Western Rail Yard
INFRASTRUCTURE PROJECT

Appendix M Socioeconomics

Appendix M: Socioeconomics

This technical appendix was prepared to provide additional background information and documentation to support the analyses FRA conducted to evaluate the potential effects of the No Action Alternative and Preferred Alternative in Chapter 17, "Socioeconomics."

M.1 DEMOGRAPHIC AND SOCIOECONOMIC CONDITIONS

This section presents existing demographic and socioeconomic conditions FRA collected and documented for the Study Area (see **Figure M-1**).

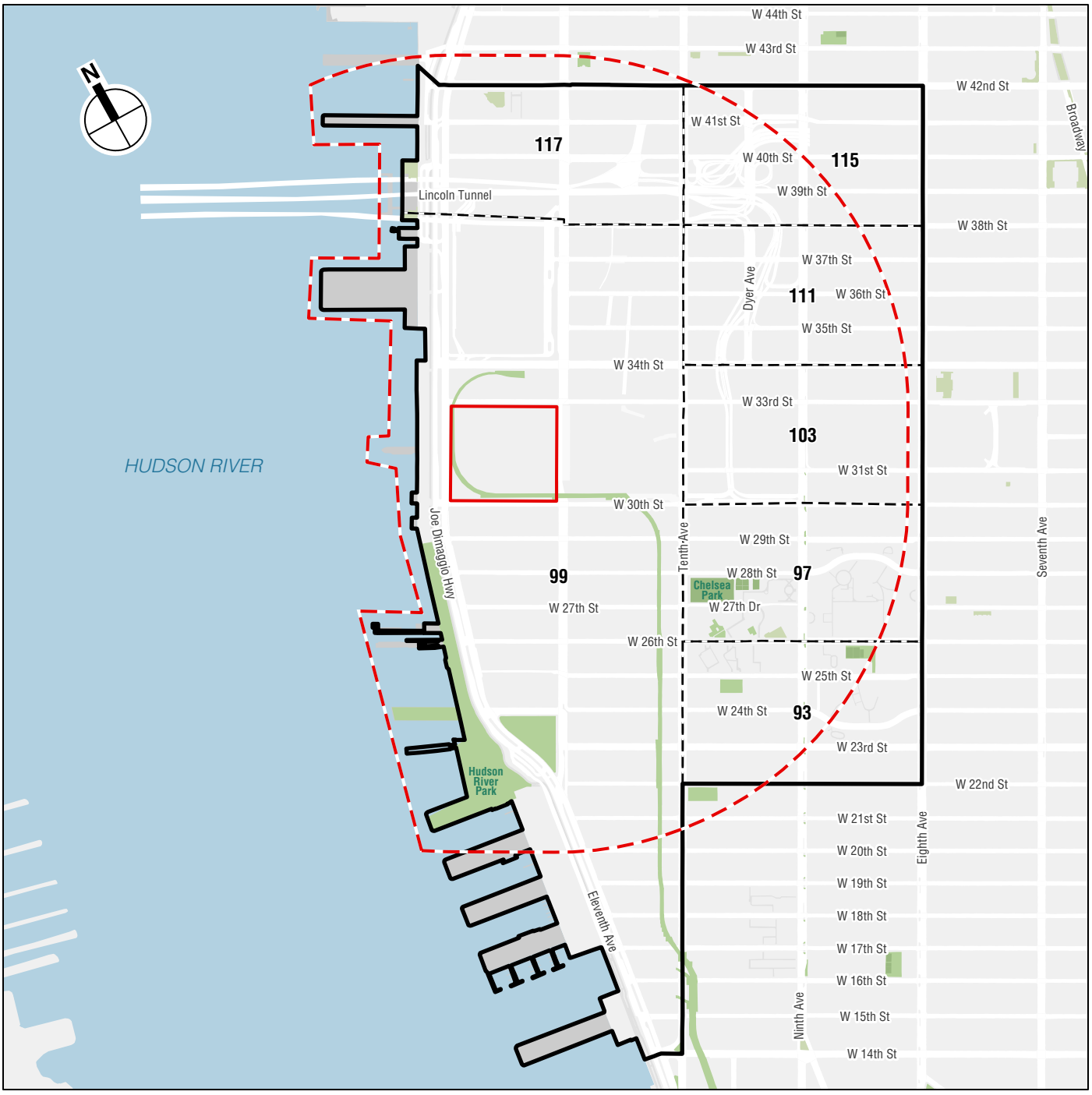
In recent years, the Study Area has experienced a dramatic increase in residential population. Based on U.S. Census American Community Survey (ACS) estimates, in 2018 the Study Area was home to 34,833 residents, which represents a nearly 39 percent increase over the 2010 estimated population (see **Table M-1**). This Study Area's population growth rate far exceeded that of Manhattan and New York City over the same period.

Table M-1
Residential Population

Area	2010	2018	Percent Change 2010–2018
Study Area	25,078	34,833	+38.9
Manhattan	1,583,345	1,632,480	+3.1
New York City	8,078,471	8,443,713	+4.5

Sources:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

The Study Area's residential population has a lower proportion of children and a higher proportion of working-age adults as compared to Manhattan and New York City as a whole. As shown in **Table M-2**, in 2018 approximately 8.2 percent of Study Area residents were under 18 years of age, compared to 14.5 percent of Manhattan's population and 20.8 percent of New York City's population. Over 77 percent of Study Area residents were working-age (18 to 64 years), compared to about 70 percent in Manhattan and 65 percent in New York City. In 2018, approximately 14.5 percent of Study Area residents were age 65 or older. This is a slightly lower proportion when compared to the population of Manhattan as a whole, where approximately 15.8 percent of residents were age 65 or older. The Study Area had about the same proportion of residents age 65 or older when compared to New York City as a whole (14.2 percent). Of those residents age 65 or older, the Study Area had a disproportionately high percentage in the 75-to-84 age cohort (5.5 percent of residents, compared to 4.7 percent in Manhattan and 4.3 percent in New York City). The Study Area had a slightly lower proportion of residents in the 85 years and over cohort (1.8 percent, compared to 2.4 percent in Manhattan and 2.0 percent in New York City).



Socioeconomics Study Area

WESTERN RAIL YARD INFRASTRUCTURE PROJECT

Figure M-1

Table M-2
Age of Residential Population (2018)

	Study Area		Manhattan		New York City	
	Number	Percent	Number	Percent	Number	Percent
Under 5 Years	1,183	3.4	79,897	4.9	551,869	6.5
5 to 9 Years	624	1.8	62,983	3.9	476,567	5.6
10 to 14 Years	896	2.6	59,051	3.6	464,704	5.5
15 to 17 Years	166	0.5	33,840	2.1	273,431	3.2
18 to 24 Years	2,787	8.0	149,638	9.2	753,644	8.9
25 to 34 Years	9,533	27.4	366,556	22.5	1,504,279	17.8
35 to 44 Years	6,234	17.9	234,534	14.4	1,156,416	13.7
45 to 54 Years	4,349	12.5	203,826	12.5	1,086,960	12.9
55 to 64 Years	4,017	11.5	184,793	11.3	986,482	11.7
65 to 74 Years	2,493	7.2	141,583	8.7	664,818	7.9
75 to 84 Years	1,914	5.5	76,731	4.7	360,090	4.3
85 Years and Over	637	1.8	39,048	2.4	164,453	2.0

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

As shown in **Table M-3**, in 2018 there were nearly 20,000 households in the Study Area, which is almost 50 percent greater than the number of Study Area households in 2010. The number of family households grew at a faster rate than non-family households.

Table M-3
Study Area Household Type (2010–2018)

Households	2010	2018	Percent Change 2010–2018
Total Households	13,230	19,829	+49.9
Family Households[2]	3,521	6,180	+75.5
Nonfamily Households	9,709	13,649	+40.6
Average Household Size	1.73	1.74	--[1]
Average Family Size	2.90	2.68	--[1]

Notes:
[1] The margin of error (MOE) of the difference between 2006–2010 and 2014–2018 ACS data is greater than the difference, and therefore a change cannot be reported with confidence.
[2] A family is defined by the U.S. Census as a group of two people or more related by birth, marriage, or adoption and residing together.
Sources:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

In terms of race, as compared to Manhattan and New York City, in 2018 the Study Area had a higher percentage of residents who identify as White and Asian, and a lower percentage who identify as Black or African American (see **Table M-4**). The Study Area also had a lower percentage of residents who identify as Hispanic/Latino (of any race)—approximately 17.5 percent in 2018, when 26.0 percent of all Manhattan residents and 29.1 percent of all New York City residents identified as Hispanic/Latino.

