



Final Section 4(f) Evaluation

Prepared for:

Southeastern Pennsylvania Transportation Authority (SEPTA)



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Final Section 4(f) Evaluation

This Final Section 4(f) Evaluation has been prepared to comply with Section 4(f) of the US Department of Transportation (USDOT) Act of 1966 (49 U.S.C. § 303), hereinafter referred to as “Section 4(f),” and its implementing regulations codified at 23 CFR Part 774. Additional guidance was obtained from Federal Highway Administration (FHWA) Technical Advisory T6640.8A (FHWA 1987b) and the revised FHWA Section 4(f) Policy Paper (FHWA 2012).

A Draft Section 4(f) Evaluation was included in the October 17, 2017 *King of Prussia Rail Extension Draft Environmental Impact Statement* (DEIS), and was subject to public and US Department of the Interior (DOI) review during the DEIS public comment period (October 17, 2017 to December 8, 2017). Because a new Section 4(f) property was identified after the DEIS was published, FTA re-issued the Draft Section 4(f) Evaluation for public and DOI review on November 25, 2020 in compliance with 23 CFR 774.5(a). FTA provided notification of its intent to make a *de minimis* impact determination in this Draft Section 4(f) Evaluation (23 CFR 774.5(b)). FTA received concurrence from the US Department of the Interior on the Draft Section 4(f) Evaluation on November 22, 2020 (Appendix C). FTA received no comments on the Draft Section 4(f) Evaluation.

This Final Section 4(f) Evaluation is included in the January 8, 2021 *King of Prussia Rail Extension Combined FEIS/ROD*. The Final Section 4(f) Evaluation identifies properties that are protected by Section 4(f), evaluates the use of these properties by the King of Prussia Rail Extension (Project), provides FTA’s findings under Section 4(f), and describes all planning to minimize harm to Section 4(f) properties.

1 Methodology

Section 4(f) of the US Department of Transportation (USDOT) Act of 1966, 49 U.S.C. Part 303(c) is a federal law that protects publicly owned parks, recreation areas, wildlife and/or waterfowl refuges, as well as significant historic sites, whether publicly or privately owned, from use in transportation projects unless there is no feasible and prudent alternative to meet the Project purpose and need. Section 4(f) requirements apply to all transportation projects that require funding or other approvals by the USDOT. As a USDOT agency, Federal Transit Administration (FTA) must comply with Section 4(f). FTA’s Section 4(f) regulations are codified in 23 CFR Part 774.

FTA cannot approve a transportation project that uses a Section 4(f) property, as defined in 23 CFR 774.17, unless FTA determines that:

- There is no feasible and prudent avoidance alternative, as defined in 23 CFR 774.17, to the use of land from the Section 4(f) property, and the action includes all possible planning, as defined in 23 CFR 774.14, to minimize harm to the property resulting from such use (23 CFR 774.3(a)); or
- The use of the Section 4(f) property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by

the applicant will have a *de minimis* impact, as defined in 23 CFR 774.17, on the property (23 CFR 774.3(b)).

The evaluation included the following steps, described in this chapter:

- Identification of Section 4(f) properties
- Definition of Section 4(f) uses
- Individual Section 4(f) evaluation
- *De minimis* impact analysis
- Avoidance analysis
- All planning to minimize harm

1.1 Identification of Section 4(f) Properties

Southeastern Pennsylvania Transportation Authority (SEPTA) reviewed existing mapping, conducted field investigations/site reconnaissance, searched property records and consulted officials with jurisdiction to identify Section 4(f) properties within the Project study area. The Project study area consists of two parts. In the King of Prussia area, the Project study area is the geographic area within 500 feet on either side of the centerline of the Preferred Alternative, as well as ½-mile from the center point of all proposed station areas. In Upper Darby, the Project study area is the geographic area within 100 feet on either side of the centerline of the proposed new track at SEPTA's 69th Street Transportation Center. The Project study area in both locations is shown on the maps in Appendix B.

1.1.1 Public parks

Public ownership of parks was verified through coordination with the officials with jurisdiction over those properties, specifically Upper Merion Township and Montgomery County. The public parks in this Final Section 4(f) Evaluation are listed below and in **Table 4-1**:

- Chester Valley Trail Extension
- PECO Easement
- Kingwood Road Park
- Valley Forge National Historical Park (also an historic property)

1.1.2 Historic properties

An Area of Potential Effects (APE) was defined around the Preferred Alternative in consultation with the Pennsylvania Historical and Museum Commission (PHMC), which is the State Historic Preservation Office (SHPO) in Pennsylvania.¹ Properties known to be historic or determined to be historic were identified according to the regulations governing Section 106 of the National Historic Preservation Act (NHPA) of 1966 (36 CFR 800). At this stage, formal determinations of eligibility and effect for each resource under Section 106 have been made and are discussed in Section 4. The historic properties in this Final Section 4(f) Evaluation are listed below and in

Table 4-1:

- Pennsylvania New Jersey (PNJ) Interconnection; Conowingo to Plymouth Meeting Transmission Line
- Pennsylvania Turnpike Delaware River Extension
- King of Prussia Inn
- Pennsylvania Turnpike: Philadelphia Extension
- General Electric Space Technology Center
- American Baptist Churches, USA Mission Center
- Valley Forge National Historical Park (also a public park)
- Philadelphia Transit Co. Building (69th Street Transportation Center)

1.2 Definition of Section 4(f) Uses

After identifying the Section 4(f) properties in the Project study area, FTA determined whether and to what extent the Preferred Alternative will impact Section 4(f) properties that would result in a Section 4(f) use of each property. The type of Section 4(f) use was then determined according to the definitions below.

- **Permanent Use**—Pursuant to 23 CFR 774.17, a permanent use occurs when land from a Section 4(f) property is permanently incorporated into a transportation project. This may occur as a result of partial or full acquisition of the Section 4(f) property, permanent easements or temporary easements that exceed regulatory limits.
- **Constructive Use**—As defined in 23 CFR 774.15(a), a constructive use occurs when a transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a property for protection under Section 4(f) are substantially

¹ It is important to recognize the difference between Section 4(f) use of historic properties and Project effects to historic properties under Section 106 of the National Historic Preservation Act, which are discussed in Section 4.7 of the DEIS. Section 4(f) and Section 106 are similar in that they both mandate consideration of historic properties in the planning of a federal undertaking. Section 4(f) applies to the actual use or occupancy of a historic site, while Section 106 involves an assessment of adverse effects of an action on historic properties. The Section 106 process is integral to the Section 4(f) process when historic properties are involved. Conversely, the Section 4(f) process is not integral to the Section 106 process.

impaired. The assessments of the potential for proximity effects of the Preferred Alternative that are provided in the 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) are used by FTA to determine whether a constructive use of properties protected by Section 4(f) will occur.

- **Temporary Use**—As defined in 23 CFR 774.13(d), a temporary use occurs when there is a temporary use of land that is “adverse in terms of the statute’s preservation purpose as determined by the criteria in 23 CFR 774.13(d).” If the criteria in 23 CFR 774.13(d) are met, the “temporary occupancy exception” applies in which there is no “use” of the Section 4(f) property. If the criteria in 23 CFR 774.13(d) are not met, the use is evaluated as permanent.

1.3 Temporary Occupancy Exception

As defined in 23 CFR 774.13(d), a temporary occupancy exception occurs when there is a temporary use of land that is not “adverse in terms of the statute’s preservation purpose” as determined by the criteria in 23 CFR 774.13(d):

- Duration of occupancy must be temporary; i.e., less than the time needed for construction of the project, and there can be no change in ownership of the land.
- The scope of work must be minor; i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal.
- There can be no anticipated permanent adverse physical impacts, nor can there be interference with the activities, features, or attributes of the property, on either a temporary or permanent basis.
- The land being used must be fully restored; i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project.
- Written concurrence must be obtained from the officials with jurisdiction, documenting agreement with the above conditions. If the officials with jurisdiction do not agree with a temporary occupancy exception determination, an analysis of use must be conducted. If concurrence is obtained from the officials with jurisdiction over the properties, a final determination will be made by FTA in the Final Section 4(f) Evaluation, which will be included in the Record of Decision.

1.4 Individual Section 4(f) Evaluation

The term “individual Section 4(f) evaluation” is used to refer to the process of assessing avoidance alternatives, determining the alternative with the least overall harm and considering all possible planning to minimize harm for each property. This analysis is required for all uses of a Section 4(f) property except in the case of a *de minimis* impact determination. The steps in this analysis are described below; parenthetical references are to the clauses in the cited regulation.

- **Analyze Avoidance Alternatives** - In this step, FTA considers alternatives that completely avoid the use of a Section 4(f) property. The avoidance analysis applies the Section 4(f) feasible and prudent criteria (23 CFR 774.17(2) and (3)). An alternative is not feasible if it cannot be built as a matter of sound engineering judgment (2). An avoidance alternative is not considered prudent (3) if:
 - (i) it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
 - (ii) it results in unacceptable safety or operational problems;
 - (iii) after reasonable mitigation, it still causes: (A) severe social, economic, or environmental impacts; (B) severe disruption to established communities; (C) severe disproportionate impacts to minority or low income populations; or (D) severe impacts to environmental resources protected under other Federal statutes;
 - (iv) it results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
 - (v) it causes other unique problems or unusual factors; or
 - (vi) it involves multiple factors as described above in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.
- **Determine Alternative with Least Overall Harm** - If no feasible and prudent alternative is identified that will avoid using a Section 4(f) property, FTA determines the alternative that will cause the least overall harm to the Section 4(f) property using the following factors (23 CFR 774.3(c)1): (1) the ability to mitigate adverse impacts to each Section 4(f) property; (2) the relative severity of the remaining harm after mitigation; (3) the relative significance of each Section 4(f) property; (4) the views of the officials with jurisdiction over each property; (5) the degree to which each alternative meets the project purpose and need; (6) the magnitude of adverse effects to resources not protected by Section 4(f); and (7) substantial cost differences among the alternatives.
- **All Possible Planning to Minimize Harm** - Upon determining that there are no feasible and prudent alternatives to avoid a Section 4(f) property, FTA considers and incorporates all possible planning to minimize the impacts of the Project. All possible planning, as defined in 23 CFR 774.17, means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project.
- **Coordinate with Officials with Jurisdiction** - FTA is coordinating with the officials with jurisdiction regarding the Section 4(f) properties and is seeking their concurrence before determinations are made in the Final Section 4(f) Evaluation.

1.5 *De minimis* Impact

A determination of *de minimis* impact can be made only if the Project will not adversely affect the features, attributes or activities that make the Section 4(f) property significant. The specific requirements for a *de minimis* impact determination are different for historic sites and for public

parklands, recreational areas, and wildlife and waterfowl refuges. Per Section 4(f) regulations, evaluations of avoidance alternatives and selection of an alternative having the least overall harm are not required if a *de minimis* impact determination is made.

If the officials with jurisdiction do not agree with a *de minimis* impact determination, an analysis of avoidance alternatives must be conducted. If the analysis concludes that there is no feasible and prudent alternative to use of the Section 4(f) property, FTA may only approve the alternative that causes the least overall harm. A least overall harm analysis is conducted to determine which alternative may proceed. A *de minimis* impact determination is inappropriate where a project results in a constructive use (23 CFR 774.3(b) and 23 CFR 774.17).

1.5.1.1 Historic Properties

As defined in 23 CFR 774.5 and 774.17, a *de minimis* impact determination is made for an historic site if FTA makes a determination of “No Adverse Effect” or “No Historic Properties Affected” through consultation under Section 106 of the NHPA, and the SHPO concurs with that determination.

1.5.1.2 Parks, Recreation Areas and Refuges

A *de minimis* impact on a public parkland, recreational area, and/or wildlife and waterfowl refuge is defined as that which does not “adversely affect the features, attributes or activities qualifying the property for protection under Section 4(f)” as defined in 23 CFR 774.17. This determination can be made only with the concurrence of the officials with jurisdiction, and can be made only after an opportunity for public review and comment on the preliminary determination. Public review and comment is being sought for the preliminary determinations in this Final Section 4(f) Evaluation.

2 Project Purpose and Need

The purpose of the proposed Project is to provide faster, more reliable public transit service to the King of Prussia (KOP) area that:

- Offers improved transit connections to the area from communities along the existing Norristown High Speed Line, Norristown, and Philadelphia;
- Improves connectivity between defined key destinations within the King of Prussia area; and
- Better serves existing transit riders and accommodates new transit patrons.

The need for expanded transit service in Montgomery County has been identified for more than 20 years in regional studies and local plans. The Project need stems from existing transit service deficiencies that are expressed by long travel times, delays due to roadway congestion, required transfers leading to two or more seat trips, and destinations that are underserved, or currently not served, by public transit. These needs are compounded by growing population and employment in the area, concentrations of major commercial development in King of Prussia, and significant planned development for the area.

3 Descriptions of No Action and Preferred Alternatives

This section briefly describes the Preferred Alternative and the No Action Alternative. More detail about the Preferred Alternative is provided in Appendix A. Appendix A also includes a summary of the alternatives development and screening process that occurred was included in the 2017 *King of Prussia Rail Extension Draft Environmental Impact Statement and Draft Section 4(f) Evaluation* (www.kingofprussiarail.com), the latter being a chapter of the former.

3.1 No Action Alternative

The No Action Alternative is the 2040 condition without the Project; it assumes that other major regional committed projects will occur. The major regional committed projects consist primarily of planned capacity and operational improvements to regional and local study area roadways, particularly US Route 422 and the Pennsylvania Turnpike (see **Table 3.1-1**). All but one roadway project is located at the periphery of the transportation study area. Though not a major regional project, Montgomery County's Chester Valley Trail Extension is also within the transportation study area. In addition to the major regional committed projects, the No Action Alternative consists of roadway and transit networks, transit service levels, traffic volumes, and forecasted demographics for the horizon year 2040. With the exceptions of the Norristown High Speed Line Bridgeport Viaduct and Norristown High Speed Line Transit System Preservation projects, SEPTA has no control over the scope, timing, implementation or effects of the listed committed projects.

Table 3.1-1: Transportation Study Area Major Regional Committed (Funded) Projects by 2040

Project	Type	Description
I-276 and Lafayette Street / Ridge Avenue	Roadway	New interchange for Norristown
Henderson Road, Roadway System Expansion	Roadway	Widen Henderson Road from South Gulph Road to Shoemaker; Widen South Gulph Road from Crooked Lane to I-76 Gulph Mills intersection
I-76 Pennsylvania Turnpike	Roadway	Reconstruct and widen the Turnpike from Morgantown, Berks County to Valley Forge
Traffic Management Center, Roadway Operational Improvement	Roadway	New regional traffic management center at PennDOT District 6 Headquarters
US 422 Bridge and PA 23 Interchange (River Crossing), Roadway System Expansion	Roadway	Bridge replacement and new bridge over Schuylkill River - existing bridge is 5 lanes, new bridge will have 6 lanes; Intersection/interchange improvements at US 422 and PA 23 Interchange
PA 23 and Trout Creek Road, Roadway System Expansion	Roadway	Replace weight restricted bridge on a new alignment; realign roadway between Moore Road and Vandenberg Road providing two westbound lanes and one eastbound lane

Project	Type	Description
I-76 Integrated Corridor Management, Roadway System Expansion	Roadway	Variable speed limits, queue detection, dynamic lane assignments, junction control improvements, adaptive ramp metering, continuous monitoring systems, responsive traffic control, coordination with SEPTA, biking enhancements, and full safety analysis
Lafayette Street, Roadway System Expansion	Roadway	Extend roadway from Barbadoes Street to Diamond Avenue
Norristown High Speed Line Bridgeport Viaduct, Transit System Preservation	Transit	Rehabilitate Bridgeport Viaduct over Schuylkill River and Bridge 0.15 over 69th Street yard tracks on existing line
Norristown High Speed Line, Transit System Preservation	Transit	Tie Replacement and Continuous Welded Rail on existing line

Source: DVRPC, *Connections 2045 Plan for Greater Philadelphia*, access July 28, 2020 via Amended Major Regional Projects.

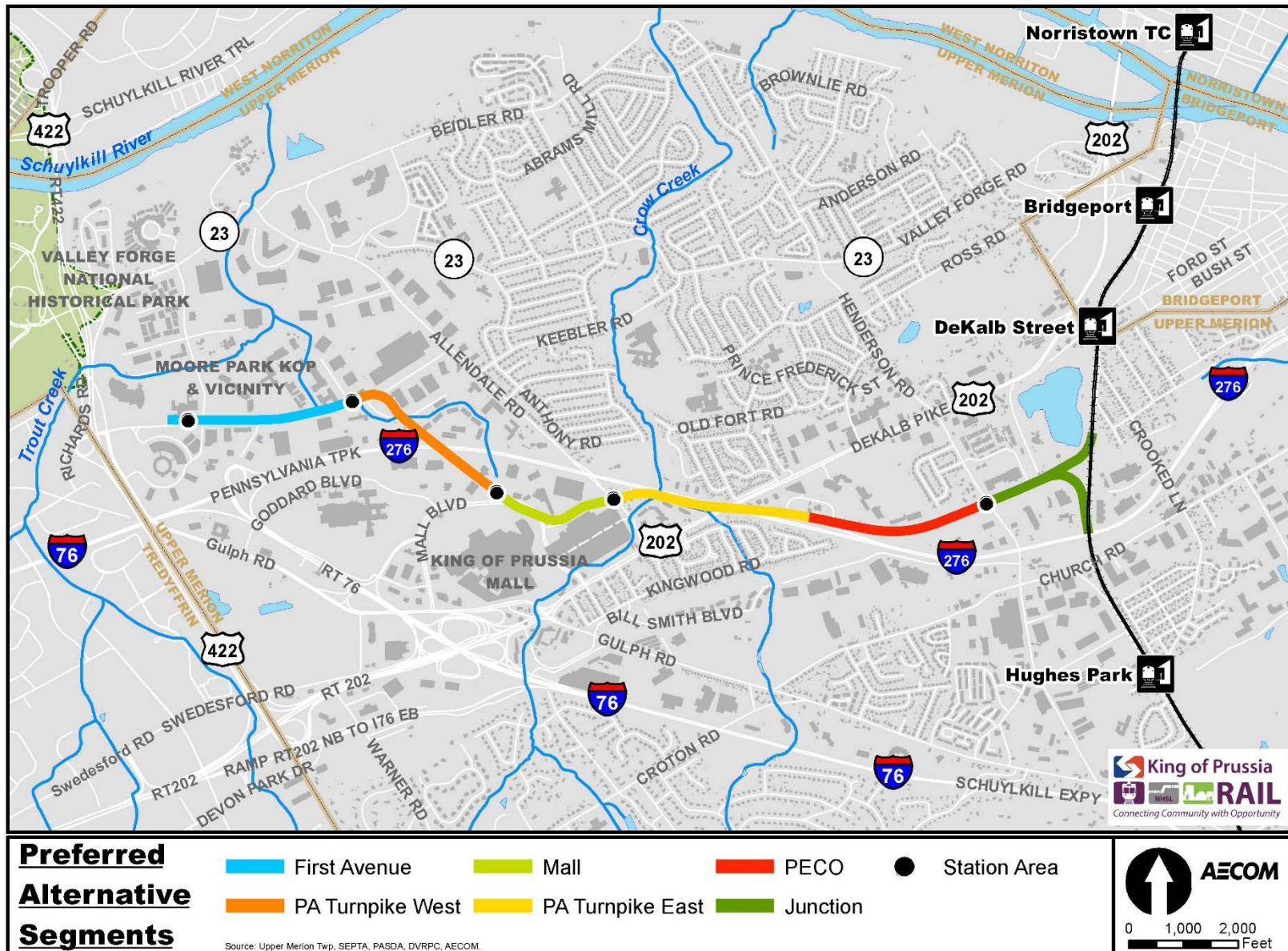
3.2 Preferred Alternative

The Preferred Alternative consists of 3.5 miles of new, double-track guideway that will branch off of the existing Norristown High Speed Line (NHSL) and extend westward to the King of Prussia Mall, terminating near the Valley Forge Casino Resort (VFCR) along First Avenue. Along the guideway, five new stations are proposed: Henderson Road, Allendale Road, Mall Blvd, First & American and First & Moore. Also, as part of the Project, SEPTA will reconstruct an existing platform and extend an existing track at the existing 69th Street Transportation Center to accommodate the new Project service. New, supporting facilities along the guideway will include park-and-ride facilities for 500 vehicles each at two locations (Henderson Road Station and First & Moore Station, three traction power substations, communications and signals equipment, and stormwater management facilities). The guideway is defined and described in this Final Section 4(f) Evaluation according to five geographic segments (**Figure 3.2-1**):

- Junction: NHSL to Henderson Road Station
- PECO: Henderson Road Station to Pennsylvania Turnpike Service Plaza
- Pennsylvania Turnpike East: Pennsylvania Turnpike Service Plaza to Allendale Road Station
- Mall: Allendale Road Station to Mall Blvd Station
- Pennsylvania Turnpike West: Mall Blvd Station to First & American Station
- First Avenue: First & American Station to First Avenue Station

A detailed description of the alternatives considered as part of the Project is provided in Appendix A.

Figure 3.2-1: Preferred Alternative Guideway Segments



4 Identification and Assessment of Use of Section 4(f) Properties

This Final Section 4(f) Evaluation identifies and assesses four public parks and/or recreational areas and seven historic properties (including one park that is also an historic property) that are Section 4(f) properties within the Project study area. No wildlife or waterfowl refuges are within the Project study area. Two historic railroad properties are in the Project study area: the Pennsylvania Railroad: Morrisville Line, and the Philadelphia and Western Railway (Norristown High Speed Line). The Fixing America's Surface Transportation (FAST) Act specifically exempts these railroads from evaluation under Section 4(f) because each railroad meets the FAST Act requirements for exemption:

“Section 11502 (23 U.S.C. 138(f)/49 U.S.C. 303(h)) exempts from Section 4(f) review the use of railroad and rail transit lines, or elements thereof, that are in use or that were historically used for the transportation of goods or passengers. The exemption applies regardless of whether the railroad or rail transit line, or element thereof, is listed on or is eligible for listing on the National Register of Historic Places.”

Each historic property was determined eligible for listing in the National Register of Historic Places (NRHP) (23 CFR § 774.17) during the Section 106 consultation for the Project, or was previously determined eligible or listed in the NRHP by others. Section 106 consultation is described for each historic property in this section. Additional information on historic properties is provided in the 2016 *KOP Rail Intensive-Level Survey and Eligibility Report*, the 2017 *KOP Rail Determination of Effects Report*, and the FTA letter to the SHPO dated October 16, 2020 (www.kingofprussiarail.com). **Table 4-1** lists the Section 4(f) properties in the Project study area that are evaluated. The maps in Appendix B depict the locations of these properties. **Table 4-1** also includes Section 4(f) properties that are within the study areas of the Action Alternatives considered in the October 17, 2017 DEIS; they are included in this Final Section 4(f) Evaluation because they are relevant to the avoidance and least overall harm analyses in Sections 5 and 6.

The following subsections describe, from east to west, the public parks, recreational areas and historic properties that are located within the Project study area. This description is followed by an assessment of use by the Preferred Alternative. **Table 4-2** summarizes the results of the assessment of use of Section 4(f) properties by the Preferred Alternative.

Table 4-1: Section 4(f) Properties Evaluated

Prop #	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
1	Chester Valley Trail Extension	Planned multi-use recreation trail	Aligned along former Philadelphia and Reading Railroad corridor; crosses under Preferred Alternative at Saulin Boulevard, Upper Merion Township	Montgomery County	Planned multi-use trail on former railroad corridor; Montgomery County owns former Philadelphia and Reading Railroad corridor
2	Pennsylvania New Jersey (PNJ) Interconnection; Conowingo to Plymouth Meeting Transmission Line	Historic electric utility corridor (NRHP-eligible, Criteria A and C)	Portion of PECO electric utility corridor within the APE	SHPO	Linear electric transmission corridor; contributing elements include existing steel lattice towers supporting cable circuits
3	Pennsylvania Turnpike Delaware River Extension	Historic highway (NRHP-eligible, Criteria A)	Crosses King of Prussia from Norristown High Speed Rail (NHSL) west to the Pennsylvania Turnpike's King of Prussia Interchange; Preferred Alternative aligned within Turnpike right-of-way (ROW) between PECO and Allendale Road; Preferred Alternative crosses between King of Prussia Mall and American Avenue; Montgomery, Delaware and Bucks Counties	SHPO	Multi-lane regional interstate highway corridor; no existing contributing elements in the Project study area; non-contributing elements include travel lanes (originally two in each direction); interchanges and toll plazas; tunnels; abandoned sections; bridges, culverts and retaining walls; service plazas; maintenance facilities; and state police stations.
4	PECO Easement (a)	Recreational area	Northern portion of PECO utility corridor west of Pennsylvania Turnpike	Upper Merion Township and Montgomery County	Open space view and passive recreation
5	Kingwood Road Park (a)	Park	PECO utility corridor along Kingwood Road	Upper Merion Township	Active use park with softball field, basketball courts, shelter, picnic area, and play apparatus

Prop #	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
6	King of Prussia Inn (a)	Historic structure (NRHP-listed, Criterion C)	Bill Smith Boulevard, south of US Route 202; south of and outside Preferred Alternative APE	SHPO	Architecturally significant as an early roadside inn dating to the 18 th Century; site of political gatherings during the American Revolution and function as a public house
7	Pennsylvania Turnpike: Philadelphia Extension	Historic structure (NRHP-eligible, Criterion A)	Extends west from the King of Prussia Interchange; property is outside Preferred Alternative APE	SHPO	Significant for its association with the post-World War II toll-road movement, a transformative initiative that resulted in an interstate system of limited-access tolled highways
8	General Electric Space Technology Center (a)	Historic structure (NRHP-eligible, Criteria A and C)	230 Mall Boulevard, Upper Merion Township; west of the King of Prussia Mall	SHPO	Significant for its architecture and contribution to science and technology
9	American Baptist Churches, USA Mission Center	Historic structure (NRHP-eligible, Criteria A and C)	Southeast corner of First Avenue/N. Gulph Road intersection; south of Preferred Alternative guideway, First & Moore station, and park-and-ride facility, Upper Merion Township	SHPO	Architecturally significant building complex (4 buildings) and campus landscape features
10	Valley Forge National Historical Park and Valley Forge National Historic Landmark (NHL)	Historic property (NHRP-listed, Criteria A, B, C, and D) and NHL	West of US Route 422; outside Preferred Alternative APE	SHPO and NPS	Nationally significant American Revolution site, associated with Baron von Steuben; historic buildings, structures, landscapes, objects, archaeological sites and natural resources
11	Philadelphia Transit Co. Building (69 th Street Transportation Center)	Contributing element to two NRHP-eligible historic districts; not individually NRHP-eligible	Southern terminus of NHSL, Market and 69 th Streets, Upper Darby Township	SHPO	Existing, operating rail and bus terminal building and yards

(a) Property is outside the Preferred Alternative study area; however, the property is relevant to the avoidance and least overall harm analyses, which discuss other alternatives considered and the Section 4(f) properties potentially impacted by them.

Table 4-2: Use of Section 4(f) Properties by the Preferred Alternative

Property Name	Overall Property Size	Preferred Alternative		
		Permanent Impacts (acres/% of property)	Temporary Impacts During Construction (acres/% of property)	Section 4(f) Finding by FTA
1. Chester Valley Trail Extension	3.8 miles	0/0%	0.6 ac, <0.02 mile/<0.5%	Temporary Occupancy Exception, No Use
2. PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line	210 miles (46 acres in APE)	Replace approximately 4 towers	0/0%	Permanent Use, not <i>de minimis</i>
3. Pennsylvania Turnpike: Delaware River Extension	32 miles	6.2 ac, approx.1 mile/3%	3.9 ac, approx.1/2 mile/2%	Permanent Use, <i>de minimis</i> impact
4. PECO Easement (a)	14.3 acres	0/0%	0/0%	No use
5. Kingwood Road Park (a)	2.5 acres	0/0%	0/0%	No use
6. King of Prussia Inn (a)	Building	0/0%	0/0%	No use
7. Pennsylvania Turnpike: Philadelphia Extension	104 miles	0/0%	0/0%	No use
8. General Electric Space Technology Center (a)	121 acres	0/0%	0/0%	No use
9. American Baptist Churches, USA Mission Center	23 acres	0/0%	0/0%	No use
10. Valley Forge National Historical Park	3,465 acres	0/0%	0/0%	No use
11. Philadelphia Transit Co. Building (69 th Street Transportation Center)	Building	0/0%	0/0%	No use

Notes: No constructive uses will occur. (a) Property is outside the Preferred Alternative study area; however, the property is relevant to the avoidance and least overall harm analyses, which discuss other alternatives considered and the Section 4(f) properties potentially impacted by them.

Source: AECOM 2020.

4.1 (1) Chester Valley Trail Extension

The regional Chester Valley Trail runs for 13.5 miles in Chester County into Montgomery County and Upper Merion Township to its current terminus on the west side of South Gulph Road. Montgomery County administers this paved, multi-use recreation trail in the township. The County is constructing a 3.8 mile extension of the Chester Valley Trail eastward from its current terminus along the south side of the Township/County's PECO Easement on the PECO utility corridor to the Pennsylvania Turnpike. Before the Pennsylvania Turnpike, the proposed trail will transition to follow along Hansen Access Road eastward until joining the County-acquired former East Penn Railroad LLC railroad corridor. The trail will turn north using the former railway corridor, which continues north along the north-south leg of Saulin Boulevard and across US Route 202 toward Bridgeport (**Figure 4.1-1**). Trail construction is expected to be completed in 2022.

Figure 4.1-1: Chester Valley Trail Extension ROW across US Route 202

Findings, Chester Valley Trail Extension:

No Permanent Use. The Preferred Alternative will cross the County's right-of-way (ROW) for the Chester Valley Trail Extension (former Philadelphia and Reading Railroad corridor) at Saulin Boulevard (map in Appendix B). The planned trail will be at grade with the existing roadway. The elevated guideway of the Preferred Alternative will cross over the proposed at-grade trail alignment. Vertical clearance over the trail will be approximately 21 feet. Guideway support columns will be designed to not impact the trail or its ROW, thereby not requiring permanent incorporation of land from the trail ROW and avoiding impact to the trail. FTA made a finding of no use for the Chester Valley Trail Extension because the Preferred Alternative will not permanently incorporate land from the Chester Valley Trail Extension.



No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the Chester Valley Trail Extension, specifically, noise, vibration and visual effects. The noise and vibration analyses in the combined FEIS/ROD² identified no noise or vibration impacts to the Chester Valley Trail Extension. The proposed elevated guideway would be a new visual element crossing over the trail; the potential visual change at the crossing of the Chester Valley Trail Extension was assessed in the combined FEIS/ROD to be moderate because the existing visual character of the trail route is developed and trail user sensitivity to views will be low to moderate. Although a visual change will occur, the Chester Valley Trail Extension will not experience visual impacts from the Preferred Alternative that will impair the activities, features or attributes of the property; and no proximity impacts will occur that are so severe that the

² 2017 King of Prussia Rail Combined Final Environmental Impact Statement (www.kingofprussiarail.com)

protected activities, features or attributes that qualify the Chester Valley Train Extension for protection under Section 4(f) will be substantially impaired. FTA made a finding of no constructive use of the Chester Valley Trail Extension.

Temporary Occupancy Exception, No Use. The Preferred Alternative will temporarily occupy Chester Valley Trail Extension land to provide construction work area and access. Specifically, SEPTA will temporarily occupy a strip of land alongside the existing roadway ROW at the trail crossing (approximately 0.6 acre (<0.5% of the property) at Saulin Boulevard. However, FTA made a finding of temporary occupancy exception, pursuant to 23 CFR 774.13(d) because the Preferred Alternative satisfies the five criteria:

- 1) Because the trail crossing is a relatively small work area compared to the overall length of the Project, the duration required to construct the portion of the Preferred Alternative at the trail crossing will be less than the overall three-year Project construction duration. No change in land ownership will occur.
- 2) The scope of the Project construction work at the trail crossing will be minor in nature and magnitude (<0.5% of the property) in comparison to the 3.8-mile length of the overall trail extension. SEPTA will temporarily occupy land within the trail ROW at the Project crossing to enable access by construction workers and equipment to the elevated guideway structure overhead. SEPTA will coordinate with the County regarding temporary re-routing the trail during Project construction. The land areas SEPTA temporarily uses will be designated as construction work areas; work areas will be secured to protect the safety of construction workers and the public. Other parts of the trail will not be impacted and will remain open to trail users.
- 3) No permanent, adverse physical impact to the trail will occur as a result of construction activity. As other portions of the trail will remain open to trail users, and as SEPTA will restore the part of the property and trail it temporarily disturbs at the end of its construction activity, no permanent or temporary interference with the activities, features or attributes of the trail will occur.
- 4) SEPTA will fully restore the land that is temporarily used, including the trail itself.
- 5) SEPTA is coordinating with Montgomery County about the Project crossing over the proposed Chester Valley Trail Extension. On December 24, 2020, FTA received concurrence from the County on its proposed temporary occupancy determination for the Chester Valley Trail Extension (Appendix C). The County's agreement enables FTA to make a final determination of temporary occupancy exception for the Chester Valley Trail Extension.

4.2 (2) PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line

The PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line is a 210-mile ring of high-voltage transmission lines constructed in the 1920s to service Pennsylvania and New Jersey (**Figure 4.2-1**). The system was fueled by three power plants, the largest of which was located at Conowingo, MD. Power generated at the Conowingo plant flowed through 60 miles of high-voltage transmission lines, including the PECO corridor in the Project study area, to a large substation in Plymouth Meeting. From the substation, power was distributed into the PNJ Interconnection. Built by three cooperating utilities including PECO, the PNJ Interconnection was the first cooperative large-scale power pool in the U.S., forming the first major power grid.

