and two by eight decking with a two rail (top and middle) railing.

On the other hand, per lineal foot costs may be as high as $100 or more a lineal foot for a six-foot wide boardwalk using composite materials utilizing eight-foot section with six-by-six pilings, two by ten rafters, and two by eight or two by 10 decking and a three rail (bottom, middle, top) railing and with the use of professional architects and carpenters.

How can we reduce costs?

A. Costs can be reduced by:

- Reducing the size and length of the boardwalk. In some instances this may be possible by increasing trail areas and decreasing boardwalk length. Trail construction (providing there is no surfacing and few bridges) in lands immediately adjacent to the wetland is often relatively inexpensive; boardwalk construction often quite expensive.
- Using volunteers for construction, maintenance, etc.
- Soliciting lumberyards or other suppliers to donate materials or to provide materials at cost.
- Constructing a portion of a boardwalk during the winter for open-water areas which are iced-over. It is often much easier and less time consuming to sink pilings through holes in the ice than to maneuver them into place during the summer.
- Placing numbering signs on poles or trees in the wetland where they are less susceptible to vandalism.
- Using low cost materials for the brochure and recycling brochures.

Are regulatory permits needed for a boardwalk?

A. They may be, depending upon state and local regulations, the size of the boardwalk, whether fills will be placed in the wetland, the type of wetland and other factors. We suggest you check with your local zoning administrator with regard to any local zoning or building code permits which may be needed and the regulatory requirements. The zoning administrator may also be aware of state permitting requirements. A state permit is often needed if the wetland is part of a broader lake or coastal water with the bed owned by the state. A federal Section 404 (Clean Water Act) permit may also be needed from the U.S. Army Corps of Engineers in some instances. In general, a Section 404 permit will not be needed for a boardwalk in an "isolated" wetland. In addition, a small boardwalk for a non-isolated wetland but involving no fill or dredging may qualify for a "programmatic" permit. Larger structures or those involving fills will require a permit.

Are railings needed for the boardwalk, observation areas? If so, how extensive should they be?

A. Some boardwalks are constructed with no railings where there is little danger if children or adults fall from the boardwalk into the wetland. These are particularly common for forested, freshwater marshes or for salt marsh wetlands with only a few inches of water and little drop from the deck to the wetland (e.g. less than a foot). However, even here a small two by four "rim" along the edge of the decking is desirable if the boardwalk is to be used by wheelchairs.

More substantial railings are needed if the boardwalk crosses deep water or attains considerable height (e.g., two-feet or more). Someone may then be injured by falling into the wetland or may drown in the water. This is particularly a problem if a boardwalk is to be used by children.

It is very difficult to construct a railing system which will totally protect children. Some railings are designed with three or more horizontal rails (near the deck, half way up, and at the top of the railing supports) to obtain this result. But even than, a determined child may be able to squeeze between the railings. Some boardwalks utilize wire mesh to prevent this, but wire mesh is also not attractive.

What sort of materials should be used for boardwalk construction?

A. Most boardwalks are constructed of pressure treated four by four's or six by sixes (pilings) with two by six or two by eight cross members and two by six or two by eight deck material. However, some boardwalks also use two by tens for decking and cross members for longer spans or heavy use.

There has been some concern that chemicals from pressure treated wood may pollute nearby waters although there is apparently little empirical evidence to support this. Increasingly, plastic composites are used for boardwalk construction as an alternative to wood. However, they are quite expensive. In addition, some of the composites are brittle in freezing conditions and easily split when under even modest tension.

Most boardwalks use galvanized nails or screws to secure the decking. Bolts (stainless steel preferred but expensive) are usually used to secure cross members to the pilings. Screws and bolts are preferable to nails because nails can work themselves out with the flexing of the boardwalk. But nails are, of course, cheaper.

How can boardwalks be constructed to reduce potential flood damages?

A. Flooding is a particular concern in boardwalk construction for wetlands adjacent to major lakes, rivers, or estuaries since many boardwalks in these locations suffer flood damage. Water levels in many wetlands typically fluctuate two to five feet during spring runoff or rainy periods for many inland wetlands. Water level fluctuations of 10-feet or more are common for 100-year flood events for many riverine, coastal, and estuarine wetlands. Boardwalks constructed of wood typically float if not firmly attached. If firmly attached to pilings they may survive submergence for a period of hours or a few days. But, few can survive prolonged wave action and flowing water. Flowing water combined with upward buoyancy forces will often tear sections of a boardwalk from their pilings.

Fluctuating water levels pose a dilemma in boardwalk construction. In an ideal world, the deck of a boardwalk would be raised above anticipated flood elevations. But, this may be unsightly and impractical. On the other hand, few not for profits or local governments have sufficient funds to repeatedly rebuild a boardwalk each year.

Several strategies are available to address potential flood and erosion problems. They can often be combined.

- The first is to elevate the boardwalk enough to deal with yearly flooding (e.g., a foot or two of flooding) and then to rebuild or repair any damage after a major flood. This may be a cost effective strategy, particularly where a continued source of funds and maintenance staff are available and major floods are infrequent. Rebuilding and repair costs may be reduced through the use of additional strategies (see below).

- A second strategy is to securely bolt each section of the boardwalk to deep-seated pilings with the hope that the boardwalk will stay in place when flooding occurs and not be damaged. This works fairly well where flooding is of short duration, there is no wave action or velocity in the water, and the pilings can be sunk deep into the soil.
- A third strategy is to tether each section or span of a boardwalk with a cable or nylon rope to its pilings. The boardwalk is designed so that sections rest on their pilings but the sections are not firmly attached to them. With this design, each section floats off of its piling during a flood, but is kept near the pilings by the tether. After floodwaters fall, the sections are placed by hand again on the pilings. This works particularly well for small sections of relatively narrow and lightweight boardwalks.

How are load bearing needs and the capacities of various materials to be calculated?

A. An architect or engineer can provide a working group with information concerning anticipated load bearing needs based upon the width of the deck, section length, and other features. We strongly suggest you seek such expert help for a large boardwalk, particularly if a tower or other elevated area is to be constructed. You need to design with a considerable safety factor and assume a worst-case scenario. For example, as suggested above, it might be assumed that as many as ten people weighing 200 pounds each might crowd onto a four-foot wide by eight-foot section looking at a snake or rare bird in the wetland. The section would, therefore, need to support at least 2000 lbs of weight.

We also suggest you consult an architect or engineer concerning load bearing capacities of various materials including pressure treated wood and plastic composites.

How can the difficulties with working in water and mud be reduced?

A. Constructing a boardwalk in water and deep organic mud (often encountered in a wetland) is a challenge. Waders help in shallow water and boats and canoes can be used where there is enough water depth. It is also sometimes possible to finish one section of a boardwalk before starting the next and to continuous "build out" although some time in the water is required to set pilings. The next set of pilings are sunk using the last finished section as a construction platform. But, sinking all pilings at once before construction of the platforms also has advantages.

Other suggestions include:

- Sections of decking can be assembled in upland areas and carried or floated to pilings. This works, particularly, for small, lightweight sections.
- For areas with prolonged freezing temperatures, holes can be cut in the ice with an ice augur. Pilings can then be driven through the hole in the ice and into the soil. Snowmobiles and sleds may be used to move materials into place.
- Wide, light, flat-bottomed boats such as Jon boats may be used to move materials in and out of shallow water and to place pilings.

Upgrading an Existing Boardwalk

How can the impacts of boardwalks and trails upon vegetation and wildlife be reduced?

A. A variety of measures may be used for reducing impacts:

- Trails and boardwalks should be located in less sensitive areas of a wetland and adjacent lands, away from rare or endangered vegetation and wildlife. Trails and boardwalks often can be routed around large trees so that large trees do not need to be cut.
- Care should be taken to maintain natural wetland hydrology including fluctuations of water levels important to wildlife in any construction.
- Natural materials should be used (e.g. wood for boardwalks, woodchips for trails).
- Designs and colors should be used which blend with natural scenery (e.g., natural wood colors).
- Construction may be able to take place in the winter which reduces impacts on nesting or feeding wildlife.
- Once a boardwalk or trail is constructed, limitations can be placed on the months and hours of access to minimize impacts upon nesting birds and other wildlife (where this is necessary).
- Litter containers can be provided at convenient locations to reduce littering.

Observation tower

What purposes may observation blinds, platforms and observation towers serve?

A. They can facilitate bird-watching and provide spectacular views (often). Simple blinds are easy to construct and relatively inexpensive. Observation towers are much more expensive but also provide panoramic views.

What factors should be considered in design and construction of a trail adjacent to a wetland?

A. Suggestions for trail development adjacent to a wetland include:

- A trail, like a boardwalk, should not be constructed in highly sensitive upland areas with rare or endangered plants or animals or other highly limiting factors.
- The trail should parallel the shore of a wetland as closely as possible to provide vistas of the wetland. However, a balance must be struck between maximum view of the wetland and construction and maintenance problems. A trail located along the immediate shore of a wetland is often flooded or muddy a portion of the year.
- If possible, the trail should avoid organic soil areas. This is not always possible, however. Boardwalks, small bridges, rock pathways, and other techniques should be used to bridge such areas.
- The trail should have an interesting, curvilinear design where possible.
- The trail should avoid steep gradient areas where erosion is likely.

- In many instances, use of mountain bikes and any motor vehicles should be prohibited on the trail since trails adjacent to wetlands tend to be wet a portion of the time and often muddy. Vehicles will quickly exacerbate these problems.
- Natural materials such as wood chips are often desirable for trail covering. However, wood chips float when flooding occurs and are simply washed away. Crushed stone is therefore desirable in some of these areas.
- If possible and practical, the trail or a portion of the trail should be designed for handicapped access. This is not always possible for trails adjacent to wetlands, however, because of the wet soils and mud which is common during certain times of the year and the rapid (albeit only a few feet) climbs and drops common on many wetland-related trails.

What sort of signs should be provided for the boardwalk and/or trail?

A. Two types of signs are typically needed for boardwalks and trails:

- General informational signs. These signs provide the name and description of the wetland and boardwalk/trail, provide use information (e.g., hours of operation), and mark the trail on the ground (e.g., blazes on trees).
- Plant and animal descriptive signs. These signs mark areas of the wetland and plants/animals of special interest. Many boardwalks and trails have numbered markers at trees and other vegetation of significance. A trail brochure, then, provides more information concerning these trees or other features.

Vandalism of signs is often a problem. Vandalism, however, can be reduced by placing signs or markers some distance from the boardwalk in the wetland (e.g., 3 feet). Few vandals find it worthwhile to actually walk out into the wetland.

What tips can be provided for signs?

A. Tips for use of signs include:

- Keep them simple.
- Use weather resistant materials.
- Place them in visible areas but at least three-feet out into the wetland from the boardwalk or trail to reduce vandalism.

Trail Sign, Cape Cod, Maine

What sorts of boardwalk/wetland brochures are needed?

A. A brochure should, at a minimum:

- Briefly describe the wetland including its history and why it is important.
- Provide rules of conduct and advice on use of the area (e.g., stay on the trails, watch out for poison ivy).
- Include a boardwalk/trail map showing number points of interest.
- Include a brief description of each numbered points of interest.
- Provide contact for more information.
- Request the user to return the brochure to the kiosk or trail/boardwalk or entrance point.

What sorts of interpretative programs are appropriate for boardwalks/trails?

A. This will depend, in part, upon the type of the wetland, location, and the needs for the area. However, programs offered by schools, local land trusts, public resource agencies (e.g., state fish and game departments) often include:

- School visits to the wetland/boardwalk to observe the wetland, wildlife, plants, or to carry out research.
- Wetland and birding festivals.
- Ecotours conducted by local guides, travel agencies (e.g. tours into the Everglades).
- Scheduled nature walks, lectures for the general public.

SUGGESTED READINGS

Kusler, J. 1994. Guidebook for Creating Wetland Interpretation Sites Including Wetlands and Ecotourism. Association of State Wetland Managers.

Kusler, J. 2004. Common Questions. Wetlands and Ecotourism. ASWM, Berne, New York.

Sinnot, T. 1999. *Assessment of the Risks to Aquatic Life From the Use of Pressure-Treated Wood in Water*. New York Department of Environmental Conservation.

SUGGESTED WEB SITES

http://handbooks.btcv.org.uk/handbooks/content/section/2341
BTCV Handbook Online. Guidelines for boardwalk construction. Useful.

http://www.appalachianenvironment.com/villagegreen.htm
Photos and brief description of Village Green boardwalk.

www.audubon.org/local/sanctuary/corkscrew/Visit/BoardwalkTour.html
Boardwalk Tour - Corkscrew Swamp Sanctuary. This site contains a boardwalk tour at Corkscrew Swamp (excellent).

www.sfrc.ufl.edu/Extension/pubtxt/for5d.htm
Bridges, Boardwalks and Other Wetland Crossings. Design suggestions for boardwalks in wetlands (good).

www.uvm.edu/~kcook3/?Page=cbogd.html&MM=natural_menu.html
Colcester Bog Boardwalk (University of Vermont). Plastic floats and native woods were primarily used.

www.meadowlands.state.nj.us/ec
Meadowlands Environment Center. The Center has several boardwalks.

www.sfrc.ufl.edu/Extension/pubtxt/for5c.htm
Trail Construction. Recommendations for trail construction (good).

http://www.fhwa.dot.gov/environment/fspubs/01232833/found05.htm
Recommendations for wetland trail and boardwalk design.

www.sackville.com/visit/waterfowl/index.html
Waterfowl Park – Sackville. Description of Sackville wetland site.

www.rice.edu/wetlands/PR_Materials/pr02.html
West Eugene Wetlands Self Guided Tour. Rice University.

www.deq.state.mi.us/documents/deq-swq-nps-wec.pdf
Wetland Crossings. Design specifications for wetland crossings in Minnesota.

www.epchc.org/docks_and_boardwalks.htm
Specifications for docks and boardwalks in wetlands (Hillsborough County, Florida)

http://www.ecsu.edu/ECSU/AcadDept/Geology/dismal_swamp.htm
Dismal Swamp wetland boardwalk project.

Association of State Wetland Managers, Inc.

1434 Helderberg Trail, Berne, NY 12023
Phone (518) 872-1804; Fax (518) 872-2171; www.aswm.org

An electronic version of this brochure is available in PDF at:
http://www.aswm.org/brochure/boardwalks.pdf

Appendix L - Ground Leasing for Municipalities

Ground Leasing for State and Local Government Toolkit

by Practical Law Government Practice

Maintained • USA (National/Federal)

Resources to assist government landlords and tenants in effectively drafting and negotiating ground leases and related documents.

A **ground lease** is typically a long-term lease agreement of unimproved land or previously developed property where the tenant constructs new improvements. Lease terms customarily run from 30 to 100 years or longer and are generally not less than 20 years. The tenant usually holds ownership of the improvements during the ground lease term and the tenant is obligated to pay all expenses attributable to the property.

A tenant may have several advantages by entering into a ground lease rather than purchasing the fee interest in the real property, including:

- A ground lease substantially reduces the tenant's front-end development costs because it eliminates land acquisition costs.
- Rental payments are often deductible by the tenant for federal and state income tax purposes.

There are, however, also disadvantages for a tenant in a ground lease transaction, including:

- The total costs for ground leasing property are usually higher in the long term than if the tenant purchases the property outright.
- The tenant often has less flexibility over the development, use, and operation of the property because of restrictions contained in the ground lease.
- The tenant may have difficulty financing or refinancing the ground lease because of limitations contained in the ground lease. This prevents the tenant from taking equity out of the project.
- The tenant's leasehold interest under the ground lease is a "diminishing asset" because the value and marketability of the project diminishes as the end of the lease term nears.

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A landowner may have several advantages by entering into a ground lease rather than selling the property outright, such as:

- The landlord retains the **fee** ownership to and a reversionary interest in the property.
- A ground lease provides the landlord with a low risk development of the land that results in steady rental income to the landlord over a long term.
- The landlord avoids **replatting** or **subdivision** laws.
- Governmental landlords may be restricted in selling the land but can instead lease the land for development.
- A carefully drafted ground lease allows the landlord to keep control over the development and permitted uses of the land.

There are also, however, disadvantages for a landlord in a ground lease transaction, such as:

- The landlord may have little or no control over the development and use of the land.
- The ground lease may contain restrictions that prohibit the landlord from borrowing against its fee interest in the land during the ground lease term.
- If a landlord allows its fee interest in the land to be secured by the tenant's financing, the landlord may lose its property during foreclosure if the tenant defaults under its financing.

A ground tenant usually needs financing to help fund its development costs. A ground tenant typically gets a construction loan for the construction phase of the development. After the construction is completed, the ground tenant gets take-out financing from a term lender to pay off the construction loan. Lenders of the construction loan and the permanent take-out loan want assurances that the ground lease contains clauses that protect the lenders' interests.

This Toolkit contains continuously maintained practices notes, standard documents, standard clauses and state-specific laws and customs guidance to help counsel for government landlords and tenants manage the process of drafting and negotiating ground leases and related documents.

Practice Notes

- Financeable Ground Leases: Key Considerations
- Ground Lease Rent Adjustment Determinations in the US
- Purchase Options in Commercial Leases
- Commercial Tenant Bankruptcies: Issues and Strategies for Landlords

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- Owning and Leasing Green Real Estate
- Sovereign Immunity of State and Local Governments in State Courts
- Sovereign Immunity of States Under the Eleventh Amendment

Standard Documents and Clauses

- Financeable Ground Lease Clauses (Pro-Leasehold Lender Short Form)
- Ground Lease (Short Form)
- Ground Lease Completion Guaranty (Pro-landlord)
- Memorandum of Ground Lease
- Ground Lease Subordination, Non-disturbance and Attornment Agreement (Pro-lender/Pro-landlord)
- Ground Lessor Estoppel Certificate
- Rent Adjustment Determination Clause (Baseball Method) (Ground Lease)
- Leasehold Mortgage Ground Rent Reserve Fund Covenants (Pro-leasehold Lender)
- Rent Adjustment Determination Clause (Ground Lease)
- Boilerplate Clauses
- Non-Waiver of Sovereign Immunity Clause
- Airport Lease Clauses for AIP Compliance

State-specific Materials

- Real Estate Ownership: State Q&A Tool
- Real Estate Leasing: State Q&A Tool
- Real Estate Finance: State Q&A Tool

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- Foreign Investment in Real Estate: State Q&A Tool
- Managing Commercial Real Estate Leases: State Q&A Tool
- Real Estate Brokerage Laws and Customs: State Q&A Tool

