

3.9 NATURAL RESOURCES

INTRODUCTION

The proposed action would not result in significant adverse impacts to natural resources.

As defined in the *CEQR Technical Manual*, a natural resource is a plant, animal species or any area capable of providing habitat for plant and animal species. Any area capable of functioning to support environmental systems and maintain the City's environmental balance may also be considered a natural resource. Such resources include surface and groundwater, soils, drainage systems, wetlands, dunes, beaches, grasslands, woodlands, landscaped areas, gardens, parks and built structures used by wildlife. An assessment of any given natural resource is appropriate if that natural resource exists on or near the site of the proposed action, or if an action involves disturbance of that resource.

The rezoning area is the primary study area for this analysis, and the secondary study area has been established with a radius of approximately 1/4th mile around the rezoning area; including the area north and south of the 125th Street Corridor from 131st Street on the north, 119th Street on the south, and from Broadway on the east to Second Avenue on the west. Collectively, the primary and secondary study areas are referred to as the "study area." See Figure 3.9-1 for the Natural Resources Study Area.

The study area is urbanized and densely developed, does not contain natural features of significance, nor is it located immediately adjacent to any natural resources. No habitat for rare, threatened or endangered species exists within the study area. The study area does not include any of the following ecological resources: wetlands, beaches, dunes, bluffs, thickets, significant grasslands, meadows, woodlands or forests. The *CEQR Technical Manual* lists a number of areas that contain natural resources designated by a governmental agency as significant, sensitive or worthy of protection. The study area is not located within or immediately adjacent to any of these natural resources areas. No portion of the primary study area (rezoning area affected by the proposed action) is within the City's designated coastal zone. As the proposed action would not result in any new development in the coastal zone, no assessment for conformity with New York City's Local Waterfront Revitalization Program is necessary.

As privately owned projected and potential development sites could potentially contain subsurface contaminants, it is proposed that each site receive an (E) designation, which will provide a mechanism to forestall the potential exposure of construction workers, residents and permanent labor force in new buildings to such contamination. With the proposed (E) designations, prior to construction activities, further investigation would be performed on those development sites with the potential to contain hazardous materials, to determine the presence and nature of contaminants of concern and the proper remedial and/or health and safety measures that would be employed during redevelopment. As discussed in Chapter 3.10, "Hazardous Materials," the (E) designation would require that any suspected surface and subsurface contamination on an identified development site be fully characterized and remediated prior to construction activities, and would include a New York City Department of Environmental

Protection (NYCDEP)-approved sampling plan, and, if necessary, a remediation plan and a health and safety plan (HASP), also approved by NYCDEP. If areas are found to be contaminated, remediation would be performed in accordance with all City, state, and federal regulations and protocols. The (E) designation would preclude the potential for significant adverse hazardous materials impacts associated with the proposed action.

There are three City-owned projected and potential development sites in the primary study area. For these sites, prior to redevelopment, the owning agency will enter into a Memorandum of Understanding with NYCDEP outlining the requirements for additional study and potential remediation.

With the (E) designations and the Memoranda of Understanding establishing development protocols on City-owned sites, no significant adverse impacts to natural resources would result.

3.9.1 EXISTING CONDITIONS

This section describes the existing conditions of the natural resources of the 125th Street Rezoning and Related Actions study area. Using the guidance supplied by the *CEQR Technical Manual*, potential areas of concern include surface water, ground water, floodplains, coastal resources, wildlife, wetlands, upland resources, built resources, and significant, sensitive, or designated resources.

Surface Water

The surface waters in the vicinity of the study area are the Hudson River to the west, and the Harlem River to the east. On the west, the study area extends to touch the shoreline of the Hudson River, but major built features including Riverside Drive and the Henry Hudson Parkway intervene between the rezoning area and this resource. On the eastern side of the study area, the boundary extends to include a portion of the Harlem River, but the primary study area is separated from the river by First Avenue and Harlem River Drive.

The portion of the Hudson River located west of the study area is a tidal estuary, where sea water and fresh water mix. It is known as the Lower Hudson Reach. Given the mixture of water types, estuaries are among the most ecologically productive ecosystems. The New York State Department of State (NYSDOS) has designated the Lower Hudson Reach as a Significant Coastal Fish and Wildlife Habitat, stretching from Battery Park at the southern tip of Lower Manhattan to the northern extent of Haverstraw Bay at Stony Point in Rockland County, about 25 miles to the north of the study area. The estuary also includes all adjoining riverine and estuarine habitats, including open water and tidal wetlands. The Hudson River Estuary extends approximately 153 miles from New York Harbor to Troy, New York (See Figure 3.9-2: Hudson River Estuary in New York City).

The portion of the Hudson River in the study area is within the Inner Harbor of New York Harbor, which extends from the New York City/Westchester County border through the Battery to the Verrazano Narrows. Water quality in the Harbor has shown consistent gradual

improvement over the past 30 years¹. The last most significant improvement to water quality occurred in 1992, after the 1991 upgrade of the North River Water Pollution Control Plant (WPCP) to secondary treatment².

The Harlem River is not a true river, as it has neither headwaters nor a mouth. Rather, it is a tidal strait, flowing eight miles between the East River and the Hudson River. The Harlem River separates the boroughs of Manhattan and the Bronx. The river course has undergone significant modification to become a shipping channel in the 19th century through realignment, landfilling, bulkheading and dredging. The edges of the river have also been modified to support roadways, resulting in a shoreline of bulkheads and revetments. Part of the current course of the Harlem River is the Harlem River Ship Canal, runs somewhat south of the former course of the river, isolating a small portion of Manhattan (Marble Hill) on the Bronx side of the river.