Figure 4.2-1: PNJ Interconnection; Conowingo to Plymouth Meeting Transmission

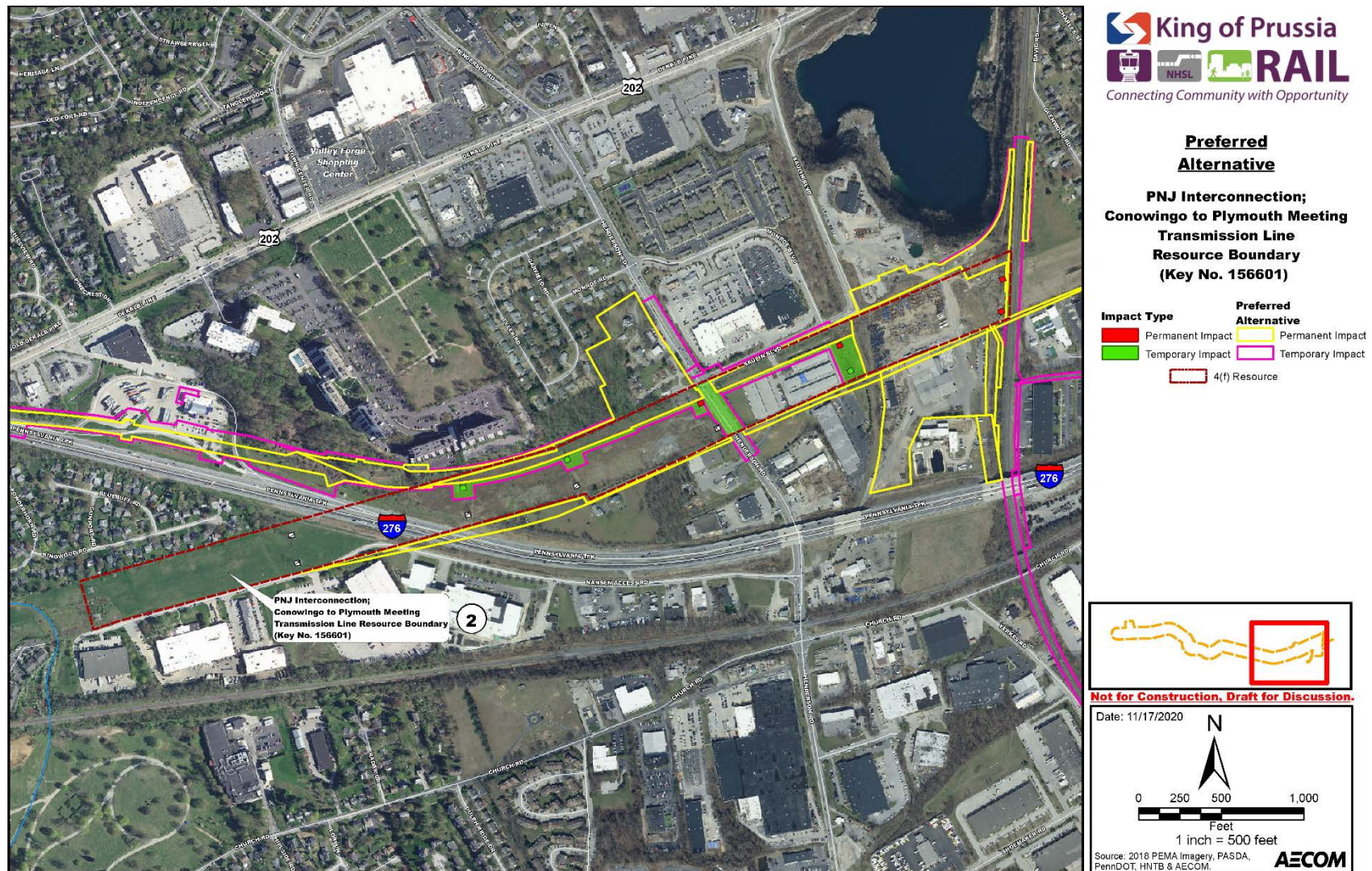


The PECO transmission line corridor in the Project study area is a linear transmission line lying between the existing NHSL and the PA Turnpike, and extending across the Turnpike along Hansen Access Road. The boundaries of the resource are the parcel boundaries of the PECO corridor. The resource was part of the original APE for the Project, but was not identified as a potential historic resource during previous consultation. The portion of the PNJ Interconnection in the APE is depicted on maps in Appendix B. This portion of the PNJ Interconnection in the Project study area is eligible for listing in the National Register of Historic Places (NRHP) as contributing to the larger PNJ Interconnection. The contributing elements to the property are the steel lattice towers, which continue to function for the primary property purpose of conveying power.

Finding, PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line:

Permanent Use. The Preferred Alternative will require replacement of approximately four of the steel lattice towers within the PECO corridor boundaries that are contributing elements to the overall Conowingo to Plymouth transmission line (**Figure 4.2-2**). The towers will be replaced with taller monopole structures. Three of the higher structures will enable the cable circuits to be raised over the Project track crossing, thereby achieving sufficient vertical clearance between the track and the circuits. High-voltage power systems design requirements specify the separation of the circuits from other structures by specific distances depending on the amount of power carried in the circuits. The fourth tower will be replaced because of the proximity of the proposed guideway to it. PECO, the owners and operators of the property in the Project study area, will be responsible for the design of the tower replacement that is required to implement the Project, and SEPTA will continue to coordinate with PECO during subsequent Project design.

Figure 4.2-2: Proposed Use of PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line



Under Section 106, FTA found the Preferred Alternative may result in an adverse effect to the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line. Physically removing towers that are contributing elements to the resource would diminish the historic integrity of the property; the SHPO concurred with this finding on October 30, 2020 (Appendix C).

Under Section 4(f), FTA made a finding of permanent use because of the replacement of approximately four of the towers. Sections 5 and 7 describe the avoidance analysis for the property and all measures to minimize harm to the property, respectively.

4.3 (3) Pennsylvania Turnpike: Delaware River Extension

The Delaware River Extension of the Pennsylvania Turnpike was built in 1954 and extended the Pennsylvania Turnpike from the Valley Forge interchange to the Delaware River (**Figure 4.3-1**). The Pennsylvania Turnpike: Delaware River Extension crosses the Project study area in a generally east-west direction, passing behind the King of Prussia Mall. The property consists of a multi-lane highway and related infrastructure. The Pennsylvania Turnpike: Delaware River Extension is part of the Pennsylvania Turnpike Main Line Historic District, whose period of significance is 1938 through 1956. The Turnpike and its extensions were determined eligible for the NRHP in 2005 under Criterion A for association with the post-World War II toll-road movement, and as one of the last elements in a regional system of high-speed, limited-access superhighways connecting northeastern and north-central states with Chicago. The boundary of the historic resource is the parcel boundary. Key contributing elements to the District are features associated with the engineering standards used in the original construction: travel lanes (originally two in each direction); interchanges and toll plazas; tunnels; abandoned sections; bridges, culverts and retaining walls; service plazas; maintenance facilities; and state police stations.

Finding, Pennsylvania Turnpike: Delaware River Extension:

Permanent Use, de minimis impact. The Preferred Alternative will permanently use a portion of the Pennsylvania Turnpike: Delaware River Extension as described below and shown in **Table 4-2, Figures 4.3-1, 4.3-2, 4.3-3 and 4.3-4**, and the maps in Appendix B. In the Preferred Alternative, the elevated guideway will be along and across the property. The guideway will also cross the property on an elevated structure near the PECO corridor and behind the King of Prussia Mall. The Project will permanently incorporate approximately one mile (6.2 acres) of land within the boundaries of the property, and temporarily impact approximately ½ mile (3.9 acres) of land within the boundaries of the property during Project construction for access and work areas.

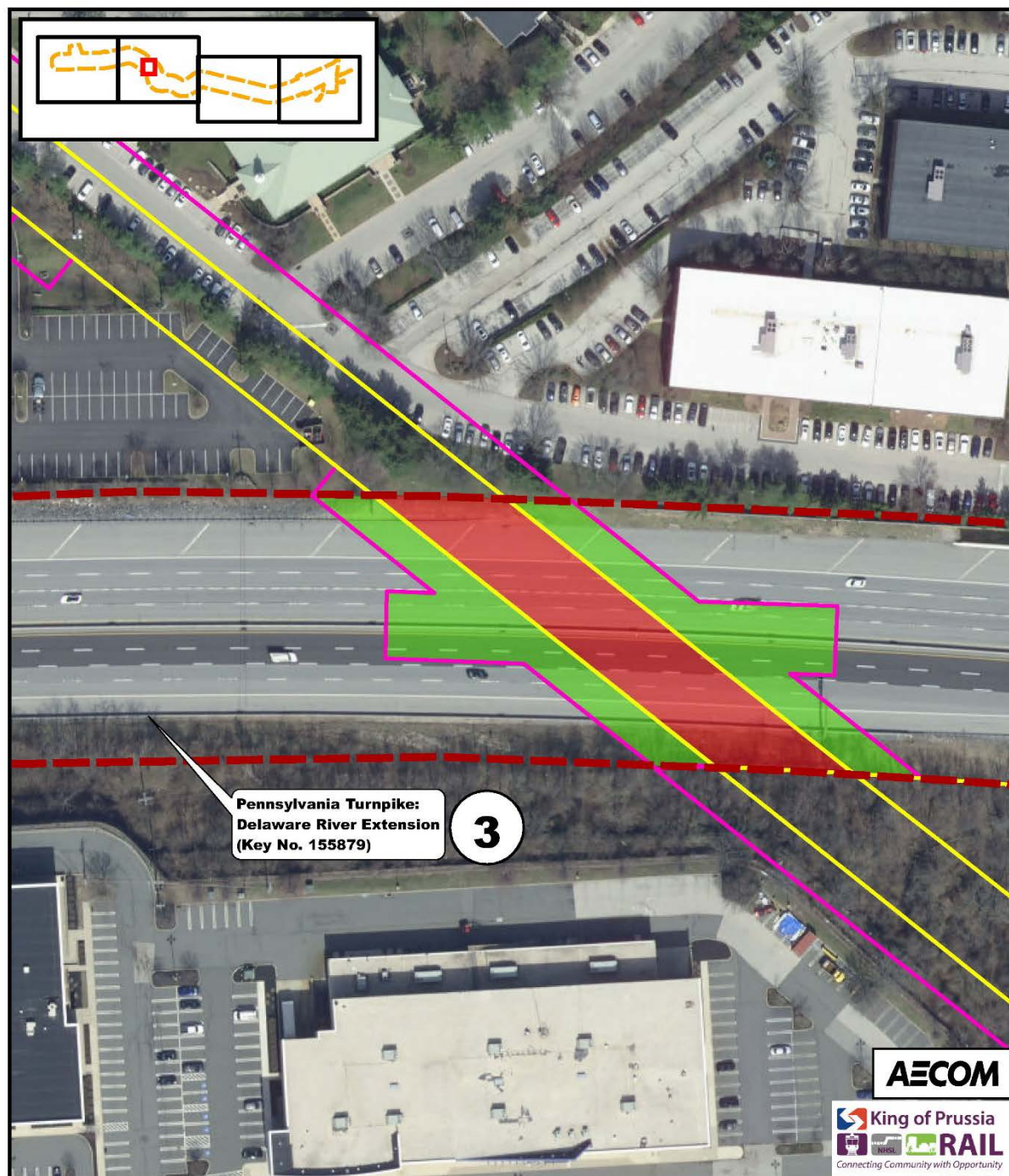
Figure 4.3-1: Pennsylvania Turnpike: Delaware River Extension



The ROW of the Pennsylvania Turnpike: Delaware River Extension is vegetated outside the paved roadway area. As a minimization measure, the guideway supports will be placed in these vegetated areas so as not to impact existing highway travel lanes. Supporting structures will be placed in the median at the Pennsylvania Turnpike crossing as well as outside the paved roadway area. After taking into account measures to minimize harm and subject to public review of this Final Section 4(f) Evaluation, FTA made a finding of a permanent, *de minimis* impact for the Preferred Alternative based on the following criterion:

- 1) A Section 106 determination of no adverse effect on the Pennsylvania Turnpike: Delaware River Extension was made by FTA for the Preferred Alternative; the SHPO concurred with this determination on March 16, 2017 and October 30, 2020 (Appendix C). A no adverse effect determination under Section 106 enables a *de minimis* impact determination to be made under Section 4(f) because it means that the Preferred Alternative will have no adverse impact on the features, attributes or activities that qualify the Pennsylvania Turnpike: Delaware River Extension for protection by Section 4(f). On December 21, 2020, FTA informed the SHPO of its intent to make a *de minimis* impact finding prior to making a finding in its Final Section 4(f) Evaluation (Appendix C).

Figure 4.3-2: Proposed Use of Pennsylvania Turnpike: Delaware River Extension, Area 1 of 3



**Preferred
Alternative**

**Pennsylvania Turnpike: Delaware
River Extension (Key No. 155879)**

Source: 2018 PEMA Imagery, PASDA, PennDOT, HNTB & AECOM. Date: 11/10/2020

Impact Type

- Permanent Impact
- Temporary Impact
- 4(f) Resource

**Locally Preferred
Alternative**

- Permanent Impact
- Temporary Impact

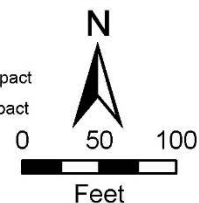


Figure 4.3-3: Proposed Use of Pennsylvania Turnpike: Delaware River Extension, Area 2 of 3

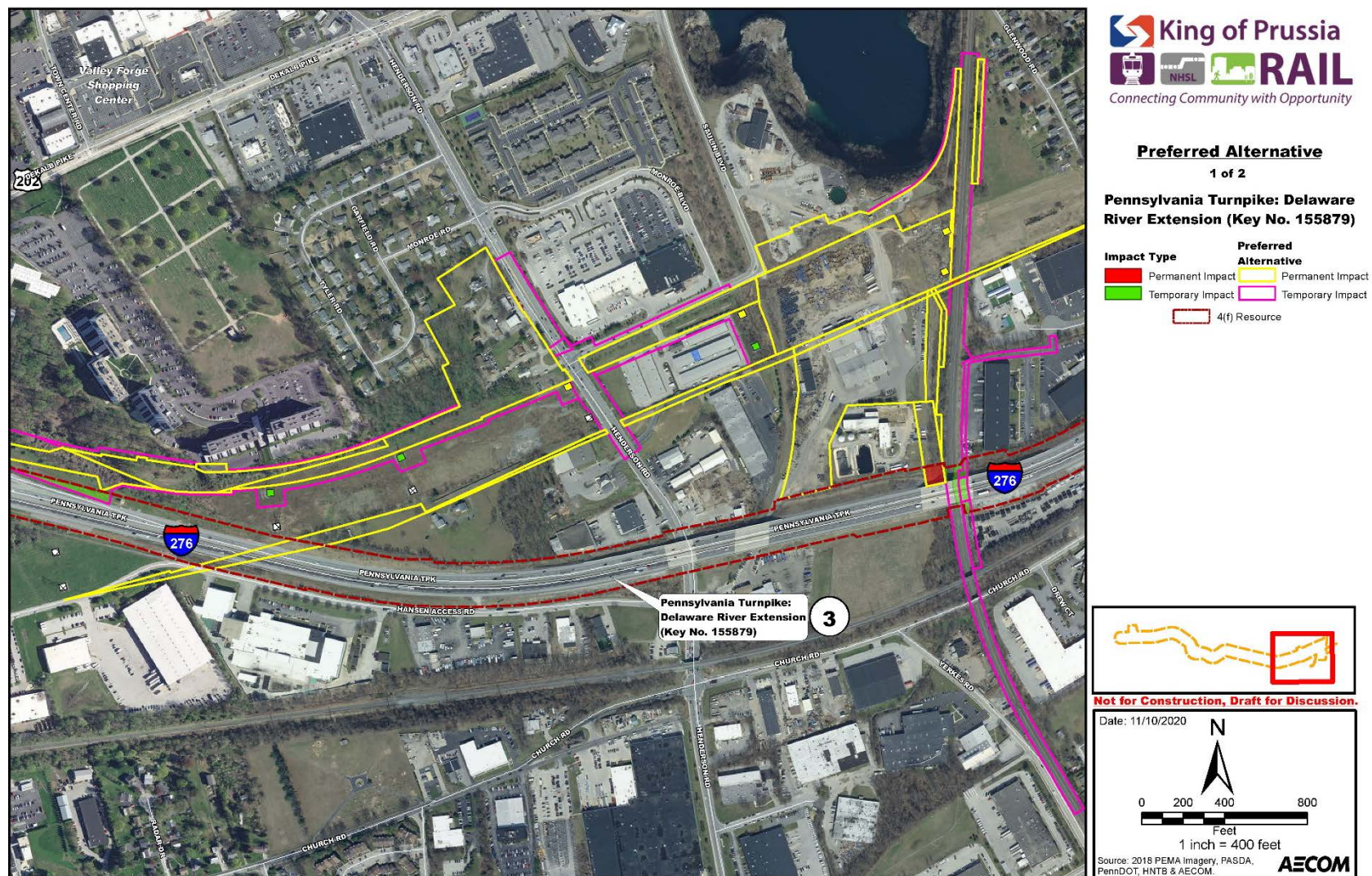
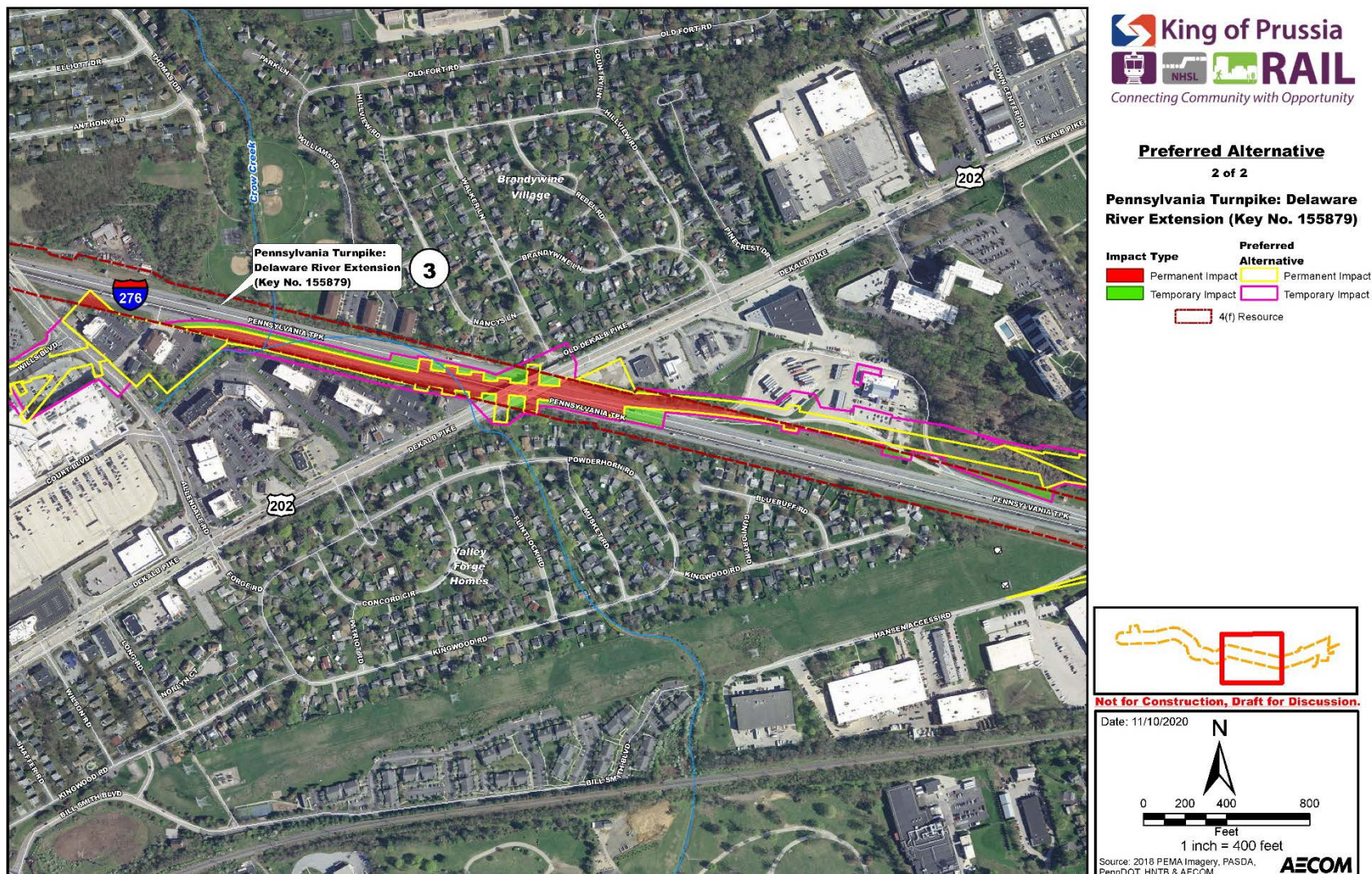


Figure 4.3.4: Proposed use of Pennsylvania Turnpike: Delaware River Extension, Area 3 of 3



4.4 (4) PECO Easement

On December 1, 2011, Upper Merion Township entered into an easement agreement with PECO; this easement grants to Upper Merion Township the “perpetual, exclusive right” to use approximately 14.3 acres of land within the PECO utility corridor west of the Pennsylvania Turnpike crossing for “active and passive recreation (including the establishment of athletic fields), parking lots, a bicycle-pedestrian trail, and open space” (**Figure 4.4-1**). Within the PECO Easement is another easement for the Township’s Kingwood Road Park (described in Section 4.5 below). With the exception of Kingwood Road Park, which is developed with recreational amenities, the remainder of the PECO Easement is undeveloped by the Township. The Township’s existing plan is to retain the PECO Easement as open space. FTA determined that the PECO easement is publicly owned land and therefore subject to Section 4(f).

Figure 4.4-1: PECO Easement



Findings, PECO Easement:

No Permanent Use. The Preferred Alternative will be approximately 400 feet from the PECO Easement (maps, Appendix B). FTA made a finding of no permanent use for the PECO Easement because the Preferred Alternative will not permanently incorporate land from the PECO Easement.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the PECO Easement because Project construction will not be staged on the property.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the property, specifically, noise, vibration and visual effects. The Preferred Alternative is approximately 400 feet from the PECO Easement and there is a line of sight between the alignment and the PECO Easement. The noise and vibration assessment described in the 2021 *KOP Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com), identified the PECO Easement as being outside the area of potential impact; thus, no Project noise impact to the PECO Easement will occur. The elevated guideway of the Preferred Alternative will be visible alongside and above the Pennsylvania Turnpike. Existing visual elements that will remain visible with the Preferred Alternative include the high rise condominium complex known as 251 Dekalb on the north side of the Turnpike behind the proposed guideway, the Valley Forge Homes development alongside the PECO Easement, the electrical towers and wires within the PECO corridor, and the land within the PECO corridor. In this primarily developed land use context, the visual effect of the Preferred Alternative aligned along the north side of the Pennsylvania Turnpike will not substantially

impair the activities, features or attributes of the PECO Easement and will not cause proximity impacts that are so severe that the protected activities, features or attributes that qualify the PECO Easement for protection under Section 4(f) will be substantially impaired. FTA made a finding of no constructive use of the PECO Easement will occur.

4.5 (5) Kingwood Road Park

Kingwood Road Park is a portion of the land transferred to Upper Merion Township from PECO by easement agreement that is described in Section 4.4 above. The Township developed and administers this neighborhood park along Kingwood Road. Kingwood Road Park contains a softball field, basketball courts, shelter, picnic area, and play apparatus (**Figure 4.5-1**). The Township leases the park's 2.5 acres from PECO through the PECO Easement described in Section 4.4 above.

Figure 4.5-1: Kingwood Road Park



Findings, Kingwood Road Park:

No Permanent Use. The Preferred Alternative is approximately 1,800 feet from Kingwood Road Park. FTA made a finding of no permanent use for the Kingwood Road Park because the Preferred Alternative will not permanently incorporate land from the Kingwood Road Park.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy Kingwood Road Park because Project construction will not be staged on the property.

No Constructive Use. The noise and vibration assessment described in 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) identified no potential for impacts to the Kingwood Road Park by the Preferred Alternative. The Preferred Alternative will not be visible from Kingwood Road Park because of distance, terrain and development. FTA made a finding of no constructive use of Kingwood Road Park.

4.6 (6) King of Prussia Inn

The King of Prussia Inn was listed in the NRHP on December 23, 1975 (**Figure 4.6-1**). Dating to the first quarter of the 18th Century, the King of Prussia Inn is significant as the site of political gatherings during the time of the American Revolution as well as its function as a public house and community center over several centuries. The building is significant under Criterion C for architecture as an example of an early roadside inn. The building was moved from its original location along US Route 202 on August 21, 2000 to its current site on Bill Smith Boulevard to make way for the widening of US Route 202. Despite no longer retaining integrity of location, setting or association, it remains listed on the NRHP for its architectural significance.

Figure 4.6-1: King of Prussia Inn



Finding, King of Prussia Inn:

No Permanent Use. The King of Prussia Inn is 1,800 feet from the Preferred Alternative. FTA made a finding of no permanent use for the King of Prussia Inn because the Preferred Alternative will not permanently incorporate land from the King of Prussia Inn.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the King of Prussia Inn because construction will not be staged on the property.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the King of Prussia Inn, specifically, noise, vibration and visual effects. The noise and vibration assessment described in the 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) identified no potential for impacts to the King of Prussia Inn because of the distance between the Preferred Alternative and the property. The line of sight between the Preferred Alternative and the property is blocked by development. The King of Prussia Inn will not be visible from the Preferred Alternative because of intervening buildings. FTA made a finding of no constructive use of the King of Prussia Inn.

4.7 (7) Pennsylvania Turnpike: Philadelphia Extension

The Pennsylvania Turnpike: Philadelphia Extension was determined eligible for listing in the NRHP on October 25, 2002 (**Figure 4.7-1** and maps, Appendix B). The Philadelphia Extension of the Pennsylvania Turnpike extends from Carlisle to Valley Forge and was constructed between 1948 and 1950. It connected the original Turnpike main line to the Valley Forge/Philadelphia area; this connection was later enhanced by construction of the Turnpike's Delaware River Extension to the Delaware River (1954), and the Schuylkill Expressway into Philadelphia. It is significant under Criterion A in the area of transportation history for its association with the post-World War II toll-road movement, a short-lived but transformative initiative that resulted in an interstate system of limited-access tolled highways.

Figure 4.7-1: Pennsylvania Turnpike: Philadelphia Extension



Findings, Pennsylvania Turnpike: Philadelphia Extension:

No Permanent Use. FTA made a finding of no permanent use for the Pennsylvania Turnpike: Philadelphia Extension because the Preferred Alternative will not permanently incorporate land from the Pennsylvania Turnpike: Philadelphia Extension.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the Pennsylvania Turnpike: Philadelphia Extension because Project construction will not be staged on the property.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the Pennsylvania Turnpike: Philadelphia Extension, specifically, noise, vibration and visual effects. The Preferred Alternative is approximately 1,400 feet from the Pennsylvania Turnpike: Philadelphia Extension with the line of sight from the highway blocked by terrain and intervening development. The noise and vibration assessment described in the 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) identified no potential for Project impacts to the Pennsylvania Turnpike: Philadelphia Extension. FTA made a finding of no constructive use of the Pennsylvania Turnpike: Philadelphia Extension.

4.8 (8) General Electric Space Technology Center

The General Electric Space Technology Center is located at 230 Mall Boulevard in Upper Merion Township and is situated west of the King of Prussia Mall (**Figure 4.8-1**). The Modernist complex of low-rise buildings, designed by architect Vincent Kling, was constructed in 1961 as a research laboratory that focused on space and missile technology. When built, it was the largest privately-owned facility dedicated to space research and development. Since 1995, the facility has been owned and operated by Lockheed Martin and remains in active use. Inspection of historic aerials and a brief site visit of accessible portions of the secured property indicate that the campus has undergone relatively few changes since its construction: demolition of several buildings, conveyance of Goddard Avenue parking area to nearby retail uses, and window replacement in the main building. Overall, the campus remains relatively intact and retains integrity. The physical condition combined with the site's potential to be significant for its contribution to science and technology, make the General Electric Space Technology Center potentially eligible for listing in the NRHP.

Figure 4.8-1: General Electric Space Technology Center



Findings, General Electric Space Technology Center:

No Permanent Use. The Preferred Alternative will be approximately 1,000 feet from the General Electric Space Technology Center. FTA made a finding of no permanent use for the General Electric Space Technology Center because the Preferred Alternative will not permanently incorporate land from the General Electric Space Technology Center.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the General Electric Space Technology Center because Project construction will not be staged on the property.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the General Electric Space Technology Center, specifically, noise, vibration and visual effects. The Preferred Alternative will be aligned along Mall Boulevard, approximately 1,000 feet east of the General Electric Space Technology Center with the line of sight from the Center blocked by terrain and intervening development. The noise and vibration assessment described in the 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) identified no potential for Project impacts to the General Electric Space Technology Center. Existing visual elements that will be part of the viewshed from the General Electric Space Technology Center include adjacent commercial development associated with the King of Prussia Mall. In this context, the visual effect of the Preferred Alternative guideway along Mall Boulevard will not impair the activities, features or attributes of the General Electric Space Technology Center; and it will not cause proximity impacts that are

so severe that the protected activities, features or attributes that qualify the General Electric Space Technology Center for protection under Section 4(f) will be substantially impaired. FTA made a finding of no constructive use of the General Electric Space Technology Center.

4.9 (9) American Baptist Churches, USA Mission Center

The American Baptist Convention built its headquarters building on the property at the southeast corner of First Avenue and N. Gulph Road in 1962 (**Figure 4.9-1**). The architect for the project was Vincent Kling, whose circular plan for the national headquarters office building was inspired by the Baptist tenet of centrality, unity and single focus. Kling combined form with glass, stone and concrete materials, incorporating arcades, towers, and other treatments to add interest to the white exterior. The American Baptist Churches, USA Mission Center is eligible under Criterion C for its architectural distinction, an example of a Modernist office building complex. The elements that contribute to the significance of the property include the complex of four buildings and the associated original landscape elements: northwest lawn, courtyard, parking lots, sidewalks and terraces.

Figure 4.9-1: American Baptist Churches, USA Mission



Finding, American Baptist Churches, USA Mission Center:

No Permanent Use. The Preferred Alternative will be on the opposite, north side of First Avenue from the American Baptist Churches, USA Mission Center. FTA made a finding of no permanent use for the American Baptist Churches, USA Mission Center because the Preferred Alternative will not permanently incorporate land from the American Baptist Churches, USA Mission Center.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the American Baptist Churches, USA Mission Center because Project construction will not be staged on the property.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the American Baptist Churches, USA Mission Center, specifically, noise, vibration and visual effects. The Preferred Alternative will be in the line of sight of the Center across First Avenue. The noise and vibration assessment described in the 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) identified no potential for Project impacts to the American Baptist Churches, USA Mission Center. Existing visual elements that will be part of the viewshed from the American Baptist Churches, USA Mission Center include adjacent commercial development associated with the VFCR and other development. In this context, the visual effect of the Preferred Alternative guideway along First Avenue will not impair the activities, features or

attributes of the American Baptist Churches, USA Mission Center; and it will not cause proximity impacts that are so severe that the protected activities, features or attributes that qualify the American Baptist Churches, USA Mission Center for protection under Section 4(f) will be substantially impaired. FTA made a finding of no constructive use of the American Baptist Churches, USA Mission Center.

4.10 (10) Valley Forge National Historical Park

Valley Forge National Historical Park was listed in the NRHP on July 4, 1976

(Figure 4.10-1). This 3,465-acre parcel is home to cultural resources that date from the time of the American Revolution, including remains of forts and earthworks, an artillery park, Washington's headquarters house, quarters of other top officers and the Grand Parade Ground where Baron Friedrich von Steuben rebuilt the army and where news of the French alliance was announced on May 6, 1778. The park is historically significant under Criterion A as the site of the third winter encampment (1777-78) of the Continental Army under General George Washington and is also significant under Criterion B for its association with Baron von Steuben. The

Park is administered by the National Park Service. The boundary includes Valley Forge National Historic Landmark, designated on January 20, 1961, and has a smaller overall boundary than the Valley Forge National Historical Park. The five areas of significance noted in the NRHP nomination are: the Revolution, the beginnings of the American Army, sculpture and monuments, industry, architecture (19th and 20th century) and ruins. Collectively, the Valley Forge National Historical Park and Valley Forge National Historic Landmark form a nationally significant resource that includes historic buildings, structures, landscapes, objects, archaeological sites and natural resources.

Figure 4.10-1: Valley Forge National Historical Park



Varnum's Quarters in Valley Forge National Historical Park

Findings, Valley Forge National Historical Park and Valley Forge National Historic Landmark:

No Permanent Use. The Preferred Alternative will be approximately 800 feet from the Valley Forge National Historical Park and Valley Forge National Historic Landmark. FTA made a finding of no permanent use for the Valley Forge National Historical Park and Valley Forge National Historic Landmark because the Preferred Alternative will not permanently incorporate land from the Park and Landmark.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the Valley Forge National Historical Park and Valley Forge National Historic Landmark because Project construction will not be staged on the property.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the Valley Forge National Historical Park and Valley Forge National Historic Landmark, specifically, noise, vibration and visual effects. The line of sight between the Park and Landmark and the Project is blocked by terrain, vegetation and roadway infrastructure. The noise and vibration assessment described in the 2021 *King of Prussia Rail Extension Combined Final Environmental Impact Statement/Record of Decision* (www.kingofprussiarail.com) identified no potential impacts to the Park and Landmark. Existing visual elements that are part of the viewshed from the Park and Landmark include tree growth along Richards and N. Gulph Roads, terrain and the roadways, bridge and interchange ramp infrastructure of US Route 422 and PA Route 23. These visual elements tend to block views of the Project area from the Park and Landmark. In this context, the Preferred Alternative will not impair the activities, features or attributes of the Park and Landmark, and will not cause proximity impacts that are so severe that the protected activities, features or attributes that qualify the Park and Landmark for protection under Section 4(f) will be substantially impaired. FTA made a finding of no constructive use of the Valley Forge National Historical Park and Valley Forge National Historic Landmark.