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Appendix M - Native Plants

	Common Name	Scientific Name	Bloom period / color	Size	Notes
Sunny Moist Sites					
Trees	Red maple	*Acer rubrum*	Mar-Apr / red	40-100'	very adaptable to light and moisture conditions
	Serviceberries	*Amelanchier* species	Mar-May / white	20-30'	good fall color and edible berries
	Tuliptree	*Liriodendron tulipfera*	May-Jun / green & orange	75-100'	fast growing, nectar source, tulip-shaped flowers
	Eastern white pine	*Pinus strobus*	May / cones 5"	> 100'	graceful shape with very high wildlife value
	White oak	*Quercus alba*	Mar-May / inconspicuous	60-80'	acorns feed a variety of wildlife, slow-growing
	Eastern hemlock	*Tsuga canadensis*	Apr-May / cones ¾"	60-80'	evergreen, tolerates shade, PA's state tree symbol
Shrubs	Summersweet	*Clethra alnifolia*	Jul-Aug / white or pink	6-12'	very fragrant, tolerates shade, supports pollinators
	Red-osier dogwood	*Cornus sericea*	May / white	6-12'	showy red stems, spreads to form colonies
	Winterberry	*Ilex verticillata*	May-Jun / red berries	6-10'	male and female plants needed for fruit production
	Red chokeberry	*Photinia pyrifolia*	Mar-May / white	5-10'	red fruits & fall color, can be pruned as a hedge
	Ninebark	*Physocarpus opulifolius*	May-Jul / pinkish white	5-10'	coppery fall color, papery peeling bark
Perennials	Swamp milkweed	*Asclepias incarnata*	Jul-Aug / rose	2-6'	lovely flowers, food for monarch butterfly caterpillars
	Joe-pye-weed	*Eutrochium fistulosum* (*Eupatorium f.*)	Aug-Sep / purple	3-10'	nectar source draws many pollinators
	Gaura	*Gaura biennis*	Jul-Sep / pink or white	1-6'	long-blooming, very attractive flowers
	Oxeye sunflower	*Heliopsis helianthoides*	Jul-Sep / yellow	1-5'	nectar for butterflies & bees, seeds for goldfinches
	Great blue lobelia	*Lobelia siphilitica*	Jul-Oct / blue	1-4'	long blooming, nectar for hummingbirds & butterflies
	Bee-balm	*Monarda didyma*	Jul-Aug / red	2-5'	nectar for hummingbirds & butterflies, aromatic
	Wild blue phlox	*Phlox divaricata*	May-Jun / lilac	1-2'	aromatic showy, nectar source, dormant in summer
	Mountain mints	*Pycnanthemum* species	Jul-Aug / white	15-36"	aromatic, support butterflies, bees and other species
	New England aster	*Symphyotrichum novae-angliae*	Aug-Oct / purple	2-6'	tolerates drier soil
	New York ironweed	*Vernonia noveboracensis*	Jul-Sep / purple	3-6'	tall, attractive nectar source for wet sites
	Culver's-root	*Veronicastrum virginicum*	Jun-Sep / white or pink	to 6'	elegant spires of flowers support butterflies
Sunny Dry Sites					
Trees	Red bud	*Cercis canadensis*	Apr-May / pink	20-35'	fixes nitrogen, 20-year average lifespan
	Eastern red-cedar	*Juniperus virginiana*	Apr-May / inconspicuous	30-45'	evergreen, sky blue fleshy berry-like cones
	Blackgum	*Nyssa sylvatica*	Apr-May / inconspicuous	30-75'	dark blue fruits, scarlet early fall color
	Red oak	*Quercus rubra*	Apr-May / inconspicuous	60-80'	acorns feed wildlife
	Sassafras	*Sassafras albidum*	Apr-May / yellow	30-50'	dark blue fruits feed songbirds
Shrubs	Black chokeberry	*Photinia melanocarpa*	Apr-May / white	3-6'	black fruits feed songbirds, red fall color
	New Jersey tea	*Ceanothus americanus*	May-Sep / creamy white	< 3'	drought tolerant
	Blueberries	*Vaccinium* species	May-Jun / white-pink	2-12'	Highbush & lowbush need acidic soils, edible fruit
	Blackhaw	*Viburnum prunifolium*	Apr-May / white	8-15'	blue-black fruits feed songbird and people
Perennials & Grasses	Big bluestem grass	*Andropogon gerardii*	Jun-Sep / inconspicuous	3-5'	clump-forming, bronze fall & winter color
	Butterfly-weed	*Asclepias tuberosa*	May-Sep / orange	1-3'	food for monarch caterpillars, deep-rooted
	Blazing-star	*Liatris spicata*	Jul-Sep / purple	2-6'	showy flower spikes
	Wild bergamot	*Monarda fistulosa*	Jul-Aug / pink-violet	2-5'	nectar for hummingbirds & butterflies, aromatic
	Sundrops	*Oenothera perennis*	Jun-Aug / yellow	1-2'	long-blooming perennial, drought tolerant
	Switchgrass	*Panicum virgatum*	Jul-Sep / pink-red	3-6'	golden yellow-burgundy fall color, winter cover
	Virginia creeper vine	*Parthenocissus quinquefolia*	Jul-Aug / inconspicuous	25-35'	bluish-black berries with high wildlife value, fall color
	Beard-tongue	*Penstemon digitalis*	May-Jul / white	2-5'	meadow & border plant, long-blooming
	Black-eyed Susan	*Rudbeckia hirta*	Jul-Sep / yellow	2-3'	long-blooming, readily available
	Little bluestem grass	*Schizachyrium scoparium*	Aug-Oct / inconspicuous	2-4'	blue-green in spring, coppery autumn color
	Goldenrods	*Solidago* species	Sep-Oct / yellow	1-4'	drought tolerant once established, many pollinators
	Indian-grass	*Sorghastrum nutans*	Aug-Sep / yellow anthers	3-8'	beautiful seed heads feed songbirds
Shady Moist Sites					
Trees	Sugar maple	*Acer saccharum*	Apr-May / yellow	60-75'	adaptable to dry sites, outstanding fall color
	River birch	*Betula nigra*	Apr-May / brown catkins	60-80'	attractive peeling bark
	Flowering dogwood	*Cornus florida*	Apr-Jun / white or pink	10-30'	prefers acidic soils, red berries
	Pin oak	*Quercus palustris*	Apr-May / tan catkins	60-70'	red fall color, acorns feed wildlife
Shrubs	Smooth alder	*Alnus serrulata*	Mar-Apr / yellow catkins	6-10'	high wildlife value
	Pagoda dogwood	*Cornus alternifolia*	May-Jun / white	15-25'	very high wildlife value, purple-red fall color
	Wild hydrangea	*Hydrangea arborescens*	Jun-Aug / white	3-6'	leaves poisonous
	Spicebush	*Lindera benzoin*	Mar-May / yellow	6-12'	aromatic, red fruits
	Rosebay	*Rhododendron maximum*	Jun-Jul / rose pink	10-30'	evergreen wildlife cover
Perennials	Jack-in-the-pulpit	*Arisaema triphyllum*	Apr-Jun / green-purple	1-3'	bright red berries in an unusual flower shape
	Wild ginger	*Asarum canadense*	Apr-May / maroon	< 1'	semi-evergreen groundcover
	Dutchman's breeches	*Dicentra cucullaria*	Apr-May / white to cream	< 1'	early nectar for bumblebees, dormant in summer
	Cardinal-flower	*Lobelia cardinalis*	Jul-Sep / scarlet	2-5'	nectar for hummingbirds & butterflies, usually biennial
	Golden ragwort	*Packera aurea*	Apr-Jul / yellow	1-2'	long-blooming, tolerates wet areas
	Jacob's ladder	*Polemonium reptans*	Apr-Jun / blue	1-2'	clumping ladder-like foliage, self-seeds
	Foamflower	*Tiarella cordifolia*	Apr-Jul / white	4-14''	groundcover for deciduous woods, long-blooming
Ferns	Maidenhair fern	*Adiantum pedatum*	distinctive delicate texture	1-2'	great for woodland or rock gardens
	Wood ferns	*Dryopteris* species	lacy clump of fronds	1-3'	evergreen, some adaptable to drier sites
	Cinnamon fern	*Osmunda cinnamomea*	fertile fronds in Apr-May	1-2'	fertile fronds cinnamon brown, prefers acidic soils
	Interrupted fern	*Osmunda claytoniana*	distinctive fronds	2-4'	prefers acidic soils
	Christmas fern	*Polystichum achrostichoides*	evergreen, short rhizomes	1-2'	adaptable to drier sites
Shady Dry Sites					
Trees	Shagbark hickory	*Carya ovata*	May / green catkins	60-80'	golden yellow to orange fall color, sweet nuts
	Chestnut oak	*Quercus montana*	May-Jun / catkins	50-75'	acorns feed wildlife
	Hop-hornbeam	*Ostrya virginiana*	April / catkins	35-50'	nutlets in a loose papery cone resembling hops
	Witch-hazel	*Hamamelis virginiana*	Sep-Nov / golden yellow	8-20'	fragrant, often multi-stemmed
Shrubs	Pinxter-flower	*Rhododendron periclymenoides*	Apr-May / pink to white	6-12'	prefers acidic soils
	American hazelnut	*Corylus americana*	Mar-Apr / catkins	10-15'	nuts ripen in Aug-Sep.
	Arrow-wood viburnum	*Viburnum dentatum*	May-Jun / white	3-15'	a very variable and adaptable species
Perennials	Black cohosh	*Actea racemosa*	Jun-Sep / white	3-8'	tapering spikes of flowers & interesting seed heads
	White snakeroot	*Ageratina altissima* (*Eupatorium rugosum*)	Jul-Oct / white	2-3'	nectar for butterflies & bees, hardy, spreading habit
	Wild columbine	*Aquilegia canadensis*	Apr-Jun / red & yellow	1-3'	supports hummingbirds, adaptable to sun and soil
	White wood aster	*Eurybia divaricata*	Jul-Oct / white	1-3'	showy fall flowers, thrives throughout PA
	Bigleaf aster	*Eurybia macrophylla*	Aug-Sep / pale blue-violet	1-2'	groundcover, larval food for pearl crescent butterfly
	Wood geranium	*Geranium maculatum*	Apr-Jul / lavender-pink	1-2'	adaptable to full sun, spreads slowly
	Alumroot	*Heuchera americana*	May-Aug / greenish	1-2'	long-blooming, many cultivars
	Virginia bluebells	*Mertensia virginica*	Mar-Jun / blue	1-2.5'	early, long-blooming, supports early pollinators
	Partridge-berry	*Mitchella repens*	May-Jul / white	<1'	groundcover, acid soils, trailing stems, red fruits
	Mayapple	*Podophyllum peltatum*	May / white	1-2'	prefers acid soils, rhizomes spread slowly
	Stonecrop	*Sedum ternatum*	Apr-Jun / greenish-white	<1'	groundcover, adaptable to sun
	Solomon's plume	*Smilacina racemosa*	May-Jul / white	1-2'	starry flowers, red berries, rhizomes spread

LANDSCAPING WITH NATIVE PLANTS IN PENNSYLVANIA

Monarda fistulosa

pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Tiger Swallowtail on Wild Bergamot

Go native with these six basics:

1. Learn more about native plants

Learn what plants are native to your area. Many field guides and online resources can help you get started. Days afield in Pennsylvania's parks and wildlands getting to know the wildflowers are both delightful and educational.

2. Landscape with native plants

In many neighborhoods, wild native plant communities have been seriously impaired. The landscaping of parks, yards, streets and campuses can provide the foundation for local ecosystems. Well-chosen native plants can perform beautifully in these landscapes. The DCNR-Bureau of Forestry recommends hardy and adaptable native plants which flourish in a wide variety of conditions and have a better chance of success in gardens. These plant species grow abundantly throughout the state. For a short list of recommended native plants easily purchased, see the table in this brochure.

3. Protect native plant communities and minimize habitat destruction

The easiest, least expensive, and best way to conserve Pennsylvania's plant heritage is to protect existing native plant communities from further disturbance. If disturbance is necessary, strive for minimum impact on habitat.

4. Buy nursery-propagated native plants

Many retail nurseries and mail-order catalogs now offer native plants. As more consumers request native plants, these sources of supply will grow making it even easier for more gardeners to go native. If you want guaranteed ornamental characteristics, named cultivars of native species are available in some cases. Cultivars are predictable in attributes many gardeners want—height, color and blooming period. If your goal is genetic diversity, however, ask for straight species grown from local seed sources. Plants grown from seed provide more variety than cloned cultivars.

5. Do not remove native plants from the wild

Taking plants from the wild depletes native populations. Also, many wild-collected plants do not survive transplanting. Discourage wild-collecting of plants by making sure that plants you buy are propagated at a nursery or start plants yourself from local seed. Collect seed only where plants are abundant and take at most 10 percent of the seed crop. You must have the property owner's permission on private land. Seed collecting in public parks and state forests is illegal without a permit from the managing agency.

6. Practice responsible landscaping techniques

The first rule of responsible landscaping is to plant the right plants in the right environment. Choose plants that match the prevailing light and soil conditions — shade or sun, wet or dry, and acid or neutral pH. One good tactic is to notice which native plants are thriving nearby and let these clues guide your plant selection. This brochure lists some information, but more is available from plant nurseries, catalogs, books, or online. Proper site preparation begins with a soil test to determine the current condition of the soil. Composts and a mulch of leaves and grass clippings improve soil structure and provide slow release of nutrients. Chemical fertilizers provide a flush of soluble elements that give weeds a competitive edge.

Try cultural pest controls before using chemicals — keep the soil covered to prevent weeds; remove invasive plants nearby; take out diseased plants to reduce infestations. Many native plants attract beneficial insects which help control pests so try creating habitat for "good bugs."

Never introduce exotic plants into your landscape that may spread from your property and invade native plant communities. Read the DCNR brochure *Invasive Plants in Pennsylvania* for more information.

In Summary

Native plants help create beautiful landscapes that provide wildlife habitat and reduce maintenance costs.

Their greatest benefit, though, may be the increased appreciation of our natural heritage. Native plants in our gardens connect us to all the living things that sharing our neighborhood. Children and adults can have a high-quality educational experience right in their own backyard, park, school, or workplace.

For more information and a list of native plant and seed sources in Pennsylvania visit our web site: http://www.dcnr.state.pa.us/forestry/plants/nativeplants/index.htm

Pinxter-flower

Monarch Caterpillar

What is a native plant?

The Department of Conservation and Natural Resources (DCNR) defines a native plant as one that occurred within Pennsylvania before European settlement. Native plants include ferns; grasses and sedges; annual, biennial and perennial wildflowers; trees, shrubs and vines that covered "Penn's Woods" when English, Dutch, German and Swedish settlers brought their agricultural plants and associated weeds to the colony. More than 2,100 plant species make up the native botanical heritage of Pennsylvania.

Why should I care about native plants?

Native plants create beautiful landscapes that provide native wildlife with the diverse habitat and food they need to survive. Plants are the foundation of local ecosystems. As such they maintain the unique natural heritage of a region. Pennsylvania's native plants give a sense of place that is recognized and enjoyed by citizens and visitors from all over the world. Native plants form the basis of the food chains that support bees, butterflies hummingbirds and songbirds inhabiting our backyards. Supporting our favorite birds requires more than seed-feeders for the adults. Bluebirds, chickadees, warblers — in fact over 90 percent of the birds that share our suburban neighborhoods raise their babies on a diet of insects, especially caterpillars. By providing plant foods for the butterfly and moth caterpillars, we help adult birds feed the next generation of songsters.

Goldenrods, asters, sunflowers, bonesets and other plants support hundreds of species of butterflies and moths that have co-adapted to feed on their leaves, pollen and nectar here in the eastern United States. These insects in turn support birds and other wildlife in the ecological network.

Because Pennsylvania's native plants are adapted to grow here, they thrive with less maintenance thereby reducing the labor and expense of watering and fertilizing.

As wildlands are developed, paved or planted to biologically impoverished grass lawns, our community and residential gardens become increasingly important to sustaining the natural beauty and wildlife that define the region.

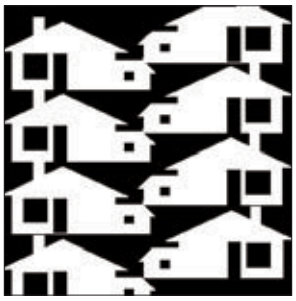
Greg Czarnecki

DCNR–BOF–12/7/2016

Appendix N - Shared Parking

8. Shared Parking

Fact Sheet



This smart growth tool can be used in rural, suburban, or urban communities.

What is Shared Parking?

Shared parking is a tool through which adjacent property owners share their parking lots and reduce the number of parking spaces that each would provide on their individual properties. Shared parking is not a new concept. It has been used extensively in traditional neighborhood commercial nodes and downtown settings for decades. In these locations, there are higher-density office or apartment buildings, with shops and restaurants lining the sidewalks. People often park in one spot and then walk from one destination to another. The effect is that those various uses share the same parking spaces. Shared parking is being used more and more in conjunction with new development. If adjacent land uses have different peak hours of parking demand, then they can share the some of the same parking spaces.

Why use Shared Parking?

Parking is one of the largest uses of land in urban and especially suburban areas. In a typical suburban shopping center, for example, parking occupies more land area than the building itself. Often, sites with large parking lots are located next door to other sites with equally large lots. If adjacent sites serve different purposes, each parking lot may lie empty for long periods of time. This suggests that an excessive amount of space is given over to parking, and that less parking would be needed if the lots were somehow connected, shared, and used more efficiently. Shared parking can reduce the amount of land needed for parking, creating opportunities for more compact development, more space for pedestrian circulation, or more open space and landscaping.

Two Approaches to Shared Parking

There are two main approaches to shared parking: (1) contractual agreements between adjacent uses; and (2) parking management districts. Whereas the first approach involves only two adjacent users, the second approach encompasses an entire district with multiple property owners. Under a contractual agreement, the circumstances under which parking spaces would be shared would be explicitly defined in the contract. In a parking district, all uses within the district would have access to all the parking spaces at any given time.

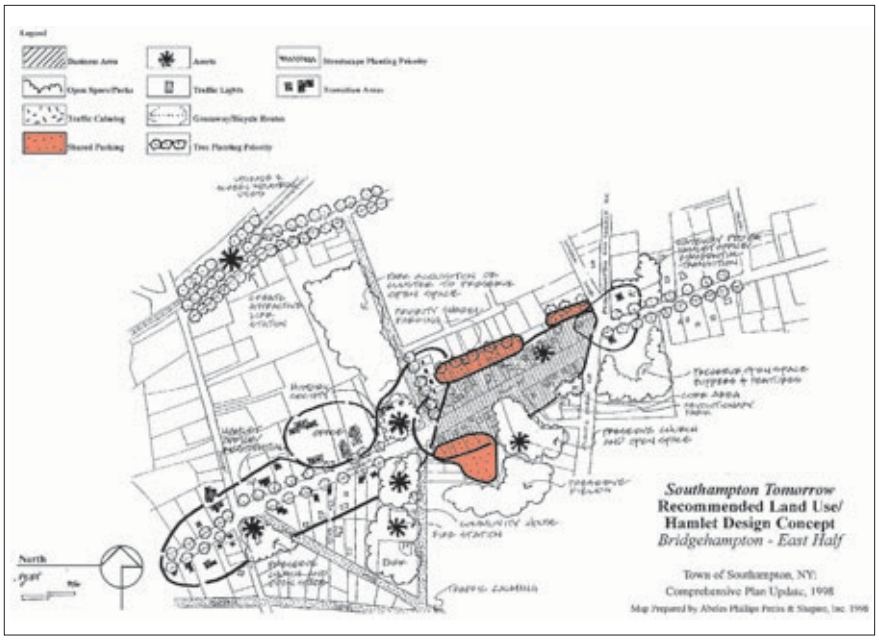
Approach 1: CONTRACTUAL AGREEMENT BETWEEN TWO ADJACENT USES

Toolbox

Special Permit Approval. For two uses in a commercial area, shared parking should be encouraged as part of the review process. The provisions should state that shared parking between two adjacent land uses (whether on the same site or on adjacent sites) would be preferred, especially if they have different peak times (e.g., a movie theater and a supermarket) or, conversely, if they share the same patrons (e.g., a dry cleaner and a deli)

Demonstrated Difference in Peak Parking Demand. As part of the approval process, the developer would have to demonstrate that the two land uses have differing peak-hours (or days, or seasons) of parking demand, or that the total parking demand at any one time would be adequately served by the total number of parking spaces.

Contractual Agreement Required. A development agreement between sharing property owners is necessary in order to ensure the proper functioning of the shared parking arrangement. The adopting ordinance needs to require such an agreement between developers as a condition of engaging in shared parking, and model language for an agreement should be adopted.



This plan for the Bridgehampton hamlet center in Southampton, Long Island calls for a shared parking area that would serve the hamlet businesses. (Source: APPS, Inc.)

Keys to Success

Target auto-oriented mixed-use commercial uses. Shared parking works best in situations where there are somewhat dissimilar land uses, with different peak hours of use — i.e., a hotel and an office, or a home supply store and a movie theater. A traditional mix of uses (in the form of a "Main Street" environment) is not necessary, but the use mix must be varied enough to generate different peak times of demand. But

bear in mind that shared parking can also work for complementary uses where the patrons go from store to store (e.g., an antique center). The essential ingredient in both cases is that patrons park once.

Keep the "sum" clause. Most zoning ordinances have minimum parking requirements for each individual use, and on multi-use sites, most zoning ordinances require that the total parking requirement be equal to the sum of the requirement for each individual use. This requirement should not be removed, because it ensures an adequate amount of parking where there are two similar uses on the same site, especially where they do not share the same customers. For example, a site with a grocery store and a home supply store would tend to have the same peak-hours of customer attraction. The "sum" clause would ensure that adequate parking is available during weekends and evenings.

Provide zoning incentives in auto-oriented business centers. In many commercial centers and office parks, businesses depend on large parking lots for business and have a natural business incentive to provide as much parking as possible. Zoning incentives for shared parking can encourage a reduction in the size of the parking lots. Incentives that could be provided for shared parking include an increase in floor area ratio (FAR) and increased flexibility in certain bulk regulations, such as building coverage or height. Incentives for shared parking are generally not necessary in traditional neighborhood centers or downtown areas, because the scarcity of land in those locations provides an inherent economic incentive for pursuing shared parking.

Make shared lots walkable. Parking spaces that are shared should be located within a reasonable walking distance of all the destinations they are intended to serve. Generally, the preferred parking-space-to-front-door distance that a person is willing to walk for shopping or work is 400 to 800 feet, and the maximum is generally 1,200 feet. In addition, walkways, crosswalks, decorative paving, stop signs for cars, and landscaping are needed to allow ease of walking through the parking areas, such that the shared parking area is well-integrated with each of the sites that it serves.

Conduct a demonstration project. Demonstration projects can help develop interest in shared parking. A local government can spearhead the task of developing a shared parking arrangement between two adjacent uses, taking on the time and cost of analyzing the parking demand, developing a potential sharing scheme, and preparing and negotiating the shared parking agreement. This initiative would create a model that could be used by other developers on independent shared parking arrangements.

Approach 2: PARKING MANAGEMENT DISTRICTS

Toolbox

Collection of Fees. In a parking management district, each property is levied a fee, based on the assessed value of the property, which is used to support the functions of the district. The district is responsible for parking-related maintenance, security, taxes, enforcement, utilities, signage, and so on. Fee collection can be facilitated by the local government, by being included as a separate line item on property tax bills.

Governance by Oversight Committee. A parking district is typically governed by an oversight committee elected by the members of the district. The oversight committee would be responsible for overseeing the district and responding to the concerns of members.

Keys to Success

Target compact, mixed-use, pedestrian-oriented commercial nodes where parking is in short supply. Parking districts are particularly well-suited to locations with multiple small property owners in a compact, pedestrian-oriented setting. Such an environment is conducive to walking, and therefore, most customers will prefer to park once and then circulate on foot. The parking district allows many businesses to share the same pool of parking, a desirable outcome in locations where parking is in short support.

Redesign the parking lots. As compared to shared parking agreements between two adjacent sites, the creation of a parking management district opens up the opportunity of comprehensively redesigning the parking lots. Rather than having a

series of smaller-sized parking lots divided by arbitrary lots lines with landscaped buffers, lots can be consolidated and circulation systematized, with more creative and effective landscaping, pedestrian circulation, and lighting.

Charge for parking. Users are generally accustomed to paying for parking in a neighborhood or downtown environment. Because parking is limited, paid parking will encourage some people to walk, carpool, or use transit, rather than driving. Also, paid parking encourages greater turnover of parking spaces, which is critical for business in an environment where parking is in short supply.

Establish rules for new development. Even though all spaces in a parking district are shared, property owners often maintain title over the portions of their properties that lie within the common parking field. If the membership in the district exempts the owner from making available a minimum number of spaces on his or her property, the owner could potentially remove the parking spaces on the property to make way for an addition. Such an action would remove spaces from the district while creating additional parking demand through the increase in building space. When the parking district is established, rules should be set up to determine whether such an action would be permissible and what the property owner's obligation would be to the district. For example, the district bylaws could stipulate that a property owner could undertake an expansion only if he or she provided additional spaces elsewhere. Similarly, rules would have to be established in the case of a district expansion or contraction.

Take on-street parking into account. In a compact environment, where parking spaces are in short supply, on-street parking is a critical resource. Those on-street spaces should be managed by the parking district as well. They should be metered, as the turnover of on-street spaces is particularly important for business, and they should be redesigned in conjunction with the redesign of the off-street lots.

Parking is often provided to excess. These shopping centers along Route 58 in Riverhead, Long Island have provided acres of parking that are often underutilized. This image is ubiquitous in America. (Source: APPS, Inc.)

For More Information

1. Portland Metro. Shared Parking Handbook, 1997. <www.metro-region.org/metro/growth/ main/sharedpark.pdf>.
2. Victoria Transport Policy Institute, Online Transportation

Demand Management Encyclopedia, 2001. <www.vtpi.org/tdm>.
3. Urban Land Institute, Washington, DC. Phone: (202) 624-7000, <www.uli.org>.

See also, Detailed Technical Analysis on Shared Parking, available through CRCOG.

Prepared by Abeles Phillips Preiss & Shapiro, Inc., 2002.

