

Chapter 6A: Land Use, Zoning, and Public Policy

6A.1 INTRODUCTION

This chapter of the Environmental Impact Statement (EIS) presents the analysis the Federal Railroad Administration (FRA) and the New Jersey Transit Corporation (NJ TRANSIT) conducted of the potential effects of the No Action and Preferred Alternatives on land use, zoning, and adopted public planning and policy documents. “Land use” refers to the activity that occurs on land and within the structures that occupy it—for example, residential; commercial, industrial, institutional and community facilities, transportation-related, parks and recreational uses, and vacant land. Zoning is the legal method by which municipalities define what land uses are allowed on a given parcel of land and the physical restrictions, such as bulk, height, or setbacks, that have been placed on development. The analysis considers the uses and development trends in the area that may be affected by the Project, and determines whether the Project is compatible with those conditions or may affect them. The analysis also considers the Project’s consistency with, and effect on, the area’s zoning and other applicable public policies. Direct effects on study area land uses, zoning, or public policy may constitute an adverse impact if the change would negatively affect community facilities or community character, or if the Project would generate land use or zoning designation that would be incompatible with existing or surrounding uses or development patterns. The Port Authority of New York and New Jersey (PANYNJ), in its role as Project Sponsor, has accepted and relied on the evaluations and conclusions of this chapter.

This chapter reflects the following changes made since the Draft Environmental Impact Statement (DEIS) for the Hudson Tunnel Project:

- The chapter incorporates design modifications related to the permanent features of the Project (e.g., modifications to surface tracks and tunnel alignment) and changes to construction methods and staging.
- The chapter is updated to describe current conditions in the affected environment and any related updates to the analysis of potential impacts.
- The discussion related to Hudson River Park is expanded and clarified in response to comments from the Hudson River Park Trust (HRPT).

This chapter contains the following sections:

- 6A.1 Introduction
- 6A.2 Analysis Methodology
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 - 6A.2.2 Analysis Techniques
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 - 6A.8.1 General Construction Practices
 - 6A.8.2 New Jersey
 - 6A.8.3 New York

6A.2 ANALYSIS METHODOLOGY

During development of this EIS, FRA and NJ TRANSIT developed methodologies for evaluating the potential effects of the Hudson Tunnel Project in coordination with the Project's Cooperating and Participating Agencies (i.e., agencies with a permitting or review role for the Project). The methodologies used for analysis of land use, zoning, and public policy are summarized in this chapter.

6A.2.1 REGULATORY CONTEXT

FRA's *Procedures for Considering Environmental Impacts*¹ call for environmental reviews to consider a proposed project's potential to affect existing and planned land uses, land use controls, and comprehensive regional planning. In addition, the Council on Environmental Quality's (CEQ) National Environmental Policy Act (NEPA) regulations state that EISs shall discuss possible conflicts and inconsistencies with Federal, regional, state, and local land use plans, policies, and controls. New Jersey, New York State, and New York City environmental regulations also call for consideration of a project's effects on land use, when environmental reviews are required. In addition, local zoning regulations typically require compliance with designated standards related to land use.

Following completion of the DEIS, the PANYNJ became the Project Sponsor for the Hudson Tunnel Project (see Chapter 1, "Purpose and Need," Section 1.1.2, for more information). Consistent with the roles and responsibilities defined in Section 1.1.1, as the current Project Sponsor, the PANYNJ will comply with mitigation measures and commitments identified in the Record of Decision (ROD).

In addition to zoning, as set forth in the New York City Charter, some actions in New York City are subject to the Uniform Land Use Review Procedure (ULURP). The ULURP process applies to the following actions by New York City agencies: changes to the city map; mapping of subdivisions or platting of land into streets, avenues or public places; designation or change of zoning districts; special permits within the Zoning Resolution requiring approval of the City Planning Commission; site selection for capital projects; revocable consents, requests for proposals and other solicitations or franchises, and major concessions; improvement in real property, the costs of which are payable other than by the City of New York, housing and urban renewal plans and project pursuant to city, state, and federal laws; sanitary or waterfront landfills; disposition of city-

¹ 64 Federal Register 28545, May 26, 1999, as updated in 78 FR 2713, January 14, 2013.

owned property; and acquisition of real property by the City of New York. Projects subject to ULURP undergo a required public review process with specific reviews by the affected Community Board(s), borough president, City Planning Commission, and City Council before they can be approved. The Preferred Alternative does not include any actions that are subject to New York City's ULURP process.

6A.2.2 ANALYSIS TECHNIQUES

This analysis begins with descriptions of the existing environment in the study area, including land uses, zoning, and public policy within the study areas to describe the Project's setting. The analysis identifies land uses in the study areas and identifies existing zoning and public policy documents (e.g., local and regional comprehensive or master plans) that indicate community visions for the study areas. Data sources included available planning documents, field visits conducted by the Project team to the Project study area, and Geographic Information Systems (GIS) mapping layers, including data from the New Jersey Office of GIS, New Jersey Treasury, State Office of Information and Technology, and from the New York City Department of City Planning (NYCDPC). Information on zoning and public policy was compiled based on reviews of local zoning ordinances and comprehensive plans for the applicable jurisdictions. In connection with the identification of planned development and potential changes to policy or plans, coordination with the municipalities within the study area was conducted by contacting their planning departments (or appropriate equivalent departments) to gather approved redevelopment plans as well as gain an understanding of proposed developments that may occur within the study areas. In New Jersey, the appropriate departments (e.g., Planning, Public Works) of Hudson County, the New Jersey Sports and Exposition Authority (NJSEA), the Cities of Hoboken and Union City, and the Townships of Weehawken, Secaucus, and North Bergen were contacted. In New York City, NYCDPC was contacted. The analysis of impacts on public policy is not required by NEPA but is undertaken here to comply with New York City Environmental Quality Review (CEQR).

Following the description of the existing conditions in the affected environment, this chapter describes the affected environment in the future, including a discussion of proposed projects and initiatives that will change the affected environment by the Project's analysis year.

The chapter then analyzes the effect of the No Action Alternative and the Preferred Alternative on existing and proposed land uses (i.e., planned developments) and zoning policies, and the consistency of the No Action and Preferred Alternatives with public policy. An adverse land use impact may occur if a project results in a land use that is incompatible with existing or surrounding uses or development patterns; similarly, an adverse zoning impact when a project is not consistent with its site's zoning; and an adverse impact may occur if a project is inconsistent with a given public policy. For Project components and elements located in New York City, FRA and NJ TRANSIT used the guidance of the *CEQR Technical Manual*. The *CEQR Technical Manual* was developed by New York City for evaluation of the environmental impacts of projects proposed in New York, based on local conditions and issues. These criteria for adverse impacts are well suited for evaluation of effects in the study area and were therefore also used for purposes of NEPA in this analysis.

6A.2.3 STUDY AREAS

In general, the study area for the assessment of land use, zoning, and public policy is the area 500 feet from the Project site (defined as the area that would be affected by construction activities associated with the Preferred Alternative, including both the new tunnel and rehabilitation of the North River Tunnel, as well as the permanent elements of the Preferred Alternative; see Chapter 4, "Analysis Framework," for a detailed description of the Project site). This is the area that is most likely to be affected by construction or operation of the Preferred Alternative. This

study area was adjusted in Weehawken to include the portion of construction truck routes that would use local, non-arterial streets. No study area was included for the rehabilitation work that would occur entirely within the underground North River Tunnel since this work would occur well below the surface within an existing tunnel and does not have the potential to adversely affect land uses above. Similarly, once the North River Tunnel rehabilitation is complete and trains are operating in the rehabilitated tunnel, there would be no potential for adverse effects to land uses above, as conditions would be similar to existing conditions since the Project would not change rail operations. (The potential for vibration impacts above either tunnel is evaluated in Chapter 12B, "Vibration," and takes into consideration the specific land uses and activities above each tunnel.) The New Jersey study area is shown in **Figure 6A-1** and the New York study area is shown in **Figure 6A-2**.

6A.3 AFFECTED ENVIRONMENT: EXISTING CONDITIONS

6A.3.1 NEW JERSEY

6A.3.1.1 LAND USE

Maps illustrating the land use in the New Jersey study area are provided in **Figure 6A-3**, which shows the western portion of the New Jersey study area (generally, Secaucus, Jersey City, and North Bergen), and **Figure 6A-4**, which shows the eastern portion of the New Jersey study area (generally, North Bergen, Union City, Weehawken, and Hoboken).

6A.3.1.1.1 County Road to Tonnelle Avenue

6A.3.1.1.1.1 Project Site

The western portion of the study area includes portions of Secaucus, Jersey City, and North Bergen. From approximately County Road in Secaucus to an area just east of Secaucus Road in North Bergen, the Project site incorporates some of the raised embankment of the Northeast Corridor (NEC) and land just to its south, consisting of both paved and natural areas (see **Figure 6A-3**). More specifically, along the south side of the NEC embankment, the Project site in that area includes:




- Portions of paved driveways and parking areas associated with industrial and warehousing uses.
- Natural (wetland) areas close to the NEC (which are shown on **Figure 6A-3** as vacant land).

East of Secaucus Road, the Project site diverges from the NEC and includes the following:

- Portions of paved driveways and parking areas associated with industrial and warehousing uses.
- Natural (wetland) areas.
- An area above existing freight railroad rights-of-way operated by Conrail and New York, Susquehanna & Western Railway (NYSW). This area also includes a utility right-of-way for Public Service Electric & Gas (PSE&G) high-tension power lines.
- Property owned by NJ TRANSIT and Amtrak on the west side of Tonnelle Avenue, described in Section 6A.3.1.1.2 of this chapter.

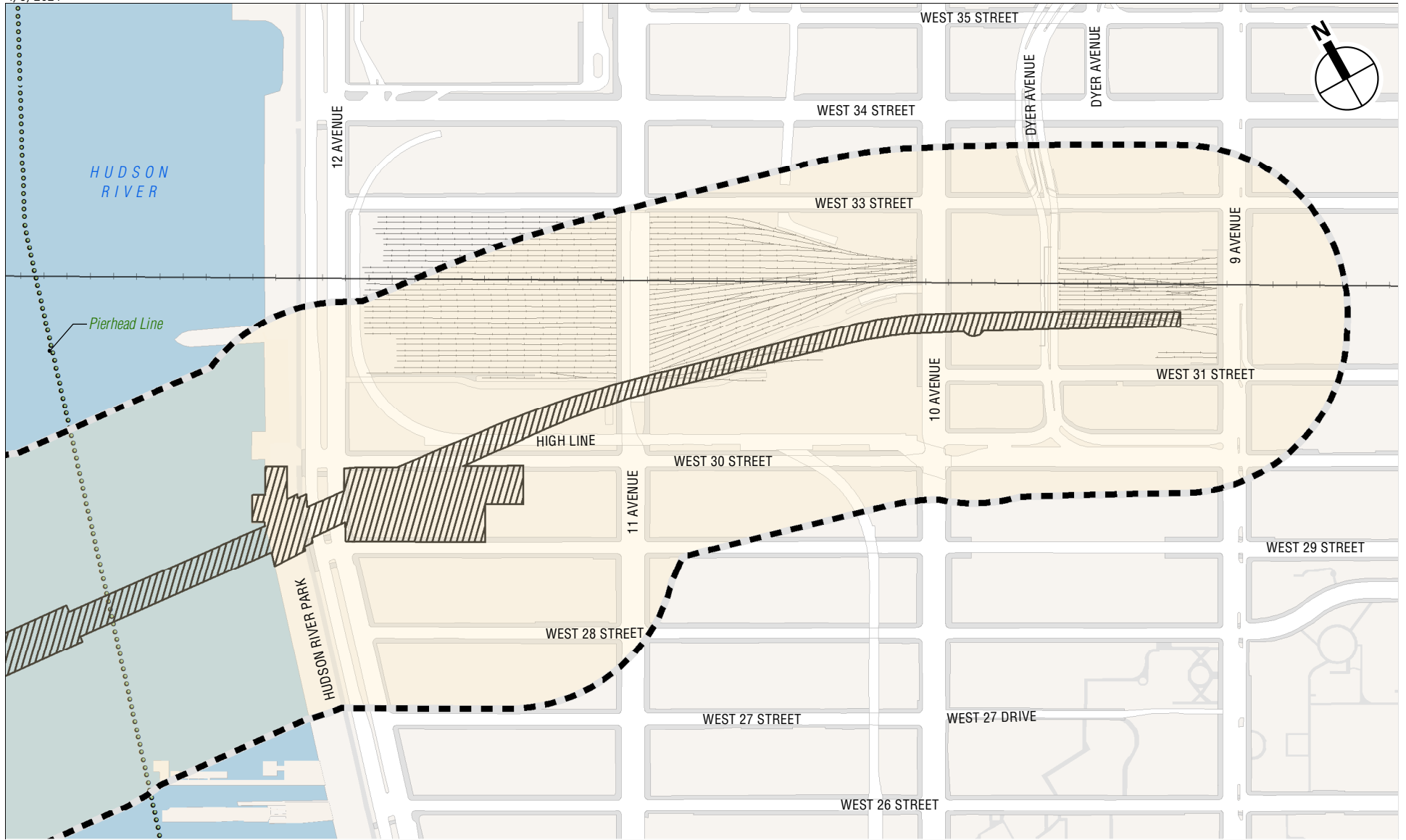
The specific properties that are included within the Project site are listed in **Table 6A-1**.



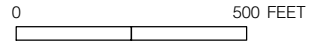
-  Project Site
-  Municipal Boundaries
-  Study Area (500-Foot Boundary)



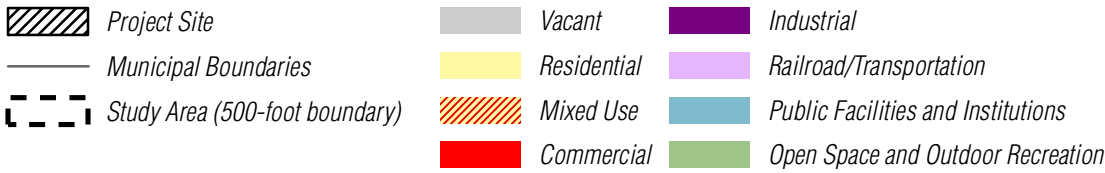
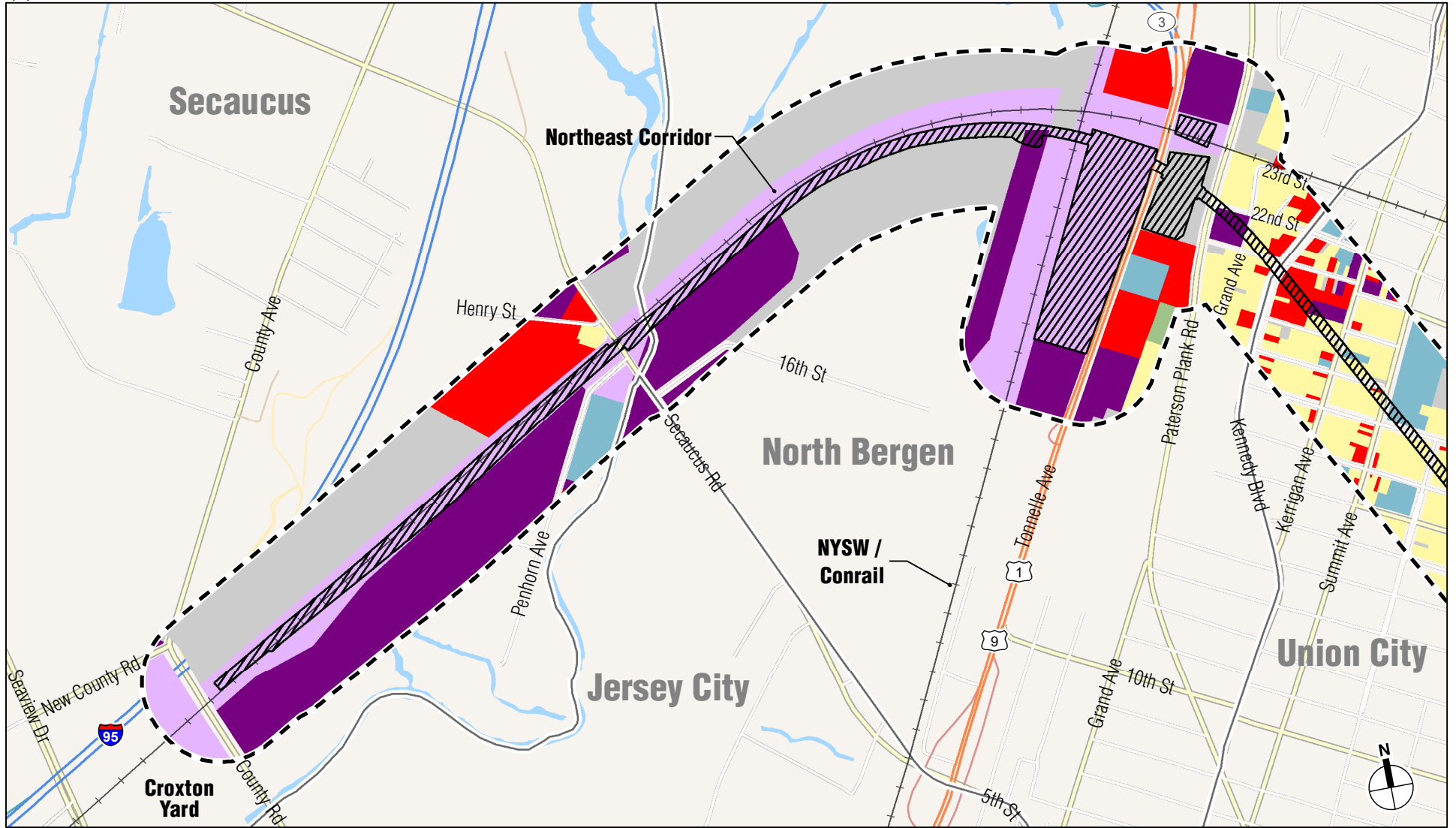
New Jersey Land Use Study Area
Figure 6A-1



