

**7.1 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 Hudson Tunnel Project's potential impacts on socioeconomic conditions in New Jersey and New York. Socioeconomic conditions include the social and economic characteristics of the people who live and work within the study areas, and the trade and economic characteristics of businesses located within the study areas. The Preferred Alternative has the potential to affect socioeconomic conditions if it affects neighborhood character or cohesion as a result of new land uses or adverse environmental impacts; restricts access to businesses or community facilities; or impedes emergency services.

Operation of the Preferred Alternative would not increase rail service on the Northeast Corridor (NEC) and would have no potential to change travel patterns in the region. Therefore, operation of the Preferred Alternative has no potential to influence real estate trends or employment in the region or cause demographic shifts. This chapter describes relevant socioeconomic conditions in the study area and describes the potential effects of the Preferred Alternative on socioeconomic conditions. 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.

A separate analysis of environmental justice and the potential for disproportionate and adverse impacts from the No Action Alternative or Preferred Alternative on low-income and minority populations is provided in Chapter 22, "Environmental Justice."

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, including the latest available demographic and economic data, and associated updates to the environmental impacts and mitigation.
- The discussion related to Hudson River Park is expanded and clarified in response to comments from the Hudson River Park Trust.
- The chapter reflects an updated cost estimate for the Project.

This chapter contains the following sections:

- 7.1 Introduction
- 7.2 Analysis Methodology
  - 7.2.1 Regulatory Context
  - 7.2.2 Analysis Techniques
  - 7.2.3 Study Areas
- 7.3 Affected Environment: Existing Conditions
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- 7.4 Affected Environment: Future Conditions
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  - 7.7.3 New York
- 7.8 Measures to Avoid, Minimize, and Mitigate Impacts

## **7.2 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 socioeconomic conditions are summarized in this chapter.

### **7.2.1 REGULATORY CONTEXT**

FRA's *Procedures for Considering Environmental Impacts*<sup>1</sup> calls for analysis of a proposed project's potential effects on the socioeconomic environment, including the number and kinds of available jobs likely to be affected by each alternative, the potential for community disruption and cohesion, the possibility of demographic shifts, the need for and availability of relocation housing, the potential impacts on commerce, and the impacts on local government services and revenues.

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).

### **7.2.2 ANALYSIS TECHNIQUES**

For socioeconomic conditions, FRA and NJ TRANSIT consulted the following data sources to gather useful information in understanding existing conditions: 2000 and 2010 U.S. Census Bureau data, U.S. Census 2015-2019 American Community Survey (ACS) data, and Esri Business Analyst, a private online data provider. Geographic Information Systems (GIS) mapping layers, site visits, and municipal property search databases were also used to determine property information.

The potential effects of the Preferred Alternative's construction and operation on socioeconomic conditions were assessed. The assessment considers direct and indirect socioeconomic impacts resulting from potential displacements and changes in neighborhood or community cohesion for social groups. Changes stemming from direct or indirect displacement may constitute an adverse impact if the displacement substantially changes the socioeconomic profile or housing character of the study area, or if potentially displaced businesses provide essential products or services to the local economy that would no longer be available in its trade area to local residents or businesses due to the difficulty of either relocating the businesses or establishing new,

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<sup>1</sup> 64 Federal Register 28545, May 26, 1999.

comparable businesses. The relative loss of municipal tax revenue was also evaluated to address the potential for impacts to a municipality's ability to provide services.

### **7.2.3 STUDY AREAS**

The study area for this assessment considers all areas in which the Preferred Alternative could alter socioeconomic conditions, either directly or indirectly. The size of the study area is based on a consideration of potential impacts of the Preferred Alternative during construction, including the location of active construction in combination with the potential construction access routes, and operational conditions. In general, the study area for consideration of the localized socioeconomic conditions is the area within 500 feet from the Project site (defined as the area that would be affected by construction activities associated with the Preferred Alternative as well as the permanent elements of the Preferred Alternative—see Chapter 4, "Analysis Framework," for further definition of the Project site). The analysis also considers the larger, more regional effects of the No Action and Preferred Alternatives.

The study area is shown in **Figure 7-1**. For consideration of census data, census block groups that fall within that 500-foot perimeter were included in the study area. The study area includes 24 census block groups in New Jersey and 4 in New York, as discussed below.

Information on low-income and minority populations in the study area and consideration of whether the Preferred Alternative may result in disproportionate impacts on those populations is provided in Chapter 22, "Environmental Justice."

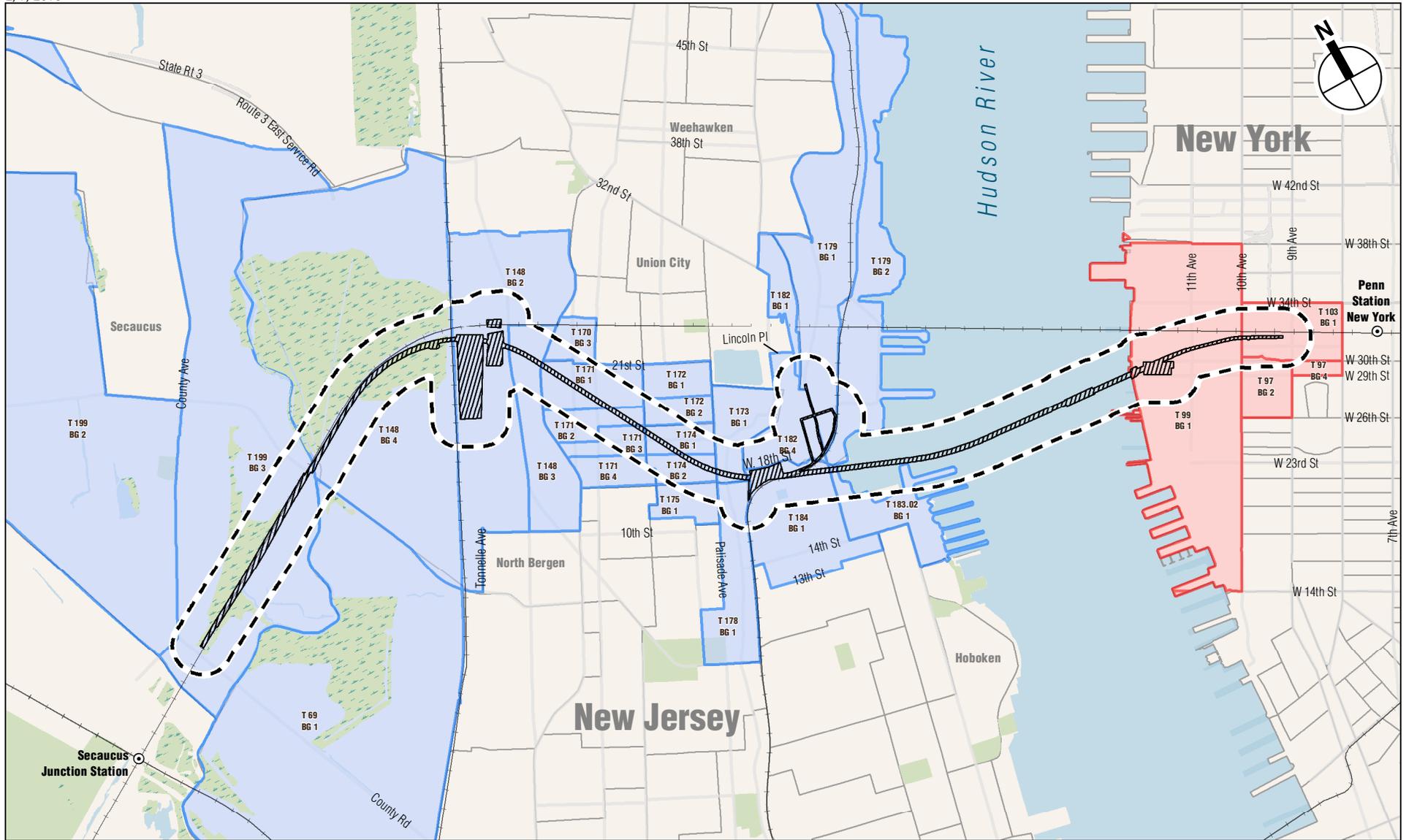
## **7.3 AFFECTED ENVIRONMENT: EXISTING CONDITIONS**

### **7.3.1 NEW JERSEY**

#### *7.3.1.1 OVERALL SOCIOECONOMIC CONDITIONS*

##### *7.3.1.1.1 Social Conditions*

**Table 7-1** presents the population for the New Jersey study area's census tracts, the New Jersey study area as a whole, and Hudson County. According to the 2015-2019 ACS, the population of the study area is 40,331 (approximately 6.0 percent of the population of Hudson County). This does not include residents of the approximately 290 apartments at Hudson Mews in North Bergen, or the 550 new apartments in the residential buildings at Hamilton Cove in Weehawken, since these buildings were completed after the date of the census information. Chapter 22, "Environmental Justice," provides information on the racial and ethnic characteristics and low-income status of the study area's population.



Project Site

New Jersey Census Tracts in Study Area

Study Area (500-foot boundary)

New York Census Tracts in Study Area

0 5,000 FEET



**Table 7-1  
2015-2019 Total Population,  
New Jersey Study Area**

<b>Geography<sup>1</sup></b>	<b>Total Population</b>
CT 69 BG 1	68
CT 148 BG 2	2,869
CT 148 BG 3 <sup>2</sup>	2,203
CT 148 BG 4	0
CT 170 BG 3	1,811
CT 171 BG 1	1,535
CT 171 BG 2	1,413
CT 171 BG 3	911
CT 171 BG 4	1,158
CT 172 BG 1	1,636
CT 172 BG 2	1,661
CT 173 BG 1	2,520
CT 174 BG 1	1,105
CT 174 BG 2	1,384
CT 175 BG 1	2,886
CT 178 BG 1	1,841
CT 179 BG 1 <sup>3</sup>	804
CT 179 BG 2	2,722
CT 182 BG 1	764
CT 182 BG 4	664
CT 183.02 BG 1	4,418
CT 184 BG 1	1,598
CT 199 BG 2	3,480
CT 199 BG 3	880
<b>NJ Study Area</b>	<b>40,331</b>
<b>Hudson County</b>	<b>670,046</b>
<b>Notes:</b>	1 See Figure 7-1 for the study area. 2 This does not include residents of the approximately 290 apartments at Hudson Mews, which was completed after the date of the census information. 3 This does not include residents of the 550 new apartments at Hamilton Cove, since these buildings were completed after the date of the census information.
<b>Source:</b>	U.S. Department of Commerce, Bureau of Census, 2015-2019 American Community Survey 5-Year Estimates.

