Chapter 20 Section 4(f) Evaluation

20.1 INTRODUCTION

This chapter has been prepared pursuant to the requirements of Section 4(f) of the Department of Transportation (DOT) Act of 1966. Based on this Section 4(f) Evaluation, Federal Transit Administration (FTA) has determined that the proposed Project would result in the use of the Old Main Delaware, Lackawanna and Western (DL&W) Railroad Historic District, which is a Section 4(f) property. This chapter discusses the identification of Section 4(f) properties within the Area of Potential Effects (APE) for the proposed Project, describes the effect of the proposed Project on those properties, and summarizes measures to minimize harm included as part of the proposed Project.

20.2 REGULATORY CONTEXT AND METHODOLOGY

Section 4(f) of the DOT Act of 1966, as amended (23 C.F.R. Part § 774-codified in 49 U.S.C. 303 and generally referred to as "Section 4(f)) prohibits the Secretary of Transportation from approving any program or project that requires the "use" of: (1) any publicly-owned parkland, recreation area, or wildlife/waterfowl refuge of national, state, or local significance; or (2) any land from a historic site of national, state, or local significance (collectively, "Section 4(f) properties"), unless there is no feasible and prudent alternative to the use of such land and such program and the project includes all possible planning to minimize harm to the park, recreation area, wildlife/waterfowl refuge, or historic site. A historic site is considered to be a property that is listed on, or is eligible for listing on, the National Register of Historic Places (NRHP) ("NR-listed" and "NR-eligible"). As set forth in the Section 4(f) regulations, archaeological resources are protected under Section 4(f) only when their importance is derived from their preservation in place.

A project use of a Section 4(f) property occurs when it:

- Permanently incorporates land from the property into a transportation facility;
- Temporarily occupies land in a manner that is adverse in terms of the statute's preservation purpose; or
- Comprises a constructive use of land, which per C.F.R. Part 774.15(a) occurs "when the transportation project does not incorporate land from a Section 4(f) property, but the proximity impacts are so severe that the protected activities, features, or attributes that qualify property for protection under Section 4(f) are substantially impaired."

In some cases, even if there is a use of a Section 4(f) property, FTA may determine that a use is *de minimis*. A *de minimis* impact determination under 23 C.F.R. Part 774.3(b) subsumes the requirement for all possible planning to minimize harm by reducing the impacts on the Section 4(f) property to a *de minimis*

level. As summarized from 49 U.S.C. 303(d)(2) FTA may make a *de minimis* determination on a historic site only if, pursuant to the Section 106 consultation process:

- The transportation program or project will have no adverse effect on the historic site, or there will be no historic properties affected by the transportation program or project;
- FTA's finding has received written concurrence from the applicable State historic preservation officer or tribal historic preservation officer (and from the Advisory Council on Historic Preservation if the Council is participating in the consultation process); and; and
- FTA has developed its finding in consultation with parties consulting as part of the Section 106 consultation process.

With respect to parks, recreation areas, or wildlife or waterfowl refuges, as summarized from 49 U.S.C. 303(d)(3), FTA may make a finding of *de minimis* impact only if:

- After public notice and opportunity for public review and comment, FTA finds that the transportation program or project will not adversely affect the activities, features, and attributes of the park, recreation area, or wildlife or waterfowl refuge eligible for protection under this section; and
- The finding has received concurrence from the officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge.

20.2.1 Feasible and Prudent Avoidance Alternative and Least Overall Harm

A feasible and prudent avoidance alternative would avoid using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. An alternative is not prudent if:

1) It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
2) It results in unacceptable safety or operational problems;
3) After reasonable mitigation, it still causes severe social, economic, or environmental impacts; severe disruption to established communities; severe disproportionate impacts to minority or low-income populations; or severe impacts to environmental resources protected under other Federal statutes;
4) It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
5) It causes other unique problems or unusual factors; or

6) It involves multiple factors of the above, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

If there is no feasible and prudent avoidance alternative, FTA may approve only the alternative that causes the least overall harm in light of Section 4(f)'s preservation purpose. In accordance with C.F.R. Part 774.3 (c)(1), "least overall harm" is determined by balancing the following list of factors:

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;

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 resources not protected by Section 4(f); and

7) Substantial differences in costs among the alternatives.

20.3 PROJECT DESCRIPTION

The proposed Project would include a natural gas-fired generation plant with a net generation of 104 to 140 megawatts (MW) including steam power generation from waste heat, referred to as the Main Facility (Preferred Alternative Project Component A). The Main Facility would be located in the Town of Kearny in Hudson County, New Jersey. It would be electrically connected to the Public Service Electric & Gas Company (PSE&G) system, which currently provides power to NJ TRANSIT and Amtrak facilities in the Project area. Under normal conditions, the microgrid would have the capacity to import from, and export into, the larger commercial grid 24 hours per day, seven days per week (24/7). When the existing commercial power grid is fully available, the microgrid would operate in parallel with it, providing dedicated power for railroad operations to meet electrical demand in the most reliable and cost-effective manner, offsetting commercial power grid supplies. Under a scenario involving a regional or local blackout condition, the microgrid would disconnect from the PSE&G commercial grid and become the primary source of power to support the following services, subject to further design and concept verification:

- Limited commuter rail service on Amtrak's Northeast Corridor between New York Penn Station and County Yard/Jersey Avenue Station in New Brunswick (approximately 32.8 rail miles) via connection to a new Kearny Substation;

- Limited NJ TRANSIT commuter rail service between Hoboken Terminal and Millburn Station on the Morris & Essex Line (approximately 16.3 rail miles), via a power connection to the Mason Substation; and

- Service on NJ TRANSIT's Hudson-Bergen Light Rail (HBLR) between Tonnelle Avenue in North Bergen and 8th Street in Bayonne (approximately 16.6 rail miles), via connections to the individual traction power substations along the HBLR right-of-way.

In addition to providing traction power, the microgrid would be designed to support the following non-traction loads, to the extent technically feasible:

- NJ TRANSIT Hoboken Terminal and Yard through input to Henderson Street Substation;
- The majority of NJ TRANSIT HBLR station loads (approximately 16.6 rail miles), supported through the connections to the traction power substations mentioned above;
- Northeast Corridor signal power, Hudson River tunnel ventilation, pumping, and lighting loads for the sections of operable track from New York Penn Station to County Yard/ Jersey Avenue Station (approximately 32.8 rail miles);
- NJ TRANSIT Main Line's operating segment signal power from the intersection with the Morris & Essex Line to the Upper Hack Lift Bridge (approximately 2.5 rail miles); and
- The NJ TRANSIT Rail and HBLR Regional Operations Centers.

Figure 1-2 in Chapter 1, "Purpose and Need," depicts the rail service network throughout which power would be distributed during a regional or local blackout condition. The service territory was chosen to support an overall service goal of transporting as many customers as possible between key nodes in NJ TRANSIT's core public transit system. The proposed Project would be a resilient system that also facilitates emergency transportation for commuters from work to place of residence. Newark, New Jersey, and Manhattan, New York, represent areas with very high transit dependency for work and non-work trips.

The Build Alternative includes the Main Facility and other power distribution infrastructure needed to support the core service territory—including several substations, various electrical lines, and other elements that extend throughout the Project Area. The Build Alternative is presented in the EIS and Table 20-1 as "Preferred Alternative Project Component A" through "Preferred Alternative Project Component G" (see Figure 2-1 in Chapter 2, "Project Alternatives").