Appendix O – Project Photos

901 Washington St property

Courts at Spring Mill

David's Bridal Parking Area

David's Bridal Parking Garage

Appendix O – Project Photos

Landscaping Company Property on Washington St

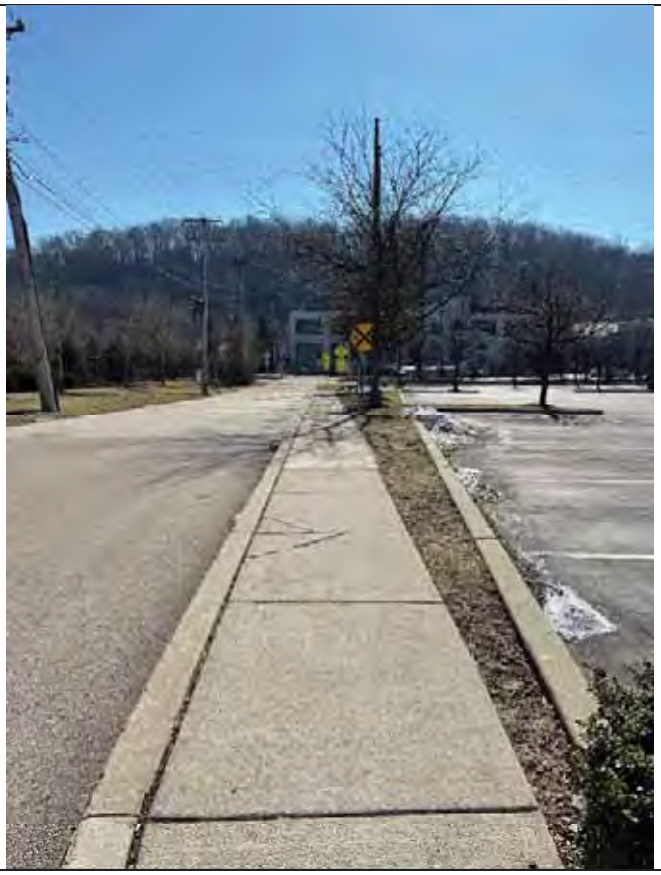
Lee Park Commons on E Hector St

Lee St approach to RR tracks

Quaker Park parking area adjacent to SRT

Appendix O – Project Photos

Parking warning sign at Quaker Park



Existing sidewalk along Lee St at Quaker Park

Trail crossing sign on Lee St at Quaker Park driveway

End of sidewalk on Lee St at Quaker Park entrance

Appendix O – Project Photos

SRT at Lee St

SRT signage at Lee St

Hines Rowing Center property

Defunct railroad tracks crossing Washington St

Appendix O – Project Photos

SEPTA gantry at 901 Washington St

SEPTA gantry at David's Bridal property

SEPTA parking access from Lee St/David's Bridal

SEPTA railroad crossing at Lee St

Appendix O – Project Photos

SEPTA utility building along Washington St

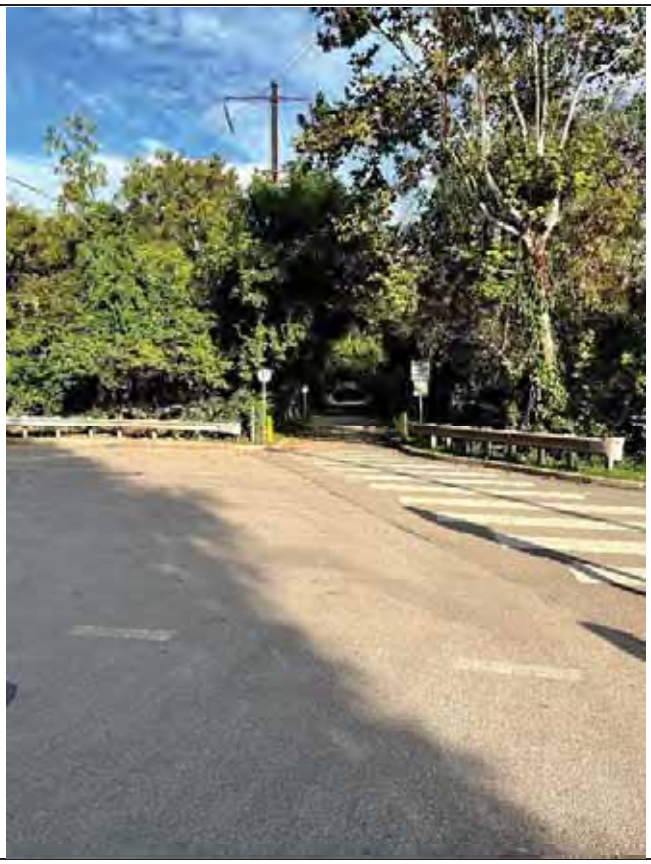
SEPTA crossing at Station Ave

Utility poles along Hines Rowing Center property

David's Bridal loading dock

Appendix O – Project Photos

David's Bridal adjacent to SEPTA tracks



SRT east of Spring Mill bus loop

Reserved parking signs at David's Bridal parking garage

Driveway from parking garage to David's Bridal building

Appendix O – Project Photos

Warning sign at SEPTA parking lot on Station Ave

Stairs between lots at Spring Mill Corporate Center

Parking lot at Spring Mill Corporate Center

Directional sign at Spring Mill Corporate Center

Appendix O – Project Photos

David's Bridal loading area

David's Bridal river access

Painted box on Station Ave delineating railroad crossing

Riverbank at David's Bridal river access

Spring Mill SEPTA station

Spring Mill SEPTA station parking

Appendix O – Project Photos

Spring Mill SEPTA station parking

David's Bridal parking garage

Pedestrian crossing at Spring Mill SEPTA station

Spring Mill County Park

Spring Mill County Park along Station Ave

Tricycle Café along Station Ave

Appendix O – Project Photos

Station Ave approach to cul-de-sac

Spring Mill County Park along SEPTA parking lot

Lee St approach to Hector St

Existing crossing of Hector St at Lee St

Quaker Park private parking lot along SRT

Parking lot along North Lane

- User Accessibility
- Site Location Appropriateness
- Cost Considerations / Trade-offs
- Environmentally-friendly

There are four primary questions to answer in determining a best-suited launch site: How will access be achieved? Which site location is most appropriate? What type of funding is available? Which environmental issues must be addressed?

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User Accessibility: Broad + Practical

Universal Design: Paddlers of all abilities want to launch and land smoothly without capsizing or damaging their watercraft. They need firm and stable surfaces that support their movements and sufficient space to accommodate the length of their watercraft during put-in and take-out.

Physical Launch Accessibility: Paddlers must be able to stabilize their watercraft during transition to and from the water. Climbing in and out can be especially challenging when there is significant height difference between seat levels and shoreline or when current or waves create chop.

Slope: As close to 5% as possible at water's edge. Stay below 8.33%, whenever possible.

Accessible launch area in a dynamic river setting with high banks at the Charles City, Iowa waterfront.

Ideal launch environment

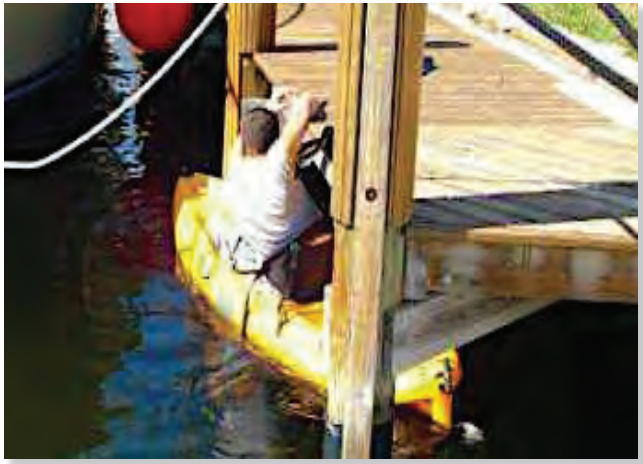
User Accessibility: Four Design Factors

Recommendations for designing a launch that addresses the need of paddlers with disabilities:

Height Above Water: Design the launch surface as close as practical to water level. If a dock is the only way to gain water access, have the decking be as close to the water level as possible.

Staging Zone: Allow paddlers to enter their boats parallel to dock, from the side, allowing paddlers "dry" access to side entry of their boats.

The area for Walking path/Staging area should be a minimum of 5', preferably 6' to 12' wide and long enough to accommodate the typical watercraft to be used at this site.

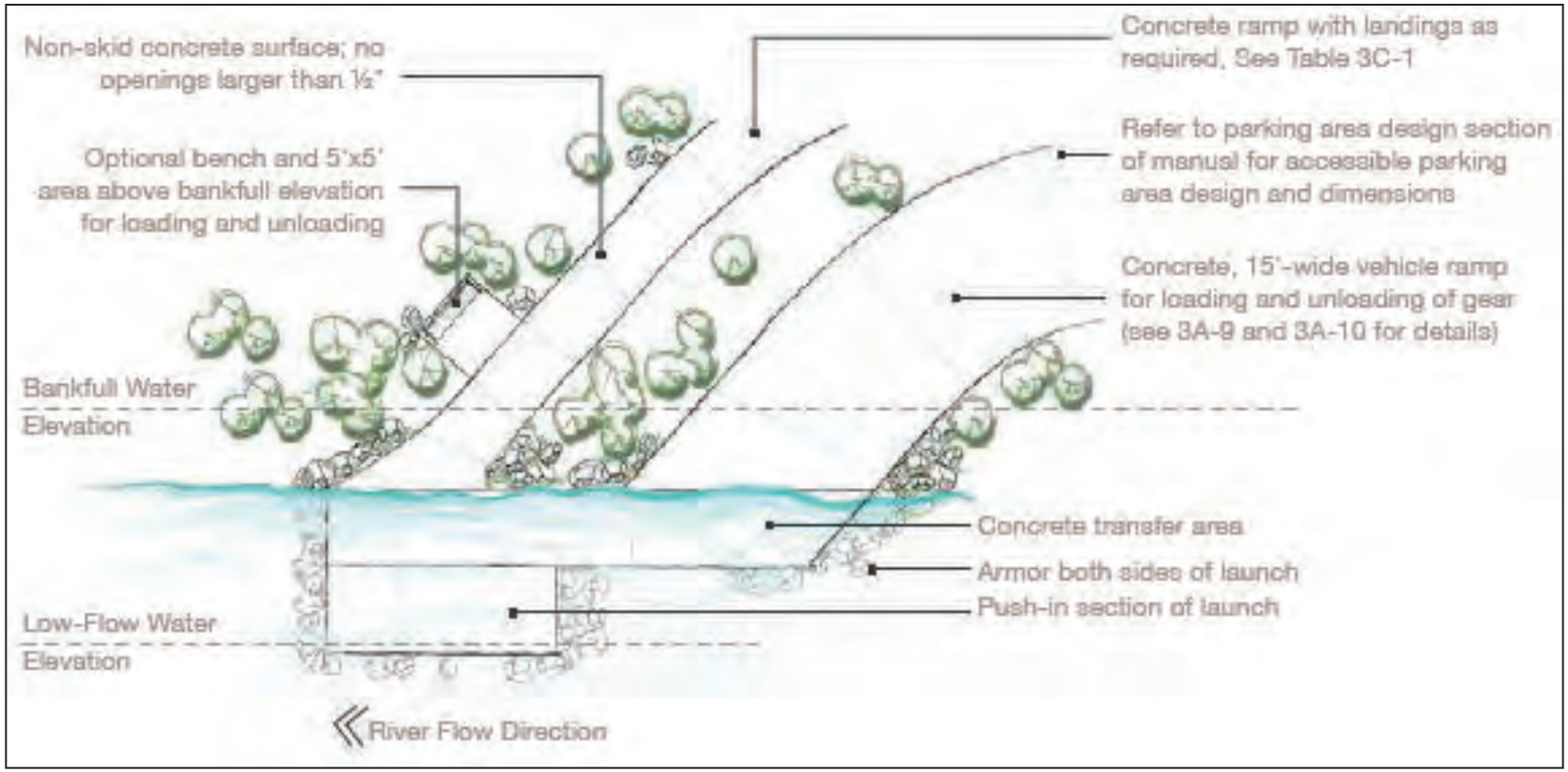


Example of a launch that is too high!

Biathlon Race Boat line up on Potomac River

Photo Credit: [Guidelines for Developing Non-Motorized Boat Launches in Florida]

User Accessibility: Universal Launch Design



Universal design practices seek to construct all facilities in ways that integrate users of varying abilities where possible.
Diagram from Iowa DNR Water Trails Toolkit

Site Location Appropriateness

The launch design that is chosen should be appropriate for the characteristics of your site. The type of water body as well as relevant climatic and ecological factors will all influence the launch choice. Choosing an appropriate site will enable the installation of a launch that is inexpensive, long lasting, and environmentally sensitive. The next slide describes what characteristics to look for in a site.

Poor Design: Steep slope, rugged terrain

Good Design: Wide, sturdy staircase

Site Location Appropriateness: 7 Site Location Characteristics for a "Best-Suited" Launch

1. Is constructed in accordance with applicable regulations, particularly the accessibility requirements.
2. Provides safe access away from potential hazards at various water levels and user conflict
3. Can withstand flow levels, currents, and exposure to elements
4. Designated with consideration for multiple types of users and carrying capacity of launch, parking, and waterway
5. Provides a firm surface for launching, despite changes in sedimentation levels
6. Will not be easily damaged due to climatic or seasonal conditions
7. Does not cause damage to riparian habitats or vegetation during construction and is unlikely to cause environmental impacts over time.

Site Location Appropriateness: Launch Design Selection Criteria

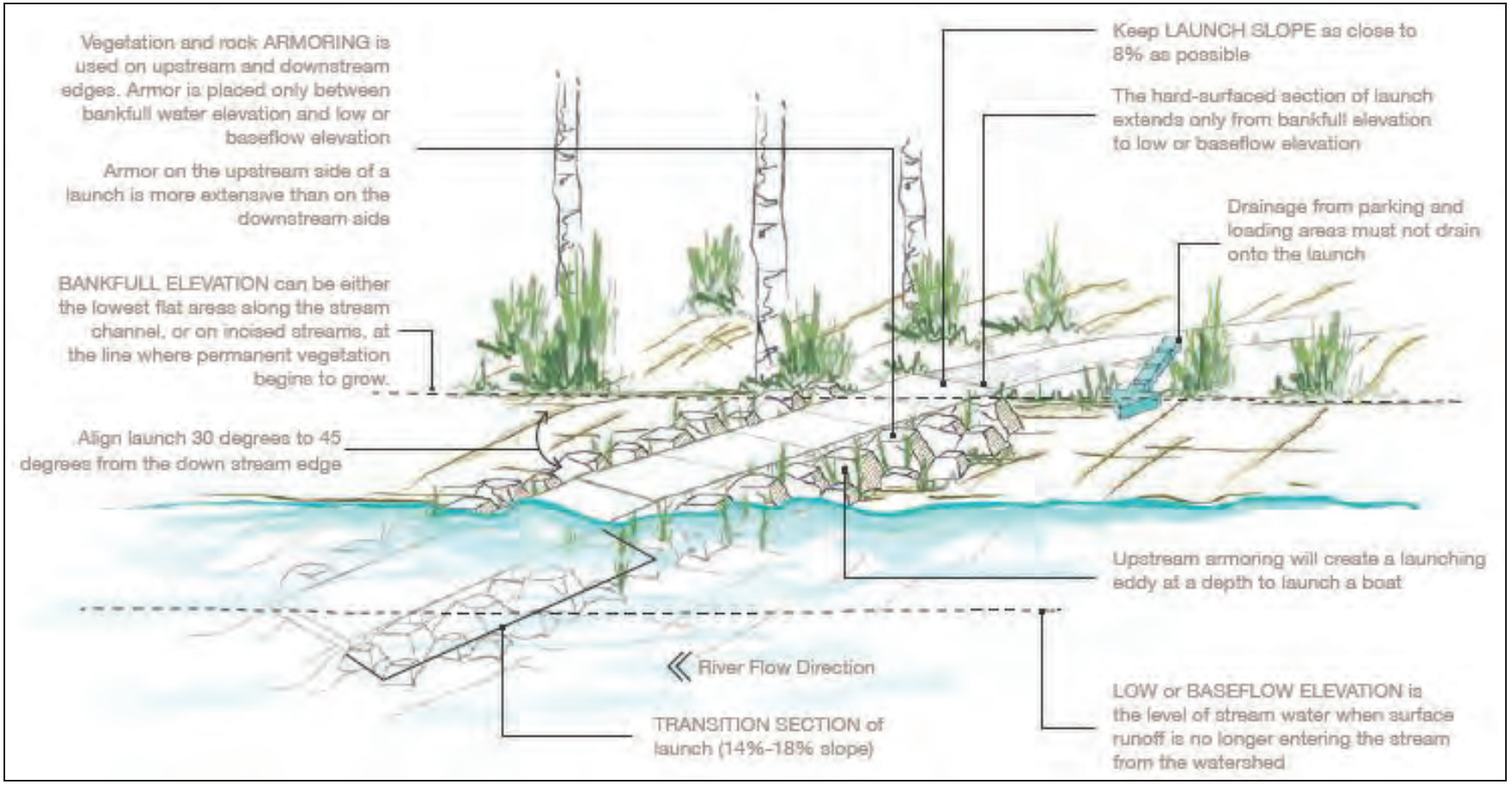
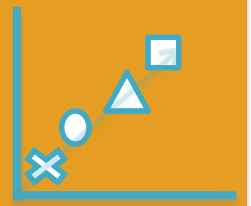


Diagram from [Iowa DNR Water Trails Toolkit]

Cost Considerations

The cost of your project will depend upon the complexity of your launch design. While you will want to keep your launch design as simple as possible, the potential for erosion, high use, and steep banks are just a few examples of factors that may require a more complex design, as well as materials and anchoring that go beyond your initial projection.

Complexity
vs.
Cost



Natural Design - most cost-effective, when possible.

The more complex, the more expensive!

Cost-Saving Design Tips

1. **Minimal Construction:** Keeps costs low and helps maintain a natural appearance along a shoreline. If construction is necessary, durable materials will reduce the need for later repairs or replacements.

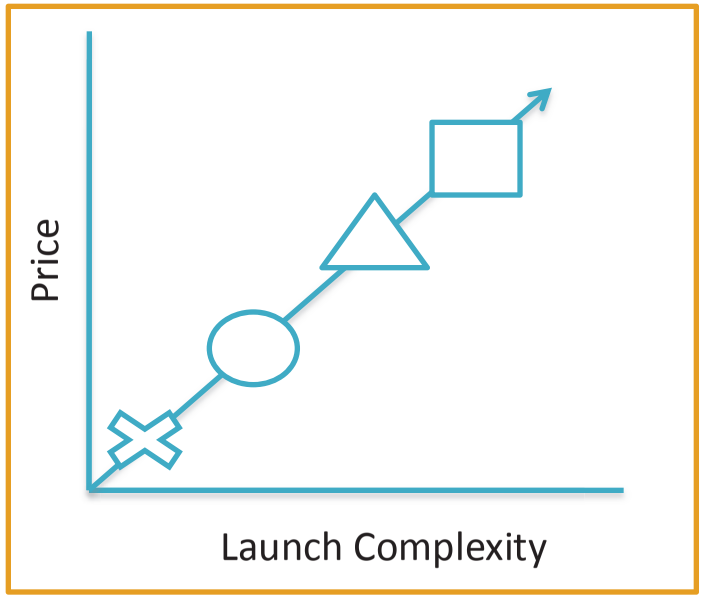
2. **Weathering Impact:** The speed at which materials weather will depend on climatic factors and level of exposure to currents and winds.

3. **Existing Structures:** In some cases, existing docks used by motorized boats can provide stable surfaces for paddle craft access, but many standard docks rise too far above the surface of the water to enable a safe and easy put-in for paddlers.

4. **Minor Modifications:** Some boat docks may be modified to make them more paddler-friendly, including being lowered, lengthened, or widened. Ramps can be made less steep or step-downs may be added with handrails, cleats, or windbreaks.

5. **Shoreline Features:** Features such as boardwalks can be combined with floating docks to enable the launching of hand-carried craft.

Launch Complexity vs. Cost



As complexity increases, so does cost. We have provided four launch examples that fall in different pricing tiers.

$ - Natural Surface

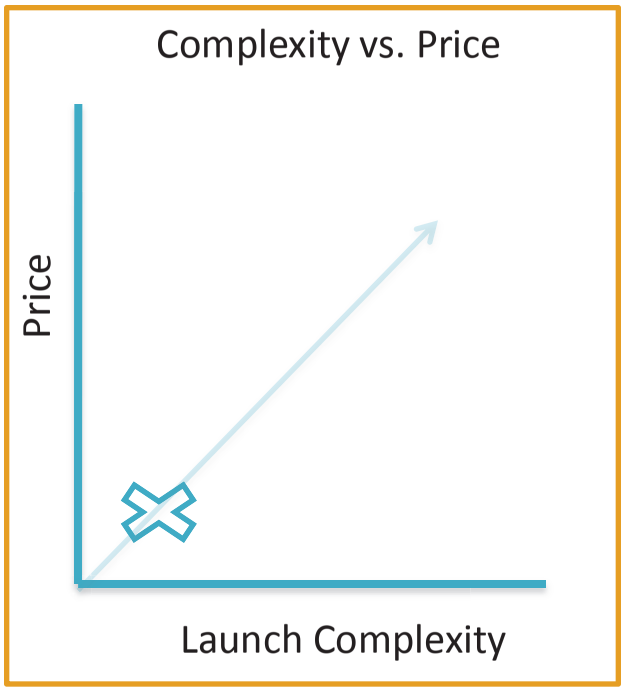
$$ - Natural Stairs

$$$ - Concrete Launches

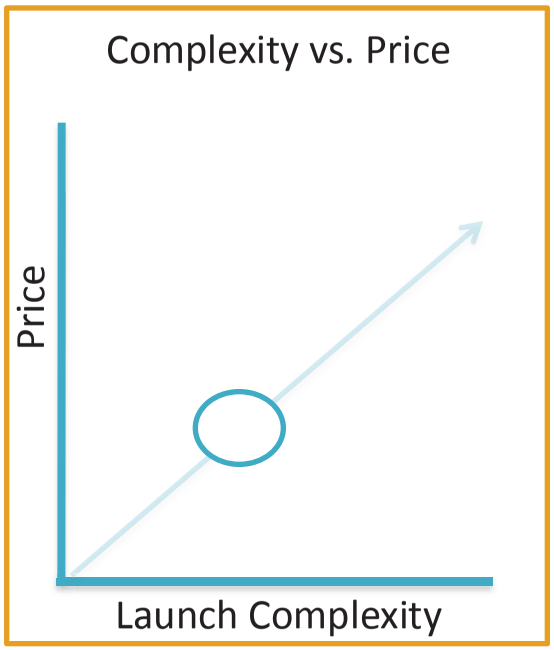
$$$$ - Steep or Urban Launches

$ - Natural Surface Designs

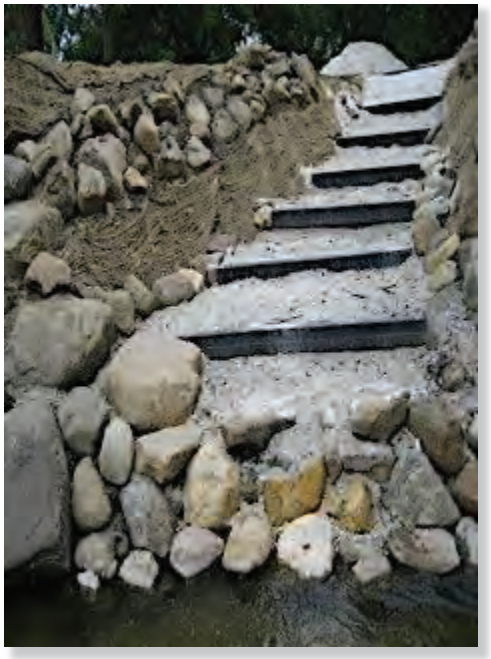
Natural surface designs are always the most cost efficient design choice and should be used whenever possible. Small additions to your site, as well as armoring the launch to protect it from the effects of erosion, can make a site more user-friendly. The boulders in the picture below offer such an example. The upstream placement of the boulders creates an area of calm water for the paddler to launch and helps prevent bank erosion.



$$ - Natural Stairs and Retrofits



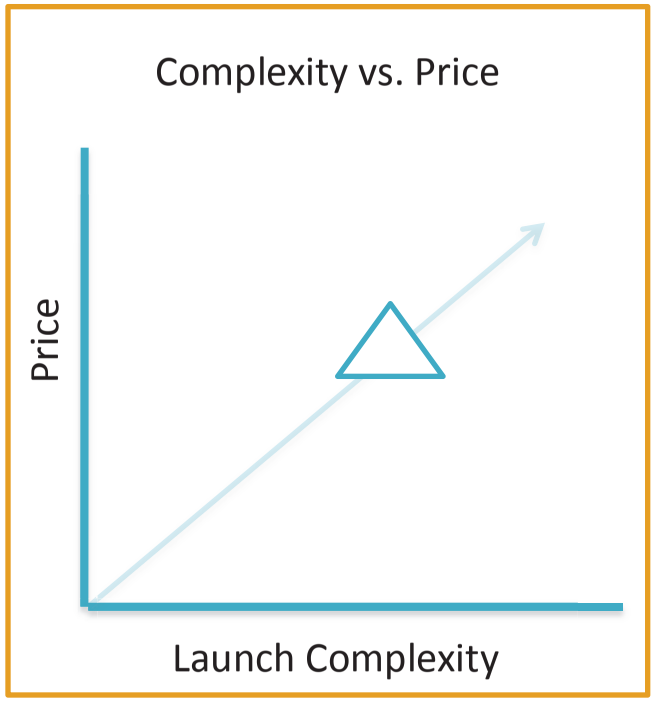
The steepness of the site might require a more complex launch design to provide safe access to the water. If you do not have the space to make a low-gradient ramp, stairs are an alternative solution for steep banks. Natural stairs are more complex and more expensive than a natural surface ramp. Using materials available on site such as the rocks in the image to the right can reduce construction expense considerably.



Installing launches in marinas such as the one in the image to the left may require a more complex design. This complex launch addresses heavy boat traffic while providing safe access from an elevated pier. Modifying an existing launch to be more paddler-friendly may be just as effective and less expensive!

