

A. INTRODUCTION

This chapter describes the potential socioeconomic effects of construction activities associated with the proposed project from two perspectives: (1) it considers whether the proposed project could result in significant adverse socioeconomic effects due to construction activities; and (2) it estimates the economic benefits generated by construction.

SOCIOECONOMIC STUDY AREA*POTENTIAL SIGNIFICANT ADVERSE SOCIOECONOMIC EFFECTS ASSESSMENT*

As described in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, if a proposed project would entail construction for a long duration that could affect the access to and therefore viability of a number of businesses, and the failure of those businesses has the potential to affect neighborhood character, a preliminary assessment for construction effects on socioeconomic conditions should be conducted.

The socioeconomic study area (see Figure 5.2-1) is based largely on the furthest extent of either the ¼-mile radius from the project area or the protected area, which generally follows the Federal Emergency Management Agency (FEMA) 100-year Special Flood Hazard Area (SFHA) with 90th percentile 2050s sea level rise assumptions for the area between Montgomery Street and East 25th Street. As per CEQR methodology, the above-described outer boundary is adjusted to align with census tracts to form the socioeconomic study area. Within the socioeconomic study area, the analysis focuses on locations where construction activities may have the potential to directly affect business conditions.

ECONOMIC BENEFITS DURING CONSTRUCTION

The analysis of economic benefits during construction is presented, per the *State Environmental Quality Review (SEQR) Handbook*, 3rd Edition, 2010. Economic benefits estimated for this analysis include the direct, indirect, and induced jobs, wages and salaries, and total economic output generated by project construction activities within New York City and New York State. The study areas for the assessment of economic benefits are New York City and New York State.

B. PRINCIPAL CONCLUSIONS**NO ACTION ALTERNATIVE (ALTERNATIVE 1)**

The No Action Alternative assumes that no new comprehensive coastal protection system is constructed in the proposed project area. Therefore, under the construction phase, no changes to socioeconomic conditions are expected to occur with the No Action Alternative.

PREFERRED ALTERNATIVE (ALTERNATIVE 4): FLOOD PROTECTION SYSTEM WITH A RAISED EAST RIVER PARK

Construction activities associated with the Preferred Alternative would not generate significant adverse socioeconomic effects. Construction activities would not directly displace businesses, nor would they require the temporary closure of businesses within or surrounding the project area, including businesses on routes of access to/from construction sites. Construction activities would, at times, affect pedestrian and vehicular access in the immediate vicinity of construction activities. However, construction activities in the project area are located far enough away from businesses such that access to businesses would not be impeded. Lane and/or sidewalk closures and construction staging areas would not obstruct entrances to any existing businesses, or obstruct major thoroughfares used by customers. Businesses would not be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities.

An economic benefits analysis was performed and utilized the Impact Analysis for Planning (IMPLAN) economic input-output modeling system to estimate construction costs for the proposed project. Based on the construction costs of the Preferred Alternative, as well as the other With Action Alternatives, the economic benefits—including construction-related jobs, wages and salaries, and the total economic output of construction—were estimated. Total employment, employee compensation, and economic activity, including direct, indirect, and induced effects in New York City are summarized by alternative in **Table 6.1-1**.

Table 6.1-1
Economic Benefits from Construction by Alternative – New York City

	Other Alternative (Alternative 2): Flood Protection System on the West Side of East River Park – Baseline	Other Alternative (Alternative 3): Flood Protection System on the West Side of East River Park – Enhanced Park and Access	Preferred Alternative (Alternative 4): Flood Protection System with a Raised East River Park	Other Alternative (Alternative 5): Flood Protection System East of FDR Drive
Total Employment (Person-Years)¹	1,529	6,652	8,134	Similar to the Preferred Alternative
Total Employee Compensation (Millions of Constant 2021 dollars)	\$154.53	\$686.56	\$798.49	Similar to the Preferred Alternative
Total Economic Output or Demand² (Millions of Constant 2021 dollars)	\$411.63	\$1,814.81	\$2,146.83	Similar to the Preferred Alternative
Notes:				
¹ A person-year is the equivalent of one person working full-time for a year.				
² The total effect on the local economy, including the sum of the cost of goods and services used to produce a product and the associated payments to workers, taxes, and profits.				
Sources:				
The characteristics and construction cost of the development; the IMPLAN economic modeling system.				
* This table has been revised for the FEIS.				