4.11 (11) Philadelphia Transit Co. Building (69th Street Transportation Center)

The Philadelphia Transit Co. Building in Upper Darby Township is a component of the 69th Street Transportation Center. The property is the portion of the station building that is closest to Market Street. The rear portion of the station building where the train platforms are located is newer construction and is not part of the historic property. The Philadelphia Transit Co. Building is not individually eligible for the NRHP, but is a contributing resource for two NRHP-eligible historic districts: the Market Street Elevated Railway Historic District and 69th Street Terminal Square Shopping District.

Figure 4.11-1 depicts the Market Street façade of the building. The Philadelphia Transit Co. Building is within the boundaries of each district, but is a discontinuous piece of each district, meaning that it is a contributing resource to the districts but is physically separated from other parts of the districts by properties that are not within the districts. The main portion of the Market Street Elevated Railway Historic District is not contiguous to the Project area and lies some distance east within Philadelphia's

Figure 4.11-1: Philadelphia Transit Co. Building (69th Street Transportation Center)



city line, and the main portion of the 69th Street Terminal Square Shopping District lies south of Market Street/West Chester Pike, outside the immediate Project area.

Findings, Philadelphia Transit Co. Building:

No Permanent Use. The Preferred Alternative will make improvements and provide additional rail transit service to 69th Street Transportation Center (Appendix A). Specifically, SEPTA will expand an existing platform with associated track in the non-historic part of the station and operate additional train service on those tracks. The proposed work will not change the historic use, appearance or function of the historic portion of the building. The Preferred Alternative will be well inside 69th Street Transportation Center property and surrounded by existing rail, trolley, and bus service infrastructure; and no permanent incorporation of land from the districts will occur (maps, Appendix B).

FTA made a finding of no historic properties affected for the Philadelphia Transit Co. Building under Section 106; and the SHPO concurred on March 16, 2017 and October 30, 2020 (Appendix C). On the basis of the Section 106 finding, FTA made a finding that the Preferred Alternative will not impact the features, attributes, or activities that qualify the Philadelphia Transit Co. Building for protection under Section 4(f); the Preferred Alternative will cause no permanent use of the Philadelphia Transit Co. Building.

No Temporary Occupancy. The Preferred Alternative will not temporarily occupy the Philadelphia Transit Co. Building because Project construction will not be staged on or within the building.

No Constructive Use. The Preferred Alternative was assessed for potential constructive use of the Philadelphia Transit Co. Building, specifically, noise, vibration and visual effects. The Preferred Alternative will make improvements and provide additional rail transit service to 69th Street Transportation Center (Appendix A). As an existing transit service resource, the Philadelphia Transit Co. Building will not experience noise, vibration or visual impacts from the Preferred Alternative that will impair the activities, features or attributes of the property; and no proximity impacts will occur that are so severe that the protected activities, features or attributes that qualify the Philadelphia Transit Co. Building for protection under Section 4(f) will be substantially impaired. FTA made a finding of no constructive use of the Philadelphia Transit Co. Building.

5 Avoidance Alternatives Analysis

The Preferred Alternative, along with each alternative and design option considered in the DEIS (see Appendix A), would result in a Section 4(f) use of one property (**Table 4-2** and **Table 5-1**). For this reason, an avoidance alternatives analysis was prepared as required by 23 CFR § 774.3(c). In this analysis, FTA identified avoidance alternatives that would eliminate the use of a Section 4(f) property and applied feasible and prudent criteria to those alternatives and design options. Feasible and prudent avoidance alternatives are those that would avoid using any Section 4(f) property and would not cause other problems of a magnitude that would substantially outweigh the importance of protecting the Section 4(f) property (23 CFR § 774.17).

Table 5-1: Potential Use of Section 4(f) Properties by Each DEIS Action Alternative

Map No.	Property Name	Overall Property Size	Action Alternative						
			PECO-1 st Ave.	Recommended LPA and its Design Options			PECO/TP–N. Gulph	US 202-1 st Ave.	US 202-N. Gulph
				PECO/TP–1 st Ave. (recommended LPA)	PA Turnpike North/South Option	9/11 Memorial Avoidance Option			
	Permanent Impacts								
1	Chester Valley Trail Extension	3.8, miles	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
2	PNJ Interconnection: Conowingo to Plymouth Meeting	60 miles	Replace approx. 12 towers	Replace approx. 4 towers	0/0%	0/0%	Replace approx. 4 towers	0/0%	0/0%
3	PA Turnpike Delaware River Extension	32 miles	1 ac/<1%	5.8 ac, approx. 1 mile/3%	6.2 ac, approx. 1 mile/3%	5.2 ac, approx. 1 linear mile/3%	5.4 ac, approx. 1 mile/3%	2.8 ac, approx. 0.5 mile/2%	2.4 ac, approx. 0.5 mile/2%
4	PECO Easement	14.3 acres	4.6 ac/32%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
5	Kingwood Road Park	2.5 acres	0.5 ac/20%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
6	King of Prussia Inn	Building	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
7	Pennsylvania Turnpike: Philadelphia Extension	104 miles	0/0%	0/0%	0/0%	0/0%	0.7 ac, approx. 0.5 mile/<1%	0/0%	0.7 ac, approx. 0.5 mile /<1%
8	General Electric Space Technology Center	121 acres	0/0%	0/0%	0/0%	0/0%	0.02/0.02%	0/0%	0.02/0.02%
9	American Baptist Churches, USA Mission Center	23 acres	0.02 ac/0.1%	0.02 ac/0.1%	0.02 ac/0.1%	0.0 ac2/0.1%	0.1 ac/0.4%	0.02 ac/0.1%	0.1 ac/0.4%
10	Valley Forge National Historical Park	3,465 acres	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
11	Philadelphia Transit Co. Building (69 th Street Transportation Center)	Building	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
	Temporary Impacts								
1	Chester Valley Trail Extension	3.8 miles	0.6 ac, <0.02 mile /<0.5%	0.6 ac, <0.02 mile /<0.5%	0.6 ac, <0.02 mile /<0.5%	0.6 ac, <0.02 mile /<0.5%	0.6 ac, <0.02 mile /<0.5%	0.2 ac, <0.01 mile /<0.3%	0.2 ac, <0.01 mile /<0.3%
2	PNJ Interconnection: Conowingo to Plymouth Meeting	60 miles	4.2 acres	4.2 acres	0/0%	0/0%	4.2 acres	0/0%	0/0%
3	PA Turnpike Delaware River Extension	32 linear miles	0.5 ac, approx. 0.5 mile/<1%	1.8 ac, approx. 1 mile/1%	2.5 ac, approx. 1 mile/1%	1.7 ac, approx. 1 mile/1%	1.6 ac, approx. 1 mile/1%	1 ac, approx. 0.5 mile/<1%	0.8 ac, approx. 0.5 mile/<1%
4	PECO Easement	14.3 acres	1.3 ac/9%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
5	Kingwood Road Park	2.5 acres	0.2 ac/9%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
6	King of Prussia Inn	Building	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
7	Pennsylvania Turnpike: Philadelphia Extension	104 miles	0/0%	0/0%	0/0%	0/0%	0.4 mile/0.4%	0/0%	0.4 mile/0.4%
8	General Electric Space Technology Center	121 acres	0/0%	0/0%	0/0%	0/0%	0.1 ac/0.1%	0/0%	0.1 ac/0.1%
9	American Baptist Churches, USA Mission Center	23 acres	0.1 ac/0.3%	0.1 ac/0.3%	0.1 ac/0.3%	0.1 ac/0.3%	0.3 ac/1.3%	0.1 ac/0.3%	0.3 ac/1.3%
10	Valley Forge National Historical Park	3,465 acres	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%
11	Philadelphia Transit Co. Building (69 th Street Transportation Center)	Building	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%	0/0%

Notes:
Pink shading = Permanent use, not *de minimis*;
Tan shading = Permanent Use, *de minimis*;
Blue shading = temporary occupancy exception, no use.
No constructive uses would occur.
Source: AECOM, 2020

Alternatives evaluated in the avoidance analysis include the No Action Alternative and the other types of alternatives as identified in FHWA's *2012 Section 4(f) Policy Paper*:

- **Location Alternatives** – A location alternative refers to the rerouting of the entire Project along a different alignment. Examples of location alternatives are the four other Action Alternatives and the recommended Locally Preferred Alternative (LPA) design options assessed in the DEIS.
- **Alternative Actions** – An alternative action involves actions that do not require construction or that consist of a different transit mode.
- **Alignment Shifts** – An alignment shift is the rerouting of a portion of the Project to a different alignment to avoid the use of a specific property.
- **Design Changes** – A design change is a modification of the proposed design in a manner that would avoid impacts.

5.1 Feasible and Prudent Avoidance Alternative

Definitions of feasible and prudent alternatives under 23 CFR § 774.17 note that an alternative that would use any Section 4(f) property is not an avoidance alternative. An alternative is determined feasible if it could be built as a matter of sound engineering judgment. Under 23 CFR § 774.17, factors are defined for determining alternatives to be not prudent. An alternative would not be prudent for any of the following reasons:

- **Factor 1** – It would compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.
- **Factor 2** – It would result in unacceptable safety or operational problems.
- **Factor 3** – After reasonable mitigation, it would still cause one or more of the following:
 - Severe social, economic, or environmental impacts
 - Severe disruption to established communities
 - Severe, disproportionate impacts on low-income or minority populations
 - Severe impacts on environmental properties protected under other federal statutes
- **Factor 4** – It would result in additional construction, maintenance, or operational costs of an extraordinary magnitude.
- **Factor 5** – It would cause other unique problems or unusual factors.
- **Factor 6** – It would involve multiple factors in one through five above, that while individually minor, could cumulatively cause unique problems or impacts of extraordinary magnitude.

The following narrative evaluates the No Action Alternative and other potential location alternatives, alternative actions, alignment shifts, and design changes using these feasible and prudent factors. Included in this analysis are the DEIS Action Alternatives and the recommended LPA design options. The results of the evaluation are follows:

- The No Action Alternative is not a feasible and prudent avoidance alternative because it would not achieve the Project purpose and need (Factor 1) (Section 5.2);
- None of the location and alternative actions described in Sections 5.3 and 5.4 is a feasible and prudent avoidance alternative for the reasons described in those sections (Factors 1 through 6); and
- None of the Action Alternatives and recommended LPA design options is a feasible and prudent avoidance alternative because each would use one or more Section 4(f) properties as described in Section 5.5. For these reasons, no feasible and prudent avoidance alternative exists (23 CFR § 774(a)(1)).

5.2 Avoidance Alternative #1: No Action Alternative

The No Action Alternative assumes no improvements to the transportation system in the Project study area through 2040, other than those contained in the financially-constrained element of *Connections 2045 Plan for Greater Philadelphia*, the long-range transportation plan of the DVRPC. Table 2-2.1 lists the major regional transportation projects in the No Action Alternative, which include several roadway improvement projects and transit system investments.

The No Action Alternative would avoid the use of all Section 4(f) properties in the Project study area, including the PNJ Interconnection property and its towers because the No Action Alternative would make no alterations to the existing infrastructure. However, the No Action alternative is not a feasible and prudent avoidance alternative under Factor 1. Specifically, the No Action Alternative would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need. The Project purpose is to provide faster, more reliable public transit service to the King of Prussia area that:

- Offers improved transit connections to the area from communities along the existing Norristown High Speed Line, Norristown, and Philadelphia;
- Improves connectivity between defined key destinations within the King of Prussia area; and
- Better serves existing transit riders and accommodates new transit patrons.

The No Action Alternative will not achieve the Project's purpose and need as it will not extend faster, more reliable transit service to the King of Prussia/Valley Forge area. As no new transit service projects are planned, the No Action Alternative will not improve transit connections to and within the King of Prussia area; will not improve connectivity between defined key destinations in the King of Prussia area; and will not better serve existing transit riders and accommodate new riders.

5.3 Location Alternatives

Use existing railroad corridors – During the alternatives development process, described in the *2017 King of Prussia Rail Extension Combined Draft Environmental Impact Statement* (www.kingofprussiarail.com), SEPTA examined the feasibility of using existing freight railroad corridors in the Project study area, either by sharing track with freight operators or using a

portion of railroad ROW. Potential alignments using portions of Norfolk Southern (NS) track ROW to the south of the PECO utility corridor as well as a northerly route through Abrams Yard near the Schuylkill River were considered. However, SEPTA's outreach to NS about possibly using their rail ROW indicated that NS is not interested in sharing corridors with SEPTA's Project. As a result, FTA determined that while use of the NS corridors may be potentially feasible, it is not prudent (Factor 5). Moreover, the Abrams Yard alignment was determined to be remote from the key Project study area destinations – King of Prussia Mall, Moore Park KOP and Valley Forge National Historical Park, requiring circuitous routing to serve these destinations.

Use existing roadway corridors – Also during the alternatives' development process, SEPTA examined the potential to align the Project within existing roadways in the Project study area. Potential use of existing roadway corridors was considered early in the project development process (Tier 1 screening) when a long list of many potential alignments was examined by SEPTA for feasibility and reasonableness. The screening process eliminated potential alignments that either could not be built as a practical matter (infeasible) or had one or more other circumstances that made continued consideration of an alignment not reasonable or prudent. The factors that were used to measure reasonableness and prudence included:

- Ability of the alignment to achieve the Project purpose and need (Factor 1), and
- Results in unacceptable safety or operational problems, such as very slow operating speeds and conflicts with existing transportation systems, for example freight railroads (Factor 2).

As a result of this location alternatives analysis, no feasible and prudent avoidance alternative involving the use of existing railroad or roadway corridors exists (23 CFR § 774.3(a)(1)).

5.4 Alternative Actions

Upgrade existing facilities – The avoidance analysis considered the potential to upgrade to existing transit facilities in a manner that would avoid the use of Section 4(f) properties, including the PNJ Interconnection: Conowingo to Plymouth Meeting Transmission Line, was evaluated. The Project study area is currently served by the following existing facilities:

- **SEPTA Bus:** Six SEPTA bus routes (92, 99, 123, 124, 125 and 139) currently serve the King of Prussia/Valley Forge area. Each route serves the King of Prussia Transportation Center, a transit center located near the JC Penney store at the King of Prussia Mall, and most serve other stops in the area.
- **Existing NHSL:** SEPTA's NHSL operates between the 69th Street Transportation Center in Upper Darby and the Norristown Transportation Center, serving the Main Line area in Delaware and Montgomery Counties. The NHSL provides local, express and Hughes Park Express service on a frequent schedule with service from approximately 4:30 AM to 2:30 AM.
- **Regional Rail:** Connections to SEPTA's regional rail system are available at the Norristown Transportation Center via the Manayunk/Norristown Line, a regional rail line

providing service between Norristown and Center City Philadelphia and to SEPTA bus routes.

- **Connecting Shuttle Services:** The Greater Valley Forge Transportation Management Association manages the Upper Merion Rambler, which is a local circulator. The King of Prussia Business Improvement District manages The Connector service, which links the Business Park with the Norristown Transportation Center and Wayne Regional Rail station.

Expansion of existing transit services within and near the Project study area, while potentially feasible, does not address the problems regarding travel time delays due to traffic congestion, transfers from the NHSL to bus service to reach key Project study area destinations, and limited bus service capacity to accommodate future forecast ridership. For example, while SEPTA could potentially increase bus service between the NHSL and transportation study area destinations, bus travel time and reliability would be subject to the same roadway congestion and delays as the routes SEPTA already operates. In addition, more buses would not overcome the inconvenience of transfers between NHSL rail and bus modes. Thus, increasing bus service would not achieve the Project need for providing faster, more reliable public transit service, or better accommodating existing and future transit patrons. Therefore, no bus service alternatives were considered. In summary, while upgrading existing bus facilities is potentially feasible, it is not prudent; doing so would not achieve the Project purpose and need (Factor 1).

Alternative modes – Early in Project planning, potential alternative modes considered included bus and light rail as these are commuter-oriented transit modes that could potentially serve a similar function to extension of NHSL service. However, as described above, bus service, while potentially feasible, would not achieve the Project purpose and need because it would not address travel time delays due to traffic congestion and transfers from the NHSL to bus service to reach key destinations (Factor 1). A connecting light rail transit service from the NHSL to the Project study area would have the same problem as bus service in terms of requiring a transfer from the NHSL. As the proposed NHSL extension would provide similar service on a fixed guideway to a light rail mode but without the transfer, light rail was not considered a prudent alternative (Factor 1).

As a result of this alternative actions analysis, no feasible and prudent avoidance alternative exists that involves upgrades to existing facilities and use of alternative modes (23 CFR § 774.3(a)(1)).

5.5 Alignment Shifts and Design Changes

FTA and SEPTA considered alignment shifts and design changes given that portions of each DEIS Action Alternative and recommended LPA design option would use different alignments than the Preferred Alternative. For example, FTA and SEPTA examined the US 202-1st Ave. and US 202-N. Gulph Action Alternatives, which would not incorporate land from the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line property. However, as described in Section 6, these Action Alternatives would use US Route 202, which is not supported by key stakeholders, political leaders, and the public because of visual and traffic impacts, particularly during Project construction.

SEPTA considered whether incorporation of land from the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line property by the Preferred Alternative could be reduced or eliminated by shifting the guideway alignment to the north. Such a shift would require either aligning the guideway over the existing, adjacent Saulin Boulevard, or shifting the alignment of Saulin Boulevard north along with the guideway. In examining these concepts, SEPTA identified that design and operational problems would occur at the nearby Saulin Boulevard/Henderson Road intersection. Because this intersection carries substantial traffic in the existing condition, design modifications to the intersection would have to enable the intersection to operate in an as good or better condition than it does today. With the guideway over Saulin Boulevard and the Henderson Road/Saulin Boulevard intersection, the guideway support structures would cause line of sight and safety problems at the intersection as well as at the driveway to the shopping center that is on the north side of Saulin Boulevard. In shifting Saulin Boulevard to the north, the turning movements to and from Saulin Boulevard would be awkward because the existing shopping center building is close to the intersection, cramping turning movement design. For these reasons, FTA made a finding that while shifting the guideway to avoid incorporating land from the property may be feasible, it is not reasonable because it would result in unacceptable safety and operational problems.

SEPTA also examined whether the Preferred Alternative guideway elevation in the Junction area could be modified such that replacing the steel lattice towers on the property would not be required. The elevation of the proposed tracks between the existing NHSL is constrained by vertical clearance requirements over Henderson Road. It is not feasible to lower the track elevation within property, and then increase the track grade to achieve vertical clearance requirements over Henderson Road. The only feasible way to increase vertical clearance is to raise the existing electric transmission circuits. In the existing condition, the electric circuits are attached to the top horizontal arms of the existing towers; thus, the circuits cannot be raised higher on the existing towers. The towers will need to be replaced with taller towers in order to raise the electric circuits to a sufficient height for the Project to have sufficient clearance beneath them. SEPTA coordinated with PECO regarding tower replacement and identified monopoles as the type of structure PECO now uses for tower replacement; in-kind replacement is not possible. On the basis of these findings, FTA made a finding that avoiding tower replacement is not feasible as a matter of sound engineering judgment.

6 Least Overall Harm Analysis

In accordance with 23 CFR 774.3(2)(c), if a Section 4(f) analysis determines that there is no feasible and prudent avoidance alternative, FTA may only approve the alternative that causes the least overall harm in light of the preservation purpose of Section 4(f). In the avoidance analysis (Section 5), FTA determined that neither the Preferred Alternative nor the DEIS Action Alternatives and recommended LPA design options is a feasible and prudent avoidance alternative. As a result, FTA evaluated the Preferred Alternative and each DEIS Action Alternative and recommended LPA design option to select the alternative with the least overall harm.

FTA's least overall harm analysis complies with the methodology outlined in 23 CFR § 774.3(c)(1)). The Section 4(f) regulations require a balancing of the following seven factors when determining which alternative will cause the least overall harm:

- Ability to mitigate adverse impacts on each Section 4(f) property (including any measures that will result in benefits for the property)
- Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection
- Relative significance of each Section 4(f) property
- Views of the officials with jurisdiction over each Section 4(f) property
- Degree to which each alternative meets the purpose and need for the project
- After reasonable mitigation, the magnitude of any adverse impacts on properties not protected by Section 4(f)
- Substantial differences in costs among the alternatives

FTA applied each of the seven key factors to the Preferred Alternative and each of the DEIS Action Alternatives and recommended LPA design options as outlined below. **Table 6-1** provides a summary of this evaluation; **Table 4-1** supports **Table 6-1** by summarizing the properties used by the Preferred Alternative and each DEIS Action Alternative and recommended LPA design option, followed by an interpretive discussion.

Because all of the DEIS Action Alternatives and recommended LPA design options, except for US 202-1st Ave. and US 202-N. Gulph, are reported in the Draft Section 4(f) Evaluation as impacting the PECO corridor in the Project study area and potentially requiring replacement of some of the existing towers on the property, and because the Draft Section 4(f) Evaluation identified the PECO corridor as a portion of the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line historic property (Section 4.2), the least harm analysis considers those DEIS Action Alternatives and recommended LPA design options as also permanently incorporating land from the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line.

To mitigate for the tower impacts, FTA, SEPTA, and the SHPO signed a Section 106 Memorandum of Agreement on November 25, 2020 that stipulates specific mitigation prior to tower demolition (Appendix C). Although these commitments are specific to the Preferred Alternative, these commitments could be applied to the other DEIS Action Alternatives and recommended LPA design options that would impact the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (other than US 202-1st Ave. and US 202-N. Gulph) because the nature of the impacts of those alternatives and design options would be similar. By evaluating the DEIS Action Alternatives and recommended LPA design options, a comparison can be made between of the Preferred Alternative and the DEIS Action Alternatives and recommended LPA design options using the list of properties protected by Section 4(f) in **Table 4-1**.

Table 6-1: Least Harm Analysis Summary

Alternatives	Section 4(f) Least Overall Harm Criteria (23 CFR 774.3(C)(1))						
	Impact Mitigation ¹	Remaining Severity ²	Property Significance ³	Officials' Views ⁴	Purpose and Need ⁵	Impact Magnitude ⁶	Cost Difference ⁷
Preferred Alternative	More ability than PECO-1 st Ave.; less ability than US 202-1 st Ave. and US 202-N. Gulph; same ability as remaining alternatives and design options	1 property permanent use; 1 properties <i>de minimis</i> impact	Equal significance	SHPO Section 106 concurrence on adverse effect for one property, and <i>de minimis</i> impact for 2 properties	Best achieves each element	<ul style="list-style-type: none">• Least number of partial and full residential acquisitions (similar to recommended LPA based on DEIS level analysis: 24 and 4, respectively)• Least number of parks impacted or crossed (0 and 1, respectively), and visual impacts• No impact on threatened and endangered species• Favored by key stakeholders and political leaders because alignment will not use US Route 202, will be behind the King of Prussia Mall, will use First Avenue, have less visual and traffic impacts, as well as provide service to Moore Park KOP and the Upper Merion Township KPMU zoning district• Low number of PECO tower impacts (4)	Similar to recommended LPA based on DEIS level analysis
PECO/TP-1 st Ave. (recommended LPA)	More ability than PECO-1 st Ave.; less ability than US 202-1 st Ave. and US 202-N. Gulph; same ability as remaining alternatives and design options	1 property permanent use; 2 properties <i>de minimis</i> impacts	Equal significance	SHPO concurrence on adverse effect to one property not sought, but likely; concurrence on no adverse effect for 3 properties	Achieves each element to a lesser degree than the Preferred Alternative	<ul style="list-style-type: none">• Same as Preferred Alternative	Action Alternatives similar
PECO-1 st Ave.	Least ability compared to other alternatives and design options	3 properties permanent use; 2 properties <i>de minimis</i> impacts	Equal significance	SHPO concurrence on effects not sought, but likely similar to recommended LPA; Township and County concerns for park property impacts	Similar to recommended LPA but less strong in travel time savings, ridership increase, mode shift and access to jobs; least well performing on community facility access	<ul style="list-style-type: none">• Higher number of partial residential (59) and parks (2) acquisitions• No potential to impact threatened and endangered species• Alignment was not favored by key stakeholders and political leaders during the DEIS because of alignment in PECO corridor west of Turnpike and in front of King of Prussia Mall, visual and park impacts• Higher number of potential PECO transmission tower conflicts (12)	Action Alternatives similar
PECO/TP-N. Gulph	More ability than PECO-1 st Ave.; less ability than US 202-1 st Ave. and US 202-N. Gulph; same ability as remaining alternatives and design options	1 property permanent use; 4 properties <i>de minimis</i> impacts	Equal significance	SHPO concurrence on adverse effect to one property not sought, but likely; potential impact on additional 5 properties minor, likely no adverse effect	Similar to recommended LPA; but less strong on travel time savings, access to jobs and parks	<ul style="list-style-type: none">• Least number of potential partial commercial acquisitions (30)• No impact on threatened and endangered species• Alignment was not favored by key stakeholders and political leaders during the DEIS because it would have fewer Project stations within the KPMU zoning district and will not use First Avenue, therefore having less service to Moore Park KOP and the Upper Merion Township KPMU zoning district, as well as visual and park impacts• Same PECO tower impacts as Preferred Alternative (4)	Action Alternatives similar
US 202-1 st Ave.	Most ability compared to other alternatives and design options	2 properties <i>de minimis</i> impacts	Equal significance	SHPO Section 106 concurrence not sought; potential impacts on same 3 properties as recommended LPA; likely no adverse effect for each property	Similar to recommended LPA but less strong in travel time savings, ridership increase, parking, access to jobs	<ul style="list-style-type: none">• Fewer partial residential property acquisitions (2); more partial commercial property acquisitions (95) and full residential acquisitions (19)• Within the range of the State threatened southern red oak (<i>Quercus falcata</i>)• Alignment was not favored by key stakeholders and political leaders during the DEIS because it would use US 202, and visual and traffic impacts.• Least number of potential PECO tower conflicts (0)	Action Alternatives similar

Alternatives	Section 4(f) Least Overall Harm Criteria (23 CFR 774.3(C)(1))						
	Impact Mitigation ¹	Remaining Severity ²	Property Significance ³	Officials' Views ⁴	Purpose and Need ⁵	Impact Magnitude ⁶	Cost Difference ⁷
US 202-N. Gulph	More ability compared to other alternatives and design options except US 202-1 st Ave.	4 properties <i>de minimis</i> impacts	Equal significance	SHPO Section 106 concurrence not sought; potential impacts on same 3 properties as recommended LPA; potential impact on additional 2 properties minor, likely no adverse effect for each property	Similar to recommended LPA; but less strong on travel time savings, ridership increase, access to jobs and parks	<ul style="list-style-type: none">• Fewer partial residential acquisitions (2); more partial commercial acquisitions (69)• Within the range of the State threatened southern red oak (<i>Quercus falcata</i>). Higher visual and noise impacts (5), .• Alignment was not favored by key stakeholders and political leaders during the DEIS because alignment will use US Route 202 and will not use First Avenue resulting in less service to Moore Park KOP and the Upper Merion Township KPMU zoning district, and visual and traffic impacts• No PECO tower conflicts (0)	Action Alternatives similar
Recommended LPA with Pennsylvania Turnpike North/South Option	More ability than PECO-1 st Ave.; less ability than US 202-1 st Ave. and US 202-N. Gulph; same ability as remaining alternatives and design options	1 property permanent use; 2 properties <i>de minimis</i> impacts	Equal significance	SHPO Section 106 concurrence not sought; likely adverse effect to 1 property; similar potential impacts on same 3 properties as recommended LPA	Similar to recommended LPA	<ul style="list-style-type: none">• Similar to the recommended LPA.	Action Alternatives similar
Recommended LPA with 9/11 Memorial Avoidance Option	Same ability as other alternatives and design options except less than US 202-1 st Ave. and US 202-N. Gulph	1 property permanent use; 2 properties <i>de minimis</i> impacts	Equal significance	SHPO Section 106 concurrence not sought; likely adverse effect to 1 property; similar potential impacts on same 3 properties as recommended LPA	Similar to recommended LPA	<ul style="list-style-type: none">• Similar to the recommended LPA.	Action Alternatives similar

¹ The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)

² The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection (see Table 4-2 for property identification).

³ The relative significance of each Section 4(f) property

⁴ The views of the official(s) with jurisdiction over each Section 4(f) property

⁵ The degree to which each alternative meets the purpose and need for the project

⁶ After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f) (DEIS and FEIS findings)

⁷ Substantial differences in costs among the alternatives

Factor 1 – Ability to mitigate adverse impacts on each Section 4(f) property

The ability to mitigate impacts on Section 4(f) properties was measured by considering the types of proposed uses the Preferred Alternative and each DEIS Action Alternative and recommended LPA design option would have, and making a relative comparison among the alternatives and options. PECO-1st Ave. would permanently use portions of three Section 4(f) properties, including two protected park properties: PECO Easement and Kingwood Road Park. The PECO-1st Ave. alignment would cross each park property, potentially impacting the ability to use each property for its intended recreational function. The ability to mitigate the impacts to these properties would be relatively difficult because the impaired function of the recreational properties would have to be restored. For example, for the function of Kingwood Road Park as a neighborhood recreation property to be restored, replacement land would have to be found within or close to the neighborhood. Given the developed character of the neighborhood, replacement land may be difficult to find. None of the other alternatives and design options would incorporate land from those park properties or cause an impairment of the function of an impacted property.

The US 202-1st Ave. and US 202-N. Gulph Action Alternatives would permanently incorporate land from two and four properties, respectively. However, because no adverse impact would occur to the activities, functions or attributes that make each property significant under Section 4(f), FTA made a preliminary finding of *de minimis* impact for each of the properties. Thus, the ability to mitigate the impacts to those properties would be relatively easier compared to permanent uses that are not *de minimis* impacts.

Each of the remaining DEIS Action Alternatives and recommended LPA design options would require replacement of some existing towers on the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line property (Preferred Alternative, recommended LPA, recommended LPA with the Pennsylvania Turnpike North/South Option, recommended LPA with the 9/11 Memorial Option, and PECO/TP-N. Gulph) (see Appendix A for descriptions of the options). Among these alternatives and design options, the impacts to the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line in terms of tower replacement would be comparatively similar; at minimum, each would require replacement of the same existing towers. As such, the commitments SEPTA has made for the Preferred Alternative to mitigate impacts to the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line could be applied to any of these action alternatives and design options.

Factor 2 – Relative severity of the remaining harm, after mitigation

The relative severity of the remaining harm to Section 4(f) properties, after mitigation was measured by considering the effectiveness of mitigation to address the adverse effects of the alternatives and design options to the activities, attributes, and features of the impacted properties.

PECO-1st Ave. would permanently use portions of three Section 4(f) properties, including two protected park properties: PECO Easement and Kingwood Road Park, likely requiring relocation or reconfiguration of the properties. The location of each of the properties is integral to its significance because Kingwood Road Park serves the Kingwood Road residential area.

Relocating the park outside the residential area, or reconfiguring the park around the Project would not completely eliminate the adverse impacts caused to the function of Kingwood Road Park. Similarly, the PECO Easement is intended to serve a local recreation function as well as Montgomery County's plan to extend the Chester Valley Trail using the PECO corridor. Relocating the PECO easement outside the local area, or reconfiguring the PECO Easement around the Project would not completely eliminate the adverse impacts caused to the function of PECO Easement.

The US 202-1st Ave. and US 202-N. Gulph Action Alternatives would permanently incorporate land from two and four properties, respectively. However, because no adverse impact would occur to the activities, functions or attributes that make each property significant under Section 4(f), FTA made a preliminary finding of *de minimis* impact for each of the properties. Thus, the impacts to the properties can be mitigated with little to no remaining harm.

Each of the remaining action alternatives and design options would require replacement of existing towers of the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (Preferred Alternative, recommended LPA, recommended LPA with the Pennsylvania Turnpike North/South Option, recommended LPA with the 9/11 Memorial Option, and PECO/TP-N. Gulph). The commitments SEPTA has made in the Section 106 Memorandum of Agreement will provide a permanent record of the affected historic towers on the property within the Project study area. Although tower replacement will occur, the function of the PECO corridor as part of the historic PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line will remain. Thus, the impacts to the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line can be mitigated with little remaining harm.

Factor 3 – Relative significance of each Section 4(f) property

FTA considers each Section 4(f) property to be equally significant in this evaluation; none of the properties has been determined through this evaluation or through coordination with officials with jurisdiction to be of different value.

Factor 4 – Views of the officials with jurisdiction over each Section 4(f) property

Upper Merion Township and Montgomery County have indicated concerns about the potential loss or reduction in park facilities on the PECO Easement and Kingwood Road Park properties if PECO-1st Ave. were to be advanced. SEPTA adopted the Preferred Alternative, not PECO-1st Ave., in part because the Preferred Alternative will avoid impacting these park properties.

The official with jurisdiction over the historic Section 4(f) properties in this least harm analysis is the SHPO. The SHPO concurred on the Section 106 adverse effect determination for the Preferred Alternative on October 30, 2020. Although a Section 106 effect finding and SHPO concurrence were not sought for the other alternatives and design options, all but US 202-1st Ave. and US 202-N. Gulph would similarly permanently incorporate land from the PNJ Interconnection property as the Preferred Alternative. As the potential impact on each additional historic property would be similar in size and would require replacement of some towers, it is reasonable to consider a Section 106 adverse effect finding to be likely for each property if consultation were pursued (**Table 6-1**).

The potential impacts of the US 202-1st Ave. and US 202-N. Gulph alternatives on Section 4(f) properties would be relatively minor (**Table 6-1**); a no adverse effect finding would be likely if consultation were pursued.

Factor 5 – Degree to which each alternative meets the purpose and need for the project

The Preferred Alternative and each DEIS Action Alternative and recommended LPA design option achieves the Project purpose and need, although some differences in degree are recognized. The Preferred Alternative, the recommended LPA, and each recommended LPA design option best achieve the Project purpose and need, with the combination of the most travel time savings, highest ridership increase, high mode shift rate, most transit parking capacity, and most access to jobs, parks and community facilities. PECO-1st Ave. is less strong in travel time savings, ridership increase, mode shift rate, access to jobs, and least effective among the DEIS Action Alternatives in community facility access. PECO/TP-N. Gulph is similar to the Preferred Alternative and recommended LPA but also less strong in travel time savings, and access to jobs and parks. US 202-1st Ave. is similar to the Preferred Alternative and the recommended LPA but also less strong in travel time savings, ridership increase, providing transit parking, and access to jobs. US 202-N. Gulph is similar to the Preferred Alternative and the recommended LPA but also less strong in travel time savings, ridership increase, and access to jobs and parks.