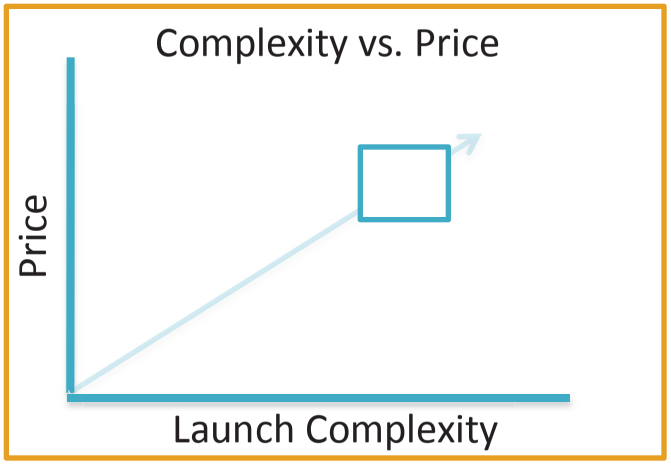
$$$ - Concrete Launches

Concrete launches provide an extremely stable surface for loading people and gear into a watercraft and sliding into the water. However, they also require heavy construction which can increase the price of a project. Concrete launch installation may require that the site be dry and coffer damming may be necessary. For a more cost efficient approach, precast concrete planks with a rail system do not require dewatering the submerged section of the launch.



$$$$ - Steep or Urban Launches

Some sites require launches that are extremely complex and expensive. Long steep slopes, like the site in the picture to the left, require large constructed staircases to provide access. One option when faced with steep banks is to look for another site where it will be less expensive to construct.



Urban launches present an array of unique challenges. The example to the left shows banks of the river with an aesthetically appealing natural look while still maintaining stability. Railings are necessary to prevent access in areas that are not safe.

Four Cost-Effective Design Recommendations: #1

Limit Construction: Use construction only when absolutely necessary. In many cases, an actual launch structure may not be needed; firm or sandy banks, level rocks, and beaches can often provide sufficient access.

Sturdy gravel beach on Nulhegan River, VT

Sandy Beach on Amelia Island, FL

Four Cost-Effective Design Recommendations: #2

Minimize Exposure: Choose access sites with minimal exposure to winds and heavy currents, preferably near calmer water, such as eddies. If this is not possible, consider creating a vegetative or other type of buffer to provide protection from the elements.

The example on the right exemplifies this minimized exposure launch.

Minimal exposure, natural surface launch on the lower Tuolumne river in California

Four Cost-Effective Design Recommendations: #3

Modify Existing Structures: To reduce construction expenses, modify existing boat docks or shoreline structures to welcome both non-motorized and motorized craft.

Example to right: Airboats use these wooden slats to 'dry launch' from a trailer but they are also utilized by paddlers to decrease hull damage from the concrete surface. Modify existing launch structures by adding wooden or PVC slats to make a launch non-motorized boat-friendly.

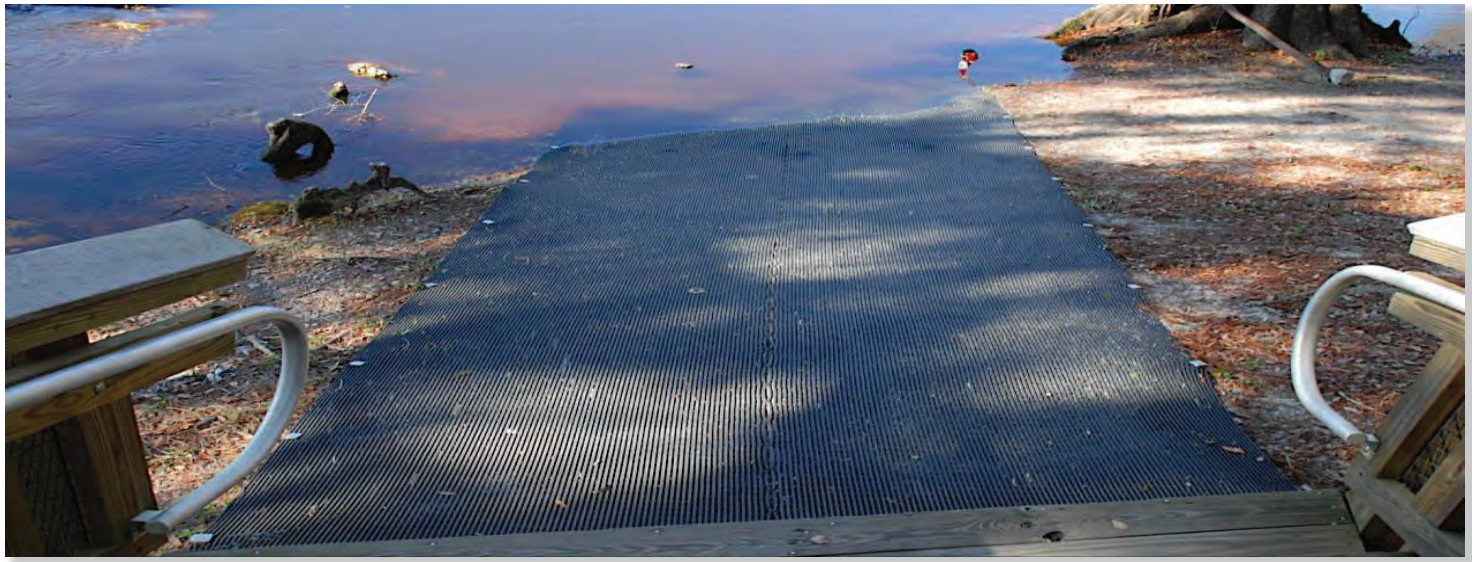
Note: If launch improvements are likely to create a traffic bottleneck at the launch site, consider widening the launch with features that appeal specifically to non-motorized users.

Photo Credit: Guidelines for Developing Non-motorized Boat Launches in Florida

Four Cost-Effective Design Recommendations: #4

Multiple Uses: Construct launches that serve multiple purposes, such as mitigating erosion or restoring wetland vegetation; simple ramps or implanted beaches may help to stabilize a fragile bank or provide "soft treatments" while also enabling access.

Example Below: Synthetic industrial matting is used to stabilize the surface on this launch along the Suwannee River. It can also be used to stabilize banks with a 2-4% slope and allows vegetation to grow through matting. It is anchored with 18-24" stainless steel pins and requires little maintenance. This launch is submerged frequently and has survived several flood events with no problems.



Humboldt Bay Trails, Arcata Marsh and Wildlife Sanctuary: Cost-Efficiency Study

Problem: The existing boat ramp is usable at only the highest tides, and at low tide the nearest channel is approximately 150 feet from the boat ramp (*see image below)*. In the past, the concrete boat ramp was used by motor-boaters backing their boats into the water, but the narrow window for high-tide access now generally prohibits motorized boating at this facility.

The existing floating portion of the dock, adjacent to the boat ramp is non-functional as it broke apart several years ago and is too short to be of use. Paddlers wishing to use the Marsh facility are generally forced to use the steep and slippery concrete boat ramp. The existing parking lot has recently been repaved and is approximately 24,000 square feet, but lacks any appropriately striped accessible parking. There is one portable ADA-compliant toilet on site at the north end of the parking lot.

Humboldt Bay Water Trails Implementation Program

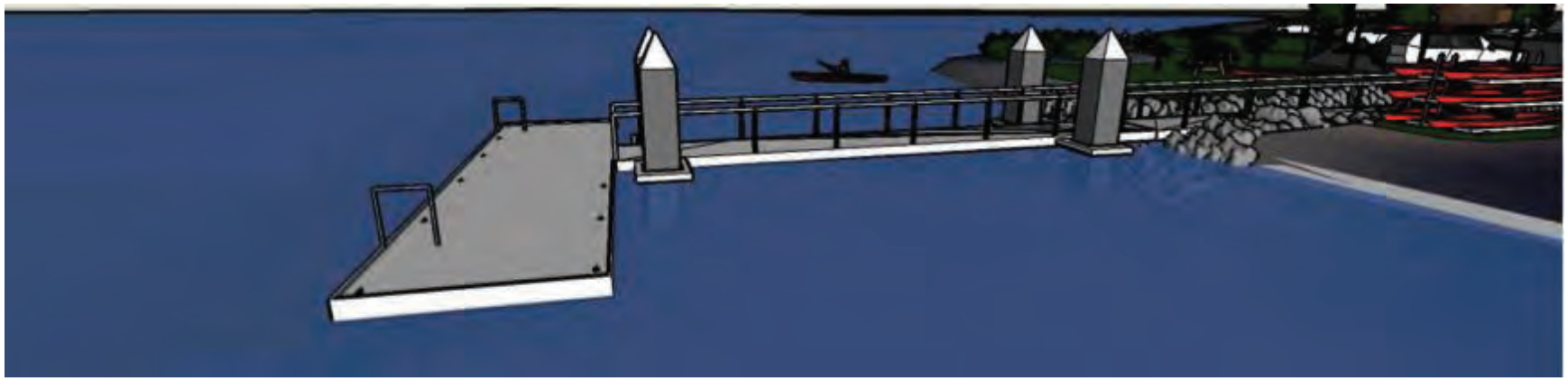
Humboldt Bay Trails, Arcata Marsh and Wildlife Sanctuary: Cost-Efficiency Study

Solution: The dock facility represented in the accompanying figures should provide non-motorized boating access at most tide levels. This conceptual dock design addresses issues with low tide access, and comments from regional boaters who have expressed concern for docks that incorporate 90-degree turns in order to comply with slope guidelines. The Arcata Marsh design increases the length of the dock to avoid turns. The dock design presented here extends to the parking lot edge. In this configuration, the dock slope is never greater than 8.33%.

This conceptual design proposes using a polyethylene, snap-together, cell style of dock (such as one manufactured by Connect-A-Dock, Inc.) requiring very little maintenance and offering multiple configurations. The low profile cells are ten inches thick. Extra flotation is available in case more is needed, but it would increase the dock height. Also available from the manufacturer are accessories such as handrails, and wheel chairs can also operate on this material. The docks can support the expected load at the Arcata Marsh.

Humboldt Bay Trails, Arcata Marsh and Wildlife Sanctuary: Site Overview

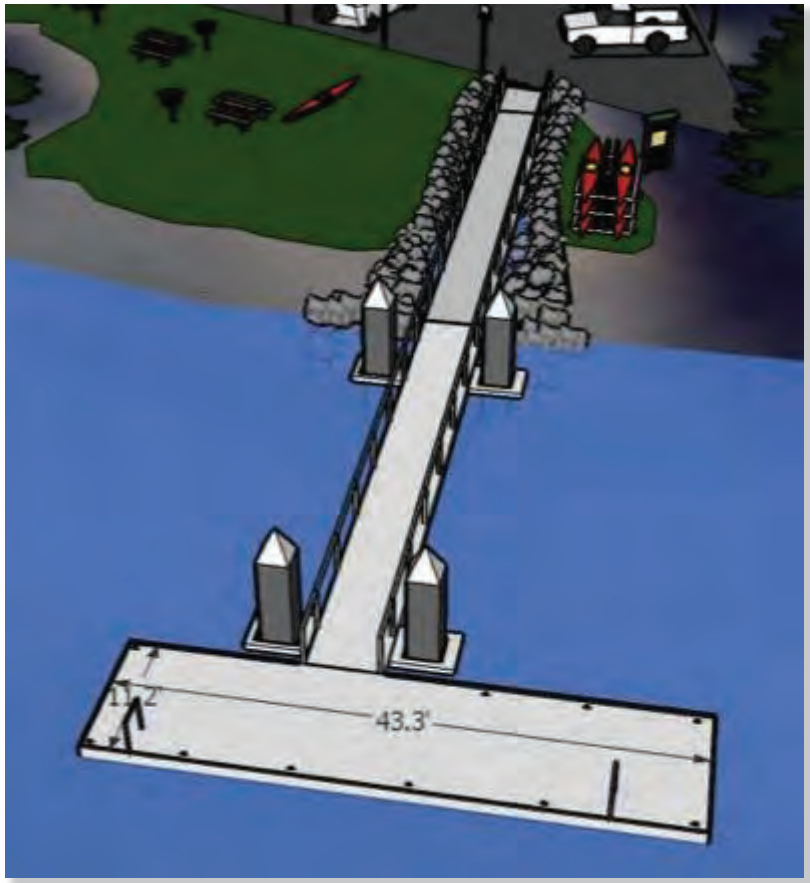
Humboldt Bay Trails, Arcata Marsh and Wildlife Sanctuary: Profile of Dock



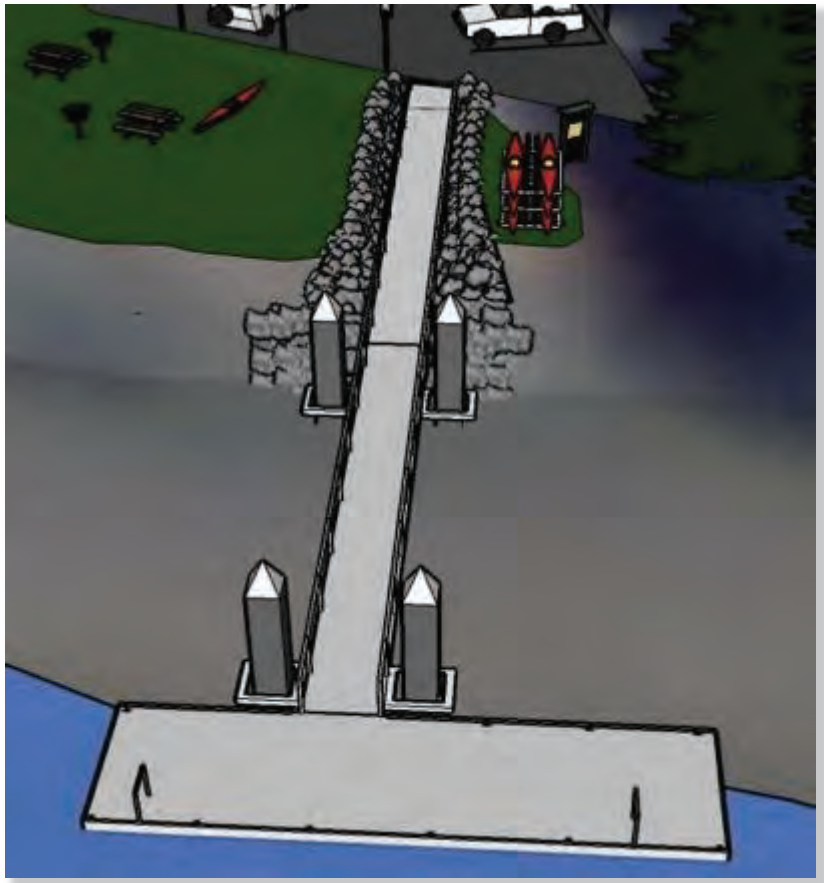
Profile of dock at high tide

Profile of dock at low tide

Humboldt Bay Trails, Arcata Marsh and Wildlife Sanctuary: Planned View of Dock



Profile of dock at high tide



Profile of dock at low tide

Environmentally-Friendly Launch Considerations

Use of low-impact designs and non-toxic materials is essential to watershed health. Consider water quality and vegetation when providing sustainable recreation. There are usually environmental compliance requirements for projects on the bed and banks of rivers.

Existing Natural Site - Robinson Preserve, FL

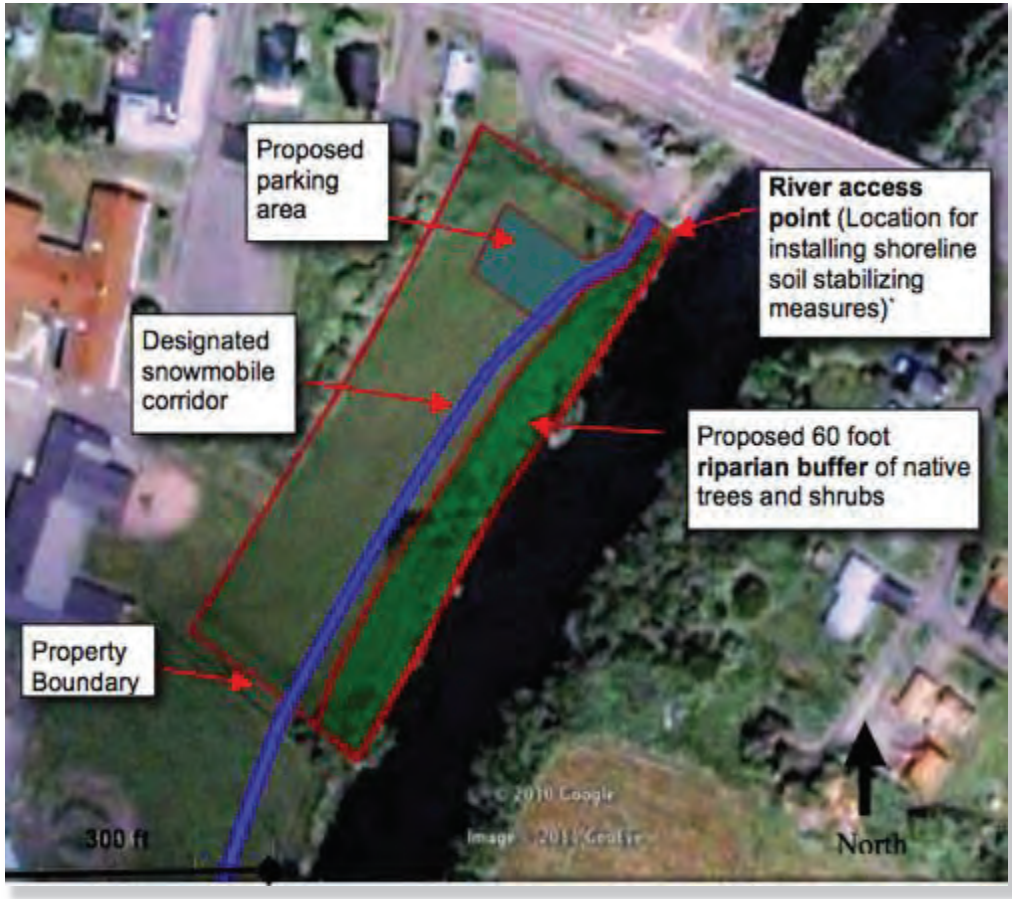
Photo Credit: Guidelines for Developing Non-motorized Boat Launches in Florida

Environmentally-Friendly Launch Recommendations

- Investigate applicable regulations; develop launch designs in accordance with these regulations.
- Use structures requiring minimal construction or alteration of the shoreline.
- Consult with a local natural resource specialist during the planning and construction phase to identify ecologically sensitive nesting sites, rookeries, spawning areas, or endangered species; an optimal put-in site may not be feasible for ecological reasons.
- Merge the needs of natural functions and the desired recreational uses of the water; with rivers and streams, avoid making any channel modifications and preserve in-stream habitats as much as possible.

Erosion can be prevented with good siting and proper access design.

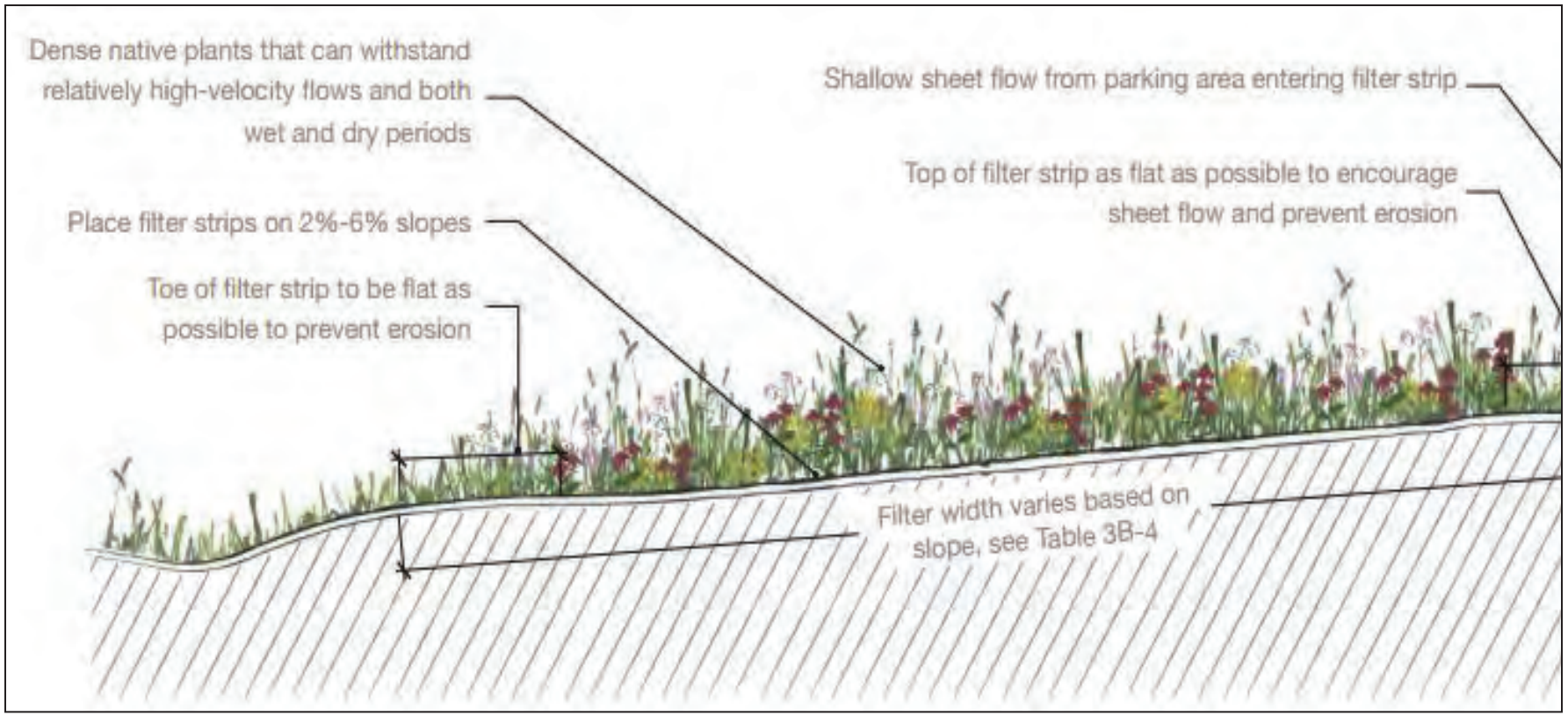
Environmentally-Friendly Launch Recommendations, cont.



A riparian buffer planted with native species to provide wildlife habitat and to protect water quality on the Connecticut River in Canaan, VT

- Monitor watershed conditions and changes in stream morphology.
- Gather data from local or state agencies that monitor water levels and flows to develop a launch that will accommodate the conditions of the water body.
- Avoid using hard reinforcements (e.g. concrete, steel, rock) where shorelines are eroding. Instead, use bioengineering methods, such as developing a riparian buffer planted with native species, to protect vegetation and habitats and stabilize shorelines while sheltering the launch area.
- Avoid using toxic or hazardous materials, or items that have contained these materials, wherever possible.

Environmentally-Friendly Launch Recommendations: Filtration Design – Vegetated Filter Strip



In areas where the seasonal water table is < 4' deep, there is frequent flooding, and the slope is > 15%, the vegetated filter is a great way to minimize impact to water resources at a launch site.
Diagram From Iowa DNR Water Trails Toolkit

Bibliography/Resources – Chapter 1

References

- Iowa DNR - Iowa Water Trails Toolkit
- Florida Fish & Wildlife Conservation Commission - Guidelines for Developing Non-motorized Boat Launches in Florida
- ADA Standards for Accessible Design
- Humboldt Bay Trails Cost Study - http://www.nrsrcaa.org/baytrails/
  http://scc.ca.gov/webmaster/ftp/pdf/sccbb/2010/1008/20100805Board3D_Humboldt_Bay_Water_Trail_Ex2.pdf
- NOAA Buoy Data - http://www.ndbc.noaa.gov/
- American Canoe Association – http://www.americancanoe.org / 'Adaptive' tab

Photo Credits – Chapter 1

Photo List

Slide 10: Charles City waterfront in Iowa, Nate Hoogeveen, Iowa DNR

Slide 13: Courtesy of the National Park Service

Slide 16: Courtesy of the National Park Service

Slide 19: Courtesy of the National Park Service

Slide 20: Courtesy of the National Park Service

Slide 20: Courtesy of the National Park Service

Slide 21: Trestle View Park, Winnipesaukee River, Franklin, NH – Charlie Tracy

Slide 22: Courtesy of the National Park Service

Slide 22: Courtesy of the National Park Service

Slide 23: Left Image - Courtesy of the National Park Service

Slide 23: Right image - **Guidelines for Developing Non-motorized Boat Launches in Florida**

Slide 24: Courtesy of the National Park Service

Slide 26: **Guidelines for Developing Non-motorized Boat Launches in Florida**

Slide 27: **Humboldt Bay Water Trails Implementation Program**

Slide 33: **Guidelines for Developing Non-motorized Boat Launches in Florida**

Slide 34: **Guidelines for Developing Non-motorized Boat Launches in Florida**

Appendix Q - Transportation Data

TMS Site 7928: Traffic Monitoring Report

Location Description: 500 Feet East of SR-3015.