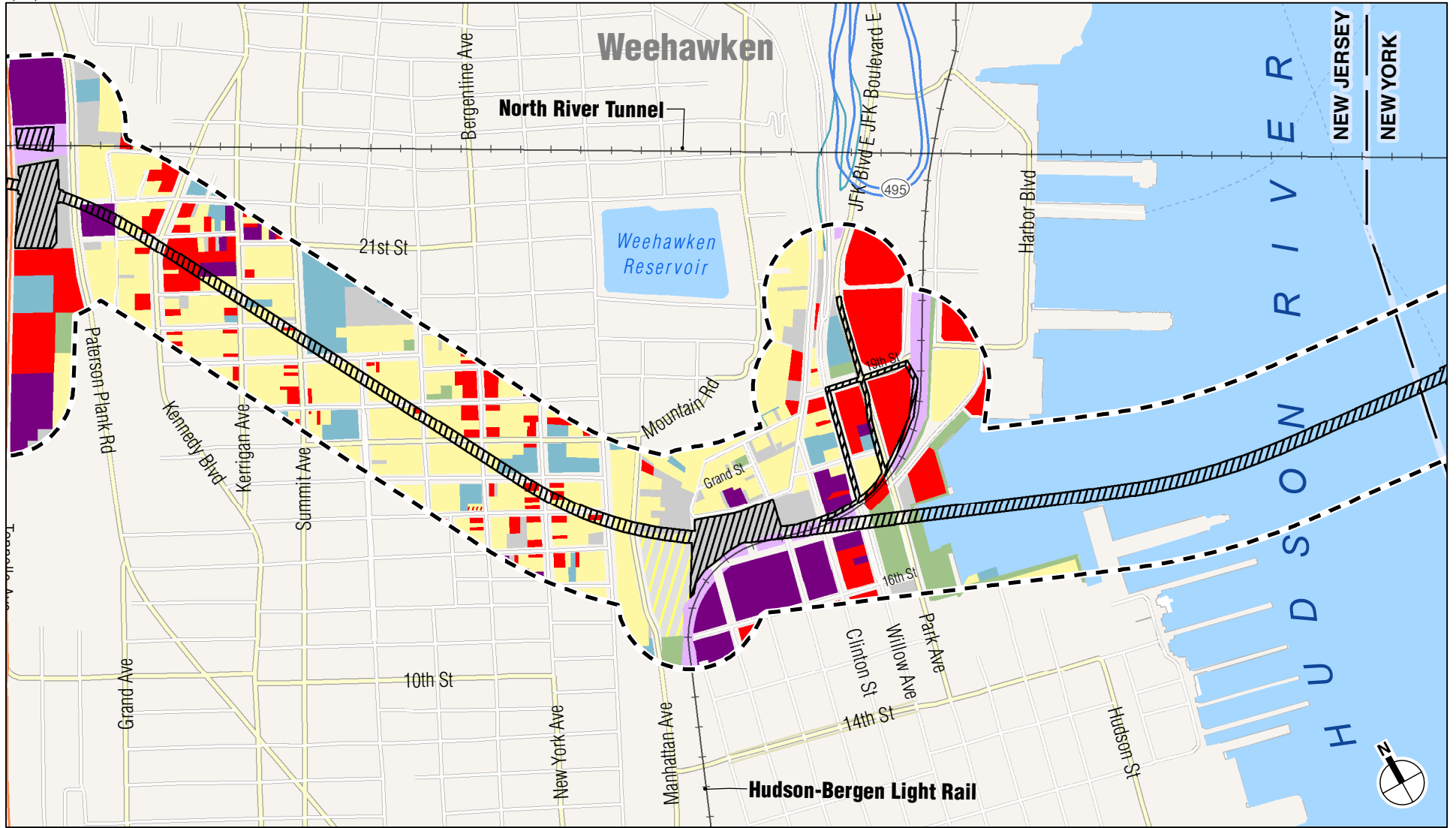
-  Project Site
-  Study Area (500-Foot Boundary)
-  Existing Northeast Corridor














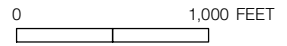
New York Land Use Study Area
Figure 6A-2



Land Use in Western Portion of New Jersey Study Area
Figure 6A-3



- | | | |
|---|--|---|
|  Project Site |  Vacant |  Industrial |
|  Study Area (500-foot boundary) |  Residential |  Railroad/Transportation |
|  Mixed Use |  Public Facilities and Institutions |  Open Space and Outdoor Recreation |
|  Commercial |  Under Construction | |



Land Use in Eastern Portion of New Jersey Study Area
Figure 6A-4

**Table 6A-1
Properties and Land Uses on the Project Site,
County Road to Tonnelle Avenue**

Address	Block/Lot	Land Use
County Road to Secaucus Road		
County Road, Secaucus	Block 44, Lot 2	Vacant area and paved parking area at an industrial / warehousing facility
801 Penhorn Avenue	Block 44, Lot 5.04	Paved area providing access to warehouse loading docks
405 Penhorn Avenue	Block 44, Lot 4.08	Paved parking area at an industrial / warehousing facility
301 Penhorn Avenue	Block 44, Lot 3.01	Paved parking area at an industrial / warehousing facility
201 Penhorn Avenue	Block 44, Lot 2.01	Paved parking area at an industrial / warehousing facility
Secaucus Road to Tonnelle Avenue		
2806 Secaucus Road, North Bergen	Block 449.01, Lot 1.02	Paved parking area at an industrial / warehousing facility
2820 16th Street, North Bergen	Block 449.01, Lot 1	Paved area used for parking and storage of tractor trailers, containers, and equipment
2400 16th Street, North Bergen	Block 449.01, Lot 4	Paved container area at an industrial / warehousing facility, undeveloped wetland area
NA	Block 442, Lot 1.01	Undeveloped wetland area
NA	Block 442, Lot 1.09	PSE&G utility right-of-way
NA	Block 485, Lot 1	NYSW freight railroad right-of-way; PSE&G aerial high-tension power lines; wetland area being created
NA	Block 486, Lot 1	Conrail freight railroad right-of-way
Tonnelle Avenue	Block 35, Lot 6.01	Amtrak electric substation (Hackensack Substation 42)
2001 Tonnelle Avenue	Block 35, Lot 5.03	NJ TRANSIT bus storage and warehouse
2126 Tonnelle Avenue	Block 27, Lots 29, 41, 39, 42, 43.01	Vacant area
Notes: NA = not applicable; PSE&G = Public Service Electric & Gas Company.		

6A.3.1.1.1.2 Study Area

As shown in **Figure 6A-3**, beyond the Project site, the study area from County Road to Tonnelle Avenue is generally parallel to the existing NEC tracks. Land use south of the NEC is predominantly industrial, consisting of light industrial, warehousing, and distribution uses in industrial parks along Penhorn Avenue (in Secaucus) and 16th Street (in North Bergen). At the western end of the study area, a small portion of Croxton Yard, a large freight rail yard and intermodal facility, is in the study area. Across County Road from the railyard, a recently developed warehouse and distribution facility is on the south side of the NEC. The study area also includes undeveloped land, largely consisting of wetland areas and the water of Penhorn Creek, which curves through the area south of the NEC and crosses the NEC twice.

North of the NEC, most of the study area is undeveloped land near the I-95/New Jersey Turnpike (on the east) or undeveloped wetlands. Near Secaucus Road, the study area also includes a warehouse and three small residences north of the NEC (on Henry Street), and a Hindu religious institution, the Shree Swaminarayan Temple located south of the NEC on Penhorn Avenue within the Penhorn Avenue industrial park. South of Penhorn Creek on Secaucus Road, a portion of a trucking terminal (located in Jersey City) is in the study area.

Close to Tonnelle Avenue, the study area includes the freight railroad rights-of-way operated by Conrail and NYSW as well as a utility right-of-way for PSE&G high-tension power lines.



6A.3.1.1.2 Tonnelle Avenue Area

6A.3.1.1.2.1 Project Site

The Project site along Tonnelle Avenue consists of the following (see also **Table 6A-1**):

- An electric substation on the south side of the NEC (west side of Tonnelle Avenue) that provides power to the NEC (Amtrak's Hackensack Substation 42).
- A large property on the west side of Tonnelle Avenue (2001 Tonnelle Avenue) that includes a large area used by NJ TRANSIT for buses that are no longer in service, a warehouse building used by NJ TRANSIT for storage, and a small parking area used by a private bus operator for midday storage of buses serving the Port Authority Bus Terminal.
- A vacant, paved property on the east side of Tonnelle Avenue (2126 Tonnelle Avenue) adjacent to the slope of the Palisades.
- The open cut of the NEC's approach to the existing North River Tunnel (on the east side of Tonnelle Avenue).

6A.3.1.1.2.2 Study Area

The Tonnelle Avenue portion of the study area falls within North Bergen. Tonnelle Avenue (U.S. Routes 1 and 9) is a busy arterial roadway with two traffic lanes in each direction (northbound Tonnelle Avenue widens to three lanes at the northern limit of the study area) and a concrete divider separating the directions. In the study area, this road is lined with commercial uses, including restaurants, gas stations and other auto-related uses (auto wrecking), building supply and retail stores (see **Figure 6A-3**). Some light industrial and industrial uses are also in this corridor, including self-storage units and a waste management facility.

The Tonnelle Avenue corridor also includes one notable exception to this industrial and commercial land use pattern: a Hindu religious institution, BAPS Shri Swaminarayan Mandir Temple, on the east side of the road approximately 250 feet south of the Project site. The temple is separated from the portion of the Project site that is on the east side of Tonnelle Avenue by a Taco Bell fast food restaurant and its parking area.

In addition, commercial and residential uses, as well as a new park, are on the slope of the Palisades above the Tonnelle Avenue corridor, along Paterson Plank Road and Grand Avenue. Since completion of the DEIS, these include a new, six-building residential complex and hotel as well as the new park.

6A.3.1.1.3 The Palisades

6A.3.1.1.3.1 Project Site

The Project site consists of land underground beneath the Palisades.

6A.3.1.1.3.2 Study Area

The Palisades are a line of steep cliffs that run along the western side of the Hudson River from northeastern New Jersey into southern New York State. In the study area, the Palisades are approximately 300 feet above the land to their west and east. The steep slopes on the western and eastern side of the Palisades are largely undeveloped and vegetated, except the western face is traversed by Paterson Plank Road and land uses along that road and the eastern face is traversed by Manhattan Avenue and land uses along that road. Portions of North Bergen and Union City are located on the Palisades in the study area.

As shown in **Figure 6A-4**, the study area on the Palisades is predominantly residential. Institutional and community facility uses that support the residential neighborhoods are also located in this area, including several schools, religious institutions, and libraries. Commercial and

retail uses are clustered along the major north-south streets, including JFK Boulevard, Bergenline Avenue, and New York Avenue.

Notable community facilities and institutions in the study area include the Union City Library and a number of public and parochial schools, including the Eugenio Maria de Hostos Center for Early Childhood Education, the Jose Marti Freshman Academy, St. Francis Academy, the Miftaahul Uloom Academy, Mother Seton School, and Colin Powell Elementary School. The study area also includes several publicly accessible parks and recreational facilities.

6A.3.1.1.4 *East of the Palisades*

6A.3.1.1.4.1 *Project Site*

East of the Palisades, the Project site includes the following:

- Vacant land at the base of the Palisades, north of the Hudson-Bergen Light Rail (HBLR) right-of-way and south of West 18th Street. This property is owned by NJ TRANSIT. NJ TRANSIT acquired this site as part of the Access to the Region's Core (ARC) Project and demolished the light industrial buildings that were on the site.
- An easement running along the north side of the HBLR to Park Avenue that NJ TRANSIT acquired as part of the ARC Project. The easement runs close to an apartment building between Willow and Park Avenues and is currently being used by residents of the apartment building as a private dog run.
- A potential new easement along the north and west sides of the HBLR tracks between Park Avenue and 19th Street, behind the Dykes Lumber building.
- Land below ground, passing beneath the HBLR, Clinton Street, the edge of a PSE&G substation, two roadway viaducts (Willow Avenue viaduct and Park Avenue viaduct), and two parks and a riverfront walkway, described below in the discussion of the study area.

6A.3.1.1.4.2 *Study Area*

The study area east of the Palisades includes portions of Hoboken and Weehawken and is generally divided in two by the curving right-of-way of the HBLR tracks (see **Figure 6A-4**). The study area is bounded on the west by the steep vegetated slope of the Palisades. In the study area, two major streets, Willow Avenue and Park Avenue, are raised on viaducts, both several blocks (more than 1,000 feet) long, to cross the HBLR right-of-way. Adjacent to each viaduct, at-grade local roadways (i.e., service roads) that do not cross the HBLR provide access to land uses on these two streets. Willow Avenue has a southbound and a northbound service road, on either side of the viaduct, and the area under the viaduct is used for parking. Park Avenue has a two-way service road on the west side of the viaduct and no service road on the other side.

The area north of the HBLR tracks includes a residential neighborhood generally west of Park Avenue and north of West 18th Street. This neighborhood, known as "The Shades" because of its location at the base of the Palisades, includes low-rise, attached residences in the blocks directly north of the Project site. This portion of the study area also includes a church and a small neighborhood playground (Pizzuta Park).² It also includes a 10-story apartment building between the Willow Avenue and Park Avenue viaducts on the north side of the HBLR tracks (1700 Park Avenue). This building's entrance is on West 18th Street; the south side of the building has a private dog run adjacent to the building.

² Please note that open spaces and recreational resources are described in more detail in Chapter 8, "Open Space and Recreational Resources," and, where appropriate, are included in the Final Section 4(f) Evaluation relating to the Project's impacts on parks and historic resources in Chapter 24, "Final Section 4(f) Evaluation."



North of West 19th Street, the study area includes the North Hudson Regional Fire and Rescue Engine 3 fire station at 1900 Willow Avenue, which has driveway access on both Willow Avenue and JFK Boulevard East/Park Avenue. A public basketball court, 19th Street Basketball Courts, abuts the south side of the fire station and is bounded on three sides by streets: Willow Avenue, JFK Boulevard, and 19th Street. On the east side of Park Avenue, the study area includes a large lumber retail warehouse store (Dykes Lumber) and two office buildings. After completion of the DEIS, a new residential complex, Hamilton Cove, was completed at 800 Harbor Boulevard east of the HBLR right-of-way and Dykes Lumber Company property.

The area south of the HBLR tracks is predominantly an industrial district of Hoboken that includes the HBLR right-of-way, the North Hudson Sewerage Authority's wastewater treatment plant, which serves Hoboken, Union City, Weehawken, and West New York; a PSE&G electric substation, including an outdoor component and a building; a self-storage facility; and a dialysis center. A portion of surface lot used by private bus companies for bus storage is also in the study area.

East of the Willow Avenue and Park Avenue viaducts, the Hoboken portion of the study area south of the HBLR includes two parks—1600 Park and Harborside/Cove Park—as well as a portion of the Hudson River Waterfront Walkway (see Chapter 8, “Open Space and Recreational Resources”).

The waterfront area of Weehawken from JFK Boulevard East to the Hudson River is part of the Lincoln Harbor redevelopment area, an area where extensive waterfront development of office buildings, residential buildings, and park spaces has occurred over the past two decades. At the eastern edge of the study area, the new 550-unit Hamilton Cove residential development at 800 Harbor Boulevard is part of the Lincoln Harbor development.

6A.3.1.2 ZONING

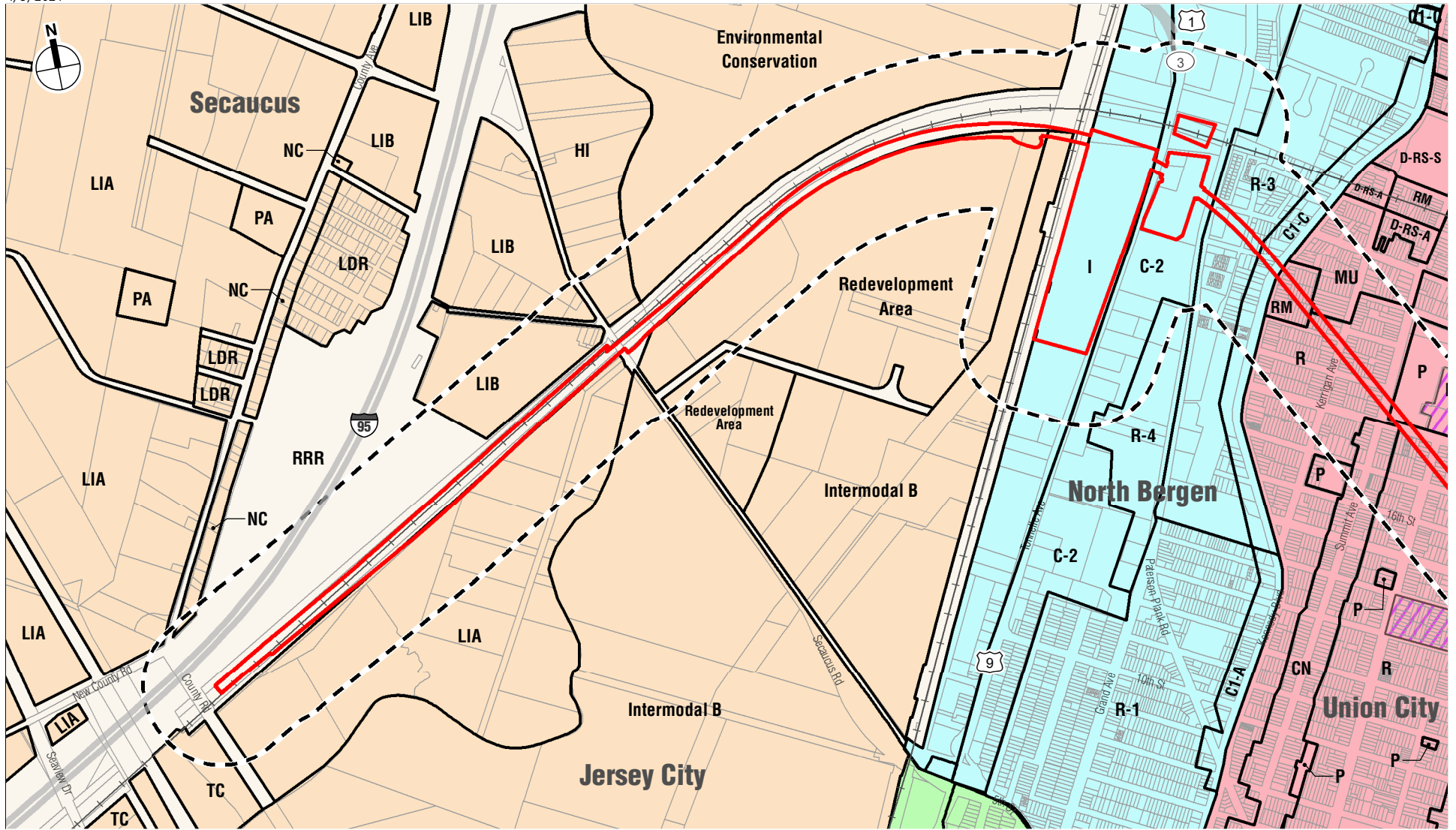
In the New Jersey portion of the study area, zoning in the Meadowlands is controlled by NJSEA, the planning and zoning authority for the 30.4-square-mile Meadowlands District, which consists of portions of 14 municipalities in Bergen and Hudson Counties, including Secaucus, Jersey City, and North Bergen. Within the Meadowlands District, wetland enhancement, restoration, or creation and wildlife habitat creation are permitted uses in all zoning districts. The rest of the study area is under the jurisdiction of the local municipalities: North Bergen, Jersey City, Union City, Weehawken, and Hoboken. **Table 6A-2** lists the zoning districts or categories for each municipality in the study area along with their permitted uses. Zoning for the New Jersey portion of the study area is shown in **Figures 6A-5 and 6A-6**.

6A.3.1.2.1 County Road to Tonnelle Avenue

As shown in **Table 6A-2** and **Figure 6A-5**, zoning within the study area in the Secaucus and North Bergen Meadowlands areas predominantly consists of rail right-of-way, light industrial, and environmental conservation districts, along both sides of the railroad corridor in North Bergen. In this area, the Project site is predominantly zoned for transportation and utility uses within the roads, rails, and rights-of-way (RRR) district; where the Preferred Alternative alignment begins to diverge from the existing NEC alignment as it approaches Tonnelle Avenue, it also passes through small portions of the 16th Street Redevelopment Area (RA), zoned for transportation- and industry-related office use, and the Intermodal B district (IB), zoned for intermodal freight transfer use.

6A.3.1.2.2 Tonnelle Avenue Area

Zoning along Tonnelle Avenue consists predominantly of industrial districts (I) west of the roadway and highway commercial districts (C-2) east of the roadway. The Project site includes areas in both of these districts.



