

A. INTRODUCTION

This chapter describes existing land use, zoning, and public policies applicable to the proposed project and evaluates potential significant adverse effects that may result from implementation of the proposed flood protection system. Potential significant adverse effects to land use as a result of implementing the flood protection system are also evaluated. Potential land use issues include known or likely changes in current land uses within the study area, as well as the proposed project's potential effect on existing and future land use patterns. Potential zoning and public policy issues include the compatibility of the proposed project with existing zoning and consistency with existing applicable public policies.

PROJECT AREA ONE

Project Area One extends from Montgomery Street on the south to the north end of John V. Lindsay East River Park (East River Park) at about East 13th Street. Project Area One consists primarily of the Franklin Delano Roosevelt East River Drive (the FDR Drive) right-of-way, a portion of Pier 42 and Corlears Hook Park as well as East River Park. The majority of Project Area One is within East River Park and includes four existing pedestrian bridges across the FDR Drive to East River Park (Corlears Hook, Delancey Street, East 6th Street, and East 10th Street Bridges) and the East Houston Street overpass. Project Area One is located within Manhattan Community District 3, and borders portions of the Lower East Side and East Village neighborhoods.

PROJECT AREA TWO

Project Area Two extends north and east from Project Area One, from East 13th Street to East 25th Street. In addition to the FDR Drive right-of-way, Project Area Two includes the Consolidated Edison Company of New York (Con Edison) East 13th Street Substation and the East River Generating Station, Murphy Brothers Playground, Stuyvesant Cove Park, Asser Levy Recreational Center and Playground, the VA Medical Center, and in-street segments along East 20th Street, East 25th Street, and along and under the FDR Drive. Project Area Two is in Manhattan Community Districts 3 and 6, and borders portions of the East Village, Stuyvesant Town, Peter Cooper Village, and Kips Bay neighborhoods.

LAND USE, ZONING, AND PUBLIC POLICY STUDY AREA

The land use, zoning, and public policy study area (the "study area") encompasses the area of direct effect in Project Areas One and Two as well as the census tracts within the larger area associated with the inland extent of the Special Flood Hazard Area (i.e., the "protected area"). These census tracts include 2.02, 10.01, 10.02, 12, 20, 22.01, 22.02, 24, 26.01, 26.02, 28, 32, 34, 44, 60, 62, and 64.

In total, the study area covers approximately 739 acres and is located along approximately 3.06 miles of the southeastern Manhattan waterfront between Montgomery Street and East 34th Street

with areas extending inland (see **Figure 5.1-1**). South of East Houston Street, the study area extends inland along East Broadway Street, Ridge Street, and Clinton Street; north of East Houston Street, the study area extends further inland to Avenue B, First Avenue, and Third Avenue. The study area includes portions of Manhattan Community Districts 3 and 6, and the neighborhoods of the Lower East Side, East Village, Alphabet City, Stuyvesant Town, Peter Cooper Village, Stuyvesant Square, Gramercy Park, and Kips Bay. Neighborhoods in Manhattan are in a continuous state of growth and change, and boundaries of these neighborhoods are not clearly defined. However, a general discussion of the land uses within the neighborhoods is provided below based on historic and common delineations, reviews of community plans, spatial data, and the major traffic thoroughfares that help to define the edges of the neighborhoods.

B. PRINCIPAL CONCLUSIONS

Principal conclusions for each of the alternatives evaluated are summarized below. Additional details on these alternatives are provided in Chapter 2.0, “Project Alternatives.”

NO ACTION ALTERNATIVE (ALTERNATIVE 1)

The No Action Alternative is not anticipated to result in significant adverse effects to any existing or planned land use, zoning, or public policies within the study area. Projects proposed within the study area would continue as planned (see **Appendix A1**). However, the No Action Alternative would not meet the proposed project goal of providing comprehensive coastal flood protection for the protected area. During a coastal storm event similar to the design storm, the protected area could experience effects similar to Hurricane Sandy. Targeted resiliency measures may reduce the effects of storms in certain locations but would not provide protection for the larger protected area.

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

The Preferred Alternative proposes to move the line of flood protection further into East River Park, thereby protecting both the community and the park from design storm events, as well as increased tidal inundation resulting from sea level rise. The Preferred Alternative would raise the majority of East River Park. This plan would limit the length of wall between the community and the waterfront to provide for enhanced neighborhood connectivity and integration. A shared-use pedestrian/bicyclist flyover bridge linking East River Park and Captain Brown Walk would be built cantilevered over the northbound FDR Drive to address the narrowed pathway (pinch point) near the Con Edison facility between East 13th Street and East 15th Street, substantially improving the City’s greenway network and north-south connectivity in the project area.

This alternative would not result in significant adverse effects to any existing or planned land use, zoning, or public policies within the study area. Land use actions resulting from the Preferred Alternative include acquisition of real property, amendments to the City Map for changes related to existing and proposed pedestrian bridges, and a zoning text amendment; however, these actions would not result in any adverse effects on land uses and would be consistent with zoning and public policies, including the City’s Waterfront Revitalization Program (WRP). Since the Preferred Alternative provides resiliency and protection for East River Park against design storm events and periodic inundation from projected sea level rise coupled with the enhanced public access, this alternative would ensure that East River Park provides improved public access, operations, and functionality, during pre- and post-storm periods compared to the No Action Alternative.



-  Project Area One
-  Project Area Two
-  100-year Flood Hazard Area with 90th Percentile 2050s Sea Level Rise

-  Census Tracts
-  Land Use, Zoning & Public Policy Study Area

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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 FDR Drive (Alternative 5) would similarly be consistent with existing and planned land use and zoning, although Alternative 2 would require fewer land use actions than the Preferred Alternative (i.e., City Map change would not be required for Alternative 2). The alternatives would vary in the degree to which they advanced public policies pertaining to improving open spaces and access to open spaces as well as the incorporation of resiliency features, with the Preferred Alternative being the superior alternative for creating a resilient park.

C. REGULATORY CONTEXT

The proposed project is in the Borough of Manhattan in New York City. Land use and zoning within the study area is governed by the City of New York through the New York City Zoning Resolution. Land use refers to the activity that occurs on land and within the structures that occupy it. Uses may include residential, community facility, retail and service, office, industrial, heavy automotive, vacant land, parks, public facilities, institutions, and utilities. New York City's Zoning Resolution controls the use, density, and bulk of development within the City. The Zoning Resolution is divided in two parts: zoning text and zoning maps. The zoning text establishes zoning districts and sets forth the regulations governing land use and development and zoning maps show the locations of the zoning districts.

The proposed project is subject to Federal, State, City, and other local plans and policies. Per the 2014 *City Environmental Quality Review (CEQR) Technical Manual* guidelines, public policies are officially adopted and promulgated and prescribe intended uses or activities applicable to an area or particular site(s) in the City. The consistency of the proposed project with such plans and policies is examined below in Section F, “Environmental Effects.”

FEDERAL

Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands

The proposed flood protection system is located within the 100-year Federal Emergency Management Agency (FEMA) Special Flood Hazard Area (SFHA) (see **Figure 5.1-2**) and would involve both temporary and permanent adverse effects to tidal wetlands. As such, the proposed project is subject to regulations under Code of Federal Regulations Title 24, §55, Floodplain Management and Protection of Wetlands, which implements Executive Orders 11988 and 11990. This analysis would discuss why the proposed project must be situated within the floodplain and wetlands and provide the full range of effects associated with the proposed project. Further, the analysis requires a discussion of any reasonable alternative to locating the proposed project in a floodplain and wetlands. Compliance with these Executive Orders is demonstrated through the application of the Eight Step Decision Making Process (see **Appendix L**).

NEW YORK STATE

Coastal Zone Management Act

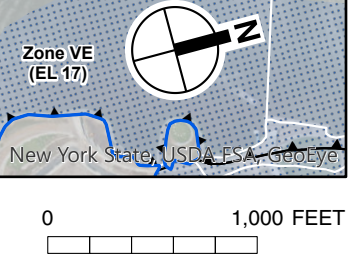
After enactment of the federal Coastal Zone Management Act (CZMA), the New York State Department of State (NYSDOS) developed a Coastal Management Plan (CMP) and enacted implementing legislation (Waterfront Revitalization and Coastal Resources Act) in 1981, with the

3/26/2019

Source: FEMA Preliminary Flood Insurance Rate Maps, 1/30/2015



- Project Area One
- Project Area Two
- Land Use, Zoning & Public Policy Study Area
- 100-Year Flood Hazard Area (1% Annual Chance)
- 500-Year Flood Hazard Area (0.2% Annual Chance)
- Boundary dividing Flood Hazard Area Zones and areas of different Base Flood Elevations
- Limit of Moderate Wave Action (Coastal A Zone)



purpose of achieving a balance between economic development and preservation, thus promoting waterfront revitalization and water-dependent uses and protecting open space, scenic areas, and public access to the shoreline, fish, wildlife, and farmland. The program also aims to minimize significant adverse effects to ecological systems, erosion, and flood hazards. The proposed project would be located within the Coastal Zone as designated by New York State and New York City, and would therefore be subject to City and State coastal management policies.