**Table 7-2** presents the estimated average and median household incomes for the New Jersey study area and Hudson County. According to the 2015-2019 ACS, the average household income in the study area is \$143,083, which is nearly \$40,000 greater than the average household income in Hudson County. The study area’s estimated median household income (\$88,315) is also greater than the median income in Hudson County (\$72,078).

**Table 7-2**  
**2015-2019 Household Income Characteristics**

Geography <sup>1</sup>	Average Household Income <sup>2</sup>	Median Household Income <sup>2</sup>
New Jersey study area	\$143,083	\$88,315
Hudson County	\$105,209	\$72,078

**Notes:** 1 See **Figure 7-1** for the study area.  
2 Dollars adjusted for inflation to match value in 2021 (CPI: 1.012).

**Sources:** U.S. Department of Commerce, Bureau of Census, 2015-2019 American Community Survey 5-Year Estimates

### 7.3.1.1.2 Economic Conditions

FRA and NJ TRANSIT obtained Business Summary Reports from Esri's Business Analyst Online for the 24 census block groups in the New Jersey study area (aggregated for the study area as a whole), and for Hudson County as a whole, for comparison.<sup>2</sup>

As shown in **Table 7-3**, there are an estimated 26,822 employees in the study area. These employees represent approximately 11.7 percent of the employment in all of Hudson County. Within the study area, the finance and insurance sector accounts for the largest share of total employment (22.0 percent), which reflects the presence of large office developments along the Hudson River, and Weehawken's business district at Lincoln Harbor between the Lincoln Tunnel and Weehawken Cove, which includes UBS, a Swiss global financial services company. This sector is followed by the retail trade sector (with 15.6 percent of the study area's employment), reflecting Weehawken's retail district along Park Avenue (its boundary with Union City), as well as the Shops at Lincoln Harbor. Hudson County has its largest share of employment in the retail trade sector, and the finance and insurance sector is the third largest share, which is indicative of the county's role as a major economic center. As shown in the same table, the retail trade sector has the largest share of the study area's businesses (16.2 percent), as well as the county's businesses (15.5 percent).

<sup>2</sup> Esri collects the data from the U.S. Census, including the ACS and the U.S. Bureau of Labor Statistics.



**Table 7-3  
Estimated Employees and Businesses in  
New Jersey Study Area and Hudson County**

Type of Job by NAICS Category	New Jersey Study Area				Hudson County			
	Employees		Businesses		Employees		Businesses	
	No.	%	No.	%	No.	%	No.	%
Agriculture, forestry, fishing and hunting	3	0.0%	1	0.1%	53	0.0%	9	0.0%
Mining	0	0.0%	0	0.0%	8	0.0%	2	0.0%
Utilities	67	0.2%	2	0.1%	126	0.1%	13	0.1%
Construction	1,166	4.3%	83	5.8%	8,480	3.7%	802	4.2%
Manufacturing	1,037	3.9%	54	3.8%	10,815	4.7%	541	2.9%
Wholesale trade	3,334	12.4%	70	4.9%	9,004	3.9%	538	2.9%
Retail trade	4,174	15.6%	231	16.2%	31,493	13.7%	2,920	15.5%
Transportation and warehousing	1,348	5.0%	87	6.1%	10,828	4.7%	728	3.9%
Information	920	3.4%	62	4.3%	8,479	3.7%	534	2.8%
Finance and insurance	5,894	22.0%	63	4.4%	21,752	9.5%	736	3.9%
Real estate and rental and leasing	1,374	5.1%	105	7.3%	12,040	5.2%	1,242	6.6%
Professional, scientific, and technical services	1,723	6.4%	133	9.3%	20,696	9.0%	1,514	8.0%
Management of companies and enterprises	10	0.0%	2	0.1%	512	0.2%	33	0.2%
Administrative and support and waste management and remediation services	321	1.2%	54	3.8%	5,286	2.3%	618	3.3%
Educational services	708	2.6%	23	1.6%	17,813	7.8%	469	2.5%
Health care and social assistance	1,475	5.5%	69	4.8%	25,325	11.0%	1,561	8.3%
Arts, entertainment, and recreation	312	1.2%	37	2.6%	4,239	1.8%	361	1.9%
Accommodation and food services	1,567	5.8%	122	8.5%	17,242	7.5%	2,089	11.1%
Other services (except public administration)	459	1.7%	115	8.0%	11,587	5.1%	2,554	13.5%
Public administration	884	3.3%	30	2.1%	12,240	5.3%	475	2.5%
Unclassified establishments	45	0.2%	90	6.3%	1,331	0.6%	1132	6.0%
<b>Total</b>	<b>26,822</b>	<b>100.0%</b>	<b>1,430</b>	<b>100.0%</b>	<b>229,349</b>	<b>100.0%</b>	<b>18,871</b>	<b>100.0%</b>

**Note:** Totals may not sum due to rounding.  
**Source:** Esri, Business Analyst Online, Business Summary Report, 2020, accessed on May 6, 2021.

### 7.3.1.2 LOCAL CONDITIONS IN THE STUDY AREA

The New Jersey study area consists generally of four areas, based on the geography as well as the anticipated construction activities for the Preferred Alternative:

- County Road to Tonnelle Avenue, where the Project site is adjacent or close to the existing tracks of the NEC.
- Tonnelle Avenue area, where the Project site would cross beneath this busy arterial and would also include staging sites on both sides of the road.

- The Palisades, which would be above the Preferred Alternative’s new tunnel alignment and are above the existing North River Tunnel alignment.
- East of the Palisades, where the Project site includes a vacant site in an industrial area that is adjacent to a residential neighborhood, which would be used for construction staging and for a permanent ventilation facility; the Project would also have construction truck routes on local neighborhood streets in this area.

#### *7.3.1.2.1 County Road to Tonnelle Avenue*

The western portion of the New Jersey study area consists of an area including and along the raised embankment of the NEC. This area consists predominantly of the transportation infrastructure associated with the NEC; the New Jersey Turnpike (I-95); several freight railroad rights-of-way and utility corridors; and light industrial, warehousing, and manufacturing businesses dependent on trucking or rail freight. On the south side of the NEC, the Project site includes portions of a number of light industrial properties, as outlined in Chapter 6A, “Land Use, Zoning, and Public Policy.”

This portion of the study area also includes three small residences north of the NEC near Secaucus Road.

#### *7.3.1.2.2 Tonnelle Avenue Area*

Tonnelle Avenue (U.S. Routes 1 and 9) is a busy arterial roadway lined with commercial uses, including restaurants, gas stations and other auto-related uses (e.g., auto wrecking), building supply and retail stores, and some light industrial and industrial uses. No residences are located along Tonnelle Avenue, but a residential area is above Tonnelle Avenue on the western slope of the Palisades on Paterson Plank Road and Grand Avenue. The Project site in the Tonnelle Avenue area includes properties on both sides of the roadway. NJ TRANSIT acquired these properties in connection with the former Access to the Region’s Core (ARC) Project. NJ TRANSIT cleared the sites in anticipation of construction for that project, which was later cancelled.

#### *7.3.1.2.3 The Palisades*

The study area on the Palisades is predominantly residential, and also includes institutional, community facility, commercial, and retail uses that support residential areas.

#### *7.3.1.2.4 East of the Palisades*

The study area east of the Palisades includes a light industrial area in Hoboken, with warehousing, utility uses (a PSE&G substation and the North Hudson Sewerage Authority’s wastewater treatment plant), self-storage, and bus parking. The tracks of the Hudson-Bergen Light Rail (HBLR) run through this area. The Project site in this area is within the light industrial area, and consists of a vacant parcel that NJ TRANSIT acquired as part of the ARC Project. At that time, the property had industrial buildings on it that NJ TRANSIT later demolished.

This portion of the New Jersey study area also includes a small residential community just north of the Project site in Weehawken, with low-rise attached and detached residences. This neighborhood is known as the Shades. Slightly east of the Shades, the study area also includes a 10-story apartment building and the recently constructed 15-story apartment complex, Hamilton Cove, with 550 apartments.



## 7.3.2 NEW YORK

### 7.3.2.1 OVERALL SOCIOECONOMIC CONDITIONS

#### 7.3.2.1.1 Social Conditions

**Table 7-4** presents the population for the New York study area’s census block groups, the study area as a whole, and Manhattan. According to the 2015-2019 ACS, the population of the study area is 10,137 (or less than 1 percent of the population of Manhattan). This does not include residents of the many new apartments in the buildings at Hudson Yards, since these were completed after the date of the census information.

**Table 7-4  
2015-2019 Total Population,  
New York Study Area**

Geography	Total Population
CT 97 BG 2	979
CT 97 BG 4	1,112
CT 99 BG 1	5,981
CT 103 BG 1	2,065
<b>NY Study Area</b>	<b>10,137</b>
<b>Manhattan</b>	<b>1,631,993</b>
<b>Note:</b>	This does not include residents of the many new apartments in the buildings at Hudson Yards, since these were completed after the date of the census information.
<b>Source:</b>	U.S. Department of Commerce, Bureau of Census, 2015-2019 American Community Survey 5-Year Estimates.

**Table 7-5** presents the estimated average and median household incomes for the New York study area and Manhattan. According to the 2015-2019 ACS, the average household income in the study area is \$190,731, which is nearly \$30,000 greater than the average household income in Manhattan. The study area’s estimated median household income (\$106,347) is also greater than the median household income in Manhattan (\$87,633).