Ground Water

Ground water within Manhattan is not used for potable water supply. Reservoirs located in the Croton, Catskill, and Delaware watersheds provide potable water to Manhattan.

Floodplains

Floodplains are defined as areas low enough in elevation to hold flood waters during significant storm events. Regulated floodplains are defined by the Federal Emergency Management Agency (FEMA) and include areas that flood during storms that have a one percent chance of occurring in any given year, which is equivalent to the likelihood of a storm occurring once every 100 years (100-year storm). FEMA also maps the 500-year floodplain but these areas are not regulated. At the local level, New York City's Local Law 33 of 1988 regulates construction in the 100-year floodplain. Without exception, habitable structures must be flood-proof or elevated above the 100-year floodplain.

The rezoning area is not located in a 100-year or 500-year floodplain. See Figures 3.9-3a & 3b: Flood Insurance Rate Maps. These figures depict the eastern and western portions of the project area and indicate the extent of the 100-year floodplain is limited to the areas adjacent to the Hudson and Harlem Rivers. The area between the eastern and western portions of the project area, although not shown on the figures, is not located within the 100-year floodplain, as mapped by FEMA.

Coastal Resources

The Lower Hudson Reach, (See Surface Waters), has been designated as one of 15 Significant Coastal Fish and Wildlife Habitat areas in New York City. This designation is given to habitats that have been evaluated and rated by the New York State Department of State (NYS DOS), in cooperation with the NYS DEC, to be "protected, preserved, and, where practicable, restored so

¹ <http://www.nyc.gov/html/dep/hwqs/hqws2003.html>, New York Harbor Water Quality Report, 2003

² *Ibid.*

as to maintain their viability as habitats.³” Additionally, The Lower Hudson Reach was designated as a significant habitat in August 1992. This designation requires a coastal consistency review for proposed projects within the designated area pursuant to the Coastal Zone Management Act (CZMA). As noted above, the proposed 125th Street Rezoning and Related Actions does not qualify for consideration, as no portion of the primary study area is located within New York City’s designated coastal zone. (See Figure 3.9-4: Coastal Zone Boundary and Chapter 3.12, “Waterfront Revitalization Program.”)

Wildlife

Wildlife species within the study area primarily consist of avian species found in and around the Hudson and Harlem River. New York City is within an important migration corridor and provides stopover habitat for migrating birds. Surveys of migrating birds in open spaces in the metropolitan area have revealed a high abundance and diversity of such birds. The Lower Hudson River area is home to known nesting populations.

Both the New York State Department of Environmental Conservation (NYSDEC) and the United States Fish and Wildlife Service (USFWS) were contacted to ascertain the potential presence of species or habitat within the study area. No habitat for rare or endangered species exists within or adjacent to the study area. Coordination has been undertaken with both NYSDEC Natural Heritage Program and the USFWS. NYSDEC has responded that:

“We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.⁴”

The USFWS responded that:

“Except for occasional transient individuals, no Federally-listed or proposed endangered or threatened species under the jurisdiction of the U.S. Fish and Wildlife Service are known to exist within the project impact area.⁵”

Wetlands

According to NYSDEC freshwater and tidal wetland maps⁶ and the USFWS National Wetland Inventory Maps⁷, there are no freshwater wetlands or tidal wetlands located within the study area.

³ New York State Department of State

http://www.nyswaterfronts.com/download/pdfs/sig_hab/nyc/Lower_Hudson_Reach.pdf

⁴ letter dated December 12, 2006 (Tara Seoane, Information Services, New York Natural Heritage Program)

⁵ letter dated January 19, 2007 (Steven T. Papa, Fish & Wildlife Biologist)

⁶ New York State Department of Environmental Conservation, Digital 1974 Tidal Wetlands Inventory, twi.ligis.org

⁷ U.S. Fish & Wildlife Service, National Wetland Inventory, www.fws.gov/nwi

Upland Resources

Upland resources include all natural areas that are not water or wetland resources. It encompasses a variety of habitats and generally defined by the vegetation. The proposed project area and adjoining area between the Hudson River and the Harlem River shorelines support little vegetation, as most of the area has been developed or is comprised of impervious surfaces. Similar to conditions in most other areas of Manhattan, existing vegetation includes predominately ornamental and invasive tree/shrub species that do not provide habitats for wildlife species other than typical urban species (e.g., mice, rats, pigeons). Upland resources in the study area include several parks which are adjacent to the rezoning area or within several blocks of the study area. These are, respectively, Marcus Garvey Memorial Park, immediately south of the rezoning area, and Morningside Park and St. Nicholas Park, which overlap a small portion of the study area.

Marcus Garvey Park consists of 20.2 acres and is located on Madison Avenue/Mount Morris Park East on the east, Mount Morris Park West on the west, and extends north-south from East 120th to 124th Streets. The park's natural, forested rock outcropping has been preserved, and a number of structures and recreational improvements including a community center and child health station. Morningside Park is a 29.88 acre park extending north-south from West 110th to West 123rd Streets and east-west from Manhattan Avenue to Morningside Drive. A portion of Morningside Park is located within the study area, at its southwestern side. Saint Nicholas Park is a 22.74 acre park extending east-west from St. Nicholas Avenue to St. Nicholas Terrace and north-south from West 128th to West 141st Streets, on the north side of the study area. Like Harlem's other "ribbon parks," such as Morningside Park St. Nicholas Park was built on a rugged mass of rock, following the steep and irregular topography of northern Manhattan.