NEW YORK CITY

Manhattan Waterfront Greenway

The Manhattan Waterfront Greenway is a plan prepared by the New York City Economic Development Corporation (NYCEDC), NYCDOT, and NYC Parks. The objective of the plan is to provide a connected greenway along the waterfront perimeter of the entirety of Manhattan. Benefits of the project include providing improved access to the shore line, integrating larger parks within a connected network, and providing a bike path for recreation and commuting. Five gaps and two areas needing upgrades have been identified and are required to complete the intended 32.5-mile loop. One of these improvements falls within the project area between East 13th and East 15th Streets, where the shared-use path narrows substantially and impedes access.

East River Blueway Plan

The East River Blueway Plan is a community-based waterfront study funded by the NYSDOS Division of Coastal Resources, commissioned by Manhattan Borough President's Office, in collaboration with Manhattan Community Board 3, Manhattan Community Board 6, and the Lower East Side Ecology Center. The East River Blueway Plan established an extensive public outreach program for coastal protection and resiliency approach that incorporated a number of sustainable principles for the East River waterfront, from the Brooklyn Bridge to East 38th Street. The East River Blueway Plan was released in March 2013. The proposed project advances the two primary goals of the plan by creating a more resilient, sustainable waterfront and providing more recreational access to the waterfront.

The Blueway Plan divides the East River waterfront into three sections for the purposes of plan analysis: South Street Waterfront Area, East River Park Waterfront Area, and Stuyvesant Cove/Waterside Plaza Waterfront Area. The study seeks to provide a vision for the East River Waterfront and includes recommendations for new and enhanced public access along the East River including a new public beach and kayak launch beneath the Brooklyn Bridge; the creation of boat launches at Stuyvesant Cove at the ends of East 20th and 23rd Streets; the installation of marshlands and sea walls in especially vulnerable flood zones, and the planting of trees and greenery along the FDR Drive to provide shade and absorb storm water runoff. Plan recommendations also include improved pedestrian connections to the waterfront, creating green corridors along streets that lead to the river, traffic calming at the East Houston Street overpass to increase pedestrian safety, capturing storm water at the ballfields in East River Park, elevating the East River Greenway to create a flood barrier, and creating a Blueway Crossing at 14th Street that would improve bike and pedestrian traffic flow while adding flood protection.

The East River Blueway Plan includes the following concepts and recommendations for the East River Park Waterfront Area:

- Connecting Two Parks—Corlears Hook Park and East River Park;
- Connect the East River to the growing neighborhood at Delancey Street;
- Reduce pedestrian-car conflicts with traffic calming on the East Houston Street Overpass;

- Provide new vantage points and functionality for the East 6th Street Bridge;
- Enhance and extend East 10th Street Bridge to the water;
- Capture stormwater in recreation field detention basins;
- Develop “Green Fingers” as guides to waterfront access points;
- Elevate East River Park Greenway for infrastructure and mode separation; and
- Create the Blueway Crossing to eliminate esplanade bottlenecks and protect critical infrastructure.

The Plan’s concepts and recommendations for the Stuyvesant Cove Park and Waterside Plaza Waterfront Area include the following:

- Create areas for both human-powered and historic vessels in Stuyvesant Cove;
- Enlarge marina to create space for public access to boating facilities;
- Support safe swimming and boating;
- Restoring intertidal salt marsh and creating complete streets to help manage stormwater;
- Create a continuous waterfront esplanade at the marina connecting to Waterside Plaza’s esplanade; and
- New and improved at-grade pedestrian crossings beneath the FDR Drive viaduct.

East River Esplanade Plan

In 2007, the East River Esplanade Plan was adopted by the Lower Manhattan Development Corporation and approved under ULURP for the site selection and disposition of the pavilion component of the Plan. The pavilion component of the plan would allow commercial activities to occur along the waterfront under the FDR Drive. The plan involves the revitalization of the waterfront from Maiden Lane for two blocks to Wall Street, and then north along City-owned land along the water’s edge to East River Park north of the Manhattan Bridge. The plan would transform the Lower Manhattan and Lower East Side waterfronts into a pedestrian-friendly public open space destination. The Maiden Lane-Wall Street phases were completed in 2014 and the esplanade component has yet to be funded. The southern portion of Project Area One overlaps with a northern portion of the East River Park Esplanade Plan. The East River Esplanade Plan identifies Pier 42 as a crucial link between the esplanade and East River Park. Specifically, the plan calls for the creation of a wider and safer connection to East River Park. A new habitat-friendly pier structure and a new public waterfront amenity would be created in this location. Additionally, the creation of a cove at Montgomery Street would provide an additional waterfront destination where boats could be moored.

PlaNYC/OneNYC

One New York: The Plan for a Strong and Just City (OneNYC) is the City’s comprehensive strategy and policy directive to address long-term challenges related to climate change, an evolving economy, and aging infrastructure. This plan built on the *PlaNYC: A Greener, Greater New York* and *PlaNYC: A Stronger, More Resilient New York*, released in 2007 and 2013, respectively. Specific visions outlined in OneNYC (Vision 3: Our Sustainable City and Vision 4: Our Resilient City) are overseen and implemented by the Mayor’s Office of Sustainability and the Mayor’s Office of Recovery and Resiliency. As a project of City-wide significance, the proposed project will be assessed for consistency with City policies related to growth, equity, sustainability

East Side Coastal Resiliency Project EIS

and resiliency measures as outlined in OneNYC. In particular, the goal outlined as “Vision 4: Our Resilient City with Coastal Defense” is directly correlated to the proposed project.

“Vision 4: Our Resilient City with Coastal Defense,” within OneNYC, describes an integrated flood protection system for the east side of Manhattan and in Lower Manhattan south of Montgomery Street to the northern end of Battery Park City. Within the “Vision 4: Our Resilient City with Coastal Defense” goal, there are three initiatives:

- Initiative 1, Strengthen the city’s coastal defenses: Complete the City's \$3.7 billion coastal protection plan, a program of infrastructure investments, natural areas restoration, and design and governance upgrades of which nearly half is funded.
- Initiative 2, Attract new funds for vital coastal protection projects: Continue to identify and secure new sources of funds for infrastructure to reduce coastal flooding risk.
- Initiative 3, Adopt policies to support coastal protection: Align and adopt policies to support the right investments in coastal protection, and ensure those investments are operated and maintained effectively.

The proposed project specifically addresses a portion of this policy, since Project Areas One and Two create flood protection for the east side of Manhattan from Montgomery Street to East 25th Street.

Uniform Land Use Review Procedure (ULURP)

The New York City Charter identifies actions that are subject to review by the City Planning Commission through ULURP, such as changes to the City Map or site selection for capital projects. ULURP is a standardized procedure whereby certain applications affecting the land use of the city are publicly reviewed. The Charter establishes a public review period for these applications. The proposed project triggers three land use actions, including acquisition of real property by the City in the form of easements, amendments to the City Map, and a zoning text amendment to acknowledge compliance of the proposed design with the City’s waterfront zoning regulations. The amendments to the City Map would be needed for changes related to existing and proposed pedestrian bridges.

Vision 2020: New York City Comprehensive Waterfront Plan

The Comprehensive Waterfront Plan, originally issued by the New York City Department of City Planning (DCP) in 1992, presented a long-range vision for the City’s waterfront. In 2011, the Comprehensive Waterfront Plan was updated and issued under the title Vision 2020. Vision 2020 was prepared in partnership with State and federal agencies, including NYSDEC, the Port Authority of New York and New Jersey and the U.S. Army Corps of Engineers. Specific strategies included improvements for each of the City’s 22 stretches of waterfront, inlets and bays, as well as active port areas, residential neighborhoods, wetlands and public open space. As a project that is located directly on City waterfront, the proposed project is analyzed for consistency with the goals of this plan.