Project Site

Study Area (500-foot boundary)

Zoning Districts

Historic Preservation Overlay District

Zoning Jurisdiction

Jersey City

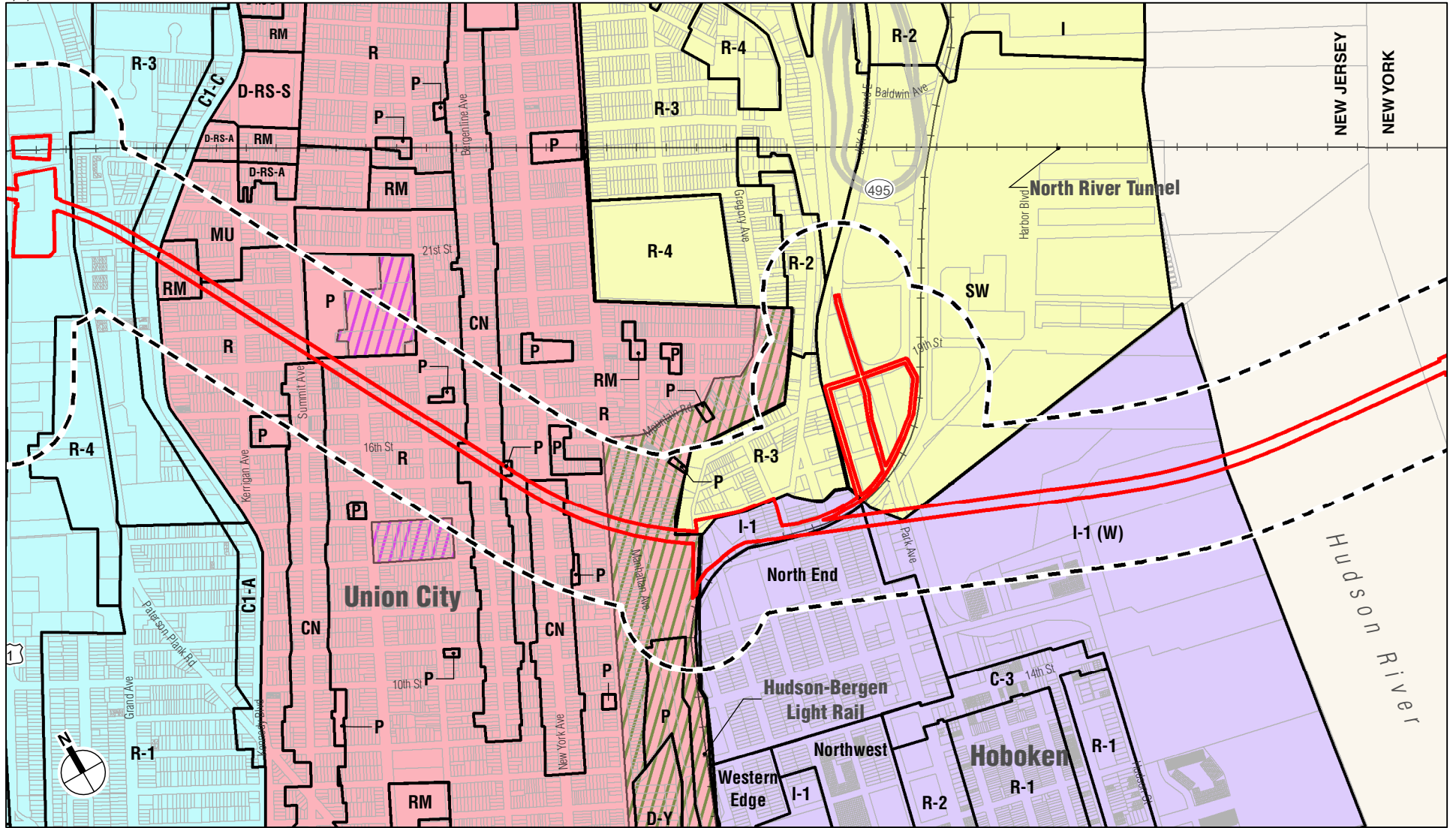
NJSEA (Zoning authority)

North Bergen

Union City

0 1,000 FEET

Note: see Table 6A-2 for zoning district designations.



Project Site
 Study Area (500-foot boundary)
 --- Municipal Boundaries

Zoning Districts
 Historic Preservation Overlay District
 Palisades Preservation Overlay District

Note: see Table 6A-2 for zoning district designations.

Jurisdiction

Hoboken	Union City
Jersey City	Weehawken
North Bergen	

0 1,000 FEET



Zoning in Eastern Portion of New Jersey Study Area
Figure 6A-6

**Table 6A-2
Existing Zoning in the New Jersey Study Area**

Zoning District	Permitted Uses
New Jersey Meadowlands District Zoning (Secaucus, Jersey City, and North Bergen)	
Roads, Rails, Rights of Way (RRR)	Mapped over highways and railroad rights-of-way
Transportation Center (TC)	Intended for major commuter transfer center and associated office, hotel, and commercial uses; mapped at Secaucus Junction Station area. Permitted uses includes passenger rail terminals, commercial off-street parking, offices, restaurants, retail, institutional uses, and parks or recreational facilities
Light Industrial A (LI-A)	Commercial and business uses on large lots, including warehouse and distribution facilities, light industry, wholesale establishments, self-storage, offices, certain commercial uses, institutional uses, essential public services and parks or recreational facilities
Light Industrial B (LI-B)	Wide range of industrial, distribution, and commercial uses, including the uses permitted in LI-A and others such as fuel service stations, truck terminals, recycling facilities
Intermodal B (IB)	High-intensity transportation facilities proximate to rail lines with operations related port and rail activities, including rail and trucking facilities and construction-related uses; includes intermodal facilities, warehouses and distribution facilities, heavy industry, truck terminals, railroads terminals and yards, recycling facilities, materials recovery, heavy and light public utility uses
Heavy Industrial (HI)	Intensive industrial, utility, and commercial uses, including major auto repair facilities, recycling facilities, intermodal facilities, construction equipment; materials recovery facilities; resource recovery facilities; outdoor storage; heavy and light public utility uses; railroad terminals and yards; and truck terminals.
16th Street Redevelopment Area (RA)	Adopted redevelopment plan supersedes zoning regulations; primary purpose is to accommodate the demand for office space associated with trucking and distribution facilities. Permitted uses include office, trucking, distribution
Environmental Conservation (EC)	To preserve and enhance ecological value of water and adjacent uplands. Permits existing public utility equipment and appurtenances; public access to water features, scientific and educational study related to wetland ecology; wetland enhancement, restoration, or creation activities; and wildlife habitat creation; other uses by special exception including transmission towers
Township of North Bergen Zoning	
Industrial (I)	Light industrial and manufacturing uses, wholesale business, storage, distribution, and warehousing, truck terminals, motor vehicle repairs, storage of buses, passenger vans, taxis and limousines.
Highway Business (C-2)	Commercial; for larger scale general commercial development such as shopping centers, car sales and repair and warehouse/office buildings; permitted uses include restaurants, hotels, public utilities, commercial and office; shopping centers
Paterson Plank Road Residential (R-4)	Multi-family, mid-rise residential, townhouse residential
Moderate Density Residential (R-3)	Residential permitting a variety of housing types, including 1- and 2-family detached dwellings, 2-family semi-attached dwellings, 3- and 4-family detached dwellings, and multi-family dwellings including mid- and high-rise buildings, garden apartments, and townhouses; also parks and schools
General Business Mixed Use (C-1C)	For commercial development along major north-south arteries with a limited amount of residential use. Permitted uses include retail, restaurants, commercial services and offices, houses of worship; residential uses as conditional use.
City of Union City Zoning	
Low-Density Residential (R)	1-, 2- and 3-family unit dwellings, municipal uses, and parks and playgrounds; schools, clubs, and institutional uses as conditional uses
Medium Density Residential (R-M)	1-, 2- and 3-family unit dwellings, rowhouses, low- and mid-rise apartment buildings, nursing homes, municipal uses, and parks; schools, clubs, institutional uses, parking garages, and wireless telecommunications facilities as conditional uses



**Table 6A-2 (Cont'd)
Existing Zoning in the New Jersey Study Area**

Zoning District	Permitted Uses
City of Union City Zoning (Cont'd)	
Multiple Use (MU)	Mixed uses of industrial, commercial, and residential uses in close proximity; permitted uses include low-rise and mid-rise apartment buildings, retail sales and personal services, offices, medical offices, light industrial, self-storage facilities, live/work units in conjunction with the adaptive reuse of an existing building, child-care centers, municipal and government uses, parks
Neighborhood Commercial (C-N)	Retail uses and services to support adjoining neighborhoods; permitted uses include retail sales and personal services, offices and medical offices (upper floors only), apartments (upper floors only) in low-rise or mid-rise apartment buildings that have one or more permitted nonresidential uses on the ground floor, live/work units (upper floors only), restaurants (excluding drive-through restaurants), banks (excluding drive-through banks), health clubs, child-care centers, municipal and government uses, parks
Public (P)	Municipal and government uses, schools, public parks and playgrounds, age-restricted housing and affordable housing in low- or mid-rise apartment buildings
Historic Preservation Overlay District (HPOD)	Intended to provide additional protection for Monastery of Perpetual Rosary and Monastery and Church of St. Michael the Archangel historic sites and residential areas surrounding them; permits 1- and 2-family dwellings and existing institutional uses
Palisades Preservation Overlay District (PPOD)	Intended to provide development controls on steep slopes of Palisades, minimizing potential for erosion; provides additional setback regulations and performance standards
Township of Weehawken Zoning	
Residential (R-2)	1-, 2-, and 3-family residences, municipal buildings, parks, institutions (hospitals, museums, schools, houses of worship, libraries)
Residential (R-3)	Uses permitted in R-2 zones, clubs and townhouses
Special Waterfront Zone Planned Development (SW)	Waterfront development, including industry, office, and recreation
City of Hoboken Zoning	
Industrial (Light Manufacturing) (I-1)	Manufacturing activities that meet performance standards; office buildings, research laboratories, warehouses and related office buildings, accessory and other permitted uses; range of conditional uses including building supply, auto service stations and garages,
Waterfront Subdistrict (I-1(W))	Subdistrict intended to protect employment opportunities while recognizing the demand for residential and retail development near waterfront; all proposed developments must undergo urban design review. Permits same uses as I-1 district, and planned unit developments (which may include a mix of residential, commercial, industrial, public, or quasi-public uses); conditional uses include marinas, restaurants, riverborne public transportation
Sources: District Zoning Regulations of the Hackensack Meadowlands District, as amended through April 1, 2013 (NJAC 19:4) and NJSEA Zoning Map (2009); Township of North Bergen Zoning Ordinance (2006); City of Union City Zoning Map (2012); Township of Weehawken Zoning Map (2003); City of Hoboken Zoning Map (2020).	

6A.3.1.2.3 The Palisades

As shown in **Figure 6A-6**, the areas of North Bergen and Union City above and near the tunnel alignment have predominantly residential zoning, with small areas designated for multiple use, public use, and parks; a historic preservation overlay area on top of the Palisades above the Project site; and neighborhood commercial uses mapped along major north-south streets. The eastern slope of the Palisades, including a small portion of the proposed Hoboken shaft site, is

mapped with Union City's Palisades Preservation overlay district. This overlay district is intended to minimize erosion on the steep slopes of the Palisades and requires minimum building setback line from the edge of the cliff face at both the top and bottom of the cliff, limited disturbance of steep slope areas, and vegetation and grading to protect natural contours, among other requirements.

6A.3.1.2.4 East of the Palisades

North of the Project site, the Weehawken portion of the study area is mapped with residential zoning and a special waterfront (SW) redevelopment district east of Willow Avenue (see **Figure 6A-6**). The section of Hoboken in the study area has industrial zoning, with a mix of light industrial, including on the Project site, and light industrial waterfront for the area east of Willow Avenue (see **Figure 6A-6**). South of the HBLR tracks, the City of Hoboken designated a 16-block, 33-acre area as the North End Rehabilitation Area in December 2013. In accordance with the New Jersey Local Redevelopment and Housing Law, the city adopted a Redevelopment Plan for the North End in March 2021, which supersedes existing zoning there.

The Hoboken staging area portion of the Project site is mapped with the City of Hoboken's I-1 light industrial zoning designation, with a small portion of the site also within the Township of Weehawken's R-3 residential district. The Preferred Alternative alignment would pass beneath waterfront districts in Hoboken (I-1(W)) and Weehawken (SW).

6A.3.1.3 PUBLIC POLICY

Public policy related to land use and development in the New Jersey study area includes the policies specific to the Meadowlands District, Hudson County plans related to land use, and local municipalities' comprehensive plans, which are generally reflected in their zoning ordinances. In addition, New Jersey has a number of statewide coastal zone management policies that relate to development.

6A.3.1.3.1 Meadowlands District

The New Jersey Legislature created the Hackensack Meadowlands Development Commission in 1968 and charged it with protecting the environment, promoting orderly development, and providing for solid waste disposal needs of the region. The commission was renamed the New Jersey Meadowlands Commission (NJMC) in 2001 and more recently was consolidated with NJSEA in 2015. The NJSEA is the planning and zoning authority for the 30.4-square-mile Meadowlands District.

The NJSEA's Hackensack Meadowlands 2020 District Master Plan Update, incorporating updates to the 2004 NJMC Master Plan, sets the planning framework for environmental protection and development in the Meadowlands District. Like the NJCM Master Plan, the primary goal of the Hackensack Meadowlands District Master Plan Update is the protection of the Meadowlands District's valuable natural resources (particularly 8,400 acres of wetlands) while promoting economic growth through sustainable redevelopment practices, with an emphasis on limiting urban sprawl and improving mass transit.

6A.3.1.3.2 Hudson County Master Plan and Master Plan Update

Hudson County's 2002 Master Plan, 2008 Master Plan Update, and 2017 Master Plan Reexamination Report identify goals of economic development (particularly through revitalization of the county's commercial and manufacturing industries), preservation of well-established residential neighborhoods with enhanced quality of life and improved community services, redevelopment along the Hudson River waterfront, and improvements to the transportation network, including the promotion of mass transit. Goals include: providing a safe and efficient transportation system; providing transportation improvements which support economic



development; promoting alternate transportation modes including bicycling, tele-commuting, transit, and walking; coordinating land use activities with the transportation network; supporting system coordination, efficiency, and safety; reducing traffic and mitigating congestion on local roads and highways and improving air quality; protecting and improving quality of life; and reducing greenhouse gas emissions from mobile sources.

6A.3.1.3.3 Municipal Master Plans

Four of the local municipalities in the New Jersey study area have a master plan used to establish zoning, as discussed below.

6A.3.1.3.3.1 Jersey City

The Jersey City Master Plan was adopted in 2001 and identified such issues as inappropriate residential development, industrial and commercial disinvestment, lack of recreational and open space, environmental conservation, aging infrastructure, the extent of contaminated sites, traffic congestion, and quality of life. To address these issues, the plan's principal goals include increased residential development of variety and quality; concentration of accessible cultural, commercial and institutional activity; availability of community resources; connectivity between residential areas and activity districts that is both pedestrian-friendly and incorporates "a wide range of mode choices" including mass transit; local and regional economic development including tourism; and maintaining the port as a "global economic node" while balancing quality of life for residents.

The land use objectives of this plan include the encouragement of brownfield redevelopment, creation of performance and design standards for industrial uses, development of clean industries, coordination of land use policies in the Hackensack Meadowlands District, waterfront development, and coordination of land use planning with the existing transportation network and planned improvements to it.

The Jersey City Master Plan's circulation plan notes that Jersey City has historically functioned as a transportation gateway for the region due to its strategic location. The plan recommends a focus on repairing and maintaining existing infrastructure, providing new infrastructure in targeted locations, constructing missing links, and retrofitting existing infrastructure. The circulation objectives of the plan (as it relates) seek to capitalize on the city's status as a regional transportation center by identifying and addressing limited east-west connectors and supporting infrastructure improvements and service expansion that best promote mass transit use, mobility, economic development and quality of life.

6A.3.1.3.3.2 North Bergen

The 2009 Adopted Reexamination of the Master Plan of the Township of North Bergen is the third and most recent reexamination of the township's 1987 comprehensive master plan. Each reexamination has included an account of issues and objectives since the last report, the extent to which they have been addressed, any changes in conditions, and subsequently any revisions to the recommendations that resulted.

The issues and objectives outlined in the 2009 Report relate to industrial redevelopment, appropriate retail mix, design standards for new development, the need for a housing plan and policy, and the development of the "Tonnelles Avenue Corridor." The report details the current status of addressing these issues and objectives, and then delineates revisions to the recommendations of the report. As an important connector to neighboring municipalities and a gateway into the community, the report emphasizes an "enhanced development character" for the Tonnelles Avenue Corridor. At the time of the report it was noted that land uses continued to transition (e.g., 49th Street light rail station, improved bus stop and commuter parking) as new construction replaced obsolete industrial structures. A call for additional zoning changes to

accelerate redevelopment was a recommendation of the plan. The report also identifies plans to widen the Tonnelle Avenue roadway by six feet.

6A.3.1.3.3.3 Union City

The goals of the 2009 Union City Master Plan (and incorporated in the city's 2018 Master Plan Reexamination Report) seek a balance of land uses in appropriate locations, the preservation of community character, economic development, community facilities and open space, the facilitation of local and regional circulation, housing diversity, promotion of the city as desirable and attractive, and improvements to the quality of life for its residents. Objectives to accomplish these goals included revising the zoning ordinance to promote consistent development, preserve character, and create open space and parking, and facilitating affordable housing through programs and grants.

6A.3.1.3.3.4 Hoboken

In 2018, the City of Hoboken adopted the 2018 Master Plan Reexamination Report, updating the 2004 City of Hoboken Master Plan and the previous update document, the 2010 Master Plan Reexamination Report. In conjunction with the 2018 Master Plan Reexamination Report, the city also issued the 2018 Master Plan Land Use Element. As stated in the 2018 Master Plan Land Use Element, "The 2018 Reexamination Report provides an overview of trends, issues and accomplishments since the City prepared its most recent Master Plan Reexamination Report in 2010. It provides a vision with stated objectives in each strategic goal area; and recommends a set of actions (policies, projects, partnerships, etc.) for the City to implement to meet those objectives. The recommendations in the Land Use Element will attempt to guide the City's growth while also respecting and protecting its character."

The 2004 Master Plan had 10 principal goals, which included amplifying Hoboken's sense of community, enhancing its unique setting, protecting its historic rowhouse fabric, celebrating the character of Washington Street as a "Main Street", improving the appearance of the city's streets, maintaining the city's mix of uses; enhancing walkability and pedestrian amenities; updating community facilities; providing additional open space and recreational facilities; and tapping into residents' entrepreneurial and community spirit. The Master Plan included eight different standalone "elements," documents that present recommendations related to the specific topics they cover. The 2010 Reexamination Report confirmed many of the recommendations of the 2004 Master Plan, but revised some land use policy recommendations and added recommendations for sustainability and flood resiliency improvements. The 2018 Master Plan Reexamination Report focuses on sustainable growth and development that retains the city's historic and cultural assets, with five goals related to maintaining and enhancing neighborhood character, preserving diversity, maintaining transportation connections, enhancing sustainability and resiliency, and improving city government functions.

As part of the planning effort, the City of Hoboken prepared the standalone 2018 Master Plan Land Use Element. This document describes existing land use and land use trends, zoning regulations and redevelopment plans that currently regulate development; summarizes the recommendations of the Master Plan Reexamination Report related to land use; and presents recommendations related to zoning districts. The 2004 Master Plan recommended rezoning the area of Hoboken north of the HBLR right-of-way, which includes the Hoboken shaft site and staging area, from light industrial to residential, for consistency with the residential zoning of the adjacent Shades section of Weehawken. However, the 2010 update eliminated the 2004 recommendation and stated, "Until the future of the ARC Tunnel is fully resolved, the proper use of land cannot be determined." The 2018 Master Plan Land Use Element identifies the Hoboken shaft site and staging area as an area that will need to be rezoned in the future. The Land Use Element recommends establishment of a new Commercial-Light Industrial Mixed Use (C-LIMU) zoning district to replace the city's industrial districts and recommends mapping this on the existing industrial districts, including the Hoboken



shaft site and staging area. This new district would expand the allowable uses beyond light industrial, to include office, industrial kitchens, artisan spaces, and other similar uses. It should include strict performance standards to avoid potential land use conflicts. The Land Use Element recommended that this updated industrial zoning remain in place in the northern part of the city (the North End) until the city adopted a comprehensive Redevelopment Plan there, which it did in March 2021.

6A.3.1.3.3.5 Summary of Master Plans

Common themes among the municipal master plans described above focus on providing and improving transportation options; encouraging development in an environmentally sustainable manner; improving transit; and increasing resiliency.

