A. INTRODUCTION

The Metropolitan Transportation Authority (MTA) and New York City Planning Commission (CPC) are serving as co-lead agencies for the environmental review of several actions ("Proposed Actions") intended to facilitate development at three Manhattan project sites—a proposed mixed-use development over the western section ("Western Rail Yard") of the MTA-Long Island Rail Road (LIRR) John D. Caemmerer Yard ("Caemmerer Rail Yard"), and permanently affordable residential development at two City-owned "Additional Housing Sites." As shown on Figure S-1**,** the Western Rail Yard ("Development Site") is bounded by Eleventh and Twelfth Avenues, West 30th and West 33rd Streets.[1] The mixed-use development on the Development Site ("Development Site Project") is expected to include commercial space (retail and office or hotel), residential units, a public school, open space, and accessory parking. The two Additional Housing Sites (also shown in Figure S-1) are located near Tenth Avenue and West 48th Street ("Tenth Avenue Site") and Ninth Avenue near West 54th Street ("Ninth Avenue Site"). Together, these three project sites comprise approximately 14 acres.

The Proposed Actions include: (1) the lease of, with option to purchase, the air space over the Western Rail Yard and related property interests by MTA to a development entity selected by MTA to carry out such mixed-use development; this entity is the conditionally designated developer, RG WRY LLC, a joint venture of the Related Companies and Goldman Sachs ("Developer"); (2) zoning map and text amendments, and accessory parking special permits by the City of New York pursuant to the Uniform Land Use Review Procedure (ULURP); (3) the establishment of new legal grades on West 33rd Street between Eleventh and Twelfth Avenues; (4) the site selection by the New York City School Construction Authority (SCA) for an elementary/intermediate public school ("PS/IS school") on the Western Rail Yard; (5) the partial release of MTA's interest in the Ninth Avenue Site; and (6) the disposition, zoning text map change, and zoning map change by the City of New York pursuant to ULURP for the Ninth and Tenth Avenue Sites to facilitate the development of permanently affordable housing at these two Additional Housing Sites.

This Environmental Impact Statement (EIS) has been prepared by the co-lead agencies pursuant to the requirements of the New York State Environmental Quality Review Act (SEQRA) and City Environmental Quality Review (CEQR).

This Draft EIS (DEIS) examines a full range of potential environmental impacts: land use, zoning and public policy; socioeconomic conditions; community facilities and services; open

[1] The easterly portion of the Caemmerer Rail Yard ("Eastern Rail Yard") was zoned for mixed-use development when the Special Hudson Yards District was created in 2005. This site is not included in the actions addressed in this EIS and is included in the EIS analyses as a future background "No Build" project.



Location of Proposed Actions
Figure S-1

historic resources; urban design and visual resources; neighborhood character; natural resources; hazardous materials; waterfront revitalization; infrastructure; solid waste and sanitation services; traffic and parking; transit and pedestrians; air quality; noise; construction; and public health. As summarized below, and described in detail in this DEIS, the Proposed Actions would have significant adverse environmental impacts on public child care, open space, shadows, traffic, transit, and pedestrian conditions in the vicinity of the Development Site. With respect to schools, there could be a temporary significant adverse impact on elementary schools for an estimated two-year period. Despite these impacts, the Proposed Actions would have an overall beneficial effect on neighborhood character at the Development Site, Additional Housing Sites, and the areas surrounding them. Replacing a large, underutilized, and inaccessible site with a mix of uses, open spaces, (including the High Line, which would be preserved as passive open space on the Development Site) and streets would complement the emerging development in the Hudson Yards and West Chelsea neighborhoods, and would provide a link in the system of open spaces now under development. Construction of permanently affordable housing on the sites would support the Clinton neighborhood by emphasizing its residential character and helping to preserve its mixed-income character. Thus, the Proposed Actions would succeed in meeting project goals—to provide much-needed funds for MTA's capital program, to create a transit-oriented development, to accommodate anticipated population and employment growth in Manhattan, to enhance the vitality of the Hudson Yards area, to add to the system of public open spaces now emerging in the Hudson Yards and West Chelsea areas, to help meet the need for affordable housing, and to expand the City's tax base.

The DEIS also considers a range of alternatives to the Proposed Actions—No Action, No Unmitigated Significant Adverse Impact, Reduced Density, and Tri-Generation Energy Supply. Neither the No Action Alternative nor the No Unmitigated Significant Adverse Impact Alternative would meet the goals and objectives of the Proposed Actions. The Reduced Density Alternative would have most of the significant adverse environmental impacts of the Proposed Actions, but would not fully achieve the goals and objectives of the Proposed Actions. The Tri-Generation Energy Supply Alternative, while requiring somewhat greater initial investment, would meet the goals and objectives of the Proposed Actions and offer the opportunity to achieve greater energy efficiency and reduced greenhouse gas emissions.

B. PROJECT DESCRIPTION

PURPOSE AND NEED OF THE PROPOSED ACTIONS

Productive use of the air space above the entire Caemmerer Rail Yard has been a long-standing goal of both MTA and the City. When the Yard was redeveloped in 1986, its facilities were organized to accommodate the columns that future development would require, the net proceeds from which were to help fund MTA's mission to provide safe, reliable, and convenient public transportation in a cost effective manner. To advance this goal, the eastern portion of the Caemmerer Rail Yard ("Eastern Rail Yard") was rezoned for commercial and residential development in 2005. The principal purpose of the Proposed Actions is to further advance this goal by allowing development of the Western Rail Yard as well. The LIRR's operations in the Caemmerer Rail Yard are essential to the entire rail system and the proper functioning of New York City's Pennsylvania Station ("Penn Station"). Accordingly, a related MTA objective is that the development of the Western Rail Yard must be planned carefully, so that a platform that includes building foundations can be built while keeping interruptions of yard operations to a minimum. Development over the Western Rail Yard would also improve and capitalize on new

transit access (the No. 7 subway line), provide new housing for current and future residents while making it more affordable and sustainable, utilize land already owned by the public, and provide new open spaces.

The City's policy to encourage development over the Western Rail Yard has several purposes: (1) to pursue transit-oriented development opportunities; (2) to accommodate projected long-term growth in population and employment in Manhattan; (3) to enhance the vitality of the Hudson Yards area by filling a prominent underutilized site with an active mix of urban land uses; (4) to create a new 24-hour neighborhood that complements the adjacent built-up areas of Midtown and Chelsea, and the emerging development in West Chelsea and the Hudson Yards area; (5) to add to the system of public open spaces now emerging in the Hudson Yards area; (6) to help meet the need for affordable housing for New York City residents and workers; and (7) to expand the City's tax base.

GOALS OF THE PROPOSED ACTIONS

Consistent with the purpose and need for the Proposed Actions, MTA and the City have set forth a number of goals for the development of the Western Rail Yard and the Additional Housing Sites. These goals for the Proposed Actions are to:

- Maximize value and revenue for MTA's capital financial plan;
- Maintain safe, continuous, and uninterrupted LIRR operations at the Development Site;
- Further the redevelopment and revitalization of the Hudson Yards area in accordance with sound planning objectives;
- Develop a mix of uses on the Development Site that will contribute to the economic, social, and recreational life of the Hudson Yards area and the City;
- Create affordable housing to support the future growth of the City as a place for residents of all economic levels;
- Provide new open space and enhanced connections to existing and proposed open space;
- Facilitate the redevelopment of the High Line as public open space;
- Develop the Development Site and the Additional Housing Sites in accordance with sustainable design principles;
- Provide opportunities for jobs and economic development;
- Provide opportunities for world class architecture; and
- Continue to expand the City's tax base.

PLANNING PROCESS

HISTORY OF THE SITE AND PLANNING BACKGROUND

The proposal to redevelop the Development Site culminates years of planning and proposals for redeveloping the entire Caemmerer Rail Yard. The Triborough Bridge and Tunnel Authority (TBTA), an affiliate of the MTA, acquired the site in 1980 and in 1986 redeveloped the Caemmerer Rail Yard as a storage and maintenance complex for the LIRR's electric commuter car fleet. During this same period, the TBTA and the New York State Urban Development Corporation developed the Jacob K. Javits Convention and Exposition Center ("Convention Center") just north of the Development Site.

The first step towards future development over the Development Site was a proposal to relocate Madison Square Garden there. Although the Garden ultimately decided not to move, its planning effort identified a broad range of public benefits that could result from such development, including new housing, parks and waterfront recreation, support uses to enhance the then relatively new Convention Center's marketability, and office space to accommodate large employers who require large development sites.

More recently, the area near the Development Site has been the subject of various planning, rezoning, and redevelopment efforts by the City, MTA, and other entities. The 2005 Hudson Yards rezoning instituted a major rezoning of the entire Hudson Yards area, including the Eastern Rail Yard, to accommodate a mix of uses and densities throughout the Far West Side, provide new open space, and extend the No. 7 subway line. In connection with the Hudson Yards project, the Development Site, which was not rezoned, was the proposed location for a multi-use stadium for the New York Jets football team, a proposal that was ultimately not approved and was later withdrawn.

REQUESTS FOR PROPOSALS

In July 2007, the MTA issued a request for proposals (RFP) for development over the Development Site. (A separate RFP was also issued by the MTA for development of the Eastern Rail Yard in accordance with applicable zoning.) In addition to the public goals stated above, the RFP set forth a goal to promote excellence in architecture, urban design, and sustainability in keeping with the City's vision for the economic development and revitalization of the Far West Midtown/Hudson Yards area. The RFP contained Design Guidelines ("guidelines") for proposals for the Western Rail Yard, formulated by the City (including the New York City Department of City Planning [DCP]), the Hudson Yards Development Corporation (HYDC), and MTA. The guidelines contemplated a floor area of 10 times lot size (FAR 10), plus density bonuses for providing permanently affordable housing and a floor area allowance for a school. Several principles were to guide the proposed development: (1) include a variety of uses; (2) integrate the development into the surrounding neighborhoods; (3) organize the buildings around a central open space; (4) create visual connections to the High Line Park and to Hudson River Park; (5) vary the building heights; and (6) create a continuous streetscape to offer a varied pedestrian experience.

On October 11, 2007, MTA received five proposals for the Development Site. After a request to all proposers, MTA received supplemental submissions from four of the five proposers on February 26, 2008. A selection committee comprising representatives of the MTA and HYDC found that all the proposals adhered to the basic mix of uses (residential, commercial, retail, public school, and open space) specified in the RFP, and generally reflected its design guidelines. After negotiations with several of the proposers, the MTA reached a conditional designation agreement with the Developer for the development of plans for the Development Site on May 19, 2008.

PUBLIC OUTREACH

For a full year before issuing the RFP, MTA, and HYDC held workshops, forums, presentations, and meetings in consultation with various City and State agencies, civic groups, and other organizations, such as a Community Advisory Committee, a Technical Advisory Committee, New York City Police Department, New York City Fire Department, New York City and New York State Departments of Transportation, New York City Department of Parks and Recreation

(DPR), Community Board 4, the Manhattan Borough President, the Hell's Kitchen Neighborhood Association, the Real Estate Board of New York, Friends of the High Line, Friends of the Hudson River Park Trust, the American Institute of Architects, the American Planning Association, the Regional Plan Association, and the Convention Center Development Corporation.

After the RFP was issued, to ensure that public input informed the developer selection process, MTA hosted a public exhibition of the five proposals received from November 19, 2007 through December 3, 2007. The exhibit featured models and other presentation materials prepared by each of the five development teams. Public comments were accepted via comment cards at the exhibit and online at the MTA website, which also provided links to the development teams' websites, where additional material describing the proposals could be viewed. A broad range of comments were received from Community Board 4, elected officials, civic and community groups, and private individuals.

DESCRIPTION OF THE PROPOSED ACTIONS

As noted above, the Proposed Actions would result in development at three project sites—the Development Site on the Western Rail Yard, and two Additional Housing Sites primarily for affordable housing, as described below.

DEVELOPMENT SITE

Current Conditions

The Development Site comprises approximately 13 acres and occupies Block 676, Lot 3, in Community District 4. It is zoned M2-3 (see Figure S-2) for medium intensity industrial use, with a maximum FAR of 2.0. As noted above, the site is part of the Caemmerer Rail Yard, which provides midday storage for 35 commuter trains daily, with a capacity of 386 train cars on 30 tracks. The Development Site also contains several LIRR facilities including a railroad interior cleaning facility with a raised platform, a yard operations building, a transportation building, an emergency facilities building, and storage. The LIRR must have continuous access to the LIRR train yard and its facilities. In addition, Amtrak's Hudson River and Empire Line tunnels lie beneath the Development Site.