**Table 7-5  
2015-2019 Household Income Characteristics**

Geography <sup>1</sup>	Average Household Income <sup>2</sup>	Median Household Income <sup>2</sup>
New York study area	\$190,731	\$106,347
Manhattan	\$161,563	\$87,633
<b>Notes:</b>	1 See <b>Figure 7-1</b> for the study area. 2 Dollars adjusted for inflation to match value in 2021 (CPI: 1.012)	
<b>Sources:</b>	U.S. Department of Commerce, Bureau of Census, 2015-2019 American Community Survey 5-Year Estimates	

#### 7.3.2.1.2 Economic Conditions

FRA and NJ TRANSIT used Business Summary Reports from Esri’s Business Analyst Online for the four census block groups in the New York study area (aggregated for the study area as a whole), and for Manhattan as a whole, for comparison. As shown in **Table 7-6**, there were an estimated 46,762 employees in the New York study area. These employees represent approximately 2.2 percent of the employment in all of Manhattan. Within the study area, the retail trade sector accounts for the largest share of total employment (23.2 percent). This sector is

followed by the professional, scientific, and technical services sector (with 13.1 percent of the study area’s employment), reflecting the presence of large office developments in this area. The other services and information sectors also had a significant share of the study area’s employment (12.7 percent and 11.6 percent, respectively). Two of the top four employment sectors in Manhattan include the professional, scientific, and technical services and retail trade sectors. The new buildings at Hudson Yards include a substantial amount of retail space and professional offices.

As shown in **Table 7-6**, the retail trade sector has the largest share of the study area’s businesses (19.6 percent). The professional, scientific, and technical services sector has the largest share of Manhattan’s businesses (14.5 percent).

**Table 7-6  
Estimated Employees and Businesses in New York Study Area and Manhattan**

Type of Job by NAICS Category	New York Study Area				Manhattan			
	Employees		Businesses		Employees		Businesses	
	No.	%	No.	%	No.	%	No.	%
Agriculture, forestry, fishing hunting	0	0.0%	0	0.0%	386	0.0%	88	0.1%
Mining	0	0.0%	0	0.0%	311	0.0%	53	0.0%
Utilities	0	0.0%	0	0.0%	5,746	0.3%	72	0.1%
Construction	1,737	3.7%	59	3.2%	37,548	1.8%	3,013	2.3%
Manufacturing	547	1.2%	37	2.0%	51,499	2.5%	3,000	2.3%
Wholesale trade	408	0.9%	36	2.0%	36,206	1.7%	3,109	2.4%
Retail trade	10,857	23.2%	358	19.6%	188,530	9.1%	16,025	12.4%
Transportation and warehousing	753	1.6%	29	1.6%	30,586	1.5%	1,130	0.9%
Information	5,426	11.6%	99	5.4%	152,161	7.4%	5,158	4.0%
Finance and insurance	3,888	8.3%	61	3.3%	289,907	14.0%	7,540	5.8%
Real estate and rental and leasing	788	1.7%	87	4.8%	102,459	5.0%	8,043	6.2%
Professional, scientific, and technical services	6,120	13.1%	262	14.4%	330,468	16.0%	18,687	14.5%
Management of companies and enterprises	35	0.1%	7	0.4%	22,963	1.1%	570	0.4%
Administrative and support and waste management and remediation services	657	1.4%	77	4.2%	77,550	3.7%	5,138	4.0%
Educational services	421	0.9%	22	1.2%	89,009	4.3%	2,800	2.2%
Health care and social assistance	4,539	9.7%	51	2.8%	223,147	10.8%	8,242	6.4%
Arts, entertainment, and recreation	1,871	4.0%	86	4.7%	64,585	3.1%	3,495	2.7%
Accommodation and food services	2,282	4.9%	116	6.4%	183,623	8.9%	10,464	8.1%
Other services (except public administration)	6,013	12.9%	129	7.1%	117,253	5.7%	11,380	8.8%
Public administration	263	0.6%	8	0.4%	54,350	2.6%	817	0.6%
Unclassified establishments	157	0.3%	299	16.4%	11,299	0.5%	20,441	15.8%
<b>Total</b>	<b>46,762</b>	<b>100.0%</b>	<b>1,823</b>	<b>100.0%</b>	<b>2,069,586</b>	<b>100.0%</b>	<b>129,265</b>	<b>100.0%</b>

**Notes:** Totals may not sum due to rounding.  
**Source:** Esri, Business Analyst Online, Business Summary Report, 2020, accessed on May 6, 2021.



### 7.3.2.2 LOCAL CONDITIONS IN THE STUDY AREA

The New York study area is located in Manhattan's Far West Side, an area that predominantly includes major transportation uses—most notably, the urban boulevard/arterial of NYS Route 9A (also known as Twelfth Avenue in the study area), which runs parallel to the Hudson River, and the multi-block rail complex of tracks west of Penn Station New York (PSNY)—and recent and ongoing construction of the Hudson Yards development, with residential, office, and retail space. This new construction is resulting in dramatic transformation of the area as a result of several public policy initiatives. These high-rise residential and commercial buildings are being developed on platforms over a large below-grade rail yard. The developments being constructed over the railyard are collectively referred to as Hudson Yards (see discussion in Section 6A.3.3.1 of Chapter 6A, "Land Use, Zoning, and Public Policy").

The study area also includes Hudson River Park, a linear waterfront park that is being developed along Manhattan's western edge as funding becomes available. Over time, this park has transformed a formerly inaccessible industrial waterfront into a publicly accessible walkway and bikeway with landscaped areas and activity zones. Within the study area, a portion of Hudson River Park is currently occupied by the West 30th Street Heliport, a private heliport with 10 helipads that provides commercial, general aviation, and air taxi services. No tourist flights are operated from this location. In the summer, approximately 72 to 100 flights operate each day from the heliport; in the winter, this number decreases to about 40 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 Project site includes a vacant site along Twelfth Avenue where the Preferred Alternative would include a vent shaft and construction staging site, on a block between West 29th and West 30th Streets (Manhattan Block 675). On the same block, two high-rise residential buildings are currently under construction.

## 7.4 AFFECTED ENVIRONMENT: FUTURE CONDITIONS

Some new development is occurring near the Project site in the New Jersey study area, including the flood protection infrastructure Rebuild By Design project in Hoboken and Weehawken. Chapter 6A, "Land Use, Zoning, and Public Policy," describes the anticipated development (see Section 6A.4.1.1).

The New York study area is seeing extensive ongoing redevelopment, also discussed in Chapter 6A, "Land Use, Zoning, and Public Policy." This includes a number of large-scale mixed-use (commercial and residential) developments, commercial developments, as well as several public transportation infrastructure and open space improvement projects (see Chapter 6A, Section 6A.4.3.1). The addition of a large amount of new commercial office space and retail space, new hotels, and thousands of new apartments will continue to change the economic profile and residential characteristics of the New York study area by the analysis year of 2033.

This condition is the baseline against which the impacts of both the No Action and Preferred Alternatives are compared.

## 7.5 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 EIS, 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. However, without a full rehabilitation of the North River Tunnel, damage to the tunnel caused by Superstorm Sandy will continue to degrade systems in the tunnel. This deterioration combined with the tunnel's age and intensity of use will likely lead to increasing instability of rail operations in the tunnel, and may lead to its eventual closure.

The No Action Alternative would result in adverse effects on socioeconomic conditions in New Jersey, New York, and the cities in the Northeast that currently benefit from Amtrak's intercity rail service. 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.

Without full rehabilitation of the North River Tunnel, the increased instability of rail operations and the potential for eventual closure of the tunnel would have wide-ranging impacts on travel in the region and on the regional economy. Extreme overcrowding and delays in public transportation service would likely occur, and a shift from train to auto travel would likely result, which would exacerbate already congested conditions on the Hudson River crossings and major roads on both sides of the river and in the region.

Increasing travel time required for work commutes and the movement of goods and services in the region would increase the cost of doing business and ultimately make the region a less desirable location to live and work. Under the No Action Alternative, the projected growth in population and employment would not be sustainable and the deterioration in travel conditions would adversely impact the local tax base and economic activity in the Northeast as individuals and businesses move away or avoid locating within the region.

## **7.6 CONSTRUCTION IMPACTS OF THE PREFERRED ALTERNATIVE**

### **7.6.1 OVERVIEW**

Construction of the Preferred Alternative would generate economic benefits for New Jersey and New York from the creation of construction jobs, wages and salaries paid to construction workers, and indirect economic activity from those expenditures throughout the regional economy (i.e., the multiplier effect).

Construction of the Preferred Alternative would generate construction jobs over the 11-year construction period. In addition to jobs directly attributable to the Project's construction, indirect employment would occur from the construction expenditure, including manufacturing jobs for the construction materials used for the Preferred Alternative and jobs in business establishments providing goods and services to the construction workers in New Jersey and New York.

Construction activities for the Preferred Alternative also have the potential to cause temporary, localized adverse effects on socioeconomic conditions. Construction of the Preferred Alternative would result in disruptions and inconveniences in areas adjacent to the proposed construction sites, as described below. The localized adverse effects described in this section would not result in the potential for community disruption, possibility of demographic shifts, need for or availability of relocation housing, adverse effects on commerce, or adverse impacts to local government services and revenues.



## 7.6.2 ECONOMIC AND FISCAL BENEFITS OF CONSTRUCTION EXPENDITURES

The construction of the Preferred Alternative would result in the investment of significant capital into the local and regional economy. This investment would result in direct and indirect economic and fiscal benefits to New Jersey and New York State in terms of employment (in jobs per year); employee compensation; total economic output (the total demand for goods and services created by construction of the Preferred Alternative); and tax revenues generated over the approximately 11-year construction period. This analysis considers the benefits to New Jersey and New York from construction activity for the Preferred Alternative; other benefits would also accrue to areas elsewhere in the U.S. where construction materials for the Preferred Alternative are manufactured.

FRA and NJ TRANSIT estimated these benefits to New York and New Jersey using the preliminary construction cost information for the Preferred Alternative based on preliminary engineering and the IMPLAN (i.e., IMPact Analysis for PLANning) input-output modeling system.<sup>3</sup> Chapter 2, “Project Alternatives and Description of the Preferred Alternative,” Section 2.5.8, provides information on the cost of the Preferred Alternative. Benefits were assumed to accrue to New Jersey or New York based on where construction spending would occur; construction spending was assumed to occur in the state where the construction activities would occur.<sup>4</sup> Economic benefits associated with the manufacture of tunnel boring machines (TBMs) for the Project were excluded from this analysis because FRA and NJ TRANSIT do not anticipate that the TBMs would be manufactured in New Jersey or New York, and therefore the benefit of that production would not occur in New Jersey or New York.