Table 20-1 - Build Alternative Project Components

Project Component	Description
Preferred Alternative Project Component A: Main Facility	Combined-cycle gas turbine plant - 5 natural gas turbines (21MW to 25MW each) o With 2 connected to heat recovery steam generators (HRSGs) - 1 steam turbine (14MW to 18MW) - 2 emergency black start engines (not to exceed 2.5MW)* Four-acre solar panel facility over stormwater retention basin (approximately 0.6MW) Static Frequency Converter yard 230 kilovolt (kV) substation
Preferred Alternative Project Component B: Natural Gas Pipeline Connection	New metering station and connections to existing natural gas pipelines on six-acre parcel
Preferred Alternative Project Component C: Electrical Lines to Mason Substation	0.7-mile electrical line (combination of new monopoles up to 220 feet tall, and underground duct banks); 230 kV at 60 Hz
Preferred Alternative Project Component D: Electrical Lines and New Kearny Substation	1.47-mile electrical line within NJ TRANSIT's Meadowlands Maintenance Complex (MMC) property (new monopoles up to 220 feet tall, and underground duct banks); 138 kV at 25 Hz New Kearny Substation
Preferred Alternative Project Component E: Electrical Lines and New NJ TRANSITGRID East Hoboken Substation	3.0-mile electrical line consisting of: - 0.8 miles within industrial Kearny (combination of new monopoles up to 220 feet tall, and underground duct banks); 27 kV at 60 Hz - 0.2 miles crossing Hackensack River (aerially 50 feet north of Lower Hack Bridge via new poles up to 220 feet, one pole on each side of the river bank; 27 kV at 60 Hz) - 0.7 miles within industrial Jersey City (combination of new monopoles up to 65 feet tall [with exception of one pole for river crossing – see above], and underground duct banks; 27 kV at 60 Hz - 0.8-mile segment within the south tube of Bergen Tunnel; 27 kV at 60 Hz - 0.22 miles from Bergen Tunnel to new NJ TRANSITGRID East Hoboken Substation (combination of new monopoles up to 65 feet tall and underground duct banks); 27 kV at 60 Hz - 0.28 miles from new NJ TRANSITGRID East Hoboken Substation to Henderson Street Substation, (combination of new monopoles up to 65 feet tall, underground duct banks and attachment to existing transportation infrastructure [HBLR]); 13.2 kV at 60 Hz - new NJ TRANSITGRID East Hoboken Substation
Preferred Alternative Project Component F: Connection to HBLR South	HBLR Headquarters Nanogrid: two approximately 2MW natural gas-fired emergency generators and stored energy installed on elevated platform in NJ TRANSIT-owned property

Project Component	Description
Preferred Alternative Project Component G: HBLR Connectivity	14.4-mile electrical line on combination of new monopoles (up to 39 feet high), underground duct banks or attachment to existing infrastructure (HBLR elevated tracks); 13.2 kV at 60 Hz - 6.6 miles from Tonnelle Avenue station in North Bergen to the Harismus Cove station in Jersey City 1.6 miles from HBLR Headquarters to West Side Avenue station in Jersey City - 6.2 miles from Jersey Avenue station to 8th Street station in Bayonne

***Note:** the actual plant output is reduced due to temperature and parasitic loads. Therefore, the total output would be less than the MW output for which each turbine is designed.

20.4 PURPOSE AND NEED

The need for the proposed Project is based on the vulnerability of the commercial electric power grid that serves NJ TRANSIT's and Amtrak's Northeast Corridor commuter rail service. The purpose of the proposed Project is to enhance the resiliency of the electricity supply to the NJ TRANSIT and Amtrak infrastructure that serves key commuter markets in New York and New Jersey to minimize public transportation service disruptions and facilitate emergency transportation during an impending storm or power loss. Power outages are occurring more frequently due to the nature and age of the existing centralized power distribution system and the intensity and frequency of severe weather events or potential man-made disruptions.

Following Superstorm Sandy in 2012, the U.S. Department of Energy (DOE) partnered with the State of New Jersey to examine the use of microgrids to help supply electricity during future extreme weather events. The proposed Project is a result of that partnership and it is designed to meet the objectives of national and state energy goals by contributing to diverse portfolios of new, cleaner, and more resilient energy generation systems.

20.5 SECTION 4(F) PROPERTIES

20.5.1 Historic Architectural Resources

Historic resources identified through the Section 106 process are considered Section 4(f) properties. In accordance with Section 106, a comprehensive Historic Architectural Resources Background Survey (HARBS) and Effects Assessment (EA) Report was prepared to identify all historic architectural resources eligible for, or potentially eligible for, the State or National Register of Historic Places (S/NR-listed or S/NR-eligible) (RGA 2017a). The survey examined 93 historic resources that were previously identified as listed or eligible. In addition, the survey identified 63 resources more than 50 years old and evaluated their potential for historic significance. The New Jersey Historic Preservation Office (NJHPO) Consultation Comments Letter dated April 24, 2018 included new Opinions of Eligibility regarding the resources within the APE. The NJHPO found that the proposed Project would not have an effect on the following historic resources: the Jersey City Water Works Historic District, the Erie Railroad Bergen Archways Historic District, the Hudson and Manhattan Railroad Transit System (PATH) Historic District, the Jersey City Water

Works Pipeline, the Wittpenn Bridge, the PRR Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River, the PRR (PATH) Bridge over Hackensack River, the JFK Boulevard Bridge, the Palisades Avenue Bridge, the Morris Canal, the Holland Tunnel, the L.O. Koven & Brothers Sheet Iron and Plate Steel Works, the North (Hudson) River Tunnels, the Lincoln Tunnel, and the West Shore Railroad Tunnel.

The proposed Project is not expected to permanently incorporate any of the above-listed Section 4(f) properties into a transportation facility or result in the temporary occupancy of Section 4(f) land that is adverse in terms of the statute's preservation purpose. The proposed Project would also not result in proximity impacts so severe that the protected activities, features, or attributes that qualify property for protection under Section 4(f) would be substantially impaired. Therefore, the FTA finds that the proposed Project would not result in the Section 4(f) use of the above-listed resources.