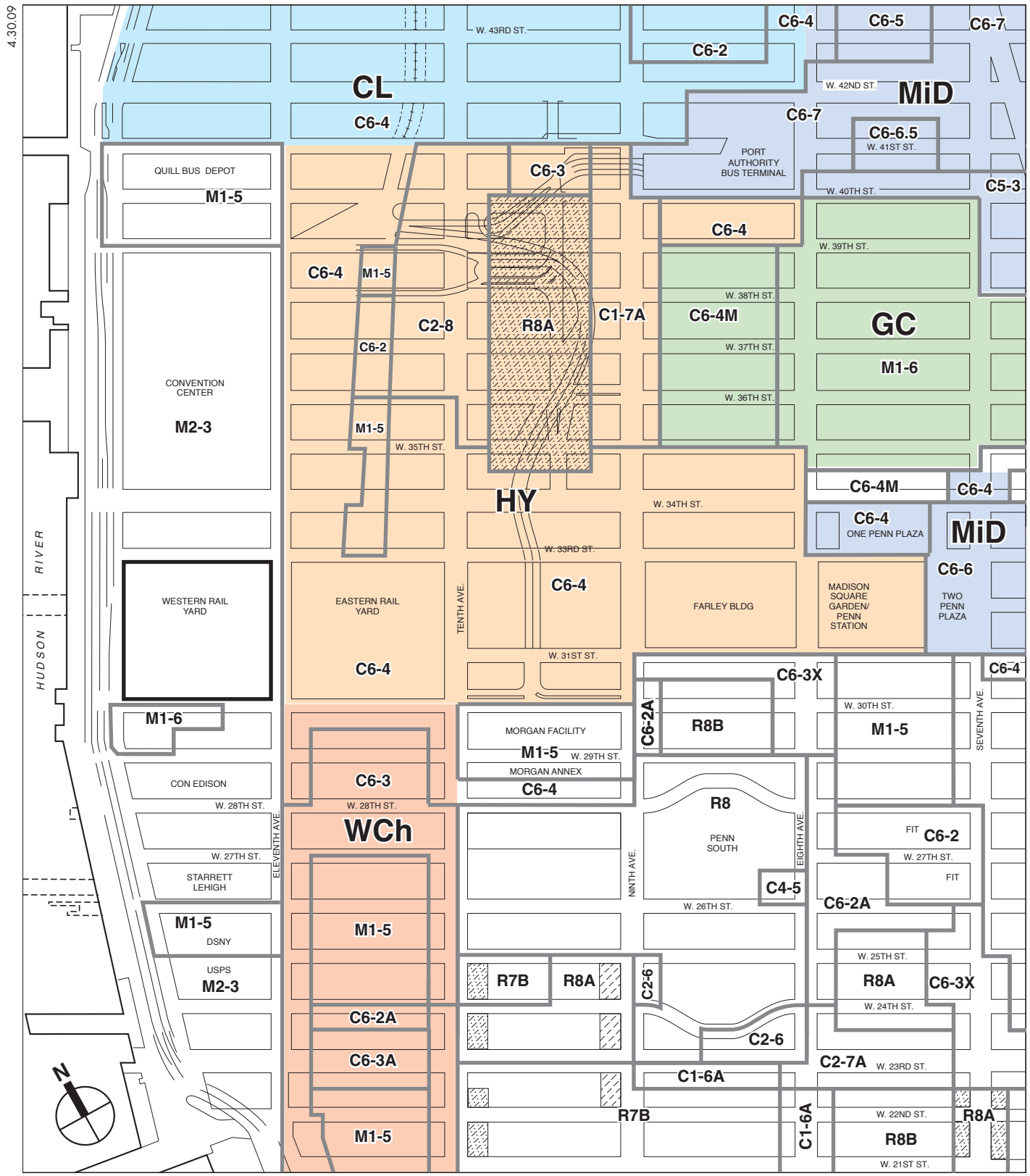
The southern section of the Development Site, between West 30th Street and the approximate location of West 31st Street, includes land ("terra firma") not occupied by LIRR operations. A private bus operator rents a portion of the terra firma and the New York City Department of Sanitation (DSNY) uses the rest for special waste drop-off, vehicle storage, truck fueling, a storage shed, and a trailer office. These tenants would vacate the Development Site prior to construction of the Development Site Project.

The High Line runs along the western and southern boundaries of the Development Site (i.e., Twelfth Avenue and West 30th Street). The High Line is currently being adaptively reused to provide a new linear public open space extending south from West 30th Street to Gansevoort Street, primarily between Tenth and Eleventh Avenues.

Proposed Actions

Zoning Actions

The existing M2-3 zoning does not permit residential use on the Development Site and greatly limits the density of any use that could be built there. MTA, as a State agency, is not bound by



WESTERN **RAIL YARD**

Development Site
Existing Zoning
Figure S-2

local zoning, but has agreed that redevelopment of the Development Site will proceed pursuant to rezoning and other related land use actions, subject to the City's land use review procedures and policies.

If approved, the Development Site would become a new subdistrict ("Subdistrict F") of the Special Hudson Yards District (see Figure S-3) in a New York City Zoning Resolution, with an underlying zoning of C6-4. Rezoning to a C6-4 district would allow for a mixture of commercial, residential, and community facility uses at a maximum FAR of 10.0. Special provisions of Subdistrict F would include a floor area bonus of five percent for each residential building, if permanently affordable housing is provided, and a floor area exemption for construction of a PS/IS school on the Development Site.

Zoning controls established specifically for Subdistrict F would regulate building envelopes, publicly accessible open space areas, streetwall controls, retail continuity, and transparency. (The proposed zoning text is provided in Appendix A.) Specifically, within the commercial building on the northeast corner of the Development Site, floor plates located above 250 feet could not exceed 40,000 square feet. Floor plates located above the tower base in residential buildings could not exceed 12,000 square feet. Tower top rules would govern tower heights based on the location of a building on the Development Site, as well as its location in relation to other buildings on the site. Specific streetwall height requirements would be established for key frontages on Eleventh Avenue, West 30th and West 33rd Streets, and along the internal roadways on the north side of the northern internal roadway and the south side of the southern internal roadway.

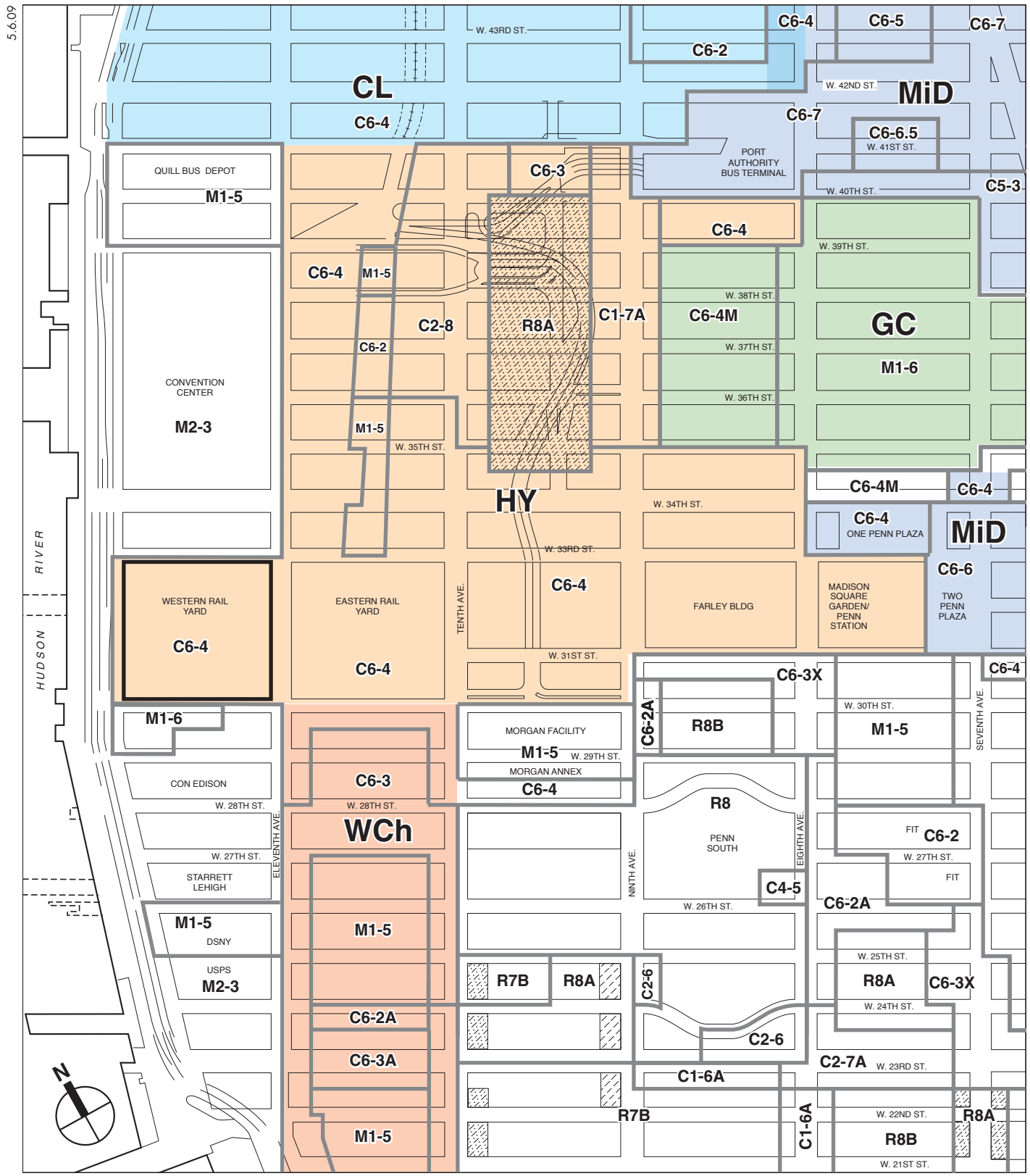
The proposed zoning controls would require ground-floor retail and transparency along specific portions of the Development Site, including Eleventh Avenue and West 30th Street and on the northern side of the proposed northern roadway and along the southern side of the proposed southern roadway. Sidewalk widths would be regulated for the proposed roadways within the Development Site, ranging from 15 to 25 feet.

The proposed zoning controls would divide the open space on the Development Site into a number of zones as follows: Western Open Space; Southwest Open Space; Central Open Space; the High Line; the Midblock Connection; and the Northeast Plaza. Specific features and core elements would be mandated for each zone and connections between zones would be required. Amenities in the open spaces would need to generally meet the privately owned public plaza standards of the Zoning Resolution. Design regulations would also be established for the private roadways and pedestrian ways on the site.

Parking regulations on the Development Site would be governed by the terms of Article I, Chapter 3 of the Zoning Resolution, which applies to Community Districts 1 through 8 in Manhattan. Based on these regulations, special permits are required to allow for the proposed 1,600 on-site accessory parking spaces.

Restrictive Declaration

The Developer would also enter into a Restrictive Declaration with the City which would incorporate commitments associated with the design and construction of the Development Site Project, including environmental controls during construction, noise attenuation, restrictions on fuel use and location of air intakes for ventilation systems, procedures for addressing hazardous materials on site, and commitments to sustainable development.



WESTERN **RAIL YARD**

Development Site
Proposed Zoning
Figure S-3

ADDITIONAL HOUSING SITES

Current Conditions

In addition to the affordable housing proposed at the Development Site, the Proposed Actions would also provide for the development, by sponsors to be selected by the City at a later date, of permanent affordable housing for low- to moderate-income families at the Tenth Avenue and Ninth Avenue Sites. Both of these sites are zoned R8, which permits residential use and certain community facilities up to an FAR of 6.02, and are both located within the Special Clinton District Preservation Area (see Figure S-4), which has specific requirements for lot coverage, yard, and building height. Also, a portion of the Tenth Avenue Site is located within the Other Area of the Special Clinton District.

The Tenth Avenue Site is located between West 48th and West 49th Streets, approximately 125 feet west of Tenth Avenue, which is approximately ¾-mile north of the Development Site. The approximately 20,000-sf development parcel occupies the western portion of Block 1077, Lot 29. Along its West 49th Street frontage, the development parcel is mapped with a C2-5 overlay, which permits local neighborhood commercial uses plus some additional uses, such as funeral homes and local repair services. The Tenth Avenue Site is occupied by a below-grade Amtrak railroad right-of-way for the Empire Line. The remainder of Lot 29 along its Tenth Avenue frontage is in use by the New York City Department of Environmental Protection (DEP) for construction of Water Tunnel No. 3; when that work is complete, the northern half of the Tenth Avenue frontage will be developed as public open space and the southern half will contain a permanent easement necessary for the operations and maintenance of DEP's Water Tunnel No. 3.

Under the regulations of the Preservation Area, the Tenth Avenue Site is subject to the 60 percent maximum lot coverage and 66 foot maximum height regulations for portions of lots beyond 100 feet on a wide street (a street 75 feet or more in width). However, under the regulations CPC may grant a special permit to modify the height restriction up to a maximum height of 99 feet.