Factor 6 – The magnitude of adverse impacts on properties not protected by Section 4(f)

Other factors, which are not Section 4(f)-related, distinguish among the Preferred Alternative, and the DEIS Action Alternatives and recommended LPA design options, including partial and full property acquisitions, threatened and endangered species impacts, support for public and stakeholder preferences, and number of PECO tower conflicts (**Table 6-1**). Comparing the performance of these factors among the Preferred Alternative, the DEIS Action Alternatives, and the recommended LPA design options, indicates that the Preferred Alternative will have the least impacts on properties not protected by Section 4(f) because it will have the least number of residential property acquisitions, the least number of parks impacted or crossed, and no impact on threatened and endangered species. In addition, the Preferred Alternative is favored by key stakeholders and political leaders because it will not be aligned along US Route 202, it will be behind the King of Prussia Mall, it will use First Avenue and serve Moore Park KOP; and it will have fewer visual and traffic impacts than the other Action Alternatives and recommended LPA design options.

The recommended LPA and the design options would have similar impacts to non-Section 4(f) properties as the Preferred Alternative.

The PECO-1st Ave. Action Alternative would have higher number of partial residential acquisitions and parks impacts and a higher number of potential PECO tower conflicts compared to the Preferred Alternative. PECO-1st Ave. was not favored by key stakeholders and political leaders during the DEIS because the alignment would be in the PECO corridor west of Turnpike and in front of King of Prussia Mall, and the visual and park impacts.

PECO/TP-N. Gulph would have comparatively fewer partial commercial property impacts, but it also was not favored by key stakeholders and political leaders during the DEIS because it would have fewer Project stations within the KPMU zoning district, and it would not use First Avenue, therefore having less service to Moore Park KOP and the Upper Merion Township KPMU zoning district; visual and park impacts were also a concern.

US 202-1st Ave would have comparatively more property acquisitions than the Preferred Alternative and would be in the range of the State-threatened southern red oak (*Quercus falcata*). US 202-1st Ave. was also not favored by key stakeholders and political leaders during the DEIS because it would use US 202, and because of its visual and traffic impacts.

US 202-N. Gulph would also be in the range of the State-threatened southern red oak (*Quercus falcata*) and was also not favored by key stakeholders and political leaders.

Factor 7 – Substantial differences in costs among the alternatives

A preliminary estimate of costs of the Preferred Alternative and the DEIS Action Alternatives and recommended LPA design options indicates similar capital as well as operations and maintenance costs (DEIS Section 8.6.2). SEPTA updated the cost estimate in 2020 for the Preferred Alternative based on the 15 percent design and using 2019 base year dollars. The updated cost estimate shows an increased cost for the Preferred Alternative that is explained by:

- The difference between the 2015 and 2019 base year dollars; and,
- The refined design that enables more detailed cost estimation for guideway and track elements, stations and park-and-ride facilities (including the two parking structures), systems subsequent design, ROW acquisition, demolition, utility work, environmental studies during subsequent design, mitigation, drainage, landscaping, bicycle and pedestrian accommodation, station circulation, and construction costs.

However, to be able to compare the relative costs of each Action Alternative and design option in this evaluation, the preliminary cost estimates for the recommended LPA were applied to the Preferred Alternative.

Least Harm Alternative Selection

The least overall harm assessment examined the Preferred Alternative and the DEIS Action Alternatives and recommended LPA design options and determined that the Preferred Alternative will have the least overall harm to Section 4(f) properties for the following reasons:

- The Preferred Alternative will require replacement of approximately four existing towers from one Section 4(f) property, which is the same or fewer in number of properties impacted compared to the DEIS Action Alternatives and recommended LPA design options, except US 202-N. Gulph which would incorporate land from four Section 4(f) properties. The Preferred Alternative will have a similar ability to mitigate adverse impacts to Section 4(f) properties because the Section 106 commitments in the Section 106 Memorandum of Agreement with the SHPO will address Project impacts to the

activities, attributes, and features of the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line with relatively low remaining harm.

- While the US 202-1st Ave. and US 202-N. Gulph Action Alternatives would also have low to no remaining harm to Section 4(f) properties after mitigation, the US 202-1st Ave. and US 202-N. Gulph Action Alternatives are within the range of the State endangered southern red oak (*Quercus falcata*), and have the potential for visual and traffic impacts. In addition, key stakeholders and political leaders do not support the US 202-1st Ave. and US 202-N. Gulph Action Alternatives because of the visual and traffic impacts the alternatives would cause.
- The Preferred Alternative will better achieve the Project purpose and need in terms of providing more travel time savings, higher ridership increase, more parking for transit users, and access to more Project study area jobs compared to the US 202-1st Ave. and US 202-N. Gulph Action Alternatives. The Preferred Alternative will also better achieve each factor that is most important to key stakeholders and political leaders, especially avoiding an alignment along US Route 202, using First Avenue, avoiding the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line west of the Pennsylvania Turnpike and being aligned behind the King of Prussia Mall.

7 All Possible Planning to Minimize Harm

All possible planning means that all reasonable measures identified in the Section 4(f) Evaluation to minimize harm or mitigate for adverse impacts and effects are included in a project (23 CFR § 774.17). Throughout alternatives development and evaluation, FTA applied the following strategies to minimize or mitigate impacts to Section 4(f) properties:

- Coordinating with officials with jurisdiction, including the County, Township, the SHPO and others to identify Section 4(f) properties early in alternatives development, determine plans for the properties by officials with jurisdiction and discuss the potential for Project impacts on those properties (Section 8);
- Seeking input from stakeholders and the public regarding the effects of the Action Alternatives and recommended LPA design options on Section 4(f) properties and other properties (Section 8);
- Using existing transportation and utility corridors as much as reasonably feasible to keep additional ROW needs to a minimum (DEIS Section 2.1.2.2);
- Using elevated guideway to minimize the physical impact of the Project on Section 4(f) properties to the extent reasonably feasible (Section 4.1); and;
- Avoiding or reducing impacts to Section 4(f) properties using design refinements (Section 4.2).

During Section 106 consultation for the Preferred Alternative, FTA, SEPTA, and the SHPO entered into a Section 106 Memorandum of Agreement on November 25, 2020 that stipulates the mitigation measures to be undertaken as part of the Project to address the adverse effects of the Project to the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (Appendix C). The key stipulation in the Memorandum of Agreement to mitigate adverse effects

to the PECO property is mapping of the PNJ Interconnection between the southern Pennsylvania border and the Plymouth Meeting Substation.

8 Coordination

FTA and SEPTA initiated coordination with the officials with jurisdiction over the Section 4(f) properties during development and evaluation of the Action Alternatives and recommended LPA design options during preparation of the Draft Section 4(f) Evaluation. Specifically, SEPTA coordinated regularly with Montgomery County and Upper Merion Township since NEPA scoping in 2013, with each entity serving as a core stakeholder on Project committees. In addition, SEPTA met with the County Planning Commission and Upper Merion Township Planning staff in April 2014 to discuss the Project as well as existing and future parkland, open space and trail facilities and plans. For example, on September 10, 2020 SEPTA coordinated with the Montgomery County Trail and Open Space Department in regard to the Project crossing the planned Chester Valley Trail Extension. That coordination activity resulted in the commitments made by SEPTA activities during subsequent design, construction, and operation of the Project, and County concurrence with FTA's Section 4(f) finding of temporary occupancy exception for the property (Section 4.1 and Appendix C). More information regarding FTA and SEPTA coordination activities may be found in the 2017 *King of Prussia Rail Extension Draft Environmental Impact Statement* (www.kingofprussiarail.com).

Regarding historic properties, FTA initiated consultation with the SHPO under Section 106 of the NHPA in 2013. Since that time, the SHPO reviewed and concurred with the Project area of potential effects for the recommended LPA on March 7, 2016, concurred on eligibility of properties within the APE for listing in the NRHP on September 26, 2016, and concurred on the effects of the Action Alternatives and recommended LPA design options on historic properties (Appendix C).

During initial Section 106 consultation, FTA and SEPTA invited and engaged Section 106 consulting parties in reviewing reports determining the eligibility of the historic properties for the National Register of Historic Places and assessing the effects of the recommended LPA on those properties. As part of reviewing the technical reports, the consulting parties were invited by FTA and SEPTA to attend a meeting on September 8, 2016 for the purpose of providing a Project overview, presenting the findings of the reports, and obtaining comments. Several parties provided verbal and written comments during consultation; however, none of the comments pertained to the three properties. A summary of the consulting party meeting in 2016 and copies of the comment letters are provided in Appendix C.

FTA re-initiated Section 106 consultation with the SHPO and consulting parties on October 19, 2020, focusing on the Preferred Alternative. The purposes of consultation were to determine the eligibility of the new historic property (PNJ Interconnection), and the effects of the Preferred Alternative on the new property as well as the previously evaluated historic properties. No additional comments were received from the consulting parties during consultation for the Preferred Alternative.

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Appendix A – Alternatives Considered



Final Section 4(f) Evaluation
APPENDIX A
ALTERNATIVES CONSIDERED

Prepared for:
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Prepared by:
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Version (FINAL): January 2021

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Appendix A Alternatives Considered

This Appendix A describes the No Action and Preferred Alternatives considered in the 2020 King of Prussia Rail Extension (Project) Final Section 4(f) Evaluation and summarizes the planning process used to identify, develop and compare the alternatives. This appendix is organized by the following sections:

- Section 1 Summary of the Planning and DEIS Processes;
- Section 2 Refinements to the Recommended LPA After the DEIS; and
- Section 3 Alternatives Considered in the Final Section 4(f) Evaluation

1 Summary of the Planning and DEIS Processes

In 2012, prior to the initiation of the NEPA process, SEPTA began evaluating the potential to extend NHSL rail transit service to the King of Prussia area. This planning work included developing the Project purpose and need, and evaluating a list of alternatives, which included alternatives from SEPTA's 2003 *Norristown High Speed Line (Route 100) Extension Draft Alternatives Analysis*, new concepts SEPTA developed, and ideas identified through agency, stakeholder, and public outreach activities. The Project purpose and need focuses on rail service, not a bus mode, because SEPTA provides six different bus routes to the King Prussia/Valley Forge area, including express bus service from Center City Philadelphia. As described in FEIS Sections 1.2.5 and 3.1, extensive existing roadway congestion makes additional bus service not a feasible solution.

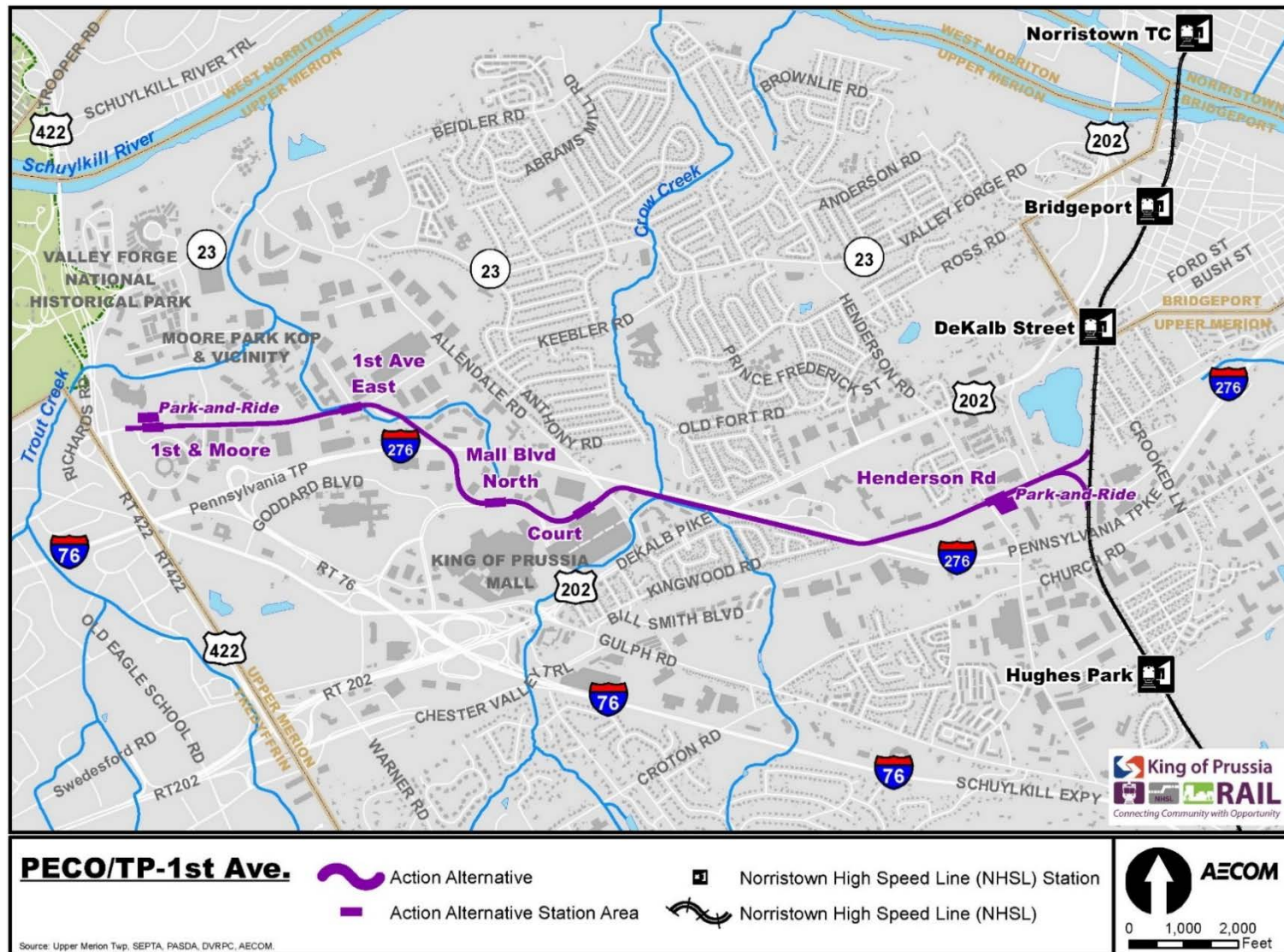
The list of 30 alternatives was then screened through a three-tiered evaluation process consisting of progressively more detailed levels of scrutiny. Tier 1 screening (October 2012 – January 2014) eliminated alternatives that did not achieve the Project purpose and need or would not be reasonable to build, operate or maintain. Tier 2 (February 2014 – December 2014) examined the surviving alternatives for engineering/right-of-way needs, markets to be served, system connectivity, support for transit-oriented development, and community and environmental impacts. As a result of Tier 2 analysis, all but the five Action Alternatives that were considered in the DEIS were eliminated; the alternatives that were eliminated did not perform as well as the five alternatives that were retained in terms of the engineering, transportation, and natural and built environment factors applied during Tier 2.

On June 27, 2013, Federal Transit Authority (FTA) and SEPTA initiated the National Environmental Protection Administration (NEPA) process for the Project with a Notice of Intent (NOI) in the Federal Register. Tier 3 analysis (January 2015 – December 2017) was conducted as part of the DEIS process, and included a detailed analysis of the five Action Alternatives, along with the No Action Alternative. Tier 3 identified the potential benefits and impacts of each of the five Action Alternatives on the transportation, natural and human environments. SEPTA refined the Action Alternatives based on input received from the public, agencies, and other stakeholders.

After considering not only the Tier 3 screening process results, but also the input received from agencies, stakeholders and the public (FEIS Chapter 5), SEPTA identified a recommended locally preferred alternative (LPA) as the environmentally preferable alternative in the DEIS . Compared to the other DEIS alternatives, the recommended LPA was identified as best meeting the purpose and need while avoiding or minimizing impacts and being responsive to agency, stakeholder, and public concerns. SEPTA also identified and evaluated two design options for the recommended LPA: the PA Turnpike North/South Option and the 9/11 Memorial Avoidance Option. Each of the recommended LPA design options would modify a portion of the recommended LPA; the remainder of the recommended LPA would be unchanged. Either or both design options could be applied to the recommended LPA as a minimization strategy.

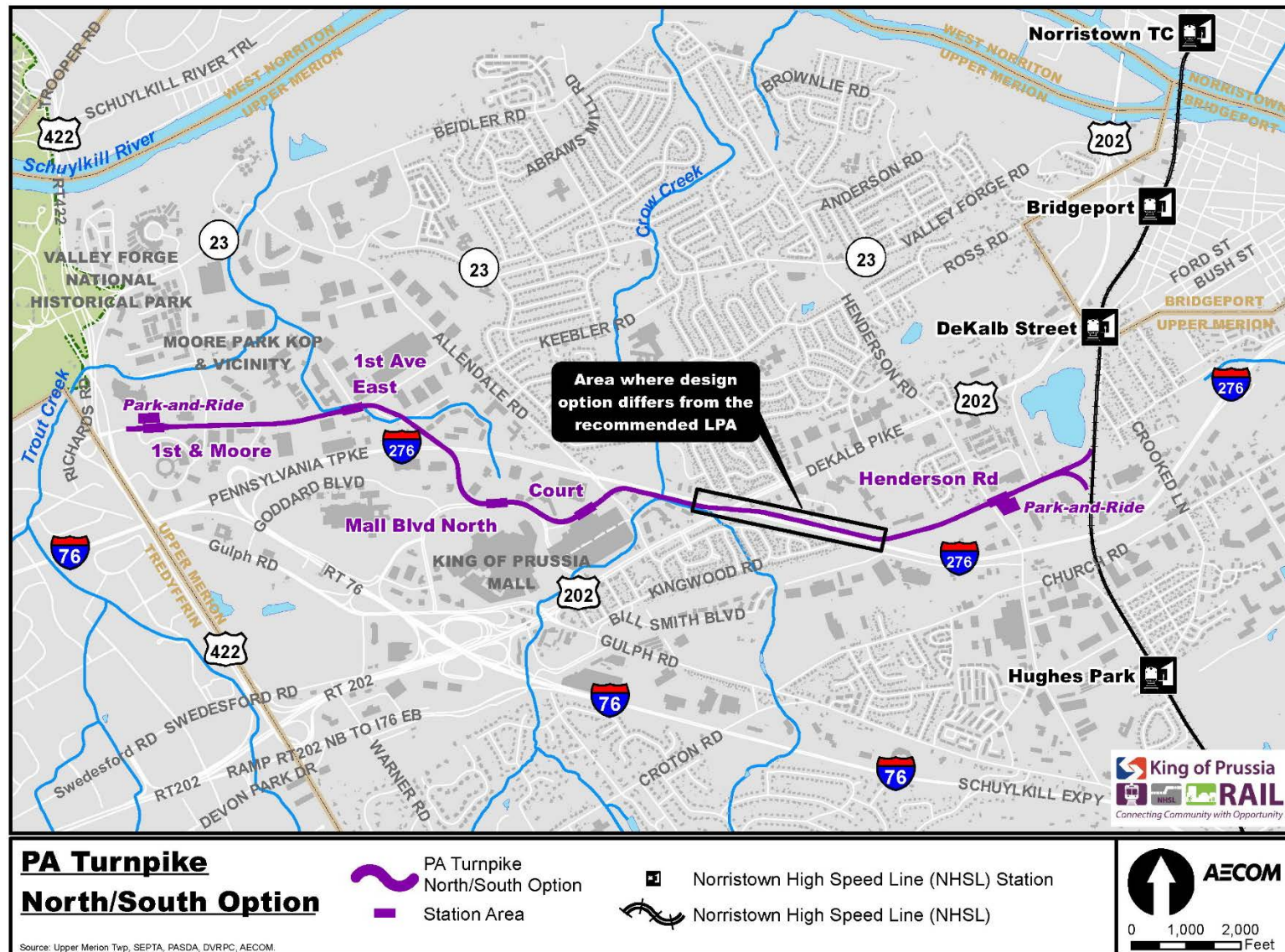
The DEIS was published in the Federal Register on October 17, 2017. A public comment period following publication of the DEIS provided an opportunity for interested parties to review the DEIS and provide comments. Following the close of the comment period on December 4, 2017, FTA and SEPTA reviewed comments received during the DEIS public comment period. On January 25, 2018, SEPTA adopted the recommended LPA as its Preferred Alternative; the recommended LPA was adopted as presented in the 2017 DEIS as the PECO/TP-1st Ave. Action Alternative with the PA Turnpike North/South Option. **Figure 2.1-1** shows the recommended LPA, and **Figure 2.1-2** shows the PA Turnpike North/South option.

Figure 1-1: Recommended LPA (PECO/TP-1st Ave.)



Source: AECOM 2017

Figure 1-2: PA Turnpike North/South Option



Source:
AECOM 2017

SEPTA's LPA resolution acknowledges the DEIS findings, noting that an extension of the NHSL to King of Prussia will provide benefits to the region, including providing travelers with a rail transit alternative to congested roadway travel, attracting new transit riders, supporting economic development opportunities, and meeting regional sustainability and livability goals. Among the DEIS alternatives, the recommended LPA was determined to best address the Project purpose and need; it was determined to best achieve the most important factors for broad acceptance by key stakeholders and political leaders; and it was determined to perform as well as or better than the other Action Alternatives in each of the most important natural and built environment factors, except wooded areas and potential threatened and endangered species habitat impacts (DEIS, Chapter 8).

The FEIS evaluates the Preferred Alternative, as well as the No Action Alternative, and demonstrates why the PECO/TP-1st Ave. Action Alternative with the PA Turnpike North/South Option remains the Preferred Alternative. The other action alternatives in the DEIS remain unchanged and are hereby incorporated by reference into this FEIS. The other action alternatives are: PECO-1st Ave., PECO/TP-N. Gulph, US 202-1st Ave., US 202-N. Gulph, and the 9/11 Memorial Avoidance Option for the recommended LPA.

2 Refinements to the Recommended LPA After the DEIS

Following the DEIS public comment period and SEPTA's adoption of the recommended LPA as the Preferred Alternative, FTA and SEPTA evaluated the Preferred Alternative at a higher level of planning and engineering pursuant to 23 U.S.C. Part 139(f)(4)(D). SEPTA's activities in this evaluation included:

- Responding to substantive comments made during the DEIS comment period (related to access and connections; development potential around stations; avoiding or minimizing impacts to traffic, noise, vibration, visual and property; and Project costs);
- Updating supporting information, including but not limited to: ridership projections, bus and shuttle routes, land use data, traffic analysis, Project operation plan, and Project costs;
- Committing to specific minimization and mitigation measures; and,
- Developing and evaluating construction and operation designs to 15 percent.

These activities enabled SEPTA to refine the Preferred Alternative to provide improved operations and fewer impacts. The Preferred Alternative consists of 3.5 miles of new, double-track guideway from the existing NHSL to First Avenue. Along the guideway, five new stations are proposed: Henderson Road, Allendale Road, Mall Blvd, First & American and First & Moore. Collectively, the proposed guideway, stations and supporting structures are referred to as the Project in this Final Section 4(f) Evaluation to distinguish Project elements from the existing NHSL. Also, as part of the Project, SEPTA will renovate the existing 69th Street Transportation Center to accommodate the new Project service. New, supporting facilities along the guideway will include park-and-ride facilities for 500 vehicles each at two locations (Henderson Road Station and First & Moore Station, three traction power substations, communications and signals equipment, and stormwater management facilities). The guideway

is defined and described in this Final Section 4(f) Evaluation according to six geographic segments (**Figure 2-1**):

- Junction: NHSL to Henderson Road Station
- PECO: Henderson Road Station to PA Turnpike Service Plaza
- PA Turnpike East: PA Turnpike Service Plaza to Allendale Road Station
- Mall: Allendale Road Station to Mall Blvd Station
- PA Turnpike West: Mall Blvd Station to First & American Station
- First Avenue: First & American Station to First Avenue Station

Detailed descriptions of these Preferred Alternative elements are provided in Section 3.2. More detail regarding these refinements is provided in Section 3.2 and **Table 3.1-2** of this Final Section 4(f) Evaluation Appendix A.

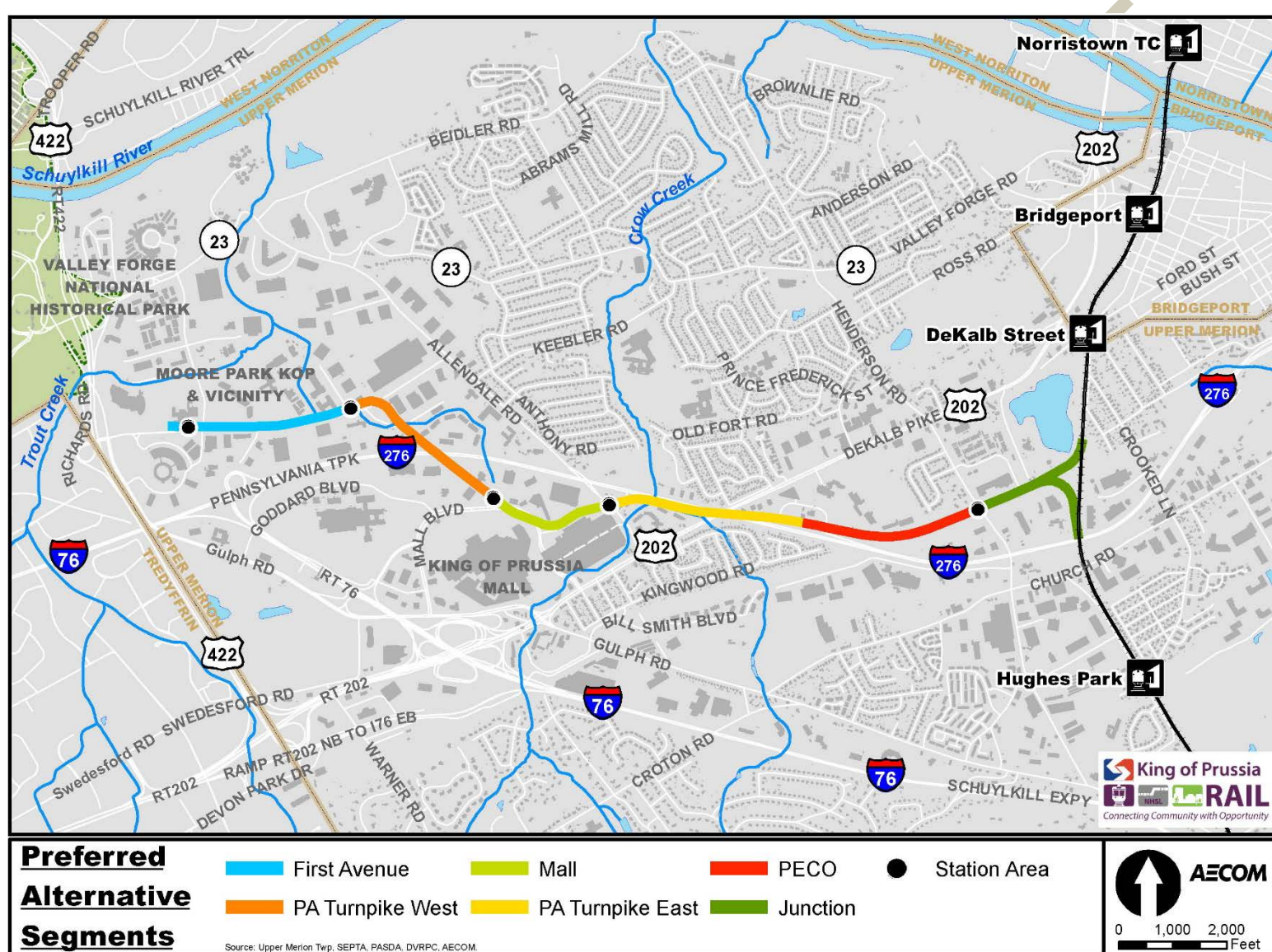
3 Alternatives Considered in the Final Section 4(f) Evaluation

3.1 No Action Alternative

The No Action Alternative is the 2040 condition without the Project; it assumes the other major regional committed projects will occur. The No Action Alternative serves as a baseline for comparing the Action Alternatives. The No Action Alternative in the Final Section 4(f) Evaluation is the same in principle as the No Action Alternative considered in the FEIS.

The major regional committed projects consist primarily of planned capacity and operational improvements to regional and local study area roadways, particularly US Route 422 and the PA Turnpike (see **Table 3.1-1**). All but one roadway project operates at the periphery of the transportation study area. Though not a major regional project, Montgomery County's Chester Valley Trail Extension is also within the transportation study area. In addition to the major regional committed projects, the No Action Alternative consists of roadway and transit networks, transit service levels, traffic volumes, and forecasted demographics for the horizon year 2040. With the exceptions of the NHSL Bridgeport Viaduct and NHSL Transit System Preservation projects, SEPTA has no control over the scope, timing, implementation or effects of the listed committed projects.

Figure 2-1: Preferred Alternative Guideway Segments



Source: AECOM 2020

Table 3.1-1: Transportation Study Area Major Regional Committed (Funded) Projects by 2040

Project	Type	Description
I-276 and Lafayette Street / Ridge Avenue	Roadway	New interchange for Norristown
Henderson Road, Roadway System Expansion	Roadway	Widen Henderson Road from South Gulph Road to Shoemaker; Widen South Gulph Road from Crooked Lane to I-76 Gulph Mills intersection
I-76 PA Turnpike	Roadway	Reconstruct and widen the Turnpike from Morgantown, Berks County to Valley Forge
Traffic Management Center, Roadway Operational Improvement	Roadway	New regional traffic management center at PennDOT District 6 Headquarters
US 422 Bridge and PA 23 Interchange (River Crossing), Roadway System Expansion	Roadway	Bridge replacement and new bridge over Schuylkill River - existing bridge is 5 lanes, new bridge will have 6 lanes; Intersection/interchange improvements at US 422 and PA 23 Interchange
PA 23 and Trout Creek Road, Roadway System Expansion	Roadway	Replace weight restricted bridge on a new alignment; realign roadway between Moore Road and Vandenberg Road providing two westbound lanes and one eastbound lane
I-76 Integrated Corridor Management, Roadway System Expansion	Roadway	Variable speed limits, queue detection, dynamic lane assignments, junction control improvements, adaptive ramp metering, continuous monitoring systems, responsive traffic control, coordination with SEPTA, biking enhancements, and full safety analysis
Lafayette Street, Roadway System Expansion	Roadway	Extend roadway from Barbados Street to Diamond Avenue
NHSL Bridgeport Viaduct, Transit System Preservation	Transit	Rehabilitate Bridgeport Viaduct over Schuylkill River and Bridge 0.15 over 69th Street yard tracks on existing line
NHSL, Transit System Preservation	Transit	Tie Replacement and Continuous Welded Rail on existing line

Source: DVRPC, *Connections 2045 Plan for Greater Philadelphia*, access July 28, 2020 via Amended Major Regional Projects.

Table 3.1-2: Preferred Alternative Refinements from Recommended LPA

Project Element	Refinements	Reasons for Refinement
Junction Segment	<ul style="list-style-type: none"> Refined track geometry and connections to existing NHSL 	<ul style="list-style-type: none"> Improve rail operations and NHSL connections Provide traction power substation (TPSS) Provide stormwater management facility
Henderson Road Station	<ul style="list-style-type: none"> Station shift to straddle Henderson Road 	<ul style="list-style-type: none"> Reduce station height Improve pedestrian access from west Improve location in relation to proposed PA Turnpike ramp Reduce parking requirement to 500 spaces Provide bus service accommodation Provide stormwater management facility
PECO Segment	<ul style="list-style-type: none"> Refined track geometry 	<ul style="list-style-type: none"> Improve rail operations Minimize ROW needs from PECO Minimize impacts to developed properties outside PECO ROW
PA Turnpike East Segment	<ul style="list-style-type: none"> Refined track geometry and structure 	<ul style="list-style-type: none"> Improve rail operations Simplify structure Reduce impacts to PA Turnpike Service Area
Allendale Road Station	<ul style="list-style-type: none"> Station shift to straddle Allendale Road 	<ul style="list-style-type: none"> Eliminate station structure over Mall Boulevard Reduce Costco driveway impacts Improve passenger circulation Improve passenger access from the east Reduce traffic impacts during construction Reduce permanent impacts during Project operations Provide stormwater management facility Provide TPSS near station
Mall Segment	<ul style="list-style-type: none"> Improved guideway geometry 	<ul style="list-style-type: none"> Remove guideway along and over Wills and Mall Boulevards Eliminate three horizontal curves Improve rail operations

Project Element	Refinements	Reasons for Refinement
		<ul style="list-style-type: none"> • Reduce property impacts • Reduce traffic operation impacts on Wills and Mall Boulevards • Increase distance between Mall stations • Reduce potential noise and vibration
Mall Blvd Station	<ul style="list-style-type: none"> • Station shift to between Atrium Building and Capital Grille 	<ul style="list-style-type: none"> • Eliminate station structure over Mall Boulevard • Reduce costs to construct and maintain • Improve passenger circulation • Provide pedestrian crossing over Mall Boulevard • Improve station access to and from the north side of Mall Boulevard • Provide bus service accommodation
PA Turnpike West Segment	<ul style="list-style-type: none"> • Improved guideway geometry 	<ul style="list-style-type: none"> • Reduce height of structure over PA Turnpike • Reduce costs to construct and maintain • Enable interlocking for operational flexibility
First & American Station	<ul style="list-style-type: none"> • Station shift to north side of First Avenue 	<ul style="list-style-type: none"> • Eliminate structure along and over First Avenue • Reduce costs to construct and maintain • Reduce construction impacts to traffic on First Avenue
First Avenue Segment	<ul style="list-style-type: none"> • Guideway shift to north side of First Avenue 	<ul style="list-style-type: none"> • Improve track geometry and rail operations • Improve constructability • Reduce costs to construct and maintain • Eliminate structure along and over roadway • Reduce operational traffic impacts on First Avenue • Reduce construction impacts to traffic on First Avenue • Minimize impacts to Trout Creek
First & Moore Station	<ul style="list-style-type: none"> • Station shift to corner of First Avenue and Moore Road • Reduced structure for tail track 	<ul style="list-style-type: none"> • Eliminate structure along and over First Avenue • Reduce costs to construct and maintain • Eliminate traffic impacts on First Avenue • Reduce construction impacts to traffic on First Avenue

Project Element	Refinements	Reasons for Refinement
		<ul style="list-style-type: none"> • Accommodate potential PA Turnpike interchange ramp to First Avenue • Improve passenger circulation • Increase access to properties along Moore Road • Improve transit-oriented development (TOD) potential • Reduce parking requirement to 500 spaces • Provide bus service accommodation • Provide stormwater management facility • Provide TPSS near station
69 th Street Transportation Center	<ul style="list-style-type: none"> • Expand station concourse and Platform 4 access 	<ul style="list-style-type: none"> • Accommodate increase in passengers and rail service

Source: KOP Rail Basis of Design Report, 2019 and KOP Rail Extension 15% Design Drawings, HNTB 2019

3.2 Preferred Alternative

The Preferred Alternative is the 2040 condition with the Project; it assumes the other major regional committed projects in the No Action Alternative will occur (Section 3.1). This section is organized according to the following Project elements:

- Section 3.2.1 Guideway
- Section 3.2.2 Stations and Park-and-Ride Facilities
- Section 3.2.3 69th Street Transportation Center
- Section 3.2.4 Support Facilities
- Section 3.2.5 Vehicles
- Section 3.2.6 Operating Plan
- Section 3.2.7 Bus and Shuttle Service Modifications
- Section 3.2.8 Relocation of Existing Facilities

Sources of the information presented in this section are the following, which are available on the Project website (www.kingofprussiarail.com): *King of Prussia Rail Basis of Design Report, Volumes I and II*, prepared by HNTB; and *NHSL – King of Prussia Rail Extension 15% Design Submission*, prepared by HNTB.