IMPLAN is an economic input–output modeling system that uses the most recent economic data from sources such as the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor Statistics, and the U.S. Census Bureau to predict effects on the local economy from direct changes in spending. The model contains data on 546 economic sectors, showing how each sector affects every other sector as a result of a change in the quantity of its product or service. Since completion of the DEIS, FRA and NJ TRANSIT revised the economic benefits analysis in this EIS to account for revised Project construction cost estimates and to use the more current 2019 IMPLAN model, which uses the more recent economic data than the version of the model that FRA and NJ TRANSIT used for the DEIS analysis.

The public expenditure required to complete the Preferred Alternative would translate directly into jobs for construction labor itself and for the production of necessary services and materials. In addition to these jobs, the Project’s construction would also result in indirect or secondary economic activity generated from the direct expenditures throughout the regional economy (often

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<sup>3</sup> Minnesota IMPLAN Group, IMPLAN (IMPacts for PLANning), 2019 IMPLAN State Packages for New York and New Jersey. This model was developed by the U.S. Department of Transportation and subsequently privatized by the Minnesota IMPLAN Group. Because input-output models such as IMPLAN assume static prices without “substitution” effect (i.e., the theory that as prices rise—or income decreases—consumers will replace more expensive items with less costly alternatives), as the economy changes over time, the model’s data may become less reflective of current economic conditions. In this respect, there is potential for an input-output model to overestimate longer-term impacts.

<sup>4</sup> IMPLAN modeling takes commuting patterns into account. Based on commuting patterns and the location of the Project, it is expected that a vast majority of construction workers would be from the states of New Jersey and New York, with the remaining construction workers from nearby states with strong commuting connections to the region (Pennsylvania and Connecticut) or from firms that must be brought in for the Project from outside the region due to the specialized nature of a particular construction activity that may not be available within the region.

referred to as the “ripple” or “multiplier” effect). In addition to employment directly attributable to construction of the Preferred Alternative, construction expenditures would generate indirect employment, including jobs in business establishments providing goods and services to the contractors, as well as in businesses that would provide goods and services to construction workers.

Overall, the economic benefits associated with construction of the Preferred Alternative would include (1) **employment**, or the number of jobs created as a result of construction (presented in full-time equivalents, or FTEs, which convert full- and part-time employment into the equivalent of one employee working full-time); (2) the associated **employee compensation** (total cost of labor, including wages and benefits); (3) **economic output**, which is the economic activity that would result (or the sum of the costs of goods and services used to produce a product and the associated payments to workers, taxes, and profits); and (4) **tax revenues** to local jurisdictions generated as part of the economic output.

Each of these economic benefits would include **direct benefits**, which are the benefits directly associated with the construction expenditure; indirect benefits, which are the benefits generated by construction expenditures in other economic sectors;<sup>5</sup> and **induced benefits**, which are the impacts caused by increased income in a region (e.g., direct and indirect effects generate more worker income by increasing employment and/or salaries in certain industries, and households spend some of this additional income on local goods and services, such as food and drink, recreation, and medical services; benefits generated by these household expenditures are induced effects).

**Table 7-7** summarizes the results of the IMPLAN analysis; all economic and fiscal benefits are reported in 2021 dollars.<sup>6</sup> As shown in the table, the construction activities associated with the Preferred Alternative would create an estimated rounded total of 55,312 jobs (FTE). This would include 30,650 direct construction jobs, 9,567 indirect jobs, and 15,095 induced jobs in New Jersey and New York over the full 11-year construction period. On an annual basis (i.e., jobs per year over the Project’s 11 years of construction), the construction activities associated with the Preferred Alternative would create an estimated total of 5,028 jobs, including 2,786 direct construction jobs (FTE), 870 indirect jobs, and 1,372 induced jobs in New Jersey and New York.

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<sup>5</sup> Indirect effects occur as construction expenditures will result in purchases from other businesses, such as wholesale traders. These businesses in turn purchase goods and services from other businesses, causing a ripple effect through the economy. The ripple effect continues until leakages from the region (caused, for example, by imported goods) stop the cycle. The sum of these iterative inter-industry purchases is called the indirect effect.

<sup>6</sup> Construction costs provided in Chapter 2 are provided in year-of-expenditure dollars. The analysis in this chapter conservatively provides benefits in current dollars. All estimates presented are rounded; totals may not sum because of rounding.



**Table 7-7  
Economic and Fiscal Benefits  
Associated with Construction of the Preferred Alternative<sup>5</sup>**

Region	Direct	Indirect	Induced	Total
<b>Employment (Jobs/Year)<sup>1</sup></b>				
New Jersey	1,701	550	861	3,113
New York	1,085	319	511	1,916
Total	2,786	870	1,372	5,028
<b>Employment (Total Jobs over the Full Construction Period)<sup>1</sup></b>				
New Jersey	18,711	6,054	9,474	34,239
New York	11,939	3,513	5,621	21,073
Total	30,650	9,567	15,095	55,312
<b>Employee Compensation (Millions of 2021 Dollars)<sup>2</sup></b>				
New Jersey	\$1,794.4	\$576.2	\$693.3	\$3,063.9
New York	\$1,120.7	\$362.3	\$457.4	\$1,940.4
Total	\$2,915.1	\$938.5	\$1,150.7	\$5,004.3
<b>Output (Millions of 2021 Dollars)<sup>3</sup></b>				
New Jersey	\$3,934.8	\$1,604.6	\$1,964.4	\$7,503.8
New York	\$2,517.7	\$1,015.3	\$1,252.7	\$4,785.7
Total	\$6,452.5	\$2,619.9	\$3,217.1	\$12,289.5
<b>Tax Revenues (Millions of 2021 Dollars)<sup>4</sup></b>				
New Jersey	\$50.2	\$23.9	\$69.2	\$143.2
New York	\$53.8	\$23.2	\$56.4	\$133.5
Total	\$104.0	\$47.1	\$125.6	\$276.7
<b>Notes:</b>				
<sup>1</sup> Jobs are presented in full time equivalents (FTE). An FTE is equivalent to one employee working full-time. Jobs per year are the total jobs divided over the 11 years of the construction period; total jobs are all jobs over the entire 11-year construction period.				
<sup>2</sup> The total cost of labor including wages and benefits over the entire 11-year construction period.				
<sup>3</sup> The total effect on the local economy over the entire 11-year construction period, including the sum of the cost of goods and services used to produce a product and the associated payments to workers, taxes, and profits.				
<sup>4</sup> Figures include personal income tax, corporate and business taxes, and numerous other taxes (excluding real property tax) on direct, indirect, and induced activity over the entire 11-year construction period. It is conservatively assumed that the Project Sponsor would be exempt from sales tax on construction materials.				
<sup>5</sup> Revisions to the economic benefits analysis account for revised Project construction cost estimates and are based on the more current 2019 IMPLAN model, which uses the most recent economic data from sources such as the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor Statistics, and the U.S. Census Bureau to predict effects on the local economy from changes in direct non-payroll expenditures, employment, and household income.				
Detailed amounts may not add to totals because of rounding.				
<b>Source:</b> AKRF, Inc., May 2021, the IMPLAN economic modeling system, 2019.				

### 7.6.2.1 NEW JERSEY

Construction of the Preferred Alternative would create an estimated 1,701 direct construction jobs (FTE) per year in New Jersey. In addition to direct employment, construction of the Preferred Alternative would create additional jobs off-site in the rest of the state (550 indirect and 861 induced jobs per year). In total, employment from construction of the Preferred Alternative would be 3,113 jobs per year in New Jersey. Over the full 11-year construction period, the Preferred

Alternative would create an estimated 18,711 direct construction jobs, 6,054 indirect jobs, and 9,474 induced jobs.

Direct wages and salaries from constructing the Preferred Alternative are estimated at about \$1.79 billion in New Jersey. In the broader state economy, total direct, indirect, and induced wages and salaries from Preferred Alternative construction would be even greater (approximately \$3.06 billion, including \$576 million in indirect employee compensation and \$693 million in induced employee compensation).

The total effect on the New Jersey state economy, expressed as economic output or demand for local industries, is estimated at approximately \$7.5 billion. In addition to direct expenditures, this output includes indirect and induced employee compensation, taxes, profits, and intermediate goods.

Construction of the Preferred Alternative would also create tax revenues for New Jersey and local taxing jurisdictions. These taxes include personal income tax, corporate and business taxes, and numerous miscellaneous taxes (excluding real property tax). Construction of the Preferred Alternative would create approximately \$143.2 million in state and local taxes in New Jersey, including \$50.2 million in direct revenues and \$93.1 million in indirect and induced revenues (this analysis conservatively assumes that the Project Sponsor would be exempt from paying sales tax on construction materials).

#### **7.6.2.2 NEW YORK**

In New York State, construction of the Preferred Alternative would create an estimated 1,085 direct construction jobs (FTE) per year. In addition to direct employment, construction of the Preferred Alternative would create additional jobs off-site in the rest of the state (319 indirect and 511 induced jobs per year). In total, employment from construction of the Preferred Alternative would be 1,916 jobs per year in New York. Over the full 11-year construction period, the Preferred Alternative would create an estimated 11,939 direct construction jobs, 3,513 indirect jobs, and 5,621 induced jobs in New York.

Direct wages and salaries from construction of the Preferred Alternative are estimated at about \$1.1 billion in New York. In the broader state economy, total direct, indirect, and induced wages and salaries from Preferred Alternative construction activities would be even greater (approximately \$1.9 billion including \$362 million in indirect employee compensation and \$457 million in induced employee compensation).

The total effect on the New York State economy, expressed as economic output or demand for local industries, is estimated at approximately \$4.8 billion. In addition to direct expenditures, this output includes indirect and induced employee compensation, taxes, profits, and intermediate goods.