New York City Local Waterfront Revitalization Program

The proposed project would be located within the Coastal Zone as designated by New York State and New York City, and would therefore be subject to City and State coastal management policies. Pursuant to federal legislation, New York State and the City have adopted policies aimed at protecting resources in the coastal zone. New York City’s WRP is the City's primary tool for guiding the development of the coastal zone and waterfront. The WRP contains 10 major policies,

each with several objectives focused on improving public access to the waterfront; reducing damage from flooding and other water-related disasters; protecting water quality, sensitive habitats, such as wetlands, and the aquatic ecosystem; reusing abandoned waterfront structures; and promoting development with appropriate land uses. When a proposed project is located within the coastal zone and requires federal, state or local discretionary action, a determination of the project's consistency with the policies of the WRP must be made before the project can proceed. Since the waterfront portions of the area affected by the proposed project are within the City's coastal zone, a detailed assessment of the project's consistency with New York City's WRP policy is covered in Section F, "Environmental Effects," below as well as in **Appendix D**.

East Village–Lower East Side–Two Bridges Resilient Neighborhoods Initiatives

As part of the Resilient Neighborhoods initiative, the Department of City Planning is working with the communities of the East Village, Lower East Side, and Two Bridges to collaboratively identify changes to zoning and land use to address specific local conditions not addressed by the Flood Resilience Zoning Text Amendment, and other citywide resiliency efforts. These neighborhoods were selected in part because they were among the City's hardest-hit neighborhoods during Hurricane Sandy, but also because of the unique concentration of multi-family affordable housing developments. DCP is currently working with Community Board 3 to identify local strategies to facilitate resiliency in the neighborhood. As discussed in Chapter 2.0, "Project Alternatives," the proposed project is a result of a competition to protect Lower Manhattan from coastal surge and would therefore further the goals of the East Village–Lower East Side–Two Bridges Resilient Neighborhoods Initiatives.

LOCAL

The proposed project is located within areas of Community Boards 3 and 6. Section 197-a of the City Charter authorizes Community Boards, Borough Boards or Borough President, the Mayor, or the City Planning Commission to sponsor a plan for the development, growth, and improvement of the city, its boroughs and communities. There are several community 197-a plans providing policy guidance in Project Areas One and Two. These plans are summarized below.

Stuyvesant Cove 197-a Plan

The Stuyvesant Cove 197-a Plan was sponsored by Manhattan Community Board 6 in 1995, modified by the City Planning Commission in 1997, and adopted by the City Council on March 13, 1997. The plan provided an original vision for Stuyvesant Cove based on seven planning principles to guide the planning, design, and creation of public open space and compatible revenue-generating uses along the East River waterfront between East 18th and East 23rd Streets. These planning principles were intended to support development of easily accessible public parks and open space at the waterfront; encourage water dependent uses that are compatible with the open space goals of Community Board 6; and align DCP, Borough President, and Community Board goals and vision for the waterfront. The plan also identified 19 points that outlined the community's vision for waterfront open space, specifically the 1.9-acre area identified for Stuyvesant Cove Park, including operation of a park with no large-scale active uses; creation of a waterfront promenade with direct links to existing promenades at the north and south ends of the site; and development of focal points at critical entry points to the waterfront park.

Community Board 6 197-a Plan for Eastern Section of Community District 6

The 2007 Community Board 6 197-a Plan for Eastern Section of Community District 6 was prepared to address the ongoing changes and growth in the eastern portion of Community District

6. The 197-a Plan was officially approved by the New York City Council in March 2008. This area includes an extensively developed and diverse area that includes Stuyvesant Town, East River Park, Peter Cooper Village, the FDR Drive, Consolidated Edison, and the East River, which are all located within the land use, zoning, and public policy study area. Overall goals of the plan include (but are not limited to) increasing the amount of useful open space, improving access to waterfront, completing the East River Esplanade, and implementing land use policies consistent with historic trends in the area. Waterfront related recommendations identified in this plan that are relevant to this project include the following: accommodate pedestrians, joggers, cyclists, and skaters on new esplanades and greenways; encourage new pedestrian bridges and other means to provide improved public access to the waterfront, particularly at East 16th, 27th, 29th, 30th, 40th, 41st, 42nd, 48th, and 54th Streets; preserve and create waterfront views and facilitate public access to the waterfront using appropriate zoning, land use and mapping controls; and improve urban design and streetscapes.

Pier 42 Master Plan: A People's Plan for the East River Waterfront

The Pier 42 Master Plan was approved by a Community Board 3 sub-committee and the New York City Public Design Commission (PDC) in January 2014. The Master Plan was developed between 2008–2009 when the Lower East Side Waterfront Alliance engaged Lower East Side and Chinatown community members to develop a community vision for the East River waterfront and Pier 42. The Pier 42 project will transform a former industrial maritime site on the East River into waterfront parkland. The project will be implemented in phases. Phase 1A consists of the demolition of a pier shed and other associated demolition work activities. Phase 1B consists of site remediation and construction of an upland park, including lawns, trees, landscaping, a picnic knoll, a playground, and a comfort station. Phases 1A and 1B are anticipated to be complete by 2021 and will provide a new open space amenity to the community while the City seeks funding to implement the full master plan.

D. METHODOLOGY

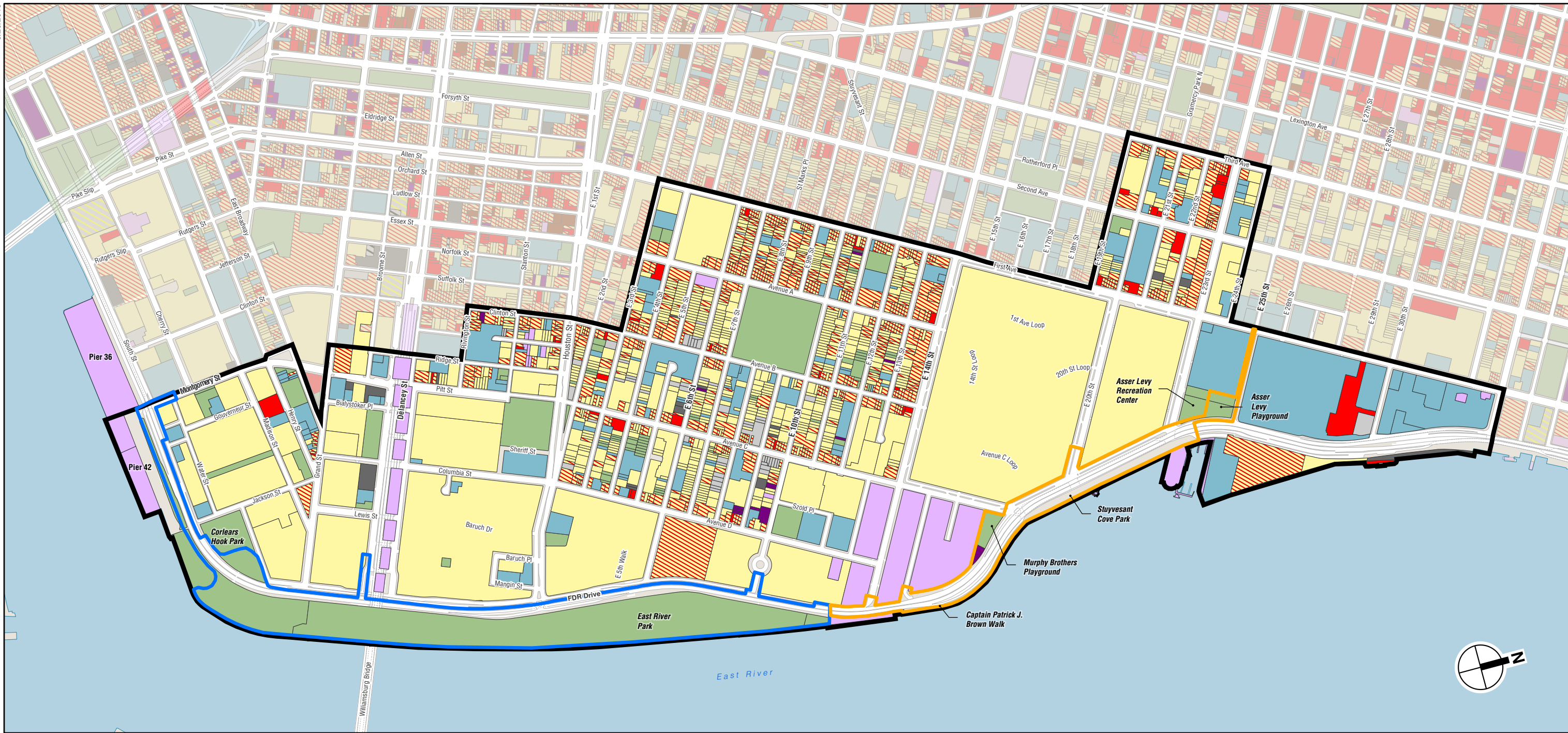
As discussed above, the study area for this analysis is defined by the area of direct effect in Project Areas One and Two as well as the boundary of the census tracts associated with the inland extent of the protected area.