Details

Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	05
Cycle Year	04

Location

County	MONTGOMERY (46)
Route	3058
Segment	0042
Offset	0500
Latitude	40.07635
Longitude	-75.284

Map

Traffic Data

Date	Volume	Truck Volume	Truck %	Volume Graph
July 26, 2017	13,720			
July 24, 2012	11,931	494	4.1	
July 11, 2007	13,576	459	3.4	
July 31, 2002	15,350			

TMS Site 7929: Traffic Monitoring Report

Location Description: Btwn Sandy St & Righter St.

Details

Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	05
Cycle Year	03

Location

County	MONTGOMERY (46)
Route	3058
Segment	0032
Offset	1500
Latitude	40.07478
Longitude	-75.29187

Map

Traffic Data

Date	Volume	Truck Volume	Truck %	Volume Graph
Oct 04, 2016	11,635	482	4.1	
Nov 08, 2011	12,514			
July 26, 2006	13,365			
Jun 20, 2001	15,146			

TMS Site 20539: Traffic Monitoring Report

Location Description: .24 Miles North of Hector St

Details

Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	05
Cycle Year	04

Location

County	MONTGOMERY (46)
Route	3015
Segment	0010
Offset	1310
Latitude	40.07884
Longitude	-75.28812

Map

Traffic Data

Date	Volume	Volume Graph
July 26, 2017	5,036	
July 24, 2012	5,021	
July 10, 2007	6,553	
July 24, 2002	6,318	
Jun 11, 1997	6,091	
May 07, 1996	10,802	

DVRPC - Bicycle Count

TAKEN BY: PERMANENT S **DATE:** 10/15/2017 **PROJECT:** 17-43-010 **STATION ID:** BY0015

ROAD: SCHUYLKILL RIVER TRAIL **SR/SEG/OFF:** LOCAL

FROM: LEE ST **TO:** STATION AVE

STATE: PA **COUNTY:** **MCD:** 4209184624 - WHITEMARSH TWP

SIDEWALK: **FC:** 19 **TYPE:** BICYCLE 3

DVRPC FILE #: 142439 **COUNTER #:** Spring Mill **WEATHER:** **DATA SOURCE:** EXTERNAL

COMMENTS:

Hour Ending	
High Temp	
Low Temp	
Weather	
12 AM	
1 AM	
2 AM	
3 AM	
4 AM	
5 AM	
6 AM	
7 AM	
8 AM	
9 AM	
10 AM	
11 AM	
12 PM	
1 PM	
2 PM	
3 PM	
4 PM	
5 PM	
6 PM	
7 PM	
8 PM	
9 PM	
10 PM	
11PM	
total	
factor	
adj. total	

Equipment Factor: 1.00 **AADB:** 1,031

DVRPC - Pedestrian Count

TAKEN BY: PERMANENT S **DATE:** 10/15/2017 **PROJECT:** 17-43-010 **STATION ID:**

ROAD: SCHUYLKILL RIVER TRAIL **SR/SEG/OFF:** LOCAL

FROM: LEE ST **TO:** STATION AVE

STATE: PA **COUNTY:** **MCD:** 4209184624 - WHITEMARSH TWP

SIDEWALK: **FC:** 19 **TYPE:** PEDESTRIAN

DVRPC FILE #: 142160 **COUNTER #:** Spring Mill **WEATHER:** **DATA SOURCE:** EXTERNAL

COMMENTS:

Hour Ending	Sunday 10/15/2017	Monday 10/16/2017	Tuesday 10/17/2017	Wednesday 10/18/2017	Thursday 10/19/2017	Friday 10/20/2017	Saturday 10/21/2017
High Temp	72	71	61	72	72	74	79
Low Temp	65	48	42	48	51	55	49
Weather	CLOUDY	PTCLDY	CLEAR	CLEAR	CLEAR	CLEAR	PTCLDY
12 AM	0	0	0	1	0	0	0
1 AM	0	0	0	0	0	0	1
2 AM	0	0	0	0	0	0	0
3 AM	0	0	0	0	0	0	0
4 AM	0	0	0	0	0	0	0
5 AM	1	0	1	2	1	0	1
6 AM	5	8	8	12	11	7	4
7 AM	17	20	21	18	24	12	19
8 AM	28	50	51	44	47	39	46
9 AM	63	21	30	29	22	32	54
10 AM	70	29	20	18	34	17	77
11 AM	55	37	34	26	20	33	75
12 PM	52	68	90	68	83	64	49
1 PM	44	57	79	72	78	53	59
2 PM	43	37	51	40	29	51	56
3 PM	41	29	35	51	40	45	66
4 PM	27	48	57	51	46	50	54
5 PM	52	96	100	116	78	85	29
6 PM	23	107	101	103	131	43	13
7 PM	0	18	36	8	65	6	2
8 PM	5	2	3	7	6	3	0
9 PM	1	2	0	7	1	2	1
10 PM	2	0	1	1	1	1	7
11PM	0	0	0	0	0	0	2
Total	**529**	**629**	**718**	**674**	**717**	**543**	**615**

PEDESTRIAN SEASONAL FACTOR: 0.968 **FACTOR:** 1.0622 **AADP:** 650

Census Year	Norristown	WEEKDAY INBOUND		WEEKDAY OUTBOUND		TOTAL WEEKDAY		SATURDAY INBOUND		SATURDAY OUTBOUND		TOTAL SATURDAY		SUNDAY INBOUND		SUNDAY OUTBOUND		TOTAL SUNDAY		TOTAL IN+OUT		WEEKLY RIDERSHIP		ANNUAL	
		Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves	Boards	Leaves
2019	Spring Mill	449	10	9	414	458	424	166	5	4	124	170	129	97	2	2	106	99	108	**727**	**661**	**2,559**	**2,357**	**131,372**	**121,092**
2017	Spring Mill	487	10	22	511	509	521	187	-	5	156	192	156	89	2	3	89	92	91	**793**	**768**	**2,829**	**2,852**	**145,115**	**146,245**
2015	Spring Mill	385	13	15	375	400	388	211	3	6	133	217	136	56	-	-	66	56	66	**673**	**590**	**2,273**	**2,144**	**116,522**	**109,932**
	Averages	**440**	**11**	**15**	**433**	**456**	**444**	**188**	**3**	**5**	**138**	**193**	**140**	**81**	**1**	**2**	**87**	**82**	**88**	**731**	**673**	**2,554**	**2,451**	**131,003**	**125,756**

MODEL TRANSIT-ORIENTED DEVELOPMENT (TOD) ORDINANCE

SECTION

4

This model ordinance is offered as a template for municipalities interested in creating a transit-oriented development zoning district for the area in proximity to rail transit stations, to encourage appropraite development and increased transit use.

Using this Model Ordinance

Some standards contained within the model ordinance, such as permitted uses and maximum building height, are shown to vary based on the station area typology.

Municipalities or others utilizing this model ordinance should select the use and dimensional standards that they feel are most relevant to the station area for which they are planning for, using the station area typology (see Section 2, Station Area Typology, on pages 19-50) as a guide.

Municipalities with multiple train stations in proximity to each other may wish to consider adopting the same standards for all of their stations, using more of a corridor approach.

NOTES

Space is provided in a sidebar throughout the model ordinance for the user to make notes. In addition, explanatory information and photos are provided in this space, where applicable.

A. **Purpose & Intent**

It is the intent of the Transit-Oriented Development (TOD) District to encourage walkable, mixed-use development near train stations. Further, it is the specific intent of the TOD District to:

1. Encourage an intensity of development and a complementary mix of land uses near train stations that is compatible with and supportive of increased transit ridership and fosters the creation of a livable community with opportunities to live, work, and play within walking distance of convenient transit facilities.
2. Encourage land uses and site design practices that promote the use of alternative modes of transportation, including rail, bus, bicycling, and walking, thereby reducing traffic congestion from individual automobile use.
3. Promote economic revitalization of train station areas by encouraging innovative, transit-oriented infill development and redevelopment of underutilized land near train stations.
4. Enhance the visual character and walkability of the train station area through appropriate building scale, high-quality building design and materials, and landscaping.
5. Create an accessible and walkable environment through the development of buildings that are pedestrian-oriented with storefronts and building entrances that have direct connections to an interconnected sidewalk network.
6. Encourage shared parking between compatible uses on the same or on adjacent lots, wherever feasible, to minimize the number of curb cuts that interrupt the pedestrian network and to provide for more efficient utilization and distribution of parking within the TOD District.
7. Foster well-designed vibrant public and private gathering spaces that create a sense of place and encourage social interaction.
8. Encourage the provision of additional amenities that benefit the public health, safety, and welfare, such as moderate-income housing, adequate open space, efficient roadways, safe bicycle and pedestrian connections, stormwater management, and green building practices.

B. **Applicability**

1. The TOD Ordinance standards shall apply to the area identified as the Transit-Oriented Development (TOD) zoning district in the [Municipality] Zoning Map.

NOTES

Applicability

The exact area that the TOD ordinance applies to will be different for each municipality, and Section B should be modified accordingly. This model ordinance was written using the assumption that the ordinance would apply to the area within a ½-mile radius of a rail transit station; however, each community is different and the applicability should be based on the station area typology and specific site context. For example, individual municipalities may wish to exclude certain lands from the TOD District, such as preserved open space or floodplains that are not suitable for increased development.

Mapped vs. Overlay District

A TOD zoning district could be applied as either a mapped zoning district to replace the existing zoning around the station area, or as an overlay district that applies on top of the existing base zoning.

The model TOD ordinance was written assuming that it would be applied as a stand-alone, mapped district. On the other hand, an overlay district approach may be more appropriate in certain situations, such as when a municipality wishes to encourage TOD-style development only on lots of a minimum size within the station area.

Municipalities considering using an overlay district approach should consider conducting additional analysis to avoid potential conflicts or confusion between the TOD overlay district regulations and the base zoning. In general, a conflicts clause may also be helpful.

Sample Conflicts Clause:

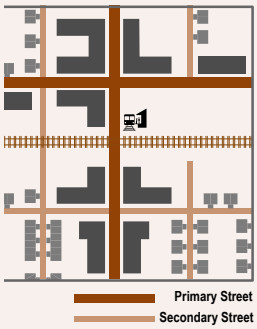
"In the event any of the sections and/or standards contained herein conflict with other sections of the [municipality] zoning ordinance or subdivision and land development ordinance, the provisions of this section shall apply."

NOTES

Primary vs. Secondary Streets

Once the municipality identifies the boundaries of the station area for which the TOD ordinance will apply, the municipality should make a map of the station area identifying which streets are considered primary streets and which are secondary streets. This distinction will determine how certain land use and building design standards within the model ordinance are applied.

The image below is an example of the type of map the municipality could create and insert into Section B.2. in order to establish what are the primary and secondary streets within the station area.



Definitions

The model ordinance was written to include definitions for all unique terms used in the ordinance. However, when considering applying this model ordinance, individual municipalities should compare this list of definitions to existing definitions in their zoning and/or subdivision and land development ordinances to ensure consistency and remove or modify definitions as needed.

Cooperative Parking vs. Shared Parking

In this model ordinance, the term "cooperative parking" refers to the management of a single parking area, whether a surface parking lot or parking structure, to serve the parking needs of multiple users.

On the other hand, "shared parking" is used in this ordinance to refer to a calculation method that reduces the minimum parking required for mixed-use developments.

2. Primary and Secondary Street Frontage. Certain use, dimensional, and design standards within the TOD District vary by primary and secondary street frontage. All existing public and private streets within the TOD District are identified as either primary or secondary streets in the map below.

   [Insert map of primary and secondary streets for station area]

C. **Definitions**

1. **Artisanal Manufacturing.** The on-site production, display, and sale of hand-fabricated or hand-manufactured parts and custom or craft consumer goods based on the skill and knowledge of the artisan and the use of hand tools or small-scale, light mechanical equipment. This involves activities such as small bakeries, candy or soap making, coffee roasters, breweries, distilleries, or the custom production of artisan products such as apparel, cabinetry, glass working, jewelry making, metal working, pottery, sculpture, wood working, and leather working.
2. **Bed & Breakfast**. An owner-occupied single-family detached dwelling in which short-term lodging rooms and breakfast meals are provided for compensation.
3. **Boutique Hotel**. A hotel, as defined herein, with a maximum of 40 guest rooms.
4. **Buffer**. A strip of land of a certain width generally intended for vegetation such as trees or shrubs or other man-made elements, with the purpose of separating and/or partially screening the view of two adjacent uses or properties from one another.
5. **Build-to Line**. A line established within a given lot, which is a certain distance from the curb line, along which the building shall be built.
6. **Building Frontage**. The length of a building façade measured in a single straight parallel line with the abutting street(s) or parking lot(s).
7. **Building Stepback**. A setback or horizontal offset in the façade of the building above the lower levels.
8. **Common Open Space**. An area of land within a development site designed and intended for the use or enjoyment of residents or users of the development.
9. **Cooperative Parking**. An arrangement in which two or more uses provide their required off-street parking in the same parking area, thereby reducing the number of individual parking areas and the number of curb cuts required to serve such parking areas.
10. **Duplex**. A single building designed as a single structure containing two separate dwelling units.

11. **Façade Articulation**. The visible expression of architectural or landscape elements through form, structure, or materials that break up the scale of buildings and spaces to achieve human scale.
12. **Frontage Occupation**. The percentage of the street frontage that is occupied by a building.
13. **Green Roof**. An engineered, multilayered roofing system sustaining the growth of plants on a rooftop while protecting the integrity of the underlying structure. The components of a green roof generally consist of, but may not be limited to, a waterproofing membrane, root barrier, drainage layer, retention layer, filter fabric, growing medium, and plants.
14. **Hotel**. A building designed for occupancy as the temporary residence of individuals. The facility may include meeting rooms, dining facilities, a bar/lounge, and ancillary recreational uses as accessory uses or structures incidental to the hotel operation.
15. **Live-Work Unit**. A dwelling unit that contains ground floor commercial space.
16. **Moderate-Income Housing**. Housing which is deemed to be affordable to those with a median household income (as rated by the national government or a local government according to a recognized housing affordability index), where the housing costs, including utilities, do not exceed 30% of the occupant's income.
17. **Oriel Window**. An oriel window is a form of bay window which protrudes from the main wall of a building but does not reach to the ground. Supported by corbels, brackets, or similar cantilevers, an oriel window is most commonly found projecting from an upper floor but is also sometimes used on the ground floor.
18. **Outdoor Dining Area**. An outdoor dining area located on the sidewalk or other open area in front of or adjoining a restaurant, coffee shop, or other food service establishment. The outdoor dining area use shall be accessory to a permitted restaurant, coffee shop, or other food service establishment.
19. **Parking Structure**. A structure of more than one level designed for the temporary or long-term storage of motor vehicles and which may contain access ramps. May be a freestanding structure or incorporated within a building. *Also referred to as "structured parking"*.
20. **Party Wall**. A wall common to but dividing contiguous buildings; such a wall contains no openings and extends from its footing below the finished ground grade to the height of the exterior surface of the roof.

NOTES

Frontage Occupation

See §F.1. for more information on how frontage occupation is calculated.

Outdoor Dining Area

Skippack Village, Skippack Township

NOTES

Predominant Setback

See §F.3. for more information on how predominant setback is calculated.

Public Gathering Space

King of Prussia Town Center, Upper Merion Township

Shared Parking

See §K.2. for more information on how shared parking requirements are calculated for mixed-use developments.

21. **Pedestrian-Oriented**. A design principle that emphasizes development and infrastructure that improves the access and environment for pedestrians, rather than automobile users.
22. **Pervious Pavement**. A pavement type designed to allow percolation or infiltration of stormwater through the surface into the soil below where the water is naturally infiltrated.
23. **Predominant Setback**. A front setback equal to the median front setback of the existing principal buildings along a common street frontage.
24. **Public Gathering Space**. Public or private outdoor space where the public is directly or indirectly invited to visit or permitted to congregate.
25. **Quadraplex (Quad)**. An arrangement of two attached buildings, connected by a common party wall, designed for and occupied exclusively as a permanent residence for four households, with each half of the building having two households living wholly or partly over the other.
26. **Roof Terrace**. A private common open space, located on the roof, serving as a gathering space for tenants of a residential building.
27. **Screening**. A method of visually shielding, obscuring, or concealing one abutting or nearby structure or use from another using fencing, walls, berms, or densely planted vegetation.
28. **Shared Parking**. A calculation method that determines the number of parking spaces necessary to meet the parking demand on a site where there are multiple uses with different peak periods of parking demand.
29. **Stacked Townhome**. A townhome that has two units stacked vertically that may or may not share a middle floor.
30. **Storefront**. Display windows of a building housing a commercial use visible from a street, sidewalk, or other pedestrianway accessible to the public.
31. **Story**. A level within a building by which building height is measured. The space in a structure between the upper surface of a floor and the upper surface of the floor or roof next above. However, where the floor level of the first story is at least five feet below the adjoining finished grade, the space shall be considered a basement and not counted as a story.
32. **Street Frontage, Primary**. The lot frontage located along a primary street, as defined in §B.2.

33. **Street Frontage, Secondary**. The lot frontage located along a secondary street, as defined in §B.2.
34. **Streetscape**. The area that is between the buildings on either side of a street, including the public or private street right-of-way, which defines its character. The elements of a streetscape include building frontage/façade, landscaping, sidewalks, street paving, street furniture, signage, architectural elements such as awnings, and street lighting.
35. **Townhome**. A single-family attached dwelling in a row of at least three units, having one or more common walls, with individual outside access.
36. **Transparency**. The percentage of a building façade that is occupied by the transparent glass surface of windows and doors that allows visual permeability into and out of the building. *Also referred to as "glazing."*
37. **Transportation Demand Management (TDM)**. The implementation of programs, plans, or policies designed to encourage changes in individual travel behavior and make efficient use of the existing transportation systems. TDM can include an emphasis on alternative travel modes to the single occupant vehicle such as carpools, vanpools, transit, walking, and biking, reduction or elimination of the number of vehicle trips, or shifts in the time of vehicle commutes to other than the peak period.
38. **Twin**. A single building that contains two separate permanent residential units side-by-side and joined together by a common party wall, but otherwise surrounded by yard areas.
39. **Verge**. A strip separating a sidewalk from the curb consisting of grass, landscaping, street furniture, or decorative paving.

D. **Use Regulations**

1. A building may be erected, altered, or used, and a lot may be used or occupied, for one or more of the following permitted or regulated uses, and no other:

NOTES

Permitted Uses

See Table 1 on the following page for a summary of which uses are most appropriate for each station area typology. See Section 2 "Station Area Typology" of this document for more information on station area typologies. Map 5 on page 20 of this document shows the recommended station area typology for all stations in Montgomery County.

When a municipality is using this ordinance template, any references to station area typologies that are not relevant to the station they are planning for can be removed. If a municipality is writing a TOD district that would apply to multiple station areas with different typologies, a simplified use table may be helpful.

Use-Specific Regulations

Section D.2. on page 71 includes additional regulations for those uses identified as "P-R – Permitted Use with Additional Use-Specific Regulations." However, municipalities may wish to consider making these conditional uses or special exceptions if that's the municipality's preferred tool for applying additional use-specific regulations.

Table 1: Permitted and Regulated Uses Based on Station Area Typology

PERMITTED USE	STATION AREA TYPOLOGY				
	REGIONAL MIXED-USE CENTER	TOWN CENTER	NEIGHBORHOOD VILLAGE CENTER	SUBURBAN EMPLOYMENT CENTER	SUBURBAN NEIGHBORHOOD
RESIDENTIAL USES					
MULTIFAMILY	P-R	P-R	P-R	P-R	P-R
STACKED TOWNHOMES	P	P	P	P	
TOWNHOMES		P	P	P	P
LIVE-WORK UNITS	P-R	P-R	P-R	P-R	
QUAD/TWIN/DUPLEX		P	P	P	P
SINGLE-FAMILY DETACHED					P
NON-RESIDENTIAL USES					
RETAIL SHOPS*	P	P	P	P	P-R
RESTAURANTS AND OTHER FOOD OR BEVERAGE ESTABLISHMENTS*	P	P	P	P	P
PERSONAL SERVICE BUSINESSES AND FINANCIAL INSTITUTIONS	P	P	P	P	
OFFICE	P	P	P	P	
FLEX/LIGHT INDUSTRIAL	P			P	
ARTISANAL MANUFACTURING*	P	P	P	P	
HOTELS*	P	P		P	
BOUTIQUE HOTEL*	P	P	P	P	
BED & BREAKFAST		P-R	P-R		P-R
ENTERTAINMENT, THEATERS, GALLERIES, MUSEUMS*	P	P	P	P	
PUBLIC TRANSIT FACILITIES	P	P	P	P	P
GOVERNMENT ADMINISTRATIVE USES (POST OFFICES, COMMUNITY CENTERS, LIBRARIES)	P	P	P	P	
SCHOOL, DAY CARE CENTER	P	P	P	P	P
STUDIOS FOR DANCE, MUSIC, FITNESS, ART, OR PHOTOGRAPHY	P	P	P	P	
OTHER USES					
PARKS, OPEN SPACES, PLAZAS	P	P	P	P	P
PARKING STRUCTURE	P	P	P	P	

P: Permitted Use

P-R: Permitted Use with Additional Use-Specific Regulations (see §D.2. Additional Use-Specific Regulations below)

* Non-residential uses marked with an asterisk (*) are considered "active streetfront commercial uses" as regulated herein.

NOTES

Parking Structure

This use refers to a parking structure as a principal use on the lot, rather than an accessory use to another use on the lot.

Active Streetfront Commercial Uses

Certain building types, depending on the station area typology and other factors, require active streetfront commercial uses on the ground floor. These uses, as specified in Table 1 on the previous page, generally have more pedestrian-traffic throughout the day and therefore contribute to a lively street environment within the station area. These uses should be designed with street-facing entrances and welcoming storefront windows (see example photos below).

Ardmore, Lower Merion Township

Fayette Street, Conshohocken Borough

2. Additional Use-Specific Regulations.

   a. *Multifamily Buildings* are permitted, provided the following standards are met:

      (1) In all station areas, private gathering space shall be provided for the residents of a multifamily building. Additional public gathering space may be provided in exchange for a building height bonus (see Bonus Provisions in §G. Bonus Provisions to Increase Building Height).

      (2) In all station areas, active street front commercial is required along the primary street frontage of multifamily buildings within 600 feet of the train station measured from the midpoint of the inbound station platform. Residential uses may be located on the second story and above.

NOTES

(3) In Suburban Neighborhood station areas, residential uses may be provided on the first floor of the secondary street frontage of any multifamily building.

(4) In Suburban Neighborhood station areas small-scale multifamily, consisting of no more than eight (8) residential units per building, shall be permitted.

b. *Live-Work Units* are permitted in Regional Mixed-Use Center, Town Center, Neighborhood Village Center, and Suburban Employment Center station areas, provided the following standards are met:

(1) Permitted ground floor uses include any of the non-residential uses that are listed as permitted in that station area typology in Table 1 above.