Table M-4
Mutually Exclusive Race/Hispanic Origin (2018)

	Study Area		Manhattan		New York City	
	Number	Percent	Number	Percent	Number	Percent
Total Population	34,833	100.0	1,632,480	100.0	8,443,713	100.0
Hispanic/Latino (of any race)	6,104	17.5	423,683	26.0	2,457,137	29.1
Not Hispanic/Latino	28,729	82.5	1,208,797	74.1	5,986,576	70.9
White alone	17,952	51.5	765,564	46.9	2,713,930	32.1
Black or African American	2,204	6.3	203,849	12.5	1,853,055	22.0
American Indian and Alaska Native alone	39	0.1	1,891	0.1	15,017	0.2
Asian alone	7,722	22.2	194,346	11.9	1,167,421	13.8
Native Hawaiian and Other Pacific Islander alone	20	0.1	524	0.0	2,794	0.0
Some other race alone	139	0.4	5,961	0.4	71,758	0.9
Two or more races	653	1.9	36,662	2.3	162,601	1.9

Source: U.S. Census Bureau, ACS 2006–2010 5-Year Estimates.

Table M-5 presents trends in Study Area racial and Hispanic origin composition between 2010 and 2018. Due to sample size and the margins of error associated with the estimates, the changes in proportions of race cannot be predicted with statistical confidence. The proportion of Hispanic population did not substantively change between 2010 and 2018.

Table M-5
Mutually Exclusive Race/Hispanic Origin
Study Area Trends (2010–2018)

	2010		2018		Percent Change 2010–2018	
	Number	Percent	Number	Percent	Number	Percent
Total Population	25,078	100.0	34,833	100.0	+38.9	0.0
Hispanic/Latino (of any race)	4,165	16.6	6,104	17.5	Increase[1]	--[2]
Not Hispanic/Latino	20,913	83.4	28,729	82.5	+37.4	-1.1
White alone	14,360	57.3	17,952	51.5	Increase[1]	--[2]
Black or African American	2,931	11.7	2,204	6.3	--[2]	--
American Indian and Alaska Native alone	101	0.4	39	0.1	--[2]	--[2]
Asian alone	3,024	12.1	7,722	22.2	Increase[1]	--[2]
Native Hawaiian and Other Pacific Islander alone	0	0.0	20	0.1	--[2]	--[2]
Some other race alone	59	0.2	139	0.4	--[2]	--[2]
Two or more races	438	1.7	653	1.9	--[2]	--[2]

Notes:
[1] The margin of error (MOE) of the difference is greater than one third of the difference, and therefore a change cannot be estimated with confidence and only the direction of the change can be reported (i.e., Increase/Decrease).
[2] The margin of error (MOE) of the difference is greater than the difference, and therefore a change cannot be reported with confidence.
Sources:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

In 2018, nearly two-thirds of Study Area households (64.4 percent) spoke English only, which was a slightly higher percentage than in all Manhattan households (61.4 percent) and a substantially higher percentage than in all New York City households, for which slightly over half (50.5 percent) speak only English (see **Table M-6**). Approximately 10.4 percent of Study Area households spoke other languages with limited English proficiency. This was a slightly higher rate when compared to all Manhattan households (9.4 percent), but a lower rate when compared to all New York City households (14.7 percent). Of the Study Area household who spoke a language other than English, those who spoke Asian and Pacific Island languages have the highest rate of limited English proficiency (41.3 percent).

Table M-6
Household Language and Households with Limited English Proficiency (LEP) in 2018

Household Language/LEP	Study Area		Manhattan		New York City	
	Number	Percent	Number	Percent	Number	Percent
Total Population	19,829	100.0	758,133	100.0	3,154,103	100.0
English Only	12,763	64.4	465,316	61.4	1,593,344	50.5
Spanish, LEP	552	2.8	39,986	5.3	218,647	6.9
Spanish, no LEP	1,604	8.1	103,137	13.6	537,731	17.0
Other Indo-European Languages, LEP	355	1.8	7,174	0.9	116,552	3.7
Other Indo-European Languages, no LEP	1,525	7.7	65,717	8.7	326,909	10.4
Asian and Pacific Island Languages, LEP	1,135	5.7	23,034	3.0	114,089	3.6
Asian and Pacific Island Languages, no LEP	1,610	8.1	39,795	5.2	158,359	5.0
Other Languages, LEP	19	0.1	1,377	0.2	15,141	0.5
Other Languages, no LEP	266	1.3	12,597	1.7	73,331	2.3

Source: U.S. Census Bureau, ACS 2006–2010 5-Year Estimates.

Similar to residential population growth trends, there has been substantial growth in the number of Study Area housing units. In 2018, there were an estimated 22,497 housing units as compared to 15,331 units in 2010, which equates to 46.7 percent growth. As shown in **Table M-7**, the Study Area far outpaced housing unit growth rates for Manhattan and New York City as a whole.

Table M-7
Housing Units (2010–2018)

Area	2010	2018	Percent Change 2010–2018
Study Area	15,331	22,497	+46.7
Manhattan	839,013	874,237	+4.2
New York City	3,343,424	3,472,354	+3.9

Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

While the Study Area saw growth in the absolute numbers of both owner- and renter-occupied housing between 2010 and 2018, the percent of housing that was owner-occupied decreased; the proportion of renter-occupied units increased by approximately 9.0 percent (see **Table M-8**). Changes in household size between 2010 and 2018 for both owner- and renter-occupied housing cannot be reported with statistical confidence.

Table M-8
Study Area Housing Tenure (2010–2018)

	2010	2018	Percent Change 2010–2018
Occupied Housing Units	13,230	19,829	+49.9
Percent Owner-Occupied	30.6	24.4	Decrease[1]
Percent Renter-Occupied	69.4	75.6	+9.0
Average Household Size of Owner-Occupied Units	1.66	1.7	--[2]
Average Household Size of Renter-Occupied Units	1.77	1.75	--[2]

Notes:
[1] The margin of error (MOE) of the difference is greater than one third of the difference, and therefore a change cannot be estimated with confidence and only the direction of the change can be reported (i.e., Increase/Decrease).
[2] The margin of error (MOE) of the difference is greater than the difference, and therefore a change cannot be reported with confidence.
Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

Table M-9 presents trends in median gross rent between 2010 and 2018 (in year 2020 dollars), based on U.S. Census ACS estimates. In 2018, median gross rent in the Study Area was $2,576, which was substantially higher than the median for Manhattan ($1,742) and New York City ($1,446). While the percent change over time in the Study Area's median gross rent cannot be reported with statistical confidence, it is likely to have increased at a faster rate than in Manhattan and the City as a whole.

Table M-9
Median Gross Rent (2010–2018)

Area	2010	2018	Percent Change 2010–2018
Study Area	$1,753	$2,576	Increase[1]
Manhattan	$1,475	$1,742	+18.1
New York City	$1,280	$1,446	+12.9

Notes:
Gross rent provides information on the monthly housing cost expenses for renters. Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials that result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment.
All dollar figures have been adjusted to 2020 dollars based on the U.S. Department of Labor Consumer Price Index for all urban consumers in the New York-Newark-Jersey City, NY-NJ-PA region.
[1] The margin of error (MOE) of the difference is greater than one third of the difference, and therefore a change cannot be estimated with confidence and only the direction of the change can be reported (i.e., Increase/Decrease).
Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

As shown in **Table M-10**, in 2018 the Study Area's average household income was an estimated $155,324 (in year 2020 dollars). This was comparable to the 2018 average household income for Manhattan ($157,467) and over $50,000 greater than the average household income for New York City households ($101,158). The Study Area's average household income has increased (in constant 2020 dollars) since 2010. While the percent change over time in Study Area average household income cannot be reported with statistical confidence, it is likely to have increased at a faster rate than in Manhattan and the City as a whole.

Table M-10
Average Household Income (2010–2018)

Area	2010	2018	Percent Change 2010–2018
Study Area	$132,734	$155,324	Increase[1]
Manhattan	$146,613	$157,467	+7.4
New York City	$93,139	$101,158	+8.6

Notes:
All dollar figures have been adjusted to 2020 dollars based on the U.S. Department of Labor Consumer Price Index for all urban consumers in the New York-Newark-Jersey City, NY-NJ-PA region.
[1] The margin of error (MOE) of the difference is greater than one third of the difference, and therefore a change cannot be estimated with confidence and only the direction of the change can be reported (i.e., Increase/Decrease).
Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

The Study Area's median household income in 2018 was an estimated $97,502 (in 2020 dollars), higher than the median household incomes for Manhattan and New York City (see **Table M-11**).

Table M-11
Median Household Income (2010–2018)

Area	2010	2018	Percent Change 2010–2018
Study Area	$81,699	$97,502	Increase[1]
Manhattan	$77,684	$85,424	+10.0
New York City	$60,125	$62,947	+4.7

Notes:
All dollar figures have been adjusted to 2020 dollars based on the U.S. Department of Labor Consumer Price Index for all urban consumers in the New York-Newark-Jersey City, NY-NJ-PA region.
[1] The margin of error (MOE) of the difference is greater than one third of the difference, and therefore a change cannot be estimated with confidence and only the direction of the change can be reported (i.e., Increase/Decrease).
Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

Figure M-2 illustrates the distribution of the Study Area's household incomes as compared to Manhattan and New York City. In 2018 nearly one in four Study Area households earned $200,000 or more, a larger proportion than in Manhattan (21.3 percent) and New York City (10.2 percent). Conversely, the Study Area had a lower proportion of Study Area households in the lowest income brackets (below $35,000).