The primary source of land use information is Geographic Information System (GIS) parcel data obtained from the DCP. Field surveys and aerial photography were used to verify land uses within the study area. Zoning and public policy information was obtained from New York City and New York State. New York City's Zoning Resolution, for example, controls the use, density, and bulk of development. Alternatives were discussed in terms of the non-storm and storm operational and maintenance phases of the flood protection system and their compatibility with land use, zoning, and public policies in effect for the area were assessed.

E. AFFECTED ENVIRONMENT

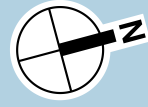
LAND USE

Existing land uses were identified and characterized based on field visits, New York City land use data, aerial photographs, and applicable planning documents. Existing land uses are described below for study area. **Figure 5.1-3** shows existing land uses in the study area.



- | | | | |
|---|-----------------------------------|------------------------------------|----------------------------|
| Project Area One | Commercial and Office Buildings | Parking Facilities | Transportation and Utility |
| Project Area Two | Hotels | Public Facilities and Institutions | Under Construction |
| Land Use, Zoning & Public Policy Study Area | Industrial and Manufacturing | Residential | Vacant Building |
| | Open Space and Outdoor Recreation | Residential with Commercial Below | Vacant Land |

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PROJECT AREA ONE

Project Area One is approximately 61 acres and consists primarily of the FDR Drive right-of-way (Montgomery Street to East 13th Street) and East River Park. Additionally, the Montgomery Street (South Street to Water Street) right-of-way is located within Project Area One. Project Area One is bordered to the west by large residential developments including New York City Housing Authority (NYCHA) and private housing. East River Park, which is operated by NYC Parks, is approximately 45.88 acres and bounded by FDR Drive to the west and the East River to the east, Jackson Street to the south and East 13th Street to the north. East River Park contains a variety of passive and active recreation spaces, including a waterfront esplanade and athletic fields. East River Park is accessible via Pier 42 to the south, several bridges that span the FDR Drive along the western side of the park, and Captain Patrick J. Brown Walk to the north. In addition, the Lower East Side Ecology Center utilizes a former fireboat house near the Williamsburg Bridge for programmed activities (e.g., planned arts activities accessible by the public) and has a composting center at the southern end of the park. East River Park also contains an amphitheater used for various events (e.g., City Parks Foundation SummerStage) near the bridge leading to Corlears Hook Park. Refer to Chapter 5.3, “Open Space,” for additional information on East River Park. EDC has implemented a Citywide Ferry Service initiative that includes 21 landings, with 10 new ferry landings, upgrades to five existing landings, and the use of six existing landings. Two of the new ferry landing sites are located within the project area, including one at Corlears Hook in Project Area One. The new landings feature barges (35 feet by 90 feet) that are connected to the shore by a gangway. The barges accommodate passenger queuing and shelter, a ticket machine and information kiosk, lighting, and static and/or digital signage.

PROJECT AREA TWO

Project Area Two is approximately 21 acres and extends north and east from Project Area One, from East 13th Street to East 25th Street. In addition to the FDR Drive right-of-way, Project Area Two also includes a portion of East 25th Street from the FDR Drive to First Avenue. At the southernmost point of Project Area Two, the Captain Patrick J. Brown Walk extends for 0.5 miles, serving as a shared-use path for both pedestrians and bicyclists. At this southernmost point, the walkway is adjacent to the Con Edison Head House, which is located east of the walkway on the river’s edge. The Con Edison Head House is used for fuel and oil deliveries for the Con Edison East River Generating Facility located on the west side of the FDR Drive between East 13th Street and approximately East 17th Street. At the northern end of the Captain Patrick J. Brown Walk, the shared-use path continues into Stuyvesant Cove Park, which is under the jurisdiction of the New York City Department of Small Business Services (SBS). Located along 0.3 miles of waterfront with approximately 1.9 acres, Stuyvesant Cove Park provides passive recreation, gardens, and programming event space. A new ferry landing is currently operational within Stuyvesant Cove Park as part of EDC’s Citywide Ferry Service. At the northernmost portion of the park, programming event space is located adjacent to a building maintained by Solar One Initiatives, a non-profit organization that promotes community solar initiatives, innovative programs in public and private schools, and other efforts. Directly north of the Solar One Environmental Education Center is a BP Gas and Service Station. The BP Gas and Service Station is accessible via East 23rd Street or the FDR Drive service ramp. North of East 23rd Street between East 23rd and East 25th Streets is the Asser Levy Recreation Center and Playground. Between the FDR Drive and First Avenue, East 25th Street is lined on the north by City University of New York (CUNY) buildings and on the south by the Veterans Affairs New York Harbor Health Care Center (VA Medical Center).

STUDY AREA

Following is a description of the land use in the neighborhoods located within the study area. Many residential buildings, community facilities, and public utilities in the study area were affected by Hurricane Sandy, which had significant economic, fiscal, and social effects on the study area neighborhoods. Additional information regarding these effects can be found in Chapter 2.0, “Project Alternatives,” and within the technical analysis chapters of this DEIS.

Lower East Side

A portion of the Lower East Side neighborhood is in the southern section of the study area between Montgomery Street and East Houston Street. As shown in **Figure 5.1-3**, land uses within the study area are primarily higher-density residential, consisting of multi-family (elevator and walk-up) and mixed-use residential buildings (i.e., with commercial uses on the ground floor). Additionally, throughout the Lower East Side there are public facilities and institutions, religious facilities, open spaces, parking, and commercial space. Multi-family elevator buildings include NYCHA’s Vladeck Houses and the Baruch Charney Vladeck II complex located along Madison and Water Streets, and Jackson and Gouverneur Streets. The Vladeck Houses are a 13-acre housing complex consisting of 20 six-story buildings with approximately 1,500 apartment units. The Baruch Charney Vladeck II Houses are a two-acre complex with four six-story buildings containing approximately 250 apartment units. The Bernard Baruch Houses are bound by the FDR Drive, Columbia Street, East Houston Street, and Delancey Street. The Baruch Houses are located on 27 acres and contain 17 buildings (ranging between seven and 14 stories) with approximately 2,150 apartment units. The privately owned East River Cooperative Housing campus is located north of the Vladeck Houses between Cherry and Delancey Streets along the FDR Drive. The East River Cooperative Housing campus includes four 20-story apartment buildings located on two lots totaling approximately 11 acres. There are approximately 1,650 apartment units located on the East River Cooperative Housing campus. The East River Cooperative Housing complex includes a one-story commercial development along Grand Street and houses some commercial and institutional facilities within the residential buildings.

Public facilities and institutions in the area include P.S. 137 and the City College Child Development Center located between Henry and Grand Streets; P.S. 110 at Lewis and Delancey Streets; Henry Street Settlement on the northeast corner of Henry and Pitt Streets; P.S. 97 on East Houston Street; New Explorations into Science, Technology, and Math located on Columbia Street; and P.S. 188 and Girls Prep Charter School along East Houston Street on Lillian Wald Drive.

Open space in the Lower East Side includes Sol Lain Playground, Luther Gulick Playground, Corlears Hook Park, and Baruch Playground. Refer to Chapter 5.3, “Open Space,” for additional information on these parks.

Transportation and utility land uses include the Williamsburg Bridge and the Con Edison East River Generating Facility complex. Commercial and office building land uses are on the south corners of Grand and Henry Streets, and the southeast corner of Abraham Kazan and Delancey Streets, south of Williamsburg Bridge.

East Village and Alphabet City

In the center of the study area north of East Houston Street is the East Village neighborhood. The East Village is bordered to the north by Stuyvesant Square and Stuyvesant Town, to the south by the Lower East Side, to the east by the East River Park, and to the west by Greenwich Village.

Within East Village is the Alphabet City neighborhood. Alphabet City is defined by Avenues A, B, C, and D, which run in a north-south direction from East 14th Street to East Houston Street. Residential land uses within the East Village and Alphabet City largely consist of mixed residential and commercial buildings, and multi-family walk-up and elevator buildings. Commercial uses on the ground floor vary greatly and range from bars and restaurants to boutique stores and supermarkets. Except for a few large developments (e.g., NYCHA Lillian Wald Houses and Jacob Riis Houses), residential buildings (mixed-use and multifamily) in these two neighborhoods are typically four- to six-story buildings on small lots. Lillian Wald Houses are located between the FDR Drive and Avenue D, and East 6th and East Houston Streets, and include 18 buildings varying between 11 and 14 stories tall with approximately 1,860 apartment units on 16 acres. The Jacob Riis Complex (comprised of Jacob Riis Houses and Jacob Riis II) is located between East 6th and East 13th Streets, and Avenue D and the FDR Drive. The complex includes a total of 19 buildings, varying between 6 and 14 stories high. Totalling approximately 17 acres, the Jacob Riis Complex has approximately 1,770 apartment units. Other land uses in this neighborhood include industrial and manufacturing, public facilities and institutions, and transportation and utility. Industrial and manufacturing land uses include the Con Edison East River Generating Facility and a New York City Department of Environmental Protection (DEP) building.