The NJHPO found that the proposed Project would have an effect (but not an adverse effect), on the following historic resources: the PRR New York to Philadelphia Historic District, Substation 4, Substation 41, the PRR New York Bay Branch Historic District, the Essex Generating Station, the Public Service Electric Gas Company (PSE&G), Kearny-Essex-Marion Interconnection Historic District, the People's Gas Light Company/PSE&G Marion Office Historic District, the US Route 1 Extension (Pulaski Skyway) Historic District, the US Routes 1 & 9 Historic District, the New Jersey Midland Railway/New York, Susquehanna and Western Railroad Historic District, the Erie Railroad Main Line Historic District, the Edison Battery Company Property, the PSE&G Kearny Generating Station, St. Peter's Cemetery, the Erie Railroad Bergen Hill Tunnel, the Jersey City High School, the Holbrook Manufacturing Company, the Continental Can Company Complex, the Lackawanna Warehouse and Viaduct, the Grove Street Bridge, the Engine Company #3, Truck #2 Firehouse, the Erie-Lackawanna Terminal, Hoboken Yard/Henderson Street Substation, Belvedere Court, the R. Neumann & Co. Factory Complex, the Hoboken Historic District, the Mechanic's Trust Company, the Bayonne Trust Company, the East 17th Street Apartment Buildings Streetscape, the Maidenform Brassiere Company, the East 19th Street Streetscape, the Mount Carmel Historic District, the YMCA of Bayonne, Public School Number 5 in the City of Bayonne, the Lehigh Valley Railroad Historic District, the PRR New York Bay Branch Historic District, the Hanover National Bank Repository, the Communipaw-Lafayette Historic District, the Ocean Avenue Bridge, the Bergen Avenue Bridge, the Former Candy Factory, the Paulus Hook Historic District, the Van Vorst Park Historic District, the One Exchange Place (Bank Building), the Commercial Trust Company Bank, the Hudson and Manhattan Railroad Powerhouse, the Warehouse Historic District, the Great Atlantic and Pacific Tea Company Warehouse, the Butler Brothers Warehouse, the Pohlmann's Hall, 269-271 Ogden Avenue, 268-272 Ogden Avenue, the Ferguson Brothers Manufacturing Company, the Old Hillside Road Trolley Horseshoe Curve, NJ Route 3 (NJ 495) Highway Approach to Lincoln Tunnel Historic District, NJ Route 495 Viaduct, the Lincoln Tunnel Entrance and Ventilation Buildings, and the King's Bluff Historic District.

The historic properties listed above are located within the architectural APE, as defined in consultation with the NJHPO under Section 106 of the National Historic Preservation Act (NHPA); however, they would not be used by the proposed Project. The proposed Project is not expected to permanently incorporate any of these Section 4(f) properties into a transportation facility or result in the temporary occupancy of Section 4(f) land that is adverse in terms of the statute's preservation purpose. While the context of some of these resources would be somewhat altered by the proposed Project, the protected activities, features,

or attributes of the resources would not be substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the resource are substantially diminished. The proposed Project would not substantially diminish the significance of historic properties listed above that qualifies them for inclusion in the NRHP. Therefore, the proposed Project would not constitute a Section 4(f) use of these properties and no further analysis is necessary.

The NJHPO found that the proposed Project would result in a direct adverse effect as well as a cumulative visual effect on the Old Main DL&W Railroad Historic District and an adverse visual effect on historic resources that contribute to the Historic District. A description of the Old Main DL&W Railroad Historic District and its contributing resources is presented below.

Old Main DL&W Railroad Historic District and its Contributing Resources

The Old Main DL&W Railroad Historic District is eligible for listing in the NRHP under Criterion A for its association with suburbanization, as well as for commuter, passenger, and freight traffic. The construction of the line advanced the development of suburban communities in northern New Jersey by providing accessible transportation into New York City via the ferries at Hoboken. The resource is also eligible for listing in the NRHP under Criterion C for its contributions to the field of engineering. The construction of the line across the challenging terrain of northern New Jersey required the construction of numerous bridges and tunnels. Most notably, the railroad undertook a major rebuilding effort in the early twentieth century that involved a pioneering and comprehensive use of concrete construction technology.

The Historic District extends over 80 miles across New Jersey, from the Hudson River at the east end to the Delaware River at the west end. Approximately 4.5 miles of the Old Main DL&W Railroad Historic District are encompassed within the proposed Project area. Numerous contributing resources have been identified within the Old Main DL&W Railroad Historic District. Contributing resource types include railroad stations, bridges, tunnels, interlocking towers and signal equipment, culverts, catenary and electrical system structures, civil engineering features (cuts, fills, embankments, retaining walls), railway yard facilities, and branch or side tracks. The contributing resources to the Old Main DL&W Railroad Historic District that are within the proposed Project APE for architectural resources are described below.

- **The Old and New Bergen Tunnels** are parallel tunnels that cut through the trap rock of Bergen Hill and each carry two rail lines. The Old Bergen Tunnel was built in 1876 and the New Bergen Tunnel was built in 1908. The old tunnel carries the westbound tracks for the Morris & Essex Line while the new tunnel carries the eastbound tracks. The Old Bergen Tunnel is technologically significant for its association with the development of transportation and commerce in the late nineteenth century, and the New Bergen Tunnel is technologically significant for the innovative use of concrete in response to an increase in railroad freight operations during the early twentieth century. The Old and New Bergen Tunnels were determined eligible for listing in the NRHP under Criteria A and C in the areas of Transportation and Engineering.

- **The West-End Through Truss Bridges** are steel bridges at milepost 1.89 on the Morris & Essex Line, built in 1908 for the DL&W Railroad. The West-End Through Truss Bridges are the only trusses surviving on Morris & Essex Line and are technologically significant as an example of heavy

trusses used in railroad construction. The truss bridges were determined individually eligible for listing in the NRHP under Criteria A and C in the areas of Transportation and Engineering.

- **The Delaware, Lackawanna and Western (DL&W) Railroad Boonton Line Historic District** (a.k.a. NJ TRANSIT Main Line) is eligible for listing in the NRHP under Criteria A and C for its associations with freight and passenger service, and for spurring the growth and development of industries and residences along the alignment. The DL&W Rail Road leased the Morris & Essex Railroad in 1868, then constructed and opened the so-called Boonton Cut-off in 1869-1870 to channel coal and freight traffic off the old Morris & Essex Railroad main line between Boonton and Hoboken. The Boonton Branch was built to the highest engineering standards of the day with gentle grades, long tangents, and generous curves for the efficient movement of freight. Construction and operation of the branch helped to solve problems with freight congestion and geographic impediments on the former Morris & Essex Railroad main line.

- **The West End Interlocking Tower** was built in 1909 and was used to control the junction between the DL&W Railroad Boonton Line and the Morris & Essex Line. At present, the tower is used as office and storage space for rail maintenance and no longer functions as an interlocking tower. The West End Interlocking Tower was determined individually eligible for listing in the NRHP under Criteria A and C in the areas of Transportation, Engineering, and Architecture.

- **The Lower Hack Draw Bridge and Hackensack River Lift Bridges Historic District** is a vertical lift bridge designed and built in 1927 by internationally-renowned engineer John Alexander Low Waddell. The bridge carries three railroad lines across Duffield Avenue in Jersey City and the Hackensack River. Both reinforced concrete and steel comprise the structural components of the bridge. The Lower Hack Draw Bridge is individually eligible for inclusion in the NRHP under Criteria A and C in the areas of Transportation and Engineering. In addition to being a contributing resource of the Old Main DL&W Railroad Historic District, the bridge is also a contributing resource to the Hackensack River Lift Bridges Historic District.

  The Hackensack River Lift Bridges Historic District includes three other individually eligible bridges: Wittpenn Bridge, Pennsylvania Harsimus Branch Bridge, and Pennsylvania Railroad Bridge. All four are post-World War I vertical lift bridges that are eligible under NRHP Criteria A and C in the areas of Transportation and Engineering. The district represents largely unaltered, operable, and increasingly rare examples of historically and technologically significant bridge types. The district's period of significance is 1928 to 1930.