3.2.1 Guideway

As described in Section 2.2, the Preferred Alternative guideway consists of six segments; a description of the alignment and characteristics of each segment is provided below. A quick guide to the guideway is presented in **Table 3.2-1**; and previously shown in **Figure 2-1** the segment locations. **Figure 3.2-1** shows the Preferred Alternative guideway along First Avenue. **Table 3.2-2** presents key guideway design criteria.

Table 3.2-1: Quick Guide to the Guideway

Segment Name	Location	Key Features and Operations
Junction	Existing NHSL to planned Chester Valley Trail Extension	<ul style="list-style-type: none"> • Wye connection to NHSL • Wye elevated on fill or retained fill • Supporting Facilities: TPSS, stormwater management (SWM) • Operating speed: 15 mph
PECO	Planned Chester Valley Trail Extension to near 251 DeKalb apartments	<ul style="list-style-type: none"> • Guideway along north edge of PECO utility corridor • Guideway on elevated structure over Henderson Road (14' 9" vertical clearance at Henderson Road) and to the east • Guideway at grade or in cut west of Henderson Road (maximum 60-foot cut depth) • Elevated structure provides clear spans over Henderson Road and planned Chester Valley Trail Extension • Stations: Henderson Road Station elevated over Henderson Road

Segment Name	Location	Key Features and Operations
		<ul style="list-style-type: none"> Supporting Facilities: SWM Operating speed: 35 mph
PA Turnpike East	Near 251 DeKalb apartments east of Allendale Road	<ul style="list-style-type: none"> Guideway along north side of PA Turnpike, then crossing over to south side of PA Turnpike Guideway on retained fill between PECO and PA Turnpike Service Plaza Guideway on elevated structure over ramps and SWM facilities at PA Turnpike Service Plaza Guideway on elevated structure over US 202 and PA Turnpike crossing (with median pier): 16' 6" vertical clearance to US 202, 60 feet vertical clearance to PA Turnpike and Crow Creek Stations: None Supporting Facilities: radio tower, SWM Operating speed: 45 to 55 mph
Mall	Allendale Road to Mall Blvd Station	<ul style="list-style-type: none"> Guideway on elevated structure over Allendale Road, Wills Boulevard, Mall Boulevard and private driveways (14' 9" vertical clearance) Stations: Allendale Road Station and Mall Blvd Station Supporting Facilities: TPSS, SWM Operating speeds: 30 mph
PA Turnpike West	West of Mall Blvd Station to First & American Station	<ul style="list-style-type: none"> Guideway over PA Turnpike, American Avenue, Trout Creek, First Avenue and along north side of First Avenue Guideway on elevated structure with vertical clearances: 16' 6" over PA Turnpike (with median pier), 14' 9" over American Avenue, First Avenue and private driveways Stations: Mall Blvd Station and First & American Station Supporting Facilities: Midline interlocking, signal huts, SWM Operating speed: 40 to 50 mph
First Avenue	First & American Station to First & Moore Station	<ul style="list-style-type: none"> Guideway along north side of First Avenue Guideway on elevated structure with vertical clearances: 14' 9" over Clark Avenue, Moore Road and private driveways Stations: First & American Station to First & Moore Station Supporting Facilities: TPSS, signal huts, SWM Operating speed: 15 to 50 mph

Notes:

mph = miles per hour

SWM = stormwater management facility

TPSS = traction power substation

Source: *KOP Rail Basis of Design Report*, 2019 and *KOP Rail Extension 15% Design Drawings*, HNTB 2019

Figure 3.2-1: Preferred Alternative Guideway

Source: HNTB, 2020

Table 3.2-2: Key Guideway Design Criteria

Key Guideway Design Criteria
<ul style="list-style-type: none"> • Track type: continuous welded rail • Maximum operating speed: 55 mph; Design speed: 70 mph • Minimum track curve radius: 400 feet • Maximum track grade: 2.5% • Distance between track centers: 12 feet, 6 inches • All exclusive right-of-way: no public at-grade crossings • All grade-separated track: structured crossings over ten roadways and 25 driveways • Minimum vertical clearance over roadways: 14 feet 9 inches • Guideway pier locations: applied PennDOT's Clear Zone Criteria for safety; maximum 120-foot spacing between piers • Guideway and support structure materials: concrete and steel • PECO cut depth: maximum 60 feet with concrete retaining walls

Source: KOP Rail Basis of Design Report, HNTB 2019

- **Junction:** The guideway will turn off the existing NHSL corridor between the NHSL DeKalb Street and Hughes Park Stations, curving west to pass along the south side of the old quarry property to the point where it will cross over the planned Chester Valley Trail Extension (maps, Appendix B of the Final Section 4(f) Evaluation).

To enable the Project to serve the Norristown Transportation Center to the north and 69th Street Transportation Center to the south, two pairs of track connections with the

existing NHSL are required, forming a Y-shaped connection. The southern track pair (from 69th Street Transportation Center) will turn off the NHSL just north of the point where the NHSL crosses I-276. The northern track pair (from Norristown Transportation Center) will turn west off the NHSL south of the intersection of Glenwood Road and David Road. The two track pairs will curve to the west and merge into one track pair just east of the planned Chester Valley Trail Extension. The design of the Junction segment is guided by the following physical constraints and railroad operating condition requirements:

- Existing bridges over the NHSL south of the Junction: the Church Road bridge, the Norfolk Southern Trenton Cut-off bridge and the PA Turnpike bridge;
- The proximity of the Aqua Pennsylvania, Inc. property to the north and west;
- Existing transmission tower array in the PECO utility corridor (Section 3.2.8); and,
- Railroad grade and geometry requirements.

Working within these constraints, SEPTA proposes to shift the portion of existing NHSL tracks in the Junction segment area approximately five feet to the west to accommodate the new tracks that will form the Project connection to the existing NHSL. To overcome differences between the elevation of the existing NHSL tracks and the elevation of the Project tracks, SEPTA will raise the elevation of the existing NHSL tracks in the Junction segment area approximately three feet between the Norfolk Southern Trenton Cut-off bridge and a point approximately 500 feet north of the PA Turnpike bridge. The Project tracks in the Junction segment will be elevated on fill or retained fill east of the planned Chester Valley Trail Extension. Prior to crossing over the trail, the track support will transition from fill to an elevated guideway structure.

- **PECO:** The guideway will be along the northern edge of the PECO utility corridor. The guideway will span over the planned Chester Valley Trail Extension and over Henderson Road. The Henderson Road Station will occupy the elevated guideway over Henderson Road (Section 3.2.2). West of the station, the guideway will continue west along the northern edge of the PECO electric utility corridor. As the guideway approaches the PA Turnpike near the 251 DeKalb apartments, the guideway will curve northwest off the PECO corridor to run along the north side of the PA Turnpike (maps, Appendix B of the Final Section 4(f) Evaluation).

The design of the PECO segment is guided by physical constraints within and adjacent to the PECO utility corridor, including:

- The existing lattice transmission tower array (see Section 3.2.8);
- The planned Chester Valley Trail Extension crossing;
- The Henderson Road crossing;
- The 251 DeKalb apartment complex on a bluff to the north of the PECO corridor; and,
- Substantial changes in terrain elevation along the PECO segment.

Working within these constraints and in coordination with PECO, SEPTA refined the guideway to minimize use of land within the PECO right-of-way as well as additional

right-of-way needs from other properties. SEPTA's design transitions the guideway from an elevated structure at the Henderson Road crossing to below ground in a cut with retaining walls along the remaining length of the segment. The depth of the cut at its deepest point will be approximately 60 feet below the existing ground surface at the top of the hill near the 251 DeKalb apartments.

- **PA Turnpike East:** From the PECO segment, the guideway will continue west on the north side of the PA Turnpike, emerging from the cut and transitioning to elevated guideway as the terrain slopes down just east of the PA Turnpike Service Plaza. The PA Turnpike East segment follows the alignment of the DEIS PA Turnpike North/South option on the north side of the PA Turnpike to the PA Turnpike Service Plaza. Beginning at the PA Turnpike Service Plaza, and continuing as a refinement to the DEIS PA Turnpike North/South option, the guideway will be along the north side of the PA Turnpike, crossing over the service plaza ramps and drainage structures, before crossing over the PA Turnpike and US 202, and following along the south side of the PA Turnpike to just east of Allendale Road (maps, Appendix B of the Final Section 4(f) Evaluation). **Figure 3.2-2** and **Figure 3.2-3** are illustrative renderings of the PA Turnpike East segment crossing the PA Turnpike and US 202.

Figure 3.2-2: PA Turnpike East Rendering



Source: HNTB 2020

Figure 3.2-3: Preferred Alternative Crossing the PA Turnpike Rendering

Source: HNTB 2020

The design of the PA Turnpike East segment is guided by physical constraints, including US 202, the PA Turnpike, service plaza ramps and drainage basins, and Crow Creek, which parallels the south side of the PA Turnpike east of Allendale Road. In coordination with the PA Turnpike Commission and PennDOT, SEPTA refined the guideway alignment to accommodate these constraints by simplifying the guideway structure and aligning the guideway along but outside the PA Turnpike and creek. In particular, the guideway is refined to cross over the PA Turnpike and US 202 simultaneously. The height of the guideway will be approximately 60 feet above the PA Turnpike and 16 feet 6 inches over US 202 (**Figure 3.2-4**). Due to the length of the crossing, a straddle bent support will be required to support the guideway at the point where the centerlines of the guideway, the PA Turnpike, and US 202 cross. Thus, the guideway will span the travel lanes of each roadway.

Figure 3.2-4: PA Turnpike over US 202 (Dekalb Pike) Rendering

Source: HNTB 2020

After crossing back to the south side of the PA Turnpike, the guideway will be adjacent to but outside of the PA Turnpike shoulder, and outside Crow Creek.

- **Mall:** The elevated guideway will continue west from the PA Turnpike East segment, crossing the King of Prussia Volunteer Fire Company property and Allendale Road. The proposed Allendale Road Station will occupy the guideway at the Allendale Road crossing (Section 3.2.2). West of Allendale Road, the elevated guideway will cross to the north side of Wills Boulevard, parallel Wills Boulevard on the north side, then curve north before crossing over Mall Boulevard in two locations, before arriving at the proposed Mall Blvd Station between the Capital Grille (236 Mall Boulevard) and the Hyatt House Hotel (240 Mall Boulevard) (maps, Appendix B of the Final Section 4(f) Evaluation). **Figure 3.2-5** is an illustrative rendering of the Mall segment crossing Mall Boulevard.

Figure 3.2-5: Mall Segment Rendering

Source: HNTB 2020

The design of the Mall segment is guided by physical constraints: existing roadways; existing businesses along Wills and Mall Boulevards; plans by Simon Property Group to redevelop the surface parking lot along Mall Boulevard; and driveways, parking layouts and parking capacity requirements for each business. In coordination with the Mall and other business owners, SEPTA refined the guideway alignment after the DEIS to accommodate these constraints by shifting the guideway to the north side of Wills Boulevard, and aligning it through the Costco parking lot and a portion of the Crowne Plaza parking lot. SEPTA also refined the alignment to reduce the number of curves and provide a more direct route toward First Avenue, thereby improving operations and reducing Project costs.

- **PA Turnpike West:** The guideway will continue north from the Mall Blvd Station over the PA Turnpike, American Avenue and First Avenue where it will turn west along the north side of First Avenue to the First & American Station (maps, Appendix B of the Final Section 4(f) Evaluation). **Figure 3.2-6** is an illustrative rendering of the PA Turnpike West segment crossing the PA Turnpike.

Figure 3.2-6: PA Turnpike West Rendering

Source: HNTB 2020

The design of the PA Turnpike West segment is guided by physical constraints: existing businesses along American Avenue, existing roadways, driveways, parking layouts and parking capacity requirements for each business, and the existing PECO substation. In coordination with the PA Turnpike Commission, Upper Merion Township, and business owners, SEPTA refined the guideway alignment to accommodate these constraints by orienting the guideway along the eastern property line of the Hyatt Place Hotel (440 American Avenue) and the adjacent apartment building and office building complex. The guideway will continue north over American Avenue and follow the property line between Gatti-Morrison Construction Service (801 First Avenue East) and the adjacent PECO substation property.

North of the Mall Blvd Station, the height of the elevated guideway will increase to provide the vertical clearance required to cross the PA Turnpike. Between the PA Turnpike crossing and the First & American Station, the guideway will remain elevated, but will descend following the existing terrain.

- **First Avenue:** West of the First & American Station, the guideway will continue west along the north side of First Avenue, crossing Moore Road, to the western terminus at the proposed First & Moore Station, to be located at the northwest corner of First Avenue and Moore Road (maps, Appendix B of the Final Section 4(f) Evaluation).

The design of the First Avenue segment is guided by physical constraints, including traffic operations, several roadways and business driveways, existing businesses, a planned greenway along the north side of First Avenue, Trout Creek, and the PECO substation in the southeast corner of First and American Avenues. In coordination with Upper Merion Township and business owners, SEPTA refined the guideway alignment

to accommodate these constraints by shifting the guideway off the centerline of First Avenue, thereby eliminating roadway and traffic operational impacts associated with the DEIS recommended LPA alignment, which was over First Avenue. The guideway will be elevated, thereby maintaining access to existing private driveways, and will cross over Trout Creek, which is adjacent to the Metropolitan Business Center (860 First Avenue).

3.2.2 Stations and Park-and-Ride Facilities

As described in Section 2, the Preferred Alternative will provide five new stations along the proposed guideway, with park-and-ride facilities at two of the stations. In addition, SEPTA will modify the existing 69th Street Transportation Center to accommodate the proposed Project.

3.2.2.1 New Stations

SEPTA developed concepts for the new stations with the goal of providing consistent function and appearance among the stations. To achieve this goal, the following standard station design elements were applied:

- **Appearance:** Building architecture, massing and materials will be consistent among the stations to identify stations as being part of the Project, enhance passenger experience, and provide a sense of arrival.
- **Entrances:** Station entrances will be consistent with passenger circulation routes (pedestrian and bicycle, bus connections, drop-off/pick-up, and park-and-ride). Where reasonably feasible, stations will be located over existing roadways to enable passenger access from each side of the roadway. This configuration eliminates the need for at-grade pedestrian road crossings. Stations that will be adjacent to rather than over existing roadways will require an at-grade roadway crossing for station access from the opposite side of the roadway. Station entrances will be visible and identifiable; understandable wayfinding elements will be provided.
- **Vertical Circulation:** At each end of the platforms, vertical circulation elements consisting of elevators and stairs between street level and station platforms will provide passenger access and circulation directly to the platforms. Vertical circulation elements will be sized to accommodate forecasted ridership.

A typical station rendering can be found in **Figure 3.2-7**. A description of each station is provided below. A quick guide to the stations is presented in **Table 3.2-3**; and previously shown in **Figure 3.2-1** the station locations. **Table 3.2-4** presents key station design criteria.

Figure 3.2-7: Typical Station Rendering

Source: HNTB 2020

Table 3.2-3: Quick Guide to Stations

Station Name	Location	Key Features and Operations
Henderson Road (Park-and-ride)	Over Henderson Road, south of Saulin Boulevard (PECO segment)	<ul style="list-style-type: none"> • Station elevated over Henderson Road • Two tracks, one center platform • Access from both sides of Henderson Road to station by stairs and elevators • Dedicated drop-off/pick-up driveway off Saulin Boulevard • Park-and-ride facility: 500 spaces in a four-level parking structure west of the Henderson Road/Saulin Boulevard intersection • Bus berths on each side of Henderson Road • Accommodates future PA Turnpike interchange improvements at Henderson Road and Saulin Boulevard
Allendale Road	East side of Allendale Road at Wills Boulevard (Mall segment)	<ul style="list-style-type: none"> • Station elevated over Allendale Road • Two tracks, one center platform • Access from both sides of Allendale Road to station by stairs and elevators • Pedestrian bridge connection to Mall • Sidewalk and crosswalk connections along Allendale Road • Dedicated drop-off/pick-up driveway from Allendale Road

Station Name	Location	Key Features and Operations
		<ul style="list-style-type: none"> • No park-and-ride facility • No bus service accommodation
Mall Blvd	Northwest side of Mall Boulevard, north of Capital Grille Restaurant (Mall segment)	<ul style="list-style-type: none"> • Station elevated • Two tracks, one center platform • Access from both sides of Mall Boulevard by stairs and elevators • Pedestrian bridge connection to Mall across Mall Boulevard • Sidewalk and crosswalk connections along Mall Boulevard • Dedicated drop-off/pick-up driveway from Mall Boulevard • No park-and-ride facility • Bus berths (2), lay-by (parking) and bus operator room
First & American	Northwest corner, First Avenue and American Avenue (PA Turnpike West segment)	<ul style="list-style-type: none"> • Station elevated • Two tracks, one center platform • Access from both sides of Clark Avenue by stairs and elevators • Sidewalk and crosswalk connections along and across First Avenue • Dedicated drop-off/pick-up driveway from First Avenue • No park-and-ride facility • No bus service accommodation
First & Moore (Terminal Station with park-and-ride)	Northwest corner, First Avenue and Moore Road (First Avenue segment)	<ul style="list-style-type: none"> • Station elevated • Three tracks, two platforms: center and side • Access to both ends of station platform by stairs and elevators • Park-and-ride facility: 500 spaces in a 4-level parking structure; access from First Avenue • Dedicated drop-off/pick-up area in parking structure • Bus berths (4) in parking structure • Pedestrian bridge between station and parking structure • Single track extension west of station for train storage: approximately 228 feet • Energy-absorbing bumpers at track termini
69 th Street Transportation Center	6901 Market Street, Upper Darby PA	<ul style="list-style-type: none"> • Existing station • Extend existing track to station • Reconstruct Platform 4 to be 17 feet wide • Extend lengths of Platforms 1 through 4 to for flexibility in Project service to station • Expand fare array on concourse

Station Name	Location	Key Features and Operations
		<ul style="list-style-type: none"> • Expand access between concourse and Platform 4 • Remove existing stair to ground level • Relocate existing employee facilities within station to accommodate improvements • Add new emergency egress stair • Modify existing bus turnaround

Source: KOP Rail Basis of Design Report, 2019 and KOP Rail Extension 15% Design Drawings, HNTB 2019.

Table 3.2-4: Key Station Design Criteria

Key Station Design Criteria
<ul style="list-style-type: none"> • Drop-off/pick-up facilities: all stations • Park-and-ride facilities: First & Moore (structure), Henderson Road (surface parking) • Bus accommodation: First & Moore, Mall Blvd, Henderson Road • Stations over roadways: First & American, Allendale Road, Henderson Road • Pedestrian bridges at stations: First & Moore, Mall Blvd, Allendale Road • Platforms: <ul style="list-style-type: none"> ○ Station platform type: center platforms between eastbound and westbound tracks (additional side platform at First & Moore Station) ○ Station platform lengths: 225 feet (accommodate a three-car train) ○ Center platform width at mid-line: 22 to 24 feet (20 feet at terminal stations) ○ Side platform width at First & Moore (western terminal) Station: 12 feet ○ Access and vertical circulation at each end of platforms

Source: KOP Rail Basis of Design Report, HNTB 2019

- **Henderson Road Station (Station and Park-and-Ride)** - The Henderson Road Station in the PECO segment will be elevated over the southern approach of Henderson Road to the Henderson Road/Saulin Boulevard intersection (**Figure 3.2-8**). The platforms will cross over Henderson Road, thereby providing passenger access to the station from both sides of Henderson Road without having to cross Henderson Road at grade.

As an intermodal hub, the Henderson Road Station will provide an off-street park-and-ride facility, accommodate bus operations, and provide for passenger drop-off/pick-up service. SEPTA refined the parking amount at this location from 750 spaces for the recommended LPA in the DEIS to 500 spaces for the Preferred Alternative. SEPTA reduced the parking space amount while still satisfying forecast parking demand at the station. SEPTA will provide a parking structure in the northwest quadrant of the existing Henderson Road/Saulin Boulevard intersection, on property occupied by several business including BJ Kitchen Floor, Inc. To accommodate the proposed parking space count, the structure will be approximately four levels in height. Access to the parking structure will be from Henderson Road. A dedicated drop-off/pick-up driveway will be provided in front of the parking structure on Henderson Road. Just to the south of the station, a bus berth will be provided on each side of Henderson Road to provide bus connections to the station.

Figure 3.2-8: Henderson Road Station Rendering

Source: HNTB 2020

The proposed Henderson Road Station will not preclude a future PA Turnpike with Henderson Road. Roadway and intersection improvements will be made along Saulin Boulevard and at the Henderson Road/Saulin Boulevard intersection to accommodate the proposed station and park-and-ride facility if planned intersection improvements as part of a Taco Bell development do not occur (Chapter 3).

- **Allendale Road Station** – Allendale Road Station in the Mall segment will be elevated over Allendale Road just south of the Allendale Road/Wills Boulevard intersection (**Figure 3.2-9**). The platforms will cross over Allendale Road, thereby providing passenger access to the station from both sides of Allendale Road without having to cross Allendale Road at grade. A dedicated drop-off/pick-up driveway will be provided off Wills Boulevard on the property of the existing King of Prussia Volunteer Fire Company, providing passenger access to the station at the east end of the platform. Passengers from the Mall area will have access to the west end of the platform from a station entry point in an existing parking lot on the west side of Allendale Road. A pedestrian bridge will provide the connection between the Allendale Road Station and the second floor of the Mall. No passenger parking will be provided at the station. No SEPTA bus service is planned for the Allendale Road Station. Roadway and intersection improvements will be made at the Allendale Road/Wills Boulevard intersection.

Figure 3.2-9: Allendale Road Station Rendering

Source: HNTB 2020

The location of the Allendale Road Station has been refined after the DEIS to straddle Allendale Road. The reasons for shifting the station location are to provide access to the station from both sides of Allendale Road, and to minimize impacts on redevelopment plans in the Mall area. In this location, the station will provide better access to existing businesses and will have a lower cost. A portion of the proposed station is on the property of the existing King of Prussia Fire Company and 9/11 Memorial, which will be relocated as part of the Project (Section 3.2.8).

- Mall Blvd Station** - The location of the Mall Blvd Station in the Mall segment has been refined after the DEIS recommended LPA to be just north of Mall Boulevard, along the refined Mall segment (**Figure 3.2-10**). The station will be adjacent to the Capital Grille restaurant building (236 Mall Boulevard). A pedestrian bridge will provide a connection over Mall Boulevard between the station and the Mall property. No passenger parking will be provided at the station. Mall Blvd Station will provide two bus berths to enable bus connections to Project service. Additional bus service-related facilities at Mall Blvd Station will include a bus operator's facility, and bus laybys. The bus facilities will occupy a portion of property previously occupied by Joe's Crab Shack. The Project will signalize the Mall Boulevard/former Toys R Us driveway and coordinate the timing of other signals along Mall Boulevard (Chapter 3).

Figure 3.2-10: Mall Blvd Station Rendering

Source: HNTB 2020

- **First & American Station** - The location of the First & American Station in the PA Turnpike West segment has been refined after the DEIS to the property at 840 First Avenue, at the northeast corner of the intersection of Clark and First Avenues (**Figure 3.2-11**). The property is currently occupied by the Escape Room and other businesses. The refinement eliminates the station in the median of First Avenue. In that original location, grade requirements will have required the station to be more than 50 feet above the roadway, which is undesirable for passenger access and will have added to the Project cost and visual impacts. Shifting the station to the north side of First Avenue provides more distance for the tracks to descend from the PA Turnpike and a more reasonable station height of approximately 35 feet above the existing ground.

A dedicated drop-off/pick-up driveway to the main station entry will be provided off of First Avenue with a connection to Clark Avenue; pedestrian circulation will also be by means of the main station entry. No passenger parking will be provided at the station. As part of the Project, the existing traffic signal at the First Avenue/American Avenue intersection will be upgraded.

Figure 3.2-11: First & American Station Rendering

Source: HNTB 2020

- **First & Moore Station (Terminal Station and Park-and-Ride)** - The location of the First & Moore Station in the First Avenue segment is refined to be at the northwest corner of First Avenue and Moore Road on the property of Devon Pharmaceuticals (**Figure 3.2-12**). This refinement is related to the refinement of the track to be on the north side of First Avenue. SEPTA retained the three-track program for this station as indicated in the DEIS, with the provision for a center platform to access the two main tracks and a side platform to access the third track. Access to the platforms will be provided by stairs at the west ends of the platforms. As an intermodal hub, First & Moore Station will provide an off-street park-and-ride facility, accommodate bus operations, and provide for passenger drop-off/pick-up service. The park-and-ride facility will consist of a four-level parking structure (approximately 52 feet tall) with a pedestrian bridge connecting to the station. The ground level of the parking structure will provide bus berths and bus layover facilities, including dedicated bus lanes with bus berths. A separate drive lane will be provided for passenger drop-off/pick-up service.

Figure 3.2-12: First & Moore Station Rendering

Source: HNTB 2020

SEPTA made an additional refinement by eliminating the length and amount of tail track west of the station. In this refinement, one track will extend beyond the end of the platform for a distance sufficient to accommodate a 3-car train (approximately 228 feet). An energy-absorbing bumper system will be provided at the end of each track. These refinements support planned operations while reducing Project costs, maintenance and visual impacts.

First & Moore Station will provide two platforms, a central platform to accommodate service to and from 69th Street Transportation Center, and a side platform to accommodate service between the Project and Norristown. The platforms will be 44 feet above the existing ground.

As the western terminal station for the Project, SEPTA will provide a 500-space park-and-ride structure at the First & Moore Station. As part of the Project, the First Avenue/proposed garage driveway intersection will be signalized, and signal timings at two existing intersections along the First Avenue corridor will be coordinated: First Avenue/Moore Road and First Avenue/American Avenue.

3.2.3 69th Street Transportation Center

SEPTA identified the need to make several improvements to the existing 69th Street Transportation Center to accommodate the Project and its passengers. These improvements are shown in **Figure 3.2-13** and **Figure 3.2-14**, and include:

- **Track:** SEPTA will extend one existing track to Platform 4 to serve Project trains.
- **Platform:** SEPTA will widen Platform 4 from the existing one-sided operation (serving Track 3) to a two-sided operation (serving Tracks 3 and 4). The wider platform will provide for pedestrian circulation to trains on both sides of the platform.
- **Concourse:** SEPTA will expand the existing fare array on the concourse to provide bays for Project service. To accommodate the additional space, SEPTA will relocate a staff breakroom and locker room within the station area. In addition, an existing stair connecting to the ground floor will be removed from the existing space and reconstructed as an enclosed egress stair to the east of the station.
- **Bus loop:** Extending the existing track to a widened Platform 4 will physically impact the portion of the existing bus loop near the north side of the station building. SEPTA will shift the bus loop approximately 20 feet compared to its existing location. The operation of the bus loop and access to and from the bus loop will be unchanged.

3.2.4 Support Facilities

As described in Section 2, the Preferred Alternative will provide facilities to support Project operations along the proposed guideway, including guideway crossovers, power and TPSS, communications equipment, SWM facilities and landscaping. The 15% design plans provide concepts for these facilities including locations and dimensions. A quick guide to each support facility is presented in **Table 3.2-5**.

Figure 3.2-13: 69th Street Transportation Center

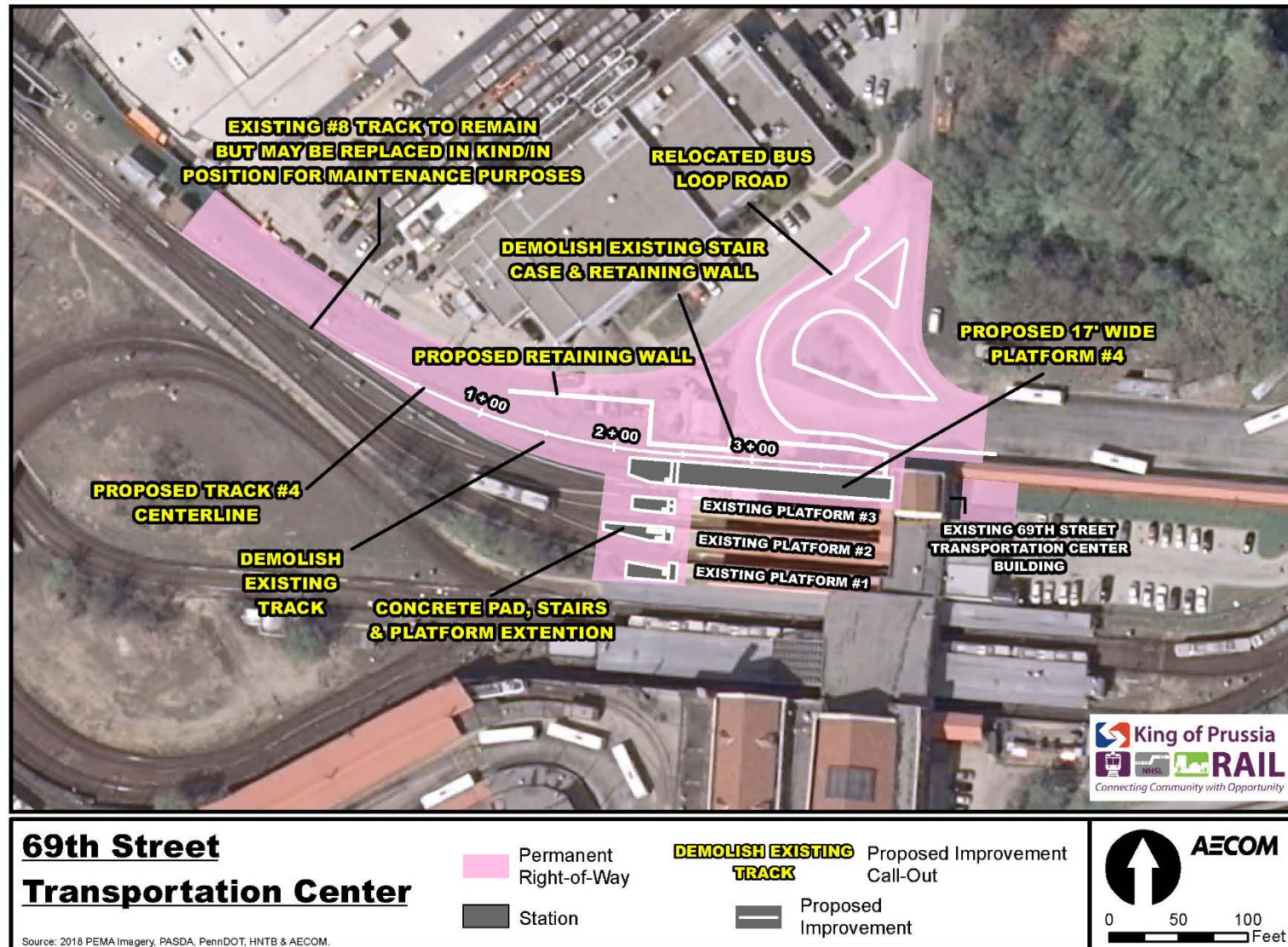
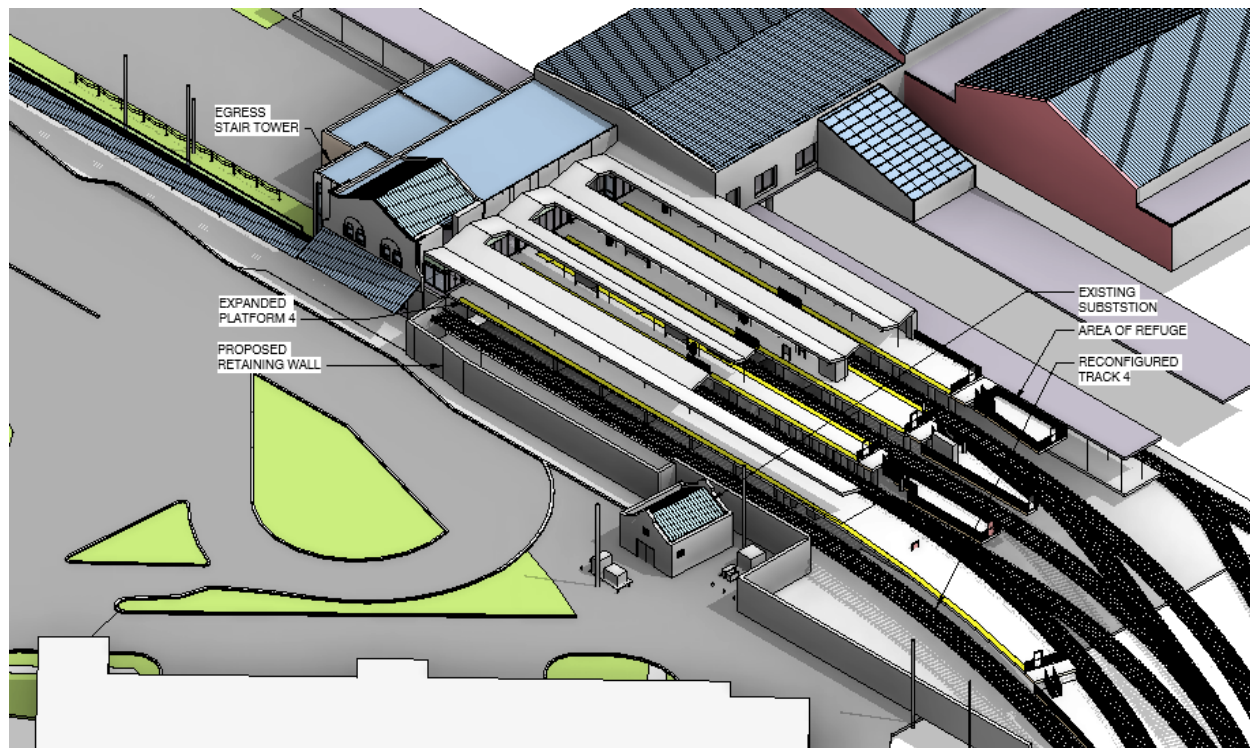


Figure 3.2-14: Rendering of 69th Street Transportation Center Improvements

Source: HNTB 2020

Table 3.2-5: Quick Guide to Supporting Facilities

Facility Type	Descriptions
Guideway Crossover Tracks	<ul style="list-style-type: none"> • Purpose: provides connections between the proposed two-track system; enables SEPTA to move trains from one track to another • Crossover track locations (2): east of First & Moore Station, east of Mall Blvd Station (potential for a third crossover east of PA Turnpike Service Plaza) • Crossovers on viaduct or retained fill at same elevation as two-track system
Power and TPSS	<ul style="list-style-type: none"> • Purpose: provide power to the Project • System power type: electric (sourced from PECO) • Vehicle power technology: third rail at track level (same as NHSL) • Power converter facility: TPSS <ul style="list-style-type: none"> ○ TPSS Locations (3): First & Moore Station, Allendale Road Station, Junction segment ○ Building type: stick built or prefabricated ○ Building size: 50' by 56', or 35' by 75' depending on site ○ Building site: 70' by 80', or 50' by 100' depending on site ○ Access: Fenced and gated; access driveway by SEPTA personnel only from station driveways (from Saulin Boulevard in Junction segment)

Facility Type	Descriptions
Communications Equipment	<ul style="list-style-type: none"> • Purpose: a signaling system that manages train traffic • Integrate with SEPTA's existing Suburban Operations Control Center Centralized Traffic Control System (existing NHSL control location) • New equipment along guideway: signal huts at intervals along guideway; radio station east of the PA Turnpike Service Plaza • Radio station elements: tower and equipment building <ul style="list-style-type: none"> ○ Tower dimensions: 11' by 11' base; approximately 200 feet tall ○ Equipment building: 8' by 10' ○ Radio station site: 17' by 28' ○ Radio station access: Fenced and gated; access driveway by SEPTA personnel only from station driveways (from PA Turnpike Service Plaza) • Signal huts: shown on 15% plans as "Com Hut," "CIL" and "Signal Hut" • Communications rooms in stations • Fare vending system: compatible with SEPTA's existing NHSL service
Stormwater Management (SWM)	<ul style="list-style-type: none"> • Purpose: convey runoff from new impervious surfaces (buildings, parking and guideway); apply best stormwater management practices to reduce potential for impacts to water resources (Chapter 4). • Drainage systems along guideway: ditches, swales • Detention basins: <ul style="list-style-type: none"> ○ Above-ground basin locations: Junction segment, near PA Turnpike Service Plaza, PA Turnpike East segment near highway crossing, Allendale Road Station, PA Turnpike West segment near highway crossing, First Avenue near Trout Creek ○ Below-ground basin locations: Henderson Road park-and-ride, Mall Blvd Station, First & Moore Station
Landscaping	<ul style="list-style-type: none"> • Purpose: Complement the Project using plant materials; provide visual screening of some support facilities • Landscaping locations: stations, SWM facilities, appropriate locations along the guideway, screening around TPSS facilities

Source: KOP Rail Basis of Design Report, 2019 and KOP Rail Extension 15% Design Drawings, HNTB 2019.