(2) The non-residential use on the ground floor along a primary street frontage shall occupy a minimum of 75% of the width of the building excluding entrances for upper floors.

c. *Retail* is permitted in Suburban Neighborhood station areas, provided the building footprint does not exceed 10,000 square feet.

d. *Bed & Breakfasts* are permitted in Regional Mixed-Use Center, Town Center, Neighborhood Village Center, and Suburban Employment Center station areas, provided the following standards are met:

(1) The owner(s) of the bed & breakfast must occupy the dwelling unit as their principal residence.

(2) A maximum of five (5) guest sleeping rooms shall be permitted.

(3) The length of stay within a bed & breakfast shall not exceed 14 consecutive days in any six-month period.

(4) As part of the price of the lodging room, overnight guests may be provided with up to one meal per day. Any meal service provided shall be for overnight guests only.

(5) Separate kitchens in guest rooms shall be prohibited.

3. **Prohibited Uses**. The following uses, as well as any use not specifically permitted, are specifically prohibited within the TOD District:
    a. Drive-through windows or facilities
    b. Automobile or other vehicle sale, service, or repair establishments
    c. Gasoline service station and filling station
    d. Self-service storage facilities
    e. Adult entertainment uses

E. **Dimensional Standards**

All lots within the TOD district shall meet the following dimensional requirements:

NOTES

Prohibited Uses

The TOD District should prohibit automobile-oriented uses that detract from the transit- and pedestrian-oriented environment. However, if the municipality wishes to permit these types of uses, additional design standards should be applied. For example, additional screening requirements and access controls may be needed for drive-through uses to maintain the pedestrian-friendly feel of the TOD district overall.

Dimensional Standards

See Table 2 on the following page for a summary of the dimensional standards that are most appropriate for each station area typology. See Section 2 "Station Area Typology" of this document for more information on station area typologies. Map 5 on page 20 of this document shows the recommended station area typology for all stations in Montgomery County.

When a municipality is using this ordinance template, any references to station area typologies that are not relevant to the station they are planning for can be removed. If a municipality is writing a TOD overlay district that would apply to multiple station areas with different typologies, a simplified use table may be helpful.

Table 2: Dimensional Standards Based on Station Area Typology

DIMENSIONAL STANDARDS	STATION AREA TYPOLOGY				
	REGIONAL MIXED-USE CENTER	**TOWN CENTER**	**NEIGHBORHOOD VILLAGE CENTER**	**SUBURBAN EMPLOYMENT CENTER**	**SUBURBAN NEIGHBORHOOD**
BUILDING HEIGHT					
• MINIMUM	4 STORIES, AND A MINIMUM OF 48 FEET	3 STORIES, AND A MINIMUM OF 35 FEET	2 STORIES, AND A MINIMUM OF 28 FEET	N/A	N/A
• MAXIMUM BY-RIGHT	8 STORIES, UP TO 100 FEET	5 STORIES, UP TO 65 FEET	3 STORIES, UP TO 35 FEET	3 STORIES, UP TO 35 FEET	3 STORIES, UP TO 35 FEET
• MAXIMUM WITH BONUSES	10 STORIES, UP TO 120 FEET	7 STORIES, UP TO 90 FEET	5 STORIES, UP TO 65 FEET	5 STORIES, UP TO 65 FEET	N/A
IMPERVIOUS COVERAGE MAXIMUM % LOT AREA	85%	100%	80%	70%	50%
MINIMUM FRONTAGE OCCUPATION[21]	70%	90%	70%	N/A	N/A
BUILD-TO LINE[22]	15 FEET	15 FEET	15 FEET	15 FEET	SINGLE-FAMILY RESIDENTIAL BUILDINGS: PREDOMINANT SETBACK[23] OR 15 FEET[24] ALL OTHER BUILDINGS: 15 FEET
MINIMUM SIDE SETBACK[25]	0 OR 8 FEET	0 OR 5 FEET	0 OR 5 FEET	15 FEET	COMMERCIAL: 0 OR 5 FEET RESIDENTIAL: 15 FEET
MINIMUM REAR SETBACK	20 FEET	10 FEET	20 FEET	40 FEET	30 FEET
MINIMUM PARKING SETBACK[26,27]	0 OR 20 FEET	0 OR 10 FEET	0 OR 15 FEET	0 OR 20 FEET	20 FEET
MINIMUM BUILDING SETBACK WHERE ABUTTING A RESIDENTIAL ZONING DISTRICT	40 FEET	20 FEET	20 FEET	40 FEET	40 FEET
BUILDING STEPBACK[28]	12 FEET	12 FEET	12 FEET	N/A	N/A
BUFFER AREA WIDTH[29]	20 FEET	10 FEET	15 FEET	20 FEET	20 FEET

21 See General Standards, §F.1.
22 See General Standards, §F.2.
23 See General Standards, §F.3.
24 Where the predominant setback does not apply, the minimum front setback is 15 feet.
25 Zero-foot side yard setback only applies where there is a shared party wall.
26 Minimum parking setback applies to side and rear property lines. See §K.6. for additional parking lot design standards.
27 Zero-foot parking setback only applies where there is a cooperative parking agreement between the adjacent properties.
28 See General Standards, §F.
29 See General Standards, §F.5. for applicability and Buffer Design Standards, §H.4. for design standards.

F. **General Standards**

The following standards apply to all station area typologies, as applicable according to Table 2.

1. **Frontage Occupation**. Frontage occupation is regulated according to the station area typology and applies to all building frontages. The following elements shall be excluded from the frontage occupation calculation:
   a. Sidewalks and internal pedestrian pathways;
   b. Public gathering space;
   c. Required minimum setbacks;
   d. One (1) vehicular driveway per street frontage.
2. **Build-to Line**.
   a. The build-to line may be increased by up to 25 feet, for a maximum build-to line of 40 feet, for all or part of the building frontage length, provided the additional setback area is used for either public plaza space, outdoor dining areas, or additional landscaping space between the building and the street.
   b. Where a build-to line requirement applies, architectural features such as overhangs, oriel windows, upper floor balconies, loggias, pergolas, and similar architectural features may extend beyond the build-to line up to three (3) feet.

NOTES

Development Limits

This model TOD ordinance does not specify a maximum residential density or floor area ratio (FAR), in part to encourage a mixture of unit sizes, and therefore a range of housing prices, that may be affordable to more households.

In addition, other dimensional standards that limit impervious coverage and building height, as well as minimum parking and open space requirements for most developments – taken together will adequately limit development to a scale that can be accommodated within each site.

Building Height

Communities applying the model TOD ordinance to a Regional Mixed-Use Center station area should consider allowing more than two additional stories of height through the height bonus provisions. Regional Mixed-Use Center station areas could accommodate 12-15 story buildings.

Building Stepback

Developments in Regional Mixed-Use Center station areas may take on different forms where a building stepback may or may not be an important design feature.

For example, a building stepback can be beneficial for infill development within an established 3-5 story "Main Street" in order to maintain the pedestrian-scale of the block from the street view. However, where development of large blocks is anticipated, requiring a building stepback may not be necessary as the new buildings will not be directly adjacent to existing, smaller-scale buildings.

Frontage Occupation

"Frontage occupation" is defined as "the percentage of the street frontage that is occupied by a building."

NOTES

Predominant Setback

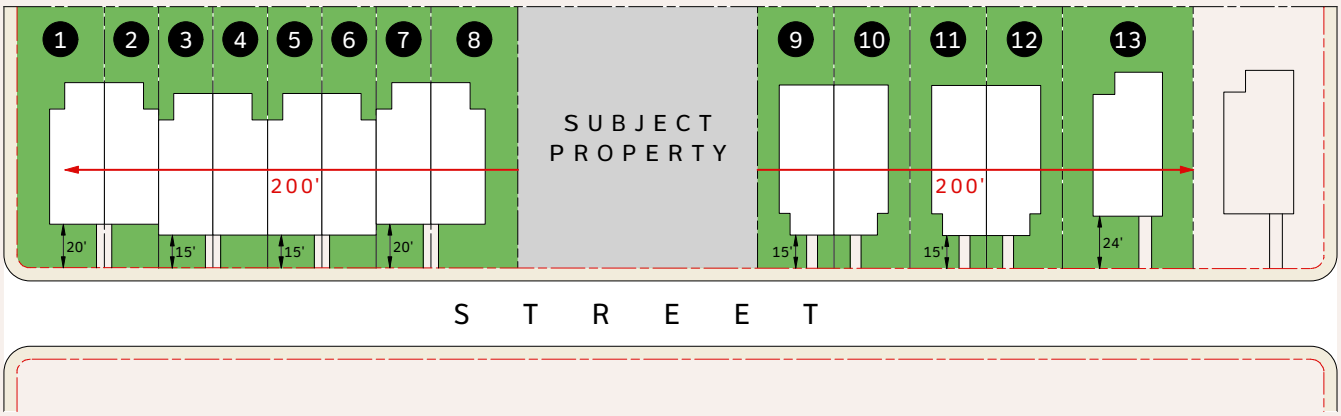
The predominant setback is determined by calculating the median front setback of existing principal buildings on the same side of the street as the subject property, and within 200 feet on either side of the subject property as measured along the street line.

The median front setback is determined by arranging the front setbacks of the existing principal buildings in sequence from smallest to largest in size and finding the middle number. When an even number of properties is being used to determine the median, the median value is calculated by taking the average of the two middle values. The median front setback, and therefore the predominant setback, in the example illustration below is 15 feet.

3. **Predominant Setback**. The maximum front setback for new single-family detached residential buildings in Suburban Neighborhood station areas shall be equal to the predominant setback, subject to the following standards:

   a. The predominant setback is determined by calculating the median front yard setback of existing buildings on the same side of the street as the proposed building and within 200 feet of the property's lot line, as measured along the street.

   b. If there are fewer than three (3) qualifying buildings as defined in §F.3.a. above, the predominant setback shall not be used, and the front setback shall be as specified in Table 2 above.



Lot Number	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7	Lot 8	Lot 9	Lot 10	Lot 11	Lot 12	Lot 13
Setback	20'	20'	15'	15'	15'	15'	20'	20'	15'	15'	15'	15'	24'
Setback (Ascending)	15'	15'	15'	15'	15'	15'	15'	15'	20'	20'	20'	20'	24'
Lot Number	Lot 9	Lot 10	Lot 11	Lot 12	Lot 3	Lot 4	Lot 5	Lot 6	Lot 1	Lot 2	Lot 7	Lot 8	Lot 13
	6						MEDIAN	6					

4. **Building Stepback**.

   a. The façade of the building shall be setback an additional distance, as specified in Table 2 above.

   b. The building stepback shall apply above the third floor in the following locations:

      (1) Along the street frontage; and

      (2) Along the side lot lines when a zero-foot side setback is applied.

   c. The amount of the building stepback may be reduced to eight (8) feet where the building is set back further than the build-to line.

5. **Buffer**. Buffer area width is regulated according to the station area typology. There shall be a buffer area along a property line within the TOD District where it abuts a residential or industrial zoning district. The buffer area shall include landscaping and other features as specified in §H.4.

G. **Bonus Provisions to Increase Building Height**

Proposed developments within the TOD District that provide public benefits, and meet all applicable standards in Table 3 below, shall qualify for a building height bonus. One additional story of building height may be granted in exchange for each four (4) bonus points earned. Each story of additional building height granted under this section shall be equal to a maximum of 13 feet in building height. The overall building height shall not exceed the maximum building height with bonuses listed in Table 2 above. Any improvements proposed as part of the below bonus options shall be provided above and beyond any improvements required elsewhere in this chapter.

NOTES

Building Stepback

The fourth floor of this building is stepped back along the street frontage side of the building.

City of Philadelphia

Buffers and Transitional Districts

Since train stations are often located in established areas, TOD Districts may abut existing residential, commercial, or industrial districts.

Municipalities may want to consider how neighboring districts could develop as transition areas between the higher-intensity TOD District and lower-intensity residential districts. If there are existing residential properties that are not zoned residential, the municipality should consider if that neighborhood could experience redevelopment and whether up-zoning to create a transitional district is needed.

However, there may be other uses that warrant a buffer, such as industrial districts. Each municipality should decide if a buffer is necessary or not based on the existing surrounding uses.

Building Height Bonuses

The height bonus options and criteria included in Table 3 on the following page represent a menu of many potential options for municipalities applying the model TOD ordinance to consider. However, municipalities should prioritize the bonus provisions that they want to incentivize with more points based on their community vision and what would be most realistic and beneficial for their particular station area.

The amount by which the building height can be increased using the provisions in this section will depend on the maximum height (with bonuses) that the municipality selects in Table 2. No height bonus is permitted in the Suburban Neighborhood station area typology.

Some of the bonus options are meant to provide direct community improvements, such as moderate-income housing or public gathering space, while others can provide indirect benefits, such as environmental sustainability provisions, including green roofs and alternative energy sources. Municipalities may wish to consider requiring improvements that could have the potential to be the most impactful for the larger community before developers can utilize other bonus options.

When evaluating the inclusion of certain bonus options, municipalities can consider potential development sites. For example, where a municipality anticipates large-site redevelopment, requiring public gathering space would be appropriate. On the other hand, a smaller municipality may wish to incentivize the inclusion of public gathering space where smaller infill development is more likely.

Table 3. Height Bonus Options and Standards

BONUS	POINTS	BONUS FEATURE STANDARD
MODERATE-INCOME HOUSING	4+ (see standards)	Moderate-income housing is provided as part of a development, subject to the following standards: • Four (4) bonus points shall be provided for each five (5) dwelling units, or every 10% of the total number of dwelling units, whichever is greater, that are reserved for moderate income housing. • The units shall be reserved for households with incomes not exceeding the income limits by household size specified by the Pennsylvania Housing Finance Agency for Montgomery County. • The units must remain affordable in perpetuity with a covenant that runs with the land.
PUBLIC GATHERING SPACE (PEDESTRIAN PLAZA, COURTYARD, SQUARE, OR POCKET PARK)	4	A public gathering space equal to at least five (5) percent of the lot area is constructed, subject to all relevant design standards provided in §J.
ALTERNATIVE ENERGY SOURCES	2+ (see standards)	A solar, geothermal, or other renewable energy power-generation facility is installed on-site. The number of bonus points provided shall be based on the energy generation capacity of the system. • Two (2) bonus points for 10% of the expected annual energy usage for the building produced. • One (1) additional bonus point for each additional 10% of the expected annual energy usage produced
STRUCTURED PARKING	2-3	A parking structure is constructed, subject to the following standards: • All of the required off-street parking is provided within a parking structure(s) • The parking structure meets all of the design standards provided in §K.6.c. An additional one (1) bonus point can be received for providing active streetfront commercial uses along the ground floor frontage(s) of the parking structure located on secondary streets.
GREEN ROOF	2	A green roof is installed, subject to the following standards: • Minimum area equal to 50% of the overall roof area, or 3,500 square feet, whichever is greater • Exposure to direct sunlight at noontime • The green roof design shall conform to the best available technology standards, such as those published by LEED, as approved by the municipal engineer • An operations and maintenance plan shall be prepared for the green roof and submitted to the municipality for approval

NOTES

Alternative Energy Ordinance

If considering including a bonus option for alternative energy, municipalities should consider adopting an alternative energy ordinance to ensure that the installation and output of an alternate energy source is measureable and acceptable.

Appendix S - Riparian Buffer Plantings

TREES

	Ecological Benefits	Description/Habitat	Site Conditions	Characteristics
Black Willow *Salix nigra* 	Supports native pollinators, twigs eaten by larger mammals Fibrous root system and tolerance of wet conditions prevent stream banks from eroding	Deciduous lowland tree, grows in moist and saturated soils along streams, rivers and other floodplain or wetland areas. Easy to establish from cuttings.	**Soil pH:** 5.0-8.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑ ●	**Flowers:** Male and Female greenish catkins, Apr-Jun **Fruit:** Seeds, after 10 yrs **Fall Color:** Insignificant **Height:** 10'-40'
Red Maple *Acer rubrum* 	Early flowering time supports native pollinators in the spring and the seeds and twigs are eaten by birds and mammals. It is often used in site rehabilitation	Maples are very adaptable, living in swamps and drier upland areas. The bright-red fall color is aesthetically pleasing.	**Soil pH:** 5.5-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑	**Flowers:** Red rarely yellow, Mar-May **Fruit:** Red, winged seeds, May-Jul **Fall Color:** True to its name, leaves turn bright red **Height:** 20'-40'
Silver Maple *Acer saccharinum* 	Provide seeds and nesting sites for birds, early pollen producer. Rapid growth makes it beneficial in reclamation areas, but may shade out other species.	Lowland riparian tree, lives in well-drained, moist soils in floodplains and along water sources. Feathery canopy appearance. Subject to breakage.	**Soil pH:** 5.5-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑	**Flowers:** Greenish/reddish, short clusters, Feb-May **Fruit:** Winged seeds Apr-Jun **Fall Color:** Pale yellow **Height:** 40'-60'
American Sycamore *Platanus occidentalis* 	Animals eat twigs, cavities provide shelter, shade Good for rehabilitating sites with saturated soils, may shade out smaller species	Large, fast growing trees, with an open, irregular crown and distinguishing bark. They tolerate a range of conditions, mainly growing around rivers and lakes	**Soil pH:** 5.0-6.5 **Type:** Loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑	**Flowers:** Small, brown globose heads Apr-Jun **Fruit:** Small, hairy, Oct-winter, available for animals **Fall Color:** Yellowish brown **Height:** 50'-130'
Tulip Poplar *Liriodendron tulipifera* 	Provides pollen for native insects and fruits and twigs for mammals Often planted in restoration but shouldn't be overused since rapid growth pushes out other plants	Known for its fast, straight growth and the attractive, tulip-like flowers. It grows best in lowland areas with well-drained, loose texture soils.	**Soil pH:** 4.5-7.5 **Type:** Loam, sand **Moisture:** Moist **Light:** ☼ ◑	**Flowers:** Orange/green, tulip-like, very show and fragrant, May-Jun. **Fruit:** Slim, Sept-Oct **Fall Color:** Golden yellow **Height:** 70'-100'
Swamp White Oak *Quercus bicolor* 	Provides shelter and shade, as well as food (acorns) for animals, very valuable for wildlife	Swamp white oaks are large deciduous trees. Leaves feature two-toned color on the top and bottom*. They live in swamps and along stream edges.	**Soil pH:** 4.3-6.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑	**Flowers:** Catkins, male(red) ,female (green/yellow), Mar-May **Fruit:** Acorns, fall **Fall Color:** Gold brown/red **Height:** 60'-70'
Yellow Birch *Betula alleghaniensis* 	Provides food and shelter for songbirds Commonly used riparian tree enjoy wetter conditions and grow fairly rapidly	Displaying beautiful fall color, yellow birch is a tree with attractive, papery bark and open canopy. Lives along streams, ponds, rivers, and swamps	**Soil pH:**4.0-8.0 **Type:** Clay, loam **Moisture:** Moist-Wet **Light:** ◑	**Flowers:** Yellow Green, Apr-May **Fruit:** Green to tan, cone-like, July-Oct **Fall Color:** Yellow **Height:** 60'-80'

☼ Full sun ◑ Partial sun ● Full shade

SHRUBS

	Ecological Benefits	Description/Habitat	Site Conditions	Characteristics
Buttonbush *Cephalanthus occidentalis* 	Provides for native insects and pollinators. They are good for erosion control along stream banks.	Button bush is a small to medium-sized shrub, growing in marshes, forest wetlands, and along bodies of fresh water. Can grow in shade but needs sun to flower	**Soil pH:** 6.1-8.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑ ●	**Flowers:** Distinctive dense, round clusters of white flowers, Jul-Aug **Fruit:** Green/brown, Sep-Jan **Fall Color:** Insignificant **Height:** 3'-10'
Northern Spicebush *Lindera benzoin* 	Food for birds and butterflies, all parts are edible and aromatic leaves and berries can be used to make tea	The spicebush grows in forested areas, along streams and in floodplains	**Soil pH:** 4.5-6.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ◑ ●	**Flowers:** Small and yellow, before leaves, Mar-May **Fruit:** Bright red berries, Sep-Oct **Fall Color:** Golden-yellow **Height:** 3'-15'
Red-Osier Dogwood *Cornus sericea* 	Wildlife eat twigs and the fruit are eaten by birds. The shrubby, multi-stemmed structure provides great nesting sites for birds and small mammals. (Can also be used in Zone 3)	Red Osier dogwoods are shrubby lowland plants know for their bright red stems	**Soil pH:** 4.5-6.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑	**Flowers:** White, flat-topped clusters May-Aug **Fruit:** White, Jul-Oct **Fall Color:** Reddish green with bright red stems that add color in winter **Height:** To 10'
Silky Dogwood *Cornus amomum* 	Provides for songbirds, waterfowl, and mammals. (Can also be used in Zone 3)	Shrubby dogwood that likes forested wetlands, stream and pond banks	**Soil pH:** 4.5-6.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑	**Flowers:** White, flat-topped clusters May-Aug **Fruit:** White, Jul-Oct **Fall Color:** Reddish green with bright red stems that add color in winter **Height:** To 10'
Swamp Rose *Rosa palustris* 	Edible fruit provides for song birds, small mammals and insects	This thorny plant tolerates flooding. Its showy flowers are aesthetically pleasing.	**Soil pH:** 4.0-7.0 **Type:** Clay, loam **Moisture:** Moist-Wet **Light:** ☼ ◑ ●	**Flowers:** Pink, Jun-Aug **Fruit:** Red berry, Jul-Mar **Fall Color:** **Height:** 8'
Southern Arrowwood *Viburnum dentatum (V. recognitum)* 	Dark berries attract birds and small mammals like chipmunks	Densely leaved and often used in landscaping, due to it's form. Straight stems, nice structure in winter. Likes wooded floodplains and stream banks with loamy soil.	**Soil pH:** 5.1-6.5 **Type:** Clay, loam, sand **Moisture:** Dry-Wet **Light:** ☼ ◑ ●	**Flowers:** White, May-Jun **Fruit:** Blue/black berry, Sep-Nov **Fall Color:** Reddish purple **Height:** 10'-15'
Winterberry Holly *Ilex verticillata* 	Although poisonous to humans, berries provide food for birds and mammals in winter	Thrive in fresh tidal and shrub swamps and forested wetlands	**Soil pH:** 4.3-6.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ ◑ ●	**Flowers:** Greenish white, Jun-Jul **Fruit:** Red berries, Aug-Feb, persist into winter **Fall Color:** Yellow, brown **Height:** 6'-12'

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These are also great places to find more information on the listed native species!

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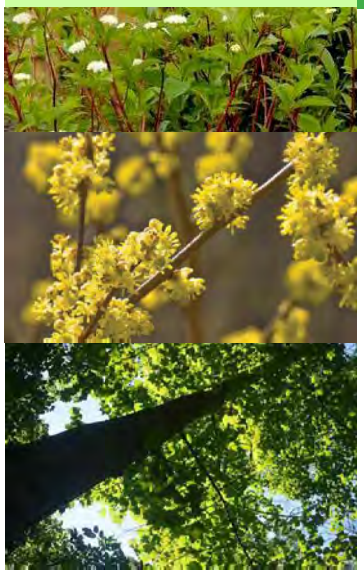
pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

A SHORT LIST OF SUGGESTED BUFFER PLANTS

ZONE 1

A native riparian forested area planted with trees and shrubs offers long-term stream and watershed health



Of course, some maintenance is involved (like removing invasives). However, **there's no harvesting of products in this zone since it's crucial in providing for your growing ecosystem!** Functions of this zone include bank stabilization, slowing down runoff, encouraging more infiltration, and providing food, shelter, and shade for the local wildlife, fish, and beneficial insects. This zone is also a future source of large woody material for stream habitat.