Built Resources

There are no piers, waterfront structures, old piers, pile fields, ruins, beach protection structures or flood protection structures located within the rezoning area. Within the study area, the Harlem River is bulkheaded, exhibiting multiple conditions, including sheet piling, rip-rap and gabion bulkheading somewhat north of the study area. The Hudson River is also bulkheaded with a range of structural types, including mostly rip-rap stones. There are piers and platforms at the Hudson River edge; most are in disrepair.

Significant, Sensitive, or Designated Resources

According to the *CEQR Technical Manual*, there are no Significant, Sensitive, or Designated Resources within the rezoning project area, but the study area is adjacent to certain limited resources. State and federal interest is generally focused on the City's coastal areas, but the City also recognizes a number of upland areas as having significant value. In addition to waters, as discussed below, such resources include the Jameco and Magothy aquifers, coastal resources, the Gateway Natural Recreation Area, Jamaica Bay and other State Significant coastal fish and wildlife habitats are designated significant, sensitive, or worthy of protection. Of these resources, surface water resources, and coastal resource, both embodied by the adjacent Hudson

River, are near to the project study area.

The Lower Hudson Reach is the portion of the Hudson River starting from Battery Park at the southern tip of Manhattan and extending north to approximately the City of Yonkers in Westchester County, about 19 miles distance overall. The Lower Hudson Reach was designated as a significant habitat in August 1992. This designation requires a coastal consistency review for proposed projects within the designated area pursuant to the CZMA. However, the proposed action would not induce any new development within the City's designated Coastal Zone, and no consistency review is required.

The 125th Street Rezoning and Related Actions project area is also located adjacent to the Hudson River Estuary. The Hudson River Estuary is a drowned river valley rising only 1.5 miles along 150 miles between New York City and Troy, New York. The estuary is maintained as a shipping channel, and dredged to maintain a minimum depth of 9 -11 meters, although portions of the river are much deeper, e.g. 66 meters at West Point (Moran & Limburg 1986⁸). Slightly more than half the estuary is covered by marshes and wooded swamps; the remainder consists of mud flats that are flooded at high tide. Wetlands are in greatest abundance in the upper third of the estuary. The estuary as a whole has been identified as an essential fish habitat (EFH) for 15 species of fish. EFHs are designated by regional fishery management councils that are required by the federal Sustainable Fisheries Act of 1996 to identify these EFHs within their jurisdiction to better manage and conserve each species. However, there are no portions of the study area that are located within the estuary: the study area is adjacent to the estuary.

There is no known state or federally listed or proposed endangered or threatened species in the area, except for occasional transient individuals. In addition, no habitat within the study area, under provisions of the Endangered Species Act and under the jurisdiction of the USFWS, is designated or proposed as a critical habitat.

3.9.2 FUTURE WITHOUT THE PROPOSED ACTION

As the upland areas of the study area are generally urbanized and largely devoid of natural resources, Future No-Action development within the study area would not result in significant adverse impacts on the condition of natural resources in the study area.. Chapter 3.3, "Land Use, Zoning and Public Policy" provides a description of developments expected to occur by the 2017 analysis year. The most significant among these for the purposes of natural resources assessment would be the East 125th Street Rezoning, proposed by the New York City Economic Development Corporation, which would be located immediately east of the subject 125th Street Rezoning and Related Actions project, and the proposed Special Manhattanville rezoning, which would be located between the proposed action area and the Hudson River.

As there are no natural resources of significance in the study area, new developments and other changes in the future without the proposed action would not result in significant adverse impacts

⁸ <http://life.bio.sunysb.edu/marinebio/fc.1.estuaries.html>

on ground water, floodplains, coastal resources, wildlife, wetlands, uplands, built resources, and significant, sensitive, or designated resources.

Potential Effects of Tall Structures on Migratory Birds

Avian nighttime collisions with buildings and towers are more common than daytime collisions. Most species of migratory birds use the stars to navigate at night, and brightly illuminated buildings and broadcast towers attract birds, particularly when poor weather conditions cause birds to fly at lower altitudes. The height or altitude of migration is an important factor in the determination of the potential for collisions with structures. Migration altitudes vary depending on species, location, geographic features, season, time of day, and weather⁹. According to published reports, approximately 75 percent of neotropical migratory birds fly at altitudes between 500 and 6,000 feet during migration. Shorebirds generally migrate at altitudes of between 1,000 and 13,000 feet¹⁰.

In the future condition without the proposed action, the existing zoning of the 125th Street Corridor would continue in place. The existing mapped zoning districts include those generally applied to major commercial corridors outside of the central business districts. In Community Districts 9-12, which includes the entire study area, these mapped districts include C4-4, C4-5, C4-6, C4-7, and for the rezoning area, also includes the general residential district designated R7-2. None of these districts have a building height maximum, and towers for the highest density district (C4-7), with an FAR of 12 including a plaza bonus, could reasonably be expected to exceed 360 feet in height. Structures of this height and greater could result in a strike hazard for migratory birds. However, based on the anticipated number of new developments expected to be completed by 2017, the number of collisions and resulting bird mortality is expected to be insignificant when compared to the total numbers of birds migrating along the Atlantic Flyway.