6A.3.1.3.4 New Jersey Coastal Zone Management Policies

New Jersey's coastal zone management policies include review under the Coastal Area Facility Review Act (CAFRA), the Waterfront Development Act, and Coastal Zone Management rules. These are discussed in Chapter 21, "Coastal Zone Consistency."

6A.3.2 HUDSON RIVER

The Hudson River is located between the New Jersey and New York portions of the Project site. Policies governing the use of the Hudson River are codified into regulations that are analyzed elsewhere in this FEIS, in Chapter 11, "Natural Resources," and Chapter 21, "Coastal Zone Consistency." In New York, the portion of the river up to the pierhead line is public open space within the designated boundaries of Hudson River Park (described further below).

6A.3.3 NEW YORK

6A.3.3.1 LAND USE

6A.3.3.1.1 Project Site

The New York portion of the Project site is located in the area between the Hudson River bulkhead near West 30th Street and the eastern side of Tenth Avenue between West 31st and 33rd Streets (see Chapter 4, "Analysis Framework," for a description of the Project site in New York). Existing land uses on the Project site in New York include the following:

- A portion of Hudson River Park, which is a linear park that extends along the west side of Route 9A (to the pierhead line) from the Battery in Lower Manhattan to West 59th Street. The portion of the park within the Project site includes a waterfront esplanade. It also includes the West 30th Street Heliport, which is within the park boundaries and generates revenue for the park.
- A portion of the West 30th Street Heliport, a privately run heliport along the water's edge, that extends from approximately West 29th Street to West 33rd Street within the boundaries of Hudson River Park. The heliport has 10 helipads and provides commercial, general aviation, and air taxi services. No tourist flights are operated from this location. In the summer, approximately 72 flights operate each day from the heliport; in the winter, this number decreases to about 36 daily flights. The West 30th Street Heliport is a permitted commercial use within Hudson River Park that generates revenue to support operations and maintenance at Hudson River Park. The portion of the heliport within the Project site includes two of the heliport's 10 landing pads and a fueling area.
- The Project site crosses Route 9A (also known as Twelfth Avenue at the Project site), a two-way, New York State highway with three southbound lanes and four northbound lanes separated by a raised, planted median, plus a northbound parking lane and a sidewalk along

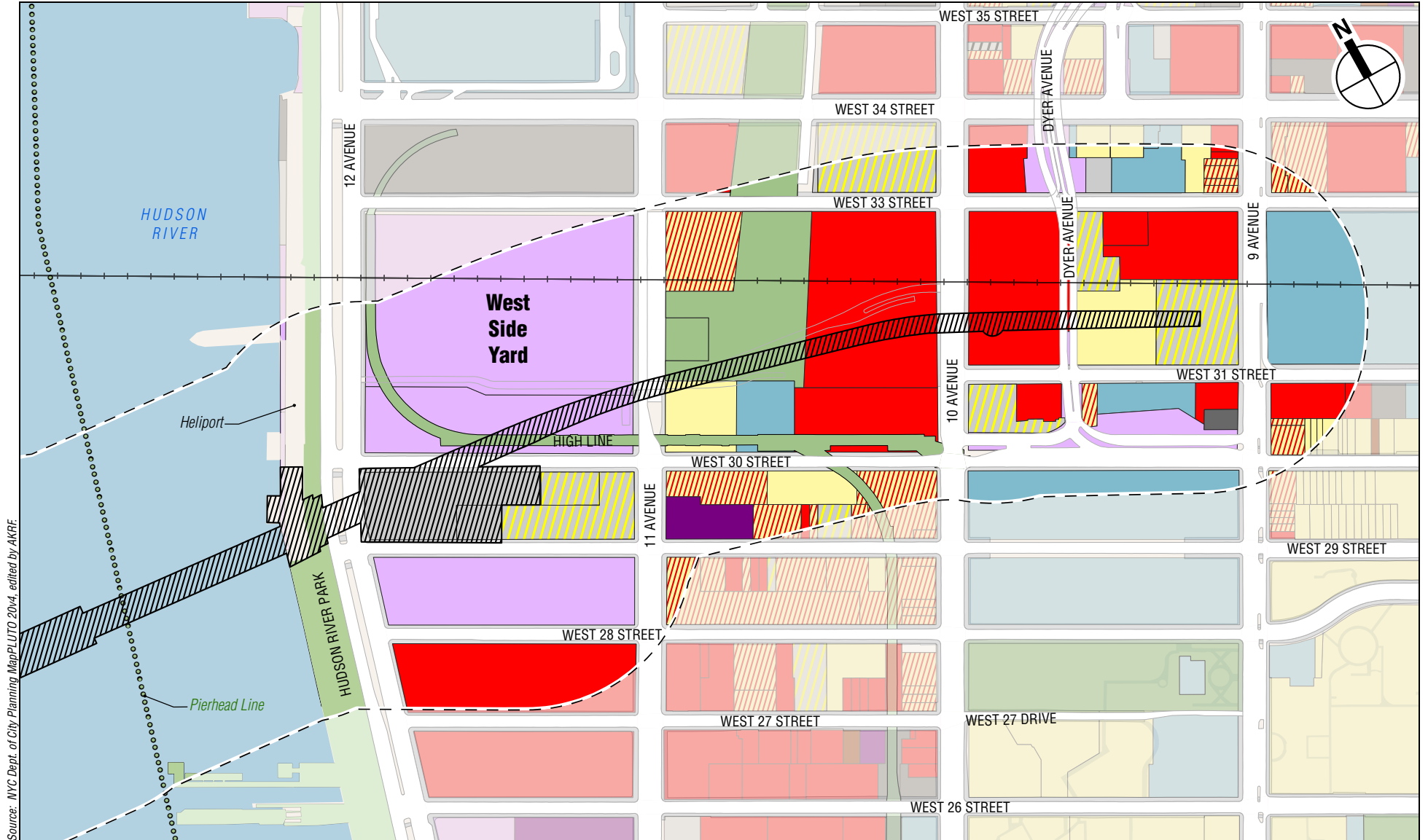
the eastern side of the road. In addition to the roadway, Route 9A also includes a two-lane bikeway that runs north-south between Hudson River Park and the highway.

- A portion of the block on the east side of Twelfth Avenue between West 29th and West 30th Streets, which is Manhattan Block 675. The Project site includes Lot 1 of Block 675, a vacant property, and the western portion of an adjacent lot on West 29th Street, Lot 12. When the DEIS was prepared, the PANYNJ held a surface easement on Lot 1 and was using the site for bus parking and security activities, but that easement has since expired and the site is now vacant. When the DEIS was prepared, Lot 12 housed several industrial uses. It is now part of a construction site for a large residential building a private developer is erecting at the eastern end of the block.
- The Project site crosses West 30th Street, a one-way local street serving eastbound traffic.
- From West 30th Street to Tenth Avenue north of West 31st Street, the Project site includes a below-grade area that is currently undergoing construction as part of the Hudson Yards Right-of-Way Preservation Project. Amtrak is constructing a concrete casing to preserve a railroad right-of-way beneath the ongoing large-scale development above the Metropolitan Transportation Authority (MTA) Long Island Rail Road's (LIRR) John D. Caemmerer West Side Yard. Amtrak has completed construction of the section of the concrete casing preserving the railroad right-of-way between Eleventh and Tenth Avenue, which is below the recently constructed Eastern Rail Yard portion of the Hudson Yards development. This development includes a mix of high-rise residential and office towers, and street level retail and public open spaces, as discussed further below in Section 6A.3.3.1.2.
- The Project site crosses beneath Tenth Avenue, a one-way arterial street with four northbound lanes and a parking lane and sidewalk on each side of the street.
- The portion of the Project site on the east side of Tenth Avenue between West 31st and West 33rd Streets is the area beneath a 16-story, 1.8 million-square-foot (sf) office building (450 West 33rd Street), which is on a platform over the rail right-of-way. The owner of the building at 450 West 33rd Street recently renovated it to replace the building's façade and introduce new retail uses on Tenth Avenue to complement the large-scale redevelopment occurring at Hudson Yards. Beneath this building are railroad tracks leading into Penn Station New York (PSNY) and rail storage tracks. Louvers in the street-level façade of 450 West 33rd Street along Tenth Avenue provide passive ventilation for the railroad tracks below the building. The eastern terminus of the Project Site near Ninth Avenue is beneath the recently constructed 67-story 1 Manhattan West office building, as well as ongoing construction associated with the Manhattan West development.

6A.3.3.1.2 Study Area

The New York study area is located in Manhattan's Far West Side neighborhood, also known as the Hudson Yards area (see **Figure 6A-7**). The study area has historically been dominated by transportation-related uses (includes expansive rail yards), with a more limited amount of manufacturing, residential and commercial uses. However, this area has recently undergone and continues to undergo extensive construction with high-density residential and commercial developments as a result of recent public policy initiatives. These new developments are substantially altering the land use in the area (discussed further below in Section 6A.4.3).

The predominant current land use in the far western section of the New York study area is a portion of the large railyard (the West Side Yard) located on the superblock from Twelfth Avenue to Ninth Avenue between West 30th and West 33rd Streets. The portion of the West Side Yard between Twelfth and Eleventh Avenues is currently exposed, while the portion between Eleventh and Ninth Avenues has been covered by large recent development projects (discussed further below). The Long Island Rail Road (LIRR) uses the West Side Yard for midday storage of trains. Eleventh



Source: NYC Dept. of City Planning MapPLUTO 20v4, edited by AKRF.

- Project Site
- Study Area (500-foot boundary)
- Existing Northeast Corridor
- Commercial and Office Buildings
- Industrial and Manufacturing
- Open Space and Outdoor Recreation
- Parking Facilities
- Public Facilities and Institutions
- Residential
- Residential with Commercial Below
- Transportation and Utility
- Vacant Land
- Under Construction

0 500 FEET



Land Use in New York Study Area
Figure 6A-7



Avenue crosses over the West Side Yard on a viaduct. This yard connects to the array of tracks leading into PSNY. Two other, smaller railyards are also located in the PSNY complex, as discussed in Chapter 5B, "Transportation Services." The North River Tunnel enters Manhattan beneath the West Side Yard, at a portal just east of Tenth Avenue beneath the building at 450 West 33rd Street.

Much of the study area consists of recent major development and ongoing construction sites for additional large new buildings. This multi-block residential and office development is being constructed on platforms above the West Side Yard. This development is referred to as Hudson Yards, and consists of two subsections: the Western Rail Yard (west of Eleventh Avenue), which is in early planning and design, and the Eastern Rail Yard (east of Eleventh Avenue), much of which has been constructed since publication of the DEIS. The Eastern Rail Yard development includes six towers (one of which is still under construction) with a seven-level retail building totaling approximately 11.7 million square feet of residential, office, retail, and hotel space, as well as a public open space plaza, an elaborate staircase tourist attraction called the Vessel, and a new arts center called the Shed. In addition, another area of below-grade rail tracks leading to PSNY east of 450 West 33rd Street has been covered with a platform and is being redeveloped as part of the Manhattan West project with high-rise office, residential, hotel, and retail buildings and public open space. Four buildings have been completed, with two still under construction (see Section 6A.4.3 below). As part of the overall redevelopment efforts in this area, the MTA New York City Transit (NYCT) No. 7 subway line was extended to this area in 2015, with a new station located at West 34th Street between Tenth and Eleventh Avenues.

Dyer Avenue, an access road to the Lincoln Tunnel, extends north from West 30th Street through the study area between Ninth and Tenth Avenues. Dyer Avenue is adjacent to the east side of 450 West 33rd Street, and is covered by a platform forming a two-block-long tunnel.

The study area includes part of Hudson River Park and the West 30th Street Heliport within the park. The study area also contains a portion of the High Line, a public open space constructed on an elevated former freight rail line, which runs along the western and southern edges of the West Side Yard before turning south near Tenth Avenue.

The properties between West 29th and West 30th Streets (and between Twelfth and Eleventh Avenues) adjacent to the Project site are currently vacant or undergoing construction. This area is referred to as Block 675, as discussed above. When the DEIS was completed, this block was occupied by auto repair and light manufacturing buildings, a former gas station, and two buildings used by the New York City Department of Sanitation (DSNY). The eastern portion of the block is currently undergoing construction of two mixed-use residential and commercial high-rise buildings. To the south of the Project site, the Con Edison West 28th Street facility occupies the full block between West 28th and West 29th Streets and Eleventh and Twelfth Avenues, and includes electrical operations, a natural gas refueling station, an equipment storage area, office space, and parking for 250 trucks and other service vehicles. South of West 28th Street, the blocks between Eleventh and Twelfth Avenues contain several large former shipping and warehouse buildings that have been repurposed for mixed light manufacturing and commercial uses. This includes the Starrett-Lehigh Building, a former freight terminal and shipping facility occupying the full block bounded by Eleventh and Twelfth Avenues and West 26th and 27th Streets.

The area south of the Project site along West 30th Street between Tenth and Eleventh Avenues contains several recently built high-rise apartment buildings; residential growth in this area is largely the result of a zoning change (the West Chelsea/High Line rezoning) intended to facilitate high-density residential development along the High Line. Several high-rise apartment buildings are located along West 34th Street near Dyer Avenue and the access road to the Lincoln Tunnel. There are also limited public facility and institutional uses in the study area. Two churches (the Church of Saint Michael and the Church in New York City), as well as a supportive housing facility for women

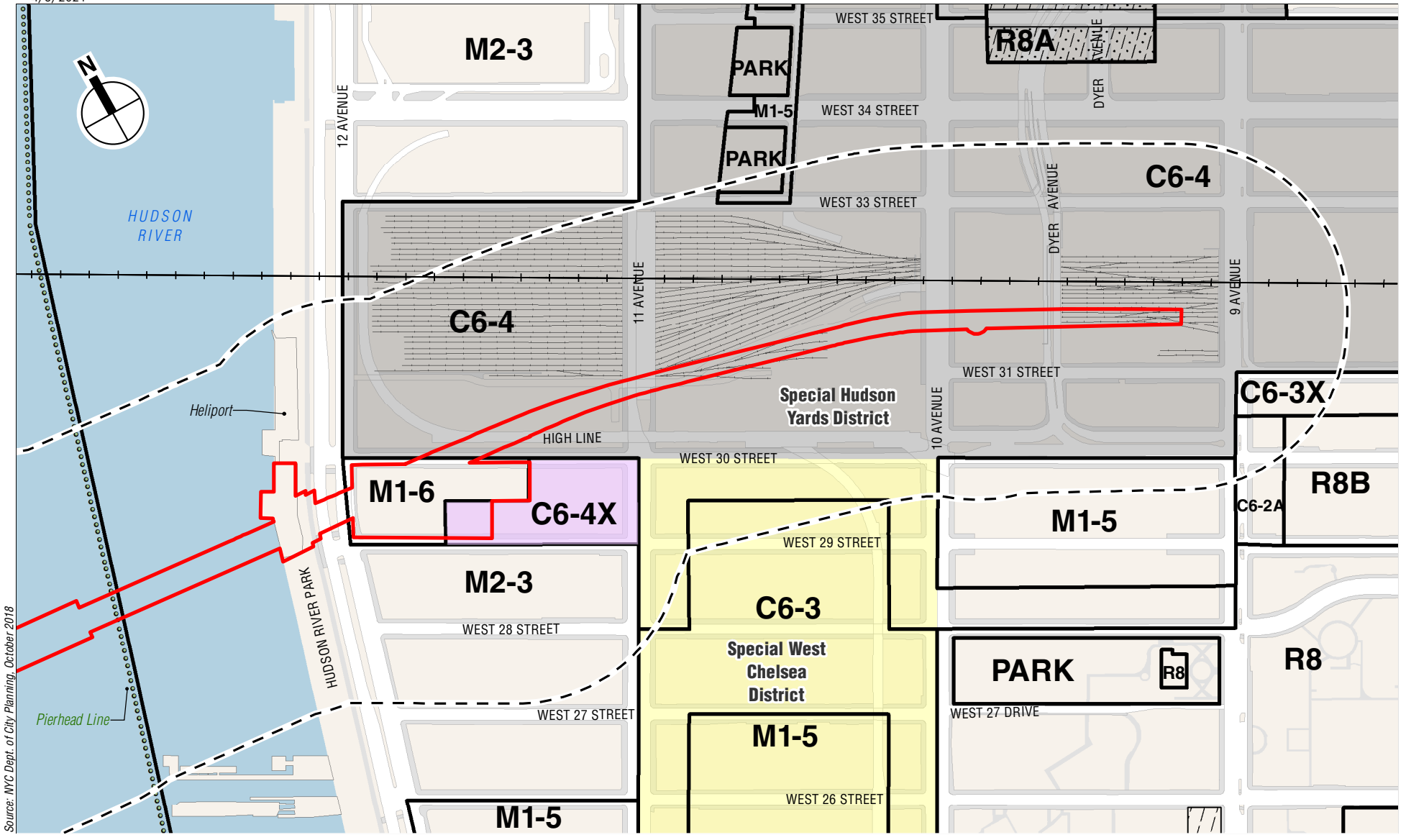
(the Webster Apartments) are located along West 34th Street between Ninth and Tenth Avenues. The U.S. Postal Service Morgan General Mail Facility occupies the block bounded by West 29th and West 30th Streets and Ninth and Tenth Avenues.

6A.3.3.2 ZONING

Zoning in the New York study area is controlled by the New York City Zoning Resolution, which designates both general zoning districts (e.g., residential, commercial, or manufacturing) as well as area-specific districts (known as Special Purpose Districts). The Zoning Resolution includes additional regulations applicable to sites located along the waterfront throughout the city. Zoning regulations are not applicable to parcels located within the public right-of-way or parcels that are designated as public parkland. **Tables 6A-3 and 6A-4** summarize the zoning districts located within the study area, and **Figure 6A-8** shows their location.