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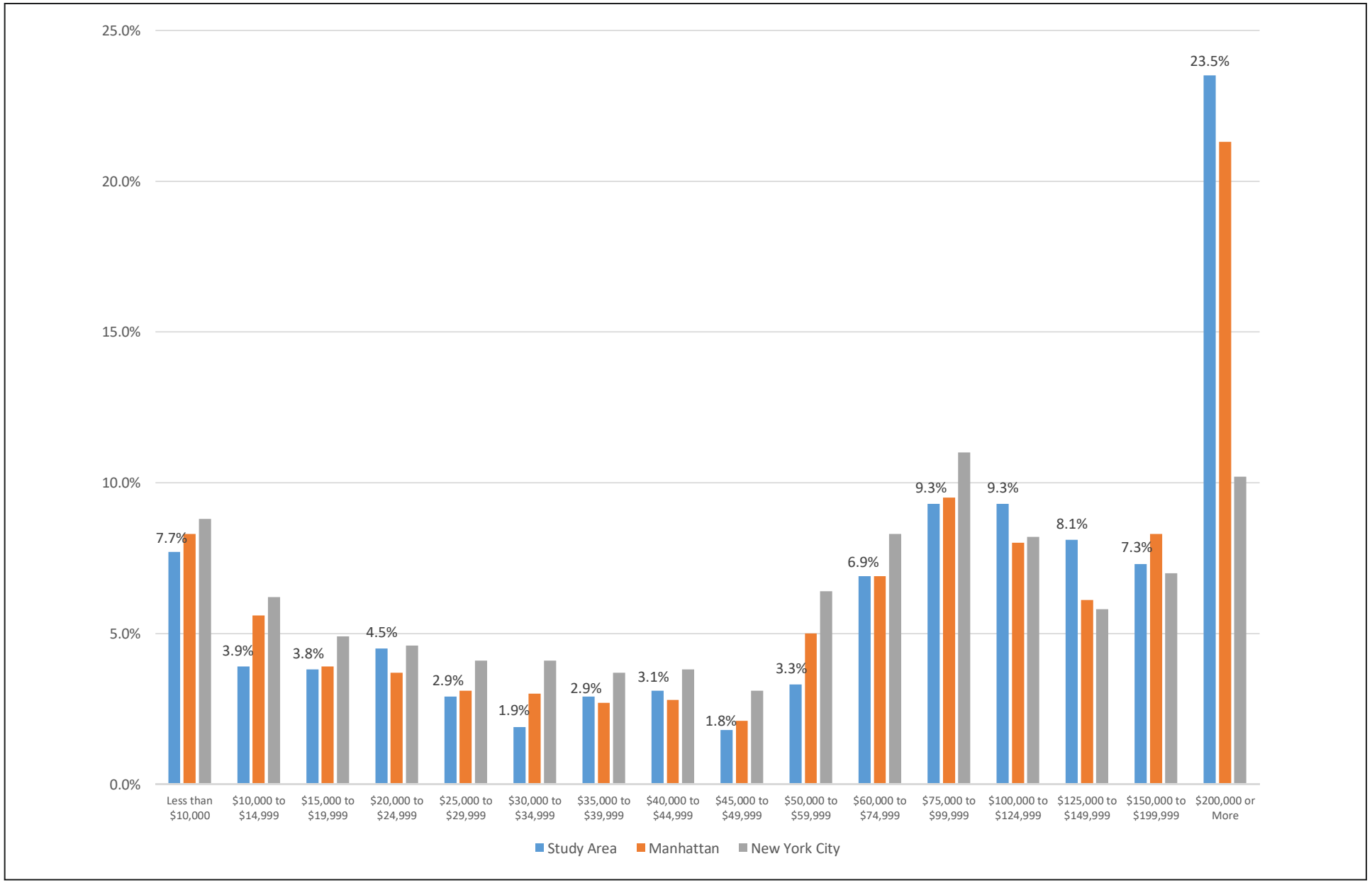

Household Income Distribution (2018)

Figure M-2

WESTERN RAIL YARD INFRASTRUCTURE PROJECT

As detailed in **Table M-12**, in 2018 approximately 13.0 percent of the Study Area residential population was living in poverty, which was lower than the percentage for Manhattan (16.6 percent) and New York City (18.9 percent). The percentage of Study Area families living in poverty (7.2 percent) also was lower than the rates for Manhattan and New York City. The population under 18 years of age who were living in poverty (12.5 percent) was notably lower than the rates for Manhattan (22.3 percent) and New York City (26.8 percent).

Table M-12
Poverty Status in 2018

	Study Area		Manhattan		New York City	
	Number	Percent	Number	Percent	Number	Percent
Population Living in Poverty	4,534	13.0	263,413	16.6	1,570,754	18.9
Families Living in Poverty	442	7.2	40,922	12.7	294,980	15.6
Population Under 18 Years Living in Poverty	351	12.5	51,805	22.3	465,069	26.8
Population Age 18 to 64 Living in Poverty	3,555	13.2	167,246	15.2	893,833	16.5
Population Age 65 and Over Living in Poverty	628	12.5	44,362	17.6	211,852	18.3

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Although the percent change over time for those Study Area residents living in poverty cannot be reported with statistical confidence, it appears to have decreased since 2010 (see **Table M-13**).

Table M-13
Study Area Poverty Status Trends (2010–2018)

	2010		2018	
	Number	Percent	Number	Percent
Population Living in Poverty	4,193	17.0	45,34	13.0
Families Living in Poverty	367	10.4	442	7.2
Population Under 18 Years Living in Poverty	624	28.5	351	12.5
Population Age 18 to 64 Living in Poverty	3,041	16.2	3,555	13.2
Population Age 65 and Over Living in Poverty	528	14.3	628	12.5

Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

Table M-14 summarizes U.S. Census ACS data on persons with disabilities in the Study Area, with comparison data for Manhattan and New York City. In an attempt to capture a variety of characteristics that encompass the definition of disability, the ACS identifies serious difficulty with four basic areas of functioning—hearing, vision, cognition, and ambulation. These functional limitations are supplemented by questions about difficulties with selected activities from the Katz Activities of Daily Living (ADL) and Lawton Instrumental Activities of Daily Living (IADL) scales, namely difficulty bathing and dressing, and difficulty performing errands such as shopping. Overall, the ACS attempts to capture six aspects of disability—hearing, vision, cognitive, ambulatory, self-care, and independent living—which can be used together to create an overall disability measure, or independently to identify populations with specific disability types.

Overall, the Study Area has a lower proportion of residents with disabilities as compared to Manhattan and New York City as a whole. As detailed in **Table M-14**, in 2018 approximately 8.2 percent of Study Area residents had some form of disability, compared to 10.3 percent of the Manhattan population and 10.8 percent of the New York City population. The Study Area proportions for each individual disability type also were lower than in Manhattan and New York City.

Table M-14
People with Disabilities (2018)

	Study Area		Manhattan		New York City	
	Number	Percent	Number	Percent	Number	Percent
Total Population	34,802	100.0	1,621,687	100.0	8,379,895	100.0
With a Disability (All)	28,66	8.2	166,821	10.3	905,592	10.8
Hearing Difficulty	727	2.1	36,091	2.2	181,759	2.2
Vision Difficulty	509	1.5	33,313	2.1	157,917	1.9
Cognitive Difficulty	1,021	3.0	61,244	4.0	331,130	4.2
Ambulatory Difficulty	1,634	4.9	100,974	6.5	546,417	7.0
Self-Care Difficulty	537	1.6	42,676	2.8	231,666	3.0
Independent Living Difficulty	891	2.8	66,953	4.8	370,804	5.6

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-15 presents trend data on persons with disability in the Study Area in 2012 and 2018. While the change over this period cannot be reported with confidence due to the small sample size, it appears that both the total numbers of Study Area residents with disabilities and the percentage of residents with disabilities has decreased since 2012.

Table M-15
Study Area Trend in People with Disabilities (2012–2018)

	2012		2018	
	Number	Percent	Number	Percent
Total Population	26,610	100.0	34,802	100.0
With a Disability (All)	2,923	11.0	2,866	8.2
Hearing Difficulty	641	2.4	727	2.1
Vision Difficulty	554	2.1	509	1.5
Cognitive Difficulty	859	3.3	1,021	3.0
Ambulatory Difficulty	1,991	7.7	1,634	4.9
Self-Care Difficulty	522	2.0	537	1.6
Independent Living Difficulty	964	4.0	891	2.8

Source:
U.S. Census Bureau, ACS 2007–2012 and 2014–2018 5-Year Estimates.

Tables M-16 through M-22 provide additional detail on persons with disabilities by age and disability type.