3.9.3 FUTURE WITH THE PROPOSED ACTION

The 125th Street Rezoning and Related Actions study area is urbanized and densely developed. The study area does not include any of the following ecological resources: wetlands, beaches, dunes, bluffs, thickets, significant grasslands, meadows, woodlands, or forests. The *CEQR Technical Manual* lists a number of areas that contain natural resources designated by a governmental agency as significant, sensitive, or worthy of protection. The study area is not located within or immediately adjacent to any of those listed natural resource areas. The study area neither contains natural resources of significance, nor, with the exception of three parks located within or partly adjacent to the study area and the two rivers immediately adjacent to the study area, is located adjacent to natural resources of significance.

⁹ Evans-Ogden, 1996; *also* Jason Jones, Charles M. Francis (2003) The effects of light characteristics on avian mortality at lighthouses *Journal of Avian Biology* 34 (4), 328–333.

¹⁰ *Ibid.*

Hazardous Materials

As presented in Chapter 3.10, all 49 ~~48~~ projected and potential development sites were evaluated pursuant to preliminary screening criteria contained in Title 15, rules of the City of New York, Chapter 24, Section 4, and Hazardous Materials Appendix 5 of the *CEQR Technical Manual Appendices*.

As a result of this evaluation, it is recommended that each privately-owned projected and potential development site receive an (E) designation as part of the proposed action. By placing (E) designations on sites where there is a known or suspect environmental concern, the potential for an adverse impact to human health and the environment resulting from the proposed action is avoided. The (E) designation provides City with the mechanism for addressing environmental conditions so that significant adverse impacts do not occur as a result of site development.

(E) designations require that pre-development activities at each site include a Phase 1 environmental site investigation, and, if necessary, a sampling protocol and remediation to the satisfaction of NYCDEP before the issuance of a building permit. Appendix D presents the complete list of privately-owned projected and potential development sites for which (E) designations are proposed (Appendix D Table 1, “Projected and Potential Sites Requiring (E) Designations for Hazardous Materials”).

In addition to the sites receiving (E) designations, there are three (3) projected and potential development sites owned all or in part by the City that have been identified as having the potential for hazardous materials contamination. Because these sites are under City ownership, they are not subject to the regulations governing (E) designations. Therefore, the agencies that own and control these sites will enter into Memoranda of Understanding or other agreements with NYCDEP to ensure that any testing and remediation activities, as deemed necessary by NYCDEP in accordance with NYCDEP requirements, are performed prior to and/or during development of or a change in use on these sites. (See Table 2 in Appendix D “City Owned Sites with Potential Hazardous Materials.”)

Potential Effects of Tall Structures on Migratory Birds

As noted under no-action conditions, avian nighttime collisions with buildings and towers are more common than daytime collisions. Most species of migratory birds use the stars to navigate at night, and brightly illuminated buildings and broadcast towers attract birds, particularly when poor weather conditions cause birds to fly at lower altitudes. The height or altitude of migration is an important factor in the determination of the potential for collisions with structures.

With the Proposed 125th Street Corridor Rezoning and Related Actions rezoning area, building height limitation would be established, where none exist today. The proposed action and the Special Harlem District bulk controls would establish such building height limitations for every mapped district with the exception of the R7-2. The highest density district (the C4-7) would have a height limitation of 290 feet, substantially less than that which could be allowed under the existing or future no-build condition. The maximum heights for commercial districts other than

the C4-7 within the Special Harlem district would not exceed 120 feet, which would be allowed in the C4-4D district. For the C4-4A, maximum building height would not exceed 80 feet, and for the two general residential districts (R7A and R6A), building heights would be limited at 80 feet and 70 feet respectively. These building heights would be more consistent with most extent building heights and would be substantially lower than would be allowed under existing zoning.

While there would continue to be a strike hazard for migratory birds, as allowable building heights would be substantially reduced and significantly more consistent within the 125th Street Corridor, it is likely that, with the Proposed 125th Street Corridor Rezoning and related actions, the opportunity for strike hazard would be substantially reduced.

Built Resources

The proposed action does not include any projected developments that would modify existing waterfront structures nor does it have the potential to have such effects.