Total direct, indirect, and induced employment resulting in New York City from construction is estimated to range between approximately 1,529 to 8,134 person-years of employment, depending on the alternative. Total direct, indirect, and induced employee compensation

resulting in New York City from construction is estimated to range from between approximately \$154.53 million to \$798.49 million, depending on the alternative. Total economic activity that would result from construction is estimated to range between \$411.63 million and \$2,146.83 million in New York City, depending on the alternative. Each alternative would generate additional employment, employee compensation, and economic activity in the broader New York State economy.

OTHER ALTERNATIVES

The Flood Protection System on the West Side of East River Park – Baseline Alternative (Alternative 2), The Flood Protection System on the West Side of East River Park – Enhanced Park and Access Alternative (Alternative 3), and The Flood Protection System East of Franklin Delano Roosevelt East River Drive (FDR Drive) Alternative (Alternative 5) would be similar to the Preferred Alternative in that they would not directly displace businesses, nor would they require the temporary closure of businesses within or surrounding the project area, including businesses on routes of access to/from construction sites. Overall, construction activities associated with these alternatives would not generate significant adverse socioeconomic effects.

C. REGULATORY CONTEXT

A detailed discussion of the regulatory context governing the open space analysis is presented in Chapter 5.2, “Socioeconomic Conditions.” In addition, in accordance with the National Environmental Policy Act (NEPA) of 1969 requirements and SEQRA and their implementing regulations, economic benefits are provided to allow the agencies to make a determination that balances environmental impacts with economic and social considerations. According to the New York State Department of Environmental Conservation’s (NYSDEC) *The SEQRA Handbook 3rd edition—2010*, “Social and economic benefits of, and need for, an action must be included in an EIS” (p. 89).

D. METHODOLOGY

POTENTIAL SIGNIFICANT ADVERSE SOCIOECONOMIC EFFECTS ASSESSMENT

This assessment focuses on whether construction conditions could affect access to existing businesses, the potential consequences concerning their continued viability, and the potential effects of any loss of business activity on the character of the area.

ECONOMIC BENEFITS ANALYSIS

Economic benefits—including construction-related jobs, wages and salaries, and the total economic output of construction—were estimated using IMPLAN, an economic input-output modeling system. The IMPLAN model was developed by the U.S. Department of Agriculture Forest Service in 1979 and was subsequently privatized by the Minnesota IMPLAN Group (MIG). The model 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 for New York City 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. A similar IMPLAN model for New York State was used to trace the effects on the state economy.

MEASURES OF ECONOMIC EFFECT

Using IMPLAN terminology, economic effects are broken into three components: direct, indirect, and induced:

- *Direct effects* represent the initial benefits to the economy of a specific new investment (e.g., a construction project or changes in employment).
- *Indirect effects* represent the benefits generated by industries purchasing from other industries as a result of the direct investment (e.g., indirect employment resulting from construction expenditures would include jobs in industries that provide goods and services to the contractors). A direct investment triggers changes in other industries as businesses alter their production to meet the needs of the industry in which the direct effect has occurred. 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.
- *Induced effects* represent the effects caused by increased income in a region. Direct and indirect effects generate more worker income by increasing employment and/or salaries in certain industries. 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 quantified as induced effects.

E. ENVIRONMENTAL EFFECTS

A detailed description of the alternatives analyzed in this chapter is provided in Chapter 2.0, “Project Alternatives.”

NO ACTION ALTERNATIVE (ALTERNATIVE 1)

The No Action Alternative assumes that no new comprehensive coastal protection system is installed in the proposed project area. No changes to socioeconomic are expected to occur with the No Action Alternative.