The Effects of the Proposed Project on the Old Main DL&W Railroad Historic District and its Contributing Resources

The proposed Project would result in the following changes to the Old Main DL&W Railroad Historic District and its contributing resources:

- Installation of the electrical line within a precast duct bank at grade between the northernmost track and the north wall of the New Bergen Tunnel (the south tunnel), which is part of the Old and New Bergen Tunnels.

- Placement of the electrical line across the top of the southern West-End Through Truss Bridge.[21]

- Installation of approximately 60 new monopoles within the Old Main DL&W Railroad Historic District as follows:

    - 5 new poles up to 65 feet tall between the Old and New Bergen Tunnels' eastern portals and the new NJ TRANSITGRID East Hoboken Substation.[22]
    - 24 new poles, up to 65 feet tall, between the Old and New Bergen Tunnels' western portals and the Hackensack River.
    - Two monopoles up to 220 feet tall, one on each bank of the Hackensack River, by the Lower Hack Draw Bridge.
    - 29 new poles, up to 220 feet tall, between the Hackensack River and Amtrak's Substation No. 41.

The installation of the proposed duct banks for the electrical line would not directly alter the Old and New Bergen Tunnels and would not degrade important historic design elements of the tunnel. The exact placement and attachment method for the electrical lines to the West-End Through Truss Bridges has not yet been determined. As project plans are finalized, care would be taken to design and install this section of the electrical line in a way that would minimize impacts to the historic fabric of the bridges and would be guided by the *Secretary of the Interior's Standards*.

The proposed five new poles between the Bergen Tunnels' eastern portals and the new NJ TRANSITGRID East Hoboken Substation would be visible but would not adversely affect the visual character of the Old Main DL&W Railroad Historic District or its contributing resources, based on the relatively small number of poles in this section of the corridor. The proposed 24 new 65-foot-tall poles between the western portals of the Old and New Bergen Tunnels and the Hackensack River would exceed the height of the existing catenaries and signal bridges in this section of the corridor. According to NJHPO, this portion of the rail line has maintained a high level of integrity, both in terms of the line itself and its setting. The new 65-foot-tall poles would visually affect the Old Main DL&W Railroad Historic District and its contributing resources, including: the Bergen Tunnels' western portals (part of the Old and New Bergen Tunnels), the West-End Through Truss Bridges, the West End Interlocking Tower, the DL&W Railroad Boonton Line Historic District, and the Lower Hack Draw Bridge. The corridor and the Lower Hack Draw Bridge would also be affected by the proposed monopoles on each bank of the Hackensack River, which would be up to 220 feet tall. NJHPO found that the pole immediately west of the Lower Hack Draw Bridge would have

[21] Conceptual plans at 10 percent design that were shared with NJHPO contemplated the electrical line in a conduit across the top of the West-End Through Truss Bridges. The 10 percent design also considered the possibility of attaching the conduit to the top member of one of the bridges. The design has since advanced and the attachment of the conduit to the West-End Through Truss Bridges in no longer proposed. Instead, this section of the electrical line would feature an aerial lashed cable.

[22] As the engineering design advances, the number of poles that would be within the boundaries of the Historic District may be further refined and reduced.

an adverse effect on the bridge and the two historic districts to which the bridge contributes. The 29 poles to the west of the Lower Hack Draw Bridge that would be up to 220 feet tall would visually affect the Old Main DL&W Railroad Historic District. This portion of the District has maintained a high level of integrity within the corridor right-of-way, however its setting has been compromised due to the construction of multiple surrounding poles ranging in height from 105 to 300 feet.

Section 4(f) Use of the Old Main DL&W Railroad Historic District and its Contributing Resources

Overall, none of the proposed Project elements alone would result in conditions that would constitute a Section 4(f) use of the Old Main DL&W Railroad Historic District or its contributing resources. Individual poles would not result in a substantial impairment of historic features that make the Old Main DL&W Railroad Historic District, its contributing resources, or the Hackensack River Lift Bridges Historic District eligible for inclusion in the NRHP.

Taken cumulatively, the proposed Project elements would also not result in a Section 4(f) use of the individually-eligible resources contributing to the Old Main DL&W District or in a Section 4(f) use of the Hackensack River Lift Bridges Historic District. While the individually-eligible historic resources contributing to the Old Main DL&W Railroad Historic District would be visually affected, the number of poles affecting any one resource would be small. The proposed Project would not result in a substantial impairment of the features that make the resources contributing to the Old Main DL&W Railroad Historic District individually eligible for listing in the NRHP. Therefore, the proposed Project would not result in a use of Section 4(f) properties that are individually-eligible historic resources that contribute to the Old Main DL&W Railroad Historic District.

However, the cumulative effect from all of the proposed Project elements on the resources contributing to the Old Main DL&W Railroad Historic District and the overall effect of the proposed Project on the integrity and setting of the Old Main DL&W Railroad Historic District would result in a Section 4(f) use of the Historic District. Cumulatively, the proposed Project elements would diminish the integrity and alter the setting of portions of the Historic District where the integrity has been preserved. Therefore, the proposed Project includes an evaluation of alternatives that would avoid the Section 4(f) use and all possible planning to minimize harm.

20.5.2 Archaeological Resources

Section 4(f) regulations apply to archaeological sites (including those discovered during construction) that are on or eligible for inclusion on the National Register and that warrant preservation in place. A Phase IA Archaeological Survey was prepared for the proposed Project and is summarized in Chapter 9, "Historic Resources." The archaeological survey found that the APE for the proposed Project has applied low to high sensitivity for prehistoric archaeological resources and moderate sensitivity for historic archaeological resources for specific project components. "Supplemental Information for the Phase IA Archaeological Survey (Phase IA)" was also prepared and submitted to the NJHPO.

Areas of high prehistoric archaeological sensitivity comprise locations where intact buried land surfaces were identified in Project Components A, C, D and E. Areas where extensive prior ground disturbance has

occurred have low prehistoric archaeological sensitivity. Areas of moderate to high historic archaeological sensitivity comprise locations in Project Components A, C, D, E, F and G proximate to previously identified archaeological sites and listed or eligible historic properties and historic districts, including the Jersey City Water Works Pipeline, the Jersey City Water Works Historic District, the Covert/Larch Historic District, the New York, Susquehanna, and Western Railroad Engine Repair Site, and St. Peter's Cemetery. Areas of moderate to high historic archaeological sensitivity comprise locations in Project Component G proximate to the Morris Canal, identified historic archaeological sites, and locations where intact historic land surfaces have been identified. The areas of archaeological sensitivity are presented on Figures 9-3 through 9-8 in Chapter 9, "Historic Resources," and in Appendix C.

As described in Chapter 9, "Historic Resources," studies to identify the potential for significant historic resources within the project area included a Phase IA Archaeological Survey and historic architectural site surveys. Based on the Phase IA Archaeological Survey, archaeological resources, if present, would most likely be important for the information they might yield and not for preservation in place. Therefore, these potential archaeological resources are not considered Section 4(f) properties. If, however, based on further study and consultation with NJHPO, FTA and NJ TRANSIT determine that any archaeological resources present within the project site derive their value from preservation in place, NJ TRANSIT will supplement this Section 4(f) Evaluation. The NJHPO Consultation Comments Letter, dated April 24, 2018 (see Appendix C) stated that based on other recent projects, archaeological monitoring of mechanically excavated monopoles is not effective in recovering useful archaeological data. Therefore, NJHPO recommended only archaeological monitoring for the installation of utilities and duct banks within areas of archeological sensitivity identified in the Phase IA report and supplemental information in Appendix D. The NJHPO Consultation Comments Letter also noted that the New Jersey Junction Railroad-to-Newark Avenue Iron Viaduct (Substructure Only) is located within Project Component F, Section I (as noted in the Supplemental Information provided for the Phase 1A Survey) and is eligible for inclusion in the State and National Register. NJHPO would require archaeological monitoring for any utility and/or duct banks proposed within this eligible resource.