Significant, Sensitive, or Designated Resources

Threatened and Endangered Species

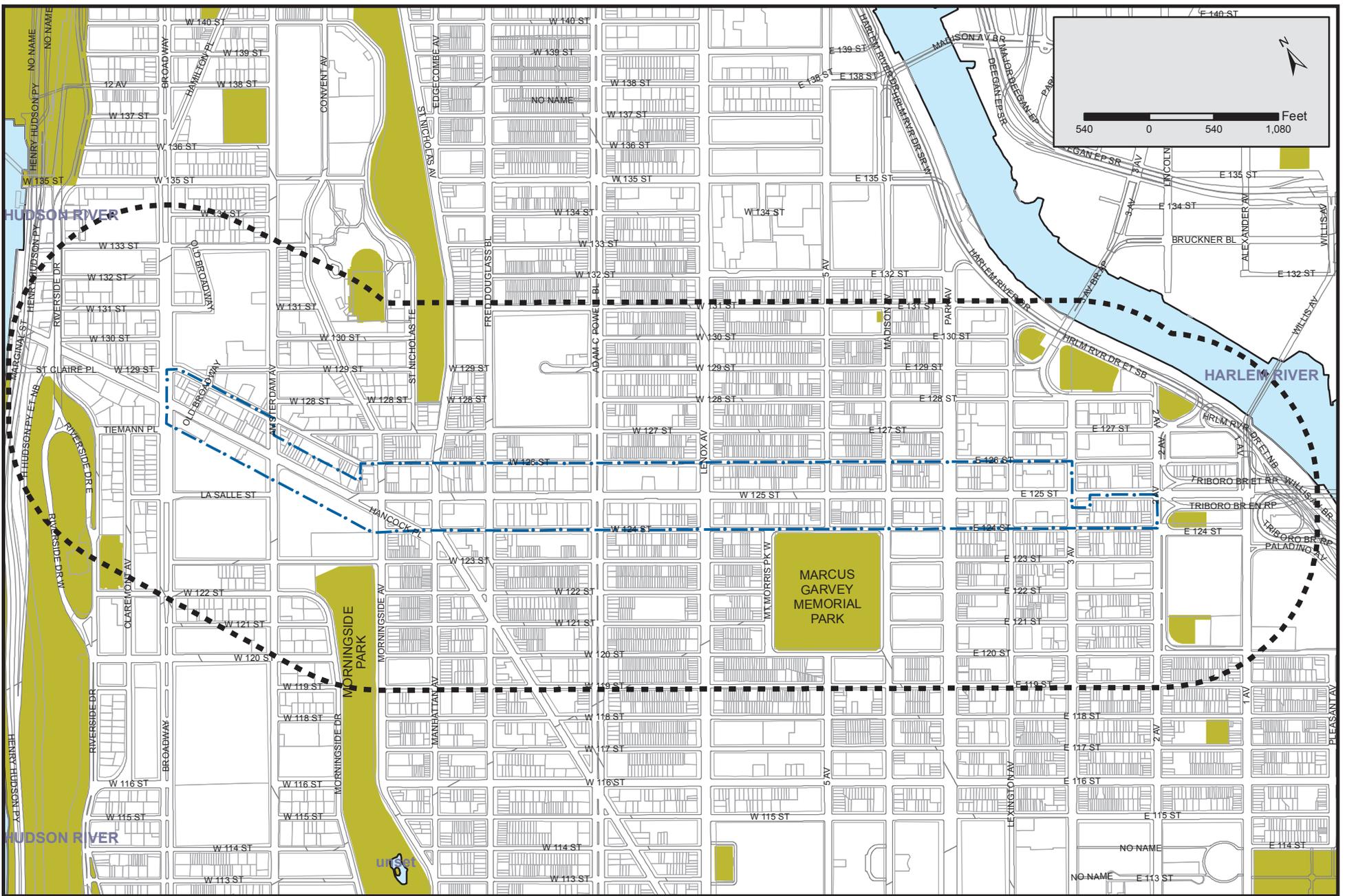
As noted under Section 3.9.1, Existing Conditions, there are no known state or federally listed or proposed endangered or threatened species in the redevelopment project area, except for occasional transient individuals. In addition, no habitat within the study area, under provisions of the Endangered Species Act and under the jurisdiction of the USFWS, is designated or proposed as a critical habitat.

Additionally, no construction activity in the Hudson or Harlem Rivers is proposed as a result of the proposed action. Therefore no significant impacts to surface water quality or impacts to threatened or endangered species within those rivers would result from the proposed action.

Essential Fish Habitat (EFH)

With no construction within the Hudson and Harlem Rivers as a result of the proposed action, there would be no direct impact on EFH.

As no significant natural resources exist within the study area, the proposed action would not result in significant adverse impacts to natural resources. The projected and potential development sites are located in upland, urbanized areas already occupied by buildings, structures and paved areas. New developments and other changes in the future with the proposed action in the project study area are not expected to have any significant impacts on other natural resources, including ground water, floodplains, coastal resources, wildlife, wetlands, uplands, built resources, and significant, sensitive, or designated resources.