The Con Edison East River Complex is located between Avenue C, the FDR Drive, East 13th Street, and the East 20th Street FDR Drive entrance. The complex consists of the East River Generating Facility, which generates steam and electricity, and two substations that send power to area substations and distribution networks in Midtown and Lower Manhattan, south of 39th Street and north of the World Trade Center.

Several community facilities, institutions, and religious facilities are in the East Village and Alphabet City neighborhoods. Schools include P.S. 34 at the corner of East 12th Street and Szold Place; P.S. 15 between Avenues C and D, between East 4th and 5th Streets; and Children's Workshop School and East Village Community School, both located between Avenue B and Avenue C and East 8th and 12th Streets. Additional community facilities and institutions include a Social Security Administration Building, Police Service Area #4, Housing Work Healthcare, and Tompkins Square Library.

Open spaces within the East Village and Alphabet City neighborhoods consist of three NYC Parks-managed parks and many lots that are part of the NYC Parks GreenThumb Program. GreenThumb was initiated in the 1970s to create opportunities for volunteer gardens and community spaces on vacant lots. The GreenThumb program supports over 600 community gardens across the City that are managed by neighborhood residents. NYC Parks-managed parks in the East Village and Alphabet City include Dry Dock Playground, Tompkins Square Park, and Murphy Brothers Playground. Refer to Chapter 5.3, "Open Space," for additional information on NYC Parks-managed parks. Community gardens in the GreenThumb program include El Jardin Del Paradiso, Secret Garden, Orchard Alley, Peach Tree Garden, Parque de Tranquilidad, All People's Park, 9th Street Community Garden Park, Firemen's Memorial Garden, Green Oasis, Gilbert's Garden, Campos Garden, Suen Dragon Garden, The Creative Little Garden, 6th Street and Avenue B Community Garden, El Sol Brillante Sr. Garden, El Sol Brillante, Jr., Joseph C. Sauer Park, Children's Garden and Dias Y Flores Garden.

Stuyvesant Town and Peter Cooper Village

Stuyvesant Town and Peter Cooper Village are large private residential developments located from First Avenue to Avenue C, and East 14th to East 23rd Streets. These developments are

bordered by the East River and Avenue C to the east, the Stuyvesant Square and Gramercy Park neighborhoods to the west, East Village and Alphabet City to the south, and Kips Bay to the north. Uses in Stuyvesant Town and Peter Cooper Village are limited to residential housing with a few street-level commercial uses. Stuyvesant Town consists of approximately thirty-six 13-floor apartment buildings with 8,800 apartment units. Peter Cooper Village consists of 21 15-floor apartment buildings with several commercial storefronts on East 20th Street. There are approximately 2,450 apartment units located within Peter Cooper Village.

Gramercy Park

A small portion of the Gramercy Park neighborhood, between First and Third Avenues and East 19th and East 23rd Streets, is located within the study area. Gramercy Park is defined as the neighborhood surrounding Gramercy Park, a small, private park bordered by East 21st Street, East 20th Street, and Gramercy Park East and West (and between Third Avenue and Park Avenue). The Gramercy Park neighborhood is generally defined as bordering Stuyvesant Town-Peter Cooper Village to the east, the Flatiron District to the west, Union Square to the southwest, Stuyvesant Square to the south, Rose Hill to the northwest, and Kips Bay to the northeast. The neighborhood was designated as a historic district by LPC in 1996. Land uses within the Gramercy Park neighborhood are primarily residential (mixed residential and commercial buildings, one- and two-family buildings, and multifamily elevator/walk-ups), along with commercial uses, open space and recreation, parking facilities, and public facilities and institutions. Mixed residential and commercial buildings are concentrated along First Avenue. One- and two-family buildings, and multifamily elevator and walk-up buildings, are generally located on streets between East 14th and East 23rd Streets.

Open spaces within this neighborhood include Augustus St. Gaudens Playground and Peter's Field. Refer to Chapter 5.3, "Open Space," for additional information on these parks. Public facilities, institutions, and religious facilities include several schools and medical facilities. Schools in the Gramercy Park neighborhood include Manhattan Comprehensive Night and Day High School, P.S. 40: The Salk School of Science, and Simon Baruch Junior High School. Medical facilities include Gramercy Surgery Center Beth Israel Medical Center. The Mt. Sinai Beth Israel Medical Center, High School for Health Professions and Human Services serves the role of both a medical facility and a school.

Kips Bay

A portion of the Kips Bay neighborhood is located within the study area. Part of Manhattan Community Board 6, Kips Bay is bordered on the north by Murray Hill; on the west by Madison Square; on the south by the Stuyvesant Square neighborhood and the Peter Cooper Village apartment complex; and on the east by the East River. Land uses within the Kips Bay neighborhood are primarily residential (mixed residential and commercial buildings, one- and two-family buildings, and multi-family elevator/walk-ups), along with commercial and office uses, open space, and public facilities and institutions. Medical and institutional land uses within Kips Bay in the study area include the VA Medical Center located at 423 East 23rd Street, NYU Rory Meyers College of Nursing at 431 First Avenue, Bellevue Hospital Center located at 462 First Avenue, the 30th Street Men's Shelter at 400 East 30th Street, and NYU Langone Medical Center located at 550 First Avenue. Open spaces within the study area include Asser Levy Playground bordered by the FDR Drive, East 23rd Street, the VA Medical Center, and East 25th Street. Commercial uses dependent on the waterfront within the study area include the Marine and Aviation Building, located along the East River adjacent to Project Area Two, and the New York

City Ferry landing at East 34th Street. The Marine and Aviation Building contains a parking garage, a landing base for seaplanes, and berthing spots for pleasure boats.

ZONING

Land other than parks and streets, wharfs, or places are mapped with zoning districts that define the allowable uses and development regulations. Special Districts are often mapped to regulate distinct development policies for any given area. Description of the zoning districts mapped within the study area are summarized below, and **Figure 5.1-4** presents the zoning districts mapped in the study area.

PROJECT AREA ONE

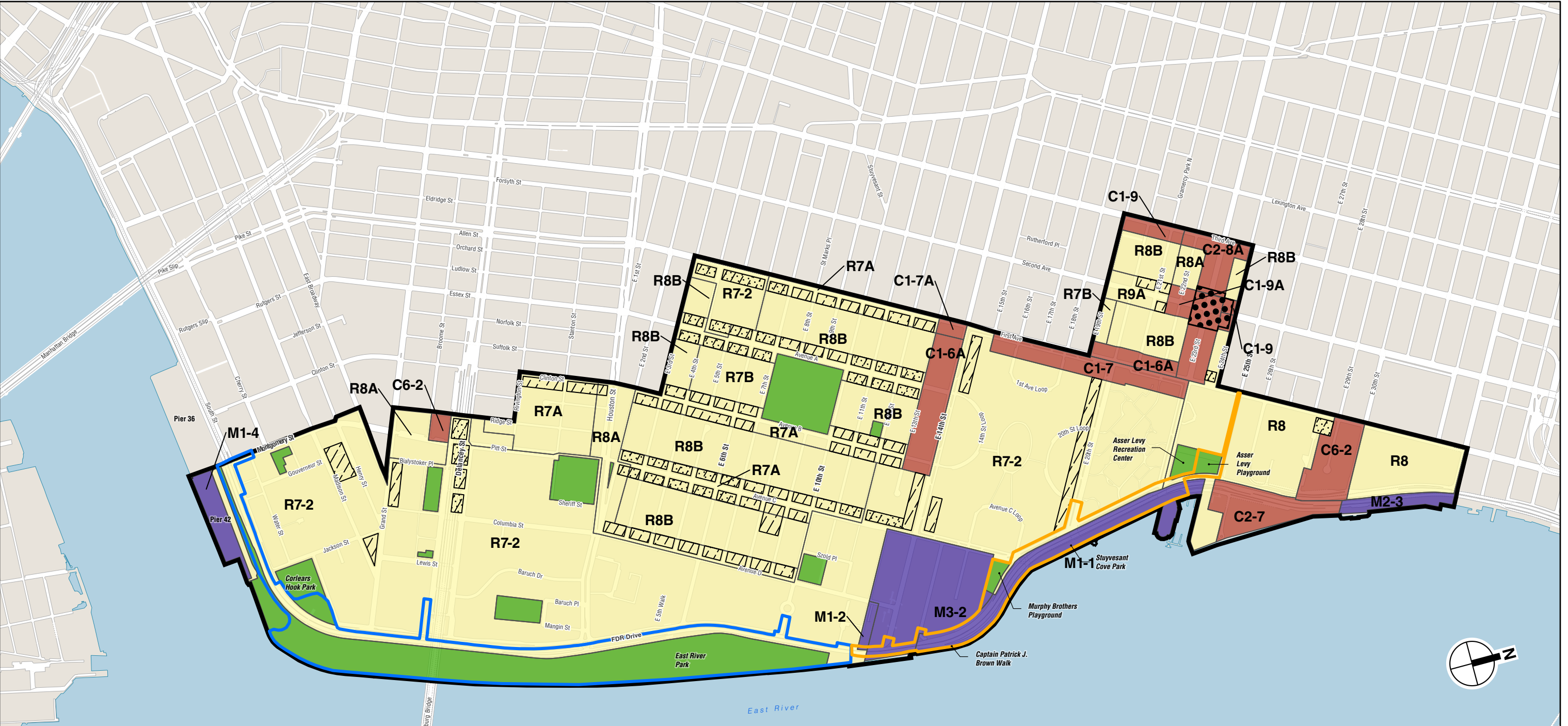
The majority of Project Area One is located within public parkland under the jurisdiction of NYC Parks (i.e., East River Park); zoning regulations are not applicable to park areas. A portion of Project Area One near Pier 42 is located within a light manufacturing district (M1-4). Another portion of Project Area One in the vicinity of Montgomery Street is located within residential (R7-2) and commercial (C6-4) districts. These and other districts in the study area are described below.