Table M-16
Disability Status – All Disabilities (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	34,802	100.0	100.0	1,621,687	100.0	100.0	8,379,895	100.0	100.0
With a Disability	2,866	8.2	8.2	166,821	10.3	10.3	905,592	10.8	10.8
No Disability	31,936	91.8	91.8	1,454,866	89.7	89.7	7,474,303	89.2	89.2
Under 5 Years	1,183	3.4	100.0	79,897	4.9	100.0	551,869	6.6	100.0
With a Disability	0	0.0	0.0	464	0.0	0.6	3,539	0.0	0.6
No Disability	1,183	3.4	100.0	79,433	4.9	99.4	548,330	6.5	99.4
5 to 17 Years	1,686	4.8	100.0	155,676	9.6	100.0	1,213,005	14.5	100.0
With a Disability	8	0.0	0.5	6,563	0.4	4.2	57,092	0.7	4.7
No Disability	1,678	4.8	99.5	149,113	9.2	95.8	1,155,913	13.8	95.3
18 to 34 Years	12,289	35.3	100.0	514,518	31.7	100.0	2,248,373	26.8	100.0
With a Disability	278	0.8	2.3	15,864	1.0	3.1	90,722	1.1	4.0
No Disability	12,011	34.5	97.7	498,654	30.7	96.9	2,157,651	25.7	96.0
35 to 64 Years	14,600	42.0	100.0	619,844	38.2	100.0	3,211,658	38.3	100.0
With a Disability	1,039	3.0	7.1	60,084	3.7	9.7	342,061	4.1	10.7
No Disability	13,561	39.0	92.9	559,760	34.5	90.3	2,869,597	34.2	89.3
65 to 74 Years	2,493	7.2	100.0	140,012	8.6	100.0	655,072	7.8	100.0
With a Disability	561	1.6	22.5	31,350	1.9	22.4	159,304	1.9	24.3
No Disability	1,932	5.6	77.5	108,662	6.7	77.6	495,768	5.9	75.7
75 Years and Over	2,551	7.3	100.0	111,740	6.9	100.0	499,918	6.0	100.0
With a Disability	980	2.8	38.4	52,496	3.2	47.0	252,874	3.0	50.6
No Disability	1,571	4.5	61.6	59,244	3.7	53.0	247,044	2.9	49.4

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-17
Disability Status – Hearing Difficulty (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	34,802	100.0	100.0	1,621,687	100.0	100.0	8,379,895	100.0	100.0
With a Hearing Difficulty	727	2.1	2.1	36,091	2.2	2.2	181,759	2.2	2.2
No Hearing Difficulty	34,075	97.9	97.9	1,585,596	97.8	97.8	8,198,136	97.8	97.8
Under 5 Years	1,183	3.4	100.0	79,897	4.9	100.0	551,869	6.6	100.0
With a Hearing Difficulty	0	0.0	0.0	343	0.0	0.4	2,633	0.0	0.5
No Hearing Difficulty	1,183	3.4	100.0	79,554	4.9	99.6	549,236	6.6	99.5
5 to 17 Years	1,686	4.8	100.0	155,676	9.6	100.0	1,213,005	14.5	100.0
With a Hearing Difficulty	0	0.0	0.0	661	0.0	0.4	6,166	0.1	0.5
No Hearing Difficulty	1,686	4.8	100.0	155,015	9.6	99.6	1,206,839	14.4	99.5
18 to 34 Years	12,289	35.3	100.0	514,518	31.7	100.0	2,248,373	26.8	100.0
With a Hearing Difficulty	58	0.2	0.5	2,501	0.2	0.5	12,223	0.1	0.5
No Hearing Difficulty	12,231	35.1	99.5	512,017	31.6	99.5	2,236,150	26.7	99.5
35 to 64 Years	14,600	42.0	100.0	619,844	38.2	100.0	3,211,658	38.3	100.0
With a Hearing Difficulty	183	0.5	1.3	8,529	0.5	1.4	46,604	0.6	1.5
No Hearing Difficulty	14,417	41.4	98.7	611,315	37.7	98.6	3,165,054	37.8	98.5
65 to 74 Years	2,493	7.2	100.0	140,012	8.6	100.0	655,072	7.8	100.0
With a Hearing Difficulty	154	0.4	6.2	6,829	0.4	4.9	32,907	0.4	5.0
No Hearing Difficulty	2,339	6.7	93.8	133,183	8.2	95.1	622,165	7.4	95.0
75 Years and Over	2,551	7.3	100.0	111,740	6.9	100.0	499,918	6.0	100.0
With a Hearing Difficulty	332	1.0	13.0	17,228	1.1	15.4	81,226	1.0	16.2
No Hearing Difficulty	2,219	6.4	87.0	94,512	5.8	84.6	418,692	5.0	83.8

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-18
Disability Status – Vision Difficulty (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	34,802	100.0	100.0	1,621,687	100.0	100.0	8,379,895	100.0	100.0
With a Vision Difficulty	509	1.5	1.5	33,313	2.1	2.1	157,917	1.9	1.9
No Vision Difficulty	34,293	98.5	98.5	1,588,374	97.9	97.9	1,427,617	17.0	17.0
Under 5 Years	1,183	3.4	100.0	79,897	4.9	100.0	79,254	0.9	100.0
With a Vision Difficulty	0	0.0	0.0	185	0.0	0.2	612	0.0	0.8
No Vision Difficulty	1,183	3.4	100.0	79,712	4.9	99.8	78,642	0.9	99.2
5 to 17 Years	1,686	4.8	100.0	155,676	9.6	100.0	158,737	1.9	100.0
With a Vision Difficulty	0	0.0	0.0	884	0.1	0.6	7,022	0.1	4.4
No Vision Difficulty	1,686	4.8	100.0	154,792	9.5	99.4	151,715	1.8	95.6
18 to 34 Years	12,289	35.3	100.0	514,518	31.7	100.0	520,795	6.2	100.0
With a Vision Difficulty	16	0.0	0.1	2,825	0.2	0.5	15,709	0.2	3.0
No Vision Difficulty	12,273	35.3	99.9	511,693	31.6	99.5	505,086	6.0	97.0
35 to 64 Years	14,600	42.0	100.0	619,844	38.2	100.0	616,602	7.4	100.0
With a Vision Difficulty	196	0.6	1.3	11,464	0.7	1.8	62,318	0.7	10.1
No Vision Difficulty	14,404	41.4	98.7	608,380	37.5	98.2	554,284	6.6	89.9
65 to 74 Years	2,493	7.2	100.0	140,012	8.6	100.0	115,186	1.4	100.0
With a Vision Difficulty	88	0.3	3.5	6,331	0.4	4.5	25,604	0.3	22.2
No Vision Difficulty	2,405	6.9	96.5	133,681	8.2	95.5	89,582	1.1	77.8
75 Years and Over	2,551	7.3	100.0	111,740	6.9	100.0	94,960	1.1	100.0
With a Vision Difficulty	209	0.6	8.2	11,624	0.7	10.4	46,652	0.6	49.1
No Vision Difficulty	2,342	6.7	91.8	100,116	6.2	89.6	48,308	0.6	50.9

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-19
Disability Status – Cognitive Difficulty (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	33,619	100.0	100.0	1,541,790	100.0	100.0	7,828,026	100.0	100.0
With a Cognitive Difficulty	1,021	3.0	3.0	61,244	4.0	4.0	331,130	4.2	4.2
No Cognitive Difficulty	32,598	97.0	97.0	1,480,546	96.0	96.0	7,496,896	95.8	95.8
Under 5 Years	1,686	5.0	100.0	155,676	10.1	100.0	1,213,005	15.5	100.0
With a Cognitive Difficulty	8	0.0	0.5	5,134	0.3	3.3	40,000	0.5	3.3
No Cognitive Difficulty	1,678	5.0	99.5	150,542	9.8	96.7	1,173,005	15.0	96.7
5 to 17 Years	12,289	36.6	100.0	514,518	33.4	100.0	2,248,373	28.7	100.0
With a Cognitive Difficulty	192	0.6	1.6	9,279	0.6	1.8	51,825	0.7	2.3
No Cognitive Difficulty	12,097	36.0	98.4	505,239	32.8	98.2	2,196,548	28.1	97.7
18 to 34 Years	14,600	43.4	100.0	619,844	40.2	100.0	3,211,658	41.0	100.0
With a Cognitive Difficulty	471	1.4	3.2	22,713	1.5	3.7	119,012	1.5	3.7
No Cognitive Difficulty	14,129	42.0	96.8	597,131	38.7	96.3	3,092,646	39.5	96.3
35 to 64 Years	2,493	7.4	100.0	140,012	9.1	100.0	655,072	8.4	100.0
With a Cognitive Difficulty	101	0.3	4.1	7,415	0.5	5.3	37,146	0.5	5.7
No Cognitive Difficulty	2,392	7.1	95.9	132,597	8.6	94.7	617,926	7.9	94.3
65 to 74 Years	2,551	7.6	100.0	111,740	7.2	100.0	499,918	6.4	100.0
With a Cognitive Difficulty	249	0.7	9.8	16,703	1.1	14.9	83,147	1.1	16.6
No Cognitive Difficulty	2,302	6.8	90.2	95,037	6.2	85.1	416,771	5.3	83.4
75 Years and Over	33,619	100.0	100.0	1,541,790	100.0	100.0	7,828,026	100.0	100.0
With a Cognitive Difficulty	1,021	3.0	3.0	61,244	4.0	4.0	331,130	4.2	4.2
No Cognitive Difficulty	32,598	97.0	97.0	1,480,546	96.0	96.0	7,496,896	95.8	95.8