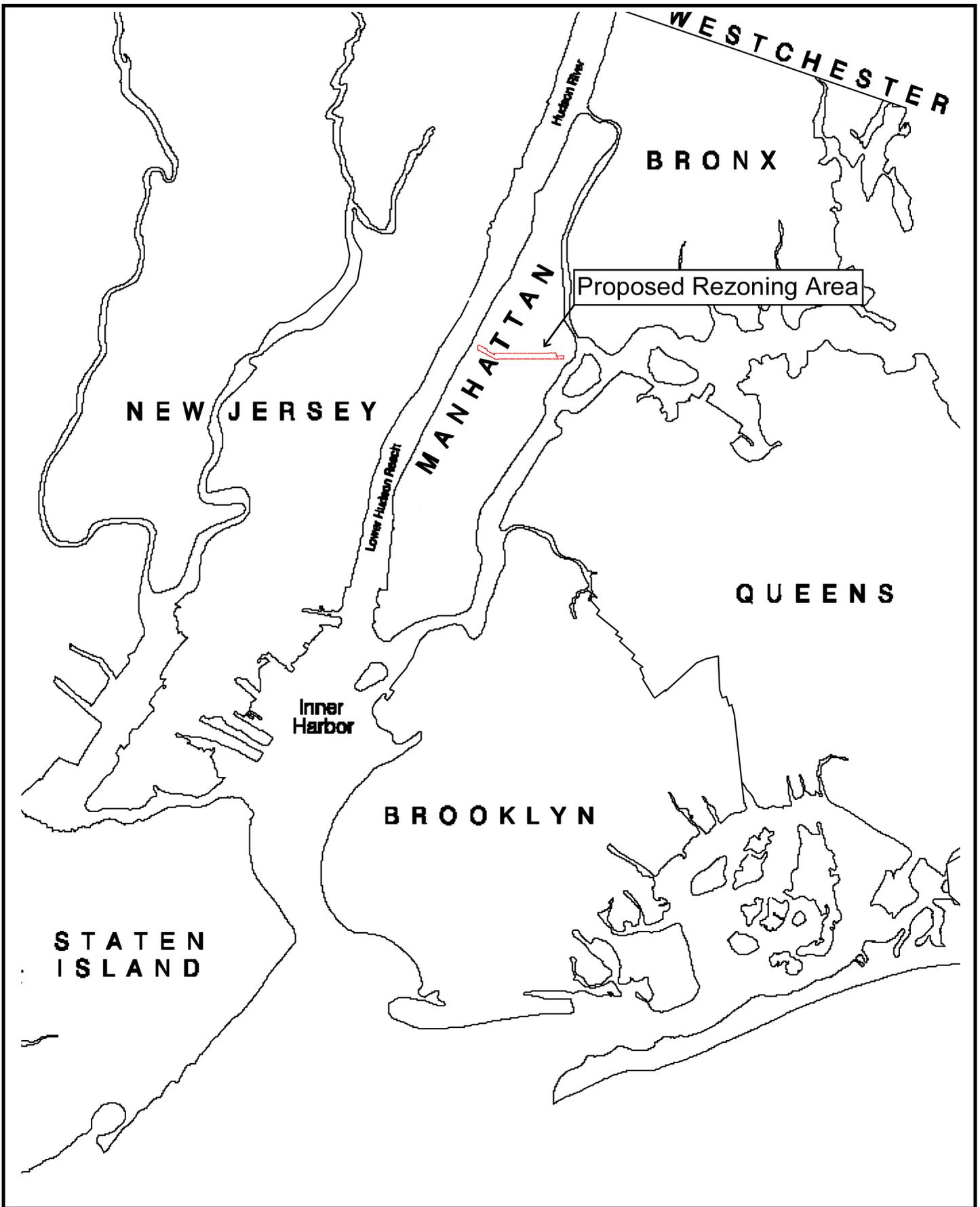
Legend

- Proposed Rezoning Area
- 1/4 Mile Radius around
- Proposed Rezoning Area

Source: NYC Department of City Planning MapPLUTO

Figure 3.9-1 - Natural Resources Study Area

*125th Street Corridor Rezoning and Related Actions EIS
NYC Department of City Planning*



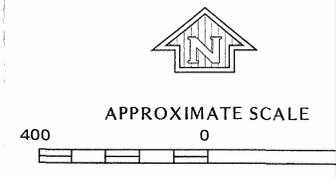
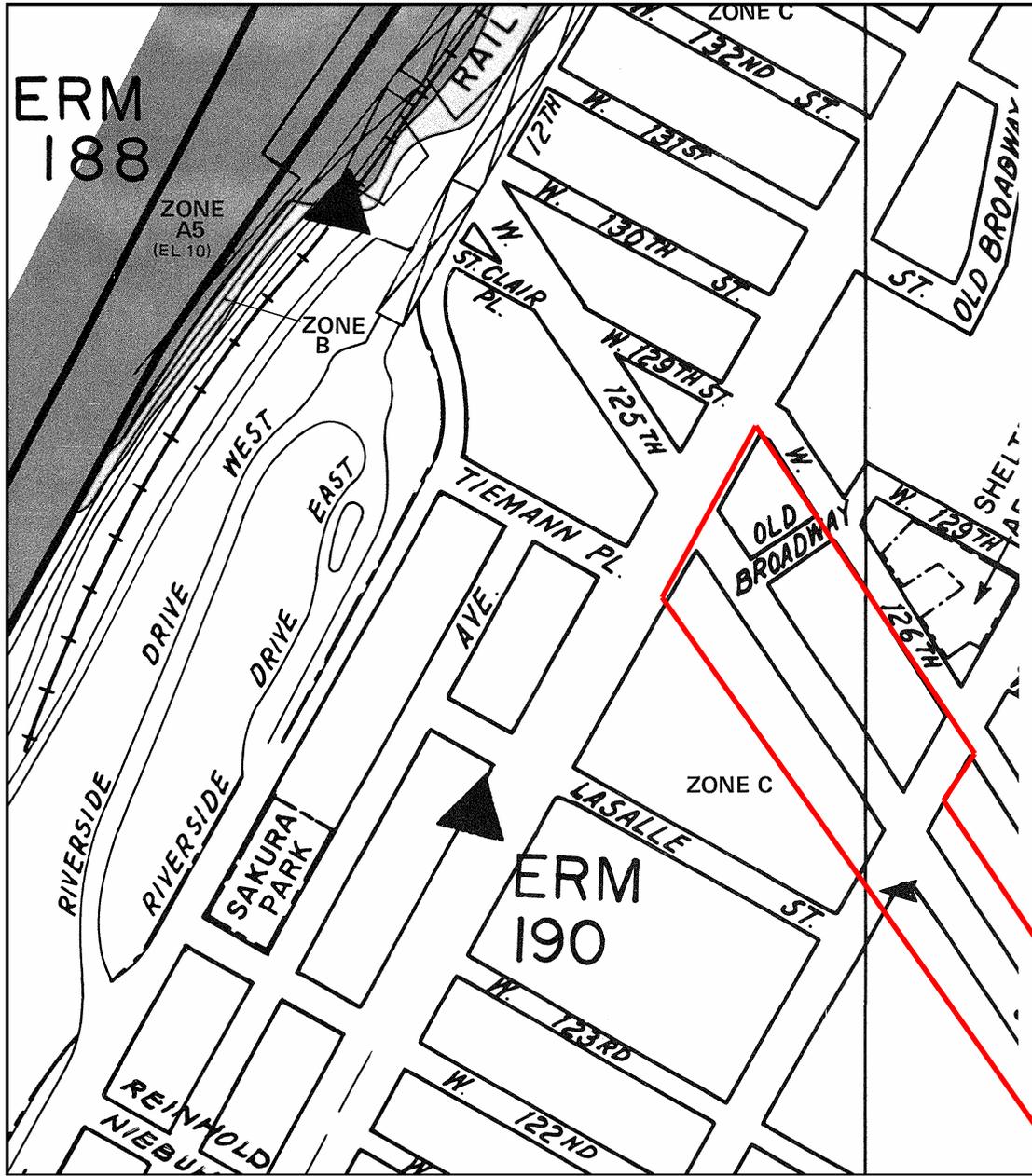
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 Proposed Rezoning Area