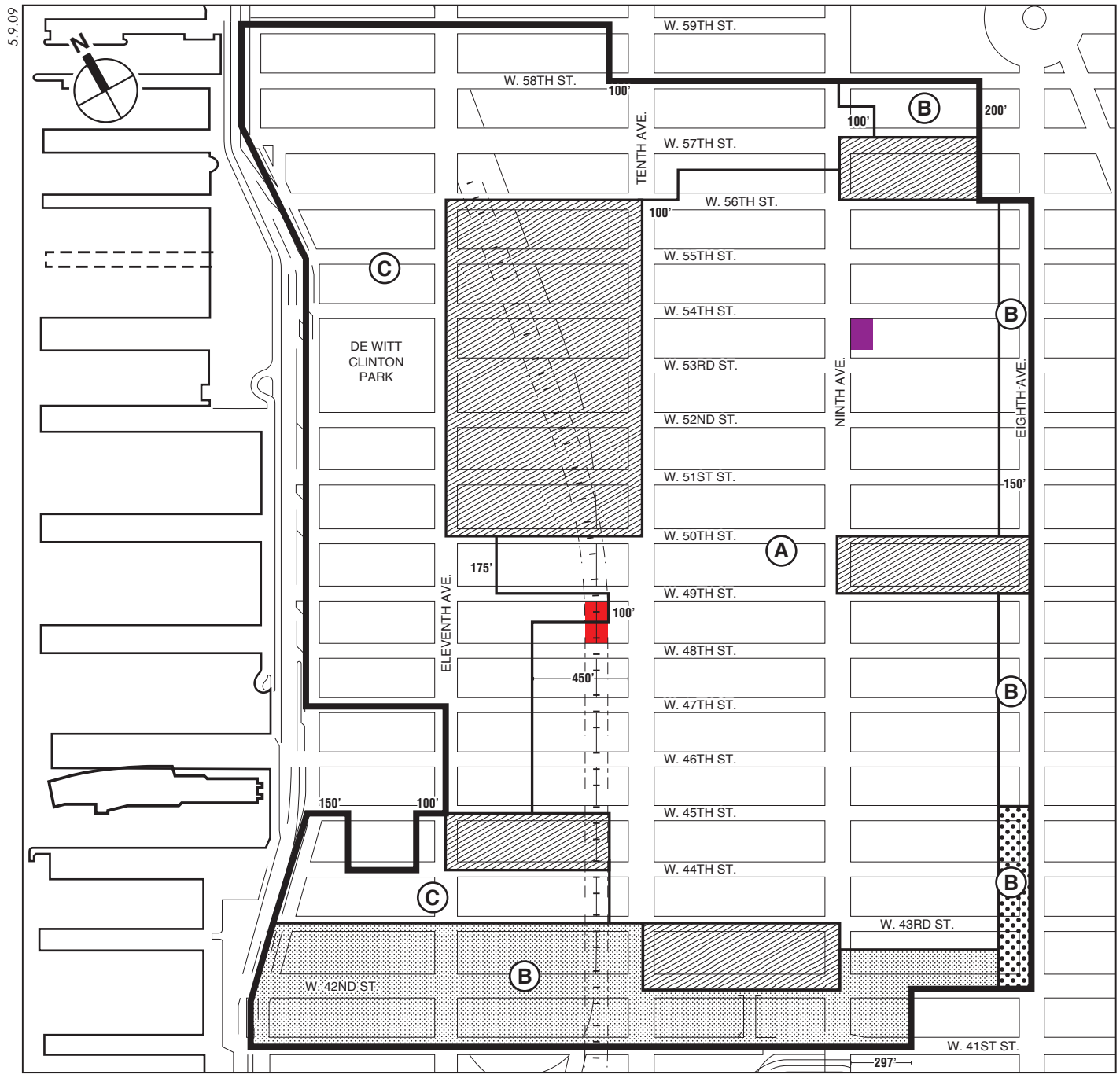
The Ninth Avenue Site is located on the southeast corner of West 54th Street and Ninth Avenue, approximately one mile north of the Development Site and⅓ -mile north of the Tenth Avenue Site. It occupies the Ninth Avenue frontage of Block 1044, Lot 3, which is currently a gravel parking lot for the adjoining MTA-New York City Transit (NYCT) building that occupies the rest of Lot 3, extending approximately 150 feet eastward along West 54th Street.

The 16,875-sf parcel is mapped with a C1-5 overlay on part of the site, which permits local neighborhood commercial uses in the underlying R8 district to an FAR of 2.0. Under the regulations of the Preservation Area, the Ninth Avenue Site is subject to the 70 percent maximum lot coverage and 85 foot maximum height regulations for portions of lots within 100 feet of a wide street and subject to the 60 percent maximum lot coverage and 66 foot maximum height regulations for portions of lots beyond 100 feet of a wide street. However, under the regulations CPC may grant a special permit to modify the height restriction up to a maximum height of 115 feet along the avenue frontage.

Proposed Actions

Zoning Actions

The Proposed Actions would include a zoning text map amendment to the Special Clinton District to include the Tenth Avenue Site and the lot area extending to Tenth Avenue in the Special Clinton District Other Area (see Figure S-5). In addition, the future developer (selected



Tenth Avenue Site

Ninth Avenue Site

Special Clinton District Boundary

Area Boundary

A *Preservation Area*

B *Perimeter Area*

B *Portion of Perimeter Area B also subject to additional 42nd Street Perimeter Area regulations*

B *Portion of Perimeter Area B also subject to Article VIII, Chapter I (Special Midtown District)*

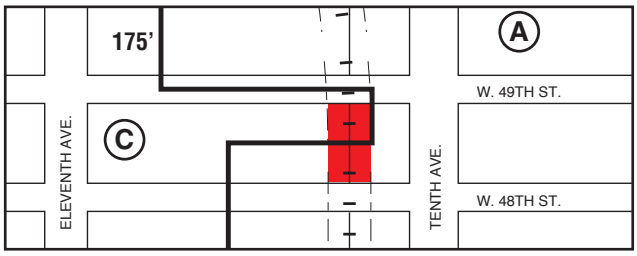
C *Other Area*

Excluded Area

0 200 500 FEET

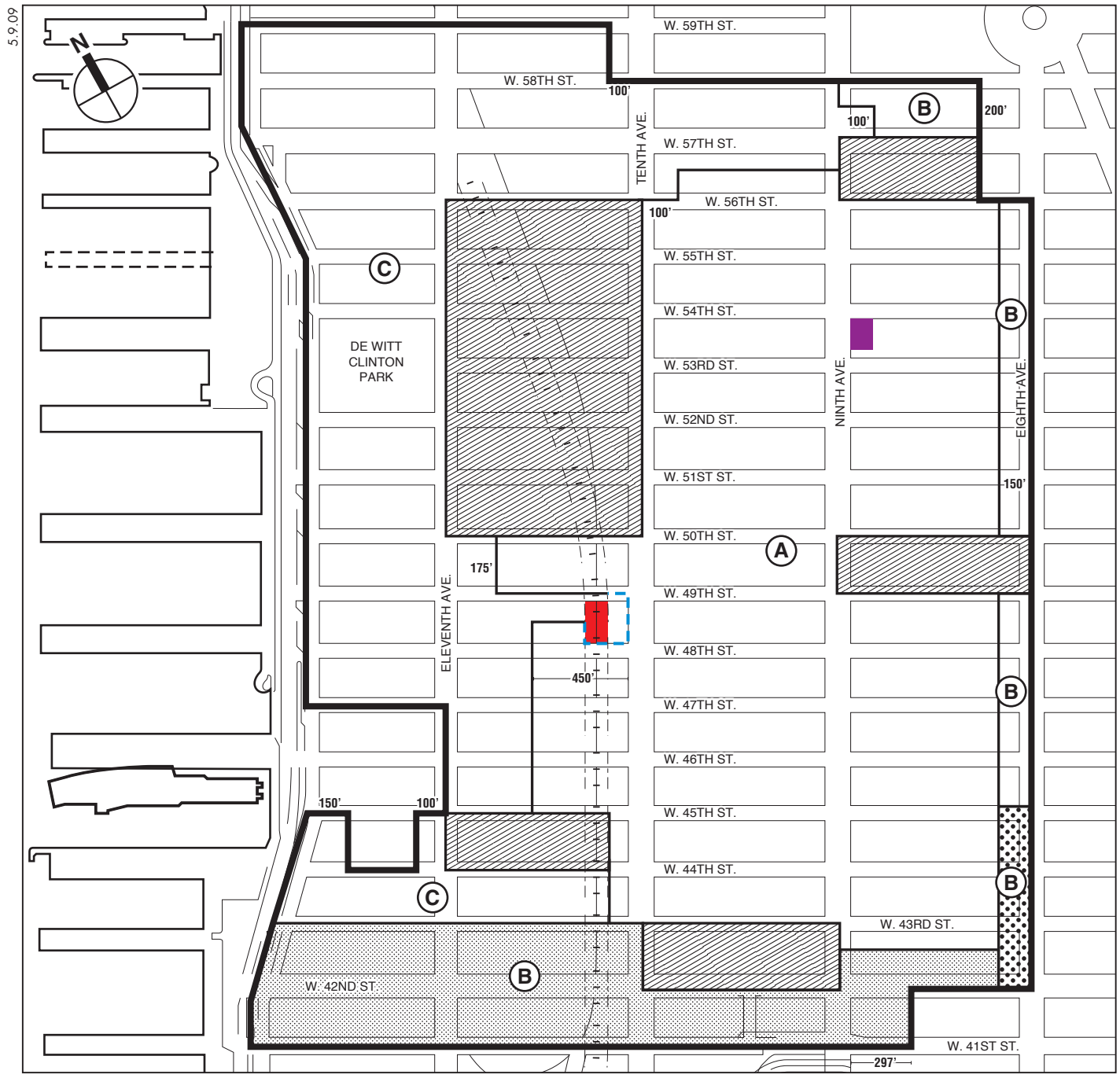
SCALE

Tenth Avenue Site Inset



WESTERN **RAIL YARD**

Additional Housing Sites
Existing Special Clinton District
Figure S-4



Special Clinton District Boundary

Area Boundary

A Preservation Area

B Perimeter Area

B Portion of Perimeter Area B also subject to additional 42nd Street Perimeter Area regulations

B Portion of Perimeter Area B also subject to Article VIII, Chapter I (Special Midtown District)

C Other Area

Excluded Area

Ninth Avenue Site

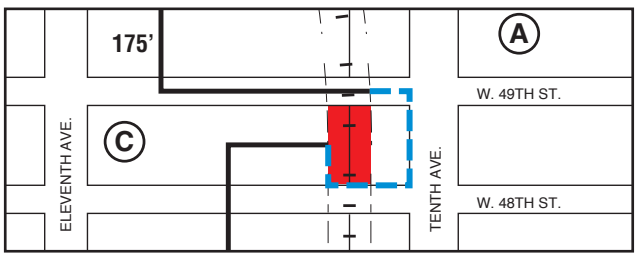
Tenth Avenue Site

Proposed Boundary of Other Area

0 200 500 FEET

SCALE

Project Site Inset



WESTERN **RAIL YARD**

Tenth Avenue Site
Proposed Special Clinton District
Figure S-5

through an RFP process as described below) would have to seek a special permit to build over the Amtrak railroad right-of-way and a special permit to allow the height of the building to rise from the Special Clinton District's as-of-right 66 feet to 99 feet.

For the Ninth Avenue site, the Proposed Actions would include a zoning map change to extend the C1-5 commercial overlay to within approximately 275 feet of Eighth Avenue (see Figure S-6). Development on the Ninth Avenue Site would require that the future developer seek a special permit to modify height requirements of the Special Clinton District Preservation Area, so that the full permitted FAR and full program of affordable housing and NYCT facilities could be constructed.

Memorandum of Understanding

A Memorandum of Understanding (MOU) between DCP, the New York City Department of Housing Preservation and Development (HPD), and DEP will incorporate commitments associated with the design and construction of the Additional Housing Sites, including environmental controls during construction, noise attenuation in the new buildings, and procedures for handling hazardous materials on site.

DEVELOPMENT PROGRAM

DEVELOPMENT SITE

Program Overview[1]

The Proposed Actions would allow for the construction of between 6.2-million to 6.4 million gross-square-foot (gsf) mixed-used development at the Development Site, including residential, commercial (retail and office or hotel space), a PS/IS school, publicly accessible open space, and enclosed accessory parking areas. The Proposed Actions would encourage a variety of housing types on the Development Site, including market rate condo and rental housing and affordable rental housing, with a floor area bonus to facilitate permanent affordable housing.

Residential development at the Development Site would range from approximately 3.8 million sf comprising 4,624 units to 4.8 million sf comprising 5,762 units. Twenty percent of all rental units on the Development Site would be affordable housing units under the terms of the applicable 80/20 program, with the provision of affordable units subject to (1) the allocation of sufficient tax-exempt bond cap or other equivalent low-cost financing to the Developer for each building of rental housing as and when required, and (2) the availability to the Developer of such other incentives, programs, exemptions, credits or abatements as are then generally available for the development of 80/20 housing in the City. The commercial development would include approximately 1.5 to 2.2 million sf of Class A office space or a 1,200-room convention-style hotel. In addition, there would be between 210,000 and 220,500 sf of retail space. The Development Site Project would also provide an approximately 120,000-sf PS/IS school with 420 elementary school seats and 330 intermediate school seats, approximately 5 acres of publicly accessible open space, and accessory parking.

[1] This section provides a general overview of the development program. For analysis purposes in the EIS, reasonable worst-case development scenarios have been identified for the Development Site, which are presented below under "Framework for Analysis."



Ninth Avenue Site
Proposed Zoning
Figure S-6

There would be a total of up to 1,600 on-site accessory parking spaces comprising approximately 1,330 accessory residential spaces and 270 accessory commercial spaces. As currently planned, the terra firma portion of the site could accommodate up to approximately 850 parking spaces. The remaining 750 spaces would be constructed on the platform, subject to review and approval by MTA and LIRR.