**Table 6A-3
Existing Zoning Districts in the New York Study Area**

Zoning District	Maximum FAR ¹	Uses/Zone Type
Manufacturing Districts		
M1-5	5.0 Commercial and Manufacturing 6.5 Community Facility ²	Light manufacturing districts allowing industrial uses that conform with performance standards (related to dust, noise, or vibration), such as repair shops, shipping, and storage facilities; typically as buffers between heavy industry and adjacent commercial or residential districts.
M1-6	10.0 Commercial and Manufacturing ³ 10.0 Community Facility ^{2,3}	
M2-3	2.0 Commercial and Manufacturing	General manufacturing district (typically located in waterfront areas) with lower performance standards, providing for industrial uses that produce a higher level of disturbances.
Commercial Districts		
C6-3	6.0 Commercial ³ 0.99-7.52 Residential 10.0 Community Facility ³	High-density commercial districts permitting a wide range of uses, including residential uses; typically located in Central Business Districts with large-scale office and retail establishments serving the entire metropolitan region.
C6-4	10.0 Commercial and Residential ³ 10.0 Community Facility	
C6-4X (in Special Hudson River Park District)	10.0 Commercial, Residential, Community Facility Up to 12.0 with purchase of development rights from park	High-density commercial and residential district; when mapped within Special Hudson River Park District, requires mandatory inclusionary (affordable) housing
C2-5 Overlay	2.0 Commercial (within high-density residential districts)	Overlay district within a residential district along a major street; allows for local commercial facilities (e.g., restaurants or grocery stores) serving a residential area.
Residential Districts		
R8A	6.02 Residential 6.5 Community Facility	Higher density residential district with predominantly large apartment buildings; contextual lot coverage and height regulations provide for buildings that match the scale of historic residential neighborhoods
<p>Notes: 1. Floor Area Ratio (FAR) is a measure of density establishing the amount of development allowed in proportion to the base lot area. For example, a lot of 10,000 sf with an FAR of 1 has an allowable building area of 10,000 sf. The same lot with an FAR of 10 has an allowable building area of 100,000 sf.</p> <p>2. Certain community facilities (including houses of worship, hospitals, and ambulatory health care facilities) permitted in M1 districts.</p> <p>3. Up to 20 percent increase for a public plaza bonus.</p> <p>Source: <i>New York City Zoning Resolution.</i></p>		



Source: NYC Dept. of City Planning, October 2018

- Project Site
- Study Area (500-foot boundary)
- Existing Northeast Corridor
- Zoning Districts
- C1-5 Commercial Overlay District
- C2-5 Commercial Overlay District
- Special Hudson River Park District
- Special Hudson Yards District
- Special West Chelsea District



Zoning in New York Study Area
Figure 6A-8



Table 6A-4

Special Zoning Districts in the Study Area

District	District Description and Regulations
Special Hudson Yards District	Includes variety of use, bulk, and urban design controls in six subdistricts. Provides for high-density commercial and residential development along two corridors. New developments required to provide retail on major corridors, street wall continuity, pedestrian circulation space, plantings, subway entrance easements, and screened or below-grade parking. Bonus mechanism provides for increased bulk in some areas for capital improvements.
Special West Chelsea District	To facilitate the redevelopment of a former manufacturing area with residential and commercial uses, centered on the High Line. Includes a High Line Transfer Corridor (HLTC) allowing sites along and under the High Line to transfer development rights to designated receiving sites in order to preserve light, air, and views around the High Line. Includes 10 mapped subareas with special bulk and lot coverage regulations.
Special Hudson River Park District	Established to facilitate the repair and rehabilitation of piers, bulkheads, and infrastructure in Hudson River Park and facilitate their maintenance and development, through the transfer of development rights within the district, given that commercial development in the park is limited; intended to promote an appropriate range of uses to complement Hudson River Park and, if housing is included, serve residents of varied income levels.
Source: <i>New York City Zoning Resolution.</i>	

6A.3.3.2.1 Project Site

Hudson River Park and the West 30th Street Heliport are located within a manufacturing district (M2-3), although zoning regulations do not apply to public parkland. The paved lot between West 29th and West 30th Streets (Twelfth Avenue fan plant site, on Lot 1 of Block 675) is also located in a manufacturing district (M1-6). The eastern end of Block 675, including the area proposed as part of the Project site for construction staging (a portion of Lot 12), is zoned C6-4X as part of the Special Hudson River Park District. This zoning designation allows properties in this district to serve as receiving sites for development rights transferred from Hudson River Park (see Section 6A.3.3.5 for discussion of this special district).

The Hudson Yards Right-of-Way Preservation Project being built to preserve the railroad right-of-way beneath the Hudson Yards overbuild project is located in a commercial district (C6-4) within the Special Hudson Yards District, although zoning regulations do not apply to this below-grade area. The 450 West 33rd Street portion of the Project site is also located in a C6-4 commercial district and the Special Hudson Yards District (Farley Corridor Subdistrict B, Western Blocks Subarea B1). Descriptions of the zoning regulations applicable to these Project site parcels are included in **Tables 6A-3 and 6A-4**.

6A.3.3.2.2 Study Area

As shown in **Figure 6A-8**, the study area consists of a mix of manufacturing and commercial zoning districts. Most of the study area is mapped with two special districts, which were both adopted in 2005 as part of rezoning efforts to promote redevelopment in the area with high-density commercial and residential uses: the Special Hudson Yards District and the Special West Chelsea District. The Special Hudson Yards District occupies a large portion of the study area and provides for high-density commercial and residential development, retail on major corridors, streetwall continuity, pedestrian circulation space, and other features. Other zoning districts in the study area include mixed commercial and manufacturing, and mixed residential and community uses.

6A.3.3.3 PUBLIC POLICY

6A.3.3.3.1 New York City Waterfront Revitalization Program

New York City has adopted a Local Waterfront Revitalization Program (LWRP) that has been formally approved by the New York State Department of State in conformance with the federal Coastal Zone Management Act. Chapter 21, “Coastal Zone Consistency,” discusses the New York City LWRP.

6A.3.3.3.2 PlaNYC/OneNYC

In April 2007, the New York City Mayor’s Office of Long Term Planning and Sustainability released *PlaNYC: A Greener, Greater New York* (PlaNYC), which included policies to address key challenges faced by New York City: population growth, aging infrastructure, and global climate change. Since that time, updates to PlaNYC build on the goals set forth in 2007 and provide new objectives and strategies. In 2015, *One New York: The Plan for a Strong and Just City* (OneNYC) was released by the Mayor’s Office of Sustainability and the Mayor’s Office of Recovery and Resiliency. OneNYC builds upon the sustainability goals established by PlaNYC and focuses on growth, equity, sustainability, and resiliency. OneNYC’s Transportation Initiative 3 calls for expansion of the transit network, including developing a regional transit strategy to address the growing number of commuters from west of the Hudson River.

6A.3.3.3.3 Vision 2020

In March 2011, the New York City Department of City Planning released *Vision 2020: New York City Comprehensive Waterfront Plan*. It contains eight strategies to achieve the goal of improving the New York City waterfront: expand public access; enliven the waterfront; support the working waterfront; improve water quality; restore the natural waterfront; enhance the blue network; improve government oversight; and increase climate resilience.

6A.3.3.3.4 Block 675 Planning Framework

In May 2017, NYCDCP released a planning study, *Block 675 Planning Framework*,³ that provides an overall vision for developments on Block 675 in terms of land use, density, massing, and urban design. Block 675 is located between West 29th and 30th Streets, and between Twelfth and Eleventh Avenues (see Figure 4-4 in Chapter 4, “Analysis Framework”). The planning framework for Block 675 is intended to inform review of private land use applications on the block and support a targeted expansion of the Special Hudson River Park District established by the New York City Zoning Resolution. The study establishes parameters for potential private developments and land use applications in the future, and recommends that sites on the block be rezoned to C6 high-density districts and included in the Special Hudson River Park District, in which developers would be allowed to purchase development rights from Hudson River Park through specified mechanisms. The eastern portion of the block is now zoned consistent with this planning recommendation. The Block 675 Planning Framework recommends a mix of land uses for the block including residential, commercial, and public facility, with active uses and glazing on lower floors to activate the streetscape along West 30th Street and Eleventh Avenue. The framework envisions a building massing rhythm that responds to the transitional context from Chelsea to Hudson Yards and from inland to waterfront, and calls for preservation of views of the city and toward the Hudson River, including sightlines at the corner of Twelfth Avenue and West 30th Street. The planning framework recognizes the need to incorporate the Hudson River Tunnel

³ <https://www1.nyc.gov/assets/planning/download/pdf/plans-studies/block-675-planning-framework/block-675-presentation-0517.pdf>.



Project into Block 675, including both a tunnel passing beneath the block and a tunnel ventilation building on the western portion of the block.

6A.3.3.3.5 Hudson River Park Act

Hudson River Park, consisting of both land and water (from the shoreline to the pierhead line) from just north of Chambers Street to West 59th Street, including along the western boundary of the New York study area, was created by the New York State legislature through the Hudson River Park Act of 1998. This legislation identified the boundaries of Hudson River Park, established the Hudson River waters within the park as an estuarine sanctuary, and created the HRPT as a public benefit corporation with the mandate to design, construct, and maintain the park. HRPT is undertaking construction of Hudson River Park incrementally, as funding becomes available. The Hudson River Park Act requires that the Hudson River Park be financially self-supporting to the extent practicable, stating, “the costs of the operation and maintenance of the park [shall] be paid by revenues generated within the Hudson River Park and that those revenues be used only for park purposes.” To support the park, the Hudson River Park Act defines a non-tourism/non-recreational heliport as a permissible use in the park that generates revenues in support of the park’s operations.

In 2013, New York Governor Andrew M. Cuomo signed an amendment to the Hudson River Park Act into law to help the park address its ongoing financial constraints. The amendment allows the transfer by sale of any unused development rights on the park property to properties located up to one block east of the boundaries of the park, if and to the extent designated and permitted under local zoning ordinances. The 2013 amendment to the Hudson River Park Act also called for relocation of the non-tourism/non-recreational heliport to a new floating structure to be located between West 29th and West 32nd Streets and permitted an interim commercial use east of the bulkhead in the park between West 29th and West 34th Streets up to July 1, 2024.

Following the 2013 amendment, in 2016 the City of New York established a new zoning special district, the Hudson River Park District. The intent of the special district is to facilitate the repair, rehabilitation, maintenance, and development of the Hudson River Park, through the transfer of development rights within the Special Hudson River Park District, as well as to promote appropriate uses on the receiving sites that complement the park and serve residents of varied income levels, to the extent residential use is included. For sites to receive development rights from Hudson River Park, they must first be included in the Special Hudson River Park District through an amendment to the Zoning Resolution and the City Planning Commission must grant a special permit for the transfer.⁴ In addition, the HRPT must make a formal approval through its Board of Directors for the transfer of development rights. The 2016 New York City actions also included approval of a private application pursuant to the special district provisions to transfer unused development rights from Pier 40 in Hudson River Park (granting site) to 550 Washington Street (receiving site), a site across Route 9A from Hudson River Park at approximately Houston Street.

In June 2018, the City of New York amended the Zoning Resolution to map the Special Hudson River Park District on the eastern portion of Manhattan Block 675, the block between Eleventh and Twelfth Avenues and West 29th and West 30th Streets. All lots except Lot 1 are included in the special district. At the same time, the City Planning Commission granted special permits for the transfer of development rights from Hudson River Park to two development sites on the eastern portion of Block 675.

In addition, the Hudson River Park Act was amended in 2018 to allow HRPT to enter into a lease for a new below-grade rail tunnel beneath the park between West 27th and West 30th Streets (i.e.,

⁴ New York City Zoning Resolution Article VIII Chapter 9.

the new Hudson River Tunnel included as part of the Preferred Alternative for the Hudson Tunnel Project).

6A.4 AFFECTED ENVIRONMENT: FUTURE CONDITIONS

In the future absent implementation of the Preferred Alternative, changes will occur to the New Jersey and New York study areas by the Project's analysis year of 2033. These are discussed below. The evaluation of the future affected environment considers conditions in the study areas during the future analysis years absent the implementation of the Preferred Alternative. This condition is the baseline against which the impacts of both the No Action and Preferred Alternatives are compared.

6A.4.1 NEW JERSEY

6A.4.1.1 LAND USE

No notable changes are proposed in the North Bergen portion of the study area in the future by 2033, with the exception of some planned modifications at Substation 42, where Amtrak currently has plans to add a fifth traction power transformer and build a new control house to relocate equipment from the deteriorating historic substation building adjacent to Substation 42.

In Union City, New Jersey, a new residential development is under construction at 1300 Manhattan Avenue on the hillside adjacent to the Hoboken staging area. When complete, this development will include four buildings with 55 apartments. The new buildings will comprise 11 stories, about half of which will step down the hillside below Manhattan Avenue.⁵

In Weehawken and Hoboken, New Jersey, Hudson County intends to rehabilitate the Willow Avenue bridge over the HBLR. The timing of this work is unknown.

Also in Hoboken, the New Jersey Department of Environmental Preservation (NJDEP) is proposing the Rebuild By Design project, an initiative to reduce frequent flooding in Hoboken due to major storm surges, high tides, and heavy rainfall events. As part of that project, NJDEP proposes numerous green infrastructure elements, such as landscaped berms and levees and bioretention basins, to "resist" and "delay" flooding. Within the study area, the Rebuild By Design project includes three features near the Project site:

- A "resist" feature, a flood barrier, along the east side of Park Avenue in Hoboken. Based on preliminary information, the barrier will begin at approximately 14th Street on the east side of Park Avenue and will continue northward and cross over the HBLR tracks near Dykes Lumber. It will then curve along the north and west side of the HBLR right-of-way to approximately 19th Street. The wall will be 6 to 8 feet tall, with deep, pile-supported foundations.
- Harborside Park/Cove Park will be replaced with a new signature park that incorporates flood resist structures. Potential enhancements to the park include playgrounds, lawn areas, game courts and a viewing deck overlooking Weehawken Cove. Design and landscaping improvements to the Hudson River Walkway are also included in the Rebuild by Design project.
- A "delay, store, discharge" feature, a below-grade pump station, is proposed in the vicinity of Hoboken's wastewater treatment plant. Conceptual plans site this pump station beneath Clinton Street on the south side of the HBLR right-of-way, potentially near Clinton Street.

⁵ <https://hobokenheights.com>; accessed May 11, 2021.



Underground piping will also be installed along both sides of the HBLR right-of-way, with two new outfalls in Weehawken Cove. NJDEP completed an FEIS evaluating the impacts of the Rebuild by Design project in June 2017.⁶ NJDEP has obtained funding from the U.S. Department of Housing and Urban Development and construction began in spring 2021, with project completion expected in 2022.

In addition, two large construction projects are under way or planned outside the land use study area—rehabilitation of the Route 495 bridge over Tonnelles Avenue and replacement of the Lincoln Tunnel Helix. The Route 495 project is nearing completion. For more information on the Lincoln Tunnel Helix this project, see Chapter 20, “Indirect and Cumulative Effects,” Section 20.6.3.

6A.4.1.2 ZONING AND PUBLIC POLICY

Within the study area, the Rebuild By Design project represents a notable public policy that will be implemented in the future by the analysis year for this EIS of 2033. In terms of public policy, the Jersey City Division of City Planning is currently undertaking a comprehensive update to its Master Plan.

In addition, the 2018 Master Plan Land Use Element recommended a new mixed commercial and industrial zoning district to replace the city’s current light industrial district, including on the Hoboken shaft site and staging area. These changes may occur in the future.

6A.4.2 HUDSON RIVER

Conditions in the Hudson River near the Project site will remain unchanged in the future by the Project’s analysis year of 2033. As discussed in Section 6A.3.3.3.5, an amendment to the Hudson River Park Act calls for the relocation of the West 30th Street Heliport to a floating structure located between West 29th and West 32nd Streets, but the timing of such a relocation is unknown.

6A.4.3 NEW YORK

6A.4.3.1 LAND USE

6A.4.3.1.1 Project Site

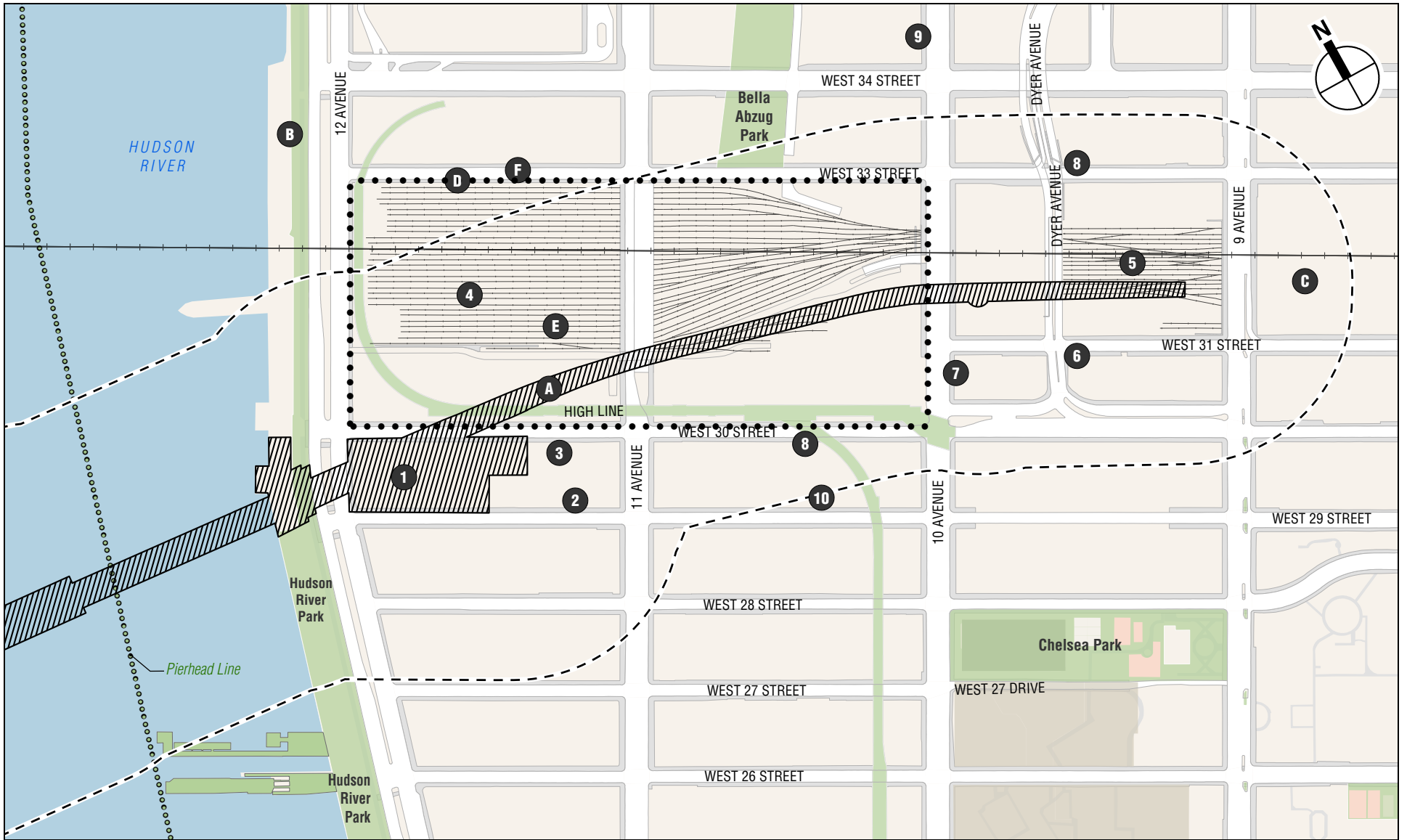
A number of development initiatives are proposed or planned in the study area by 2033, including on the Project site. Developments proposed in the study area, including on the Project site, are shown in **Figure 6A-9**. Along the waterfront, HRPT is planning to make improvements to the portion of Hudson River Park located between West 29th and 34th Streets, including the portion that is included in the Project site. See the discussion of the study area in Section 6A.4.3.1.2.

The current owner of Lot 1 may have an interest in redeveloping the site. A 2020 news article reported that the owner is planning a large office building for this site, consistent with the site’s current zoning.⁷ The M1-6 district does not prescribe any maximum height and the new development would likely be a high-rise building along Twelfth Avenue to take advantage of waterfront views over the Hudson River.

In addition, Amtrak is currently constructing a concrete casing on the Project site along the southern portion of the LIRR’s West Side Yard. As discussed above and detailed in Chapter 2, “Project Alternatives and Description of the Preferred Alternative,” this concrete casing structure, the Hudson Yards Right-of-Way Preservation Project, is intended to preserve a future location for

⁶ <http://www.nj.gov/dep/floodresilience/rbd-hudsonriver-feis.htm>.

⁷ <https://www.commercialcafe.com/blog/georgetown-1msf-office-tower-chelsea/>.



- Project Site
- Study Area (500-foot boundary)
- Existing Northeast Corridor
- Potential Future Developments (see Table 6A-5)



Potential Future Developments in New York Study Area
Figure 6A-9

rail operations while the large-scale Hudson Yards redevelopment is constructed on a platform above the West Side Yard.

6A.4.3.1.2 Study Area

As described above, the New York study area is currently undergoing extensive redevelopment as a result of recent public policy initiatives in the area, and many sites have recently been developed and others are currently under construction with high-density developments. **Table 6A-5** summarizes projects planned in the New York study area by 2033 (see also **Figure 6A-9**).