Figure 3.9-2 - Hudson River Estuary in New York City

*125th Street Corridor Rezoning and Related Actions EIS
 NYC Department of City Planning*



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CITY OF
NEW YORK,
NEW YORK
BRONX, RICHMOND,
NEW YORK, QUEENS
AND KINGS COUNTIES

PANEL 19 OF 131
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
360497 0019 B
EFFECTIVE DATE:
NOVEMBER 16, 1983



Federal Emergency Management Agency

see Map 6

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

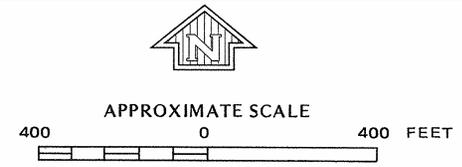
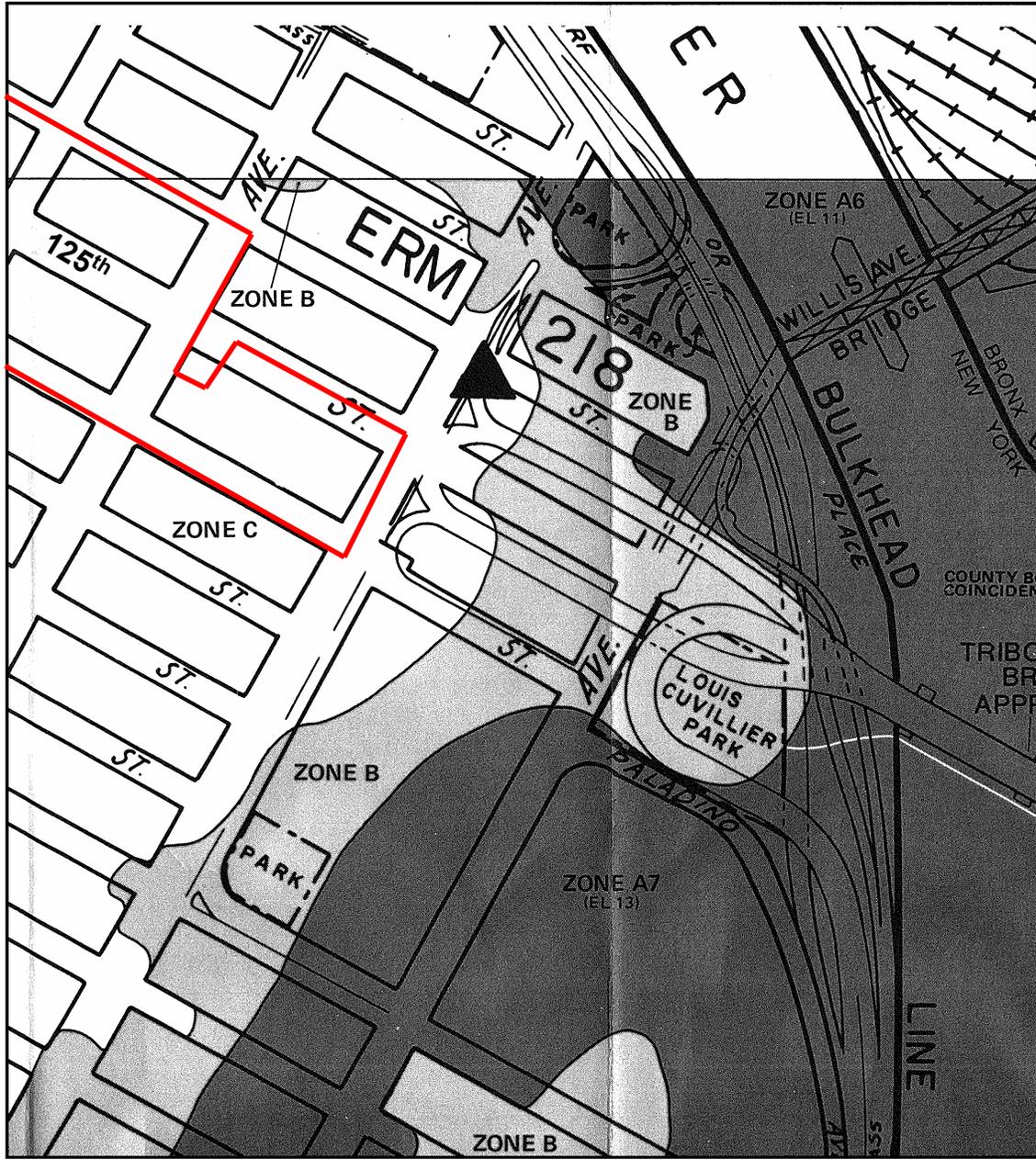
Legend