20.5.3 Wildlife or Waterfowl Refuge Areas

There are no wildlife or waterfowl refuge areas of national, state, or local significance within the proposed Project study area and no wildlife or waterfowl refuge areas would be affected by the proposed Project. Therefore, the proposed Project would not result in the Section 4(f) use of any such resources.

20.5.4 Publicly-Owned Parkland and Recreational Areas

The publicly-owned parks and recreational resources within the proposed Project study area are listed below, by park location.

- The Township of Lyndhurst
    - Richard W. DeKorte Park
- Town of Secaucus
    - Laurel Hill Park

- City of Jersey City
    - Lincoln Park and Lincoln Park West
    - Terrace Avenue Park and Edward Crincoli Park
    - Leonard Gordon Park
    - Pershing Field Park
    - LaPointe Park
    - Boyd McGuiness Park
    - Liberty State Park
    - Reservoir No. 3
    - Newport Green Park
    - J. Owen Grundy Park
    - General Nathanael Greene Park
    - Morris Canal Park
    - Berry Lane Park
    - Bayside Park
- The Township of Weehawken
    - Old Glory Park
    - Hamilton Park
    - Weehawken Dueling Grounds
    - Weehawken Waterfront Park and Recreation Center
    - 19th Street Basketball Courts
- City of Hoboken
    - Sixteen Hundred Park
    - Riverview Park
    - Mama Johnson Park
    - Gateway Park
- City of Union City
    - Firefighters Memorial Park
    - Washington Park
- City of Bayonne
    - Russell Golding Park
    - Sister Mariam Theresa Park
    - 11th Street Park
    - Edward F. Clark Park

See Chapter 4, "Community Facilities," for a description of each of these parks. Additionally, there are two planned residential developments, as described in Chapter 4, "Community Facilities," in Jersey City near the proposed electrical line routes that will include publicly-accessible open space. The former Van Leer Chocolate Factory residential condominium complex will include a 1.5-acre public park and a two-acre public park will be developed along Coles Street in a larger (5.5 acre) mixed-use development.

There are no parklands or publicly-accessible open spaces within the construction footprint of the proposed Project. The proposed Project would not require permanent or temporary acquisition of any publicly-owned parks and would not directly or indirectly result in significant adverse impacts to any of these parks. In addition, the proposed Project would not result in proximity impacts so severe that the activities, features, or attributes of these recreational resources would be substantially impaired. Therefore, the proposed Project would not constitute a Section 4(f) use of these properties and no further analysis is necessary.

20.6 ALTERNATIVES TO AVOID THE USE OF SECTION 4(F) PROPERTIES

As discussed in Section 20.5.1, the Build Alternative would result in the Section 4(f) use of the Old Main DL&W Railroad Historic District. Therefore, an avoidance alternative analysis has been prepared, in accordance with 23 C.F.R. § 774.17 & 774.3(c) (2008). An "avoidance alternative" is an alternative that avoids use of all Section 4(f) properties. FTA and NJ TRANSIT identified four alternatives that would avoid the use of the Old Main DL&W Railroad Historic District—the No Action Alternative, the Underground Alternative, the Existing Catenary Poles Alternative, and the Relocated Monopoles Alternative.

20.6.1 No Action Alternative

Under the No Action Alternative, the microgrid would not be constructed and NJ TRANSIT and Amtrak would continue to be served by the existing commercial grid. No element of the proposed Project would be implemented, and no monopoles would be installed. The context of the Old Main DL&W Railroad Historic District and its contributing resources would remain the same. Therefore, the No Action Alternative would avoid the Section 4(f) use of the Old Main DL&W Railroad Historic District. However, the No Action Alternative would not enhance the resiliency of the electricity supply to the NJ TRANSIT and Amtrak infrastructure, leaving critical public transportation and 143,000 daily commuters who depend on it vulnerable to service disruptions due to power outages during more frequent severe weather or potential man-made events. Although the No Action Alternative is feasible and would avoid the use of Section 4(f) properties, it would not meet the stated purpose and need of the proposed Project and would therefore not be prudent.

20.6.2 Underground Alternative for Avoidance to Section 4(f) Properties

With the Underground Alternative, no monopoles would be installed, and all electrical lines would be installed underground from the Bergen Tunnels' western portals to Amtrak's Substation No. 41 (see Figure 20-1). Installing the electrical lines entirely underground would eliminate the need for the above-ground monopoles. The lines would be physically located within the Old Main DL&W Railroad Historic District but would not be visible. The Underground Alternative would have a limited effect on the Old Main DL&W Railroad Historic District, and no effect on the Lower Hack Drawbridge and the Hackensack River Lift Bridges Historic District. Therefore, while the Underground Alternative would be constructed within the Old Main DL&W Railroad Historic District, it would not comprise a Section 4(f) use. The Underground Alternative would meet the purpose and need of the proposed Project, however, it presents several major engineering, geotechnical, and environmental challenges, as described below.