Site Planning, Bulk and Massing

The planning and design of the Development Site would follow the principles set forth in the RFP, which states that: the development should include a variety of uses and should be integrated into the surrounding neighborhoods; the buildings should be organized around a central open space, and there should be visual connections to the High Line Park and to Hudson River Park; the building heights should vary; the streetscape should be continuous and provide a varied pedestrian experience; and the proposal should include sustainable features. In accordance with these principles and with the proposed new zoning regulations, the following objectives were established to guide the site design:

- Reintroduce the New York City grid—Reintroduce an internal street system generally in line with West 31st and West 32nd Streets, to reduce the "superblock" effect of the Western Rail Yard and help to integrate this site into the rest of the neighborhood.
- Develop a sequence of publicly accessible open spaces—The Development Site sits in a key position in relation to surrounding open spaces, both planned and existing, that will surround it, and the project's own open space would be a critical link in connecting these spaces into the larger public open space network. (See Figure S-7).
- Place denser development on the eastern portion of the Development Site and less dense development on the western portion of the site.
- Generate street vibrancy—An active streetscape and pedestrian-friendly environment is planned for the internal roadways through the creation of ground-floor retail, street trees, and outdoor seating areas. Ground-floor retail would be required in the buildings along Eleventh Avenue and West 30th Street.

The Developer has prepared an illustrative site plan consistent with the proposed zoning regulations that also complements the design currently planned for the Eastern Rail Yard. Although this plan reflects the Developer's current approach to site planning, it must be considered illustrative, since it is not fully designed and may change based on market conditions and a more detailed design process. The illustrative site plan includes one commercial building in the northeast corner of the Development Site, three residential buildings, three mixed-use, primarily residential buildings with ground-floor retail and/or a PS/IS school, and one building that would either be residential or mixed use (see Figure S-8). It is anticipated that two residential buildings (WR-6 and WR-7) would be located west of the commercial building (WC-1) along West 33rd Street, and one residential building (WR-4) would be located in the southwest portion of the Development Site. The plan currently proposes the PS/IS school and ground-floor retail in the base of a building, with two residential towers above, in the southeast portion of the Development Site along West 30th Street (WR-2 and WR-3). Just north of this building, another mixed-use residential building would stand along Eleventh Avenue (WR-1) between the two new roadways. The residential building (WR-5) west of WR-1 would also include some ground-floor retail. The High Line is proposed to be integrated into the overall site plan for the Development Site and adaptively reused to provide passive open space with connections to other on site open spaces.

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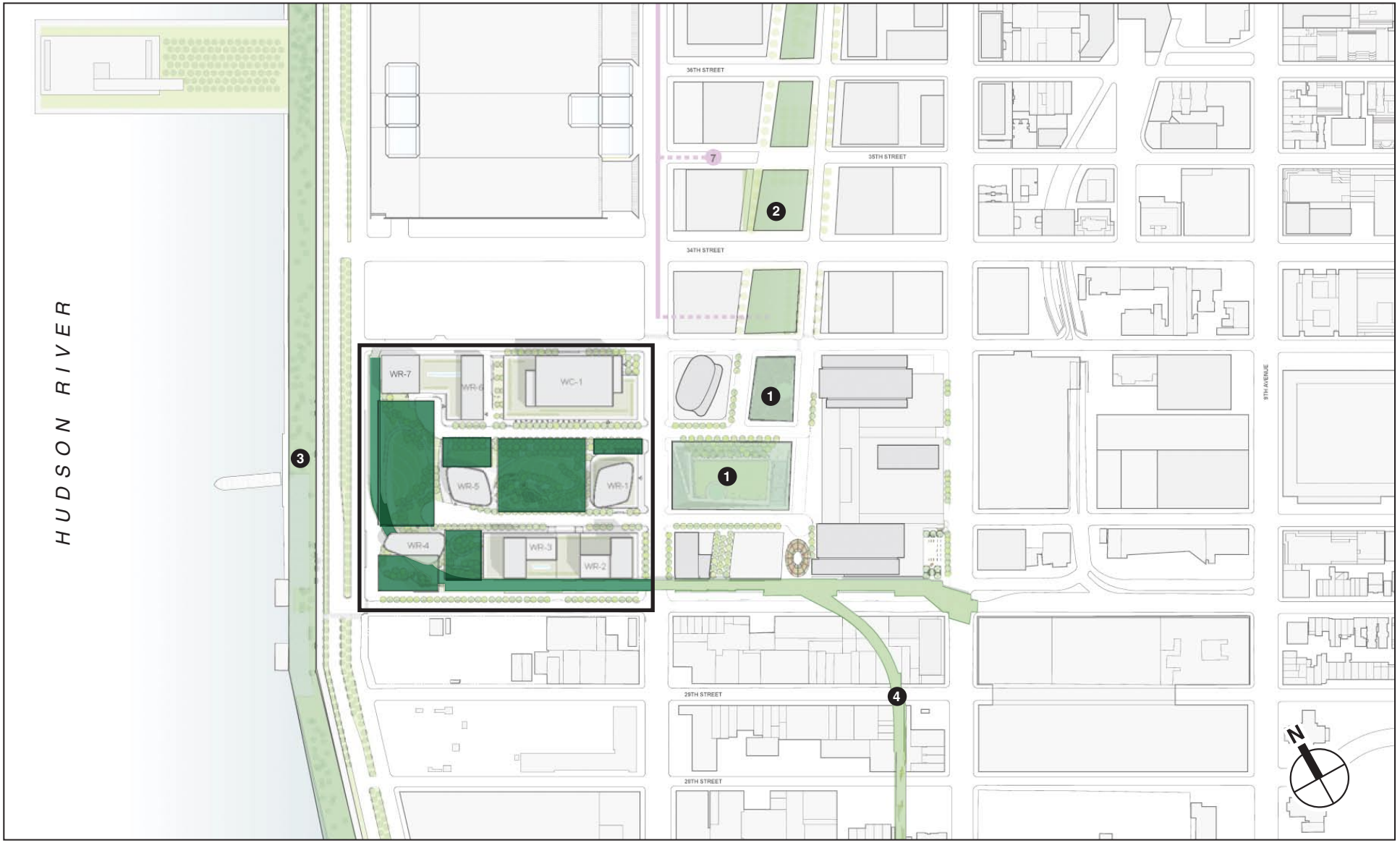

Development Site

Existing open space and open space to be developed in the future without the Proposed Actions

Proposed Open Space

1 *Eastern Rail Yard Open Space*

2 *Hudson Park*

3 *Hudson River Park*

4 *High Line Park*

0 200 500 FEET

SCALE

WESTERN **RAIL YARD**

Open Space Connections

Figure S-7



Approximate Boundary of Proposed Platform

Approximate Boundary of Terra Firma Area

Development Site
Illustrative Site Plan
Figure S-8

As required in the proposed zoning, building massing and heights would gradually decrease from Eleventh Avenue and West 33rd Street to Twelfth Avenue and West 30th Street. The tallest building on the site would be the commercial building in the northeast corner. Taller residential buildings are proposed generally in the eastern and northern portions of the Development Site, and shorter residential buildings in the southwest quadrant of the Development Site (see Figure S-9). Building heights would generally range from approximately 40 to 70 stories, or 350 to 950 feet. WC-1 would be the tallest, at 850 to 950 feet, WR-6 would be between 650 and 810 feet, and WR-7 would be between 550 and 710 feet.

South of the commercial building on Eleventh Avenue, WR-1 would be approximately 700 to 800 feet high. To its west WR-5 would be shorter at approximately 500 to 700 feet. Along West 30th Street, buildings would also decrease in height from Eleventh Avenue to Twelfth Avenue. The tallest building at the southern portion of the Development Site would be located at Eleventh Avenue, at approximately 650 to 810 feet (WR-2). Directly west of this mixed-use building would be an approximately 550 to 710-foot-tall mixed-use building (WR-3). The shortest building on the site would be at the southwest corner of the site, at a maximum height of 450 feet (WR-4).

Circulation and Parking

Two parallel vehicular roadways into the site would function as unmapped extensions of West 32nd and West 31st Streets. Both roadways would be accessed from Eleventh Avenue and would continue west with cul-de-sac drop offs to provide vehicular access to the buildings further west. The northern roadway is intended to be a two-way vehicle lane that would provide passenger side drop off and accessibility to the commercial building and residential buildings on the north side of the site. The southern roadway is also intended to be a two-way vehicular roadway and would provide access to the residential buildings in the southern and western portions of the site, as well as to the retail uses at the base of these buildings. Although these roadways would not be mapped as City streets, they would be operated with full public access, sidewalks, and street-level uses.

Access to parking would be along West 30th Street and West 33rd Streets, the northern and southern roadways (see Figure S-10). An entrance on West 33rd Street would also provide access to the loading areas. There would also be two access points to the LIRR facilities, one on West 33rd Street and the other on Twelfth Avenue. In addition, to provide better service access to and from the level of the building platform, West 33rd Street would be rebuilt to an appropriate profile and elevation between Eleventh and Twelfth Avenues. The design and construction of this profile change would be in coordination with the platform design and construction.

Open Space

Approximately 5 acres of publicly accessible open space are proposed throughout the site (see Figure S-10). This open space is anticipated to provide lawns, landscaped areas, walking paths, seating areas, plazas, and a dog run. The Developer has committed to build two playgrounds on the Development Site; however the final locations have not been determined. As described above, the proposed zoning text amendment would divide the open spaces on the Development Site into zones with core open space elements defined for each. The proposed zoning would mandate specific features and core elements and connection requirements between zones. Amenities in open spaces would need to generally meet the privately owned public plaza standards in the zoning resolution.