PROJECT AREA TWO

Similar to Project Area One, Project Area Two is largely comprised of areas (parks and mapped roadway rights-of-way) with no applicable zoning districts. Stuyvesant Cove Park is zoned M1-1, the VA Medical Center is zoned R8, the NYCHA Jacob Riis Houses are zoned R7-2, and the Con Edison facility is zoned M3-2 (see **Figure 5.1-4**). These zoning designations are described below.

STUDY AREA

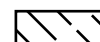
The larger study area is mapped with a range of residential, commercial, park, and manufacturing zoning designations (see **Figure 5.1-4**). **Table 5.1-1** summarizes the various zoning districts controlling land use and development in the study area.

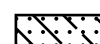



 Project Area One

 Project Area Two


 Land Use, Zoning & Public Policy Study Area


 C 1-5 Commercial Overlay District


 C 2-5 Commercial Overlay District


 Special Transit Land Use District

Zoning Designation

 Commercial

 Manufacturing

 Park

 Residential

0 1,000 FEET




Table 5.1-1

Zoning Designations within the Land Use, Zoning, and Public Policy Study Area

Zoning District	Maximum Floor Area Ratio (FAR) ¹	Use/Zone Type
Residential Districts		
R7-2	0.87–3.44 R; and 4.60 R (with Inclusionary Housing [IH] bonus); 6.5 CF	General medium-density residential district
R7A	4.00 R and 4.60 R (with IH bonus); 4.00 CF	Contextual medium-density residential district
R7B	3.00 R; 3.00 CF	Contextual medium-density residential district
R8	0.94-6.02 R and 7.20 R (with IH bonus); 6.50 CF	General medium-density residential district
R8A	6.02 R and 7.20 R (with IH bonus); 6.50 CF	Contextual medium-density residential district
R8B	4.00 R; 4.00 CF	Contextual medium-density residential district
R9A	7.52 R and 8.50 (with IH bonus); 7.5 CF	Contextual high-density residential district
Commercial Districts		
C1-5 overlay	2.00 C	Local commercial uses serving a residential area
C1-6A	2.00 C; 4.00 CF; 4.00 R; and 4.60 R (with IH bonus)	Contextual local retail and local service district
C1-7	2.00 C; 6.50 CF; 0.94-6.02 R; and 6.02 R (with IH bonus)	Local retail and local service district
C1-7A	2.00 C; 6.50 CF, 6.02 R; and 7.20 R (with IH bonus)	Contextual local retail and local service district
C1-8A	2.00 C; 7.50 CF; 7.52 R; and 8.50 R (with IH bonus)	Contextual local retail and local service district
C1-9	2.00 C; 10.00 CF; 10.00 R and 12.00 R (with IH bonus)	Local retail and local service district
C1-9A	2.00 C; 10.00 CF, 12.00 R (with IH bonus)	Contextual local retail and local service district
C2-5 overlay	2.00 C	Local commercial uses serving a residential area
C2-7	2.00 C; 10.00 CF; 0.99–7.52 R; and 8.00 R (with IH bonus);	Contextual local retail and local service district
C2-8	2.00 C; 10.00 CF; 10.00 R; and 12.00 R (with IH bonus)	Contextual local retail and local service district
C2-8A	2.00 C; 10.00 CF; 10.00 R; and 12.00 R (with IH bonus)	Contextual local retail and local service district
C6-2	6.00 C; 6.50 CF; 0.94–6.02 R; and 7.20 R (with IH bonus)	General central commercial district
C6-4	10.00 C; 10.00 CF; 10.00 R; and 12.00 R (with IH bonus)	General central commercial district
Manufacturing Districts		
M1-1	1.00 M; 1.00 C; 2.40 CF	Light manufacturing district (high performance)
M1-2	2.00 M; 2.00 C; 4.80 CF	Light manufacturing district (high performance)
M1-4	2.00 M; 2.00 C; 6.50 CF	Light manufacturing district (high performance)
M2-3	2.00 M; 2.00 C	Medium manufacturing district (medium performance)
M3-2	2.00 M; 2.00 C	Heavy manufacturing district (low performance)

Notes:

¹ FAR is a measure of density establishing the amount of development allowed in proportion to the base lot area. For example, a lot of 10,000 square feet with a FAR of 1 has an allowable building area of 10,000 square feet. The same lot with an FAR of 10 has an allowable building area of 100,000 square feet.

² Under the Quality Housing option, the maximum FAR is 4.0 on wide streets and 3.44 on narrow streets.

Source: New York City Zoning Resolution 2018

Residential Districts

The majority of the inland portion of the study area is located within medium- and high-density residential zoning districts, particularly non-contextual residential districts (R7-2 and R8), while a portion of the study area north of Delancey Street is located within contextual residential districts (R7A, R7B, R8A, R8B, and R9A). In all residential districts, uses are limited to residential and community facility uses, and commercial or manufacturing uses are not permitted. In general, buildings in residential districts may be developed under height factor regulations, which include open space requirements and determine bulk on a sliding scale based on the amount of open space provided, or Quality Housing regulations. Quality Housing regulations apply height limits to produce high-lot coverage buildings set at or near the street line. Contextual zoning districts apply the Quality Housing regulations as mandatory requirements and are generally mapped in established residential neighborhoods to produce buildings that match the traditional streetscape.

The contextual zoning districts within the study area were mapped by the East Village/Lower East Side Rezoning Plan, adopted in 2008, which was intended to preserve the existing neighborhood scale and character of the area while providing opportunities for residential growth and incentives for affordable housing. These districts contain a mix of residential buildings, ranging from row houses (typically located in R8B districts) to 10- to 12-story apartment buildings.

Commercial Districts

The study area also contains commercial zoning districts (C1-6A, C1-7, C1-7A, C1-8A, C1-9, C1-9A, C2-7, C2-8, C2-8A, C6-2, and C6-4) concentrated mostly along East 14th and East 13th Streets and First Avenue and Avenue A in the northern portion of the study area. These commercial districts are typically mapped along major thoroughfares in predominantly residential districts and are intended to provide for commercial districts that support the surrounding residential area. Commercial districts permit residential, commercial, and community uses; residential uses are governed by specified residential district equivalents. In contextual commercial districts (such as the C1-6 A, C1-7A, C1-8A, C1-9A, C2-7, C2-8, and C2-8A districts located within the study area), the contextual zoning regulations described above are applied through the contextual residential district equivalent.

In addition, commercial overlay districts (C1-5 and C2-5) are mapped along many of the main thoroughfares within the study area, particularly along First Avenue and Avenues A, B, C, and D in the Alphabet City portion of the study area. Commercial overlays are mapped along major streets in residential districts and provide for local retail and services, such as grocery stores, restaurants, beauty parlors, and other businesses that cater to nearby residents. Commercial uses are permitted to a maximum of 2.0 Floor Area Ratio (FAR) (in medium- and high-density residential districts) located in individual structures or on the lower floors of residential buildings.