Proposed Rezoning Area

Flood Zones

- Zone A - Areas of 100-year Flood
- Zone B - Areas of 500-year Flood

*Figure 3.9-3a - Flood Insurance Rate Map
Western Portion Rezoning Area*



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
NEW YORK,
NEW YORK
BRONX, RICHMOND,
NEW YORK, QUEENS
AND KINGS COUNTIES

PANEL 26 OF 131
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
360497 0026 B

EFFECTIVE DATE:
NOVEMBER 16, 1983



Federal Emergency Management Agency

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Legend

 Proposed Rezoning Area

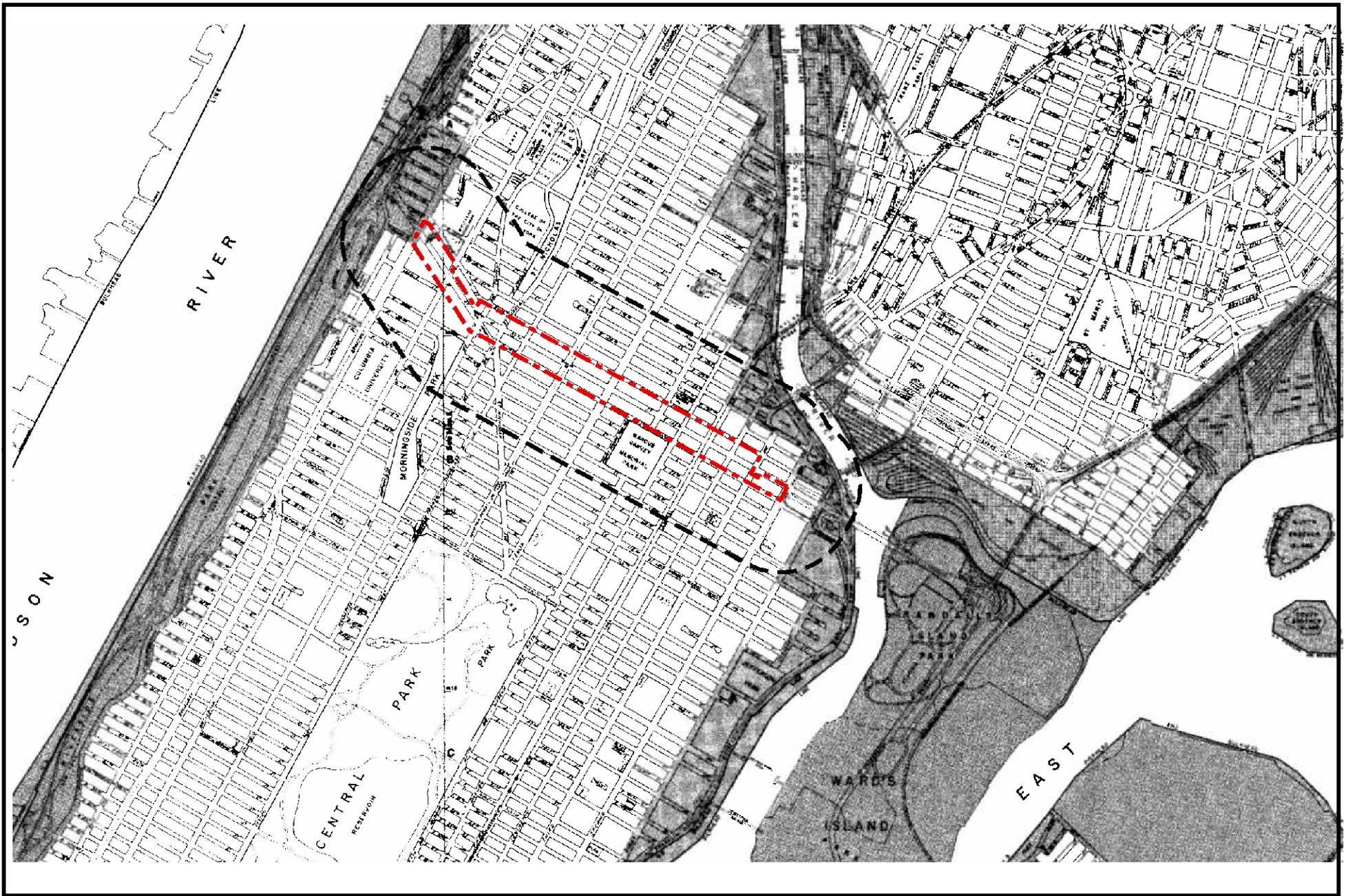
Flood Zones

 Zone A - Areas of 100-year Flood

 Zone B - Areas of 500-year Flood

Fig 3.9-3b - Flood Insurance Rate Map Eastern Portion Rezoning Area

*125th Street Corridor Rezoning and Related Actions EIS
NYC Department of City Planning*



Legend

-  Proposed Rezoning Area
-  Study Area



Source: NYC Department of City Planning Website

Figure 3.9-4 - Coastal Zone Boundary

*125th Street Corridor Rezoning and Related Actions EIS
 NYC Department of City Planning*