Construction of the Preferred Alternative would also create tax revenues for New York State and local taxing jurisdictions. These taxes include personal income tax, corporate and business taxes, and numerous miscellaneous taxes (excluding real property tax). Construction of the Preferred Alternative would create approximately \$133.5 million in non-property-related state and local taxes in New York, including \$53.8 million in direct revenues and \$79.6 million in indirect and induced revenues (this analysis conservatively assumes that the Project Sponsor would be exempt from paying sales tax on construction materials).



## 7.6.3 CONSTRUCTION EFFECTS ON LOCAL CONDITIONS IN THE STUDY AREA

### 7.6.3.1 NEW JERSEY

Construction activities for the Preferred Alternative would involve some temporary disruption to the nearby businesses and residents related to construction traffic, noise at construction staging sites, and in certain locations, the need for the temporary use of private property for construction activities. No residential property would be affected. The potential effects of construction on business activities are outlined below.

#### 7.6.3.1.1 County Road to Tonnelle Avenue

The installation of tracks and associated infrastructure in the Preferred Alternative's surface alignment through the Meadowlands would require partial acquisitions of abutting industrial properties. Temporary easements would be required to accommodate installation of below-grade drainage infrastructure and to allow construction access for workers installing the railroad embankment and structures. Some permanent property acquisitions would also be required in this area. Property acquisitions are discussed in Chapter 6B, "Property Acquisition."

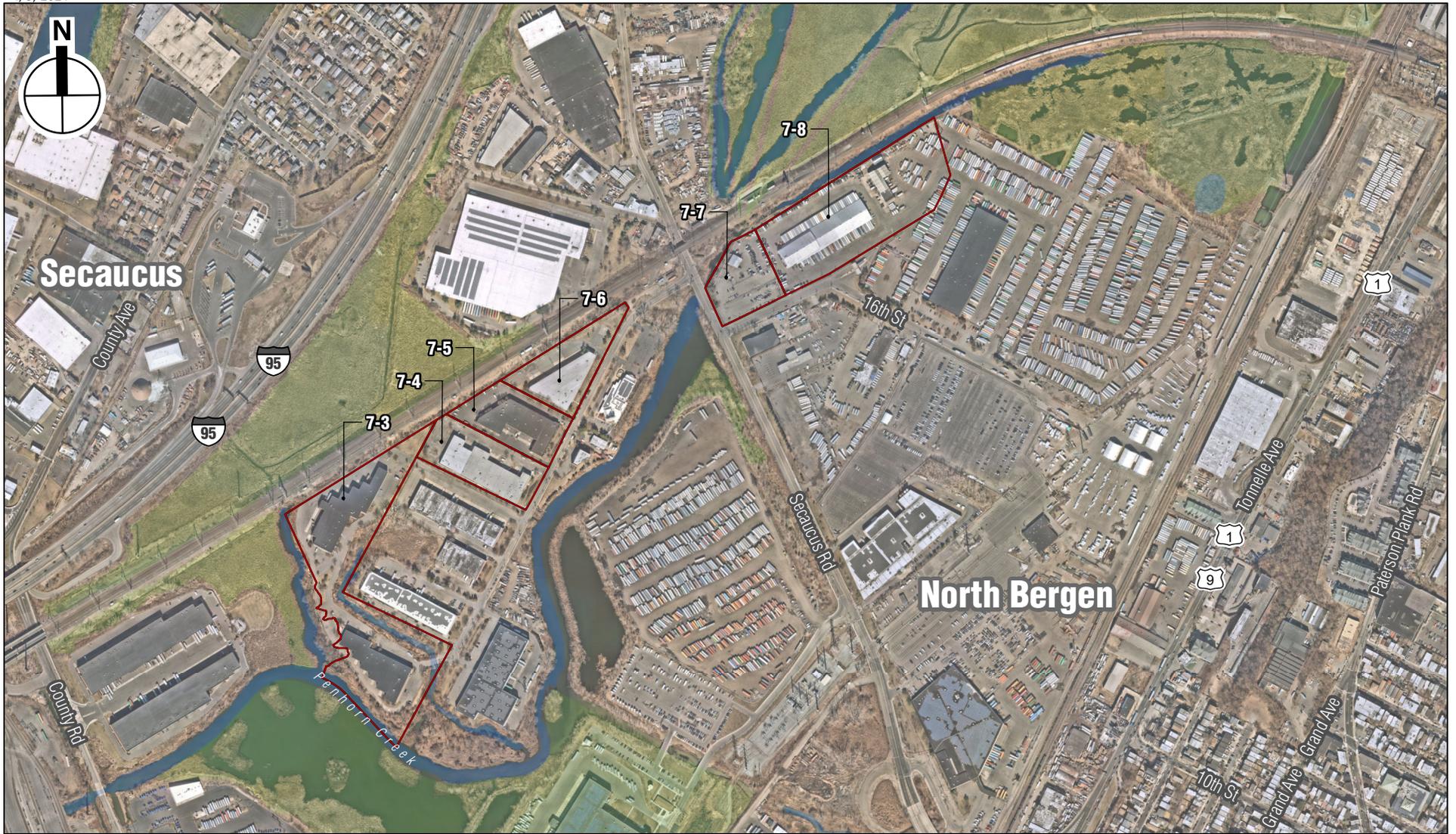
In most instances, access to commercial establishments adjacent to construction sites would be maintained at all times and temporary and permanent fee acquisition and easements would be limited to partial takings of vacant land. Based on preliminary design information, construction activities may result in some disruptions to approximately 25 businesses along the surface tracks segment of the Preferred Alternative through the Meadowlands, as described below. Amtrak is currently evaluating the construction staging approach to further reduce these disruptions wherever practicable, and the Project Sponsor will coordinate with property owners and tenants during construction to limit disruptions.

Based on the current construction approach, construction activities for the surface tracks through the Meadowlands may have the following adverse effects (**Figures 7-2 through 7-8** illustrate these properties and the potential acquisition areas required, which are discussed further in Chapter 6B, "Property Acquisition"):

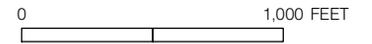
- Access to the loading docks of the warehouse at 801 Penhorn Avenue (Block 44, Lot 5.04) in Secaucus would be obstructed while crews install a retaining wall, an overhead platform for communications equipment, and an underground storm sewer. Over a period of five years, there would be intermittent periods totaling approximately 12 months when occupants of this building would not have use of some 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. Specific access requirements will be coordinated with the property owner and building tenants to minimize the disruption that would occur to business activities, where possible.

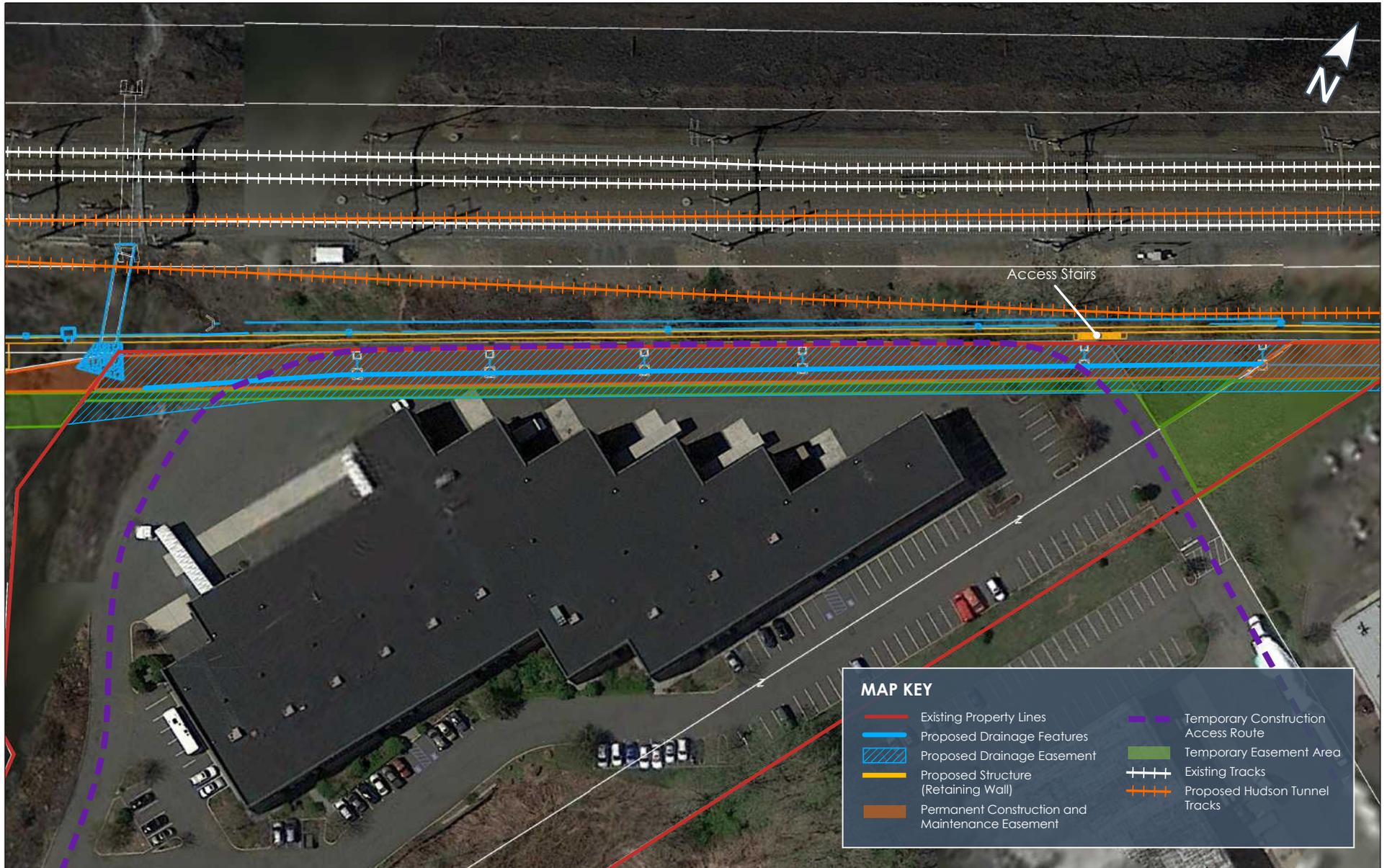
This construction would adversely affect tenants in the building, which currently include the following tenants: Caligor Rx, Paperback Shop, Windy City Wire, Tylie Jones Vault Office, A.J. Worldwide Services Inc., Bhasin Enterprises Inc., Bhasin Properties DDMG Inc., European Fishing Equipment, Japna Inc., Nationwide Wholesale Video, and Us Crystals. The Project Sponsor will fully restore the property once construction is complete; the Project Sponsor will develop specific information about the scope and timing of restoration in coordination with the affected property owners as the design advances.