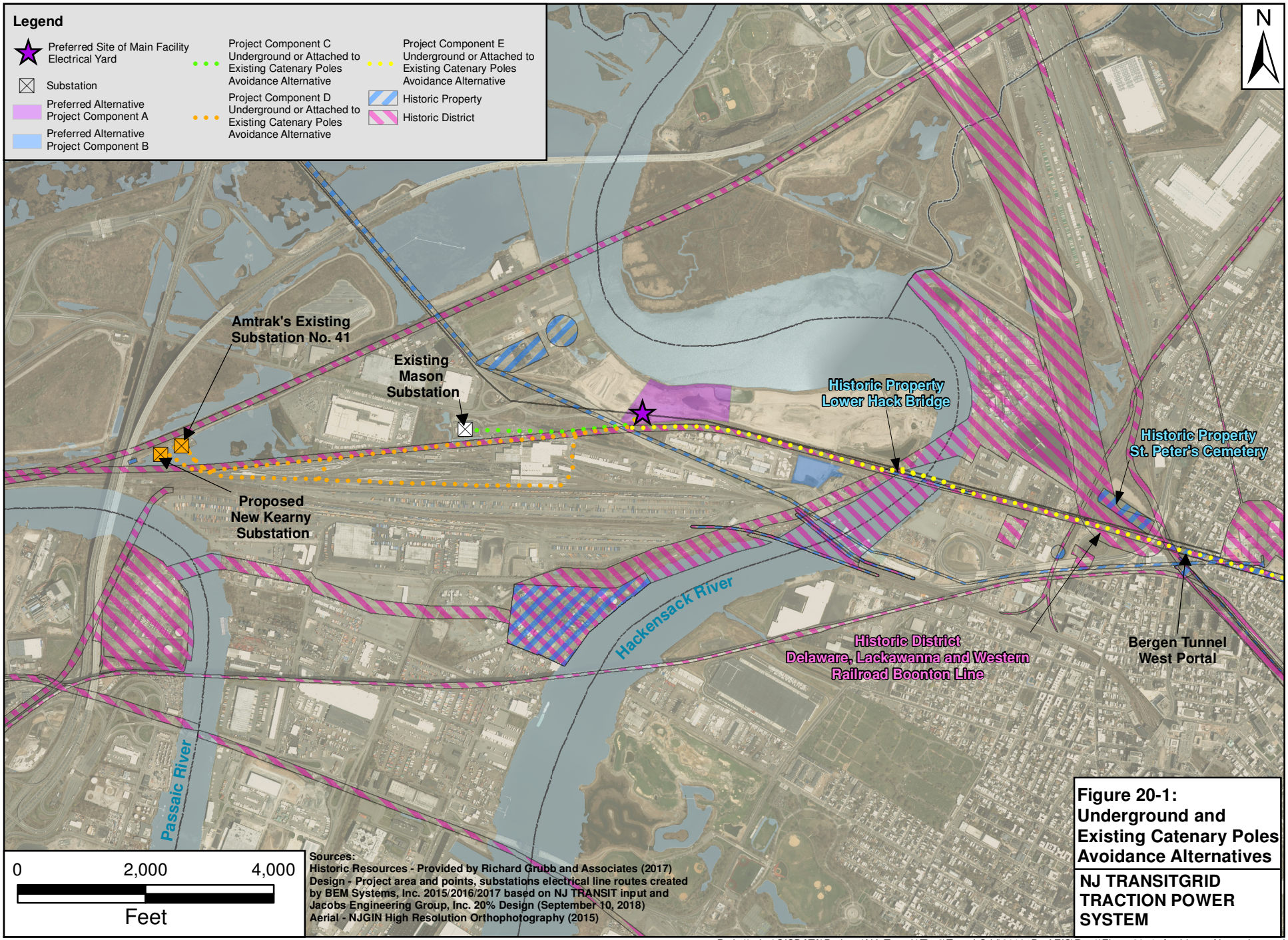

Figure 20-1: Underground and Existing Catenary Poles Avoidance Alternatives

NJ TRANSITGRID TRACTION POWER SYSTEM

Path: \\atlas\GISDATA\Projects\NJ_Transit\Tier3\TransitGrid\2019_DraftEIS\Rev0\Figure20_1_AvoidanceAlternative.mxd

Safety & Stability Concerns

During early development of the Meadowlands, in order to stabilize the swampy lands, fill material (also referred to as "historic fill") was used to raise the elevation for construction of railroads, roadways and buildings. This fill material consisted of various materials such as, but not limited to, construction debris, dredge spoils, incinerator residue, demolition debris, fly ash, or non-hazardous solid waste. The Underground Alternative would require extensive trenching within the rail right-of-way to install the electrical lines. This trenching would have the potential to disturb the geological equilibrium of the existing track embankment and affect the short- and long-term stability of the railroad. The existing embankment is not composed of uniform fill material; rather, it includes boulders and cobbles that have settled over the years and stabilized. Excavating within or near the embankment causes engineering and geotechnical concerns, as such activities can cause destabilization. A standard requirement of NJ TRANSIT is to not allow work that has the potential to disturb the embankment due to the potential safety risks. Any work in close proximity to any embankment requires ongoing survey to confirm there is no displacement of the embankment which in turn would cause impact to rail alignments, resulting in possible derailment of trains. Track alignment is extremely sensitive to these types of displacements.

To avoid the potential for destabilizing the existing rail embankment, the Underground Alternative could alternatively be constructed at a farther distance from the embankment, which would, require extensive trenching outside of the rail right-of-way. This would result in substantial property acquisition and severe impacts to environmental resources protected under other Federal statutes along with socioeconomic and other associated impacts. This strategy is also unacceptable and would not be prudent.

Major Utility Conflicts

The proposed Project area contains an extraordinary number of existing underground utilities—including stormwater, sanitary sewer, city water, fiber optics and telecommunications lines, electric utility distribution lines, high pressure natural gas lines, as well as rail signal power and fiber optic control lines. The Underground Alternative would result in insurmountable utility conflicts due to the quantity of lines and conflicts that must be avoided or utilities that would require relocation, which would further expand the area of impact. Recent test pits have found that as-built documentations of area utilities are not accurate; obtaining reliable information would require an extensive and highly disruptive subsurface investigation of area utilities just to review options for underground routing in this extremely congested area. The Underground Alternative would require extensive trenching near some of the existing high-pressure gas and high voltage electric lines. Given the uncertainty regarding their precise location, such trenching would pose an unacceptable safety risk.

Conflict with Transportation Foundations

An additional challenge with the Underground Alternative stems from the transportation infrastructure foundations that are along the right-of-way, where the electric line would be installed. Major foundations include the Route 1 access ramp and the JFK Boulevard overpass. In addition, the tracks are elevated in some parts of the corridor and cross over public roadways, including Duffield Avenue, James Avenue, and Webster Avenue. To avoid the ramp and overpass foundations, the Underground Alternative electrical

line could not be installed in a straight linear trench but would instead need to meander underground to avoid the major transportation structure foundations. A meandering underground trench would be an unusual design for an electrical line and would result in a need for frequent underground manholes, again expanding the area of impact.

Unfavorable Geotechnical Conditions

Geotechnical conditions for trenching are not favorable along portions of the corridor due to various types of fill material used during construction of the railroad in the 1840s. The materials used to construct the embankment were mainly materials excavated for construction and construction debris from development in the surrounding areas. As the materials are varied in their make-up, settlement has occurred over the past 150-plus years at varying rates. Furthermore, extensive trenching near the embankments could result in encountering historic fill or other common railroad contaminants.

Construction Cost of an Extraordinary Magnitude

The Underground Alternative would substantially prolong the duration of construction and the associated environmental effects and result in costs of at least 10 times that of the Build Alternative.

Conclusion Regarding Feasibility and Prudence

Given the engineering, safety, and geotechnical concerns described above, the Underground Alternative cannot be built as a matter of sound engineering judgment; and is therefore not feasible. Furthermore, given the extensive property acquisition, environmental, socioeconomic, and cost impacts, the Underground Alternative would not be prudent. Therefore, FTA has determined that the Underground Alternative is not a feasible and prudent avoidance alternative.

20.6.3 Existing Catenary Poles Alternative for Avoidance to Section 4(f) Properties

With the Existing Catenary Poles Alternative, no new monopoles would be installed, and all electrical lines would be installed on existing catenary structures from the Bergen Tunnels' western portals to Amtrak's Substation No. 41 (see Figure 20-1). Installing the electrical lines entirely along existing catenary structures would eliminate the need for the new, tall above-ground monopoles. The electrical lines would be physically located within the Old Main DL&W Railroad Historic District but would be visually consistent with the existing infrastructure. The Existing Catenary Poles Alternative would have a limited effect on the Old Main DL&W Railroad Historic District and would not constitute a use of Section 4(f) properties. While the Existing Catenary Poles Alternative would meet the purpose and need of the proposed Project, it presents several major engineering challenges—specifically, structural concerns and clearance concerns.