**Table 6A-5
Potential Future Projects in New York Study Area**

Fig. Ref.*	Project Name/Address	Project Description/Program	Completion Year
Development Projects			
1	Twelfth Avenue between West 29th and West 30th Streets	Approximately 941,000 square sf of hotel and/or commercial space	Unknown
2	601 West 29th Street	Mixed-Use: high-rise (60 stories), 960,000 sf of residential and retail space (up to 990 apartments), accessory parking, and a possible EMS station	2022
3	606 West 30th Street	Mixed-Use: 42 stories, 295,000 sf of residential and retail space (approximately 250 apartments)	2022
4	Hudson Yards—Western Rail Yard	Mixed-Use: eight towers (approximately 30 to 75 stories), 6.2 million sf of residential, office, retail, and school space with public open space	2030
5	Manhattan West	Mixed-Use: four towers (approximately 30 to 70 stories), retail podiums, 4.7-million sf of office, residential, and retail space; public open space	2024
6	432 West 31st Street	Commercial: 220-room hotel	Unknown
7	360 Tenth Avenue	Mixed-Use: 721 dwelling units, 12,000 sf of retail space	UC
8	431 West 33rd Street	Mixed-Use: 24 dwelling units, 5,500 sf of retail	Unknown
9	435 Tenth Avenue	Commercial: 2.2 million sf of office space	Unknown
10	517 West 29th Street	Residential: 56,160 sf of residential	UC
Infrastructure/Open Space Projects			
A	Hudson Yards Right-of-Way Preservation Project	Concrete casing preserving rail right-of-way underneath Western and Eastern Rail Yards	UC
B	Hudson River Park	Park improvements, 29th-34th Streets	UC
C	Farley Post Office/Moynihan Station	Phase 1: West End Concourse Expansion and Phase 2: Moynihan Train Hall are complete, with ongoing commercial development.	2021
D	West Side Yard Perimeter Protection Project	Resiliency project to construct protection for the West Side Yard	Unknown
E	Western Rail Yard Infrastructure Project	Section of Hudson Yards Right-of-Way Preservation Project with platform above the concrete casing and rail yard to support Hudson Yards development above.	2026
F	West 33rd Street Viaduct	Regrading of West 33rd Street between Eleventh and Twelfth Avenues to correspond with new construction over Hudson Yards.	Unknown
<p>Notes: UC = Under Construction; RC = Recently Completed * See Figure 6A-9.</p> <p>Sources: No. 7 Subway Extension—Hudson Yards Rezoning and Development Program Final Generic Environmental Impact Statement (2004); NYC Dept. of Buildings; Related Companies (http://www.hudsonyardsnewyork.com/, accessed December 2016); Brookfield Properties; Friends of the High Line (http://www.thehighline.org/, access December 2016); New York YIMBY; AKRF, Inc. field survey, November 2016.</p>			



The eastern end of Block 675 is currently in construction with two separate high-rise residential buildings that will be complete in 2022. These developments are at West 29th Street at Eleventh Avenue (601 West 29th Street, consisting of former Lots 12, 29, and 36, now consolidated as Lot 12) and on West 30th Street (606 West 30th Street, consisting of Lot 39, which has been consolidated with former Lot 38). Both projects will introduce new mixed-use towers (with a tower approximately 600 feet tall on West 29th Street and a tower approximately 520 feet tall on West 30th Street) with both residential and retail space. The development at 601 West 29th Street will be a 60-story mixed-use residential and commercial building, with up to 990 residential units; retail uses; and 198 parking spaces as well as bicycle parking in an on-site garage. The West 29th Street project may also include a new station for the New York City Fire Department (FDNY) Emergency Medical Services (EMS), to replace a station currently located on West 23rd Street; if the EMS station is not included in that project, this portion of the site would be developed with a garage. The other independent developer for the second portion of the area, 606 West 30th Street, is constructing a 42-story, primarily residential mixed-use building with approximately 250 apartments.

North of West 30th Street are the three major ongoing redevelopment projects (Western Rail Yard, Eastern Rail Yard, and Manhattan West, collectively referred to as Hudson Yards) discussed in Section 6A.3.3.1.2 that are creating a new high-rise neighborhood built on platforms above the West Side rail yard. While much of the redevelopment between Tenth and Eleventh Avenues (Eastern Rail Yard project) has been completed, one remaining high-rise office building is under construction, to be complete in 2022. On the Western Rail Yard site between Eleventh and Twelfth Avenues, eight towers will be constructed over the rail yard totaling approximately 6.2 million square feet of residential, office, retail, and school space. This project has an estimated completion year of 2029. In addition, east of the building at 450 West 33rd Street, the Manhattan West project will include four towers and a mid-rise office building with approximately 4.7 million square feet of office, residential, hotel, and retail space, planned to be completed by 2026. A portion of this project has been completed to date. All three development projects will include extensive public open space, with approximately 14 acres of open space on the Eastern and Western Rail Yards and approximately 2 acres of open space in the Manhattan West project.

Along the western edge of the New York study area, Hudson River Park will continue to be improved in the future. The 2013 amendment to the Hudson River Park Act called for relocation of the West 30th Street Heliport to a new floating structure between West 29th and West 32nd Streets.⁸ The exact timing of the relocation is unknown. Hudson River Park is being gradually developed as funding becomes available. The two private developers for the east end of Block 675 have purchased development rights from the park. According to the 2018 FEIS for the rezoning of the eastern portion of Block 675, HRPT will use the anticipated funding from the sale of the development rights to undertake improvements to the park, potentially including improvements in the segment of the park from 29th to 34th Street. HRPT has committed to work with Community Board 4 to prioritize improvements that could be funded by the transfer. Options include an over-water pedestrian platform and related upland park improvements between West 58th and West 59th Streets, construction of habitat beach and accessible walkway and related landscape improvements between West 34th and West 35th Streets, design of new temporary improvements and permanent park on the upland area between West 29th and West 34th Streets, construction of a section of the upland area between West 32nd and West 34th Streets, and upgrades to Chelsea Waterside Park. In addition, HRPT has stated that it intends to set aside 20 percent of the total value of the transfers for future capital maintenance needs for the portion of

⁸ 2013 Amendment to Hudson River Park Act (Chapter 517 of the Laws of 2013), Section 3(m)(v).

the park within Community Board 4.⁹In the area immediately to the east of the New York study area across Ninth Avenue, the James A. Farley Post Office Building has recently undergone renovations to convert the building into a multiuse facility including a new rail passenger station known as Moynihan Station. The Moynihan Station Project includes a new grand train hall for passengers and improved passenger amenities, with commercial and transit-oriented retail space. Phase 1 of the project included the West End Concourse Expansion to create access to most of PSNY's tracks and platforms through the Farley Building, expansion and rehabilitation of the underground connecting corridor between the new West End Concourse and existing PSNY, and new and reconfigured entrances for the Eighth Avenue subway lines (A/C/E) at PSNY. Phase 2 included construction of Moynihan Train Hall in the Farley Building, which opened in January 2021. Construction of additional commercial and retail space is ongoing.

6A.4.3.2 ZONING

No modifications to zoning regulations within the New York study area are currently proposed that would be in effect by 2033. The New York City Department of City Planning is currently evaluating a potential modification to the New York City Zoning Resolution to require a special permit from the City Planning Commission for new hotels within M-1 zoning districts. According to HRPT and based on comments received during the public comment period for the DEIS, a developer is proposing to develop a new building on Lot 1 and would likely seek to purchase development rights from Hudson River Park for that development; however, no developer is currently seeking such a transfer or any amendments or modifications to the zoning map or zoning text related to Lot 1. Lot 1 on Block 675 is currently zoned M1-6, which allows high-density development with commercial or hotel use (see Section 6A.3.3.2.1). If the zoning text amendment related to hotels in M1 districts is approved, a developer would require a special permit for development of a hotel on Lot 1. In addition, other properties within a 500-foot radius will retain their existing zoning, which is a mix of manufacturing and commercial districts, as discussed in Section 6A.3.3.2.2 and shown in **Figure 6A-8**.

6A.4.3.3 PUBLIC POLICY

NYCDCP released the *Block 675 Planning Framework* in May 2017. The planning framework supports a targeted expansion of the Special Hudson River Park District, which was recently enacted, and the redevelopment of the waterfront block into a mixed-use area.

6A.5 IMPACTS OF NO ACTION ALTERNATIVE

No new passenger rail tunnel across the Hudson River would be constructed in the No Action Alternative and the North River Tunnel would not be fully rehabilitated. For purposes of analysis in this FEIS, FRA and NJ TRANSIT have assumed that with the No Action Alternative, the existing North River Tunnel would remain functional and in operation at least through the FEIS analysis year of 2033, with continued maintenance as necessary to address ongoing deterioration to the extent possible.

Without proper maintenance of the transportation infrastructure, delays on Amtrak and NJ TRANSIT service for unplanned maintenance and repairs would continue to worsen. As trans-Hudson travel demand continues to grow, more and more people would be affected as access to work, home, and areas of commerce would be more difficult in New Jersey, New York, and throughout the NEC. Eventually, this would have adverse effects on the region's economy that could in turn inhibit development and land use change. Locally, the No Action Alternative would

⁹ Block 675 East Rezoning FEIS, April 2018, Chapter 6, "Open Space," p. 6-15.
<https://www1.nyc.gov/site/planning/applicants/env-review/block-675-east.page>.



have no effect on land uses on or near the Project site or in the study area. Since it would not add any new buildings, it also would have no effect with respect to zoning.

In terms of public policy, the No Action Alternative would not be supportive of transportation and therefore would not be consistent with public policies seeking to strengthen the area's transportation network.

6A.6 CONSTRUCTION IMPACTS OF THE PREFERRED ALTERNATIVE

6A.6.1 OVERVIEW

Potential impacts related to land use, zoning and public policy during the construction of the Preferred Alternative, including both the new tunnel and rehabilitation of the North River Tunnel, are discussed in this section. Construction activities associated with the Preferred Alternative would potentially be disruptive to nearby land uses, because of the activity, dust, and noise at the Project site and the increased truck traffic traveling to and from the site. In most locations, construction would not physically affect nearby properties, but there would be some exceptions, as discussed below.

Some temporary and permanent property acquisitions and easements would be needed to implement the Preferred Alternative. These are discussed in the following chapter of this EIS, Chapter 6B, "Property Acquisition."

6A.6.2 NEW JERSEY

6A.6.2.1 LAND USE

6A.6.2.1.1 County Road to Tonnelle Avenue

In the western portion of the New Jersey study area where new surface tracks would be constructed alongside the existing NEC, construction activities for the Preferred Alternative would occur on a narrow strip of land close to and including the NEC. During construction of the surface tracks, the Project contractor would likely use Amtrak's existing NEC right-of-way for small staging areas or laydown areas; the Project contractor may also elect to obtain other areas close to the right-of-way if additional space is needed. These staging areas in the industrial area close to the existing right-of-way could be in use for up to five years over the course of surface track construction (for more information, see Chapter 3, "Construction Methods and Activities," Section 3.3.1.8, and Chapter 7, "Socioeconomic Conditions," Section 7.6.3). In general, for land uses that are proximate to construction activities, the noise, truck activity, and other construction would be discernible from neighboring properties, but this disruption would be unlikely to adversely affect functions at nearby industrial, warehousing, and trucking businesses.

In this area, some private property would need to be acquired to facilitate construction (temporary construction easements) and for the permanent location of the Project's rail right-of-way (permanent easements and/or acquisitions). The acquisitions would consist of narrow strips of land at the northern edge of larger properties that are occupied by warehousing and trucking businesses. The temporary and permanent property acquisitions are described in detail in Chapter 6B, "Property Acquisition."

In addition, temporary use of some properties would be required to allow access to the construction zone. In most locations, this would consist of construction workers and trucks using driveways and paved areas of nearby industrial uses to access the construction zone. The Project Sponsor would make agreements with private property owners regarding how this access would occur, so as to minimize adverse impacts on business activities.

Temporary construction activities have the potential to adversely affect the land use on certain affected properties. As also discussed in Chapter 7, "Socioeconomic Conditions," Section 7.6.3, this may include the following:

- Light industrial and warehousing businesses at 801 Penhorn Avenue (Secaucus). Specifically, construction-related activities would encroach on the area immediately adjacent to loading docks located on the northwestern side of the building. Over a period of five years, there would be intermittent periods totaling approximately 12 months when occupants of this building would not have use of the loading bays on that side of the building. Six parking spaces on the east side of the building would also need to be removed. Work would be staged so that access to some loading docks would be available while others were closed. During these periods, the Project contractor would drive piles to serve as the foundation for a new retaining wall, install the retaining wall to support the widened embankment, and install a large (36-inch-diameter) underground drainage pipe beneath the paved parking area. The Project Sponsor would coordinate access needs with the property owner and building tenants to minimize the disruption that would occur to business activities, where possible.
- Light industrial and warehousing businesses at other properties on the north side of Penhorn Avenue in Secaucus and on the north side of 16th Street in North Bergen. The temporary easements for construction of the Preferred Alternative would remove parking spaces or container storage areas for these businesses. Temporary loss of parking spaces would be required for a total of up to five months intermittently over a five-year period at these properties. Based on the large amount of off-street parking available in the vicinity, it is likely that replacement parking would be available for any temporary loss of parking. The Project Sponsor would fully restore the property once construction is complete.

The Project Sponsor will coordinate with Conrail and NYSW regarding construction of the new bridge structure over the freight railroad right-of-way used by Conrail and NYSW close to Tonnelle Avenue, so that any required track outages would have minimal disruption to the freight railroads.

6A.6.2.1.2 Tonnelle Avenue Area

In the Tonnelle Avenue area, utility locations and the construction of a new Tonnelle Avenue roadway overpass to accommodate the Preferred Alternative's new rail right-of-way would be managed so that two-way traffic could be maintained on Tonnelle Avenue at all times, similar to construction of other bridge projects throughout the state. The Project Sponsor will implement a Maintenance and Protection of Traffic (MPT) plan in coordination with the appropriate local transportation agencies to minimize disruptions to traffic to the extent feasible (for more information, see Section 5A.9 in Chapter 5A, "Traffic and Pedestrians." Any required lane closures would be coordinated to limit impacts to off-peak periods. To provide adequate work zone widths, it is possible that the travel lanes would be reduced from their current 12-foot widths and the roadway shoulders would be closed throughout the construction zone. Lane closures would be required in this area for up to two years to facilitate utility relocations and construction of the new bridge. Resultant traffic delays could impede vehicular access to surrounding businesses.

In addition, the Preferred Alternative would involve heavy construction activities at the Tonnelle Avenue staging area for a period of approximately 11 years, including staging for the surface tracks through the Meadowlands, the new Palisades tunnel, and rehabilitation of the North River Tunnel. During that time, construction equipment on the staging area would be noticeable, as would heavy truck traffic on Tonnelle Avenue delivering construction equipment and materials and removing debris from the site. This construction traffic could cause additional disruptions to local vehicular traffic on Tonnelle Avenue. Most of the immediate land uses in the area are commercial or industrial; therefore, they would not be adversely affected by this construction. However, the noise from nearby construction has the potential to disturb quiet activities in the BAPS Shri Swaminarayan Mandir, a Hindu temple located 150 feet south of the construction zone; and



residences and a new park on the slope of the Palisades above the Tonnelle Avenue corridor along Paterson Plank Road and Grand Avenue as well as residences farther south on Tonnelle Avenue near 10th Street and Secaucus Road, where truck traffic would use the Secaucus Road U-turn.

Tonnelle Avenue construction activities also would be disruptive to the residential uses and new park that are on the slope of the Palisades above the Tonnelle Avenue corridor, along Paterson Plank Road and Grand Avenue. Construction would be most noticeable when the tunnel portal and initial tunnel are created, requiring the use of controlled drill-and-blast activities in the rock face. As discussed in Chapter 12A, "Noise," Section 12A.9, the Project Sponsor will implement a number of mitigation measures to reduce or manage loud construction noise, including window improvements for affected residences so that interior noise levels would be lower. In addition, FRA and NJ TRANSIT have identified and evaluated a potential measure to mitigate the traffic impacts resulting from construction traffic on Tonnelle Avenue. This measure is the introduction of a new traffic signal on Tonnelle Avenue at the driveway of the Tonnelle Avenue staging area, to allow northbound trucks to exit the staging area without heading south to turn around at Secaucus Road. If this signal is provided, a noise impact would no longer occur at residential receptors on Tonnelle Avenue as a result of truck traffic. For more information, see Chapter 5A, "Traffic and Pedestrians," Section 5A.8.1.1.

6A.6.2.1.3 The Palisades

The study area in North Bergen and Union City located above the Preferred Alternative's new tunnel alignment through the Palisades would be largely unaffected by construction activities, other than land uses directly uphill from the Tonnelle Avenue construction sites (discussed in the previous section). Operation of the tunnel boring machine may result in discernible vibration for a few days as the machine passes deep below the surface, but this would not be disruptive to land uses. In addition, vibration may also be noticeable during controlled drill-and-blast operations to create the tunnel cross passages between the Preferred Alternative's two tubes, but again would not be disruptive to activities on the surface. More information on vibration during construction is provided in Chapter 12B, "Vibration," in Section 12B.6.2.

6A.6.2.1.4 East of the Palisades

At the Hoboken staging area, heavy construction staging activities associated with construction of the river tunnel, ventilation shaft, and fan plant would last approximately seven years. During that time, the noise, dust, and trucking activities at the site and on local roadways leading to and from the site would be disruptive to the Shades residential neighborhood to the north (in Weehawken) as well as residential uses above the site at the top of the Palisades in Union City. As described in Chapter 3, "Construction Methods and Activities," a maximum of 8 trucks per hour in each direction would arrive at and depart from the Hoboken staging site during the most intensive construction activity. The staging area would be enclosed by a noise barrier up to 25 feet high (see Chapter 12A, "Noise," Section 12A.9), which would lessen the noise from this site for the Shades residential neighborhood. The noise barrier would not block noise for residences above the site, since they are higher than any wall could be.

As described in Chapter 3, "Construction Methods and Activities," Section 3.3.3.4, a construction access route or routes ("haul routes") would be created away from the local street system to move construction trucks away from the Shades neighborhood. All three truck access route(s) would be via a new roadway to be constructed along the northern border of the HBLR right-of-way at the southern edge of the construction site and adjacent industrial property. This off-street haul route would bring trucks to and from streets farther from the staging area. As shown in Figure 3-7 in Chapter 3, "Construction Methods and Activities," three different routes are being evaluated for trucks traveling to and from this off-street truck access road near the staging area: haul route

Option 1, using a combination of the Park Avenue service road (along the west side of the Park Avenue viaduct) with the Willow Avenue service road (on the east side of the Willow Avenue viaduct); haul route Option 2, using only the Willow Avenue service road, on both sides of the Willow Avenue viaduct; and haul route Option 3, using an off-street construction road alongside the north and west side of the HBLR tracks to 19th Street, avoiding Willow and Park Avenues altogether (see Chapter 3, “Construction Methods and Activities,” Section 3.3.3.4). These routes are being considered in this EIS to allow a comparison of routing options so that potential impacts from the trucking can be minimized. The final truck route(s) to be used will be determined by the Project Sponsor, in coordination with the Project contractor, during final design. The three routes are as follows:

- In the first truck route option (Option 1), trucks headed to the construction site on the Park Avenue service road would be close to the east side of the 10-story residential building (the Gateway building at 1700 Park Avenue) that is between West 18th Street and the HBLR. After passing the residential building, trucks would turn west and use an area along the southern side of the residential building where NJ TRANSIT has a permanent easement that it acquired to allow truck access to the same site as part of the Access to the Region’s Core (ARC) Project, a previous plan for a new rail tunnel. The building curves to avoid this easement area. The easement area is occupied by a private dog run used by residents of the apartment building, which would be displaced for the 10-year construction period. Trucks would then continue to the shaft site on an off-street construction road along the north side of the HBLR. Trucks leaving the shaft site would travel north on the Willow Avenue service road along the west side of the Gateway building. To accommodate outbound trucks, the curve from the off-street construction road to Willow Avenue would be widened, which would require underpinning the Willow Avenue viaduct (with associated pile installation) to allow a support pier to be moved. The Gateway apartment building is between Park and Willow Avenues, West 18th Street, and the HBLR right-of-way. Haul route Option 1 would thus involve truck access along three sides of this building.
- The second truck route option (Option 2) would not use NJ TRANSIT’s easement along the southern side of the Gateway apartment building and therefore would not displace the dog run. Instead, trucks headed to the construction site would use the southbound Willow Avenue service road. This would shift trucks away from the east and south sides of the Gateway apartment building. This narrow road is along the west side of the Willow Avenue viaduct, and includes three blocks with small three- and four-story apartment buildings and a church community center facing the service road. Truck traffic headed to the shaft site would be close to these buildings and could be noisy and disruptive, although these buildings already face the traffic on the Willow Avenue viaduct nearby. At the southern end of this route, a multi-building warehouse structure faces the roadway. To create an adequate turning radius for southbound trucks, the southernmost building in this warehouse complex (1714 Willow Avenue) would have to be demolished to create adequate turning room for trucks if this haul route is selected. Trucks leaving the shaft site would use the same route as described above, which would include underpinning the Willow Avenue viaduct to create a wider turning radius for outbound trucks.
- The third truck route option (Option 3) would use NJ TRANSIT’s easement along the southern side of the Gateway apartment building and therefore would displace the private dog run. It would continue past this easement along the northern and western side of the curved HBLR right-of-way beside the Dykes Lumber property to a new intersection at 19th Street. For this option, easements or property acquisition along the edge of the Dykes Lumber property would be required. This route would shift trucks away from residences on Willow and Park Avenue service roads and instead route them past the new residential building at 800 Harbor Boulevard.