PREFERRED ALTERNATIVE: FLOOD PROTECTION SYSTEM WITH A RAISED EAST RIVER PARK (ALTERNATIVE 4)

POTENTIAL SIGNIFICANT ADVERSE SOCIOECONOMIC EFFECTS ASSESSMENT

Construction activities associated with the Preferred Alternative would not generate significant adverse socioeconomic effects. Construction activities would not directly displace businesses, nor would they require the temporary closure of businesses within or surrounding the project area, including businesses on routes of access to/from construction sites. Construction activities would, at times, affect pedestrian and vehicular access in the immediate vicinity of construction activities. However, construction activities in the project area are located far enough away from businesses such that access to businesses would not be impeded. Lane and/or sidewalk closures and construction staging areas would not obstruct entrances to any existing businesses, or obstruct major thoroughfares used by customers. Businesses would not be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities.

ECONOMIC BENEFITS DURING CONSTRUCTION

Construction of the Preferred Alternative is estimated to cost approximately \$1.45 billion in 2021 dollars in hard and soft costs.

Employment and Economic Effects

Employment

The direct expenditures for the construction of the Preferred Alternative is estimated at \$1,450.00 million. As a result of the direct expenditures, direct employment from construction is estimated at 5,551 person-years of employment (see **Table 6.1-2**). A person-year is the equivalent of one person working full-time for one year. Assuming a 3.5-year construction schedule for this alternative, the 5,452 person-years estimate equates to 1,586 people working full-time over that 3.5-year period.

When new direct jobs are introduced to an area, those jobs lead to the creation of additional *indirect* and *induced* jobs, as defined in Section D. Based on the IMPLAN model’s economic multipliers for New York City sectors, the construction of the Preferred Alternative would generate an additional 1,043 person-years of indirect employment and 1,540 person-years of induced employment in New York City, bringing the total number of jobs from construction to 8,134 person-years of employment in New York City (see **Table 6.1-2**). In the larger New York State economy, the construction of this alternative would generate an estimated 153 person-years of indirect and induced employment, bringing the total direct and generated jobs from construction to 8,287 person-years of employment.

Table 6.1-2
Economic Benefits from Construction – Preferred Alternative

	Portion in New York City	Total New York City And State
Employment (Person-Years)¹		
Direct (jobs from construction)	5,551	5,551
Indirect (jobs in support industries)	1,043	1,152
Induced (jobs from household spending)	1,540	1,584
Total	8,134	8,287
Employee Compensation (Millions of Constant 2021 dollars)		
Direct (earnings from construction)	\$547.58	\$547.58
Indirect (earnings from support industries)	\$109.60	\$118.49
Induced (earnings from household spending)	\$141.30	\$144.69
Total	\$798.49	\$810.76
Total Economic Output or Demand² (Millions of Constant 2021 dollars)		
Direct (output from construction)	\$1,450.00	\$1,450.00
Indirect (output from support industries)	\$292.06	\$327.53
Induced (output from household spending)	\$404.85	\$417.06
Total	\$2,146.83	\$2,194.51
Notes:		
¹ A person-year is the equivalent of one person working full-time for a year.		
² The total effect on the local economy, including the sum of the cost of goods and services used to produce a product and the associated payments to workers, taxes, and profits.		
Sources:		
The characteristics and construction cost of the development; the 2017 IMPLAN economic modeling system.		
* This table has been revised for the FEIS.		

Employee Compensation

The direct employee compensation during construction is estimated at \$547.58 million (see **Table 6.1-2**). Total direct, indirect, and induced employee compensation resulting in New York City from the construction is estimated at \$798.49 million. In the broader New York State economy, total direct, indirect, and induced employee compensation from the construction is estimated at \$810.76 million.

Total Effects on the Local Community

Based on the IMPLAN models for New York City and State, the total economic activity that would result from construction is estimated at \$2,194.51 million in New York State, of which \$2,146.83 million would occur in New York City.

OTHER ALTERNATIVE: FLOOD PROTECTION SYSTEM ON THE WEST SIDE OF EAST RIVER PARK – BASELINE (ALTERNATIVE 2)

POTENTIAL SIGNIFICANT ADVERSE SOCIOECONOMIC EFFECTS ASSESSMENT

As with the Preferred Alternative, construction activities associated with Alternative 2 would not generate significant adverse socioeconomic effects. Construction activities would not directly displace businesses, nor would they require the temporary closure of businesses within or surrounding the project area, including businesses on routes of access to/from construction sites.