The existing catenary poles were designed and constructed to bear the loads of the existing catenary wires and have specific weight ratings. The additional weight of the new electrical lines could not be accommodated by the existing aging structures. Furthermore, the catenary poles have limited space on their cross-arms; hanging multiple lines on the same cross-arm would place unacceptable stress on the arm attachment. From a structural engineering perspective, placing the new electrical lines on the existing catenary poles is not feasible. In addition to structural infeasibility, clearance requirements cannot be

met. A continuance distance is needed between multiple high voltage cables to prevent electrical arcing, and cables are hung with specified distances between rails between the rails and the train pantograph to avoid grounding and arcing.

Given the serious structural and electrical concerns, the Existing Catenary Poles Alternative would result in unacceptable safety and operational problems and cannot be built as a matter of sound engineering judgment. Therefore, FTA has determined that the Existing Catenary Poles Alternative is not a feasible and prudent avoidance alternative.

20.6.4 Relocated Monopoles Alternative for Avoidance to Section 4(f) Properties

With the Relocated Monopoles Alternative, the monopoles would be installed outside the Morris & Essex Line right-of-way for the segment extending from the Bergen Tunnels' western portals to Amtrak's Substation 41 (see Figure 20-2). The monopoles would be located far enough away from the Old Main DL&W Railroad Historic District to avoid direct adverse effects to the District. However, this alternative presents multiple concerns.

First, the Relocated Monopoles Alternative would be constructed outside the rail right-of-way, resulting in extraordinary property acquisition and severe socioeconomic and land use impacts associated with such acquisition. This would contradict the proposed Project's goals to minimize property acquisition.

Second, the Relocated Monopoles Alternative would result in substantial impacts to environmental resources protected under Federal statutes, including wetlands and natural areas adjacent to the proposed Project area. East of the Hackensack River, the monopoles would need to be relocated to the north or south of the Old Main DL&W Railroad Historic District, likely impacting either the residential neighborhood to the south (resulting a potential environmental justice impact) or within St. Peter's Cemetery (resulting in a potential archaeological impact and Section 4(f) use).

Third, the Relocated Monopoles Alternative would still have the potential to result in a cumulative adverse visual impact to the Old Main DL&W Railroad Historic District. Monopoles with aerial wire connections ranging from 65 feet to 220 feet high would still be constructed under this avoidance alternative.

While the Relocated Monopoles Alternative would be feasible from an engineering perspective, it would not be prudent. After reasonable mitigation, this alternative would still cause severe social, economic, and environmental impacts; potentially severe disruption to established communities and disproportionate impacts to minority or low-income populations; and severe impacts to environmental resources protected under other Federal statutes.

20.6.5 Conclusion Regarding Avoidance Alternatives

As discussed above, the No Action Alternative, the Underground Alternative, the Existing Catenary Poles Alternative, and the Relocated Monopoles Alternative would all avoid the Section 4(f) use of the Old Main DL&W Railroad Historic District, but none would be both feasible and prudent.

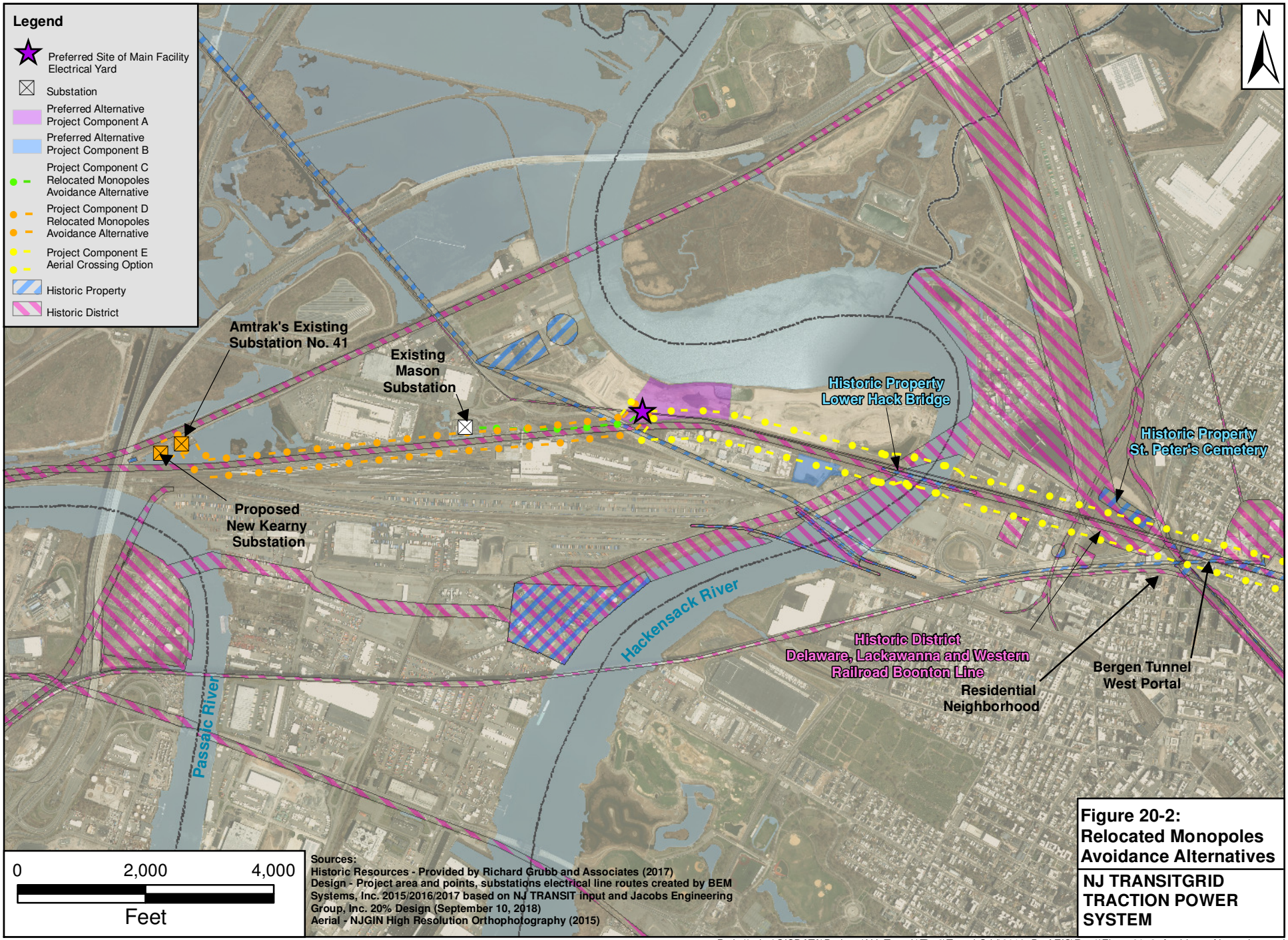

Figure 20-2: Relocated Monopoles Avoidance Alternatives

NJ TRANSITGRID TRACTION POWER SYSTEM

Path: \\atlas\GISDATA\Projects\NJ_Transit\Tier3\TransitGrid\2019_DraftEIS\Rev0\Figure20_2_AvoidanceAlternative.mxd

The Build Alternative is the only feasible and prudent alternative and a least overall harm evaluation is therefore not required. The FTA and NJ TRANSIT will continue to work in partnership with the NJHPO and the Consulting Parties to develop measures to avoid, minimize and mitigate the effect of the proposed Project on historic resources, as discussed in Chapter 9, "Historic Resources." These measures are outlined below and included in the draft Programmatic Agreement (PA).