3.2.5 Vehicles

SEPTA proposes to provide Project service using its existing fleet of N5 rail vehicles that operate on the NHSL (**Figure 3.2-15**), plus six new, N5 vehicles. The N5 vehicles, manufactured by ABB Traction, provide level floor boarding at station platforms and are equipped for electrical power by third rail, as currently used by SEPTA on the NHSL. Each vehicle has a seating capacity of 60 passengers and a total capacity of 100 passengers including standing capacity. Vehicles are climate-controlled with heating and air conditioning. Each vehicle is equipped with signaling and automatic train control. The vehicles can be run individually or coupled together to form 2-car or 3-car trains.

Figure 3.2-15: SEPTA N5 Vehicle



Note: Photo of existing SEPTA N5 vehicle.
Source: SEPTA 2015.

3.2.6 Operating Plan

The Preferred Alternative will provide “one seat ride” service from the 69th Street Transportation Center or the Norristown Transportation Center (NTC) to any proposed Project station using the NHSL and the proposed extension. The NHSL currently runs 13.5 miles between the 69th Street Transportation Center in Upper Darby and the Norristown Transportation Center in Norristown. When Project service is implemented, it will operate during the same hours as the NHSL. The NHSL currently operates from approximately 4:00 a.m. to 2:00 a.m., providing approximately 22 hours of service per day. Current service frequency varies from approximately seven to 60 minutes depending on the time of day, the day of the week and service type. Service types include limited service, express service, and local service, each with differing stop patterns. Weekend service is primarily local service. Service is bi-directional, with trains originating and/or terminating at the Norristown Transportation Center, the 69th Street Transportation Center, Bryn Mawr Station or Hughes Park Station.

Proposed service frequency with the Project is the following:

- Norristown Transportation Center to King of Prussia:
 - 10-minute headways each way during peak periods (6:00am–10:00am and 3:00pm–7:00pm)
 - 20-minute headways for all other times
- 69th Street Transportation Center to King of Prussia:

- 10 minute headways each way during peak periods (extension of Hughes Park service, some existing trains and new trains)
- 20 minute headways all other times (includes extension of Hughes Park service, some existing trains and new trains)

The Preferred Alternative operating plan reflects peak period service delivery goals of six trains per hour per direction (TPHPD) between 69th Street Transportation Center and King of Prussia (10 minute headways in peak period), as well as three TPHPD between Norristown Transportation Center and King of Prussia (10 minute headways in peak period). The future operating plan increases service on the existing corridor through the introduction of extension trips. The four Hughes Park trains that operate during the peak period will be replaced by six trains per hour to King of Prussia. In the off-peak, the future operating plan calls for three TPHPD between 69th Street Transportation Center and King of Prussia. In addition, three TPHPD will be scheduled to operate between Norristown Transportation Center and King of Prussia for the duration of the day.

Table 3.2-6 presents the number of trains per hour (TPH) along specific NHSL segments. Specifically, the conceptual operating plan for the Project for each direction of travel involves six TPH between the transportation study area and 69th Street Transportation Center during the peak period, four TPH between Norristown Transportation Center and 69th Street Transportation Center, three TPH between Norristown Transportation Center and King of Prussia and four TPH between Bryn Mawr and 69th Street Transportation Center. In total, the addition of the Project will require 17 TPH, which is 7 additional TPH as compared to the 10 TPH that operate today.

On the existing NHSL, service levels with the Project will increase from current operating plans, but express and limited stopping patterns are expected to remain the same. However, with the Project, trains will no longer turn back at Hughes Park Station, and trips to King of Prussia will follow the existing Hughes Park Limited and Express stopping patterns on the NHSL.

Table 3.2-6: Number of Project Trains per Hour by NHSL Segment

NHSL Segment	Peak TPH	Off-peak TPH
KOP to 69th Street Transportation Center	6	3
KOP to Norristown Transportation Center	3	3
69th Street to Norristown Transportation Center	4	3
69th Street to Bryn Mawr	4	0

Source: Gannett Fleming, August 25, 2020, *Draft Rail Operations Simulation Report – Norristown High Speed Line Extension*. Report available on www.kingofprussiarail.com

Rail simulations performed on the operating plans for the Preferred Alternative identified that a high-capacity signal system along the NHSL and extension is needed. In the operating plan, trains from 69th Street Transportation Center to King of Prussia must follow trains from Norristown Transportation Center to King of Prussia on two minute headways. Reliable operation of the plan requires a high capacity signal system on the extension tracks for the Preferred Alternative. The simulations also identified that additional rail vehicles will be required.

Station-to-station travel time for the Preferred Alternative will be slightly more than 15 minutes between the Norristown Transportation Center and the First & Moore Station, and about 34 minutes (Express) or about 36 minutes (Local) between the 69th Street Transportation Center and the First & Moore Station. Average train travel speed on the Preferred Alternative in the transportation study area will be approximately 35 miles per hour, though actual operating speed will be dependent upon track segment.

During subsequent design, SEPTA will refine the operating plan for the new rail service and determine fares.

3.2.7 Bus and Shuttle Service Modifications

SEPTA currently provides bus service in the transportation study area. SEPTA will modify or adjust some bus routes to serve proposed Project stations or to respond to service redundancy. These adjustments will include modifications to headways, routes or hours of service.

In addition to SEPTA bus service, the GVFTMA and the KOP-BID provide connecting shuttle services as a complement to SEPTA bus and rail services. Shuttle buses serve a different function than SEPTA buses. While buses provide a connection between King of Prussia and other areas in the Philadelphia region, shuttle buses primarily provide “last mile” connections between nearby transit stations and employment areas or residential areas. SEPTA anticipates changes to the current shuttle bus system as well as changes to the SEPTA bus network operating in the transportation study area as a result of the Project. GVFTMA and the KOP-BID are committed to modifying existing shuttle services to provide last mile service from some Project stations to other transportation study area destinations. During subsequent design, SEPTA, in partnership with GVFTMA and the KOP-BID, will develop a bus and shuttle service plan that examines existing and desired services, optimizes bus services in the context of the Project, and determines warranted and complementary connecting shuttle services.

3.2.8 Relocation of Existing Facilities

As part of the Project, SEPTA will relocate the existing King of Prussia Volunteer Fire Company and 9/11 Memorial as well as approximately four utility towers within the PECO ROW. This section describes SEPTA’s proposed actions regarding these Project elements.

3.2.8.1 Relocate King of Prussia Volunteer Fire Company and 9/11 Memorial

The existing King of Prussia Fire Company property will be crossed by the Project guideway (Section 3.2.1) and the Allendale Road Station will be partly located on the property (Section 3.2.2). SEPTA’s use of the property for the Project will require SEPTA to relocate the fire company and the memorial to a new location. SEPTA initiated discussions with the King of Prussia Fire Company and the Upper Merion Township Board of Supervisors during the DEIS in 2017 and continued discussions into 2018. At that time, the impact of the recommended LPA on the fire company property was discussed, the concept of relocating the facility and memorial was introduced, and the idea of developing the PA Turnpike North/South Option and the 9/11 Memorial Avoidance Options was identified and presented. With SEPTA’s adoption of the

recommended LPA and the PA Turnpike North/South Option in January 2018, SEPTA commits to relocating the King of Prussia Fire Company and the 9/11 Memorial.

During subsequent design, SEPTA will work with the Upper Merion Township's Unified Safety Department's Public Safety Director, and the Fire & Emergency Service Department as they identify a suitable location for the fire company and 9/11 Memorial and undertake the relocation process. SEPTA will provide the funds for relocation of the King of Prussia Fire Company and 9/11 Memorial.

3.2.8.2 Relocate and Replace Approximately Four Existing PECO Utility Towers

As described in Section 3.2.1, portions of the guideway in the Junction and PECO Segments will be within the PECO utility corridor. Existing elements in the PECO utility corridor include an overhead electric power transmission system consisting primarily of steel lattice towers that carry power cables. Each existing tower is approximately 68 to 83 feet tall. Two sets of towers carry the existing cable system along the length of the corridor. One set of towers is aligned in the northern portion of the PECO corridor (known herein as the northside set) and the second set of towers is aligned in the southern portion of the PECO corridor (known herein as the southside set). The cable system on each set of towers carries 230 kV of electric power.

Junction Segment (Replace Approximately Two Towers). In the Junction segment, the elevated guideway that will turn off the NHSL from the south will cross under the both sets of PECO's overhead electric power transmission system (maps, Appendix B of the Final Section 4(f) Evaluation). SEPTA applied the National Electric Safety Code (NESC) Standards, which are the United States' standard for safe installation, operation, and maintenance of electric power systems. The NESC Standards require a minimum vertical distance between the cable system and any development, facilities, or actions that occur under the cable system. SEPTA determined that at the guideway crossing point in the Junction segment, the distance between the elevated guideway and the cables on the northside and southside sets will be approximately 22 feet, which is not enough vertical separation between the track and the cables. A approximately 13-foot tall rail car will have only approximately nine feet of vertical clearance, which is not enough distance to achieve power industry standards. The amount of vertical clearance required for the Project will be determined by PECO during subsequent Project design.

To increase vertical clearance between the Project and the cables, SEPTA considered whether the guideway elevation could be lowered to increase the distance to the cables and achieve the minimum vertical clearance requirement. However, the guideway elevation is at the height required to meet SEPTA design requirements to provide a minimum vertical clearance at Henderson Road of 14' 9." The guideway elevation cannot be lowered to achieve the required minimum vertical clearance to the cables and also achieve the minimum vertical clearance at Henderson Road. Thus, to increase vertical clearance to the cables, the cable system will have to be raised in the guideway crossing area. Because the existing cables are attached to the highest points on the northside towers, raising cable height will require replacing approximately two existing towers and cable systems on either side of the Project crossing, on the west side of the existing NHSL.

SEPTA's conceptual study identified the need to replace the approximately two existing PECO towers in the Junction Segment with approximately four monopole structures. A monopole is a vertical structure with a single foundation to which power cables are attached (**Figure 2.3-16**); monopoles are typically used for utility tower replacement. The NESC Standards prescribe monopole spacing that is different from lattice tower spacing to provide appropriate support for the wires the poles will carry; as a result, the monopoles will be in different locations along the corridor compared to the lattice tower locations. The location of new poles will be determined by PECO in coordination with SEPTA during subsequent design.

In considering the height of the monopoles, SEPTA consulted with PECO as well as with the NESC Standards. In applying the NECS Standards, SEPTA considered potential configurations of future PECO expansion to provide additional power service in its corridor. To meet the requirements and provide PECO with the most flexibility for future expansion, SEPTA conceptually identified that the monopoles will be approximately 125 to 160 feet tall from the ground surface in the Junction Segment depending on the horizontal distance between the monopoles.

PECO Segment (Replace Approximately Two Towers). In the PECO segment of the project that is west of the Junction segment, the guideway will be along the northern edge of the PECO utility corridor. This area is between the planned Chester Valley Trail extension and the point where the guideway turns off the corridor near the 251 DeKalb apartment buildings. Although PECO has no definitive plans for expansion of their overhead electric power transmission system in this location, they indicated concern that the Project should not preclude the ability for them to undertake future expansion. SEPTA assessed that potential future expansion of the system could involve increasing the amount of power that is carried in the system by installing more tower and cable sets and/or by increasing voltage of power in the existing sets. In either case, PECO will need additional space within its existing corridor for such an expansion.

In regard to the Project and, considering the proximity of the Project guideway to PECO's northside set, SEPTA determined that the Project poses a potential risk to the integrity of the closest tower (N4, see maps in Appendix B) because of the ground disturbing activities to be undertaken by SEPTA to build the Project in a cut. To address this potential risk, SEPTA will replace approximately two towers and the associated cable systems in the northside set that are along the guideway in the PECO segment (maps, Appendix B of the Final Section 4(f) Evaluation). The existing tower location is: along the west side of Henderson Road. In addition,

Figure 3.2-16: Typical Monopole



Source: HNTB 2020

SEPTA will replace approximately one tower (N3, see maps in Appendix B) to address the same vertical clearance requirement described for the two towers in the Junction Segment.

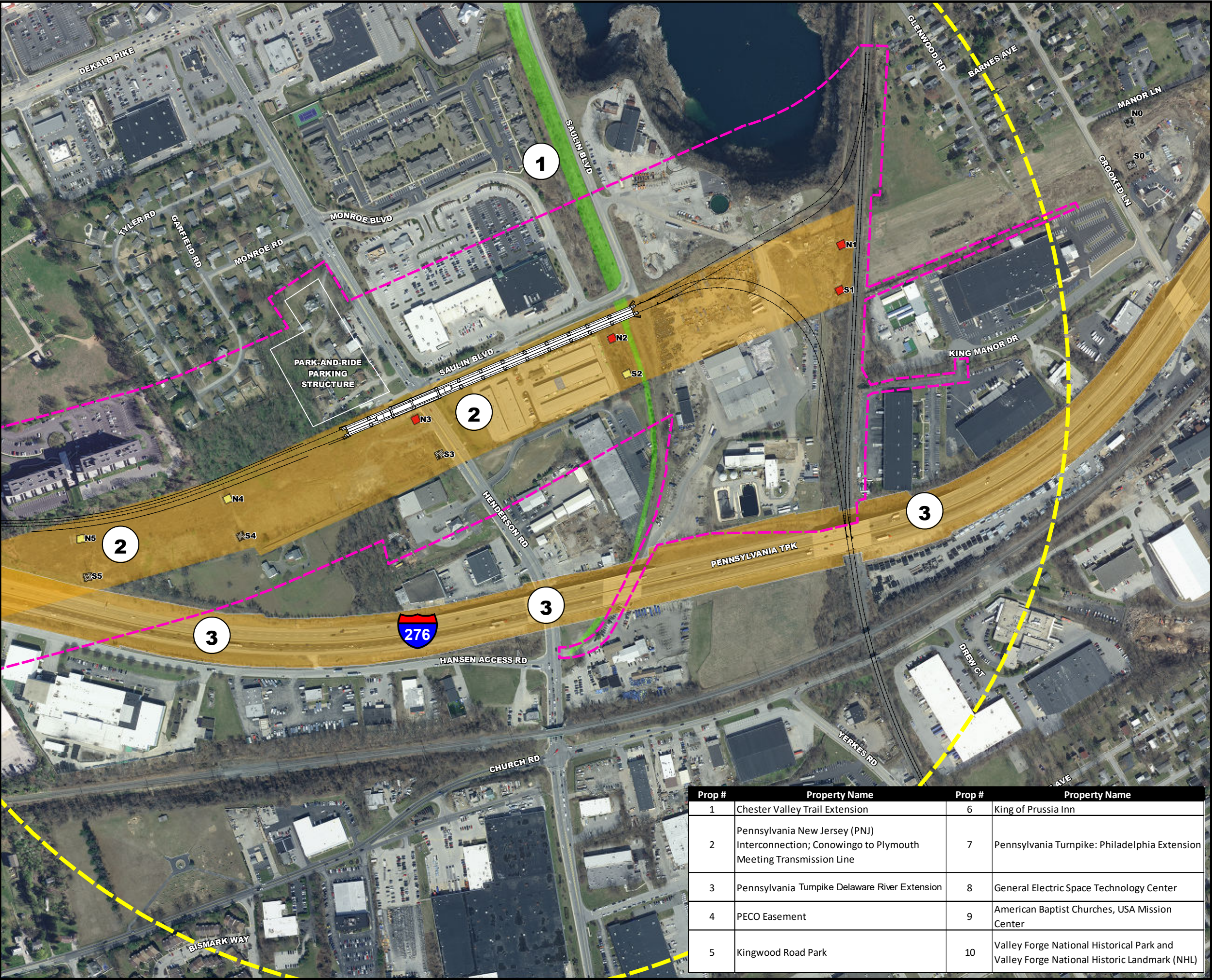
SEPTA's conceptual study of replacing approximately two PECO towers in the PECO Segment applied the NECS Standards. Subject to further design and coordination with PECO, SEPTA proposes to replace the two lattice towers with approximately three monopoles. The guidelines prescribe monopole spacing that is different from lattice tower spacing to provide appropriate support for the wires the poles will carry; as a result, the monopoles will be in different locations along the corridor compared to the lattice tower locations. The location of new poles will be determined by PECO in coordination with SEPTA during subsequent design.

In considering the height of the monopoles, SEPTA consulted the NESC Standards and considered potential configurations of future PECO expansion to provide additional power service in its corridor. To meet the NESC Standards and provide PECO with the most flexibility for potential future expansion, SEPTA conceptually identified that the monopoles will be approximately 125 to 160 feet tall from the ground surface in the PECO Segment.






Junction and PECO Segments (Replace Existing Right-of-Way): In the Junction and PECO segments of the Project, the guideway will be along the northern edge of the PECO utility corridor. PECO has requested that the Project not preclude potential future utility expansion within its existing right-of-way. To address this issue, SEPTA will acquire and provide PECO with a strip of land along the south side of the PECO corridor between the existing NHSL and the PA Turnpike (see maps in Appendix A). The strip of land will restore the width of the PECO right-of-way to the existing dimension.

Next Steps: During subsequent design, SEPTA will continue to coordinate with PECO regarding use of a portion of their corridor for the Project and replacement of approximately four existing utility towers and cable systems in the Junction and PECO Segments. Design and construction of the proposed monopoles and cable systems will be undertaken by PECO and subject to approval by PJM, which is the regional transmission organization that coordinates the movement of electricity including PECO services. SEPTA will fund the design and relocation of the towers as part of the Project.

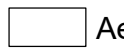


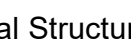


Appendix B – Maps

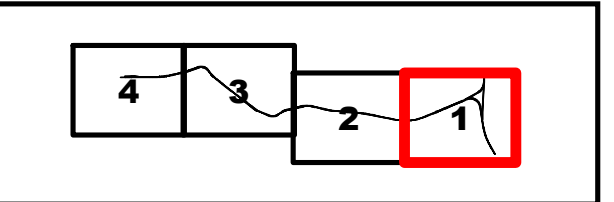


Section 4(f) Properties

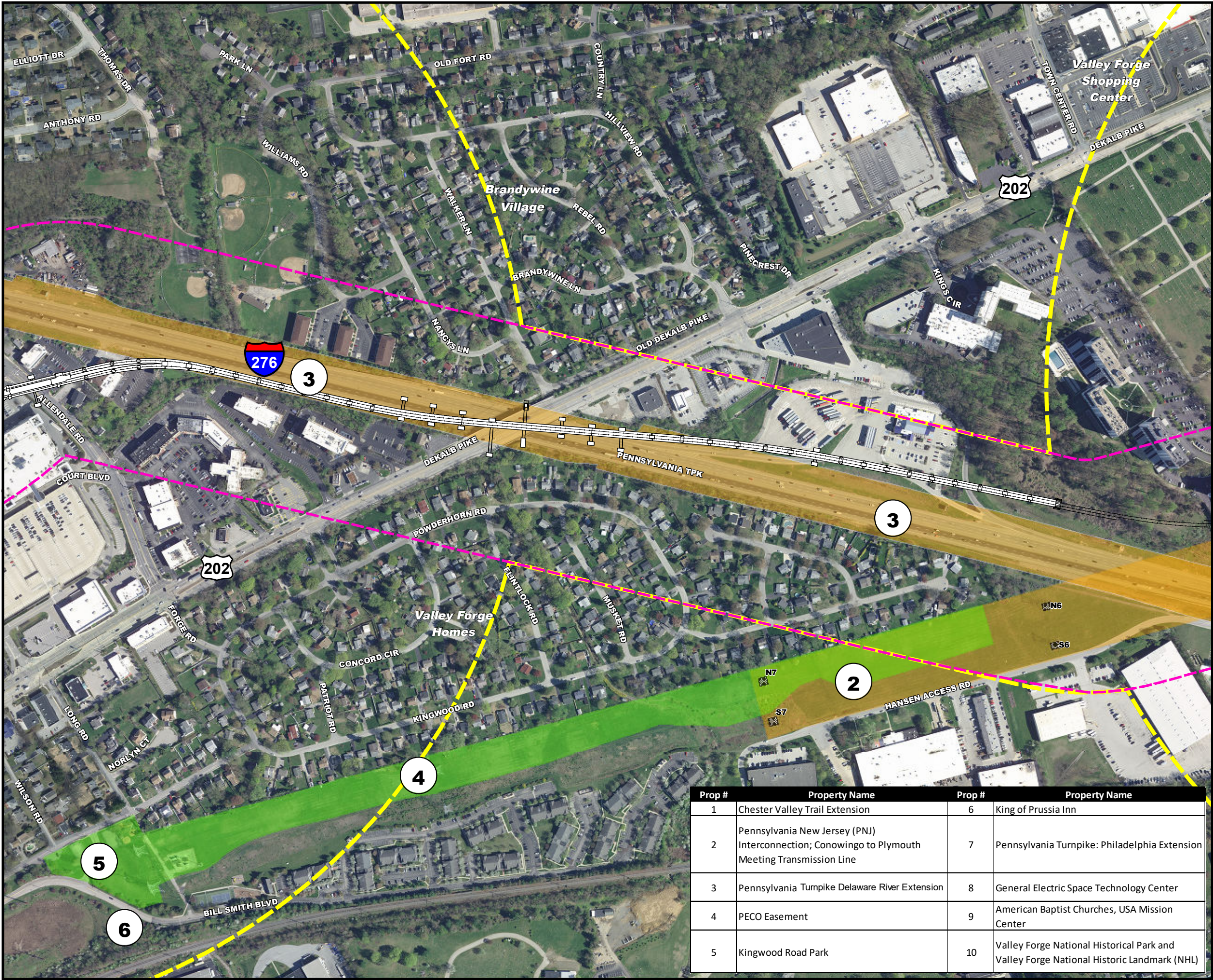
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-  Parks, Recreation & Open Space
-  # Property Number
-  Modified Area of Potential Effect for Historic Architecture (APE)
-  Project Study Area

Proposed Improvements

-  Aerial Structure
-  Other Improvements
-  Track Alignment
-  PECO Tower - Possible Replace
-  PECO Tower - Replace
-  PECO Tower



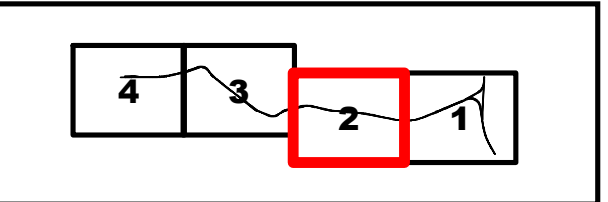
Prop #	Property Name	Prop #	Property Name
1	Chester Valley Trail Extension	6	King of Prussia Inn
2	Pennsylvania New Jersey (PNJ) Interconnection; Conowingo to Plymouth Meeting Transmission Line	7	Pennsylvania Turnpike: Philadelphia Extension
3	Pennsylvania Turnpike Delaware River Extension	8	General Electric Space Technology Center
4	PECO Easement	9	American Baptist Churches, USA Mission Center
5	Kingwood Road Park	10	Valley Forge National Historical Park and Valley Forge National Historic Landmark (NHL)



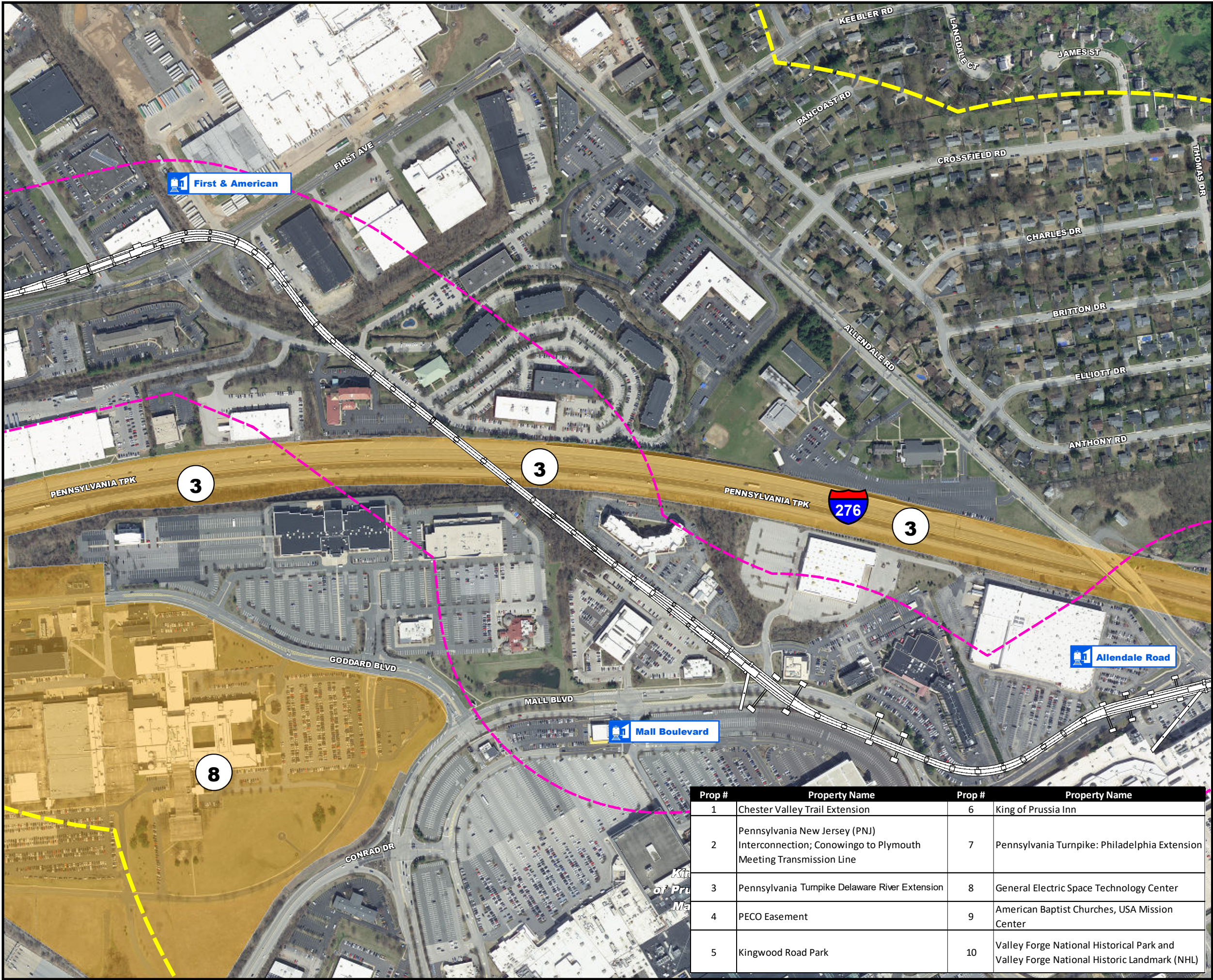
Section 4(f) Properties

- Historic Resource
- Parks, Recreation & Open Space
- # Property Number
- Modified Area of Potential Effect for Historic Architecture (APE)
- Project Study Area






- Proposed Improvements
- Aerial Structure
 - Other Improvements
 - Track Alignment
 - PECO Tower
 - PECO Tower - Possible Replace
 - PECO Tower - Replace









Prop #	Property Name	Prop #	Property Name
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4	PECO Easement	9	American Baptist Churches, USA Mission Center
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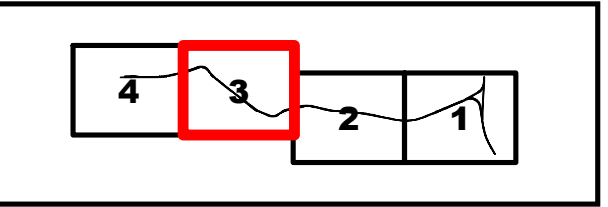