Manufacturing Districts

As noted above, a portion of Project Area One is located within an M1-4 district, and a portion of Project Area Two is located with M1-1 and M3-2 districts. Other manufacturing districts within the study area include an M1-2 and an M2-3 district, which are mapped along the FDR Drive. Manufacturing zoning districts are widely mapped along the City's waterfront areas, a reflection of the City's history of working waterfronts with shipping and industrial uses. M3 districts are designated for areas with heavy industries that generate noise, traffic, or pollutants, and are usually located near the waterfront and buffered from residential areas. M2 districts occupy the middle ground between light and heavy industrial areas and are mainly mapped in the city's older industrial areas along the waterfront. M1 districts permit only light manufacturing uses such as

warehouses that conform to stringent performance standards and are generally used as buffers between heavy manufacturing districts and commercial or residential areas. Commercial uses are generally permitted in manufacturing districts, although some commercial uses (such as hotels and many retail facilities) are not permitted in M3 districts. Residential uses are generally not permitted in manufacturing districts.

Waterfront Zoning

The City Zoning Resolution includes special regulations applying to areas located along the waterfront, outlined in Article VI, Chapter 2 (“Waterfront Zoning”). These regulations, among other policy objectives, encourage active water dependent uses and ensure access to the City’s waterfront. Waterfront zoning regulations mandate that most developments on waterfront zoning lots provide public open space along the water’s edge with pedestrian links to upland communities. Waterfront zoning also applies rules governing the location, minimum size, proportion, and design elements for waterfront public access areas. In addition, waterfront zoning regulations provide for visual corridors (unobstructed views of the shoreline from upland public areas) through special urban design rules. A majority of the waterfront area within the study area consists of park space under the jurisdiction of NYC Parks. However, Stuyvesant Cove Park is within a mapped “Marginal Street, Wharf, or Place,” which is City-owned property (under jurisdiction of SBS) where zoning applies. This property would remain as public open space with the proposed project. However, since the waterfront zoning regulations would technically apply to this property, a zoning text amendment is necessary to acknowledge compliance with the City’s waterfront zoning restrictions.

Flood Resilience Zoning Text Amendment

In 2013, DCP proposed a zoning text amendment to encourage flood-resilient building construction throughout designated flood zones. Following Hurricane Sandy, this text amendment was adopted by the City Council in 2013 on an emergency, temporary basis. Efforts are currently underway to update the text and make it permanent based on lessons learned in the recovery process. The amendment enables new and existing buildings to comply with new, higher flood elevations issued by FEMA, and to new requirements in Building Code, with the intentions of promoting and protecting public health, safety, and general welfare. General goals of the amendment include, among others, to mitigate the effects of elevated and flood-proofed buildings on the streetscape and pedestrian activity; and to promote the most desirable use of land and thus conserve and enhance the value of land and buildings, and thereby protect the City’s tax revenues. Further, the Flood Resilience Zoning Text Amendment permits temporary flood control devices and associated emergency egress systems that are assembled prior to a storm and removed thereafter on the waterfront, and within open spaces.

PUBLIC POLICY AND PLANS

Applicable federal, state, city and local policies are listed below and described above in Section C, “Regulatory Context.”

- **Federal:** Executive Orders 11988, 11990
- **New York State:** Coastal Zone Management Act.
- **New York City:** Manhattan Waterfront Greenway; East River Blueway Plan; East River Esplanade Plan; PlaNYC: A Greener, Greater New York; One New York: The Plan for a Strong and Just City (OneNYC); ULURP; WRP; and Vision 2020: New York City Comprehensive Waterfront Plan.

- **Local:** Stuyvesant Cove 197-a Plan; Community Board 6 197-a Plan for Eastern Section of Community District 6; Pier 42 Master Plan: A People’s Plan for the East River Waterfront; and Business Improvement Districts.

F. ENVIRONMENTAL EFFECTS

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

NO ACTION ALTERNATIVE (ALTERNATIVE 1)

The No Action Alternative is the future without the proposed project and assumes that no new comprehensive coastal protection system is installed in the proposed project area. Under the No Action Alternative, the existing neighborhoods would remain at risk to coastal flooding during extreme coastal storm events (the 100-year flood events with sea level rise projections to the 2050s), referred to herein as the design storm event. Therefore, the No Action Alternative would not meet the project goals and be inconsistent with City policy, specifically OneNYC’s Vision 4: Our Resilient City. As described in **Appendix A1**, there are a number of projects planned or currently under construction in the project area, including the Pier 42 project and the Solar One Environmental Education Center project (No Action projects).

As discussed in Chapter 2.0, “Project Alternatives,” and identified in **Appendix A1**, there are projects independent of the proposed project within the study area. Projects that would result in changes to land use within the project area include developments resulting from the 2008 East Village and Lower East Side Rezoning. Additional projects independent of the proposed project are not anticipated to result in changes to land use and zoning. Additionally, no changes to existing public policies are planned at this time, with the exception of the acceptance of the Flood Resilience Zoning Update, and no known new public policies are proposed by the 2025 analysis year. Major land use projects that have recently been completed within the project area include the Citywide Ferry Service. Minor projects that would not result in changes to land use include deck replacement of the East Houston Street overpass, Solar One Environmental Educational Center, and LES Ecology Center Compost Facility. Additionally, a variety of planned resiliency projects would occur under the No Action Alternative, including resiliency measures at NYCHA properties near the study area. While these resiliency measures are intended to protect critical infrastructure at these facilities, they would not provide the type of comprehensive neighborhood protection from future storm-related coastal flooding events that would be provided by the coastal flood protection systems presented in the other alternatives.

EDC has implemented a Citywide Ferry Service initiative that includes 21 landings, with 10 new ferry landings, upgrades to five existing landings, and the use of six existing landings. Two of the new ferry landing sites are located within the project area: at Corlears Hook in Project Area One and Stuyvesant Cove in Project Area Two. The new landings feature barges (35 feet by 90 feet) that are connected to the shore by a gangway. The barges accommodate passenger queuing and shelter, a ticket machine and information kiosk, lighting, and static and/or digital signage.

In 2008, the City Council adopted the East Village and Lower East Side Rezoning. The zoning changes approved under that measure are now in effect for over 110 blocks in Manhattan Community District 3. As shown in **Appendix A1**, there are a number of projected development sites located in the study area. Sites identified in this table would be developed into residential buildings with affordable and luxury apartments and ground-floor retail. Increasing development in the study area would also increase residential population densities along with the worker

population. Overall, projects resulting from the East Village and Lower East Side rezonings would result in little to no change in the overall land use pattern in the study area since proposed projects would only increase residential and worker population densities within these two neighborhoods. It is not anticipated that the proposed project would have a significant effect on the areas approved for rezoning. Land uses where proposed projects are located would remain largely the same (i.e., residential). The underlying zoning regulations of the 2008 East Village and Lower East Side rezoning plan would remain in effect under this alternative.

As indicated above, NYC Parks is proposing to construct Pier 42 as a public waterfront open space that would increase accessible open space within the study area. For many years, the Pier 42 property consisted of warehouse space and parking, located just south of East River Park between the East River and the FDR Drive. A masterplan for the overall redevelopment of Pier 42 as an open space was approved by a Community Board 3 sub-committee and the New York City Public Design Commission (PDC). Phase 1A of the Pier 42 redevelopment included the demolition of the pier shed. Phase 1B will include the redevelopment of the upland park (north and east of Phase 1A) with amenities such as an entry garden in the western section, a playground, a comfort station, a grassy knoll rising approximately seven feet above grade, solar powered safety lighting throughout the park, and access from the shared-use path along the FDR Drive service road or Montgomery Street. The Pier 42 project will introduce approximately 2.93 acres of new passive open space to the study area by 2021.

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

LAND USE AND ZONING

In the event of a storm under the Preferred Alternative, the flood protection system would be activated as described in chapter 2.0, “Project Alternatives,” to provide protection from both surge and inland flooding. The Preferred Alternative is expected to be completed before Alternatives 2, 3 and 5, which would protect upland land uses by 2023 as compared to 2025. The Preferred Alternative would additionally protect East River Park from design storm events, requiring less post-storm maintenance in East River Park to return to pre-storm conditions compared to the No Action Alternative and Alternatives 2 and 3, and therefore, more effectively protects this land use and would allow park use to resume more quickly following a design storm event, benefitting the neighborhoods of the Lower East Side, East Village, Alphabet City, Stuyvesant Town, Peter Cooper Village, Gramercy Park, and Kips Bay.

During non-storm conditions, the closure structures would remain open. Under the Preferred Alternative, landscape and urban design features would be incorporated into existing open spaces in the project area. Land uses within the study area would not be affected by the proposed project and would remain largely park or City right-of-way. During non-storm operations, the closure structures would remain open and East River Park and Stuyvesant Cove Park would remain accessible. The bridge improvements would not alter the use of land at landing sites. All landings west of the FDR Drive would be within City rights-of-way or would remain unchanged. Bridge landings within East River Park would be integrated into the park’s design. The proposed shared-use flyover bridge would be compatible with the land uses in the project area: the proposed bridge landings would be within the limits of the shared-use path and can generally be considered an extension of that path.