20.7 MEASURES TO MINIMIZE HARM

As required by Section 106 of NHPA, FTA and NJ TRANSIT are participating in an ongoing consultation process with the NJHPO and Consulting Parties regarding the potential effects on historic resources. Through consultation, FTA and NJ TRANSIT have developed measures to minimize or mitigate the adverse effect on the properties protected under Section 4(f). The mitigation measures are set forth in the draft PA, to be executed by NJHPO, FTA, and NJ TRANSIT. The draft PA lists the historic resources that may be affected by the project and describes the measures to be implemented during the project's design and construction, to avoid, minimize, or mitigate adverse effects of the project on historic resources.

Mitigation measures under consideration for historic aboveground resources include Historic American Engineering Record (HAER)-like recordation and a program of historic interpretive signs or kiosk of history display at a location to be agreed upon by NJ TRANSIT and the NJHPO. The display will comprehensively address the impact of railroads and railroading on the Meadowlands and the bridge crossings of the Hackensack River (and possibly the Passaic River). Direct impacts to historic resources would be avoided through careful design and placement of monopoles, duct banks, and other project elements. The design would be sensitive to the historic character of the Old Main DL&W Railroad Historic District and other resources. To minimize impacts to the historic fabric of the New Bergen Tunnel and the West Shore Railroad Tunnel, the electrical line installation will be designed in a careful and context-sensitive manner. For archaeological resources, monitoring during construction in certain areas sensitive for archaeological resources will be implemented, as recommended by NJHPO.

Currently, Preferred Alternative Project Component D is for the electrical line to depart from the Morris & Essex Line east of the Mason Substation and travel south around the MMC buildings and west along the MMC access rail toward Cedar Creek Marsh South. NJHPO has identified this route as their preferred option as it would result in a lesser impact to the Old Main DL&W Railroad Historic District. However, neither the preferred alternative or the optional route along the Morris & Essex right-of-way has been confirmed for construction. The required mitigation measures in the draft PA would take place for either of the route options. Although the Project has been thoroughly examined for impacts to potential historic and archeological resources, for unanticipated historic and prehistoric archeological resources encountered, the draft PA directs that the resources be treated in compliance with 36 CFR § Part 800.11 and CFR § Part 800.13. The implementation of these mitigation measures and context-sensitive design would constitute all possible planning to avoid, mitigate, or minimize harm from the proposed Project to the attributes and features of Old Main DL&W Railroad Historic District and its contributing resources that qualify these properties for protection under Section 4(f).

20.8 COORDINATION

The proposed Project has included extensive public and community outreach efforts. FTA and NJ TRANSIT have consulted with federal, state, and local agencies during the preparation of the environmental analyses. Agency coordination has occurred throughout the NEPA process and would continue during the design and construction phases of the proposed Project. A Technical Advisory Committee (TAC) was formed to facilitate effective and timely decision-making and an efficient environmental review process. The TAC includes project team members and Cooperating and Participating Agencies. In addition, a project website is being maintained to provide information on the project and upcoming milestones and meetings. The website is accessible through NJ TRANSIT's resilience website (http://njtransitresilienceprogram.com/).

A *Draft Scoping Document* was made available for public review. A Public Scoping Meeting was held on February 3, 2016 at St. Peter's University in Jersey City, NJ. Availability of the scoping document and notice of the meeting were advertised in the Federal Register on January 7, 2016, and in English- and Spanish-language newspapers, and notices were posted at 11 public libraries and 17 Section 8 housing complexes. In addition, e-blast notifications were sent to stakeholders and web subscribers.

Several stakeholders expressed written support for the proposed Project. One stakeholder, the Town of Kearny, opposes the location of the proposed Project in Kearny, NJ. The Kearny Town Council adopted Resolution 2016-68 on January 26, 2016 to formally oppose the location of the Main Facility within Kearny city limits. The Resolution (see Appendix H, "Public Involvement") identified concerns related to adverse environmental, economic and social impacts as the basis for the opposition. A *Final Scoping Document*, which summarizes the comments received during public scoping and responses to those comments, was posted to the Project web page in May 2016 (http://njtransitresilienceprogram.com/). Notice of its availability was widely distributed.

FTA and NJ TRANSIT have consulted with the NJHPO and Consulting Parties pursuant to Section 106 consultation requirements. FTA and NJ TRANSIT consulted with the NJHPO on the definition of the APE as well as the identification of consulting and interested parties. Agencies and individuals with an identified interest in history or historic preservation were contacted as part of this work. Information was requested regarding opinions as to the significance of properties within the APE, project compatibility/ incompatibility with existing historic resources, project effect(s) on eligible resources, and other thoughts and concerns relevant to the review process for the project. The NJHPO concurred with the list of Consulting Parties for the project, which includes the Hoboken Historic Preservation Commission, Jersey City Historic Preservation Commission, and the Town of Kearny. The Bayonne Historic Preservation Commission, the Mayors of Union City and North Bergen, and the Weehawken Historical Commission were invited as additional consulting parties. The Union City Museum of History was invited as an additional interested party. As part of the Section 106 consultation process, FTA contacted the following tribes/offices: the Delaware Tribe Historic Preservation Office; Tribal Historic Preservation Officer, Delaware Nation; Tribal Historic Preservation Officer, Eastern Shawnee Tribe of Oklahoma; Tribal Historic Preservation Officer, Shawnee Tribe of Oklahoma.

On October 19, 2016, RGA received a response from James P. Bruno, Esq., attorney for the Town of Kearny, stating that Kearny would like to be a consulting party for the purposes of Section 106 review and that Mr. Bruno would act as the designated representative for the Town. On November 4, 2016, FTA received a response from Susan Bachor, Historic Preservation Representative for the Delaware Tribe, stating that the Tribe wishes to enter consultation, as the APE is within an area of high probability for buried historic resources of significance to the Tribe. No other responses have been received to date.

Comments from consulting parties were provided to NJ TRANSIT and FTA for consideration. Consultation comments provided by the NJHPO on April 24, 2018 were forwarded to consulting parties. Consultation with the NJHPO involved submission of the HARBS/EA as well as the Phase IA Archaeological Survey on June 16, 2017; both documents included identification of historic properties, effects assessments, and measures to minimize harm to historic properties. Supplemental information to the HARBS/EA and Phase 1A were provided to the NJHPO on January 26, 2018. FTA and NJ TRANSIT have held multiple coordination meetings with NJHPO.

Through the Section 106 consultation process, the NJHPO determined that the proposed Project would result in an adverse effect to the Lower Hack Draw Bridge and Hackensack River Lift Bridges Historic District, and to the Old Main DL&W Railroad Historic District. Measures to avoid, minimize, and mitigate harm to these resources are summarized above and included in the stipulations of the draft PA, and would be implemented in the design and construction of the proposed Project. FTA considered the views of all Consulting Parties throughout the Section 106 process. FTA and NJ TRANSIT will continue to consult with the NJHPO to execute the PA and will implement measures that reflect all possible planning to minimize harm from the use of the Old Main DL&W Railroad Historic District, as a Section 4(f) property.