Section 4(f) Properties

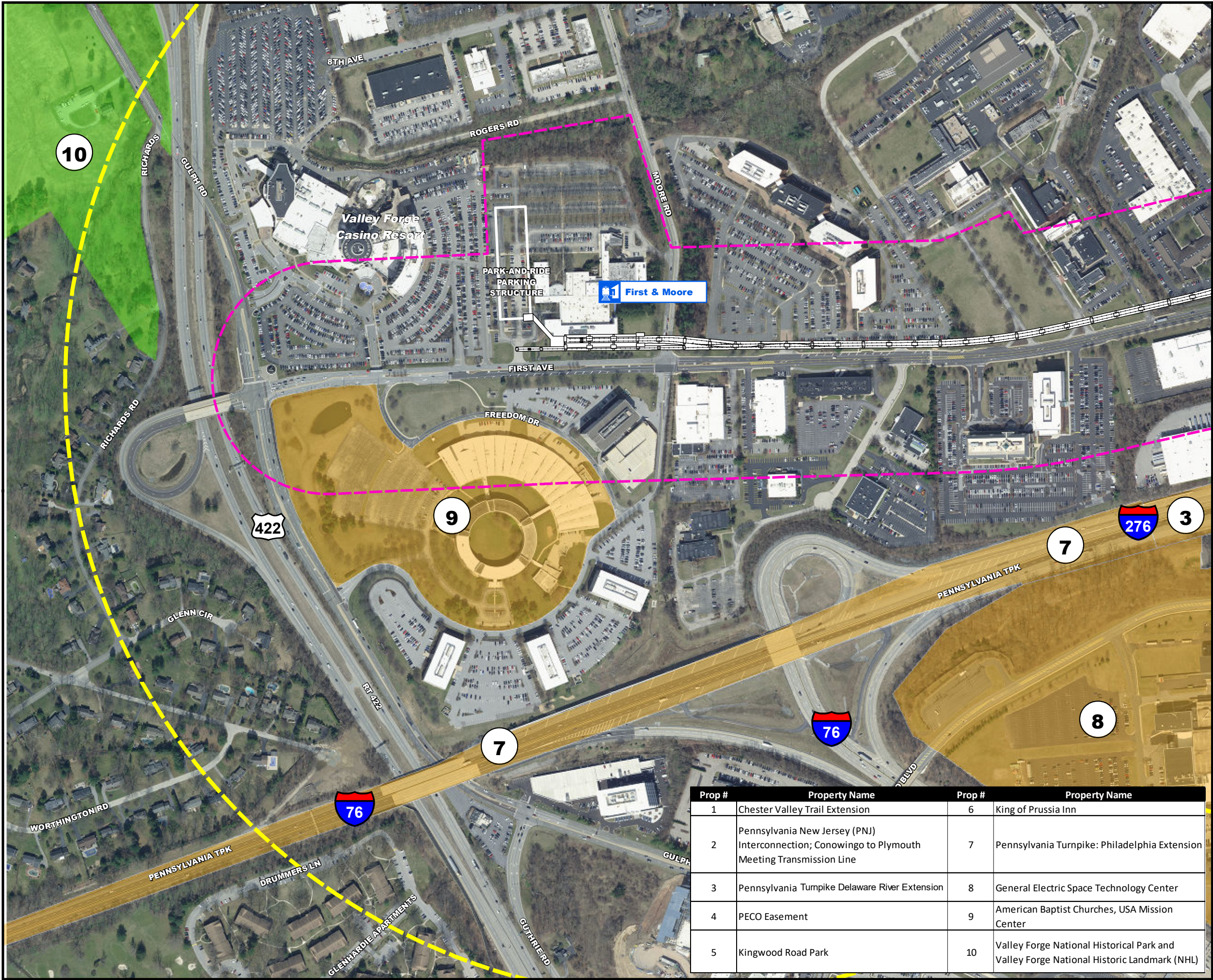
-  Historic Resource
-  Parks, Recreation & Open Space
-  Property Number
-  Modified Area of Potential Effect for Historic Architecture (APE)
-  Project Study Area

Proposed Improvements






-  Aerial Structure
-  PECO Tower
-  Other Improvements
-  PECO Tower - Possible Replace
-  Track Alignment
-  PECO Tower - Replace









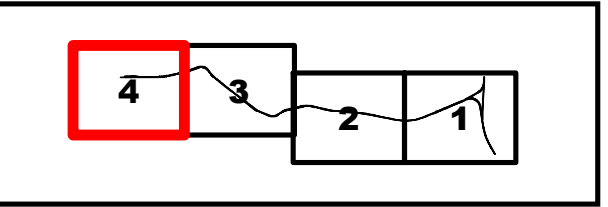
Prop #	Property Name	Prop #	Property Name
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2	Pennsylvania New Jersey (PNJ) Interconnection; Conowingo to Plymouth Meeting Transmission Line	7	Pennsylvania Turnpike: Philadelphia Extension
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4	PECO Easement	9	American Baptist Churches, USA Mission Center
5	Kingwood Road Park	10	Valley Forge National Historical Park and Valley Forge National Historic Landmark (NHL)



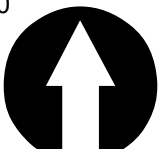
Section 4(f) Properties

-  Historic Resource
-  Parks, Recreation & Open Space
-  Property Number
-  Modified Area of Potential Effect for Historic Architecture (APE)
-  Project Study Area


- Proposed Improvements
-  Aerial Structure
 -  PECO Tower
 -  Other Improvements
 -  PECO Tower - Possible Replace
 -  Track Alignment
 -  PECO Tower - Replace



Date: 11/17/2020



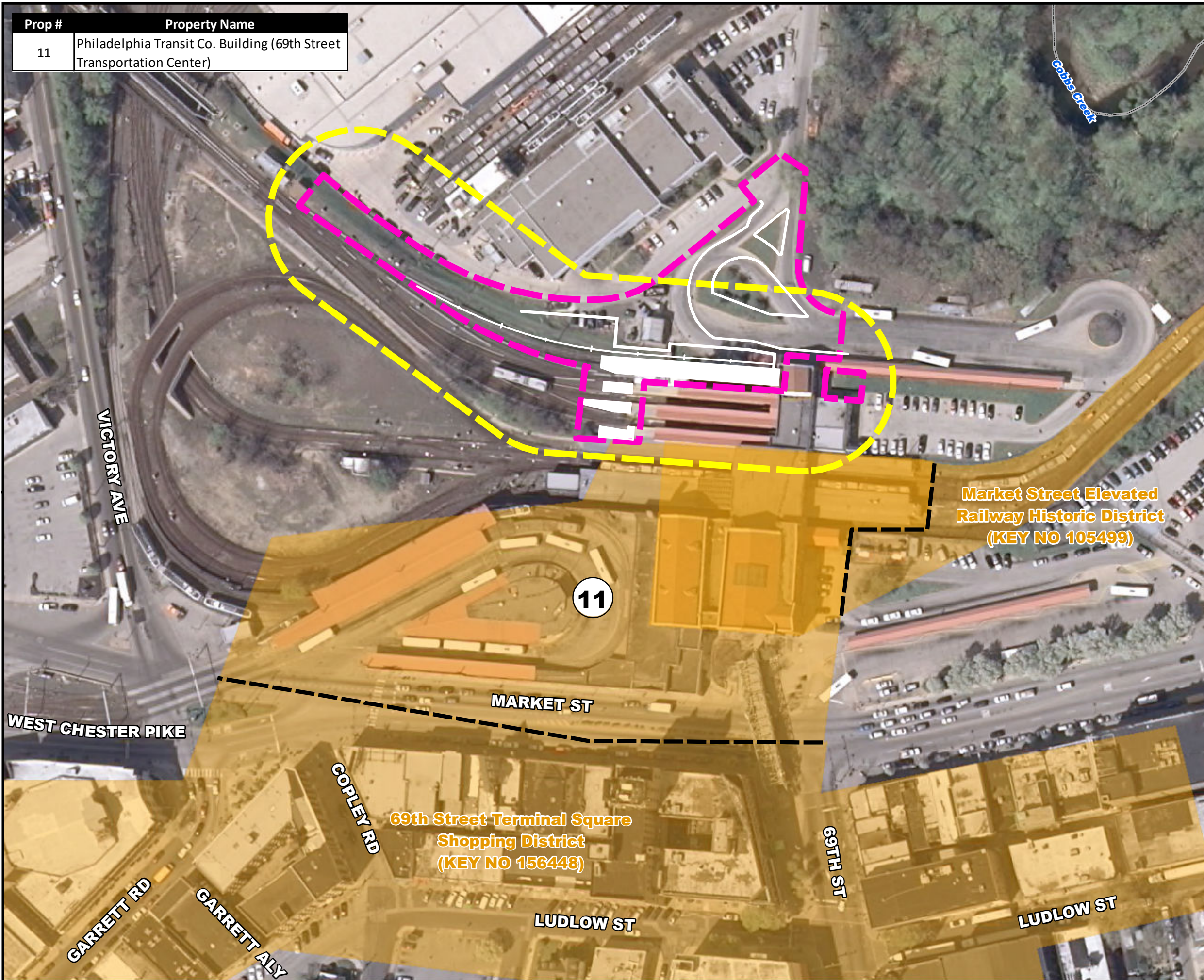
AECOM



0 200 400 800
Feet
1 inch = 400 feet





Source: 2018 PEMA Imagery, PASDA, PennDOT, HNTB & AECOM.

Prop #	Property Name	Prop #	Property Name
1	Chester Valley Trail Extension	6	King of Prussia Inn
2	Pennsylvania New Jersey (PNJ) Interconnection; Conowingo to Plymouth Meeting Transmission Line	7	Pennsylvania Turnpike: Philadelphia Extension
3	Pennsylvania Turnpike Delaware River Extension	8	General Electric Space Technology Center
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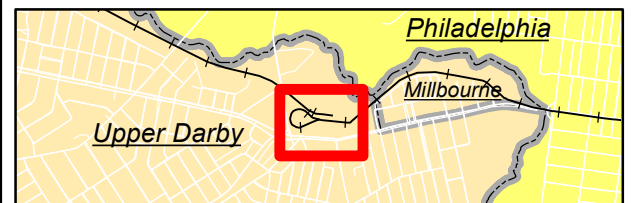
Prop #	Property Name
11	Philadelphia Transit Co. Building (69th Street Transportation Center)

Section 4(f) Properties **(69th Street Transportation Center)**

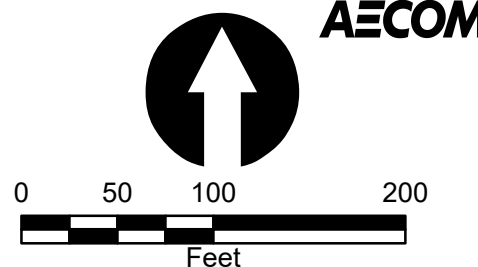
-  Historic Resource
-  Property Number
-  Modified Area of Potential Effect for Historic Architecture (APE)
-  Project Study Area

Proposed Improvements

-  Station Improvement
-  Other Improvements
-  Track Alignment



Date: 11/17/2020



1 inch = 100 feet

Source: 2018 PEMA Imagery, PASDA, PennDOT, HNTB & AECOM.

Final Section 4(f) Evaluation

***A*ppendix C Memos and Correspondence**

- PHMC's Section 106 initiation letter, April 4, 2013
- PHMC's area of potential effects letter, March 7, 2016
- Section 106 consulting parties meeting memorandum, September 8, 2016
- PHMC's eligibility concurrence letter on historic structures, September 26, 2016
- PHMC's concurrence letter on archaeology, December 15, 2016
- PHMC's concurrence letter on historic architecture, March 16, 2017
- USDOL's comments on Section 4(f), November 30, 2017
- PHMC's concurrence letter on historic architecture and archaeology, October 30, 2020
- Section 106 Memorandum of Agreement, November 25, 2020
- FTA's email to PHMC, December 21, 2020
- USDOL's concurrence letter on Section 4(f), December 22, 2020
- Montgomery County's concurrence letter on Chester Valley Trail Extension, December 24, 2020



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

4 April 2013

Alan Tabachnick
AECOM
516 E State Street
Trenton NJ 08609

Re: ER 2013-1006-091-A
Norristown High Speed Line Extension
Upper Merion Township, Montgomery County

Dear Mr. Tabachnick:

Thank you for submitting information concerning the above referenced project. The Bureau for Historic Preservation (the State Historic Preservation Office) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 *et seq.* (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Thank you for the project initiation package, including the mapping of the initial project area and National Register listed and eligible resources located within the vicinity, as well as the opportunity to participate in the Agency Advisory Committee Meeting on March 27, 2013.

We request review of a copy of the list of organizations and individuals that you plan to invite to participate in the Section 106 consultation process as consulting parties as well as additional information on your plan for tribal consultation. Since the project area contains a National Historic Landmark, you will need to include the appropriate representatives from the National Park Service in the Section 106 consultation process.

As the project alternatives are refined, we anticipate the receipt of more detailed information on the identification of historic properties and measures to avoid or minimize effects. To assist you in your identification of known historic and archaeological resources, the Bureau for Historic Preservation (PHMC-BHP) maintains records of National Register listed and eligible resources as well as archaeological surveys (P.A.S.S. files). Information on many of these resources is available on our web based Cultural Resources Geographic Information System (CRGIS) <http://crgis.state.pa.us>. Additional information is available in the survey reports and files of the PHMC-BHP's research room. Please consult the unpublished reports and files to determine what is known in the project area and whether or not the previous survey information may require an update.



Pennsylvania Historical & Museum Commission

Tom Corbett, Governor • Andrew E. Masich, Chairman • James M. Vaughan, Executive Director

A Tabachnick
ER 2013-1006-091-A
4 April 2013
Page 2 of 2

In addition, a comparison of historic (available at pennpilot.psu.edu) and current aerial mapping would be useful for identifying changes to the landscape over time as well as additional resources within the project vicinity that meet the National Register 50-year-age consideration.

We also welcome the opportunity for a site visit to identify 50-year-old resources not previously assessed for National Register eligibility and further assess the potential effects of the various alignments on National Register listed and eligible resources.

If you need further information regarding archaeological resources, please contact Mark Shaffer at (717) 783-9900. If you need further information concerning historic structures, please contact Barbara Frederick at (717) 772-0921.

Sincerely,



Douglas C. McLearen, Chief
Division of Archaeology & Protection

DCM/bcf



Pennsylvania Historical & Museum Commission

Tom Corbett, Governor • Andrew E. Masich, Chairman • James M. Vaughan, Executive Director



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

March 7, 2016

Ms. Terry Garcia Crews
ATT: Tony Cho
FTA, Region III
1760 Market Street, Suite 500
Philadelphia, PA 19103-4124

RE: ER 2013-1006-091-I; FTA: King of Prussia Rail Project; Upper Merion Township, Montgomery County; APE Report

Dear Ms. Garcia Crews,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act (NHPA) of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Archaeological Resources

The information you provided indicates a Phase IA archaeological survey will be completed for the Likely Preferred Alternative. Please provide a copy of the Phase IA report to our office for review and comment.

Above Ground Resources

Thank you for providing an Area of Potential Effects (APE) Report for the above-referenced project. Based on the information received as well as discussed in our March 3, 2016 conference call, we concur with the proposed APE and survey methodology for above ground resources. Please be sure to consult relevant guidelines and appropriate historic contexts for completion of the full HRSFs. In addition, please include historic and current aerial comparisons as appropriate in addition to the required attachments (USGS, photographs, site plans).

As captured in the March 3, 2016 meeting minutes, the following properties will be surveyed:

- Quarry Property – abbreviated Historic Resource Survey Form (HRSF)
- Philadelphia & Reading Railroad – contingent upon additional research into previous finding regarding the Chester Valley Railroad
- Brandywine Village District –full HRSF
- King of Prussia Arms Apartments – abbreviated HRSF (provided that apartment complex has no association with public housing)
- Allendale Road Farmhouse – abbreviated HRSF
- Wills Building – abbreviated HRSF
- Gatti & Morisson Building - abbreviated HRSF
- Southern W&S of PA - abbreviated HRSF
- ProMetrics - abbreviated HRSF

- Arkema Campus – full HRSF
- Devon International – abbreviated HRSF
- American Baptist Mission Center – full HRSF

Please be sure to consult relevant guidelines for completion of all forms (available from our website) and appropriate historic contexts for completion of the full HRSFs. In addition, please include historic and current aerial comparisons as appropriate in addition to the required attachments (USGS, photographs, site plans) for each of the full HRSFs.

For questions concerning archaeological resources, please contact Mark Shaffer at mshaffer@pa.gov or (717) 783-9900. For questions concerning above ground resources, please contact Emma Diehl at emdiehl@pa.gov or (717) 787.9121.

Sincerely,

A handwritten signature in black ink, appearing to read "D. McLearn", with a long horizontal flourish extending to the right.

Douglas C. McLearn, Chief
Division of Archaeology and Protection

C: Tony Cho, FTA
Liz Smith, SEPTA
Leslie Roche, AECOM
Kate Farnham, AECOM

**King of Prussia Rail
Norristown High Speed Line AA / DEIS
Section 106 Consulting Parties Meeting 1
Summary**

Date: September 8, 2016
Time: 10:30 AM
Location: Upper Merion Township Building

Participants

Kate Farnham	AECOM
Marge Quinn	AECOM
Leslie Roche	AECOM
Jesse Walker	AECOM
Beverlee Barnes	Delaware County
Dan Koenig	FTA
Tim Lidiak	FTA
Janet Arcuicci	Montgomery County
Emma Diehl	PHMC
Mark Shaffer	PHMC
Fritz Ohrenschall	SEPTA
Liz Smith	SEPTA
Stephen Burso	Tredyffrin Township
Erin McPherson	Tredyffrin Township
Jaque Camp	Upper Merion Township
Rob Loeper	Upper Merion Township

Summary of Meeting

- Introductions and sign-in sheet – Liz Smith opened the meeting with a round of introductions and sign-in sheet circulation.
- Project Overview
 - Liz outlined the meeting goals:
 - To inform attendees about the project and its relationship to cultural resources protected by Section 106; and
 - To gain feedback and input from consulting parties regarding study area cultural resources.
 - Liz then provided background on the project origins, schedule, planning process, alternatives development and screening, and the recommended locally preferred alternative (LPA).
- Section 106
 - Leslie Roche continued the meeting by describing the Section 106 process under the National Historic Preservation Act, the role of the Section 106 process to inform the NEPA DEIS process, FTA's role as lead agency, the PHMC's role as the State Historic Preservation Office, and the role of the consulting and interested parties.
 - Dan Koenig explained that as the lead agency, FTA is co-managing the project with SEPTA. It is early in the Section 106 process, which allows for dialog with the consulting parties as the project advances. Dan further explained that the format of engagement with the consulting parties is flexible. Thus, while today's session is a meeting, future interaction could be by phone or webinar if desired. Emma Diehl indicated that the PHMC is flexible in regard to the format for future consulting party meetings for the project, such as conference call.

- Kate Farnham continued the meeting by explaining the area of potential effect (APE) for historic architectural (above-ground) properties and the methodology for identifying such properties. Dan explained that FTA and SEPTA consulted with PHMC regarding the APEs for architectural history and archaeology, and PHMC concurred with the proposed APE boundaries earlier this year.
- Kate then reviewed the properties evaluated for historic potential. She noted that initially properties 50 years old or older were identified for examination as potential historic properties because the Section 106 guidelines for assessment suggest that benchmark. Dan added that 50 years was determined to be a realistic benchmark for the project considering SEPTA's timely project implementation schedule. Fifty years equates to above-ground resources built in 1970-1971. Previous architectural survey work had been done in the APE and three previously identified properties were determined eligible for listing in the National Register of Historic Places. As part of this study, AECOM also identified and surveyed 10 new properties, of which one (the American Baptist Churches USA Mission Center) was recommended eligible for listing on the National Register of Historic Places.

Properties are eligible for the National Register of Historic Places because they achieve specific criteria for eligibility outlined by the Section 106 regulations. The four eligible/recommended-eligible properties include:

1. Pennsylvania Turnpike: Delaware River Extension
2. Philadelphia and Western Railway: Norristown High Speed Line
3. Market Street Elevated Railway Historic District
4. American Baptist Churches USA Mission Center

In addition, the APE includes the Philadelphia Transit Company Building. The oldest portion of this building is not eligible but contributes to two eligible historic districts (Market Street Elevated Railway Historic District and 69th Street Terminal Square Shopping District).

- Jesse Walker continued the meeting by explaining the survey for potential below-ground (archaeological) resources, the survey methodology and results. Because of extensive development and land re-contouring in the APE, the survey results indicate low sensitivity for archaeological resources; no further archaeological work is recommended within the APE.
- Leslie concluded the Section 106 presentation portion of the meeting with next steps, explaining that the AECOM team is preparing a draft Section 106 effects report. Dan noted that the DEIS would contain the eligibility report findings and PHMC concurrence, but if the effects report is not finalized by the time the DEIS is published, the DEIS will contain preliminary findings of effect. Leslie then asked for comments from consulting parties and described how comments could be provided. It was agreed with the consulting parties to provide written comments by October 1.
- Next steps - Liz outlined next steps for the Section 106 and NEPA processes.
- Question and comment period:
 - Emma Diehl stated that PHMC is in the process of updating their statewide historic preservation plan. Meetings are occurring across the state during this process, providing the opportunity for input from interested people and organizations. She offered that those interested could participate by signing up for PHMC's blog, accessible via www.phmc.pa.gov.
 - Mark Shaffer asked whether ancillary infrastructure to the project such as stormwater management facilities and utility relocations were accounted for in the APE for archaeology?

SEPTA and the AECOM team responded that at the current level of concept design, approximately 3 percent, areas for ancillary facilities are preliminarily accommodated. Mark responded that Phase 1A archaeological survey would be required if the APE were to increase to accommodate project-related facilities. Dan noted that future survey and consultation could occur, citing the future identification of specific locations and design of piers and stations.

- Dan encouraged the consulting parties to review the survey reports for above-ground and below-ground resources and provide comments in a timely manner. Consulting party input will be shared with PHMC.
- Beverlee Barnes noted that Delaware County's architectural inventory report from 1991, prepared by CHRS, is available at the County and at PHMC in hard copy.
- Stephen Burso asked about project funding. Liz responded that SEPTA is in the process of identifying potential funding sources, of which federal funding would be a part. She noted that SEPTA expects many non-Federal funding sources will make up the match. Dan noted that SEPTA is undertaking NEPA and Section 106 as required steps toward qualifying for FTA's Capital Investment Grant program.
- Attendees asked for the slide presentation from this meeting and the address and deadline for providing comments. Liz responded that the PowerPoint presentation would be shared by email with the contact information for providing comments. Leslie showed the comment slide indicating the ways to provide comments.
- Jaque Camp asked about the potential to locate a station near the project crossing of U.S. Route 202, citing nearby apartment complexes within walking distance. Liz responded that engineering challenges make citing a station at that location not practicable. She indicated that a potential pedestrian connection from 251 DeKalb could be made to the Henderson Road station. Also, the apartment owner near Allendale likes the pedestrian access to the proposed Mall station.
- Jaque asked whether there is a warrant for two stations at the Mall now that the two parts of the Mall are connected? Liz responded that SEPTA has discussed this same question with Simon Properties, the mall owner. The western station is warranted as it would also serve Lockheed-Martin. She also cited the long-term mall development plan around the second station.
- Dan asked if there is potential for future infill stations in the project corridor? Liz responded yes.
- Stephen asked several questions:
 - How will the elevated stations be accessed? Liz responded that where stations span streets, elevators and stairs would be provided on both sides of the streets. This provision would eliminate the need for at-grade street crossing.
 - What will be the visual effect to the Tredyffrin area of the terminal station at 1st Avenue, considering the elevated structure and pedestrian bridge? Liz responded that SEPTA is preparing and will share a 3D rendering that will depict the appearance of the terminal station in the context of surrounding development.
 - Is Valley Forge National Historical Park a consulting party? Liz responded affirmatively, saying the park has been involved in the project from the beginning of the current study.
 - Trout Creek runs under the casino property in a 12- to 18-foot diameter culvert. Rob Loeper added that the stream is located behind the casino buildings.



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

September 26, 2016

Mr. Dan Koenig
FTA
1760 Market Street, Suite 500
Philadelphia, PA 19103-4124

RE: ER 2013-1006-091-L; FTA: King of Prussia Rail Project; Upper Merion Township, Montgomery County; Intensive-Level Survey Forms

Dear Mr. Koenig,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources

We offer the following comments in response to the intensive-level historic resource survey.

Eligible

Based on the information received and available within our files, we concur with the findings of the agency that the following property is **Eligible** for listing in the National Register of Historic Places:

- **National Offices of the American Baptist Church (588-590 N. Gulph Road)** – This property is Eligible for listing in the National Register of Historic Places under Criterion C in the area of Architecture, for the year 1962, the date of construction, for its exemplification of mid-century Modern architecture designed by notable architect Vincent Kling. The proposed boundary includes the current tax parcel, as indicated in the submission.

Not Eligible

We concur with the findings of the agency that the following properties are **Not Eligible** for listing in the National Register of Historic Places, due to a lack of integrity and/or significance:

- Brandywine Village
- King of Prussia Arms Apartments
- Elwood Powell House
- Wills Building (Key No. 097653)
- Gatti Morrison Construction Materials
- Southern Wine and Spirits of Pennsylvania

- ProMetrics
- Pensalt Technological Center (Arkema Campus)
- Devon International Group

No Additional Information Due to Potential for Effect

We concur with the scope and level of effort utilized to identify historic properties for this project, appropriate pursuant to 36 CFR Part 800.4, on the following properties as individual resources; however, if the proposed project route changes or if the agency anticipates direct effects to the following property, additional information in the form of a Historic Resource Survey Form may be required (upon consultation with our office):

- McCoy Quarry

For questions and/or future consultation regarding this review, please contact Emma Diehl at emdiehl@pa.gov or (717) 787-9121.

Sincerely,



Douglas C. McLearn, Chief
Division of Archaeology and Protection



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

December 15, 2016

Mr. Dan Koenig
FTA
1760 Market Street, Suite 500
Philadelphia, PA 19103-4124

RE: ER 2013-1006-091-L: FTA – King of Prussia Rail Project, Upper Merion Township,
Montgomery County – Phase IA Archaeological Survey Report

Dear Mr. Koenig:

Thank you for providing information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources. Our comments are as follows:

Archaeological Resources

Based on the results of this investigation, we agree with the recommendation that no further archaeological investigation is necessary within the APE-Archaeology.

If you have any questions or comments concerning our review, please contact Mark Shaffer at (717) 783-9900 or MShaffer@pa.gov.

Sincerely,

Douglas C. McLearn, Chief
Division of Archaeology and Protection



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

March 16, 2017

Mr. Daniel Koenig
Environmental Protection Specialist
FTA, Region III
1760 Market Street, Suite 500
Philadelphia, PA 19103

RE: ER 2013-1006-091-O; FTA: King of Prussia Rail Extension Project; Upper Merion Township, Montgomery County; Determination of Effects Report

Dear Mr. Koenig,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Determination of Eligibility- McCoy Quarry (Key No. 203554)

Based on the information received and available within our files, it is the opinion of the State Historic Preservation Officer that the **McCoy Quarry (Key No. 203554)** is **Not Eligible** for listing in the National Register of Historic Places due to a lack of integrity.

Determination of Effects

Based on the information received, we concur with the findings of the agency that the proposed project will have **No Adverse Effect** on the Pennsylvania Turnpike: Delaware River Extension (Key No. 155879); the American Baptist Churches USA Mission Center (Key No. 203535); and the Philadelphia and Western Railway: Norristown High Speed Line (Key No. 128825). We concur with the findings of the agency that the proposed project will have **No Effect** on the Market Street Elevated Railway Historic District (Key No. 105499) and the 69th Street Terminal Square Shopping District (Key No. 156448)

If you need further information concerning this review and/or project plans should change, please contact Emma Diehl at emdiehl@pa.gov or (717) 787-9121.

Sincerely,

Douglas C. McLearn, Chief
Division of Archaeology and Protection



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

November 30, 2017

9043.1
ER 17/0482

Daniel Koenig
Environmental Protection Specialist, Region III
US Department of Transportation—Federal Transit Administration
1200 New Jersey Avenue, SE
East Building E56-202
Washington, DC 20590

Subject: Draft Environmental Impact Statement and Section 4(f) Evaluation for the King of Prussia Rail Project, Montgomery, County, PA.

Dear Mr. Koenig:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement and Draft Section 4(f) Evaluation (DEIS) for the proposed King of Prussia Rail Project in Upper Merion Township, Montgomery County, Pennsylvania. The purpose of the proposed project is to provide faster, more reliable public transit service to the King of Prussia area that:

- Offers improved transit connections to the area from communities along the existing Norristown High Speed Line, Norristown and Philadelphia;
- Improves connectivity between defined key destinations within the King of Prussia area; and
- Better serves existing transit riders and accommodates new transit patrons.

The Department offers the following comments on this project for your consideration.

DEIS Comments

The Department understands that the National Park Service (NPS), Valley Forge National Historical Park (Park) has been involved in reviewing the project from the early stages and anticipates no adverse effects to the Park. Although the terminal may be minimally visible from the Park, it is already surrounded by existing mid-rise and high rise office buildings, hotels, and a casino. As described, NPS does not anticipate the project will add cumulative impact to the existing Park viewshed. NPS anticipates that the project may alleviate traffic congestion,

possibly decreasing related impacts to Park resources. Completion of the project, with its terminal near the Park, may increase accessibility by providing another transportation alternative, particularly for visitors or staff without access to personal vehicles.

Section 4(f) Evaluation Comments

The Department has reviewed the draft Section 4(f) Evaluation provided and commends the amount of effort that the Federal Transit Administration and its partners have put into researching potential alternatives and working with other agencies in determining which alternative would least impact 4(f) properties. The Department agrees that the preferred alternative PEPCO/TP-1st Ave. appears to have the least impact on the twelve (12) Section 4(f) properties identified, with only two *de minimis* uses identified for the American Baptist Churches, USA Mission Center and the Philadelphia and Western Railway. The Department recognizes that the Pennsylvania SHPO has concurred with a determination of No Adverse Effect for this alternative. The Department understands that there are potential options and alternatives that may be incorporated into the project that have not yet had formal determinations made, however the Department agrees that the two options under consideration are also likely to have no adverse effect on 4(f) properties. The Department will delay providing formal concurrence until the final Section 4(f) determination is received.

We appreciate the opportunity to provide these comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lindy Nelson', with a stylized flourish at the end.

Lindy Nelson
Regional Environmental Officer

cc: SHPO-PA James Vaughan (jvaughan@pa.gov)
Daniel Koenig (daniel.koenig@dot.gov)
Project Website (info@koprail.com)



Pennsylvania State Historic Preservation Office

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

October 30, 2020

Ms. Shauna Haas
Federal Transit Administration
1835 Market Street, Suite 1910
Philadelphia, PA 19103

RE: ER 2013-1006-091-R; FTA: King of Prussia Rail Extension; Upper Merion Township, Montgomery County; Design Refinements – Determination of Effects

Dear Ms. Haas,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Proposed Project

The Federal Transit Administration (FTA) previously completed Section 106 consultation for the above-referenced project in March 2017. PA SHPO concurred with the overall project finding of No Adverse Effect. The overall project is SEPTA's proposed extension of the Norristown High Speed Line to King of Prussia. The proposed design has been refined to include areas and actions not addressed in previous consultation.

Area of Potential Effects

Based on the information received, we concur with the agency's Area of Potential Effects as presented in your submission for both archaeology and above ground resources.

Archaeological Resources

We concur with the findings that no archaeological resources will be affected by the proposed project as refined and that no additional archaeological survey is warranted.

Aboveground Resources

Identification of Historic Properties

One new potential historic property was identified as part of the refined design. Based on the information received and available within our files, we concur with the findings of the agency that the **Pennsylvania-New Jersey (PNJ) Interconnection: Conowingo to Plymouth Meeting Transmission Line** is **Eligible** as part of the overall PNJ Interconnection (Key No. 156601), a portion of which (Wallenpaupack to Siegfried) was determined eligible in 2011. The line is eligible under Criterion A in the areas of Engineering and Industry, as it forms part of an engineering innovation with wide-ranging impacts to the development of electrical power distribution grids and was an integral part of a landmark cooperative agreement creating a power-pool partnership between three regional utilities. The property is also eligible under Criterion C as a linear district of intact typical transmission structures dating from the line's original construction that collectively

represent the innovation in engineering that made successful long-distance, high-voltage transmission and creation of a power pool possible. The period of significance begins in 1927, when the PNJ Interconnection agreement was signed and ends in 1956, when the Baltimore Gas & Electric and General Public Utilities joined the utility pool. The boundary of the linear district includes the right-of-way, or 350' on center from line. While we agree that the portion within the APE retains integrity, it is likely that the boundary extends beyond the APE to possibly include the entire line itself.

Determination of Effect

Based on the information provided and available within our files, we concur with the agency finding that the proposed project, including the revised design, will result in No Adverse Effect to the following properties: Pennsylvania Turnpike: Delaware River Extension (Key No. 155679) and the Philadelphia and Western Railroad (Key No. 128825). We concur that the proposed project as refined will have No Effect on the Market Street Elevated Railway Historic District (Key No. 105499), the 69th Street Terminal Square Shopping District (Key No. 156448), and the American Baptist Churches USA Mission Center (Key No. 203535).

With regards to the PNJ Interconnection (Key No. 156601), we concur with the overall finding of the agency that the project as refined will result in an **Adverse Effect** to historic properties due to the necessity to physically remove at least four and up to seven original lattice towers that are contributing resources to the linear historic district. To comply with the regulations of the Advisory Council on Historic Preservation, the federal agency must follow the procedures outlined in 36 CFR 800.6 when the effect is adverse. Thank you for providing the additional information regarding consideration of alternatives that avoid or minimize effects to historic properties as well as documentation of consulting party coordination. The federal agency will need to notify the Advisory Council of the effect finding and continue to consult with the PA SHPO and other consulting parties, as participating, to seek ways to avoid, minimize, and/or mitigate the adverse effects on the historic property.

Resolution of Adverse Effects

We generally agree with the proposed mitigation as outlined in the draft Memorandum of Agreement provided on October 23, 2020. As proposed, SEPTA shall prepare GIS mapping of the portion of the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line in Pennsylvania for submittal to PA SHPO and integration into PA SHPO's Cultural Resources Geographic Information System (CRGIS) and/or any successor GIS systems. Mapping shall be a boundary shape and cover the area of the resource between the Commonwealth of Pennsylvania border with Maryland and PECO's Plymouth Meeting Substation in Plymouth Meeting, Pennsylvania. The mapping shall be provided as ArcGIS shapefiles and shall be prepared and submitted in compliance with PA SHPO guidelines for GIS deliverables. This mapping will be an addendum to the resource as mapped in the previous Historic Resources Survey Form (HRSF) for the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (Key No. 156601).

In addition to the mapping proposed, PA SHPO offers for consideration an inventory of potential contributing resources for the section of line covered by the aforementioned mapping (the Commonwealth of Pennsylvania border with Maryland and PECO's Plymouth Meeting Substation) as part of this effort. This would include substations and lattice towers as well as any other supporting structures identified. The inventory would be submitted as an addendum to the HRSF in accordance with current PA SHPO standards and could be provided in table format to include name, type, estimated construction date, and photographs. Photographic documentation could include individual photographs for resources such as substations, and representative

photographs for repetitive features, such as the lattice towers. In addition, as the mapping was somewhat difficult to discern in the HRSF provided for the PNJ Interconnection (Figure 2 of the HRSF submitted), a revised map illustrating the area documented (between the Pennsylvania/Maryland border and the Plymouth Meeting Substation) on current aerial mapping should be provided.