- About 12 of 32 parking spaces at 401 Penhorn Avenue (Block 47, Lot 4.08) in Secaucus would be required for the installation of the retaining wall and drainage system for a period of up to five months over a five-year period. Tenants affected include: Art Resources Rug Store; The Creative Touch Inc.; Rug Store; JAS Forwarding USA Freight Forwarding Service; and Uoriki



 Properties where property acquisition may be required (see Figures 7-3 through 7-8)





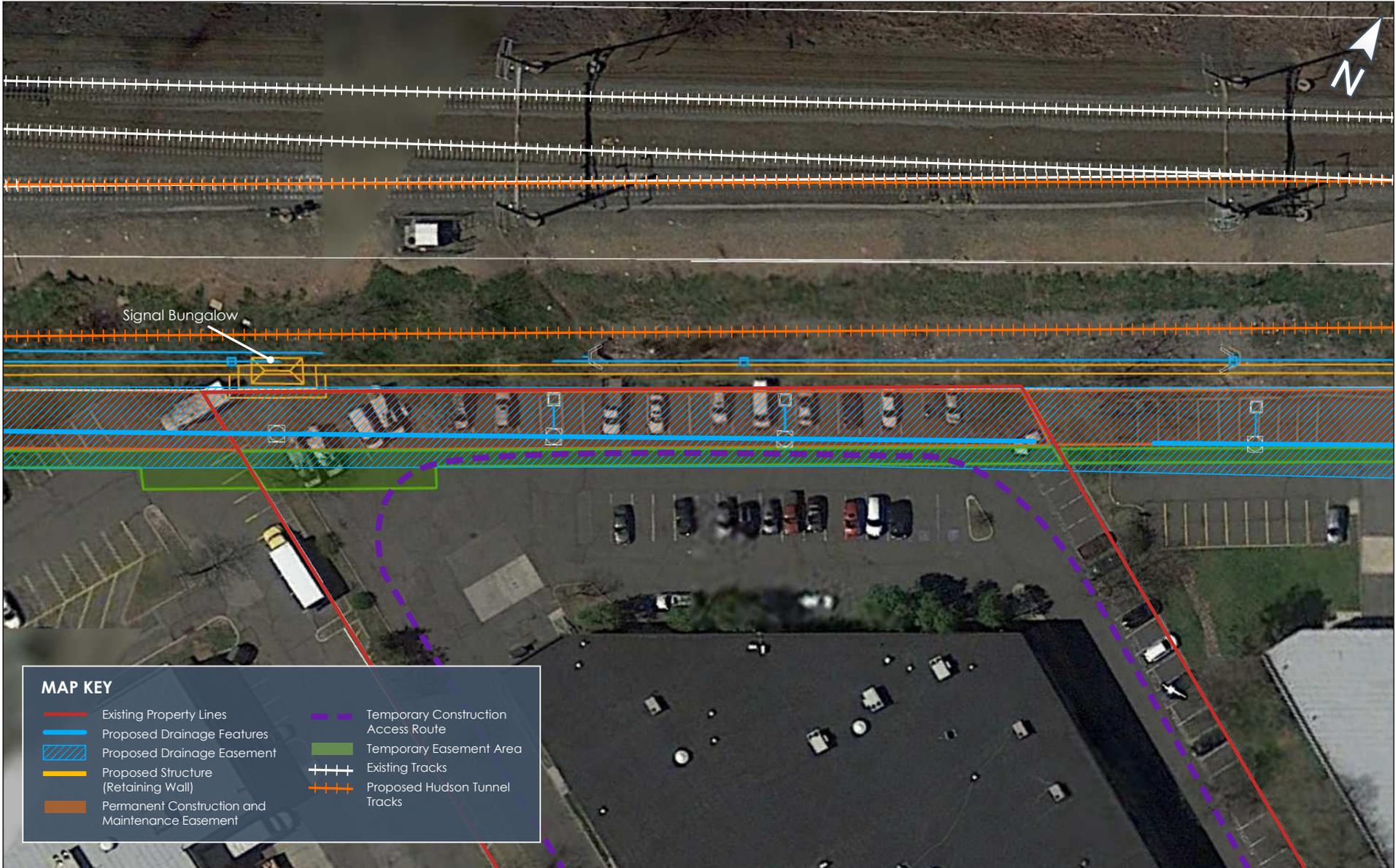
Construction Activity and Property Acquisition at 801 Penhorn Avenue, Secaucus

Figure 7-3



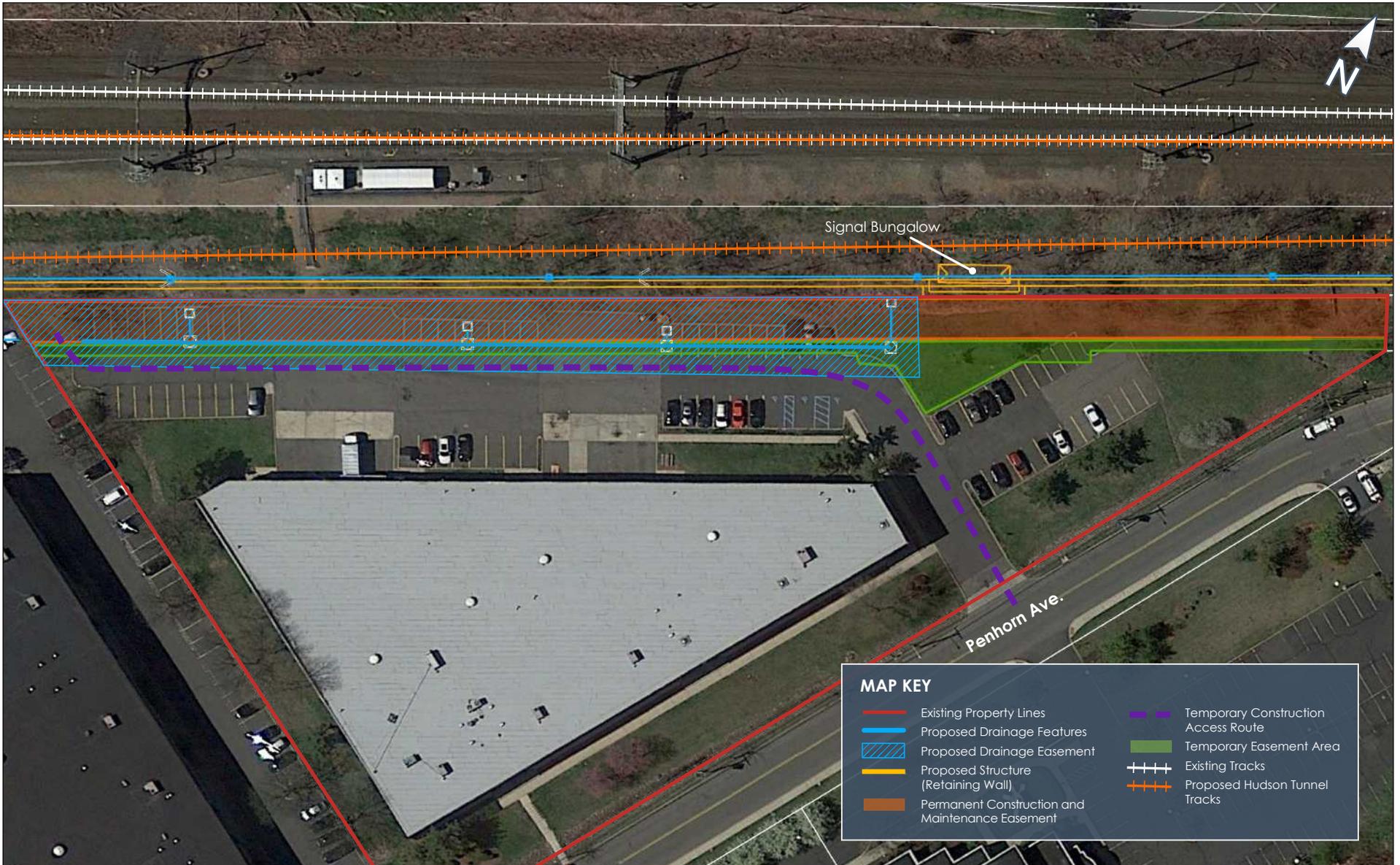
Construction Activity and Property Acquisition at 401 Penhorn Avenue, Secaucus