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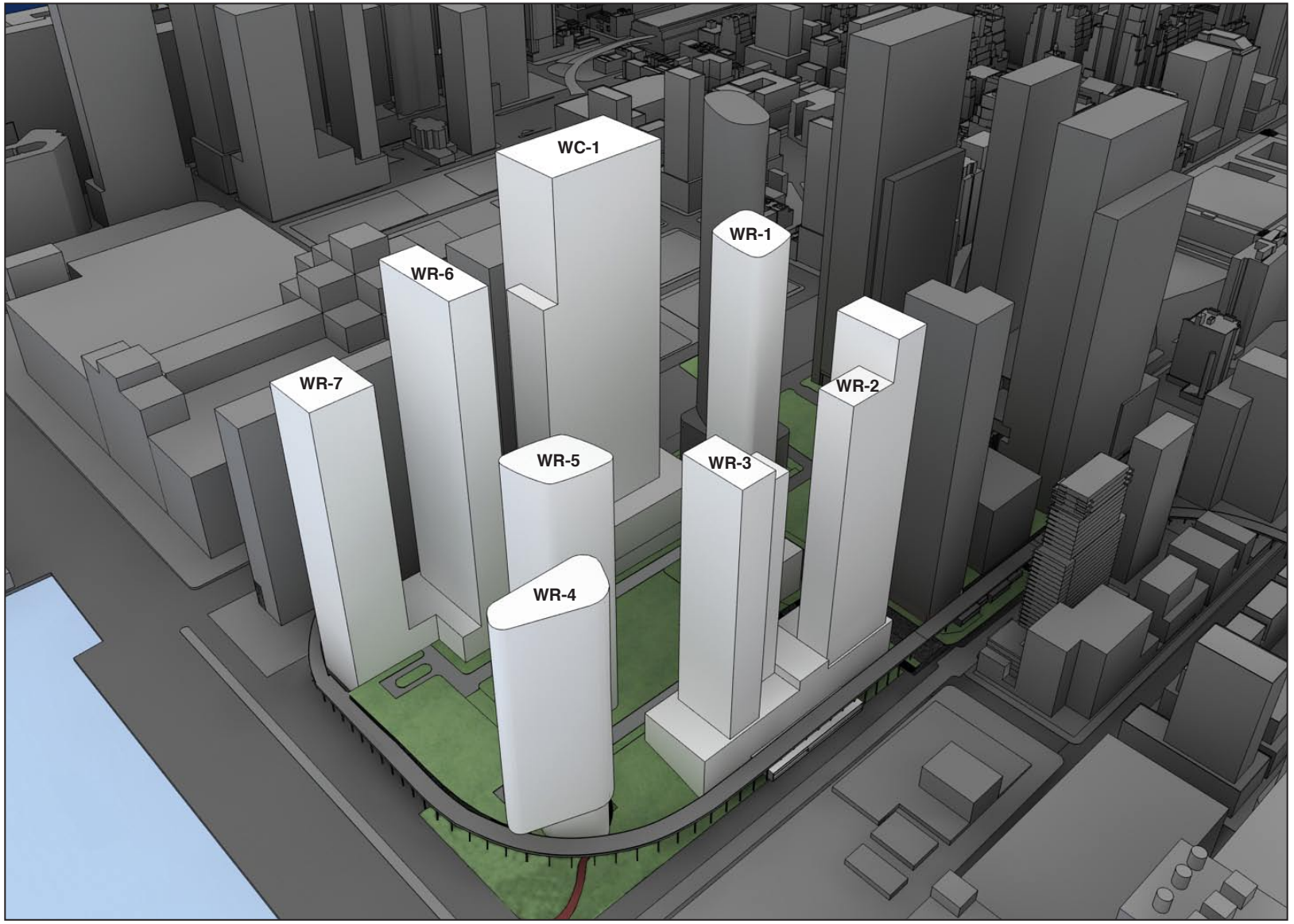
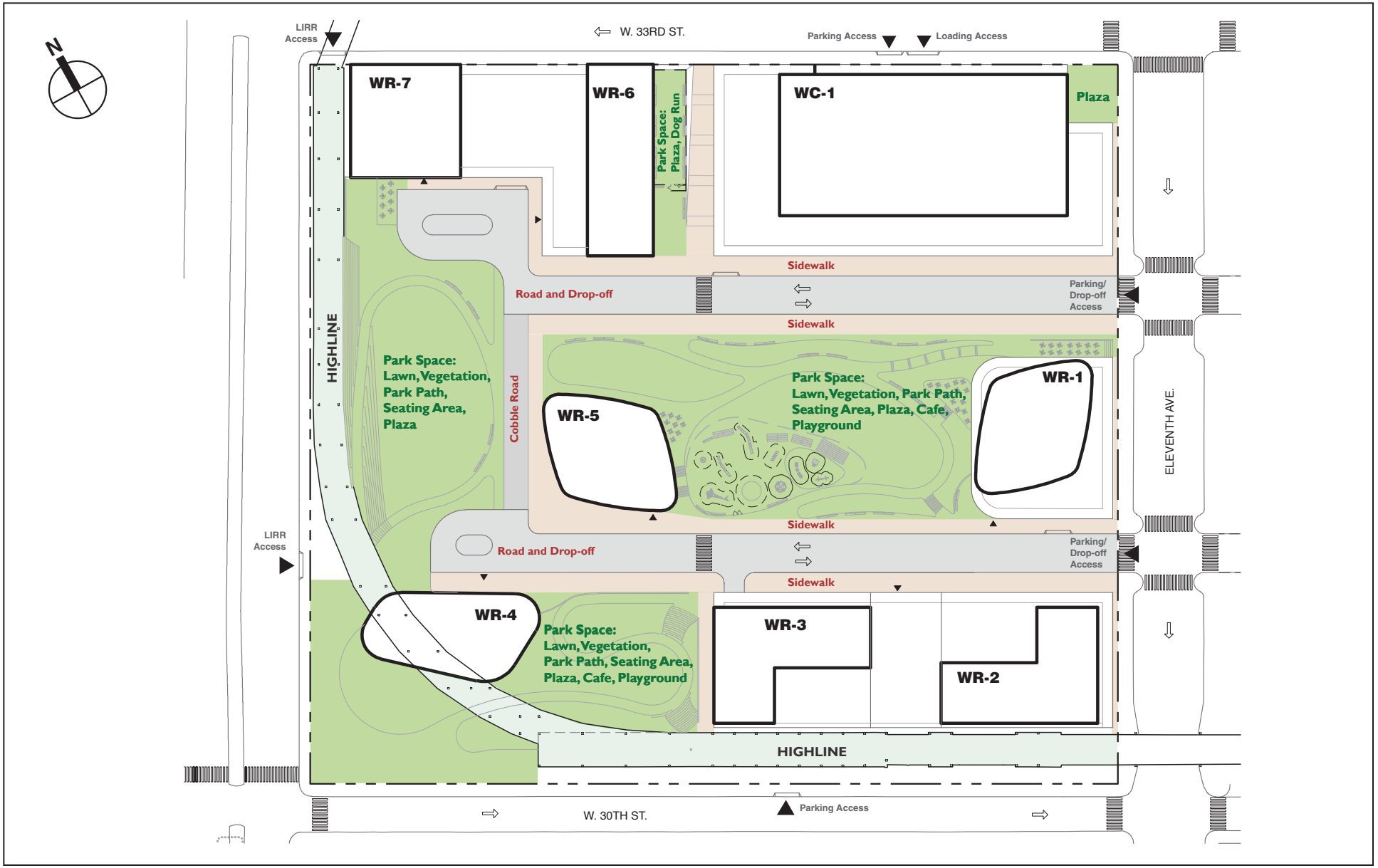


Illustrative Massing Diagram of Development Site

Figure S-9



Development Site Boundary

Proposed Access Point

Development Site: 2019 Proposed Open Space and Access

Figure S-10

In the eastern portion of the Development Site, between the northern and southern vehicular roadways, an approximately 1.6-acre central open space is proposed in the illustrative site plan. An "allée," a pedestrian pathway lined with trees on both sides, is proposed at the northern portion of this open space adjacent to the northern vehicular roadway, to draw residents and visitors into the center of the site. A seating area, plaza, café, and playground are currently contemplated within the central open space. This central open space is intended to be the highest point on the Development Site, which would enable people in this area to see above the High Line to the Hudson River. In the western portion of the Development Site, between the residential buildings to the north and south, an approximately 1.1-acre waterfront lawn is proposed that would support active and passive recreation. Current plans include amphitheater seating along the western portion of this space, which could be used for seating for outdoor events and as steps to access the High Line. A tiered open space, which is proposed at the southwest corner of the site, would lead down from the central open space, and continue under the High Line to street level on West 30th Street and Twelfth Avenue. It is proposed that the portion of the space between residential buildings WR-3 and WR-4 would include a playground, seating area, plaza, and café.

There would be two smaller open space areas along West 33rd Street— an approximately 2,500-sf plaza at the northeast corner of the Development Site and an approximately 6,800-sf open space with a pedestrian plaza and a dog run between residential building WR-6 and commercial building WC-1.

As a result of the Proposed Actions, the portion of the High Line on the Development Site would be adaptively reused as 0.99 acres of elevated passive open space. This open space would provide a pedestrian pathway that would run parallel to Twelfth Avenue before curving to the east and running parallel to West 30th Street. This open space would then connect to the portion of the High Line on the Eastern Rail Yard (to be developed in the Future without the Proposed Actions) to the east of the Development Site; from there it would connect to the High Line Park to the south of West 30th Street. As discussed above, access to the High Line is also proposed from the waterfront lawn.

Sustainable Design

The Developer proposes several sustainable, green components for the Development Site to promote water and energy conservation, as follows:

- Stormwater would be captured from building roofs and used for other building uses; buildings without stormwater capture would employ green roof technology where feasible.
- Water-conserving dishwashers and clothes washers would be installed in the residential units; and water-conserving toilets and faucets would be installed in all buildings.
- Covered and secure bike storage would be provided.
- Commitment to seek Leadership in Energy and Environmental Design (LEED) Silver certification for all buildings.
- During construction the Developer would institute diesel emission reduction measures for construction equipment and non-road vehicles and institute practices to minimize the discharge of untreated concrete-contaminated water.

Construction

At the Development Site, approximately two-thirds of the development would be constructed over the railroad tracks and LIRR facilities buildings and would require the construction of a platform. The remainder of the development would be on terra firma. Some of the existing LIRR on-site facilities would be temporarily relocated to facilitate construction. Although there would be temporary or periodic track outages during construction, there would be no disruption of LIRR passenger service.

ADDITIONAL HOUSING SITES

Development Process

Upon completion of the environmental and land use review processes, and MTA's entering into a lease, with option to purchase, for the Development Site with the Developer, HPD would issue an RFP inviting developers to submit development proposals for the Ninth Avenue Site. The RFP would be in accordance with the Mayor's New Housing Marketplace Plan, which commits to the new construction or rehabilitation of 165,000 affordable housing units by 2013. Once proposals are submitted, they would be examined in a competitive review process in the areas of planning, finance, and design. Following this process, a developer would be selected, and special permits and any additional land use reviews, as necessary, for development of the sites would be undertaken.

Development of the Tenth Avenue Site would follow a similar RFP process. The adjacent land fronting on Tenth Avenue is owned by the City and is being used by DEP for the construction of the Water Tunnel No. 3 Project. Therefore, construction of the Tenth Avenue Site would not be allowed until after DEP completed its use of the adjacent site—scheduled for mid-2013 or 2014.

Development Program

It is anticipated that the building on the Tenth Avenue Site would be approximately 11 stories (or 99 feet in height) and would include approximately 176,300 gsf of residential space (or about 204 permanently affordable units) and 10,800 gsf of retail. Ground-floor retail would front West 49th Street; publicly accessible open space would be developed in the Future without the Proposed Actions directly east of the northern half of the building (see Figure S-11).

Most of the Ninth Avenue Site would be made available for affordable housing development, with a portion reserved for use by NYCT. This site would include approximately 96,300 gsf of residential space (or approximately 108 permanently affordable units), 6,750 gsf of retail space, and 30,000 gsf of office space that would be used for NYCT training facilities. The base of the building would be six stories, with the portion of the building fronting Ninth Avenue rising to 115 feet in height. The midblock portion of the building would be 66 feet high (see Figure S-12). The first floor of the building would include ground-floor retail fronting Ninth Avenue, a residential lobby and office space on the remainder of the site. There would also be NYCT office space on the second floor. The remainder of the building would be residential space. This building would also allow for NYCT below-grade parking for up to 15 emergency vehicles.

Open Space

Development at the Additional Housing Sites would also comply with the recreation space requirements of the New York City Zoning Resolution Quality Housing Program. To comply

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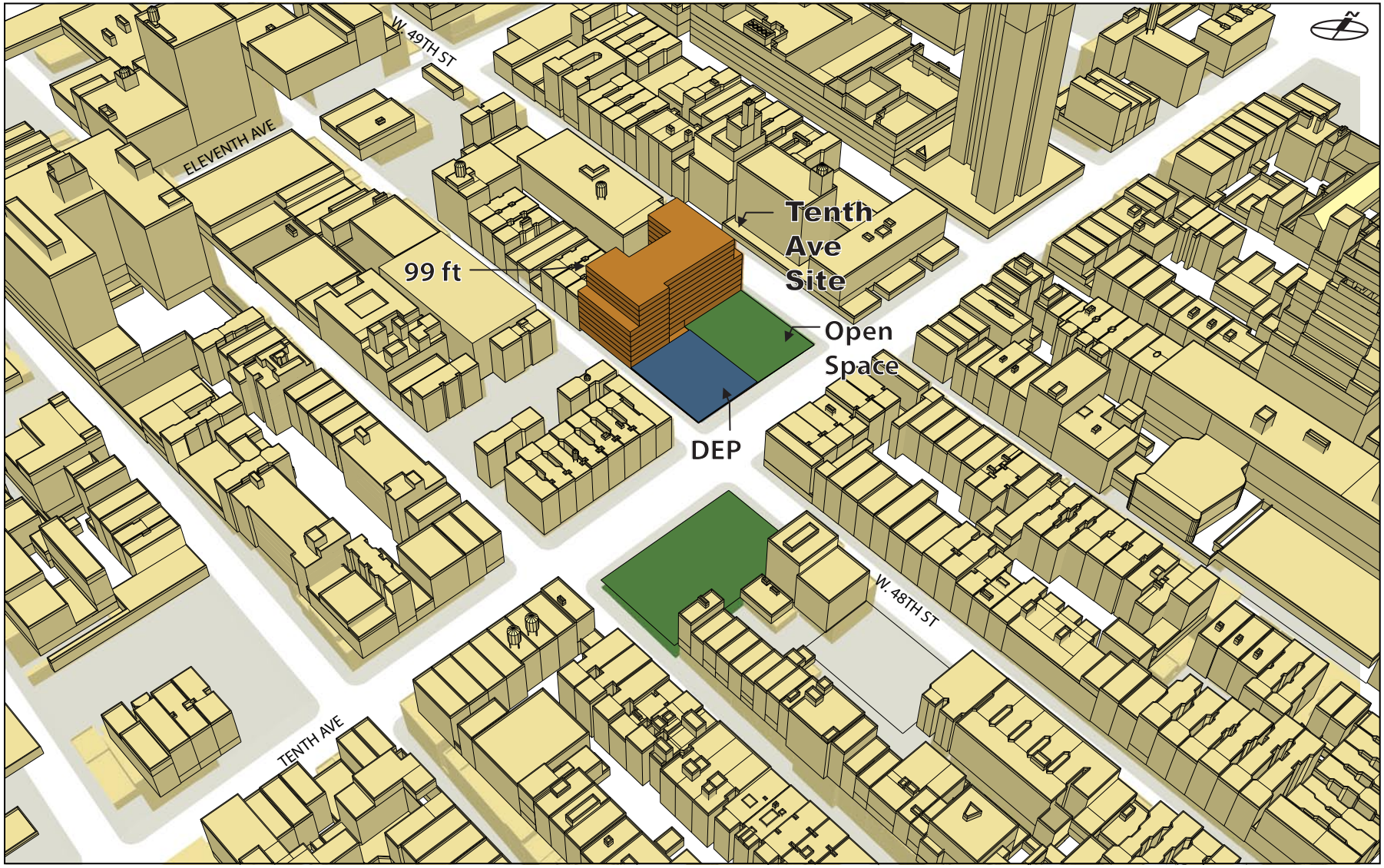