ECONOMIC BENEFITS DURING CONSTRUCTION

Construction of Alternative 2 is estimated to cost approximately \$445 million in 2021 dollars in hard and soft costs. These costs were distributed amongst IMPLAN Sectors 58 (Construction of other new nonresidential structures), 62 (Maintenance and repair construction of nonresidential structures), 64 (Maintenance and repair construction of highways, streets, bridges, and tunnels), 447 (Legal services), and 449 (Architectural, engineering, and related services).

Employment and Economic Effects

Employment

The direct expenditures for the construction of this alternative are estimated at \$445 million. As a result of the direct expenditures, direct employment from construction is estimated at 1,020 person-years of employment (see **Table 6.1-3**). A person-year is the equivalent of one person working full-time for one year. Assuming a five-year construction schedule for this alternative, the 1,020 person-years estimate equates to 204 people working full-time over that five-year period.

When new direct jobs are introduced to an area, those jobs lead to the creation of additional *indirect* and *induced* jobs, as defined in the Methodology section above. Based on the IMPLAN model's economic multipliers for New York City sectors, the construction of Alternative 2 would generate an additional 211 person-years of indirect employment and 297 person-years of induced employment in New York City, bringing the total number of jobs from construction to 1,529 person-years of employment (see **Table 6.1-3**). In the larger New York State economy, the construction of this alternative would generate an estimated 28 person-years of indirect and induced employment, bringing the total direct and generated jobs from construction to 1,557 person-years of employment.

**Table 6.1-3
Economic Benefits from Construction – Alternative 2**

	Portion in New York City	Total New York City And State
Employment (Person-Years)¹		
Direct (jobs from construction)	1,020	1,020
Indirect (jobs in support industries)	211	231
Induced (jobs from household spending)	297	306
Total	1,529	1,557
Employee Compensation (Millions of Constant 2021 dollars)		
Direct (earnings from construction)	\$105.03	\$105.03
Indirect (earnings from support industries)	\$22.21	\$23.85
Induced (earnings from household spending)	\$27.29	\$27.93
Total	\$154.53	\$156.80
Total Economic Output or Demand² (Millions of Constant 2021 dollars)		
Direct (output from construction)	\$275.24	\$275.24
Indirect (output from support industries)	\$58.20	\$64.75
Induced (output from household spending)	\$78.19	\$80.48
Total	\$411.63	\$420.48
Notes:		
¹ A person-year is the equivalent of one person working full-time for a year.		
² The total effect on the local economy, including the sum of the cost of goods and services used to produce a product and the associated payments to workers, taxes, and profits.		
Sources:		
The characteristics and construction cost of the development; the 2017 IMPLAN economic modeling system.		

Employee Compensation

The direct employee compensation during construction is estimated at \$105.03 million (see **Table 6.1-3**). Total direct, indirect, and induced employee compensation resulting in New York City from the construction is estimated at \$154.53 million. In the broader New York State economy, total direct, indirect, and induced employee compensation from the construction is estimated at \$156.80 million.

Total Effects on the Local Community

Based on the IMPLAN models for New York City and State, the total economic activity that would result from construction is estimated at \$420.48 million in New York State, of which \$411.63 million would occur in New York City.

CONSTRUCTION ACCESS AGREEMENTS

The construction access agreements for Alternative 2 would be the same as those identified for the Preferred Alternative.

OTHER ALTERNATIVE: FLOOD PROTECTION SYSTEM ON THE WEST SIDE OF EAST RIVER PARK – ENHANCED PARK AND ACCESS (ALTERNATIVE 3)

POTENTIAL SIGNIFICANT ADVERSE SOCIOECONOMIC EFFECTS ASSESSMENT

As with the Preferred Alternative, construction activities associated with Alternative 3 would not generate significant adverse socioeconomic effects. Similar to the Preferred Alternative, construction activities would not directly displace businesses, nor would they require the

temporary closure of businesses within or surrounding the project area, including businesses on routes of access to/from construction sites.

ECONOMIC BENEFITS DURING CONSTRUCTION

Construction of Alternative 3 is estimated to cost approximately \$1.2 billion in 2021 dollars including hard and soft costs (split into the same IMPLAN sectors as for the Preferred Alternative). These costs were distributed amongst IMPLAN Sectors 58 (Construction of other new nonresidential structures), 62 (Maintenance and repair construction of nonresidential structures), 64 (Maintenance and repair construction of highways, streets, bridges, and tunnels), 469 (Landscape and horticultural services), 447 (Legal services), and 449 (Architectural, engineering, and related services).