While use of any of these haul routes would divert trucks from the Shades residential neighborhood of Weehawken, which is immediately north of the Hoboken staging area, trucks would still pass some residential uses, including the 10-story apartment building located on the north side of the HBLR right-of-way between the Willow and Park Avenue viaducts (the Gateway building at 1700 Park Avenue). This building has four levels of parking below the residential portion of the building, which would help to buffer the apartments from construction truck traffic on the local roadways beneath the viaducts. In addition, with Option 3, trucks would also pass the recently constructed Hamilton Cove residential development (800 Harbor Boulevard), located across the HBLR tracks from Dykes Lumber.

The presence of construction traffic throughout the day for approximately seven years would be noticeable at the Gateway apartment building, Hamilton Cove development, and the other residential and community facility buildings on Willow Avenue. With the revised construction staging and sequencing approach evaluated in this FEIS, a maximum of eight trucks per hour in each direction would use the local street system for approximately seven years. Peak truck volumes would occur during the most intensive construction activity, which would be construction of the vertical shaft at the Hoboken staging area. During other times, truck volumes would be lower. As discussed in Chapter 12A, “Noise,” Section 12A.9, the Project Sponsor will implement mitigation measures to reduce and manage high noise levels from construction activities, including window improvements for affected residences so that interior noise levels would be lower.

Beyond the Willow and Park Avenue viaducts, trucks traveling to and from the construction site on any of the three truck routes under consideration would continue on JFK Boulevard East, passing the North Hudson Regional Fire and Rescue Engine 3 fire station at 1900 Willow Avenue, which has a driveway onto JFK Boulevard East as well as Willow Avenue. The Project Sponsor will implement a traffic management plan (MPT plan) at this location in coordination with the appropriate local transportation agencies to ensure that emergency vehicles have access to the street network and are not blocked by traffic queuing at the intersection (see Section 5A.9 in Chapter 5A, “Traffic and Pedestrians,” for more information on the MPT plan).

Construction at the Hoboken construction site would not be disruptive to neighborhoods of Hoboken located south of the site. The construction site is separated from the area to the south by the right-of-way of the HBLR and an adjacent industrial neighborhood to the south, including a wastewater treatment plant. The nearest residential uses are well outside the study area, and are not within the area where trucking activities would occur.

Construction activities would be coordinated with the City of Hoboken’s Rebuild By Design project to ensure that the two projects do not conflict during their construction and long-term permanent condition, such as at the location where the wall proposed in the Rebuild By Design project would cross the Preferred Alternative’s tunnel alignment, and where potential haul route Option 3 intersects with the final alignment for the Rebuild By Design project. The Project Partners are evaluating how to accommodate the presence of the proposed Rebuild By Design floodwall in conjunction with use of haul route Option 3 and will advance the design for Option 3 to reflect the constraints on available space resulting from the presence of the floodwall in the same area.

6A.6.2.2 ZONING

The Project Sponsor will comply with any applicable local zoning. Any temporary disruptions associated with construction also would not be subject to zoning.

6A.6.2.3 PUBLIC POLICY

Construction of the Preferred Alternative would incorporate sustainability principles to the extent applicable and practicable. Chapter 14, “Greenhouse Gas Emissions and Resilience,” describes many of the sustainable construction practices that would be implemented as part of the Preferred

Alternative. Master plans are generally focused on long-term actions and goals and therefore few elements apply to construction impacts, but rather apply to the permanent features of the Preferred Alternative analyzed later in this chapter.

6A.6.3 HUDSON RIVER

As discussed in Chapter 3, “Construction Methods and Activities,” Section 3.3.5, the in-water construction activities in the Hudson River for the Preferred Alternative would occur in a small area approximately 570 feet from the New York bulkhead (70 feet past the pierhead line), and this activity would occur in the summer and fall (July 1 to January 20) in either two or three construction seasons. The construction activity would be visible from the New Jersey and New York shorelines and could result in some noise, particularly during installation of sheet piles to create the cofferdam that encloses the work area. Equipment in use for the in-water construction could require rerouting of helicopters headed to and from the West 30th Street Heliport to avoid conflicts between aircraft and tall construction equipment. Overall, given its temporary duration and limited area of activity, the in-water construction activity would not be disruptive to nearby onshore or in-water land uses, such as the land and water areas of Hudson River Park. (See Chapter 8, “Open Space and Recreational Resources,” for discussion of waterborne recreation at Hudson River Park.)

6A.6.4 NEW YORK

6A.6.4.1 LAND USE

As described in Chapter 3, “Construction Methods and Activities,” construction activities for the Preferred Alternative would include staging and other work centered on the western third of the block between West 29th and West 30th Streets and Twelfth and Eleventh Avenues (Block 675 Lot 1 and small portion of Lot 12). This work would last approximately seven years, during which time there would be lane closures, traffic diversions, heavy truck activity, and the use of noisy equipment. As with any construction project, construction activities would at times be disruptive to nearby activities. For the portion of Hudson River Park across Twelfth Avenue from this staging site, the disruption would be limited by the presence of heavily trafficked Twelfth Avenue and the nearby West 30th Street Heliport within the park. In addition, a site enclosure or temporary noise barrier would be used to buffer the staging site from the surrounding area.

Construction for the Preferred Alternative would involve temporary construction activities in Hudson River Park, with a total duration of approximately 18 months. As described in Chapter 3, “Construction Methods and Activities,” and discussed in more detail in Chapter 8, “Open Space and Recreational Resources,” this requires temporary narrowing of the Hudson River Park walkway and bikeway for about a 150- to 200-foot length. In addition, a portion of the West 30th Street Heliport would be used for construction activities and would be closed to helicopter operations. One or two of the heliport’s landing pads and two fueling pads would be affected. The rest of the heliport, which has a total of 10 helipads, would remain open during the construction period. Following completion of the construction, the Project Sponsor will restore the affected area of Hudson River Park in coordination with HRPT. The 2018 amendment to the Hudson River Park Act allows HRPT to approve temporary construction activities related to the Hudson Tunnel Project in the park.

The 2013 amendment to the Hudson River Park Act requires relocation of the West 30th Street Heliport to a new floating structure between West 29th and West 32nd Streets, and the return of the heliport area to park use. The timing for that relocation is not known. HRPT is coordinating with the Project Partners and has stated that it would not complete new park facilities in the area required for Hudson Tunnel Project construction prior to completion of the tunneling. Therefore, if the West 30th Street Heliport has relocated prior to construction activities for the new Hudson River Tunnel, the former heliport area required for construction activities for the Project would not



be in park use. The construction activities in Hudson River Park could then delay completion of park improvements in this area.

If the heliport has not yet been relocated prior to the onset of construction activities for the Project, the ground improvement in Hudson River Park would affect the southern portion of the heliport. The installation of freeze pipes within the southern portion of the heliport would affect heliport operations and would require the closure of the heliport fueling area and its two fueling pads, one or two landing pads, and a heliport driveway and parking area during the approximately 1.5-year duration of the ground freezing activities. The Project Sponsor will coordinate with the heliport operator and HRPT regarding relocation of the fueling facility, to identify a suitable location for the fuel tank. The new location for the fuel tank may be a new permanent location, if that location can be identified (possibly near West 30th Street), or a temporary new location either within the heliport property or potentially on a new fueling barge that would be moored at the heliport, and would need to comply with all applicable regulatory restrictions related to siting such a facility.

In addition, construction activities would likely affect the throughput capacity and volume of flights using the heliport, if demand for fueling operations and landing pads exceeds the remaining capacity of the relocated fueling station and the landing pads remaining in service. The effect to heliport operations from reduced throughput capacity would be most pronounced in the summer and fringe months when the heliport is busiest. In the winter months, while there may be some disruption to operations, full utilization of the heliport's landing capacity does not generally occur.

In addition, it may be necessary to reroute helicopters headed to and from the West 30th Street Heliport to avoid conflicts between aircraft and tall construction equipment during construction activities in the park and during the in-water construction activities (Section 6A.6.3 above). The Project Sponsor will obtain a construction permit from the Federal Aviation Administration for this work.

If heliport operations are adversely affected and this affects the payments that the heliport operator makes to HRPT, this could in turn adversely affect HRPT's ability to maintain Hudson River Park. The Project Sponsor will coordinate with the heliport operator and HRPT, which receives revenues from the heliport, to minimize disruption to the heliport operation to the extent practicable. The temporary use of a portion of the heliport would comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act; see Chapter 6B, "Property Acquisition").

Construction activities at the Twelfth Avenue shaft site and staging area would occupy the same site (Lot 1 of Block 675) where a new commercial office building is possible in the No Action Alternative. Therefore, this building's completion would likely be delayed until after completion of the Preferred Alternative.

The construction activities for the Preferred Alternative would occur immediately adjacent to the new residential buildings that will be completed on the same block as the Twelfth Avenue staging site in 2022 and would be disruptive to residents of the new buildings, some of whom would have windows overlooking the construction site.

The Preferred Alternative's staging site on the block would include a portion of the property where the new development at 601 West 29th Street will be built. Amtrak and NJ TRANSIT are coordinating with the site's developer to accommodate the tunnel staging while minimizing delays to construction of 601 West 29th Street. Construction staging for the Preferred Alternative would involve using the western 126 feet of the private development site (a portion of Block 675 Lot 12) as part of the tunnel construction area. This portion of Lot 12 is proposed for a potential station for EMS (which requires additional approvals from the City of New York) or a one-story garage as part of the 601 West 29th Street development project. The potential EMS facility will be a base and support area for ambulance operators but not a staging area for ambulances; ambulances

would stage in locations throughout their service area waiting for calls. These components of the development project are therefore likely to be delayed by construction of the Preferred Alternative, potentially up to nine years—from the proposed completion date of 2022 to a date of approximately 2031. In this case, the delayed construction of the potential EMS station or one-story garage would occur adjacent to the new residential buildings on West 29th and West 30th Street, resulting in some additional construction noise and disruption to those new residential buildings for approximately 18 months longer than would occur for the Preferred Alternative alone. The new residential buildings would be of modern construction, with well insulated windows, so interior noise levels would remain acceptable. See Chapter 12A, “Noise,” Section 12A.6.3.2 for more information on noise levels.

Construction activities at the Twelfth Avenue staging area would likely be disruptive for people on the High Line in the immediate vicinity. However, the affected area along West 30th Street is a relatively short segment (about 800 feet) of the 1.45-mile-long linear park, so the overall value of the High Line as an open space resource would not be diminished (see discussion in Chapter 8, “Open Space and Recreational Resources,” Section 8.6.4.2).

Work within the Hudson Yards Right-of-Way Preservation Project would not disturb activities above, including construction of the Western Rail Yard and Eastern Rail Yard projects, nor would it disturb railroad activities at the adjacent West Side Yard. The concrete casing is being constructed to preserve the right-of-way beneath the Hudson Yards overbuild and within the West Side Yard, specifically so that railroad operations can be maintained in this right-of-way without disrupting those nearby uses. The Preferred Alternative would use the concrete casing structure for its tracks and systems.

Other construction activities at and near Tenth Avenue for the Preferred Alternative, including construction of the tunnel alignment across Tenth Avenue using cut-and-cover construction techniques and potential installation of a railroad fan plant beneath the building at 450 West 33rd Street, would have minimal disruption to the surrounding area. When work is being conducted in Tenth Avenue, it would be staged so that some traffic lanes would be maintained at all times (although limited closures may be required during off-peak periods such as nights and weekends). Construction for the Tenth Avenue fan plant may occur within or near the lower portion of the building at 450 West 33rd Street and would be staged to minimize disruption to building occupants.

Overall, the construction activities for the Preferred Alternative would occur within the context of extensive construction occurring in the immediate area, including on the same block as the Twelfth Avenue shaft site and staging area. These projects would be coordinated to minimize disruptions wherever possible.

6A.6.4.2 ZONING

The Project Sponsor will comply with any applicable local zoning (see discussion in Section 6A.7 below). Any temporary disruptions associated with construction also would not be subject to zoning.

6A.6.4.3 PUBLIC POLICY

Construction activities required for a new Hudson River rail crossing would be consistent with the New York City public policies related to expansion of the transit network and maintaining and improving resiliency.

NYCDP and HRPT have identified Lot 1 on Block 675 as a part of a future expansion of the Hudson River Park Special District and the future site for use of transferred development rights from the park pursuant to the Hudson River Park Act. At this time, there is no committed potential purchaser for those rights. Any developer of Lot 1 and potential purchaser of development rights



from HRPT will have to take the construction staging of the Preferred Alternative into consideration. Until any such sale, the proceeds will not be available to HRPT to improve the park. Construction activities for the Preferred Alternative could delay future private development on Lot 1. However, this potential delay would not adversely affect the policy that HRPT be permitted to sell development rights to support its operations, nor the mandate that HRPT be economically self-sufficient. The public policies that established the ability for HRPT to sell development rights did not specify which properties would be receiving these rights, nor did they specify timing for the sale of such rights. Consequently, construction activities for the Preferred Alternative would not alter, nor be contrary to, the public policies establishing and supporting Hudson River Park.

As noted earlier, the Hudson River Park Act was amended in 2018 to allow HRPT to enter into a lease for a new below-grade rail tunnel beneath the park between West 27th and West 30th Streets (i.e., the new Hudson River Tunnel included as part of the Preferred Alternative for the Hudson Tunnel Project). Consistent with the Hudson River Park Act, Amtrak will need to negotiate several necessary agreements with HRPT for entry permits, as well as temporary and permanent easements. The relevant agreements could include negotiated provisions that take into account potential financial losses and funding delays.

Where activities for the Preferred Alternative would directly affect Hudson River Park, the Project Sponsor, in cooperation with the other Project Partners, will seek to mitigate and minimize Project impacts to the greatest extent possible, such as by requiring restoration or improvement of the park upon the Project Sponsor's completion of work that occupies or affects the park, or by other means. See Chapter 8, "Open Space and Recreational Resources," Section 8.8.

6A.7 PERMANENT IMPACTS OF THE PREFERRED ALTERNATIVE

6A.7.1 OVERVIEW

Once the Preferred Alternative is complete, Amtrak and NJ TRANSIT operations on the NEC between New Jersey and New York would operate with additional reliability. As discussed in Chapter 2, "Project Alternatives and Description of the Preferred Alternative," upon completion of the Preferred Alternative in 2033, neither Amtrak nor NJ TRANSIT is proposing additional train service beyond that provided in the No Action Alternative. Any increase in peak-hour service requires expansion to the capacity of PSNY in Manhattan, which is not part of the Preferred Alternative.

In addition to the new and rehabilitated tunnel, the Preferred Alternative would include new surface right-of-way through the Meadowlands and three new fan plants. The permanent effects of the Preferred Alternative related to land use, zoning, and public policy are discussed in this section.

6A.7.2 NEW JERSEY

6A.7.2.1 LAND USE

6A.7.2.1.1 County Road to Tonnelle Avenue

The Preferred Alternative would widen the existing NEC railroad right-of-way through Secaucus and North Bergen, converting the northern edges of adjacent industrial and warehouse properties to transportation use. For some properties along Penhorn Avenue and 16th Street, a permanent easement would be needed through vacant land and the edge of paved parking areas to accommodate below-grade drainage features. Activities at adjacent land uses would not be affected by the Preferred Alternative. Access drives and loading docks would continue to be available and could operate as they do today. West of the developed area in the Meadowlands

portion of North Bergen, the Preferred Alternative would create a new rail viaduct through a currently natural wetland area (for information on the Preferred Alternative's impacts to natural resources, see Chapter 11, "Natural Resources").

6A.7.2.1.2 *Tonnelle Avenue Area*

In the Tonnelle Avenue area, once construction is complete, conditions would return largely to their existing state. Trains would operate at high speed along the new right-of-way and into the new tunnel portal. The new portal would bring train activity closer to certain residences directly above than the portal (which is approximately 500 feet from the existing North River Tunnel portal), but noise from the trains would be similar to existing conditions (see Chapter 12A, "Noise," Section 12A.7.2 for more information.) New noise from trains operating along the new alignment, which would be in a cut lower than Tonnelle Avenue, would also be imperceptible at the Hindu temple on Tonnelle Avenue.

6A.7.2.1.3 *The Palisades*

Land uses in the study area in North Bergen and Union City located above the Preferred Alternative's new tunnel alignment through the Palisades would be unaffected by rail operations in the new tunnel. As shown in Figure 2-5 in Chapter 2, "Project Alternatives and Description of the Preferred Alternative," the tunnel would be deep below the surface as it passes beneath the Palisades. The top (i.e., crown) of the tunnel would be approximately 70 feet below the surface at Paterson Plank Road, 150 feet at Grand Avenue, 175 feet at John F. Kennedy Boulevard, 225 feet at Summit Avenue, 260 feet at Central Avenue, 275 feet at West Avenue and Bergenline Avenue, 250 feet at New York Avenue and Palisade Avenue and 180 feet at Manhattan Avenue. At this depth, train operations would not be discernible from the surface and no vibration impacts would occur to structures above. (See also Chapter 12B, "Vibration," Section 12B.7.2.)

6A.7.2.1.4 *East of the Palisades*

The proposed Hoboken fan plant on the south side of West 18th Street, adjacent to the Shades neighborhood, would introduce an industrial building on a vacant site previously occupied by such buildings. The fan plant would house fans, ventilation, signals, and communications equipment, a substation, and emergency access. Based on preliminary design, the fan plant would occupy a footprint of approximately 250 to 300 feet by 150 to 200 feet and would be approximately 65 to 80 feet high. The fan plant is being designed to comply with the Project's design flood elevation (DFE) criterion, in recognition of the flood levels at the site during Superstorm Sandy (see Chapter 14, "Greenhouse Gas Emissions and Resilience," Sections 14.3.6.1 and 14.3.6.2), which requires that critical equipment in the fan plant be raised above the DFE. The shape, size, and design treatment of the fan plant will be further refined during advanced engineering. The Hoboken fan plant will be designed to be visually compatible with the character of the surrounding area. The Project Sponsor will coordinate with the local community and seek input in determining the appropriate design for the visible portions of the fan plant. Figure 2-10 in Chapter 2, "Alternatives and Description of the Preferred Alternative," illustrates the Hoboken fan plant.