Tenth Avenue Site
Massing Model - Looking North
Figure S-11

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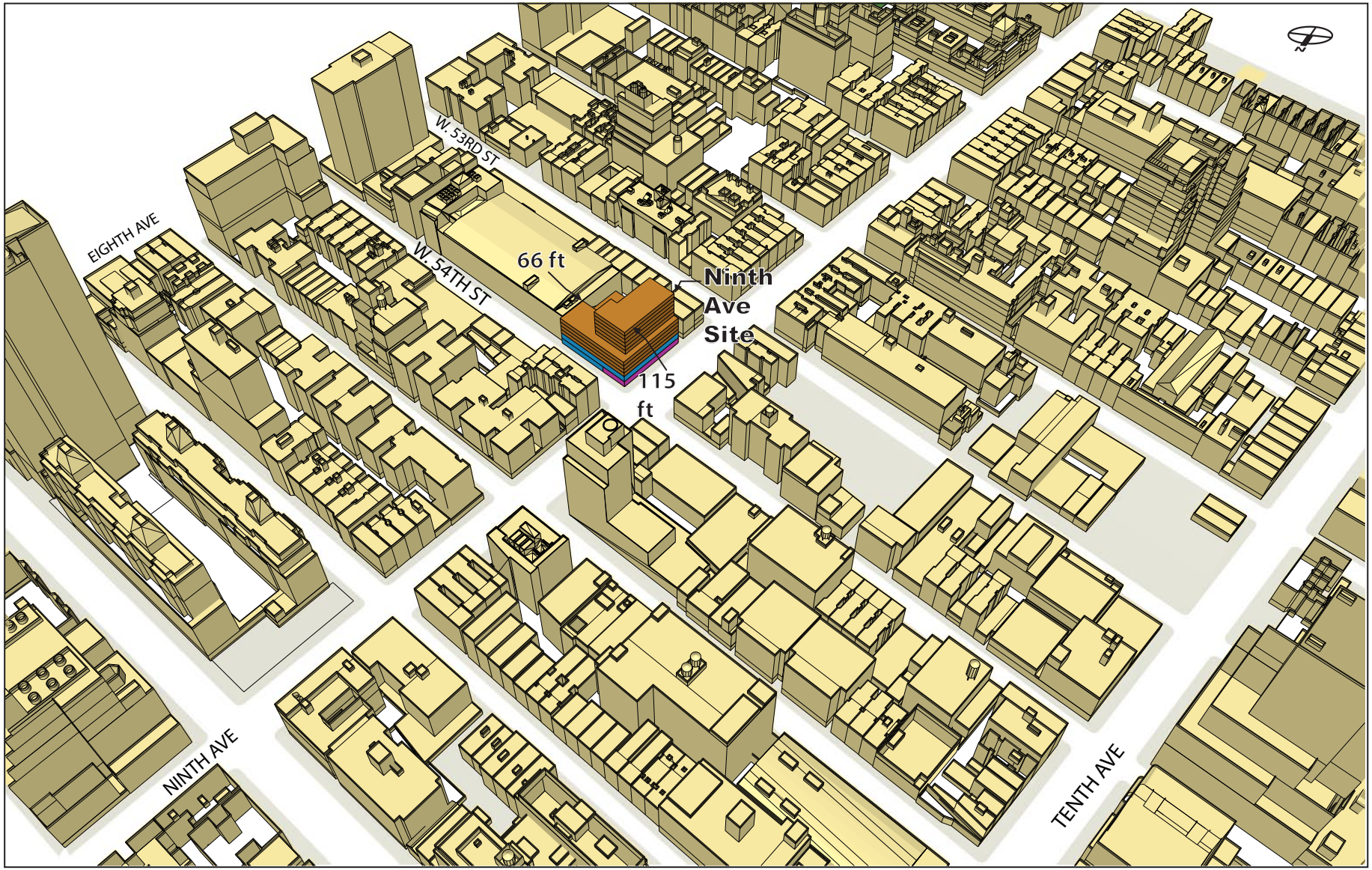

Ninth Avenue Site
Massing Model - Looking South
Figure S-12

with the requirements, the proposed developments would provide a minimum amount of recreation space for the buildings' residents.

Sustainable Design

For the Additional Housing Sites, HPD would require compliance with the New York State Energy Research and Development Authority's (ERDA's) Green Affordable Housing Component and Enterprise Community Partners' Green Communities ("Green Communities"). Green Communities is a subset of ERDA's Multifamily Performance Program, which is designed to improve the energy efficiency, health, safety, and security of new, affordable, multi-family residential buildings. This program serves new construction projects that contain five or more residential units where 25 percent of the households in the building maintain an income level at or below 80 percent of the New York State Median Income. For rental projects, Green Communities requires at least 25 apartments to be occupied by households at or below 60 percent of area median income. Projects participating in the Green Communities are required to attain the Energy Star label for mid- and high-rise buildings, receive incentives for the installation of green building features, and are required to attain LEED Silver certification.

Green Communities criteria promote smart growth, public health, energy conservation, operational savings, and sustainable building practices in affordable housing design, and the criteria contain detailed information addressing aspects of design, development, and operations, including: integrated design; site location and neighborhood fabric; site improvements; water conservation; energy efficiency; materials beneficial to the environment; healthy living environment; and operations and maintenance. The Green Communities Criteria are aligned with the LEED for Homes rating system.

C. CONSTRUCTION SEQUENCING

DEVELOPMENT SITE

Development would begin in 2011 with the construction of the platform. The construction of the platform is anticipated to occur in phases (each phase is associated with storage track outages required to be approved by MTA and LIRR[1]), starting in the northernmost portion of the site and proceeding across the yard. Although there would be temporary track outages in the Development Site, there would be no disruption to LIRR passenger service. Generally, construction of the platform and subsequent buildings is anticipated to proceed from north to south. It is anticipated that early work would also involve the construction of the buildings on the terra firma, as shown in Table S-1.

The proposed open space would be developed in phases associated with the completion of the adjacent buildings. By 2017, it is anticipated that the Development Site would contain approximately 1.63 acres of passive open space. Based on the illustrative site plan, it is anticipated that two passive open space areas would be completed, along with two residential buildings (WR-2 and WR-3) and one commercial building (WC-1) by 2017. A 1.56-acre lawn would be located in the central portion of the site, between buildings WC-1 to the north and WR-2 and WR-3 to the

[1] Once the Developer and the MTA have entered into a lease, with an option to purchase, for the Development Site, the LIRR would separately approve construction plans.

Table S-1
Anticipated Building Sequencing: Development Site

Proposed Building[4]	Construction Start	Construction Finish
WR-2 (Residential)[1,2]	October 2013	January 2017
WC-1 (Commercial)[2]	November 2013	January 2017
WR-3 (Residential)[1,2]	April 2014	July 2017
WR-1 (Residential)[2]	August 2015	January 2018
WR-6 (Residential)	January 2016	July 2018
WR-7 (Residential)	January 2016	January 2019
WR-4 (Residential)	October 2016	April 2019
WR-5 (Residential)[3]	January 2017	September 2019

Notes:
1. The PS/IS school would be located in the base of WR-2 and WR-3.
2. Buildings would have retail.
3. Building WR-5 would only have ground-floor retail in the Maximum Residential Scenario (see Chapter 2, "Framework for Analysis").
4. See Figure S-8.

south. A 2,500-sf plaza would be located at the northwest corner of the site adjacent to building WC-1, at the corner of Eleventh Avenue and West 33rd Street. The remaining open spaces to be completed by 2019 include: a 1.20-acre open space around WR-4; a 1.08-acre lawn area along Twelfth Avenue between WR-4 and WR-7; a 0.16-acre plaza adjacent to WR-6; and 0.99 acres of passive open space on the portion of the High Line on the Development Site.

ADDITIONAL HOUSING SITES

Construction of the Ninth Avenue Site is expected to begin in 2013 and be completed in 2016. Construction at the Tenth Avenue Site is anticipated to begin in 2014 and be completed in 2018.

D. PROJECT APPROVALS AND ACTIONS

DEVELOPMENT SITE

1. Zoning

- Zoning map amendment of Development Site from existing M2-3 district to proposed C6-4/Special Hudson Yards District;
- Zoning text amendments to Special Hudson Yards District zoning text to create a new subdistrict. Establish use, bulk, open space, streetwall and other design controls for Development Site and establish certification procedures for phasing for the proposed open space; and
- Special permits pursuant to Zoning Resolution Section 13-50 for accessory off-street parking.

2. Regulatory approvals/actions as necessary to facilitate the adaptive reuse of the High Line on the Development Site.

3. City map amendment for re-profiling West 33rd Street between Eleventh and Twelfth Avenues.

4. Project approval by MTA, including MTA and/or LIRR approval of platform over and any necessary improvements within the rail yard.

5. Disposition of Development Site by TBTA and MTA, including lease, with option to purchase, easements, and other options.

6. Site selection for the PS/IS school by the SCA.

7. New York City Housing Development Corporation/New York State Housing Finance Agency financing approvals/actions for affordable housing.

8. Possible New York State Department of Environmental Conservation (DEC) State Pollutant Discharge Elimination System (SPDES) and/or other DEC permits.

9. Amendment to the Uniform Tax Exemption Policy (UTEP) by the New York City Industrial Development Agency to expand the boundaries of the UTEP catchment area.

ADDITIONAL HOUSING SITES

10. Disposition by the City of the Additional Housing Sites pursuant to the requirements of the Urban Development Action Area Program (UDAAP), and possible associated affordable housing financing actions, and

- Tenth Avenue Site:
  - Zoning text map change to place the entire site in the Special Clinton District Other Area;
  - Special permit for building above a railroad right-of-way.[1]
- Ninth Avenue Site:
  - Zoning map change to extend the C1-5 commercial overlay to within approximately 275 feet of Eighth Avenue;
  - Special Permit for existing height modification.[1]
  - General Large Scale Special Permit. [1]
  - Partial release of MTA's interest in the Ninth Avenue Site to the City of New York.

E. FRAMEWORK FOR ANALYSIS

The process necessary to implement the Proposed Actions and an overview of analytical framework used to guide the technical analysis are presented below.

ENVIRONMENTAL REVIEW PROCESS

This Draft EIS (DEIS) has been prepared in accordance with SEQRA and CEQR. The review process allows decision-makers to evaluate a proposed project's environmental effects, evaluate reasonable alternatives, and identify measures to mitigate significant adverse impacts. The process also facilitates public involvement by providing the opportunity to comment on the DEIS. Often, the environmental review process is integrated and coordinated with other government agencies' decision-making processes. For the Proposed Actions, two other public processes are important milestones in implementing the project: ULURP and Waterfront Revitalization. Each is summarized below.

[1] It is anticipated that the special permits will be applied for in accordance with specific site plans following issuance of RFPs for affordable housing development and developer selection for the Additional Housing Sites.

UNIFORM LAND USE REVIEW PROCEDURE

ULURP, mandated by Sections 197-c and 197-d of the City Charter, is a process specifically designed to allow public review at four levels: Community Board, Borough President, CPC, and City Council. The procedure sets time limits for each review, with a maximum period of approximately seven months. The zoning map amendments, special permits, city map amendment, and site selection associated with the Proposed Actions are subject to ULURP. Zoning text amendments are not subject to ULURP, but are subject to review by CPC and the City Council under Sections 200 and 201 of the New York City Charter, and will be reviewed concurrently with ULURP applications. The process begins with certification by CPC that the ULURP application is complete and includes appropriate descriptions of the proposed actions and, in this case, a Notice of Completion for the DEIS.

The application is then referred to the relevant Community Board (for the Proposed Actions, Manhattan Community Board 4 [CB4]). CB4 has up to 60 days to review and discuss the proposal, hold a public hearing, and adopt a recommendation regarding the actions. Once this is complete, the Borough President has up to 30 days to review the ULURP application and issue a recommendation. CPC then has up to 60 days to approve, disapprove, or approve with modifications, and during that time, a ULURP public hearing is held. When a DEIS accompanies the ULURP application, as with this proposal, the CEQR public hearing is held jointly with the ULURP hearing. Comments made at the DEIS public hearing are incorporated into a Final EIS (FEIS); the FEIS must be completed at least 10 days before any action by CPC on the ULURP application. In the event of an approval or an approval with modifications, CPC forwards the application to the City Council, which has 50 days to review it (subject to an extension to 65 days in the event the Council were to propose modifications). Following the Council's vote, the Mayor, at his discretion, may choose to veto the action. The City Council can override that veto.

WATERFRONT REVITALIZATION

The City has adopted the Local Waterfront Revitalization Program (LWRP) pursuant to the New York Sate Waterfront Revitalization of Coastal Areas and Inland Waterways Act. CPC serves as the City's Coastal Commission under the LWRP. Actions that are subject to ULURP Sections 200 and 201 of the New York City Charter are also reviewed by CPC in its capacity as the Coastal Commission for consistency with the program's policies. The City Council approved an LWRP in October 1999. The plan replaced 56 City and State policies with 10 policies designed to simplify and clarify the consistency review process. Discretionary actions subject to CEQR and occurring within the program's boundaries are to be reviewed by the lead agency for consistency with the program's policies. Since the Development Site is located within the designated Coastal Zone of New York City, the LWRP consistency assessment is incorporated into this EIS. Written findings must be issued that the Proposed Actions are consistent to the maximum extent practicable with the LWRP before any agency can make a final decision.