Employment and Economic Effects

Employment

The direct expenditures for the construction of this alternative are estimated at \$1.2 billion. As a result of the direct expenditures, direct employment from construction is estimated at 4,370 person-years of employment (see **Table 6.1-4**). A person-year is the equivalent of one person working full-time for one year. Assuming a five-year construction schedule for this alternative, the 4,370 person-years estimate equates to 874 people working full-time over that five-year period.

Based on the IMPLAN model's economic multipliers for New York City sectors, the construction of Alternative 3 would generate an additional 955 person-years of indirect employment and 1,327 person-years of induced employment in New York City, bringing the total number of jobs from construction to 6,652 person-years of employment (see **Table 6.1-4**). In the larger New York State economy, the construction of this alternative would generate an estimated 117 person-years of indirect and induced employment, bringing the total direct and generated jobs from construction to 6,769 person-years of employment.

**Table 6.1-4
Economic Benefits from Construction – Alternative 3**

	Portion in New York City	Total New York City and State
Employment (Person-Years)¹		
Direct (jobs from construction)	4,370	4,370
Indirect (jobs in support industries)	955	1,037
Induced (jobs from household spending)	1,327	1,361
Total	6,652	6,769
Employee Compensation (Millions of Constant 2021 dollars)		
Direct (earnings from construction)	\$461.96	\$461.96
Indirect (earnings from support industries)	\$102.88	\$109.54
Induced (earnings from household spending)	\$121.72	\$124.41
Total	\$686.56	\$695.90
Total Economic Output or Demand² (Millions of Constant 2021 dollars)		
Direct (output from construction)	\$1,200.00	\$1,200.00
Indirect (output from support industries)	\$266.05	\$292.86
Induced (output from household spending)	\$348.75	\$358.47
Total	\$1,814.81	\$1,851.33
Notes:		
¹ A person-year is the equivalent of one person working full-time for a year.		
² The total effect on the local economy, including the sum of the cost of goods and services used to produce a product and the associated payments to workers, taxes, and profits.		
Sources:		
The characteristics and construction cost of the development; the 2017 IMPLAN economic modeling system.		

Employee Compensation

The direct employee compensation during construction is estimated at \$461.96 million (see **Table 6.1-4**). Total direct, indirect, and induced employee compensation resulting in New York City from the construction is estimated at \$686.56 million. In the broader New York State economy, total direct, indirect, and induced employee compensation from the construction is estimated at \$695.90 million.

Total Effects on the Local Community

Based on the IMPLAN models for New York City and State, the total economic activity that would result from construction is estimated at \$1,851.33 million in New York State, of which \$1,814.81 million would occur in New York City.

CONSTRUCTION ACCESS AGREEMENTS

The construction access agreements for Alternative 3 would be the same as those identified for the Preferred Alternative.

OTHER ALTERNATIVE: FLOOD PROTECTION SYSTEM EAST OF FDR DRIVE (ALTERNATIVE 5)

POTENTIAL SIGNIFICANT ADVERSE SOCIOECONOMIC EFFECTS ASSESSMENT

As with the Preferred Alternative, construction activities associated with Alternative 5 would not generate significant adverse socioeconomic effects. Construction activities would not directly displace businesses, nor would they require the temporary closure of businesses within or surrounding the project area, including businesses on routes of access to/from construction sites.

East Side Coastal Resiliency Project EIS

Although this alternative would require more extensive and frequent closures of the FDR Drive, those closures would not be expected to adversely affect local business activities; customers who rely on the FDR Drive to reach area businesses would still have access to those businesses via alternative routes. Study area businesses would not be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities.

ECONOMIC BENEFITS DURING CONSTRUCTION

The economic benefits that would result from construction of Alternative 5 would be similar to that from the Preferred Alternative.

CONSTRUCTION ACCESS AGREEMENTS

The construction access agreements for Alternative 5 would be the same as those identified for the Preferred Alternative. *