Figure 7-4

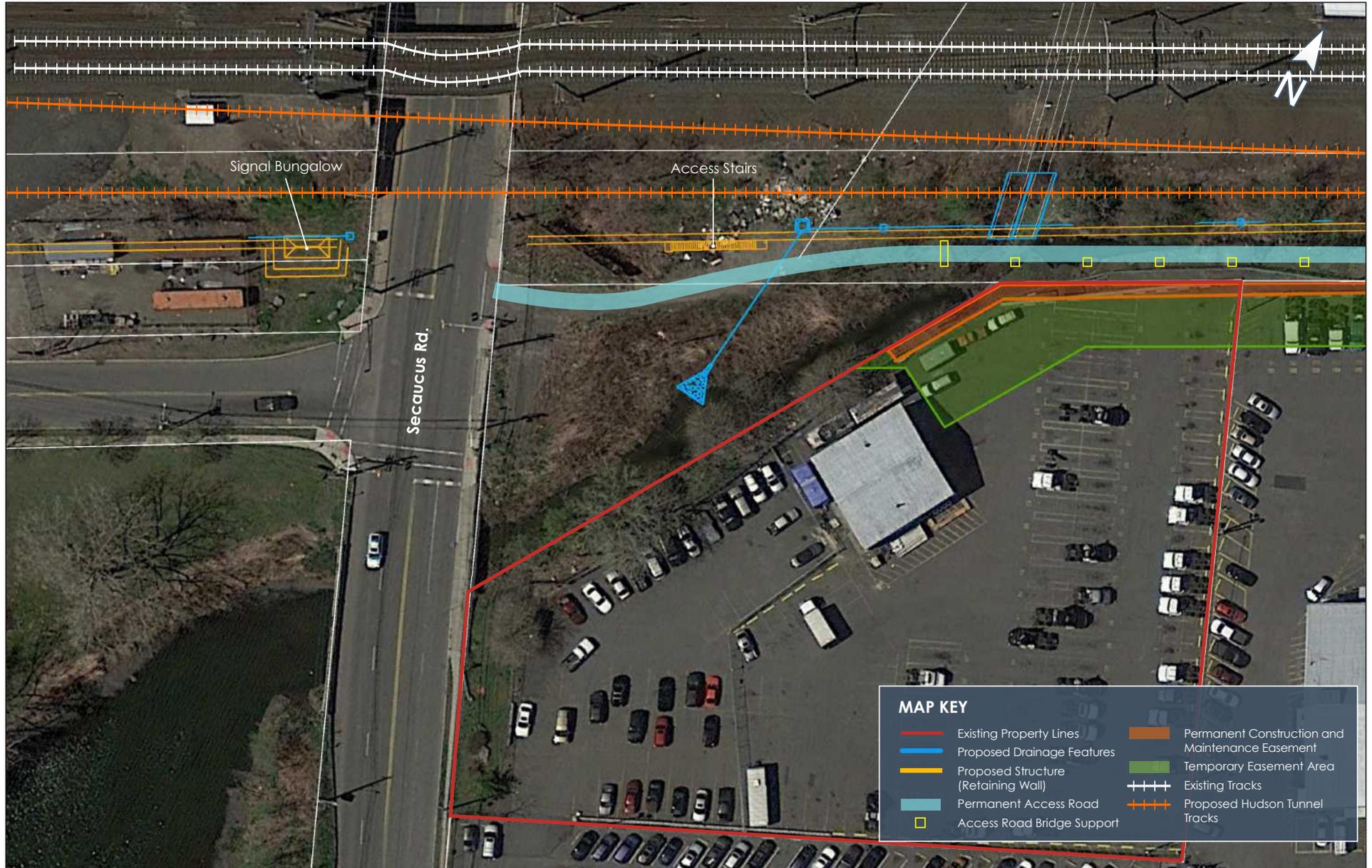


Construction Activity and Property Acquisition at 301 Penhorn Avenue, Secaucus

Figure 7-5



Construction Activity and Property Acquisition at 201 Penhorn Avenue, Secaucus  
**Figure 7-6**



Construction Activity and Property Acquisition at 2806 Secaucus Road, North Bergen

Figure 7-7



Construction Activity and Property Acquisition at 2820 16th Street, North Bergen

Figure 7-8

Fresh Seafood Wholesaler. Based on the large amount of parking and storage space nearby, replacement parking would likely be available and no tenants would need to be relocated. The Project Sponsor will fully restore the property once construction is complete; the Project Sponsor will develop specific information about the scope and timing of restoration in coordination with the affected property owners as the design advances.

- Approximately 30 parking spaces (about half) at 301 Penhorn Avenue (Block 47 Lot 3.01) in Secaucus would be required for the installation of the retaining wall and drainage system for a total of approximately five months intermittently over a five-year period. Tenants include: Pump it Up Kids Play Party and Play Space; Samsun Direct Plus; Dagia's Inc. (fashion warehouse); India's Heritage Inc.; Mega Shipping and Forwarding; Meridian Lines and Titans Industries. Based on the large amount of parking and storage space nearby, replacement parking would likely be available and no tenants would need to be relocated. The Project Sponsor will fully restore the property once construction is complete; the Project Sponsor will develop specific information about the scope and timing of restoration in coordination with the affected property owners as the design advances.
- Approximately 30 parking spaces (about half) at 201 Penhorn Avenue (Block 47 Lot 2.01) in Secaucus would be required for the installation of the retaining wall and drainage system for a total of approximately five months intermittently over a five-year period. Use of this portion of the parking area could adversely affect truck access to the building's loading docks, which is essential to the building's utility. Specific access requirements will be coordinated with the property owner and building tenants to minimize the disruption that would occur to business activities, where possible. Tenants include: Mavi Jeans Men's Clothing; CBS USA; and NJ Shipping Agents. The Project Sponsor will fully restore the property once construction is complete; the Project Sponsor will develop specific information about the scope and timing of restoration in coordination with the affected property owners as the design advances.
- Approximately seven parking spaces (out of approximately 100) at 2806 Secaucus Road (Block 449.01 Lot 1.02) in North Bergen would be required for the installation of the retaining wall and drainage system for a total of approximately five months intermittently over a five-year period. The property appears to be a parking area used by one or more trucking companies. Based on the large amount of parking and storage space nearby, replacement parking would likely be available and no tenants would need to be relocated. The Project Sponsor will fully restore the property once construction is complete; the Project Sponsor will develop specific information about the scope and timing of restoration in coordination with the affected property owners as the design advances.
- Up to approximately 50 parking spaces used to store tractor trailers, containers, and equipment would be acquired permanently at 2820 16th Street (Block 449.01, Lot 1) in North Bergen to accommodate new railroad structures, including a viaduct to support the new tracks. This property is used by National Retail Systems Inc. as part of a larger trucking and logistics operation. Work on this property may occur for approximately three years. Based on the large amount of parking and storage space nearby, replacement parking would likely be available and no tenants would need to be relocated. The Project Sponsor will fully restore the property once construction is complete; the Project Sponsor will develop specific information about the scope and timing of restoration in coordination with the affected property owners as the design advances.
- The construction staging approach presented in the DEIS would have required the use of a portion of New York, Susquehanna & Western Railway's (NYSW) lumber reload facility at the terminus of 16th Street (Block 442, Lot 1.09) in North Bergen as an access road to allow trucks and equipment to reach the construction site. Under that approach, the Preferred Alternative would have operated a temporary access road for construction vehicles headed to and from the surface tracks construction site for a period of approximately 4.5 years, which would have



temporarily reduced the amount of space available at the reload facility. With the revised construction staging approach presented in this FEIS, the temporary access road through this property is no longer required; instead, a truck turnaround would allow two-way truck traffic on a construction access road parallel to the new surface alignment. This design refinement avoids the need to impact operations at the NYSW facility.

#### *7.6.3.1.2 Tonnelle Avenue Area*

The Tonnelle Avenue staging area is located in North Bergen in an industrial/commercial corridor. The nearest residential uses are on the slope of the Palisades above the construction site on Paterson Plank Road, approximately 250 feet away (and 70 feet above) the construction area.

Construction activities at the Tonnelle Avenue staging area would occur over an 11-year period, including utility relocation and construction of a new roadway bridge over the railroad alignment, staging for the surface track construction, staging for the Palisades tunnel segment, and staging for rehabilitation of the North River Tunnel. During this time, there would be heavy truck activity and the use of noisy construction equipment (see Chapter 12A, "Noise," Sections 12A.6.2.2 and 12A.6.2.4). As with any construction project, construction activities would at times be disruptive to nearby activities. The surface-level construction activities would cause disruptions to local vehicular traffic on Tonnelle Avenue due to the movement of heavy equipment and construction materials and the temporary lane closures on Tonnelle Avenue required for the installation of a new roadway overpass over the rail alignment. Traffic delays could impede vehicular access to surrounding businesses and those businesses relying on access to and from Tonnelle Avenue, and could result in an overall reduction in business patronage. The Project Sponsor will develop a Maintenance and Protection of Traffic (MPT) plan in consultation with the local municipality to manage traffic conditions during construction.

#### *7.6.3.1.3 The Palisades*

Construction of the new Hudson River Tunnel beneath the Palisades would occur underground, between 60 feet and 250 feet beneath areas on top of the Palisades in North Bergen and Union City, which would not be noticeable to the residential or business communities in New Jersey, except for some possible ground-borne noise related to the TBM operations, which would be non-intrusive and of short duration (see Chapter 12B, "Vibration," Section 12B.6.2.4).

#### *7.6.3.1.4 East of the Palisades*

Construction activities at the Hoboken staging area would occur over a seven-year period, during which time there would be heavy truck activity and the use of noisy construction equipment (see Chapter 12A, "Noise," Section 12A.6.2.3). Traffic on major north-south routes, such as Willow Avenue, Park Avenue, and JFK Boulevard East, would experience delays caused by the introduction of haul trucks or material delivery trucks. An MPT plan would be developed in consultation with the local municipality to minimize traffic disruptions.

A construction access road (i.e., haul route) to the Hoboken staging area would shift truck traffic away from the nearby residential Shades neighborhood of Weehawken, but even with this haul route, truck traffic on the local streets could affect access to the businesses along Willow Avenue and Park Avenue.

Three options are under consideration for the truck route that would be used for access to the Hoboken staging area (these are described more fully in Chapter 3, "Construction Methods and Activities," Section 3.3.3.4). Option 1, which would route northbound trucks along the Willow Avenue service road adjacent to the Willow Avenue bridge and southbound trucks along the Park Avenue service road adjacent to the Park Avenue bridge, would require a temporary easement from the residential property at 1700 Park Avenue in Weehawken. Option 2, which would use the Willow Avenue service road for both northbound and southbound trucks, would require partial

demolition of a small warehouse structure at the southern end of the Willow Avenue access road to create a wide enough roadway to accommodate turning trucks. This would require displacement of one commercial tenant. This would be accomplished with the use of a temporary easement on the property, and the Project Sponsor would return the site of the partially demolished warehouse to the property owner upon completion of construction. Option 3, which would use an off-street route adjacent to the north and west side of the HBLR tracks to 19th Street, would require acquisition of a portion of the Dykes Lumber property at 1899 Park Avenue to create a wide enough roadway to accommodate turning trucks and for construction of a new intersection at 19th Street. This would affect an undeveloped area behind the Dykes Lumber building.