FRAMEWORK FOR ENVIRONMENTAL ANALYSIS OF THE PROPOSED ACTIONS

SCOPE OF ENVIRONMENTAL ANALYSIS

As set forth in the Positive Declaration, the co-lead agencies have determined that the Proposed Actions may result in one or more significant adverse environmental impacts and thus require preparation of an EIS. This document applies methodologies and follows the guidelines set forth

in the *CEQR Technical Manual*, where applicable. These are generally considered to be the most appropriate technical analysis methods and guidelines for the environmental impact assessment of projects in the City and are consistent with SEQRA.

For each technical analysis in the EIS, the assessment includes a description of (1) existing conditions, (2) an assessment of conditions in the Future without the Proposed Actions, and (3) an assessment of conditions in the Future with the Proposed Actions. Identification and evaluation of impacts of the Proposed Actions are based on a comparison between conditions in the Future without the Proposed Actions and conditions in the Future with the Proposed Actions. Where significant adverse environmental impacts are identified, potential mitigation measures are proposed and analyzed. An important element of the EIS is the analysis of alternatives that reduce or eliminate the significant adverse effects disclosed in the technical analyses; such alternatives also include a "No Action" alternative, as described at the end of this section.

ANALYSIS YEARS

Operational Analysis

An EIS analyzes the effects of a proposed action on its environmental setting. Since a proposed action, if approved, would take place in the future, the action's environmental setting is generally not the current environment, but the environment as it would exist at project completion. Therefore future conditions must be projected. This prediction is made for a particular year, generally known as the "analysis year" or "Build year," which is the year when the proposed action would become substantially operational. The analysis of the Proposed Actions is performed for the expected year of completion of the Proposed Actions, which is 2019. An assessment of the Proposed Actions' potential environmental impacts is also be undertaken for a 2017 "interim year" of development, after the first three buildings (out of a total of eight) are projected to be constructed and occupied on the Development Site.

Construction Analysis

The construction analyses address conditions during peak construction at the project sites. As appropriate, some of the construction analyses, such as air quality, also address a second scenario that would analyze the effects of project-related construction during the period of the highest cumulative construction activities for the Development Site and for other nearby construction projects. This is based primarily on the largest air quality emissions generation potential at nearby construction areas of the No. 7 subway line station at Eleventh Avenue and West 34th Street, the Eastern Rail Yard development, the Access to the Region's Core (ARC) project, and individual development sites in the Hudson Yards and West Chelsea areas.

The construction analysis years have been selected to address the worst-case impacts for the discrete technical areas being analyzed. In the case of traffic and parking, it is estimated that the worst-case impacts will occur in 2017. For the air quality analyses, worst-case periods are identified for different pollutants in 2012, 2014, and 2016.

DEFINITION OF STUDY AREAS

For each technical area examined in the DEIS, an appropriate study area or multiple study areas are defined for the specific analysis. A study area is the geographic area likely to be affected by the Proposed Actions for a given technical area or the area in which impacts of that type could occur. Appropriate study areas differ depending on the type of impact being analyzed. The

methods and study areas for addressing impacts are discussed in the individual technical analysis chapters.

DEFINING BASELINE CONDITIONS

The projection of future conditions begins with an assessment of existing conditions, because these can be measured and observed. For each technical area assessed in the EIS, the current conditions are first described, based on the most current information and available data regarding the surrounding study areas. Existing conditions are generally studied, where relevant, during the time periods that reasonable worst-case conditions would be expected with the Proposed Actions. For example, the time periods when the greatest number of new vehicular, pedestrian, and transit trips to and from the project sites would occur are measured for the transportation analysis. The project impacts are then assessed for those same peak periods.

The Future without the Proposed Actions condition uses existing conditions as baselines and adds to them changes known or expected to be in place by the time of the 2019 full Build year (or the 2017 interim year). For many technical areas, the Future without the Proposed Actions condition incorporates known development projects that are likely to be built by these analysis years, including developments currently under construction or that can be reasonably expected due to the current level of planning and applications for public approvals. The Future without the Proposed Actions analyses for some technical areas, such as traffic, also use a background growth factor to account for a more general increase expected in the future. Such growth factors may also be used in the absence of known development projects. The Future without the Proposed Actions analyses must also consider other future changes that will affect the environmental setting. These could include technology changes, such as advances in vehicle pollution control and roadway improvements, and changes to City policies, such as zoning regulations.

A substantial number of development projects that have been announced, are in planning or approval processes, or in construction ("No Build projects") with estimated completion dates on or before 2019 have been identified within approximately ½-mile from all three project sites. These projects are included in the future condition without the Proposed Actions. Although it is unlikely that all of these plans and proposals would be complete by 2019, this EIS conservatively assumes their completion and full build-out and also that all these developments would also be completed by the 2017 analysis year. Since each technical area in the EIS defines an appropriate study area or multiple study areas, the No Build projects have been summarized in two lists—those within approximately ½-mile of the Development Site and those within approximately ½-mile of the Additional Housing Sites. For the Development Site, these include 77 No Build projects representing a total of approximately 36.9 million gross square feet (gsf) of new development including: 18.2 million gsf of new office space, 2.7 million gsf of new retail space, 406,186 gsf of new community facility space, 15,438 new residential units, and 5,517 new hotel rooms. The amount of No Build development surrounding the Development Site reflects the zoning and public policy initiatives to accommodate and attract new development to the Far West Side. For the Additional Housing Sites, these include 41 No Build projects (which are separate from the 77 projects for the Development Site) representing a total of approximately 12.3 million gsf of new development, including 1.7 million gsf of new office space, 753,320 gsf of new retail space, 10,608 new residential units, and 1,626 new hotel rooms.

As described above, the Development Site and surrounding area were analyzed in a Final Generic Environmental Impact Statement (*"Hudson Yards FGEIS"*). Significant adverse environmental

impacts were identified in the *Hudson Yards FGEIS* and associated mitigation measures were proposed to fully or partially mitigate those impacts. Since publication of the *Hudson Yards FGEIS*, there have been substantial changes to conditions and the development program assumed in the *Hudson Yards FGEIS*, Therefore, the mitigation measures identified in the *Hudson Yards FGEIS* were determined to be inappropriate for inclusion in the analyses of future conditions for this DEIS. The analyses of community facilities, traffic and parking, and transit and pedestrians describe in more detail why the associated mitigation from the *Hudson Yards FGEIS* was excluded and how improvements which may be needed as a result of future development in the Hudson Yards area will be addressed.

RELATIONSHIP TO OTHER ACTIONS IN THE FUTURE WITHOUT THE PROPOSED ACTIONS

Several significant public projects and actions have been completed recently or are anticipated to be completed prior to the 2019 analysis year for the Proposed Actions. The analyses of the impacts of the Proposed Actions also consider these projects and actions, which are described below.

Hudson Yards Rezoning

The Hudson Yards rezoning was approved by the City Council in January 2005 for an area generally bounded by West 30th Street to the south, Seventh and Eighth Avenues to the east, West 43rd Street to the north, and Twelfth Avenue to the west. It is intended to allow transformation of the Hudson Yards area from a neighborhood characterized by parking lots, warehouses, auto body shops, and open rail cuts into a vibrant mixed-use district that will complement the Midtown central business district, as well as provide job growth and new housing for the City's growing population. Under the aegis of HYDC, a development program is underway. Development projects anticipated by 2019 are included in the Future without the Proposed Actions condition. The Hudson Yards plan also provides for new parks and public open space throughout the Hudson Yards area, including Hudson Park and Boulevard, a broad open space and boulevard system in the midblocks between Tenth and Eleventh Avenues.

The Eastern Rail Yard was rezoned in 2005 as part of the Hudson Yards rezoning, and the potential impacts of its development were addressed in the *Hudson Yards FGEIS*. The Development Site is being planned and designed to complement the expected development on the Eastern Rail Yard. The Eastern Rail Yard project is expected to include 3.55 million sf of office space, 966,000 sf of retail space, 295 hotel rooms, 1,904 residential units, 200,000 sf of community facility space, 1,000 parking spaces, and approximately 7 acres of publicly accessible open space of which approximately two acres would be enclosed.

No. 7 Subway Extension

In the Future without the Proposed Actions, the No. 7 subway line will be extended to serve the Hudson Yards area. The No. 7 subway line will be extended approximately 1 mile west and south from its current terminal at Times Square, continuing west below West 41st Street, and then turning south below Eleventh Avenue to a new terminal station at 34th Street and Eleventh Avenue—just one block northeast of the Development Site. The subway extension is expected to be completed by late 2013.

West Chelsea Rezoning

The *Special West Chelsea District Rezoning and High Line Open Space FEIS* was approved and the area generally between Tenth and Eleventh Avenues from West 30th Street to West 16th Street was rezoned in 2005. This rezoning created the Special West Chelsea District to provide opportunities for new residential and commercial development, facilitate the reuse of the High Line elevated rail line as a unique linear open space, and enhance the neighborhood's thriving art gallery district. The *Special West Chelsea District Rezoning and High Line Open Space FEIS* identified 25 projected development sites likely to be developed by 2013, which would result in 4,809 dwelling units, 574,128 sf of retail space, 160,000 sf of office space, 76,425 sf of accessory parking for off-site government use, and 227,564 sf of community facility space. In addition to the 25 projected development sites, the FEIS identified 28 potential development sites. This document considers how the Special West Chelsea District projected development relates to activities associated with the Proposed Actions.

DEFINING THE ACTION FOR ENVIRONMENTAL ANALYSIS

The Proposed Actions would allow for the development of new uses and higher densities at the Development Site and Additional Housing Sites. Under the proposed zoning changes and other controls, a range of new development could occur within the Development Site. For analysis purposes, two reasonable worst-case development scenarios have been identified for that site—a Maximum Residential Scenario and a Maximum Commercial Scenario (see Tables S-2 and S-3). The Maximum Residential Scenario would include (in addition to community facilities, open space, and parking) between 5,347 and 5,762 residential units and either (1) 1.5 million gsf of office space; or (2) a 1,200-room convention-style hotel. The Maximum Commercial Scenario would include (in addition to community facilities, open space, and parking) 4,624 residential units and 2.2 million gsf of office space. These two reasonable worst-case development scenarios represent the upper bounds of residential and commercial space for the purposes of the impact analysis. The proportional requirements for affordable housing would be the same in both scenarios. (The actual development would likely fall between these two scenarios.) The EIS examines the scenario with the greater potential environmental impact for each impact area. The two different scenarios associated with the Development Site assume the same development for the Additional Housing Sites.

The Proposed Actions would also include development of permanently affordable housing at the Additional Housing Sites. By 2016, the Proposed Actions would allow the development of approximately 108 permanently affordable housing units, 30,000 gsf of office space to be used by NYCT, and 6,750 gsf of retail space at the Ninth Avenue Site (see Table S-4). At the Tenth Avenue Site, the Proposed Actions would result in the development of 204 permanently affordable housing units and 10,800 gsf of retail space by 2018. The 312 total residential units to be developed at the Additional Housing Sites would be permanently affordable for low- to moderate-income households. Table S-5 summarizes the reasonable worst-case development scenarios assumed for the Proposed Actions, including the Development Site and the Additional Housing Sites, for 2017 and 2019.

GENERIC ANALYSIS FOR RELOCATION OF DSNY FACILITIES

The Proposed Actions would result in the interim relocation of the DSNY Garage M-6, which includes certain facilities currently located on a portion of the terra firma on the Development Site. At present, sites have not been identified for the interim relocation of the DSNY uses. Chapter 15, "Solid Waste and Sanitation Services" contains a generic analysis of the potential environmental impacts that could result from relocating the DSNY facilities from the Development Site.

Table S-2
Reasonable Worst-Case Development Scenarios for the Development Site: 2017

Development Program	Maximum Residential Scenario (GSF)		Maximum Commercial Scenario (GSF)
	Office Option[1]	Hotel Option[1]	
Residential	1,460,813	1,460,813	1,422,225
Residential Units			
Rental Units	1,948 units	1,948 units	1,896 units
Condominium Units	0 units	0 units	0 units
Total Units	**1,948 units**	**1,948 units**	**1,896 units**
Affordable Units (rental)	390 units[2]	390 units[2]	379 units[2]
Market Rate Units (rental and condo)	1,558 units	1,558 units	1,517 units
Commercial			
Office	1,495,000	0	2,185,000
Hotel	0	1,008,000 1,200 rooms	0
Retail	162,750	152,250	162,750
Community Facility			
Public School	120,000	120,000	120,000
TOTAL	**3,238,563**	**2,741,063**	**3,889,975**

Notes:
1. Two options are being considered for the commercial building in the Maximum Residential Scenario. One would be for a 1,495,000-gsf office building. The other would be for a 1,200-room convention-style hotel.
2. Twenty percent of all rental units on the Development Site would be affordable housing units under the terms of the applicable 80/20 program.