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-20
Disability Status – Ambulatory Difficulty (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	33,619	100.0	100.0	1,541,790	100.0	100.0	7,828,026	100.0	100.0
With an Ambulatory Difficulty	1,634	4.9	4.9	100,974	6.5	6.5	546,417	7.0	7.0
No Ambulatory Difficulty	31,985	95.1	95.1	1,440,816	93.5	93.5	7,281,609	93.0	93.0
Under 5 Years	1,686	5.0	100.0	155,676	10.1	100.0	1,213,005	15.5	100.0
With an Ambulatory Difficulty	0	0.0	0.0	812	0.1	0.5	9,449	0.1	0.8
No Ambulatory Difficulty	1,686	5.0	100.0	154,864	10.0	99.5	1,203,556	15.4	99.2
5 to 17 Years	12,289	36.6	100.0	514,518	33.4	100.0	2,248,373	28.7	100.0
With an Ambulatory Difficulty	20	0.1	0.2	3,420	0.2	0.7	23,035	0.3	1.0
No Ambulatory Difficulty	12,269	36.5	99.8	511,098	33.1	99.3	2,225,338	28.4	99.0
18 to 34 Years	14,600	43.4	100.0	619,844	40.2	100.0	3,211,658	41.0	100.0
With an Ambulatory Difficulty	489	1.5	3.3	34,643	2.2	5.6	206,274	2.6	6.4
No Ambulatory Difficulty	14,111	42.0	96.7	585,201	38.0	94.4	3,005,384	38.4	93.6
35 to 64 Years	2,493	7.4	100.0	140,012	9.1	100.0	655,072	8.4	100.0
With an Ambulatory Difficulty	451	1.3	18.1	22,850	1.5	16.3	114,437	1.5	17.5
No Ambulatory Difficulty	2,042	6.1	81.9	117,162	7.6	83.7	540,635	6.9	82.5
65 to 74 Years	2,551	7.6	100.0	111,740	7.2	100.0	499,918	6.4	100.0
With an Ambulatory Difficulty	674	2.0	26.4	39,249	2.5	35.1	193,222	2.5	38.7
No Ambulatory Difficulty	1,877	5.6	73.6	72,491	4.7	64.9	306,696	3.9	61.3
75 Years and Over	33,619	100.0	100.0	1,541,790	100.0	100.0	7,828,026	100.0	100.0
With an Ambulatory Difficulty	1,634	4.9	4.9	100,974	6.5	6.5	546,417	7.0	7.0
No Ambulatory Difficulty	31,985	95.1	95.1	1,440,816	93.5	93.5	7,281,609	93.0	93.0

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-21
Disability Status – Self-Care Difficulty (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	33,619	100.0	100.0	1,541,790	100.0	100.0	7,828,026	100.0	100.0
With a Self-Care Difficulty	537	1.6	1.6	42,676	2.8	2.8	231,666	3.0	3.0
No Self-Care Difficulty	33,082	98.4	98.4	1,499,114	97.2	97.2	7,596,360	97.0	97.0
Under 5 Years	1,686	5.0	100.0	155,676	10.1	100.0	1,213,005	15.5	100.0
With a Self-Care Difficulty	0	0.0	0.0	1,573	0.1	1.0	14,198	0.2	1.2
No Self-Care Difficulty	1,686	5.0	100.0	154,103	10.0	99.0	1,198,807	15.3	98.8
5 to 17 Years	12,289	36.6	100.0	514,518	33.4	100.0	2,248,373	28.7	100.0
With a Self-Care Difficulty	59	0.2	0.5	2,258	0.1	0.4	14,694	0.2	0.7
No Self-Care Difficulty	12,230	36.4	99.5	512,260	33.2	99.6	2,233,679	28.5	99.3
18 to 34 Years	14,600	43.4	100.0	619,844	40.2	100.0	3,211,658	41.0	100.0
With a Self-Care Difficulty	32	0.1	0.2	11,902	0.8	1.9	68,634	0.9	2.1
No Self-Care Difficulty	14,568	43.3	99.8	607,942	39.4	98.1	3,143,024	40.2	97.9
35 to 64 Years	2,493	7.4	100.0	140,012	9.1	100.0	655,072	8.4	100.0
With a Self-Care Difficulty	77	0.2	3.1	7,280	0.5	5.2	35,893	0.5	5.5
No Self-Care Difficulty	2,416	7.2	96.9	132,732	8.6	94.8	619,179	7.9	94.5
65 to 74 Years	2,551	7.6	100.0	111,740	7.2	100.0	499,918	6.4	100.0
With a Self-Care Difficulty	369	1.1	14.5	19,663	1.3	17.6	98,247	1.3	19.7
No Self-Care Difficulty	2,182	6.5	85.5	92,077	6.0	82.4	401,671	5.1	80.3
75 Years and Over	33,619	100.0	100.0	1,541,790	100.0	100.0	7,828,026	100.0	100.0
With a Self-Care Difficulty	537	1.6	1.6	42,676	2.8	2.8	231,666	3.0	3.0
No Self-Care Difficulty	33,082	98.4	98.4	1,499,114	97.2	97.2	7,596,360	97.0	97.0

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

Table M-22
Disability Status – Independent Living Difficulty (2018)

	Study Area			Manhattan			New York City		
	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort	Number	Percent of Total Population	Percent of Cohort
Total Population	34,802	100.0	100.0	1,621,687	100.0	100.0	8,379,895	100.0	100.0
With an Independent Living Difficulty	727	2.1	2.1	36,091	2.2	2.2	181,759	2.2	2.2
No Independent Living Difficulty	34,075	97.9	97.9	1,585,596	97.8	97.8	8,198,136	97.8	97.8
Under 5 Years	1,183	3.4	100.0	79,897	4.9	100.0	551,869	6.6	100.0
With an Independent Living Difficulty	0	0.0	0.0	343	0.0	0.4	2,633	0.0	0.5
No Independent Living Difficulty	1,183	3.4	100.0	79,554	4.9	99.6	549,236	6.6	99.5
5 to 17 Years	1,686	4.8	100.0	155,676	9.6	100.0	1,213,005	14.5	100.0
With an Independent Living Difficulty	0	0.0	0.0	661	0.0	0.4	6,166	0.1	0.5
No Independent Living Difficulty	1,686	4.8	100.0	155,015	9.6	99.6	1,206,839	14.4	99.5
18 to 34 Years	12,289	35.3	100.0	514,518	31.7	100.0	2,248,373	26.8	100.0
With an Independent Living Difficulty	58	0.2	0.5	2,501	0.2	0.5	12,223	0.1	0.5
No Independent Living Difficulty	12,231	35.1	99.5	512,017	31.6	99.5	2,236,150	26.7	99.5
35 to 64 Years	14,600	42.0	100.0	619,844	38.2	100.0	3,211,658	38.3	100.0
With an Independent Living Difficulty	183	0.5	1.3	8,529	0.5	1.4	46,604	0.6	1.5
No Independent Living Difficulty	14,417	41.4	98.7	611,315	37.7	98.6	3,165,054	37.8	98.5
65 to 74 Years	2,493	7.2	100.0	140,012	8.6	100.0	655,072	7.8	100.0
With an Independent Living Difficulty	154	0.4	6.2	6,829	0.4	4.9	32,907	0.4	5.0
No Independent Living Difficulty	2,339	6.7	93.8	133,183	8.2	95.1	622,165	7.4	95.0
75 Years and Over	2,551	7.3	100.0	111,740	6.9	100.0	499,918	6.0	100.0
With an Independent Living Difficulty	332	1.0	13.0	17,228	1.1	15.4	81,226	1.0	16.2
No Independent Living Difficulty	2,219	6.4	87.0	94,512	5.8	84.6	418,692	5.0	83.8

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

In 2018, nearly 24,000 Study Area residents—about three-quarters of the population 16 years and over—were members of the civilian labor force (see **Table M-23**). The estimated number of residents in the workforce increased by approximately 38.5 percent between 2010 and 2018.

Table M-23
Civilian Labor Force Trends (2010–2018)

	2010		2018	
	Number	**Percent**	**Number**	**Percent**
Population 16 Years and Over	23,165	100.0	32,084	100.0
In Civilian Labor Force	15,857	68.5	23,917	74.5
Employed	14,778	63.8	22,923	71.5
Unemployed	1,079	4.7	994	3.1
Unemployment Rate (percent of labor force not employed)		6.8		4.2

Source:
U.S. Census Bureau, ACS 2006–2010 and 2014–2018 5-Year Estimates.

About one-quarter of the employed Study Area residents worked within the Professional and Business Services supersector.[1] As shown in **Table M-24**, this is a higher percentage of worker representation than in Manhattan and New York City's labor force as a whole. The Study Area's labor force also held a higher proportion of jobs in the Finance and Insurance, and Real Estate and Rental and Leasing industry sectors—an estimated 19.3 percent of the Study Area labor force, compared to 16.4 percent for Manhattan resident-workers and 9.5 percent of New York City resident-workers. Study Area resident-workers held a lower percentage of jobs in the Educational Services, and Health Care and Social Assistance industry sector as compared to Manhattan and New York City as a whole.