Please note, however, that concurrence with this proposed mitigation should not preclude consideration of any other mitigation options proposed by other consulting parties, if presented.

If you need further information concerning this review and/or future consultation, please contact Emma Diehl at emdiehl@pa.gov or (717) 787-9121.

Sincerely,

A handwritten signature in black ink, appearing to read "D. McLearen", written over a horizontal line.

Douglas C. McLearen, Chief
Division of Environmental Review

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL TRANSIT ADMINISTRATION,
THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER, AND
THE SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY
REGARDING THE KING OF PRUSSIA RAIL EXTENSION PROJECT
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY AND UPPER DARBY
TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA**

WHEREAS, the Federal Transit Administration (FTA) plans to provide financial assistance to the Southeastern Pennsylvania Transportation Authority (SEPTA) for the construction of the King of Prussia (KOP) Rail Extension Project, with improvements in Upper Merion Township, Montgomery County and Upper Darby Township, Delaware County, Pennsylvania (Undertaking); and

WHEREAS, the Undertaking consists of construction of a new rail line and stations branching off the west side of the existing Norristown High Speed Line (NHSL), passing through King of Prussia, and terminating on the north side of First Avenue in Upper Merion Township, and includes track, platform, and interior passenger circulation improvements at the 69th Street Transportation Center in Upper Darby Township; and

WHEREAS, FTA has defined the Undertaking's Area of Potential Effects (APE) as the area within which the Undertaking may cause changes in the character or use of standing resources listed in or eligible for the National Register of Historic Places (NRHP), including resources from which the Undertaking may be visible and/or create a visual impact to the integrity of a historic property for above-ground properties (encompassing 485 acres). The APE includes the limits of disturbance for archaeological resources (encompassing 92 acres). The APE for the Undertaking is shown on the map in Attachment A; and

WHEREAS, pursuant to 36 CFR § 800.5(a), FTA has determined that the Undertaking may have an adverse effect on the Pennsylvania-New Jersey (PNJ) Interconnection; Conowingo to Plymouth Meeting Transmission Line (Key No. 156601), which is eligible for listing in the NRHP, and has consulted with the Pennsylvania State Historic Preservation Officer (PA SHPO) pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA; 54 U.S.C. § 306108); and

WHEREAS, SEPTA, as a recipient of Federal assistance for the Undertaking, is a consulting party in the Section 106 process pursuant to 36 CFR § 800.2(c)(4) with a responsibility in implementing the terms of the MOA, and is invited to sign this MOA as an invited signatory pursuant to 36 CFR § 800.6(c)(2); and

WHEREAS, FTA invited the National Park Service, Northeast Region; Valley Forge National Historical Park; the Montgomery County Planning Commission; the Montgomery County Division of Parks, Trails and Historic Sites; the Historical Society of Montgomery County; the Heritage Conservancy; the Upper Merion Township Planning Commission; the King of Prussia Historical Society; the Chester County Historic Preservation Network; the Chester County Historical Society; the Chester County Planning Commission; the Tredyffrin Historic Preservation Trust; the Tredyffrin Township Historical Commission; Upper Darby Township; the Upper Darby

Historical Society; the Delaware County Planning Department; the Delaware County Historical Society; the Preservation Alliance for Greater Philadelphia; The Delaware Tribe; The Delaware Nation; The Oneida Indian Nation; The Eastern Shawnee Tribe of Oklahoma; the Stockbridge-Munsee Community of Mohican Indians; and the PECO Energy Company (PECO) to participate as consulting parties to the Undertaking; and

WHEREAS, the Montgomery County Planning Commission, the Montgomery County Division of Parks, Trails and Historic Sites, the Historical Society of Montgomery County, the King of Prussia Historical Society, the Upper Merion Township Planning Commission, Upper Darby Township, and the PECO Energy Company (PECO) have agreed to be consulting parties to the Undertaking; and

WHEREAS, PECO is the owner and operator of the portion of the NRHP-eligible resource that will be adversely affected by the Undertaking and is a consulting party in the Section 106 process pursuant to 36 CFR §800.2(c)(5). FTA invited PECO to concur with this MOA pursuant to 36 CFR § 800.6(c)(3) but PECO declined to participate as a concurring party; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), FTA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

NOW, THEREFORE, FTA, SEPTA, and PA SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties.

STIPULATIONS

FTA and SEPTA will ensure that the following measures are carried out:

I. Mitigation Measures

SEPTA shall prepare GIS mapping of the portion of the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (Key No. 156601) in Pennsylvania for submittal to PA SHPO and integration into PA SHPO's Cultural Resources Geographic Information System (CRGIS) and/or any successor GIS systems. Mapping shall be a boundary shape and cover the area of the resource between the Commonwealth of Pennsylvania border with Maryland and PECO's Plymouth Meeting Substation in Plymouth Meeting, Pennsylvania. The mapping shall be provided as ArcGIS shapefiles and shall be prepared and submitted in compliance with PA SHPO guidelines for GIS deliverables. This mapping will be an addendum to the resource as mapped in the previous Historic Resources Survey Form (HRSF) for the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (Key No. 156601).

The GIS mapping shall be a desktop task, using readily available online information. SEPTA's GIS analyst shall coordinate with an architectural historian during the GIS

mapping task to identify the boundary in areas where data is available, as well as to identify areas where the resource boundary is unclear and will require verification by means of additional study by others in the future. The architectural historian shall meet the *Secretary of the Interior's Professional Qualification Standards* (48 FR 44738-9). In addition, the GIS mapping effort shall identify notable features or losses of integrity to the extent that the available desktop data can provide, scaled to within a two-day work effort.

The GIS mapping shall be accompanied by a brief memorandum that identifies the methodology, assumptions, and data sources used. The notable features or losses of integrity identified during GIS mapping will be recorded in a table or as notes in the memorandum. To the extent that the GIS mapping effort identifies sources of information that may be useful to others in future research regarding the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line, the memorandum shall cite those sources.

II. General Provisions

A. Undertaking Changes

If SEPTA proposes changes to the Undertaking that may result in additional or new effects on historic properties, SEPTA will notify FTA and the PA SHPO of such changes. Before SEPTA takes any action that may result in additional or new effects on historic properties, SEPTA, FTA, and PA SHPO will consult to determine the appropriate course of action.

B. In the event that another federal agency not initially a party to or subject to this MOA receives an application for funding/license/permit for the Undertaking as described in this MOA, that agency may fulfill its Section 106 responsibilities by stating in writing it concurs with the terms of this MOA and notifying FTA, SHPO, and SEPTA that it intends to do so. Such agreement shall be evidenced by filing their intent use this MOA to fulfill their Section 106 responsibilities with the ACHP, and implementation of the terms of this MOA.

III. Duration

FTA and SEPTA will implement the terms of this MOA, including Stipulation I, prior to demolition of any transmission towers related to construction of the Undertaking. SEPTA will notify the signatories to this MOA in writing of the start date of Undertaking construction in the portion of the PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line (Key No. 156601) that is within the Undertaking's limit of disturbance (also known as the PECO corridor), and the expected duration of construction in that location. SEPTA will again notify the signatories to this MOA in writing of the end date of construction in the PECO corridor. This MOA will expire if its terms are not carried out within ten (10) years from the date of its execution; prior to such time, FTA may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VII.

IV. Post-Review Discoveries

If any newly identified historic properties are discovered or unanticipated effects on known historic properties are identified during the implementation of this Undertaking, SEPTA shall immediately notify FTA. FTA will notify the PA SHPO of the discovery within 48 hours and consult with PA SHPO in accordance with 36 C.F.R. § 800.13(b)(3) to develop and implement actions to identify historic properties and resolve adverse effects.

V. Monitoring and Reporting

On or before September 30 of each year following the execution of this MOA until all stipulations are satisfied or the MOA is terminated, SEPTA shall provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FTA and SEPTA's efforts to carry out the terms of this MOA.

VI. Dispute Resolution

Any Signatory or concurring party to this MOA may object at any time to any actions proposed or to the manner in which the terms of this MOA are implemented by providing written notice to FTA, and FTA shall consult with such party to resolve the objection. If FTA determines that such objection cannot be resolved, FTA will:

- A. Forward all documentation relevant to the dispute, including the FTA's proposed resolution, to the ACHP. The ACHP shall provide FTA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FTA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories, and concurring parties, and provide them with a copy of this written response. FTA will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, FTA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FTA shall prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.
- C. FTA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

VII. Amendments

This MOA may be amended when such an amendment is agreed to in writing by all Signatories. The amendment will be effective on the date a copy signed by all the Signatories is filed with the ACHP.

VIII. Termination

If any Signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other Signatories to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) calendar days (or another time period agreed to by all Signatories) an amendment cannot be reached, any Signatory may terminate the MOA upon written notification to the other Signatories. Once the MOA is terminated, and prior to work continuing on the Undertaking, FTA must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. FTA shall notify the Signatories as to the course of action it will pursue.

IX. Anti-Deficiency Act

FTA's obligations under this MOA are subject to the availability of appropriated funds, and the stipulations of this MOA are subject to the provisions of the Anti-Deficiency Act. FTA shall make reasonable and good faith efforts to secure the necessary funds to implement this MOA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs FTA's ability to implement the stipulations of this agreement, FTA shall consult in accordance with the amendment and termination procedures found at Stipulations VII and VIII of this agreement.

EXECUTION of this MOA by FTA, SEPTA, and PA SHPO, and implementation of its terms are evidence that FTA and SEPTA have taken into account the effects of this Undertaking on historic properties and afforded the ACHP an opportunity to comment.

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL TRANSIT ADMINISTRATION,
THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER, AND
THE SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY
REGARDING THE KING OF PRUSSIA RAIL EXTENSION PROJECT
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY AND UPPER DARBY
TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA**

SIGNATORY

FEDERAL TRANSIT ADMINISTRATION (FTA)

Theresa "Terry" Garcia Crews Digitally signed by THERESA
GARCIA CREWS
By: _____ Date: 2020.11.25 12:14:43 -05'00' Date: _____
Theresa Garcia Crews, Regional Administrator
Federal Transit Administration, Region 3

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL TRANSIT ADMINISTRATION,
THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER, AND
THE SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY
REGARDING THE KING OF PRUSSIA RAIL EXTENSION PROJECT
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY AND UPPER DARBY
TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA**

SIGNATORY

PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICE (PA SHPO)

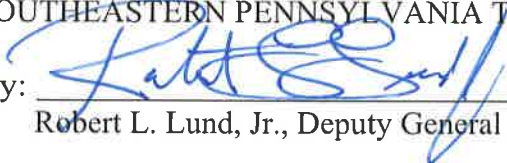
By:  Date: 11/23/2020
Andrea MacDonald, Director, State Historic Preservation Office, and
Deputy State Historic Preservation Officer

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL TRANSIT ADMINISTRATION,
THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER, AND
THE SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY
REGARDING THE KING OF PRUSSIA RAIL EXTENSION PROJECT
UPPER MERION TOWNSHIP, MONTGOMERY COUNTY AND UPPER DARBY
TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA**

INVITED SIGNATORY

SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY (SEPTA)

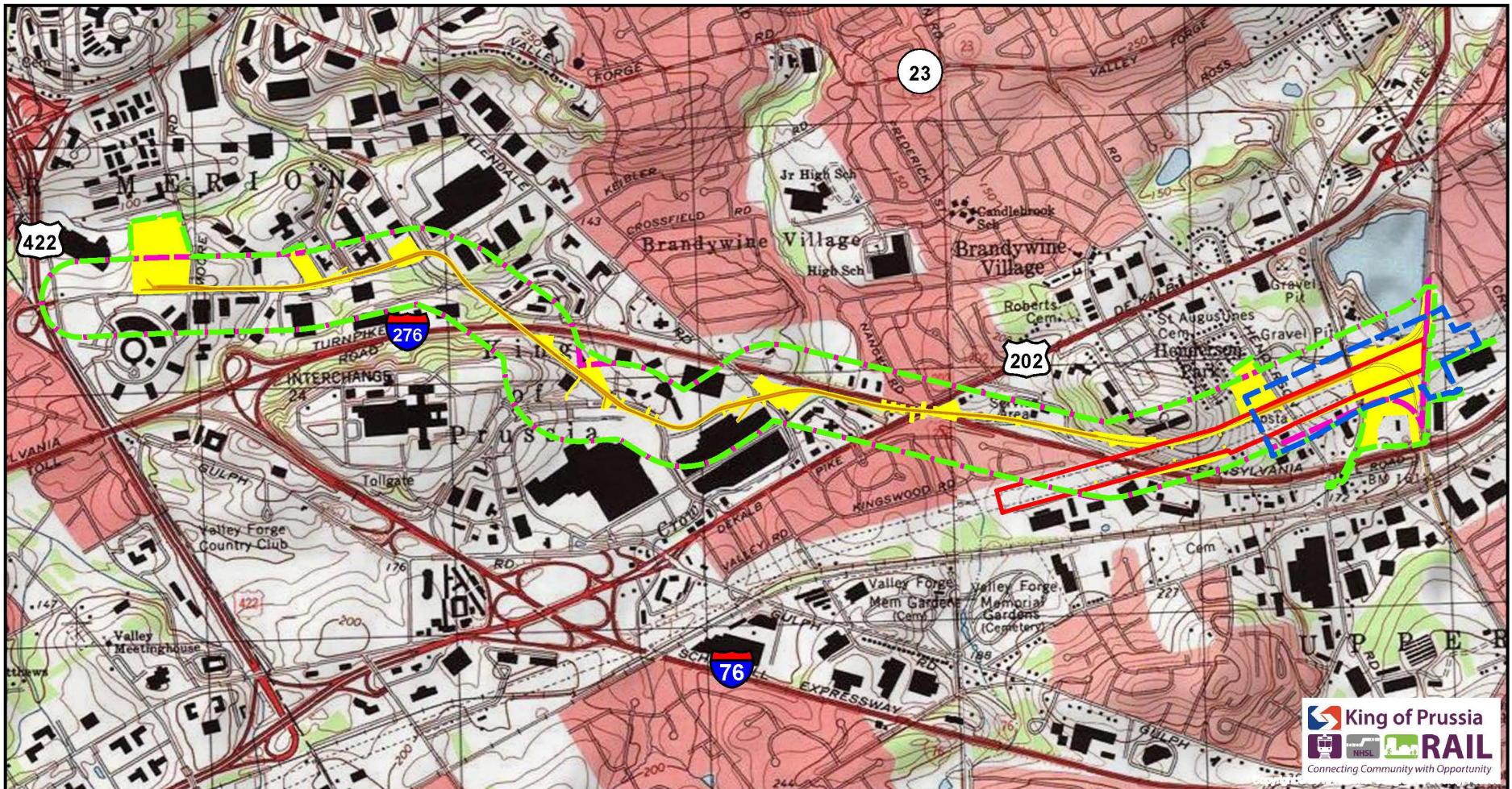
By:


Robert L. Lund, Jr., Deputy General Manager

Date:

11/24/2020

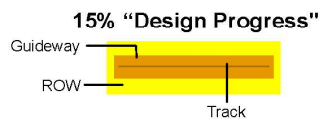
MOA Attachment A – Modified APE Map



Preferred Alternative:

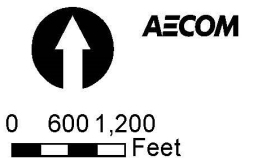
Previous and Modified APEs for Historic Architecture

10/2/2020
Source: Upper Merion Twp, SEPTA, PASDA, DVRPC, AECOM.



- Modified APE for Historic Architecture
- Previous APE for Historic Architecture

- PECO Visual APE
- PNJ Interconnection; Conowingo to Plymouth Meeting Transmission Line Resource Boundary



Roche, Leslie

From: Koenig, Daniel (FTA) <daniel.koenig@dot.gov>
Sent: Monday, December 21, 2020 10:32 AM
To: Diehl, Emma (emdiehl@pa.gov)
Cc: Ryan Judge; Shauna Haas; Tamra Dann; Roche, Leslie; Quinn, Margaret; Timothy Lidiak
Subject: [EXTERNAL] Notification of de minimis impact determination - Pennsylvania Turnpike: Delaware River Extension

Emma,

The purpose of this email is to notify PHMC of FTA's intent to make a *de minimis* impact determination pursuant to Section 4(f) for the Pennsylvania Turnpike: Delaware River Extension for SEPTA's King of Prussia Rail Extension Project (project). As the official with jurisdiction, FTA is required under 23 CFR 774.5(b)(1) to notify PHMC, as the SHPO, of our intent to make a *de minimis* impact determination. FTA made a no adverse effect determination on this property and received concurrence from PHMC on October 30, 2020. A no adverse effect determination on this property under Section 106 enables a *de minimis* impact determination to be made under Section 4(f) because it means that the Preferred Alternative will have no adverse impact on the features, attributes or activities that qualify the Pennsylvania Turnpike: Delaware River Extension for protection by Section 4(f).

As you'll recall, the Pennsylvania Turnpike: Delaware River Extension is part of the Pennsylvania Turnpike Main Line Historic District, whose period of significance is 1938 through 1956. The Turnpike and its extensions were determined eligible for the NRHP in 2005 under Criterion A for association with the post-World War II toll-road movement, and as one of the last elements in a regional system of high-speed, limited-access superhighways connecting northeastern and north-central states with Chicago. The boundary of the historic resource is the parcel boundary. Key contributing elements to the District are features associated with the engineering standards used in the original construction: travel lanes (originally two in each direction); interchanges and toll plazas; tunnels; abandoned sections; bridges, culverts and retaining walls; service plazas; maintenance facilities; and state police stations.

This email serves as notification and documentation only as PHMC has concurred with FTA's determination of no adverse effect for this property. FTA and SEPTA made the Draft Section 4(f) evaluation available for public comment on December 1, 2020 in accordance with 23 CFR 774.5 and FTA plans to issue its final Section 4(f) evaluation in the combined Final Environmental Impact Statement and Record of Decision for the project in 2021. FTA and SEPTA appreciate PHMC's continued cooperation on this project.

Best,
Dan

Daniel Koenig
Community Planner Region III
U.S. Department of Transportation - Federal Transit Administration
1200 New Jersey Avenue, SE
East Building E56-202
Washington, DC 20590
202.366.8224 (o)



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
5 Post Office Square, Suite 18011
Boston, Massachusetts 02109

December 22, 2020

9043.1
ER 20/0497

Daniel Koenig
Federal Transit Administration, Region III
1760 Market Street, Suite 500
Philadelphia, PA 19103-4124

Subject: Comments
Draft Section 4(f) Evaluation
King of Prussia Rail Expansion Project
Chester County, Pennsylvania

Dear Mr. Koenig:

The U.S. Department of the Interior (Department) has reviewed the revised draft Section 4(f) Evaluation for the King of Prussia Rail Expansion Project in Chester County, Pennsylvania. The Department acknowledges that the Federal Transit Administration (FTA) previously completed a Draft Section 4(f) Evaluation that was included in the October 2017 King of Prussia Rail Extension Draft Environmental Impact Statement (DEIS). That document was subject to public and Department review during the DEIS public comment period from October 17, 2017, to December 8, 2017. The Department provided a concurrence letter dated November 30, 2017, for that document.

We understand that because a new historic Section 4(f) property, the Pennsylvania-New Jersey Interconnection, Conowingo to Plymouth Meeting Transmission Line (PNJ Interconnection), was identified after the DEIS was published, the FTA is re-issuing the Draft Section 4(f) Evaluation for public and Department review in compliance with 23 CFR 774.5(a). We offer the following comments on this project for your consideration.

Draft Section 4(f) Evaluation Comments

The Department reiterates that comments from our November 2017 letter concerning Valley Forge National Historical Park on this project still stand. In addition, the Department concurs that there is no prudent and feasible alternative for use of the newly identified Section 4(f) property, PNJ Interconnection, along the revised rail extension alignment. In a letter dated

September 26, 2016, the Pennsylvania Historical & Museum Commission (PHMC) concurred with the FTA's determination that the project would have an adverse effect on the PNJ Interconnection. Furthermore, the Department acknowledges that through consultation, the FTA, the Southeastern Pennsylvania Transit Authority, and PHMC entered into a Section 106 Memorandum of Agreement (MOA) on November 25, 2020. The MOA stipulates the mitigation measures to be undertaken as part of the project to address the adverse effects of the project to the PNJ Interconnection.

Thank you for the opportunity to review and provide comments on this project. If you have questions regarding these comments, please contact Mark Eberle, National Park Service at mark_eberle@nps.gov. Please contact me at (617) 223-8565 if I can be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew L. Raddant", is displayed on a light blue rectangular background.

Andrew L. Raddant
Regional Environmental Officer

cc: SHPO-PA (anlowery@pa.gov)



December 21, 2020

William R. Hartman, PLA
Section Chief, Trails & Open Space Planning
Montgomery County Planning Commission
One Montgomery Plaza, Suite 613
PO Box 311
Norristown, PA 19404-0311

RE: Section 4(f) Consultation for the King of Prussia Rail Project, Upper Merion Township, Montgomery County, Pennsylvania

Dear Mr. Hartman:

The Federal Transit Administration (FTA), in cooperation with the Southeastern Pennsylvania Transportation Authority (SEPTA), published a Draft Environmental Impact Statement and Draft Section 4(f) Evaluation for the King of Prussia Rail Extension (Project) in October 2017. In March 2018, SEPTA adopted the Preferred Alternative, known in the DEIS and Draft Section 4(f) Evaluation as PECO/TP-1st Ave. with the PA Turnpike North South Option. FTA and SEPTA are undertaking a Final Environmental Impact Statement and Final Section 4(f) Evaluation for the Preferred Alternative.

As required by Section 4(f) of the US Department of Transportation Act of 1966, the purpose of this letter is to request your concurrence on FTA's proposed temporary occupancy exception determination for the Preferred Alternative regarding the planned Chester Valley Trail Extension.

Description of Chester Valley Trail and Planned Trail Extension

The regional Chester Valley Trail runs for 13.5 miles in Chester County into Montgomery County and Upper Merion Township to its current terminus on the west side of South Gulph Road. Montgomery County administers this paved, multi-use recreation trail in the township. The County is constructing a 3.8-mile extension of the Chester Valley Trail eastward from its current terminus along the south side of the Township/County's PECO Easement on the PECO utility corridor to the Pennsylvania Turnpike. Before the Pennsylvania Turnpike, the proposed trail will transition to follow along Hansen Access Road eastward until joining the County-acquired former East Penn Railroad LLC railroad corridor. The trail will turn north using the former railway corridor, which continues north along the north-south leg of Saulin Boulevard and across US Route 202 toward Bridgeport.

Section 4(f) Evaluation for Planned Chester Valley Trail Extension

The Preferred Alternative will cross the County's right-of-way (ROW) for the Chester Valley Trail Extension (former Philadelphia and Reading Railroad corridor) at Saulin Boulevard (map in Attachment A). The planned trail will be at grade with the existing roadway. The elevated guideway of the Preferred Alternative will cross over the proposed at-grade trail alignment. Vertical clearance over the trail will be approximately 21 feet. Guideway support columns will be designed to not

impact the trail or its ROW, thereby not requiring permanent incorporation of land from the trail ROW and avoiding operational impact to the trail.

However, SEPTA will temporarily occupy a portion of Chester Valley Trail Extension land to provide work area and access during construction of the Preferred Alternative. Specifically, SEPTA will temporarily occupy a strip of land alongside the existing Saulin Boulevard ROW at point where the Preferred Alternative crosses the trail (approximately 0.6 acre (<0.5% of the trail property)).

FTA intends to make a Section 4(f) finding of temporary occupancy exception, pursuant to 23 CFR 774.13(d), because the Preferred Alternative will satisfy each of the five criteria for such a finding:

- 1) Because the trail crossing is a relatively small work area compared to the overall length of the Preferred Alternative, the duration required to construct the portion of the Preferred Alternative at the trail crossing will be less than the overall three-year Project construction duration. No change in land ownership will occur.
- 2) The scope of the Preferred Alternative construction work at the trail crossing will be minor in nature and magnitude (<0.5% of the property) in comparison to the 3.8-mile length of the overall trail extension. SEPTA will temporarily occupy land within the trail ROW at the Project crossing to enable access by construction workers and equipment to the elevated guideway structure overhead. SEPTA will coordinate with the County regarding temporary re-routing of the trail during Project construction. The land areas SEPTA temporarily uses will be designated as construction work areas; work areas will be secured to protect the safety of construction workers and the public. Other parts of the trail will not be impacted and will remain open to trail users.
- 3) No permanent, adverse physical impact to the trail will occur as a result of Preferred Alternative construction activity. As other portions of the trail will remain open to trail users, and as SEPTA will restore the part of the property and trail it temporarily disturbs at the end of its construction activity, no permanent or temporary interference with the activities, features or attributes of the trail will occur.
- 4) SEPTA will fully restore the land that is temporarily used, including the trail itself.
- 5) SEPTA is coordinating with Montgomery County about the Project crossing over the proposed Chester Valley Trail Extension. By this letter, FTA seeks concurrence from the County on the proposed temporary occupancy determination for the Chester Valley Trail Extension. Written concurrence from the County will be included in the Final Section 4(f) Evaluation. The County's agreement will enable FTA to make a final determination of temporary occupancy exception for the Chester Valley Trail Extension.

In accordance with the requirements of Section 4(f), FTA provided a public notice of its intent to make a finding for the Preferred Alternative of no use of the Chester Valley Trail Extension with an opportunity for public review and comment; the public notice was posted on the Project website (www.kingofprussiarail.com) on December 2, 2020.

SEPTA and Montgomery County coordinated in the development of the following commitments that are integral to the Preferred Alternative and will be undertaken by SEPTA during subsequent Project design to minimize the effects of Project construction on the Chester Valley Trail Extension. The commitments include the following actions:


- During subsequent design, SEPTA will develop the Project design at the crossing of the planned Chester Valley Trail Extension in coordination with Montgomery County at major milestones (30%, 60%, 90% and final plan, specifications and estimates).
- During subsequent design, SEPTA will develop the Project construction plan for the crossing of the planned Chester Valley Trail Extension in timely coordination with Montgomery County.
- During subsequent design, SEPTA will develop a cost reimbursement agreement with Montgomery County to reimburse the County for expenses incurred by the County's engineering consultant or other County consultants deemed necessary by Montgomery County and SEPTA for coordination and services related to: reviewing Project construction plans and specifications; coordinating with SEPTA during Project design and construction phases; and potentially implementing temporary modifications (such as but not limited to: signage, re-routing, restoration, striping) to the planned Chester Valley Trail Extension to accommodate Project construction. All planning and design costs for the Project related to its impact upon the planned Chester Valley Trail Extension, including consultant fees as described above, shall be borne by SEPTA.
- During construction, SEPTA will implement its construction plan in the area of the Chester Valley Trail Extension. SEPTA will coordinate with Montgomery County during Project construction. All costs to construct the Project at the planned Chester Valley Trail Extension crossing will be the responsibility of SEPTA.

Request for Montgomery County Concurrence

To support the Final Environmental Impact Statement and Final Section 4(f) Evaluation, comply with Section 4(f) temporary occupancy exception determination requirements, and to provide a clear record of the outcomes of SEPTA's coordination with Montgomery County regarding the planned Chester Valley Trail Extension, SEPTA requests on FTA's behalf, that Montgomery County reviews the concurrence line at the end of this letter and returns the signed copy digitally to Ryan Judge at rjudge@septa.org. FTA and SEPTA will make your signed copy part of the Section 4(f) record for the Project and your concurrence will enable FTA and SEPTA to complete the FEIS and Final Section 4(f) Evaluation. Your prompt response is appreciated.

If you have any questions or comments, please contact me at rjudge@septa.org.

Sincerely,

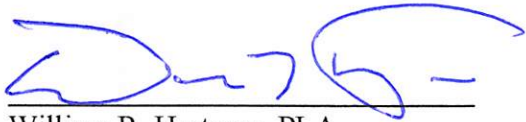


Ryan T. Judge
Manager, Strategic Planning

Attachment

cc: Tim Lidiak (FTA)
Dan Koenig (FTA)
Shauna Haas (FTA)
M. Quinn (AECOM)
L. Roche (AECOM)

Concurrence Line: As the official with jurisdiction over the Chester Valley Trail Extension, I have reviewed the conditions for a constructive use exception as outlined in this letter as well as SEPTA's commitments to minimize impacts of the King of Prussia Rail Extension to the Chester Valley Trail Extension during Project construction. I hereby concur that SEPTA's construction activities for the Preferred Alternative will be so minimal as to not constitute use of the Chester Valley Trail Extension within the meaning of Section 4(f). I understand that concurrence with the FTA's assessment of the impact to the planned Chester Valley Trail Extension will result in FTA making a Section 4(f) temporary occupancy exception determination for the Preferred Alternative.

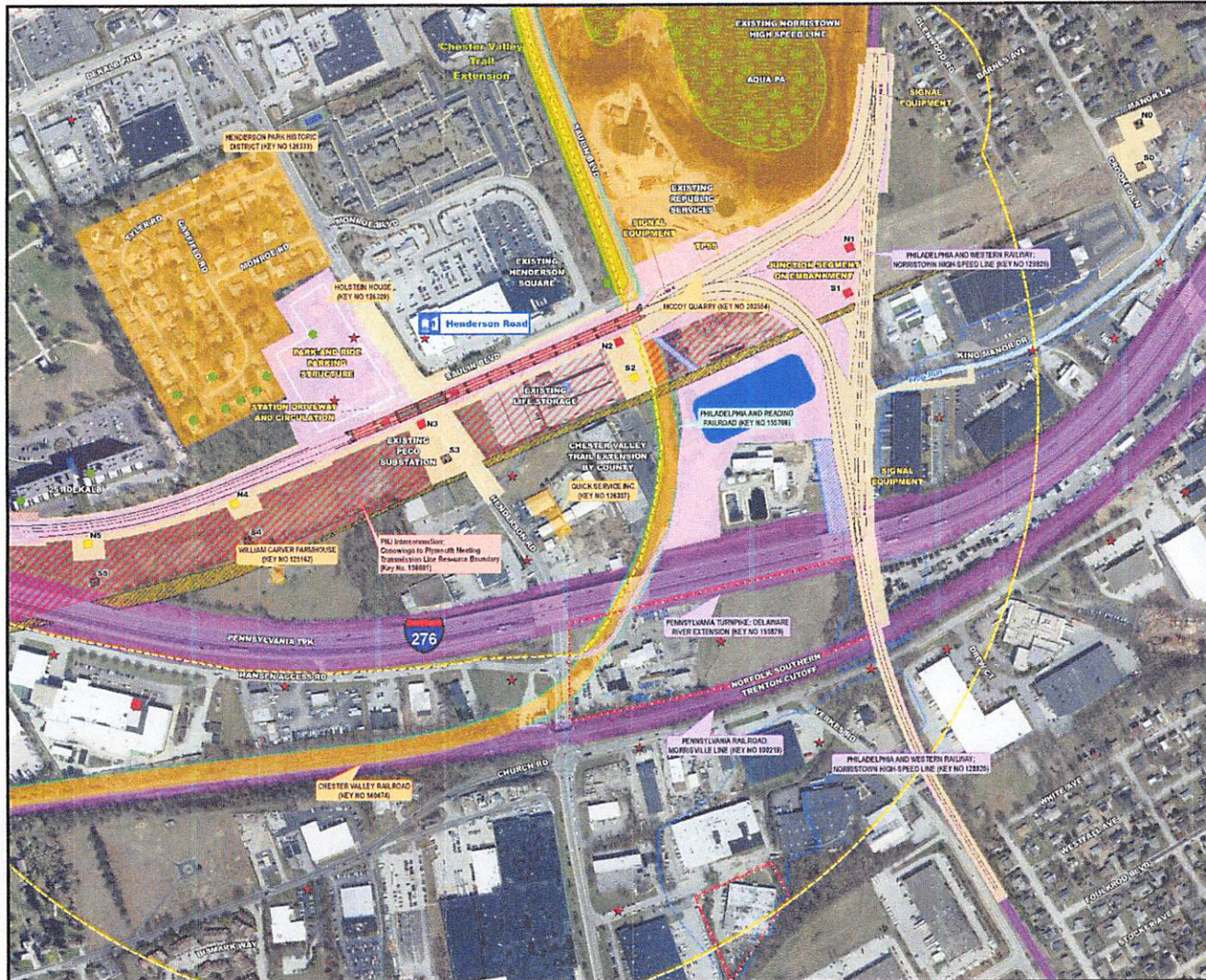



William R. Hartman, PLA
Montgomery County Planning Commission

12.24.2020

Date

Attachment A - Map





King of Prussia
RAIL
Connecting Community with Opportunity

Preferred Alternative: Sheet: 1 of 4
KOP Rail FEIS

Environmental Features	Historic Architectural Resource
Existing / Proposed Chester Valley Trail	Previously Identified
Parks, Recreation & Open Space	Listed/Eligible
King of Prussia Mixed-Use Zoning	Not Eligible
NW Wetlands	Undetermined
NW Riverine	Evaluated & Recommended
FEMA Floodplain	Potentially Eligible

Impact - Noise

Cat 2 - No Impact	Cat 3 - No Impact
Cat 2 - "Moderate"	Cat 3 - "Moderate"

Impact - HazMat ★ Hazmat Site NPL Site TRI Site

Proposed Right-of-Way

Permanent Right-of-Way	Project Study Area
Required Drainage Easement	Temporary Construction Easement
Required Private Access for SEPTA	Underground Structure Support Easement
PECO Tower	Right-of-Way to be Transferred to PECO
PECO Tower - Possibly Replace	PECO Tower - Replace

Proposed Storm Water Management

Above Ground	Proposed Improvement
Above Ground - Existing	PARK AND RIDE PARKING STRUCTURE
Underground	


Proposed Improvements

Aerial Structure	Communication Equipment
Aerial Support Structure	Signal Equipment
Embankment Area	TPSS Location
Pedestrian Overpass	Other
Station	Improvements

Not for Construction, Draft for Discussion.

Date: 12/4/2020

AECOM



0 200 400
Feet

1 inch = 400 feet

Source: 2018 PEMA Imagery, PASDA, PennDOT, HNTB & AECOM