If you need to use chemicals such as herbicide or pesticides, be purposeful in selection and application. **Use "aquatic rated" kinds to prevent damaging aquatic life.**

ZONE 1
From water's edge to about 15 feet in Keep it native!

ZONE 2
Native fruit and nut trees for you and wildlife

ZONE 3
Herbaceous perennials that can be mechanically harvested. "Well-behaved" non-natives allowed here

TREES

	Ecological/ Human Benefits	Potential Products/Income	Habitat/ Site Conditions	Description/ Characteristics
Black Walnut *Juglans nigra* 	The black walnut provides edible nuts for human and animals as well as lumber as a long-term product.	Nutmeats, shells, oils, syrup In shell-$9.25/lb, Shelled-$12/lb, Mature trees produce 6,000 lb nuts/acre/year x 10$/lb=$60,000/acre/year)	**Soil pH:** 5.5-8.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ Wet, riparian soils and should be planted near species that are juglone tolerant*	Coarse, sharp-looking branches, spreading head **Flowers:** Catkins, Apr-Jun **Fruit:** Nut, large spherical husk, Oct-Nov **Fall Color:** First to drop leaves and last to leaf out **Height:** 70'-100'
Sweet Crab Apple *Malus coronaria* 	Fleshy fruits are too sour for people to eat raw but provide food for wildlife and attracts pollinators. The tangling branches provide nesting sites for birds.	Varied production, 6bushels of apples/tree and 100 trees/acre, $30/bushel, $18,000 per acre	**Soil pH:** 6.0-7.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ Forest edges, rock streams and fields	Broad, irregular crown, occasionally multi-trunked **Flowers:** Pink, highly fragrant April to May **Fruit:** Yellow/green Sep-Nov **Fall Color:** Yellow/red **Height:** 15'-30'
Pawpaw *Asimina triloba* 	Fruit eaten by mammals. Although native, it tastes "tropical" with a custard-y texture, and is eaten fresh or used in desserts.	Fresh fruit: $2/lb wholesale, $3+/lb retail Frozen Pulp: $6/lb retail Jam: $6/6oz jar retail	**Soil pH:** 5.0-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Grows in depressional areas with rich, moist soil	Tree with large leaves and a full, egg-shaped head **Flowers:** Purplish, Apr-May **Fruit:** Yellow/green stubby bananas, Aug-Oct **Fall Color:** Yellow-red **Height:** to 10'
Persimmon *Diospyros virginiana* 	Fruit eaten by almost all birds and mammals, as well as humans	Fresh-$2.75/lb retail, frozen-$8+/lb retail, dried-$11+/lb retail, $4,125/acre estimate using $2.75/lb	**Soil pH:** 5.0-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Grows in dry to moist soils and prefers drier, open areas	Small tree **Flowers:** Yellowish, May-Jun **Fruit:** Orange, size of a large cherry, Aug-Oct **Fall Color:** Orange/yellow **Height:** 30'-50'
Downy Service Berry *Amelanchier arborea* 	Food for birds and mammals, fruits are eaten by over 50 species of wildlife. Berries can also be used for making jam if the birds haven't eaten them all.	Est. $15,000/acre for berries	**Soil pH:** 4.5-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Wooded areas with moist, well-drained soils, tolerates drier conditions	Medium-sized tree or multi-trunked shrub, open canopy **Flowers:** White clusters, Mar-June **Fruit:** Red berries, June **Fall Color:** orange/gold and red/green **Height:** 15'-25'

☼ Full sun ◑ Partial sun ● Full shade

SHRUBS

	Ecological/ Human Benefits	Potential Products/Income	Habitat/ Site Conditions	Description/ Characteristics
Black Raspberry *Rubus occidentalis* 	A brambly, native shrub that produces black raspberry fruits for people to eat, as well as the wildlife. The brambles also provides nesting sites for small mammals and birds.	Harvested: $1.50-3.50/pint; Pick-your-own-$3-$5/lb; Net return varies widely, up to $27,000/acre depending on yield and price/acre	**Soil pH:** 6.8 or less **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Likes sandy, moist or dry soils that are slightly acidic, along stream banks	Brambly, stemming shrub with purplish stems and thorns **Flowers:**, March to June **Fruit:** Black berries, June to August **Fall Color:** Insignificant **Height:** To 6'
Common Elderberry *Sambucus canadensis* 	A native shrub provides fruit for wildlife and helps with erosion control along stream banks. Considered "Nature's Medicine Chest"	Juice: $15-$17/11oz jar Syrup: $18/4oz jar retail Wine $10-$13/bottle retail Cough Drops: $2.50/15 retail	**Soil pH:** 5.0-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Tolerant of a range of conditions, prune heavily in winter to maintain thick form	Large, dense, and fast-growing, attractive flowers **Flowers:** White, flat-topped, June-July **Fruit:** Purple/black, Aug-Oct **Fall Color:** Insignificant **Height:** 3'-13'
Black Chokeberry *Aronia melanocarpa* 	Small tree or shrub that provides food for birds and mammals	Possible $10-$12/lb (mid-west Iowa markets) $0.50-$1.25/lb shipping to value-added producers	**Soil pH:** 6.5-8.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Lowland woods, swamps, bogs, moist thickets	Upright, spreading deciduous shrub, attractive flowers **Flowers:** White, flat-topped, May **Fruit:** Berries, black, summer/fall **Fall Color:** Crimson **Height:** 3'-6'
Highbush Blueberry *Vaccinium corymbosum* 	A native shrub that provides fruit for birds and mammals. Potential products are raw fruit and jams.	$2-$5/pint ($3,000-$18,000/acre, depending on pints/acre) $.65-$1.50/lb to processor	**Soil pH:** 4.5-7.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼ Forested wetlands, swamps, bogs, rock outcroppings	Twiggy, thicket- forming shrub with nice fall color **Flowers:** May-June **Fruit:** Blue/black berries Jun-Sept **Fall Color:** Bright red **Height:** To 12'
American Hazelnut *Corylus americana* 	Nuts are great source of income. Provide a great source of fiber, sold in the shell or shelled, or made into flours, candies, butters, and oils	In-shell: $3/lb wholesale Shelled: $6/8oz retail Oils $8/8oz jar retail	**Soil pH:** 5.5-7.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼◑● Rich, well-drained soils, forests, disturbed areas	Dense, deciduous shrub with one main stem, thicket-forming **Flowers:** May-June **Fruit:** Nuts, ragged husk, Jul-Sept **Fall Color:** Bright yellow to deep red **Height:** To 10'
Beach Plum *Prunus maritima* Marsh 	Require cross-pollination, used in jams and sold at farmers markets	Frozen or whole: $6/lb Fruit must be cleaned	**Soil pH:** 6.0-6.5 **Type:** Loam, sand **Moisture:** Dry-Moist **Light:** ☼ Sandy, well-drained, nutrient-poor soils	Low, spreading, and scraggly shrub or tree **Flowers:** White, May **Fruit:** Purple, Aug-Sep **Fall Color:** Red/orange **Height:** To 5'

SOURCES

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These are also great places to find more information on the listed native species!

Picture Sources:

(a is top picture, b us bottom picture)

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pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

A SHORT LIST OF SUGGESTED BUFFER PLANTS

ZONE 2

An an area planted with native fruit and nut trees for harvesting, selling, and personal consumption

Incorporating edibles into your buffer really increases the benefits of planting one. Not only do fruit and nut trees provide people with home-grown food, but these lovely natives will attract plenty of wildlife. Using these suggested plant species and others, **you can customize your buffer to fit your needs AND improve water quality and wildlife habitat!**

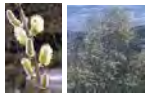
Of course, maintenance is essential to ensuring your trees are yielding maximumly so the use of aquatic and environmentally safe pesticides, herbicides, and fertilizers may be used. Using chemicals that pollute the waterways counteracts the purpose of the buffer, so **think before you apply**.

ZONE 1
From water's edge to about 15 feet in Keep it native!

ZONE 2
Native fruit and nut trees for you and wildlife

ZONE 3
Herbaceous perennials that can be mechanically harvested. "Well-behaved" non-natives allowed here

TREES&SHRUBS

	Ecological Benefits/ Potential products	Description/Habitat	Site Conditions	Characteristics
Witch Hazel *Hamamelis virginiana* 	A small tree or shrub. Game birds and mammals eat the twigs, buds and leaves. Has medicinal purposes. Woody floral*	Noted for fall/winter bloom. Witch hazel is shade tolerant, growing in rich, well-drained acidic soils. It is often multi-trunked with an open crown.	**Soil pH:** 5.5-6.5 **Type:** Clay, loam, sand **Moisture:** Dry-Moist **Light:** ☼-◑-●	**Flowers:** Yellow, Sept-Dec **Fruit:** Tan capsule, Oct-Nov **Fall Color:** Golden **Height:** 15'-30'
Pussy Willow *Salix discholor* 	Eaten by wildlife, but is well-know for its fuzzy catkins which are often cut and sold on the floral market. Woody floral*	Small ornamental tree or shrub with upright, spreading stems. Grows in full sun in damp lowlands, short-lived but fast growing.	**Soil pH:** Acidic **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼-◑-●	**Flowers:** Fuzzy catkins, aesthetically pleasing, Feb-May **Fruit:** Brown Fall Color: Not notable **Height:** 15'-25'
Curly Willow *Salix mastudana* 	The curly willow provides twigs for animals to eat, "curled" branches are aesthetically pleasing and can cut and sold. Woody floral*	Small ornamental with interesting branching tree grows in wetter conditions	**Soil pH:** **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼-◑-●	**Flowers:** Yellow **Fruit:** **Fall Color:** Golden **Height:** To 30'
Hops (Hoptree) *Ptelea trifoliata* 	The Hoptree provides sweet nectar for native bees and butterflies and seeds for birds and mammals. It's fruit is available through the winter. The Seed can be used to replace hops in beer.	The tree tolerate a range of soil conditions, ofter growing in gravelly or sandy soils with a near neutral pH in full sun to full shade.	**Soil pH:** **Type:** Clay, loam, sand **Moisture:** Dry-Moist **Light:** ☼-◑-●	**Flowers:** Small, green clusters, may-Jun **Fruit:** Flat, circular, papery, Sept-spring **Fall Color:** Yellow **Height:** 10'-20'
Flowering Quince *Chaenomeles speciosa* 	A non-native flowering shrub that attracts wildlife like rabbits and humming birds. Woody floral.	Small, multi-stemmed shrub with showy flowers, very aesthetically pleasing in a hedge row. Is not picky about soil but requires full sun	**Soil pH:** Wide range **Type:** Wide range **Moisture:** Wide range **Light:** ☼	**Flowers:** Showy, red, March (before leaves) **Fruit:** Yellow/green, fall **Fall Color:** **Height:** 6'-10'
Chinese Chestnut *Castanea mollissima* 	Provides nuts and shelter for wildlife, as well as shade Potential, unidentified market for nuts which can also be eaten by humans	A medium-sized, wide spreading tree with dense shade. Grows in moist, well-drained soils. Resistant to the Chestnut blight	**Soil pH:** Slightly acidic **Type:** Clay, loam, sand **Moisture:** Dry-Moist **Light:** ☼	**Flowers:** yellow/white catkins **Fruit:** Nut in husk, Sep-Oct **Fall Color:** **Height:** 40'-60'
American Holly *Ilex opaca* 	This iconic evergreen tree provides winter berries that are mostly eaten by song birds Woody floral*	The aesthetically pleasing tree has notable, prickly leaves. It enjoys growing in sandy wooded areas.	**Soil pH:** 4.0-7.5 **Type:** Clay, loam **Moisture:** Moist **Light:** ☼-◑-●	**Flowers:** White, May-Jun **Fruit:** Red berries **Fall Color:** Evergreen **Height:** 15'-50'

☼ Full sun ◑ Partial sun ● Full shade

TREES&SHRUBS

	Ecological Benefits/ Potential products	Description/Habitat	Site Conditions	Characteristics
Wild Hydrangea *Hydrangea arborescens* 	A plant grown for aroma and aesthetics, but is also beneficial for pollinators and insects Woody floral*	Wild hydrangeas are a fast-growing, short-lived understory shrub with showy flowers. Its natural habitat is on rocky banks and ravines	**Soil pH:** 6.1-8.5 **Type:** Loam, sand **Moisture:** Moist **Light:** ☼-◑-●	**Flowers:** Green/white, Jun-Aug **Fruit:** Brown, late summer Fall Color: insignificant **Height:** 3'-6'
Red-Osier Dogwood *Cornus sericea* 	Wildlife eat twigs and the fruit are eaten by birds. Attracts pollinators. The shrubby, nesting Woody floral*	Shrubby, multi-stemmed lowland plants with showy flowers and fruit **Yellow Twig Dogwood** *Cornus sercia* "Flaviramea" Similar to Red-Osier but with bright yellow stems	**Soil pH:** 4.5-6.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼-◑	**Flowers:** White, flat-topped clusters May-Aug **Fruit:** White, Jul-Oct **Fall Color:** Reddish green, bright red stems add color in winter **Height:** To 10'
Silky Dogwood *Cornus amomum* 	Provides for songbirds, waterfowl, and mammals. (Can also be used in Zone 1)	Shrubby dogwood that likes forested wetlands, stream and pond banks	**Soil pH:** 4.5-6.0 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼-◑	**Flowers:** White, flat-topped clusters May-Aug **Fruit:** White, Jul-Oct **Fall Color:** Reddish green with bright red stems that add color in winter **Height:** To 10'
Highbush Blueberry *Vaccinium corymbosum* 	A native shrub that provides fruit for birds and mammals. Potential products are raw fruit and jams.	$2-$5/pint ($3,000-$18,000/acre, depending on pints/acre) $.65-$1.50/lb to processor	**Soil pH:** 4.5-7.5 **Type:** Clay, loam, sand **Moisture:** Moist-Wet **Light:** ☼	Twiggy, thicket- forming shrub with nice fall color **Flowers:** May-June **Fruit:** Blue/black berries Jun-Sept **Fall Color:** Bright red **Height:** To 12'

***Woody florals**
Cuttings can be taken every 2-3 years and sold to the floral/crafts industry

Cuttings: $0.37-$0.45/stem retail
Wreaths: $45+ each retail

HERBACEOUS PLANTS

Canada Mayflower *Maianthemum canadense* 	A small, perennial understory plant that grows in northern forests	**Flowers:** White clusters, Spring-Summer **Fruit:** Red berries **Height:** 2-6"	**Bee Balm** *Monarda didyma* A garden plant, escaped cultivation, favorite of hummingbirds Likes rich soil	**Flowers:** Dense head with red bracts, Jul-Sep **Fruit:** nut-like **Height:** 1-5'
Cardinal Flower *Lobelia cardinalis* 	Aesthetic plant that grown on stream banks and damp meadows, attracts pollinators and hummingbirds, biennial must be reseeded	**Flowers:** Scarlet, Jul-Oct **Fruit:** **Height:** 2-5'	**Native Wildflowers and Grasses** Common Milkweed *Asclepias syriaca*	A band of native flowers and grasses can be a first line of defense in "buffering" the effects of runoff. They can be planted for aesthetics and to attract wildlife and pollinators. Native Milkweed varieties (pictured), in particular, provide food and shelter for Monarch butterflies.

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These are also great places to find more information on the listed native species!

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Canada Mayflower
a. http://sagebud.com/canada-mayflower-maianthemum-canadense/
Bee Balm
a. http://www.grimenurseryvt.com/bee-balm-care
Cardinal Flower
a. https://hummingbirdgardener.com/2012/08/30/cardinal-flower-a-favorite-native/
Common Milkweed
a. http://columbus.wildones.org/2015/04/20/common-milkweed-essential-for-monarchs/

pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

A SHORT LIST OF SUGGESTED BUFFER PLANTS

ZONE 3

The "working" part of your buffer, allowing mechanical harvesting and planting of your crops

This zone offers the most flexibility in what you want to plant and how you want to maintain and harvest your crops. **Species planted here can be edibles, biomass crops, plants providing wildlife benefits, industrial uses, or just for aesthetic beauty.** Lower-growing grasses and wildflowers can attract a variety of native pollinators.

As always, **use chemicals carefully and don't use anything that will pollute the water.** Planting non-native species may be considered but have a plan to control its spread and prevent it from becoming invasive.

ZONE 1
From water's edge to about 15 feet in
Keep it native!

ZONE 2
Native fruit and nut trees for you and wildlife

ZONE 3
Herbaceous perennials that can be mechanically harvested. "Well-behaved" non-natives allowed here

ROUTE 97

Chestnut Hill to Norristown Transportation Center

KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

- *Route 97 connects Chestnut Hill, Conshohocken, the Metroplex Shopping Center, and the Norristown Transportation Center.*
- *Route 97 is challenged by low ridership throughout the route.*

ROUTE OVERVIEW

Route 97 operates between Chestnut Hill and Norristown Transportation Center. The route serves Metroplex Center, Conshohocken Station, Barren Hill, and Chestnut Hill West Station.

SERVICE OVERVIEW

Schedule

On weekdays Route 97 is available between 4:54 AM until 12:34 AM (see Table 1). Average frequencies are hourly, except for late night and early morning when average frequencies are between 40 and 50 minutes.

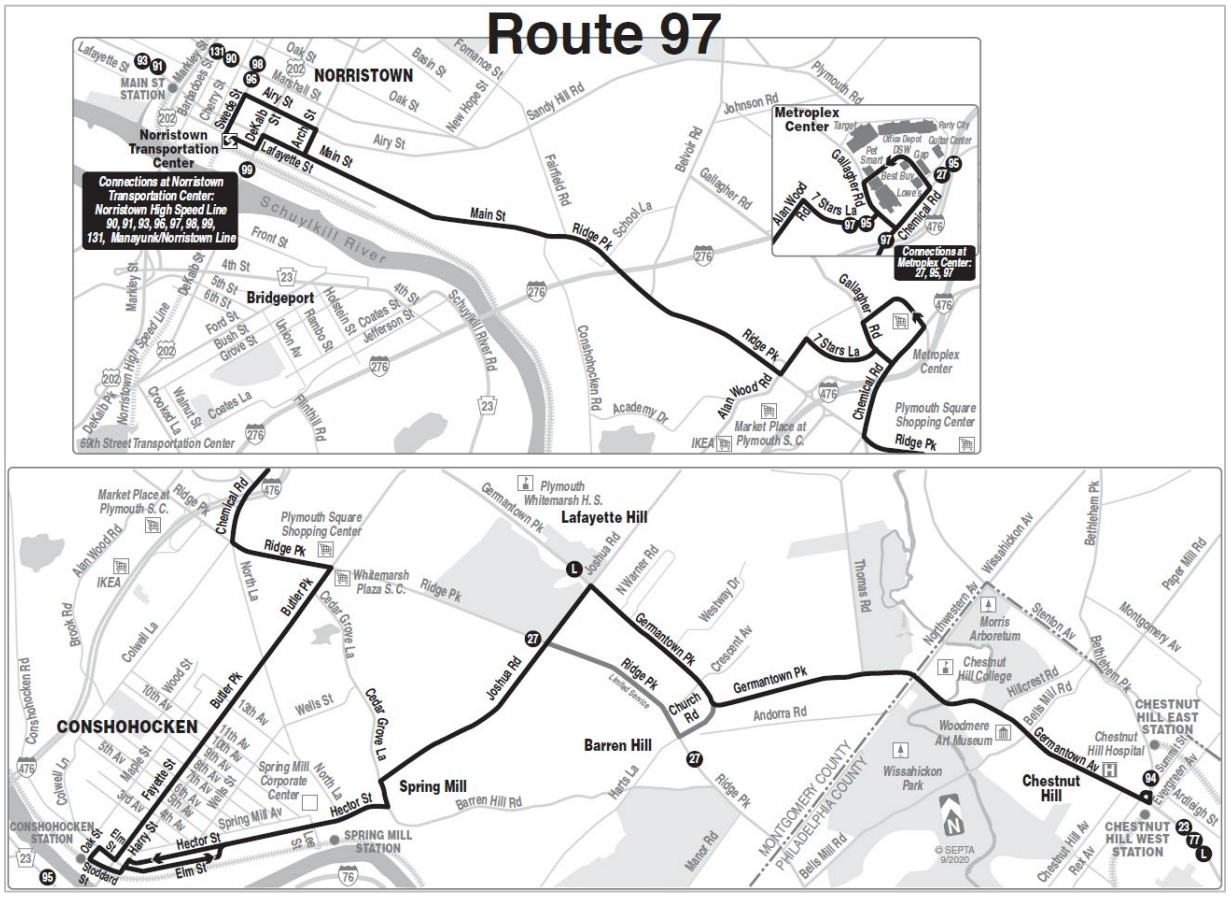
On Saturdays, Route 97 operates between 6:00 AM and 11:15 PM with average frequencies of 60 minutes. Service operates hourly all day. Sunday service on Route 97 begins at 7:15 AM and ends at 9:45 PM. Average frequencies are 60 minutes during the day and 64 minutes at night.

Table 1 | Schedule Statistics

Service Day	Span Of Service	Frequency (Range)	Frequency (Average)
Weekdays	4:00 AM to 12:18 AM		
Early AM	4:00 AM to 5:59 AM	51-51	51
AM Peak	6:00 AM to 8:59 AM	47-68	59
Midday	9:00 AM to 2:59 PM	58-67	60
PM Peak	3:00 PM to 5:59 PM	60-60	60
Evening	6:00 PM to 9:59 PM	60-75	69
Late Night	10:00 PM to 11:59 PM	45-75	60
Owl	Midnight to 3:59 AM	17-60	40
Saturdays	8:00 AM to 7:59 AM		
Day	8:00 AM to 5:59 PM	60-61	60
Night	5:59 PM to 7:59 AM	49-71	61
Sundays	6:43 AM to 10:29 PM		
Day	8:00 AM to 5:59 PM	60-62	60
Night	5:59 PM to 7:59 AM	55-95	64

Note: Span of service reflects the time the first bus begins service until the time the last bus finishes service.

Figure 1 | Route Map



Service Patterns

Route 97 operates with 8 service patterns (see Table 2). The service patterns are generally short-turns of the primary alignment. One service pattern slightly deviates from the primary alignment in addition to being a short-turn.

Table 2 | Service Patterns

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
Inbound							
230894 (A)	Norristown Transportation Center	Chestnut Hill Loop	Primary Pattern		14	12	13
230896 (B)	Norristown Transportation Center	Alan Wood Rd & Ridge Pk	Short-turn to garage	0	3	1	2
230895 (C)	Norristown Transportation Center	Germantown Pk & Church Rd	Short-turn	0	3	1	0
230897 (D)	Norristown Transportation Center	Stoddard Av & Fayette St	Short-turn	0	0	4	0

Outbound							
230899 (A)	Chestnut Hill Loop	Norristown Transportation Center	Primary Pattern		13	13	13
230901 (B)	Germantown Pk & Church Rd	Norristown Transportation Center	Short-turn & serves Ridge Pk	6	6	1	0
230900 (C)	Alan Wood Rd & Ridge Pk	Norristown Transportation Center	AM short-turn	0	1	1	0
230898 (D)	Stoddard Av & Fayette St	Norristown Transportation Center	Short-turn Saturday late night	0	0	3	0

Note: Unique stops are those not served by the primary pattern

RIDERSHIP

In the fall of 2019, Route 97 carried 720 passengers on weekdays, 447 on Saturdays, and 349 on Sundays (see Table 3).

Table 3 | Fall 2019 Ridership and Productivity

	Weekdays	Saturdays	Sundays
Daily Ridership	**720**	**447**	**349**
Rank	100	91	84
Passengers per Revenue Vehicle Hour	**24.6**	**25.4**	**17.2**
Rank	101	82	88

Transfer Patterns

The largest transfer volumes on Route 97 are to and from:

- The Norristown High Speed Line (16.2% of all trips)
- Route L Erdenheim or Plymouth Meeting Mall to Olney Transportation Center (10.8%)
- Route 23 Center City to Chestnut Hill (7.3%)
- Route 27 Broad-Carpenter to Plymouth Meeting Mall (4.0%)
- Route 99 Phoenixville to Norristown Transportation Center (3.4%)

Weekend transfer volumes are slightly lower – 55% on Saturdays, and 48% on Sundays.