[1] The Professional and Business Services supersector is comprised of the Professional, Scientific and Technical Services sector; the Management of Companies sector; and the Administrative and Support and Waste Management and Remediation Services sector. Businesses within this supersector perform professional services, hold securities of companies or perform routine support activities for the day-to-day operations of other businesses.

Table M-24
Industry Sectors for Employed Civilian Population 16 Years and Over (2018)

	Study Area		Manhattan		New York City	
	Number	Percent	Number	Percent	Number	Percent
Total Employed Civilian Population 16 Years and Over	22,923	100.0	897,040	100.0	4,053,141	100.0
Agriculture, Forestry, Fishing and Hunting, and Mining	81	0.4	496	0.1	3,870	0.1
Construction	415	1.8	17,651	2.0	206,067	5.1
Manufacturing	655	2.9	26,125	2.9	133,626	3.3
Wholesale Trade	482	2.1	18,416	2.1	85,255	2.1
Retail Trade	1,709	7.5	64,278	7.2	378,143	9.3
Transportation, Warehousing, and Utilities	414	1.8	23,276	2.6	259,590	6.4
Information	1,148	5.0	56,446	6.3	154,804	3.8
Finance and Insurance, and Real Estate and Rental and Leasing	4,418	19.3	146,846	16.4	383,827	9.5
Professional and Business Services	5,755	25.1	183,477	20.5	555,773	13.7
Educational Services, and Health Care and Social Assistance	3,923	17.1	202,300	22.6	1,080,586	26.7
Arts, Entertainment, and Recreation, and Accommodation and Food Services	2,663	11.6	95,501	10.7	440,995	10.9
Other Services, Except Public Administration	687	3.0	39,568	4.4	218,455	5.4
Public Administration	573	2.5	22,660	2.5	152,150	3.8

Source: U.S. Census Bureau, ACS 2014–2018 5-Year Estimates.

M.2 ENVIRONMENTAL CONSEQUENCES

M.2.1 NO ACTION ALTERNATIVE

This section describes the socioeconomic conditions that would exist under the No Action Alternative.

M.2.1.1 *POPULATION AND DEMOGRAPHIC CHARACTERISTICS*

Under the No Action Alternative, the Project Site would remain unchanged. The Project Site would continue to be used as an active rail yard operated by LIRR, specifically as a commuter railroad storage yard and maintenance facility, and the Tunnel Encasement and Platform would not be constructed. The No Action Alternative therefore would not contribute to population and demographic changes in the Study Area or directly affect the Study Area's elderly population or persons with disabilities.

M.2.1.2 *ECONOMIC CHARACTERISTICS*

Under the No Action Alternative, the Project Site would remain unchanged. The Project Site would continue its use as an active rail yard operated by LIRR, specifically as a commuter railroad storage yard and maintenance facility, and the Project Sponsor would not construct the Platform and Tunnel Encasement. Without the construction of the Tunnel Encasement, Amtrak would not preserve the ROW that allows for a new trans-Hudson connection into New York Penn Station. New rail infrastructure is part of the effort to maintain a functional, resilient, and improved trans-Hudson passenger rail crossing into New York Penn Station, maintain existing Amtrak intercity and NJ TRANSIT commuter rail service on the Northeast Corridor, and support future increases in the capacity of the regional rail system, should they be pursued. Therefore, the No Action Alternative would not facilitate the substantial economic benefits associated with improved commuter rail service into and out of Manhattan, and which are essential for maintaining competitive transit-oriented commercial districts that can attract talent from throughout the New York Metropolitan area.

Without the construction of the Platform, the Project Site could not provide developable land area above the Western Rail Yard, and therefore the No Action Alternative would not support the substantial economic activity associated with existing zoning plans at the Project Site. In addition, the MTA and its subsidiary agencies would be unable to maximize the revenue-generating potential of the Western Rail Yard as a real estate asset.

M.2.1.3 *DIRECT RESIDENTIAL DISPLACEMENT*

The Project Site does not contain any residential dwelling units, and under the No Action Alternative, the Project Site would remain unchanged. Therefore, the No Action Alternative would not directly displace any residential population.

M.2.1.4 *DIRECT BUSINESS DISPLACEMENT*

Under the No Action Alternative, the Project Site would remain unchanged and therefore, the No Action Alternative would not directly displace any businesses or business uses.

M.2.1.5 *ADVERSE EFFECTS ON A SPECIFIC INDUSTRY*

The No Action Alternative would not result in any direct business displacement. Therefore, the No Action Alternative would not have any adverse effects on a specific industry.

M.2.1.6 *COMMUNITY FACILITIES AND SERVICES*

Under the No Action Alternative, the Project Site would remain unchanged and therefore would not affect community facilities and services in the Study Area.

M.2.2 **OPERATIONAL IMPACTS OF THE PREFERRED ALTERNATIVE**

This section describes the socioeconomic conditions that would exist with the Preferred Alternative.

M.2.2.1 *POPULATION AND DEMOGRAPHIC CHARACTERISTICS*

The Preferred Alternative would not displace a residential population as there are no existing residences at the Project Site, nor would it introduce residential dwelling units for new populations. The Preferred Alternative would not directly displace or impede access to any facilities serving elderly and/or disabled populations, introduce any new populations of elderly or disabled persons, or interfere with the movement of these user groups in the Study Area as there would be no change in access and location to those facilities. Similarly, the Preferred Alternative would not affect these populations' access to local businesses and health care facilities as no such business or facilities exist at the Project Site.

The Preferred Alternative would generate no new transit or pedestrian trips when completed (see Chapter 6, "Transportation," for more details). Elderly and/or disabled populations would experience no change in access to transit, pedestrian facilities (such as sidewalks and crossings), or traffic signal timing, as the Preferred Alternative does not include altering the existing conditions and generates no new trips. The components that comprise the Preferred Alternative are static infrastructure, facilities that are inaccessible to the general public; therefore, there would be no impacts to elderly or disabled populations.

Therefore, the Preferred Alternative would not affect the Study Area's population and demographic characteristics.

M.2.2.2 *ECONOMIC CHARACTERISTICS*

The operations and maintenance that stem from the Platform and Tunnel Encasement would not generate new direct (on-site) employment. However, both infrastructure elements would facilitate substantial economic opportunities for the Study Area and the region. The Platform would support the provision of developable land area that would generate revenue for the MTA and its subsidiary agencies and modernize state-of-the-art life safety systems for the entire Western Rail Yard. MTA has sought to maximize the revenue generation potential of its real estate assets. Currently, there is no capacity for development over the Western Rail Yard without construction of the Platform. The 2005 Hudson Yards rezoning included the extension of the No. 7 IRT Flushing Line subway to West 34th Street and Eleventh Avenue, providing new and closer access to the subway system in the Study Area, which made private development there considerably more attractive and viable. The 2005 Hudson Yards rezoning also provided for the development of a mix of uses and densities, including a provision for new open space. The Platform would facilitate development of the Overbuild on the Project Site, which in addition to generating substantial revenue for MTA and its subsidiaries, would introduce a mix of uses that contribute to the growth in economic activity within the Study Area and the City. Chapter 20, "Indirect, Cumulative, and Other Impacts," provides more description of the indirect effects of the Preferred Alternative.

The Tunnel Encasement would maintain the ability to preserve passenger rail service in and out of New York Penn Station. New rail infrastructure is part of the effort to maintain a functional, resilient, and improved trans-Hudson passenger rail crossing into New York Penn Station, maintain existing Amtrak intercity and NJ TRANSIT commuter rail service on the Northeast Corridor, and support future increases in the capacity of the regional rail system should they be pursued. Enhanced transportation infrastructure would improve accessibility for commuters, which in turn would lead to an increase the attractiveness of the Midtown Manhattan Central Business District for workers and businesses, and would spur an increase in economic activities in the Study Area and the City.

M.2.2.3 *DIRECT RESIDENTIAL DISPLACEMENT*

The Project Site does not contain any residential dwelling units, nor is construction of new residential dwellings part of the Preferred Alternative. Therefore, the Preferred Alternative would not directly displace any residents.

M.2.2.4 *DIRECT BUSINESS DISPLACEMENT*

The Preferred Alternative would not result in the direct displacement of any businesses. The proposed Platform would include building foundations that would keep interruptions of yard operations to a minimum and allow MTA LIRR's commuter railroad storage yard and maintenance facility to be fully functional.

M.2.2.5 *ADVERSE EFFECTS ON A SPECIFIC INDUSTRY*

The Preferred Alternative would not result in any direct business displacement as no businesses currently exist at the Project Site. Therefore, the Preferred Alternative would not have any adverse effects on a specific industry.

M.2.2.6 *COMMUNITY FACILITIES AND SERVICES*

No community facilities are on or immediately adjacent to the Project Site. Therefore, the Preferred Alternative would not directly displace any community facilities, and would not directly alter the provision of public services. This analysis of police and fire protection focuses on the potential effects of the Preferred Alternative on service delivery.