In addition, as discussed in Chapter 5.5, “Urban Design and Visual Resources,” the proposed flood protection features associated with the Preferred Alternative would have no adverse urban design

effects. Urban design enhancements under this alternative include a reconstructed shared-use path and portions of the waterfront esplanade, relocation of two embayments in East River Park, full reconstruction of three bridges that span the FDR Drive, relocation and reconstruction of the amphitheater, and enhanced passive recreation and resiliently landscaped spaces. In addition, the Preferred Alternative would install the floodwall below-grade for a majority of East River Park to soften the visual effect of the flood protection system. These enhancements would ensure that the flood protection system would remain compatible with existing and anticipated land uses in the study area.

Although a zoning text amendment is necessary to acknowledge compliance of the proposed design with the City's Waterfront Zoning regulations, the Preferred Alternative does not propose changes to zoning regulations and would be compatible with existing and planned zoning within the project area and study area.

PUBLIC POLICY

The following is a discussion of the Preferred Alternative's compliance with federal, State, City, and local regulations.

Federal

Compliance with Executive Orders 11988 and 11990 is demonstrated via the Eight Step Decision Making Process for the proposed project, which may be found in **Appendix L**. This analysis concludes that the proposed project must be situated within the floodplain since the purpose of the proposed project is to provide flood protection and there is no reasonable alternative to locating the proposed project in a floodplain.

New York State

The Preferred Alternative would be in compliance with the NYSDOS CMP policy via the New York City WRP. A consistency assessment analysis has been prepared for the proposed project, which examines the compliance with State and City coastal management policies (see **Appendix D**). The analysis concludes that the proposed project would be consistent with applicable City coastal management policies and standards. The development of the proposed project is consistent with goals established for the Borough of Manhattan and the City for revitalizing and creating public access to the waterfront and would represent an increase in public access to the waterfront for recreational use, while implementing flood protection measures to protect Lower Manhattan.

New York City

Implementation of the Preferred Alternative would trigger land use actions including acquisition of real property, amendments to the City Map for changes related to existing and proposed pedestrian bridges, and a zoning text amendment. Specifically, the Preferred Alternative requires the acquisition of easements at Gouverneur Gardens, East River Housing Corporation, NYCHA, Con Edison, and the VA Medical Center to allow for construction of floodwalls or drainage elements on or near those properties. An easement would also be required for the flyover bridge footings that will be located within Captain Patrick J. Brown Walk, which is NYSDOT property. In addition, a zoning text amendment is necessary to acknowledge compliance of the proposed design with the City's Waterfront Zoning regulations for a portion of the project area. Approval of these actions is specific to the implementation of the proposed project and would not conflict with land use and zoning conditions in the study area.

In addition, while no changes to zoning in the study area are proposed, the Preferred Alternative complements City zoning policies and recent zoning changes, including those in Lower East Side,

which have been approved to stimulate commercial and residential development and ongoing resiliency initiatives in the East Village and Lower East Side. The proposed flood protection system would provide protection to the study area while enhancing the shared-use path within East River Park. It would allow for the continued use of valuable open spaces. The Preferred Alternative, by reconstructing the shared-use path and enhancing passive recreation and landscaped spaces, would support public recreational facilities in the area.

The Preferred Alternative would be consistent with the initiatives to protect Lower Manhattan from surge events outlined in *PlaNYC* and *OneNYC*, while continuing to provide and enhance access to the waterfront as discussed in the Vision 2020 plan, the East River Esplanade Plan, and the East River Blueway Plan. The Preferred Alternative also includes the foundations for a shared-use flyover bridge connecting East River Park and Captain Patrick J. Brown Walk, which would provide the opportunity for a new north-south connecting link in the East River Greenway and achieve a goal of the Manhattan Waterfront Greenway. Additionally, as mentioned above, the Preferred Alternative is consistent with applicable City coastal management policies would be in compliance with the New York City WRP. Therefore, the proposed project would be consistent with public policies pertaining to the study area, and no adverse effects to public policies would occur with this alternative. A coastal zone consistency determination using policies included in the WRP for the proposed project is included in **Appendix D**.

Local

The Preferred Alternative would be consistent with initiatives to support development of accessible public parks and open space at the waterfront outlined in the Stuyvesant Cove 197-a Plan. Additionally, the Preferred Alternative would maintain the operation of Stuyvesant Cove Park as a public open space with no large-scale active uses and would sustain links to existing promenades at the north and south ends of the park. The Preferred Alternative would also be consistent with the goals of the Community Board 6 197-a Plan via the improvement of access to the waterfront. Finally, it is anticipated that implementation of the Preferred Alternative would complement the Pier 42 Master Plan that has been approved for the East River Waterfront and Pier 42.

Therefore, it is concluded that the Preferred Alternative would be compatible with land use, zoning, and public policies within the study area.

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

Similar to the Preferred Alternative, in the event of a design storm under Alternative 2, the flood protection system would be activated as described in Chapter 2.0, “Project Alternatives,” to provide protection from both surge and inland flooding. However, the effects of a storm and the restoration that would follow would not result in changes to land use or zoning. Alternative 2 would provide the same benefits to upland communities as the Preferred Alternative but includes minimal park resiliency features or open space enhancements for East River Park. Following a design storm event, restoration to the Park would be anticipated to be more time and labor intensive, and the Park likely would be closed for a longer duration than under the Preferred Alternative.

During non-storm operations, the closure structures would remain open, and landscape and urban design features would be incorporated into existing open spaces in the project area. These proposed project elements would be compatible with existing land uses. No changes to land use within the study area are proposed, although certain land use actions would be required.

Alternative 2 would require the same land use actions as the Preferred Alternative with the exception of the City Map change, which would not be necessary under this alternative. Approval of these actions is specific to the implementation of the proposed project and would not conflict with land use and zoning conditions in the study area. As with the Preferred Alternative, Alternative 2 would have no adverse urban design effects in the study area as described in Chapter 5.5, “Urban Design and Visual Resources.” Therefore, it is concluded that Alternative 2 is consistent with land use, zoning and public policies pertaining to the study area.

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

In the event of a design storm under Alternative 3, the flood protection system would be activated but the effects of a storm and the restoration that would follow would not result in changes to land use or zoning. As described above under the Preferred Alternative, the proposed features of Alternative 3 would be consistent with applicable Federal, State, and local public policies and would not alter surrounding land uses or zoning. The land use actions required under this Alternative would be similar to Alternative 2. However, implementation of Alternative 3 would also require amendments to the City Map for changes related to existing and proposed pedestrian bridges as described in Chapter 2.0, “Project Alternatives.” Approval of these actions is specific to the implementation of the proposed project and would not conflict with land use and zoning conditions in the study area.

In addition, Alternative 3 does not conflict with City zoning policies or recent zoning changes for the nearby neighborhoods. Alternative 3 would also be consistent with relevant public policies and would provide flood protection while enhancing and providing the continued use of waterfront access and open space. Alternative 3, by reconstructing the shared-use path and enhancing passive and active waterfront recreation spaces, would contribute to the study area’s public amenities and vitality. Further, the proposed enhancement and realignment of the existing bridges at Delancey and East 10th Streets and the park-side plaza area at the East Houston Street overpass would allow for increased access to well used open spaces. However, this alternative would not provide the level of protection for East River Park proposed under the Preferred Alternative and thus, which it would be consistent with public policies to improve access to open spaces and resiliency within the study area, it would not further those policies to the same degree as the Preferred Alternative. Alternative 3 would be consistent with land use, zoning, and public policies applicable to the study area.

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

The consistency of Alternative 5 with land use, zoning, and public policies would be the similar to the Preferred Alternative. Raising the FDR Drive would not alter or affect the use or function of the roadway. This alternative provides flood protection for the FDR Drive, facilitates access to East River Park following a storm event, and eliminates the need for closure structures across the FDR Drive as proposed under the above alternatives. As a result, Alternative 5 is consistent with public policies that apply to the project area and study area described above. The land use actions required under this Alternative would be the same as the Preferred Alternative; however, this alternative would require fewer acquisitions along the Con Edison segment. Alternative 5 would support the uplands communities through enhanced protection of the FDR Drive and would also allow for emergency access to the flood protection system in East River Park during storm events when access to East River Park is otherwise limited. Therefore, it is concluded that Alternative 5 is consistent with land use, zoning, and public policies pertaining to the study area. *