Ridership by Stop

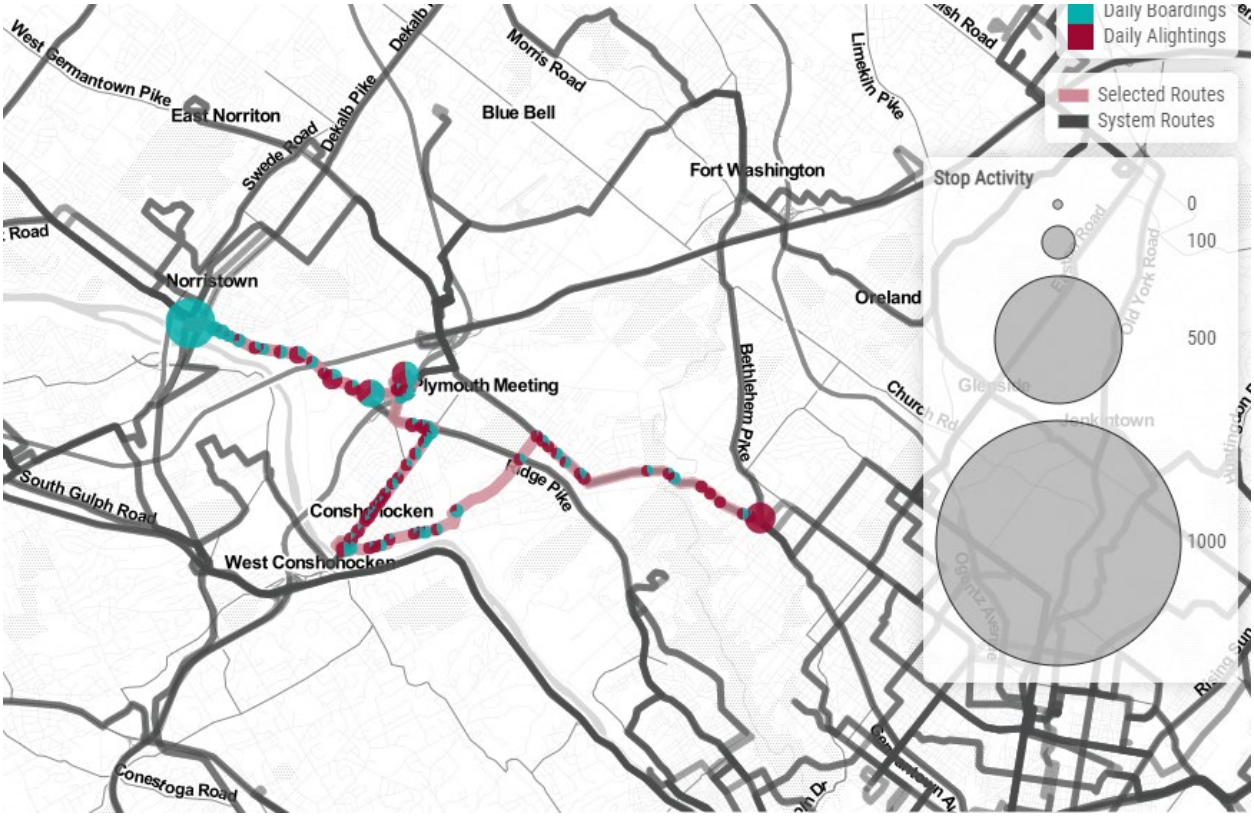
Route 97's ridership is modest with most riders traveling between the Norristown Transportation Center and the Metroplex Shopping Center (see Figure 2). The highest ridership stops on Route 97 traveling eastbound are:

- 163 boardings at Norristown Transportation Center (20.9% of all boardings)
- 38 riders board and 102 alight along Ridge Avenue, combined these stops account for 18.0% of ridership
- 31 riders board and 36 alight at the Metroplex Shopping Center (8.5%)

- 80 passengers alight at the Chestnut Hill Loop (10.3%)

Weekend patterns are also similar but with lower volumes.

Figure 2 | Weekday Westbound Ridership by Stop



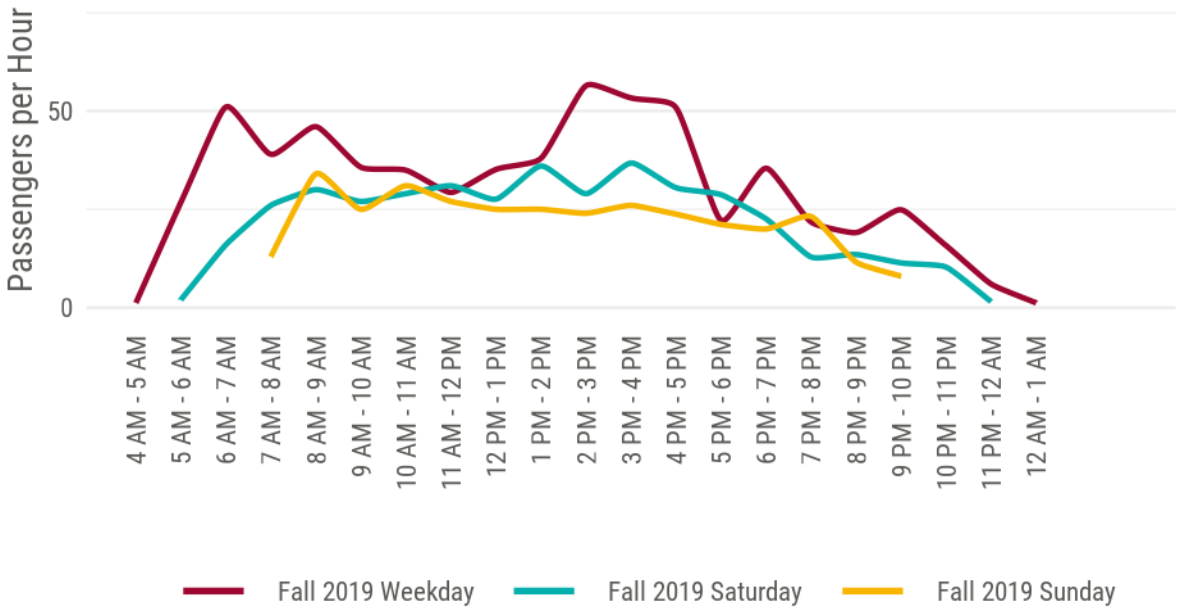
Ridership by Time of Day

Ridership by Hour

Ridership on Route 97 is peaked during the morning (6:00 AM and 8:00 AM) and afternoon (2:00 PM and 4:00 PM) when demand is at or above 50 riders per hour (see Figure 3). At its lowest point, midday ridership is at just over half of peak hour demand. After 5:00 PM ridership starts to decline.

Weekend day ridership does not have peaking patterns; instead, demand was strongest in the middle of the day, between 11:00 AM and 6:00 PM.

Figure 3 | Ridership by Hour: Fall 2019



Ridership and Maximum Loads by Trip

In Fall 2019, weekday ridership per trip was between 10 and 30 (see Figure 4) with the following patterns:

- Ridership per trip was relatively strong (8-22 riders per trip) for most of the day, decreasing after 6:00 PM.
- Demand in the early morning and late evening trips was low.

Maximum loads are below seating capacity on all trips (see Figure 5).

Figure 4 | Fall 2019 Weekday Ridership by Trip

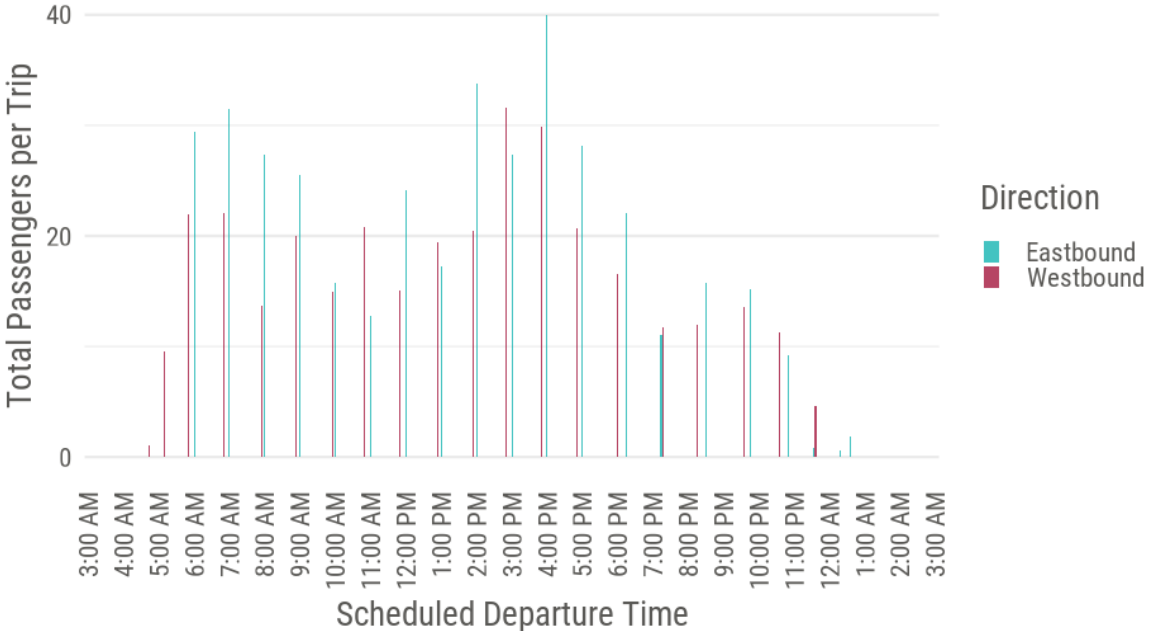
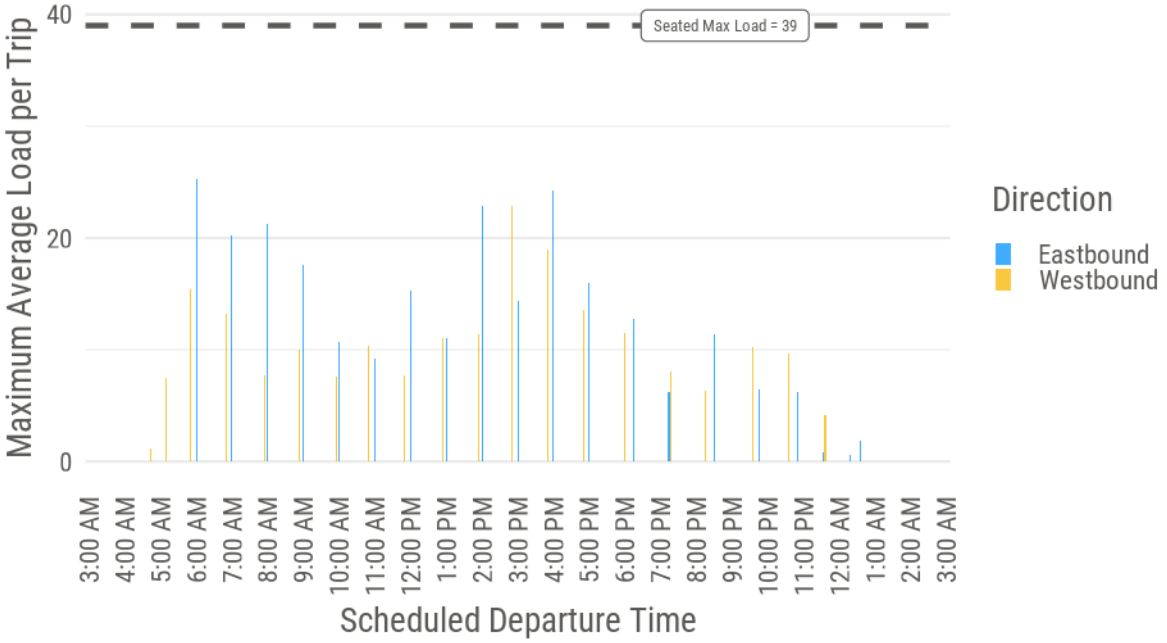


Figure 5 | Fall 2019 Weekday Maximum Loads by Trip



ON-TIME PERFORMANCE AND RUNNING TIMES

On-Time Performance

In the fall of 2019, Route 97's on-time performance was 83% on weekdays, 86% on Saturdays, and 85% on Sundays, exceeding SEPTA's on-time performance goal (see Table 4). Off-schedule performance split relatively equally between early and late service weekdays and Saturdays. On Sundays, early service is a greater contributor to off-schedule service than late service.

Dropped trips were not a significant issue for Route 97.

Table 4 | Fall 2019 On-Time Performance

	Early	On Time	Late	Missed Trips
	(>2 Mins Early)	(<2 Mins Early to 6 Mins Late)	(>6 Mins Late)	
Goal		**80%**		
Fall 2019 Actual				
Weekday	7.6%	82.9%	9.5%	0.7%
Saturday	7.4%	86.0%	6.6%	0.4%
Sunday	11.6%	85.4%	3.0%	0.0%

Note: On-time percentages are for trips that are run (do not include dropped trips)

AVERAGE SPEEDS AND STOP SPACING

In Fall 2019, average speeds varied between 10 and 15 mph (see Figure 6). Bus stop spacing was between 5 and 8 stops per mile for most of the route, although some segments had wider spacing with fewer than 5 stops per mile (see Figure 7).

Figure 6 | Fall 2019 PM Peak Northbound Speeds

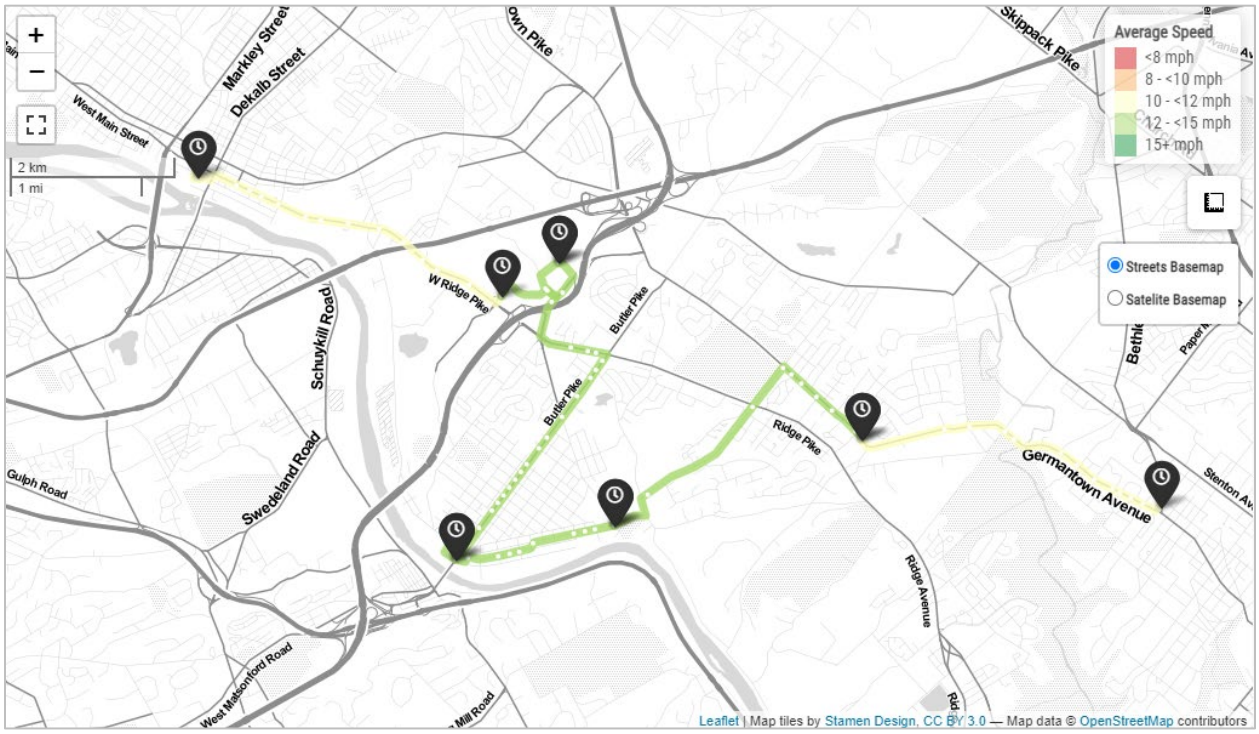
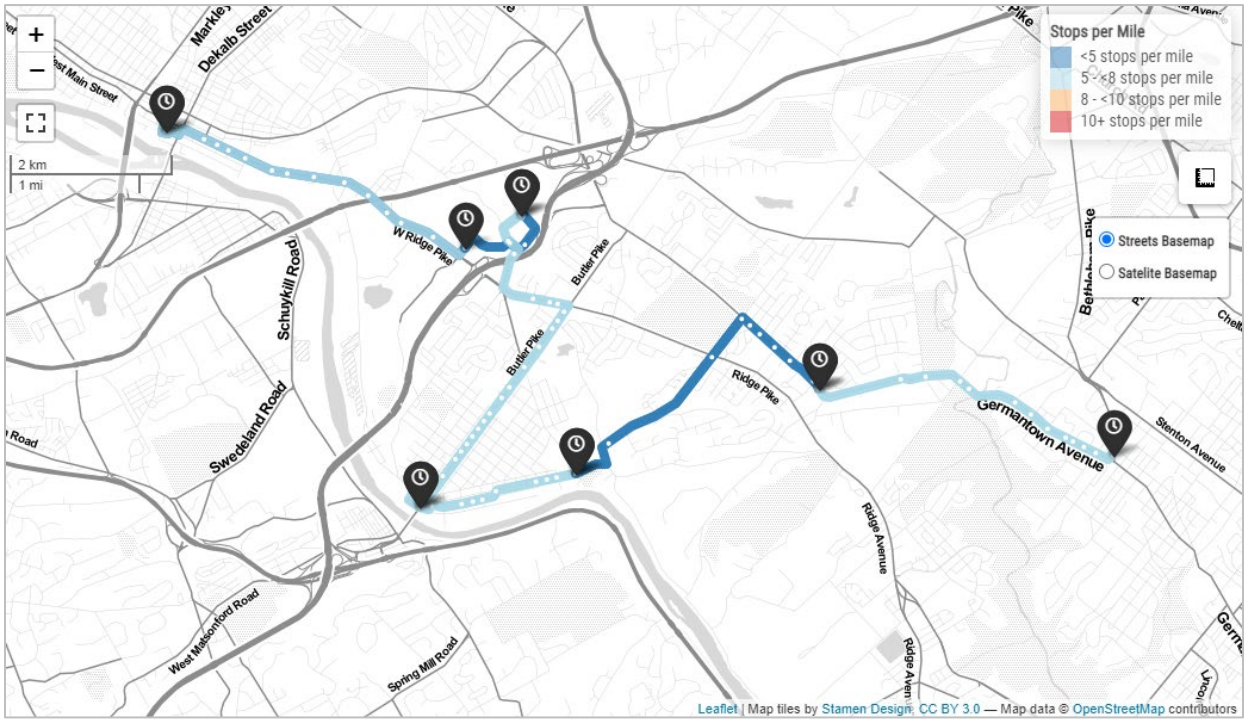


Figure 7 | Stop Spacing by Route Segment



RIDER CHARACTERISTICS

As compared with SEPTA's service area overall, Route 97 riders are more likely to be white. They are also less likely to be seniors but more likely to have a disability (see Table 5).

Table 5 | Rider Characteristics

	Route 97 Riders	Systemwide Average
Median Household Income	$35,015	$32,713
Share in Poverty	29%	30%
Ethnicity		
White	41%	38%
Black	40%	46%
Hispanic	12%	10%
Other	7%	7%
Without a Vehicle	31%	37%
Seniors	10%	15%
With a Disability	5%	2%

SERVICE IMPROVEMENT OPPORTUNITIES

Opportunities to strengthen Route 97 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

- **Simplify and Coordinate Service:** Several routes service similar markets, creating opportunities for more coordination among the routes. Potential coordination strategies include:
    - **Dividing Route 97 into Two Routes:** Route 97 serves multiple markets. Ridership is grouped around connections between 1) the Norristown Transportation Center, the Metroplex shopping center and Conshohocken and 2) between Conshohocken and Chestnut Hill. These two segments could be separate routes and restructured around rider needs in each market with service levels set to meet market demand. **Coordinate Routes 27, 97 and L:** Routes 27, 97 and L have unique alignments but serve similar markets. Route 27 connects to Wissahickon Transportation Center, while Routes 97 and L connect with Chestnut Hill. The three routes converge along Germantown Pike and Ridge Pike, which creates a potential opportunity for Route 97 to travel more directly, staying on Germantown Pike on both the inbound and outbound alignments and/or reducing service patterns.
    - **Alternate Trips from Norristown to Conshohocken and Chestnut Hill:** Another way Route 97 could be restructured would be to alternate trips between the Norristown Transportation Center and Conshohocken and trips between the Norristown Transportation Center and Chestnut Hill Loop. This would absorb some of the service patterns into the route design. It would provide more service on the western half of the route and retain the full route alignment.
- **Reduce the number of variants:** Route 97 operates with 8 service patterns, some of which have low ridership or are only used for a handful of trips. Where feasible, reducing

the number of patterns that operate along Route 97 to make service easier to understand and more customer-friendly. Some of the service patterns could also be folded into a restructured route (see above).

BOROUGH OF CONSHOHOCKEN

Office of the Borough Manager

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Karen Tutino, Member

Stephanie Cecco
Borough Manager

June 6, 2022

Mr. Rick Mellor
616 Germantown Pike
Lafayette Hill, PA 19444

Dear Mr. Mellor,

The Borough of Conshohocken would like to formally thank Whitemarsh Township for allowing Borough representatives to participate in the Whitemarsh Township Spring Mill Multi-Modal and Land Use Study. Both of our municipalities serve as important transportation junctions for Montgomery County, PA. Therefore, it was very exciting to have the opportunity to participate in this study funded by the Transportation and Community Development Initiative (TCDI) Grant from the Delaware Valley Regional Planning Commission. It was our hope that this study would allow our municipalities to focus on and generate an implementation ready plan to solve both the vehicular traffic and emergency management access issues generated by the dead-end nature of Washington Street in Whitemarsh Township.

As we are both aware, our riverfronts have experienced significant residential development with additional development scheduled for approvals in the near future. Washington Street has become a pivotal challenge for both of our municipalities. The nature of Washington Street forces all vehicular traffic and emergency management access through the Borough of Conshohocken. Your grant consultants from Gilmore and Associates did a fantastic job presenting an Executive Summary of the study to our Borough Council on June 1, 2022. During that meeting, Borough Council asked that my office send a letter to Whitemarsh Township ahead of the scheduled June 9th presentation to your Board of Supervisors. From the presentation on June 1st, we are aware that the scope of the original TCDI grant expanded over the course of the study to include other initiatives like waterfront redesign, parking, trail access, bike safety, public river access, pedestrian safety, floodplain management, etc. While those initiatives are very important, the Borough of Conshohocken requests that Whitemarsh focus on the initial goal of the TCDI grant during the decision-making process for implementation and funding which, ultimately, was to generate a solution that would rectify vehicular access restrictions on Washington Street.

We thank you in advance for your consideration. Additionally, we would welcome an opportunity to collaborate with Whitemarsh on next steps in order to facilitate a solution that would be enormously beneficial to both of our municipalities. I am available to meet and discuss this request in more detail if desired.

Sincerely,

Stephanie Cecco
Borough Manager

Cc: Colleen Leonard, Borough Council President
Tina Sokolowski, Borough Council Vice President
Judy Stern-Goldstein, Gilmore and Associates, Inc.