Table M-25 provides the 10th Precinct's overall number of crime complaints, which increased between 2001 and 2019, in contrast to the substantial reductions in complaints that were received by the Manhattan South Precinct and Citywide over the same time period.

Table M-25
Historic Crime Complaints by Precinct
Study Area and New York City (2001 and 2019)

	10th Precinct			Manhattan South			New York City		
	2001	2019	Percent Change 2001–2019	2001	2019	Percent Change 2001–2019	2001	2019	Percent Change 2001–2019
Murder	3	0	-100	24	12	-50	649	319	-51
Rape	5	15	+200	93	145	+56	1,930	1,755	-9
Robbery	135	123	-9	2,701	1,243	-54	27,873	13,369	-52
Felony Assault	103	105	+2	1,714	1,562	-9	23,020	20,695	-10
Burglary	108	83	-23	3,720	1,319	-65	32,964	10,778	-67
Grand Larceny	447	805	+80	16,673	10,837	-35	46,291	43,247	-7
Grand Larceny Auto	127	23	-82	1,457	274	-81	29,607	5,430	-82
TOTAL	**928**	**1,154**	**+24**	**26,382**	**15,392**	**-42**	**162,064**	**95,593**	**-41**

Source: NYPD Borough and Precinct Crime Statistics from CompStat 2.0
https://www1.nyc.gov/site/nypd/stats/crime-statistics/citywide-crime-stats.page.

Since operation of the Preferred Alternative would not result in any new resident or worker populations, and the infrastructure introduced by the Preferred Alternative will remain inaccessible to the general public, the analysis concludes that the Preferred Alternative would not result in any adverse effects to police service delivery.

M.2.3 CONSTRUCTION IMPACTS OF THE PREFERRED ALTERNATIVE

This section describes the effects on socioeconomic conditions from construction activities associated with the Preferred Alternative. Construction staging would take place within the Project Site and the adjacent sidewalk and parking lane on West 33rd Street and Eleventh Avenue, and the adjacent sidewalk and parking lane on West 30th Street (see Chapter 3, "Alternatives," for more details).

M.2.3.1 *POPULATION AND DEMOGRAPHIC CHARACTERISTICS*

Construction activities associated with the Preferred Alternative would not introduce new residents to the Study Area, and therefore would not affect the Study Area's population and demographic characteristics.

Section M.1 detailed that the Study Area does not contain a disproportionately large number of elderly or persons with disabilities. Moreover, there are no community facilities within immediate proximity of the Project Site that provide services targeted to these populations. The construction activities for the Preferred Alternative would generate incremental truck traffic that would be typical for the Study Area or the City at large. The Project Sponsor would develop MPT plans to ensure the safety of pedestrian, bicyclist, and vehicle circulation near the Project Site during construction of the Preferred Alternative as required by NYCDOT. The Project Sponsor has indicated that the MPT plans would specify the use of measures commonly implemented in such plans, and may include but are not limited to the following: sidewalk closures; parking lane closures; safety signs; safety barriers; and construction fencing. The Project Sponsor would coordinate approval of these plans and implementation of the closures with NYCDOT's OCMC. With such measures in place, the Preferred Alternative's construction activities would not adversely affect the elderly or persons with disabilities.

M.2.3.2 *DIRECT RESIDENTIAL DISPLACEMENT*

All construction staging and activities would occur within and immediately adjacent to the Project Site, which are areas that do not contain any residential dwelling units. Construction of the Preferred Alternative does not require any property acquisitions or temporary easements. Therefore, construction of the Preferred Alternative would not result in any direct residential displacement.

M.2.3.3 *DIRECT BUSINESS DISPLACEMENT*

As noted above, construction staging and activities would occur within and immediately adjacent to the Project Site, and construction of the Preferred Alternative would not require any property acquisitions or temporary easements. Therefore, the Preferred Alternative would not result in the direct displacement of businesses or businesses uses outside of the Project Site.

During the construction of the Platform, certain existing LIRR on-site facilities would require temporary relocation, under an agreement between the Project Sponsor and LIRR. These temporarily relocated facilities would remain located on the Project Site, and the rail yard would continue to be functional throughout the construction of the Platform. The Project Sponsor has been in close coordination with MTA and LIRR and is committed to provide interim facilities to enable the Yard to be fully functional during construction. With this commitment, there would not be an adverse impact due to the temporary on-site relocation of these uses.

M.2.3.4 *ADVERSE EFFECTS ON A SPECIFIC INDUSTRY*

The Preferred Alternative's construction activities would not result in the permanent direct displacement of any businesses or business uses. Therefore, the Preferred Alternative's construction activities would not substantially impair the ability of a specific industry or category of business to continue to operate within the City.

M.2.3.5 *COMMUNITY FACILITIES AND SERVICES*

The Preferred Alternative's construction activities would not directly displace any community facilities and services, nor would any sidewalk closures or sidewalk traffic detours impede access to any community facilities and services. The following sections consider whether construction traffic traveling to or from the Project Site could impede access to any community facilities and services. FRA based the truck route assumptions on typical distributions of construction traffic as determined through prior EISs in the area to ensure that trucks travel on NYCDOT approved truck routes. Construction vehicles would be most likely to use Tenth, Eleventh, and Twelfth Avenues and West 30th and West 34th Streets. Truck deliveries would occur throughout the day, with a peak at the start of the morning work shift (see Chapter 6, "Transportation"). During the peak construction quarter, FRA estimated approximately 23 truck trips in the 6 AM To 7 AM period, 6 truck trips in the AM (8 AM to 9 AM) and midday (12 PM to 1 PM) peak periods, and 3 truck trips in the PM (5 PM to 6 PM) peak period.

M.2.3.5.1 *Public Schools*

The only public school in the Study Area is P.S. 33 Chelsea Prep, an elementary school located at 283 Ninth Avenue, between West 26th Street and West 28th Street. Chelsea Prep is not on or immediately adjacent to an NYCDOT-designated truck route, and therefore would not experience any incremental construction truck traffic as a result of the Preferred Alternative.

M.2.3.5.2 *Public Libraries*

There are no NYPL central or branch libraries in the Study Area. Therefore, public libraries would not experience incremental construction truck traffic within the Study Area as a result of the Preferred Alternative.

M.2.3.5.3 *Child Care Centers*

There are two publicly funded child care centers in the Study Area. The Hudson Guild facility at 410 West 40th Street is not on or immediately adjacent to a NYCDOT-designated truck route, and therefore would not experience any incremental construction truck traffic as a result of the Preferred Alternative. The Hudson Guild facility at 459 West 26th Street is immediately adjacent to Tenth Avenue—a designated truck route—and is open from 8:30 AM to 5:30 PM weekdays. FRA estimates a maximum of five truck trips would pass the facility on Tenth Avenue during the morning construction traffic peak period, and one truck trip would pass it on Tenth Avenue during the evening peak period. These incremental trips would represent less than one percent of the vehicle trips during these peak periods, and would not generate significant traffic, air quality, or noise impacts. This projected volume of incremental truck trips would not impede the child care center's operations. Therefore, the Preferred Alternative's construction activities would not adversely affect any child care centers in the Study Area.

M.2.3.5.4 *Health Care Facilities*

In Chapter 17, "Socioeconomics," **Section 17.4.3.4** states that 16 outpatient health care facilities are within the Study Area (see **Table 17-16** and Figure 17-2 [Map Nos. 22 through 37]). Of those facilities, only one—Premier Health Care Diagnostic & Treatment Center at 460 West 34th Street—is immediately adjacent to a NYCDOT-designated truck routes (Tenth Avenue and West 34th Street). FRA estimates that a maximum of three truck trips would pass the center on West 34th Street during the morning construction traffic peak period. No trucks are expected to pass through the West 34th Street during the afternoon peak construction period. This projected volume of incremental truck trips would not impede the health care facility's operations. Therefore, the Preferred Alternative's construction activities would not adversely affect any health care facilities in the Study Area.

M.2.3.5.5 *Fire Protection*

The Study Area includes one engine/ladder company (Engine 34/Ladder 21), at 440 West 38th Street, and one EMS Station (Station 7), at 512 West 23rd Street. Neither of these facilities is on a truck route. In addition, the projected peak incremental truck trips within the Study Area (see Figure C2-2 in Appendix C2, "Construction Trip-Generation and Screening Analysis") do not represent a volume of additional traffic that would impede FDNY vehicle movement within and through the Study Area. Overall, the Preferred Alternative's construction trips would represent less than one percent of traffic during peak periods, and would not result in significant adverse traffic impacts. Therefore, the Preferred Alternative's construction activities would not adversely affect fire protection and EMS services in the Study Area.

M.2.3.5.6 *Police Protection*

The 10th Precinct is the only NYPD precinct within the Study Area. It is not on an NYCDOT-designated truck route, and the projected incremental truck trips within the Study Area do not represent a volume of additional traffic that would impede NYPD vehicle movement within and through the Study Area. Overall, the Preferred Alternative's construction trips would represent less than one percent of traffic during peak periods, and would not result in significant adverse traffic impacts. Therefore, the Preferred Alternative's construction activities would not adversely affect police protection services in the Study Area.