All property acquisition would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 USC §§ 4601 et seq., Uniform Act), as described in Chapter 6B, "Property Acquisition." This includes reimbursement for any tenants displaced for the Project.

#### *7.6.3.1.5 Property Values and Tax Revenues*

While the Preferred Alternative would result in adverse effects during construction, particularly in terms of traffic (see Chapter 5A, "Traffic and Pedestrians") and noise (see Chapter 12A, "Noise"), the Project Sponsor will implement a wide range of measures to avoid, reduce, and mitigate adverse impacts during construction. With these efforts in place, community character will be maintained. With these mitigation measures in place (detailed in the mitigation section of each analysis chapter) and given that construction activities would be temporary, FRA and NJ TRANSIT do not expect that property values would experience long-term adverse effects near the Project sites in New Jersey. Since tax revenues are based on long-term values, FRA and NJ TRANSIT do not anticipate a corresponding loss of tax revenue for New Jersey municipalities in the study area.

#### *7.6.3.2 NEW YORK*

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, Twelfth Avenue, and Eleventh Avenue (Manhattan Block 675, Lot 1 and part 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 construction equipment. As with any construction project, construction activities would at times be disruptive to nearby activities.

The staging site on Block 675 would include a portion of the property where the new development at 601 West 29th Street will be built (Lot 12 of Block 675). Amtrak is coordinating with the site's developer to accommodate the tunnel staging while minimizing delays to construction of 601 West 29th Street. This would involve using the western 126 feet of the development site (a portion of Block 675 Lot 12) as part of the tunnel construction area. This portion of Lot 12 is proposed for either a potential station for the New York City Fire Department (FDNY) Emergency Medical Services (EMS) or a one-story garage as part of the development project. The potential EMS station or garage may therefore 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 addition, construction activities would fully occupy Lot 1 of Block 675, which would likely delay any redevelopment of that lot with a high-rise development that is being planned by a private developer.

Construction activities related to ground improvement and tunneling could also affect the West 30th Street Heliport in Hudson River Park (Block 665, Lots 6 and 68). A 2013 amendment to the Hudson River Park Act (the New York State legislation that established the park) calls for the



relocation of the West 30th Street Heliport to a floating structure between West 29th and West 32nd Streets, but the timing for that relocation is not known. If the heliport has not yet relocated prior to the onset of construction activities for the Project, construction activities for the new tunnel would affect the southern portion of the heliport.

The proposed construction activities for the Preferred Alternative within the West 30th Street Heliport would require the closure of the heliport fueling area and its two fueling pads, one or two landing helipads, and a heliport driveway and parking area for approximately 1.5 years. The Project Sponsor, in cooperation with the other Project Partners, 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.

In addition, construction activities would likely affect the throughput capacity and volume of flights using the heliport, if demand for landing pads exceeds the remaining capacity. 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. The Project Sponsor will obtain a construction permit from the Federal Aviation Administration for this work.

The heliport is located in Hudson River Park and revenues from its operations are a component of the park's funding; thus, any loss of revenues at the heliport could adversely affect revenues to HRPT, which could in turn adversely affect HRPT's ability to maintain Hudson River Park. The Project Sponsor, in cooperation with the other Project Partners, will coordinate with the heliport operator and HRPT to minimize disruption to the heliport operation to the extent practicable. The Project Sponsor and Amtrak will comply with the Uniform Act with respect to the temporary use of a portion of the heliport.

Cut-and-cover excavation would be required for the portion of the tunnel that traverses Tenth Avenue. This work would necessitate temporary sidewalk and lane closures. The Project Sponsor will develop an MPT plan in consultation with the New York State Department of Transportation (NYSDOT) and New York City Department of Transportation (NYCDOT) to ensure that traffic continues to operate on Tenth Avenue and other streets affected by the Project's construction traffic.

Underpinning work and construction of the Tenth Avenue fan plant would require construction activity beneath and near the building at 450 West 33rd Street. This work would result in noticeable ground-borne noise and vibration but would be of limited duration and would not adversely affect the commercial tenants in the building.

## **7.7 PERMANENT IMPACTS OF THE PREFERRED ALTERNATIVE**

### **7.7.1 OVERVIEW**

The Preferred Alternative would ensure continued Amtrak and NJ TRANSIT rail service on the NEC, which is critical to the economies of New Jersey and New York. With the Preferred Alternative, there would not be deterioration in rail transit service acting as a deterrent to regional growth.

Operation of the Preferred Alternative would not increase rail service on the NEC, create permanent jobs, or change travel patterns in the region. Therefore, operation of the Preferred Alternative has no potential to influence real estate trends or employment in the region or cause demographic shifts. As a result, there would be no direct or indirect adverse impacts on local government or community services or revenue, or community or emergency services. By increasing the resiliency, redundancy, and reliability of the NEC Hudson River rail crossing, the Preferred Alternative would result in positive economic effects as compared with the adverse economic consequences of the disinvestment that would occur under the No Action Alternative (described above in Section 7.5). The Preferred Alternative would thus help the region retain available jobs, would avoid the potential for community disruption and demographic shifts, and would avoid potential adverse impacts on commerce and local government services and revenues that could occur under the No Action Alternative. The Preferred Alternative would not affect the general mobility of the elderly or handicapped.

### **7.7.2 NEW JERSEY**

In New Jersey, operation of the Preferred Alternative would not directly or indirectly affect population, housing stock, or result in substantial new development that is markedly different from existing uses, development, or activities within the area. The Preferred Alternative would not require acquisition of residential property or relocation housing. It would not result in indirect residential or business displacement, or adverse effects on a specific industry. If business tenants must be relocated from the warehouse at 801 Penhorn Avenue during construction, the business tenants that would be relocated are not of critical social or economic value, nor are they unique to the area. Temporary construction easements would be fully restored once construction is complete. The Preferred Alternative would require the permanent acquisition of some easements or fee acquisitions along the northern edge of properties in the Meadowlands portion of the study area (County Road to Tonnelle Avenue), as described in Chapter 6B, "Property Acquisition." The permanent easements acquired through the industrial properties in the Meadowlands would be to provide access to adjacent tracks or to allow underground utilities beneath parking areas, and no parking spaces or loading or laydown spaces would be permanently affected. Therefore, the Preferred Alternative would not result in direct or indirect adverse impacts on the social or economic patterns of neighborhoods in New Jersey.

### **7.7.3 NEW YORK**

In New York, the Preferred Alternative would not result in any direct or indirect residential or business displacements. It would not affect population, housing stock, or economic activities in the area, with the possible exception of a future redevelopment of Lot 1 of Block 675. The Preferred Alternative would not result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood. Therefore, the Preferred Alternative would not result in direct or indirect adverse impacts on the social or economic patterns of neighborhoods in New York.

Amtrak would 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. This property (Block 675 Lot 1) is currently a vacant paved lot. Depending on the specific type of acquisition, the acquisition of this parcel for the Preferred Alternative may result in loss of property tax revenues to the City of New York. This may also delay or preclude future private development of the site; while this would constitute an effect on that site, there would not be an adverse effect on overall socioeconomic conditions in the area.

In Hudson River Park, Amtrak would acquire a permanent below-grade easement for the tunnel alignment. The permanent location of the tunnel beneath the park would mean that no new pile-



supported structures could be located immediately above the tunnel, which would be generally in the area close to 29th Street. In addition, no deep foundations (any type of driven, vibrated, augured, or bored pile or caisson) could be located above or within a 25-foot horizontal distance of the footprint of the tunnel or any ground treatment area bordering the tunnel. No other restrictions would apply to this area, and this park space could be landscaped or developed for other recreational uses. The presence of the below-grade tunnel alignment would not interfere with the required relocation of the West 30th Street Heliport consistent with the Hudson River Park Act, and therefore would not adversely affect revenues to Hudson River Park from the heliport operation.

## **7.8 MEASURES TO AVOID, MINIMIZE, AND MITIGATE IMPACTS**

The Project Sponsor will implement a number of mitigation measures to avoid or minimize adverse effects on socioeconomic conditions from the Preferred Alternative's construction and operation. The lead Federal agency will be responsible for ensuring that the Project Sponsor implements these measures, which will be identified in the ROD. Mitigation measures will include the following:

- Property acquisitions, including temporary easements, required for the Preferred Alternative's construction and operation will be conducted in accordance with the Uniform Act and all other relevant property acquisition procedures that apply to NJ TRANSIT (or the State of New Jersey) for properties in New Jersey and to Amtrak for properties in New York (for more information on property acquisition, see Chapter 6B, "Property Acquisition"). This will ensure that property owners are fairly compensated for use of their properties, including temporary disruptions during construction.
- In the Meadowlands area where temporary construction access is required in connection with the Preferred Alternative's surface tracks, agreements will be made with private property owners and affected businesses regarding how this access would occur, so as to minimize adverse impacts on business activities. Specific access requirements will be coordinated with the property owners and building tenants to minimize the disruption that would occur to business activities, where possible. If any temporary displacement of businesses is required, affected property owners and tenants would be compensated in accordance with the Uniform Act. The Project Sponsor, in cooperation with the other Project Partners, will develop specific information about the scope and timing of restoration of affected properties in the Meadowlands in coordination with the affected property owners as the design advances.
- In all locations where disruptions to roadways are required, including at Secaucus Road at the NEC, at Tonnelle Avenue, at local roadways in Hoboken and Weehawken, and in Manhattan near the construction site, MPT plans will be implemented to manage traffic disruptions (see Chapter 5A, "Traffic and Pedestrians," Section 5A.9).
- The Project Sponsor, in cooperation with the other Project Partners, will 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.
- In areas where sidewalks or street lanes would be closed for extended periods of time, standard practices for maintaining access would be followed, including providing alternative routes of entry into buildings for employees, residents, and deliveries; providing appropriate signage to direct people to these alternative entrances; establishing a traffic management plan to ensure vehicular access to affected properties and to minimize traffic impacts on local streets; and implementing an outreach program to share construction schedules, potential impacts, and mitigation measures for local businesses. \*