The fan plant would generally be unstaffed, and little activity would occur at the site, other than visits by maintenance workers who need access to the tunnel below or to the equipment within the fan plant. During normal operations, the ventilation system would operate in passive mode, meaning that fans would not operate and air would be drawn into and out of the system by train movement in the tunnel. The fans within the building would operate during congested conditions to exhaust hot air from the tunnel; they would also operate during emergencies to exhaust smoke from the tunnel. They would also undergo regular testing. As described in Chapter 12A, "Noise," noise outside the fan plant resulting from the fans would be minimized through the use of dampers in the building and would not result in adverse noise impacts on nearby land uses, including residences in the Shades neighborhood of Weehawken and residences under construction above



the site on the hillside in Union City. When air is exhausted from the fan plant, other than in emergency conditions, this air would not include pollutants, since the trains operating in the tunnel would be electric trains and the hot air in the tunnel would not contain air pollutants. Overall, the fan plant would not conflict with nearby land uses and would not result in changes to land use patterns in the surrounding area.

6A.7.2.2 ZONING

The Project Sponsor will comply with any applicable local zoning. The Preferred Alternative's above-ground features would be consistent with the zoning on the relevant portions of the Project site. Specifically, the new surface alignment through the Meadowlands would be consistent with the Roads, Rails, Rights of Way zoning district and the rail cut near Tonnelle Avenue would be consistent with the industrial and commercial zoning of the affected property there. The new fan plant would be consistent with the City of Hoboken's I-1 light industrial zoning designation mapped on the Hoboken shaft site. If the City of Hoboken implements the new mixed commercial and industrial zoning district proposed in its 2018 Master Plan Land Use Element, the new fan plant would also be consistent with that zoning district.

6A.7.2.3 PUBLIC POLICY

In terms of public policy, the Preferred Alternative would be consistent with the state, county, and local public policies regarding the importance of transportation infrastructure to the region. The Preferred Alternative would promote or support many of the goals that are common to the municipal master plans described in Section 6A.3.1.3. Common themes are: the promotion of modal choice; improvement of transit; increasing resiliency; increasing sustainability, and promoting economic development. The NEC is a critical link in the regional transportation network for intercity travel and for commuting and its continued uninterrupted service is a key factor to allow municipalities to continue on a path of economic development. The reliability of the transportation system is important for economic and environmental sustainability.

6A.7.3 HUDSON RIVER

Once the Preferred Alternative is complete, it would be beneath the bottom of the Hudson River, similar to the existing North River Tunnel, and would not affect nearby activities, land uses, or public policies.

Within the boundaries of Hudson River Park (which includes water area from the New York bulkhead to the pierhead line), the West 30th Street Heliport could be relocated to an in-water site consistent with the Hudson River Park Act, which calls for relocation of the heliport to a floating structure located between West 29th and West 32nd Streets. Any pile supports for such a relocated heliport structure could not be located directly above, or within 25 horizontal feet, of the area where the new Hudson River Tunnel would be buried beneath the river bottom. In total, the width of this exclusion zone would be about 125 feet. This area would be located close to 29th Street, and would not affect relocation of the heliport to an area designated in the Hudson River Park Act.

6A.7.4 NEW YORK

6A.7.4.1 LAND USE

In New York, most of the Preferred Alternative would be beneath the surface and would not affect land uses above. Most notably, the Preferred Alternative's tunnel would pass beneath Hudson River Park, Twelfth Avenue, Block 675, West 30th Street, and Eleventh and Tenth Avenues. The new tunnel alignment within the Hudson Yards Right-of-Way Preservation Project beneath Hudson Yards would avoid any potential conflict with the large-scale redevelopment occurring on

a platform above the West Side Yard. Similarly, since the Preferred Alternative would be at track level and well below street level east of Dyer Avenue, it would have no effect on the Manhattan West project being constructed on a platform above the tracks there. The reconstructed North River Tunnel would also have no new visible features at the surface, and would continue to run beneath the West Side Yard and the building at 450 West 33rd Street.

At Hudson River Park, the permanent location of the tunnel beneath the park would mean that no new pile-supported structures or deep foundations (any type of driven, vibrated, augured, or bored pile or caisson) could be located on upland sites immediately above the tunnel, which is generally in the area close to 29th Street, or within a 25-foot horizontal distance from the edge of the tunnel or any ground treatment area bordering the tunnel. In total, the width of this exclusion zone would be about 125 feet for the in-river sections of Hudson River Park, and slightly larger in the upland section. No other restrictions would apply to this area, and this park space could be landscaped or developed for other recreational uses. As noted in the previous section, the presence of the below-grade tunnel alignment would still allow relocation of the West 30th Street Heliport to an in-water site consistent with the Hudson River Park Act.

The new Twelfth Avenue fan plant would occupy part of a large property between West 29th and West 30th Streets on Block 675 (Lot 1 of Block 675). The fan plant would generally be unstaffed, and little activity would occur at the site, other than visits by maintenance workers who need access to the tunnel below or to the equipment within the fan plant. Amtrak may acquire on behalf of the Project the site of the Twelfth Avenue fan plant, as well as the tunnel alignment across the block, through an easement or fee acquisition. This may be an acquisition of a portion of the property (Block 675 Lot 1) or potentially all of the property. Since the Project would involve the use of Federal funds, Amtrak will be required to meet Federal requirements for acquisition of real estate.

The preliminary design for the Hudson Tunnel Project does not identify a specific location, massing, bulk, or height for the Twelfth Avenue fan plant, to retain flexibility for future coordination with the owner of Lot 1. The fan plant could potentially be incorporated within a future building constructed on Lot 1 as part of a separate development, such as a future commercial building, or it could be developed independently on the property. As discussed in Section 6A.4.3, in the absence of the Preferred Alternative, this property may be developed with a large commercial office building. Amtrak will seek to coordinate the design of the new fan plant with any private development proposed for Lot 1.

Since construction activities at the Twelfth Avenue shaft site and staging area would occupy the same site where such a building could be constructed, its completion would likely be delayed until after completion of the Preferred Alternative. If Amtrak is unable to coordinate the design of the new fan plant with a private development proposal for Lot 1, then the portion(s) of Lot 1 where the ventilation shaft and fan plant would be located would likely not be available for subsequent private development. In this case, Amtrak would acquire a portion or potentially all of the property. The property owner would be compensated for this acquisition in accordance with the Uniform Act and other applicable law.

In any location on Lot 1, the Twelfth Avenue fan plant may be developed with its tunnel fans oriented vertically or horizontally, and could be freestanding, adjacent to, or integrated with a development built by another party as a separate project. A configuration with the tunnel fans oriented vertically would require a footprint of approximately 120 feet by 130 feet and a maximum height of approximately 150 feet. A configuration with the tunnel fans oriented horizontally would result in a lower building with a larger footprint; the specific dimensions would depend on how much is included on each floor of the building. In either of those configurations, the fan plant could be freestanding or adjacent to or integrated with a commercial or residential development built by another party as a separate project. The Project Sponsor, in cooperation with the other Project



Partners, will refine the shape, size, and design treatment of the fan plant during advanced engineering.

Two possible locations for the fan plant on Lot 1 would be: a corner site at Twelfth Avenue and West 30th Street, and a midblock site on West 29th Street east of Twelfth Avenue. The corner location would generally be more visually prominent due to its location along a major arterial roadway and across the street from two public parks (Hudson River Park and the High Line). A fan plant at this location could interfere with vistas of Hudson River Park and the Hudson River beyond for viewers on the High Line. The fan plant configuration on West 29th Street east of Twelfth Avenue would preserve these views and would generally be less visually prominent due to its location away from Twelfth Avenue. Overall, the visual prominence of the fan plant would be dependent on the design of any subsequent private development project undertaken on the fan plant site.

Regardless of the fan plant's location and configuration, the Project Sponsor, in cooperation with the other Project Partners, will design the Twelfth Avenue fan plant to be compatible with the character of the surrounding area. The design of visible elements of the fan plant will be coordinated with NYCDOP and Community Board 4 and will be further refined during advanced engineering.

As described above in Section 6A.6.4.1, a portion of Block 675 Lot 12 may be used for Project construction staging. This portion of the lot is proposed for a potential station for EMS or a one-story parking garage as part of a separate development project, and this component of the development project is likely to be delayed by construction of the Preferred Alternative, potentially up to nine years—from the proposed completion date of 2022 to a date of approximately 2031. The potential EMS facility would replace a facility farther south in the same neighborhood; with the delay, EMS services would continue to operate from the existing facility for a longer period of time.

The Preferred Alternative's other New York fan plant, the Tenth Avenue fan plant, would be located beneath and adjacent to the building at 450 West 33rd Street on Tenth Avenue between West 31st and 33rd Streets. It would be housed above an existing rail yard and within an existing void beneath the building and would not require displacement of any active uses in the building.

Overall, the Preferred Alternative would result in construction of new rail infrastructure similar to the existing transportation infrastructure in the New York study area, with limited new above-grade spaces. The new above-grade features would be designed to be compatible with surrounding land uses. Therefore, no adverse impacts related to land use would occur as a result of the Preferred Alternative.

6A.7.4.2 ZONING

The Project Sponsor will comply with any applicable local zoning. The Twelfth Avenue fan plant would be designed to comply with the applicable bulk regulations of its site, to the extent practicable.

6A.7.4.3 PUBLIC POLICY

The Preferred Alternative would be consistent with public policies affecting the New York study area. Chapter 21, "Coastal Zone Consistency," evaluates the Preferred Alternative's consistency with New York City's LWRP. The Project would be consistent with other applicable public policies, in particular local policies such as PlaNYC that seek to improve the city's transportation infrastructure, promote sustainability and resiliency; OneNYC calls for addressing the growing number of commuters from west of the Hudson. Vision 2020 promotes increasing climate resilience.

In the long-term, the Preferred Alternative would not affect public policies related to Hudson River Park. The 2018 amendment to the Hudson River Park Act specifically allows HRPT to enter into a lease permitting a below-ground rail tunnel beneath the park between West 27th and West 30th Streets. In addition, the Preferred Alternative would not interfere with the public policy intent of the Special Hudson River Park District nor the park's ability to sell air rights to properties on Block 675. Amtrak will seek to coordinate the design of the new fan plant with any private development proposed for Lot 1, and that development could still serve as a receiving site for development rights from Hudson River Park. If Amtrak is unable to coordinate the design of the new fan plant with a private development proposal for Lot 1, then the portion(s) of Lot 1 where the ventilation shaft and fan plant would be located would likely not be available for subsequent private development. In that case, the portion of Lot 1 occupied by the ventilation shaft and fan plant might not serve as a receiving site for development rights. The loss of a potential receiving site is not contrary to the public policy related to Hudson River Park or in conflict with the objectives of state or local land use plans, since the Hudson River Park Act does not designate specific properties as receiving sites and the New York City Zoning Resolution does not indicate Lot 1 as a receiving site. For a discussion of the potential for impacts during construction, see Section 6A.6.4.3.

The Twelfth Avenue fan plant would be designed in consultation with NYCDPC to ensure consistency with the overall vision laid out in the *Block 675 Planning Framework*, which recognizes the need to incorporate the Hudson Tunnel Project into Block 675, including both a tunnel passing beneath the block and a tunnel ventilation building on the western portion of the block.

Overall, the Preferred Alternative would be consistent with public policies relative to the Project area.

6A.8 MEASURES TO AVOID, MINIMIZE, AND MITIGATE IMPACTS

The Project Sponsor will implement measures to avoid or minimize adverse impacts of the Preferred Alternative on nearby land uses, including measures to minimize construction impacts and permanent impacts. The lead Federal agency will be responsible for ensuring that the Project Sponsor implements these measures, which will be identified in the ROD. These will include the following.

6A.8.1 GENERAL CONSTRUCTION PRACTICES

- Implementation of comprehensive, active and responsive local community outreach program during construction that will include a staffed local neighborhood outreach office close to each of the Project construction sites (in North Bergen and Weehawken in New Jersey and near the Twelfth Avenue staging site in New York); a dedicated Project liaison who will coordinate with the community about construction activities, address concerns, and work with the community to accommodate special events where possible; a 24-hour hotline for emergencies and construction complaints; and regular meetings and notifications about construction status and upcoming activities.
- Use of downward-directed, shielded lighting at staging areas to minimize light pollution affecting adjacent areas, with reduced lighting during hours when construction is not occurring on the sites (see Chapter 10, "Visual and Aesthetic Resources," Section 10.8).
- Measures to minimize adverse effects related to noise and vibration, as detailed in Chapter 12A, "Noise," Section 12A.9, and Chapter 12B, "Vibration," Section 12B.9, these include community outreach and notification regarding potentially disruptive activities, such as blasting; noise reduction measures for construction equipment; conducting blasting no later than 6 PM in New Jersey and 7 PM in New York except under special circumstances and only

with permission from the North Hudson Regional Fire and Rescue or New York City Fire Department; and a construction noise monitoring program; a construction vibration monitoring program for buildings near the construction (including tunneling) that includes pre-construction inspection and vibration monitoring during construction for buildings adjacent to construction sites.

- Implementation of a multi-approach dust control plan at the construction sites that includes requirements for watering the site, covering soils stored on site or being transported in trucks, vehicle washing and use of mud mats for vehicles before leaving the site, and continuous air monitoring at the perimeter of the construction sites to identify when additional measures should be taken to contain dust (see Chapter 13, “Air Quality,” Section 13.9).
- Implementation of air emissions controls for construction equipment to minimize air pollution, including idling restrictions and mandatory emissions controls for construction vehicles and equipment (see Chapter 13, “Air Quality,” Section 13.9).
- In all locations where construction activities would affect local roadways and for roadways where construction-related traffic would be directed, use of mitigation measures including MPT plans that the Project Sponsor would develop in coordination with appropriate local authorities to manage traffic disruptions. This includes Secaucus Road at the NEC, Tonnelle Avenue near the Tonnelle Avenue staging area, local roadways in Hoboken and Weehawken (including on Park Avenue in front of the North Hudson Regional Fire and Rescue Engine 3 fire station), and in New York near the Twelfth Avenue staging area and the location of tunnel construction in Tenth Avenue. For more information on mitigating traffic disruptions, see Chapter 5A, “Traffic and Pedestrians,” Section 5A.9.
- Use of erosion and sediment controls and best management practices to control runoff from the construction sites (see Chapter 11, “Natural Resources,” Section 11.9).
- Storm risk management plan for staging areas located in flood zones to address potential for flooding during construction (see Chapter 14, “Greenhouse Gas Emissions and Resilience,” Section 14.3.5.1).
- Comprehensive controls during construction at the Tonnelle Avenue and Hoboken staging areas to protect residents and workers in nearby areas from potential exposure to contaminated materials, including implementation of a Projectwide Soils and Materials Management Plan that specifies procedures for proper handling soils and excavated materials. Material would be sampled, stored, handled, and transported in accordance with all applicable regulations. During construction, continuous air monitoring would be conducted on the perimeter of construction staging areas to identify when additional dust control measures are required. (See Chapter 16, “Contaminated Materials,” Section 16.8.)
- Remediation of contaminated materials at staging areas and restoration of disturbed areas following construction with clean fill or engineering controls.
- Security measures for staging areas (see Chapter 18, “Safety and Security,” Section 18.8).
- Rodent control program to be implemented at all construction sites (see Chapter 3, “Construction Methods and Activities,” Section 3.2.4).

6A.8.2 NEW JERSEY

- Coordination agreements with property owners and tenants regarding temporary construction access to private properties along the NEC in the Meadowlands for the surface alignment, so as to minimize adverse impacts on business activities.
- Coordination with Conrail and NYSW regarding construction of the new bridge over the freight railroad right-of-way to minimize disruption to the freight railroads.

- Conduct blasting no later than 6 PM in residential areas except under special circumstances, and only with permission from the appropriate local regulatory agency (i.e., North Hudson Regional Fire and Rescue). The Project Sponsor will provide advance notice of blasting events to residents of nearby areas (see Chapter 12A, “Noise,” Section 12A.9).
- Sound-reducing windows together with air conditioning units to allow for the maintenance of a closed-window condition, to reduce interior noise levels, for residences close to the Tonnelle Avenue and Hoboken construction staging areas and the associated construction truck routes (see Chapter 12A, Section 12A.9).
- The Project Sponsor will require that truck trips serving the Hoboken staging area not exceed a maximum (cap) of eight trucks per hour in each direction throughout the construction period, and that trucking does not occur between 10 PM and 7 AM.
- The Project Sponsor will remove excavated materials from tunnel construction for the river tunnel segment primarily via the Tonnelle Avenue staging area, in order to minimize trucking to and from the Hoboken staging area.
- A noise barrier up to 25 feet high along the entire northern edge of the Hoboken staging area property along West 18th Street and wrapping at least 100 feet on the western side of the property and extending to the truck haul route on the eastern side of the staging area, to buffer the nearby residential neighborhood from construction activities (see Chapter 12A, “Noise,” Section 12A.9). This wall would be temporary, but would be in place for the duration of construction at the site. The wall will be clad with aesthetically attractive materials developed in consultation with the local community and will be set back approximately 10 feet from the street curb line, to allow street parking and provide an area for landscaping in front of the wall; this landscaping will also be selected in consultation with the local community (see Chapter 10, “Visual and Aesthetic Resources,” Section 10.8).
- Lighting at the Hoboken staging area no higher than the noise wall (see Chapter 10, “Visual and Aesthetic Resources,” Section 10.8).
- In Hoboken and Weehawken, a construction access route (i.e., haul route) that provides access to the construction staging area via an off-street route along the north side of the HBLR, to divert construction traffic away from the Shades neighborhood.
- Design of the Hoboken fan plant to be compatible with the character of the surrounding area and particularly the Shades residential neighborhood to the north. The Project Sponsor, in cooperation with the other Project Partners, will coordinate with the local community and seek input in determining the appropriate design for the visible portions of the fan plant.
- Use of an MPT plan to ensure that fire trucks and emergency vehicles leaving from and returning to the North Hudson Regional Fire and Rescue Engine 3 fire station at 1900 Willow Avenue (between Willow Avenue and JFK Boulevard East) have access to the street network and are not blocked by traffic queuing at the intersection.
- Underpinning of Willow Avenue viaduct using drilled piles rather than driven piles to the extent practicable to reduce resulting noise levels. The Project Sponsor will coordinate with the City of Hoboken and Township of Weehawken regarding pile installation for the underpinning of the Willow Avenue viaduct, to coordinate construction activities to avoid disruption to special events in nearby parks, and to provide advance notification so that the city and township can notify the public of this activity and its expected duration.
- Coordination of construction activities in Hoboken and Weehawken with the City of Hoboken’s Rebuild By Design project to ensure that the two projects do not conflict during their construction and long-term permanent condition.
- Design of the Hoboken fan plant to produce noise levels no greater than 65 dBA at the exterior of the nearest residential building (see Chapter 12A, “Noise,” Section 12A.9).



6A.8.3 NEW YORK

- Tunnel excavation from the bulkhead to the shaft site below ground, with ground improvement such as ground freezing to prepare the area. This will avoid the need for cut-and-cover excavation across Hudson River Park.
- Coordinate with the West 30th Street Heliport operator and HRPT, which receives revenues from the heliport, to minimize disruption to the heliport operation during construction of the Preferred Alternative to the extent practicable. The temporary use of a portion of the heliport would comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (see Chapter 6B, "Property Acquisition").
- If the West 30th Street Heliport fuel tank must be relocated to facilitate tunnel construction, relocation of the tank to a suitable location.
- Restoration of the area of Hudson River Park affected by construction for the Preferred Alternative in coordination with HRPT at no cost to HRPT.
- Use of site enclosures or temporary noise barriers at construction sites to buffer surrounding areas from construction noise and activity (see Chapter 12A, "Noise," Section 12A.9).
- Design of the Twelfth Avenue fan plant to be compatible with the character of the surrounding area; design of visible elements will be coordinated with NYCDCP and Community Board 4.
- Design of the Twelfth Avenue fan plant to produce noise levels no greater than 65 dBA at the exterior of the nearest residential building (see Chapter 12A, "Noise," Section 12A.9). *