M.2.3.5.7 *Other Community Facilities*

Section 17.4.3.7 describes and Figure 17-3 shows the many additional community facilities in the Study Area, including homeless shelters, community centers, and religious and cultural institutions. Several of these facilities are on a NYCDOT-designated truck route likely to be utilized by construction vehicles.[2] However, the projected incremental truck trips within the Study Area do not represent a volume of additional traffic that would impede access to these facilities, nor would they substantively change pedestrian or vehicular travel times to and from these facilities. Therefore, the Preferred Alternative's construction activities would not adversely affect any of these community facilities.

[2] These include: Covenant House Youth Shelter, Chelsea/Elliott Houses Community Center, the New Perspectives Theatre Company, the Young Adult Institute, and Hudson Guild located along Tenth Avenue; the Vortex Theatre Company, Printed Matter (visual arts), and the Artco Chelsea Art Centre located along Eleventh Avenue; the Shed, located along West 30th Street; and the Broadway Dance Club, Pick Up Performance Company, the Church in New York City, and the Hudson Yards Synagogue located along West 34th Street.

M.3 ECONOMIC BENEFITS ANALYSIS

FRA conducted an economic benefits analysis to evaluate the potential economic effects of the No Action Alternative and Preferred Alternative on jobs, labor income, value added, and output in New York City, New York State, and New Jersey. This section presents the analysis context, methodology, and results.

M.3.1 REGULATORY CONTEXT

Economic or social effects by themselves do not require preparation of an environmental impact statement. However, when the agency determines that economic or social and natural or physical environmental effects are interrelated, the environmental impact statement shall discuss and give appropriate consideration to these effects on the human environment (40 CFR §1502.16 Environmental consequences).

NEPA also provides for cost-benefit considerations under 40 CFR §1502.22. In addition, FRA's revised NEPA legislation and regulations contained in 23 CFR Part 771 Environmental Impact and Related Procedures require consideration of economic impacts.

M.3.2 ANALYSIS METHODOLOGY

FRA used the IMPLAN input-output modeling system to estimate the economic and fiscal benefits of the Preferred Alternative during construction. IMPLAN was developed by the U.S. government and subsequently privatized by professors at the University of Minnesota. IMPLAN 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 and employment (e.g., during annual operation). The model contains data for New York City, New York State, and the State of New Jersey on 536 economic sectors, showing how each sector affects every other sector as a result of a change in the quantity of its product or service.

Economic benefits are expressed in terms of: job-years (a measure of temporary employment during construction, equivalent to one person working full time for a year); full-time equivalent (FTE) jobs (if number of construction years are known); labor income (which includes employee compensation and benefits as well as proprietor income); value added (comparable to Gross Domestic Product); and total economic output (the total value of industry production). The reporting breaks out total economic impacts into two components:

1. Onsite effects represent the initial benefits to the economy of a specific new investment; e.g., this would include on-site employment (during construction) and associated labor income.

2. Offsite effects represent the benefits generated by industries purchasing from other industries and worker spending, as a result of the initial investment. For example, offsite employment resulting from the Preferred Alternative's construction expenditures will include jobs in industries that provide goods and services to the construction firm (e.g., wholesale trade, building material and garden supply stores, etc.). Additional offsite employment would result from increased household income in the region, some of which would be spent on local goods and services, such as food and drink, recreation, and medical services.

M.3.3 MODELING INPUTS AND ASSUMPTIONS

The total cost of construction of the Preferred Alternative is estimated at approximately $3.4 billion. However, not all of this construction investment will create economic benefits in the local area. Based on the current budget, FRA excluded the cost of certain expenditures that would likely be purchased outside of the regions of interest (i.e., New York City, New York State, and New Jersey). The total construction cost that would result in economic benefits to New York State and New Jersey is approximately $2.3 billion, including hard and soft costs.

Table M-26 shows the capital expenditure budget that was used as an input to the IMPLAN model. FRA selected IMPLAN Sector 56, construction of other new nonresidential structures, which includes "mass transit construction," for most of the proposed hard construction activities. In-state architecture and engineering and other soft costs were modeled separately as direct inputs in their respective sectors. FRA specified the labor income for the hard construction sector, which will total $364.7 million (or 45 percent of the hard cost). FRA estimated total direct jobs using total labor income, adjusted for the cost of benefits, and the construction laborer prevailing wage in New York City from the City of New York, Office of the Comptroller (2020).

Table M-26
Capital Expenditures by IMPLAN Sector

IMPLAN Sector	Activity	Total Spending
Sector 54 – Construction of new highways and streets	Tunnel Encasement	$440.0 million
Sector 56 – Construction of other new nonresidential structures	General Platform construction including sitework, materials and labor costs	$1.71 billion
Sector 60 – Maintenance and repair of nonresidential structures	Owner's Other Construction costs are largely made up of Payment in Lieu of Sales Tax (PILOST) payments, as well as other miscellaneous construction costs, such as site security, temporary electricity and Platform maintenance and repair	$50.7 million
Sector 445 – Insurance	Soft Costs	$70.5 million
Sector 455 – Legal Services	Other Soft Costs	$9.4 million
Sector 457 – Architectural, engineering and related services	Soft Costs	$50.0 million
Sector 463 – Environmental and other technical consulting services	Soft Costs (inspections, testing, and environmental)	$8.8 million
Total	Construction	**$2.3 billion**

Notes: Capital expenditures exclude the cost of land and financing.
Sources: The 2018 IMPLAN model and AKRF, Inc., December 2020. The Project Sponsor provided capital expenditure budget in December 2020.

M.3.4 MODELING RESULTS

Table M-27 summarizes the estimated economic benefits associated with the Preferred Alternative.

Table M-27
Economic Benefits of the Preferred Alternative

	New York City	New York State	New Jersey
Employment (Job-Years)[1]			
Onsite[1]	13,720	13,720	0
Offsite	6,216	8,091	1,733
Total	**19,936**	**21,811**	**1,733**
Labor Income (in millions of 2020 dollars)[2]			
Onsite[1]	$1,444.41	$1,444.41	$0
Offsite	$588.62	$705.36	$129.52
Total	**$2,033.03**	**$2,149.77**	**$129.52**
Value Added (in millions of 2020 dollars)[3]			
Onsite[1]	$870.70	$870.70	$0
Offsite	$968.61	$1,181.27	$215.26
Total	**$1,839.31**	**$2,051.97**	**$215.26**
Output (in millions of 2020 dollars)[4]			
Onsite[1]	$2,343.80	$2,343.80	$0
Offsite	$1,463.06	$1,828.93	$375.61
Total	**$3,806.86**	**$4,172.73**	**$375.61**

Notes:
[1] A job-year is the equivalent of one person working full-time for one year. Onsite employment includes workers associated with hard construction costs as well as soft costs (e.g. architecture and engineering and environmental consulting). AKRF, Inc. calculated job years based on labor income (adjusted for the cost of benefits), divided by average annual full-time prevailing wage of construction laborer workers in New York City, from the City of New York, Office of the Comptroller (2020).
[2] Labor income includes employee compensation and proprietor income, including the cost of benefits.
[3] Value added includes labor income, taxes on production, and other property income (profits) and may be compared to Gross Domestic Product (GDP).
[4] Output is the total value of industry production and includes payroll and non-payroll expenditures.
Sources:
AKRF, Inc. and the 2018 IMPLAN model, December 2020.

M.3.4.1 *EMPLOYMENT*

The Preferred Alternative would result in approximately 13,720 job-years of onsite construction employment over the entire construction period. Based on the construction schedules provided by the Project Sponsors, construction activities for the Preferred Alternative, including construction of the Platform and its associated infrastructure, and the Tunnel Encasement, would occur over an approximately 5-year period (late 2021 to late 2026). Therefore, onsite employment may also be represented as 2,744 FTE, or the equivalent of one person working full-time.

In addition, the Preferred Alternative would generate offsite employment in New York City (6,216 job-years), the rest of New York State (1,875 job-years), and New Jersey (1,733 job-years), from industries purchasing from other industries and worker spending. In total, the Preferred Alternative would result in 19,936 job-years in New York City, 21,811 job-years in New York State, and 1,733 job-years in New Jersey.

M.3.4.2 *LABOR INCOME*

As shown in the table, the Preferred Alternative would generate approximately $1.4 billion in onsite labor income, including benefits. Offsite employment would generate an additional approximately $705 million in labor income in New York State, including $589 million in New York City, and another $130 million in New Jersey.

M.3.4.3 *VALUE ADDED*

Construction of the Platform and Tunnel Encasement in Western Rail Yard would result in approximately $871 million in onsite value added (which may be compared to GDP). The Preferred Alternative would generate an additional approximately $1.2 billion in offsite labor income in New York State, including $969 million in New York City, and another $215 million in New Jersey.

M.3.4.4 *OUTPUT*

Onsite economic output in New York City and New York State from the construction of the Preferred Alternative would be approximately $2.3 billion. Offsite economic activity would generate an additional $1.5 billion in economic output in New York City and $1.8 billion in New York State overall. There would be an additional approximately $376 million in offsite output in New Jersey. ✷