Table S-3
Reasonable Worst-Case Development Scenarios for the Development Site: 2019

Development Program	Maximum Residential Scenario (GSF)		Maximum Commercial Scenario (GSF)
	Office Option[1]	Hotel Option[1]	
Residential	4,469,063	4,836,563	3,837,225
Residential Units			
Rental Units	1,948 units	1,948 units	1,896 units
Condominium Units	3,399 units	3,814 units	2,728 units
Total Units	**5,347 units**	**5,762 units**	**4,624 units**
Affordable Units (rental)	390 units[2]	390 units[2]	379 units[2]
Market Rate Units (rental and condo)	4,957 units	5,372 units	4,245 units
Commercial			
Office	1,495,000	0	2,185,000
Hotel	0	1,008,000 1,200 rooms	0
Retail	220,500	210,000	220,500
Community Facility			
Public School	120,000	120,000	120,000
TOTAL	**6,304,563**	**6,174,563**	**6,362,725**

Notes:
1. Two options are being considered for the commercial building in the Maximum Residential Scenario. One would be for a 1,495,000-gsf office building. The other would be for a 1,200-room convention-style hotel.
2. Twenty percent of all rental units on the Development Site would be affordable housing units under the terms of the applicable 80/20 program.

Table S-4
Development Scenario: Additional Housing Sites

Development Program	Ninth Avenue Site (GSF)	Tenth Avenue Site (GSF)	TOTAL (GSF)
Residential	96,300	176,300	272,600
Affordable Units	108 units	204 units	312 units
Commercial			
Office	30,000[1]	0	30,000
Retail	6,750	10,800	17,550
TOTAL	**133,050**[2]	**187,100**	**320,150**

Notes:
1. Office space to be used by NYCT.
2. The development would allow for NYCT below-grade parking for emergency vehicles (approx. 15 vehicles)

Table S-5
Reasonable Worst-Case Development Scenarios for the Proposed Actions

Development Program	Maximum Residential Scenario (GSF)		Maximum Commercial Scenario (GSF)
	Office Option	Hotel Option	
2017			
Residential Units			
Affordable Units	498 units[1]	498 units[1]	487 units[2]
Market Rate Units	1,558 units	1,558 units	1,896 units
Total Units	**2,056 units**	**2,056 units**	**2,004 units**
Office	1,495,000	0	2,185,000
NYCT Office	30,000	30,000	30,000
Hotel	0	1,008,000 1,200 rooms	0
Retail	169,500	159,000	169,500
Public School	120,000	120,000	120,000
TOTAL 2017	**3,371,613**	**2,874,113**	**4,023,025**
2019			
Residential Units			
Affordable Units	702 units[3]	702 units[3]	691 units[2]
Market Rate Units	4,957 units	5,372 units	4,245 units
Total Units	**5,659 units**	**6,074 units**	**4,936 units**
Office	1,495,000	0	2,185,000
NYCT Office	30,000	30,000	30,000
Hotel	0	1,008,000 1,200 rooms	0
Retail	238,050	227,550	238,050
Public School	120,000	120,000	120,000
TOTAL 2019	**6,624,713**	**6,494,713**	**6,682,875**

Notes:
1. Includes 108 units at the Ninth Avenue Site and 390 units at the Development Site.
2. Includes 108 units at the Ninth Avenue Site and 379 units at the Development Site
3. Includes 108 units at the Ninth Avenue Site, 204 units at the Tenth Avenue Site and 390 units at the Development Site.
4. Includes 108 units at the Ninth Avenue Site, 204 units at the Tenth Avenue Site and 379 units at the Development Site.

MITIGATION

Potential mitigation measures for significant adverse impacts identified in this DEIS are described in Chapter 24, "Mitigation." CEQR and SEQRA require that any significant adverse impacts identified in the EIS be minimized or avoided to the fullest extent practicable, given costs and other factors. In the DEIS, options for mitigation can be presented for public review and discussion, without the co-lead agencies having selected those for implementation. Where no practicable mitigation is available, the EIS must disclose that fact and indicate the potential for unmitigated significant adverse impacts.

Where significant adverse impacts from the Proposed Actions have been identified in this DEIS, measures with the potential to minimize or eliminate the expected impacts have been examined. Where necessary, measures to further mitigate adverse impacts will be refined and evaluated between the DEIS and FEIS, and the FEIS may therefore include more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Actions.

ALTERNATIVES

Chapter 25, "Alternatives," assesses several alternatives to the Proposed Actions. CEQR and SEQRA require that a description and evaluation of the range of reasonable alternatives to an action be included in the EIS at a level of detail sufficient to allow a comparative assessment of the significant environmental impacts of these alternatives. If the environmental assessment and consideration of alternatives identify a feasible alternative that eliminates or minimizes adverse impacts while substantially meeting the project goals and objectives, the lead agency considers whether to adopt that alternative. CEQR and SEQRA require consideration of a "No Action Alternative," which compares environmental conditions that are likely to occur in the future without the Proposed Actions to conditions that would occur in the future with the Proposed Actions. This EIS also considers a Reduced Density Alternative, and an alternative that frames a level of development small enough to eliminate all such significant, unmitigated adverse impacts ("No Unmitigated Significant Adverse Impact Alternative"). In addition, the chapter analyzes an option to include an on-site Tri-Generation energy facility on the Development Site.

F. LAND USE, ZONING, AND PUBLIC POLICY

The Proposed Actions would not result in a significant adverse impact on land use, zoning, or public policy. While the Proposed Actions would lead to substantial changes in land use and density on the Development Site, these changes would be compatible with the mixture of uses and densities that are expected to be developed in the immediately surrounding area in the Future without the Proposed Actions. The Proposed Actions would not displace the predominant existing land use on the Development Site—a platform would be constructed over the rail yard and the existing LIRR train yard and associated uses would remain. Therefore, the Proposed Actions would preserve the existing transportation use, but redevelop the Development Site to include land uses that would support and complement future development trends within the surrounding study area. Portions of the study area are already starting to transition towards high-density mixed-use development with commercial, retail, residential, and open space uses and this will continue in the Future without the Proposed Actions. Overall, the Proposed Actions would introduce new open space, a new public school, and new commercial office, residential, and retail space that would match future land use trends.

The Development Site would be rezoned from an existing M2-3 district to a C6-4 zoning district and incorporated as a new subdistrict (Subdistrict F) of the Special Hudson Yards District. The existing M2-3 zoning does not permit residential use on the Development Site and limits the density of permitted uses. Rezoning to a C6-4 district would allow for a mixture of commercial, residential, community facility, and open space uses. These uses would be permitted to a maximum FAR of 10.0 with a floor area bonus available for the provision of permanently affordable housing and a floor area allowance for the 750-seat PS/IS school. The proposed zoning would be compatible with the Special Hudson Yards District immediately east of the Development Site.

The new subdistrict would contain specific zoning controls that would regulate building envelopes, publicly accessible open space areas, streetwall controls, retail continuity and transparency. The retail continuity and transparency requirements would create active uses along the street level within the Development Site and along the surrounding streets—areas that currently lack such uses. Building envelope controls and tower requirements would ensure that the densest development be located in the northeastern portion of the Development Site—consistent with the high density zoning of the adjacent Large-Scale Plan subarea of the Special Hudson Yards District. Buildings would gradually decrease in height descending from Eleventh Avenue and West 33rd Street to Twelfth Avenue and West 30th Street, with lower building heights and bulk on the portion of the Development Site located close to the Chelsea subarea of the land use study area. The proposed zoning would create a number of publicly accessible open space areas on the Development Site, each having core open space elements that would need to generally meet the design standards of the privately owned public plazas or similar standards of the Zoning Resolution.

The Proposed Actions would also result in development at the two Additional Housing Sites. The Ninth Avenue Site, currently a gravel parking lot, would be redeveloped with permanently affordable housing, ground-floor retail space, and office space and parking for NYCT. The Tenth Avenue Site, currently open air space above a below-grade Amtrak rail cut, would be redeveloped with permanently affordable housing and ground-floor retail space. This analysis concludes that each development would replace underutilized sites with new land uses that would match the prevailing land uses within each of the Additional Housing Site study areas, that would be developed to appropriate heights, and that would be consistent with surrounding zoning.

Finally, the Proposed Actions would be consistent with relevant public policies, including PlaNYC. Many of the recommendations, goals, and initiatives of PlaNYC are at the core of the Proposed Actions, including pursuing transit oriented development, providing new housing to meet the needs of current and future residents while making housing more affordable and sustainable, utilizing land already owned by the public, improving and capitalizing on transit access, and providing for improved open spaces.

G. SOCIOECONOMIC CONDITIONS

The Proposed Actions would not result in any significant adverse socioeconomic impacts in either 2017 or 2019. The *CEQR Technical Manual* guidelines require analysis of the following five areas of concern to determine if significant adverse impacts with respect to socioeconomic conditions could occur: direct residential displacement, indirect residential displacement; direct business and institutional displacement; indirect business and institutional displacement; and adverse effects on specific industries. A summary of the analysis of the five areas of concern is below.

DIRECT RESIDENTIAL DISPLACEMENT

The Proposed Actions would not result in any direct residential displacement. None of the project sites contain a residential population.

INDIRECT RESIDENTIAL DISPLACEMENT

The Proposed Actions would not result in a significant adverse impact due to indirect residential displacement. The analysis considers the impact of the new uses introduced by the Proposed Actions, with particular focus on the up to 6,074 new housing units and the associated residential populations that could be added to the project sites' study areas. Twenty percent of all rental units on the Development Site would be affordable housing units under the terms of the applicable 80/20 program, with the provision of affordable units subject to (1) the allocation of sufficient tax-exempt bond cap or other equivalent low-cost financing to the Developer for each building of rental housing as and when required, and (2) the availability to the Developer of such other incentives, programs, exemptions, credits or abatements as are then generally available for the development of 80/20 housing in the City. Under the conservative Maximum Residential Scenario-Hotel Option, up to 5,762 residential units would be introduced to the Development Site study area (approximately 5,372 market-rate units and 390 affordable units[1]). The Proposed Actions also would introduce up to 108 affordable housing units to the Ninth Avenue Site study area, and up to 204 affordable housing units to the Tenth Avenue Site study area.

The number of new residents introduced to the Development Site study area by the Proposed Actions would be substantial, representing about 49 percent of the study area's existing population[2], and 25 percent of the study area's population in the Future with the Proposed Actions. However, the demographic characteristics of the resulting residential population would not differ significantly from that of the study area population in the Future without the Proposed Actions. The market-rate housing introduced by the Proposed Actions would be offered at rents comparable to rents for other newly-constructed market-rate apartments in the surrounding area, and would be comparable to the rents for market-rate residential units expected in the study area in the Future without the Proposed Actions. In the Future with or without the Proposed Actions by 2017 and 2019, housing prices, rents, and median incomes are expected to rise in the study area such that the Proposed Actions would not significantly alter or substantially accelerate the study area's long-term trend toward increasing residential development, affluence, and residential desirability. The Proposed Actions would not introduce any type of land use that would diminish the residential desirability of the area, offset positive trends in the study area, impede efforts to attract investment to the area, or create a climate for disinvestment. For these reasons, a significant adverse impact from indirect residential displacement would not be expected to result from the Proposed Actions.

The Proposed Actions would not result in any indirect residential displacement within the Ninth Avenue Site and Tenth Avenue Site study areas. Given that all of the residential units introduced

[1] Twenty percent of all rental units on the Development Site would be affordable housing units under the terms of the applicable 80/20 program.

[2] The Development Site study area's 2008 population estimate (20,369 residents) is based on the 2000 Census study area population estimate, with an annual background growth rate of 0.5 percent applied between 2001 and 2008. The actual number of existing residents is likely to be significantly higher, given that an estimated 5,510 housing units have been constructed in the study area since 2000.

would be leased to low- to moderate-income households, the new populations would not have the effect of increasing pressure on area housing costs and would help to maintain the existing socioeconomic characteristics of the residential population. In addition, the non-residential uses introduced to those sites would not be of a critical mass that would alter the overall socioeconomic character of the residential neighborhoods.

DIRECT BUSINESS AND INSTITUTIONAL DISPLACEMENT

The Proposed Actions would not result in a significant adverse impact due to direct business and institutional displacement. The development plan for the Development Site would require the temporary relocation of some of the LIRR facilities currently located on the Development Site, but there would not be an interruption in LIRR passenger rail service during that time.

The Proposed Actions would permanently displace from the Development Site a Greyhound Bus parking lot and DSNY facilities. DSNY is a government agency and, therefore, is not the subject of direct displacement analysis under CEQR, since it is expected that government agencies will continue in operation with or without the Proposed Actions. It is assumed that the City would retain the employees who would be displaced, as well as the services provided to the City by those employees. DSNY facilities on the Development Site help to serve several customer bases, none of which are within this study area.

As a result of the Proposed Actions, Greyhound would likely be required to find a new location for this bus parking lot, which accommodates approximately 52 Greyhound buses. The location needs of the bus parking lot could be satisfied at other locations in the City or in surrounding areas with access to the Port Authority Bus Terminal. The Port Authority of New York and New Jersey (PANYNJ) is committed to maintaining Greyhound's services in the Port Authority Bus Terminal, and would work with Greyhound to identify an appropriate relocation site. Therefore, the displacement of the parking lot would not jeopardize the operations of Greyhound, and Greyhound would be expected to continue operations serving the City in the Future with or without the Proposed Actions. Additionally, the location of the bus parking lot does not provide substantial economic value to the study area because it serves a region-wide customer base and the services it provides to local residents are not contingent on its proximity to these residents. Finally, although the study area is characterized in part by transportation uses, the bus parking lot itself is not a defining element of the neighborhood. Therefore, the direct displacement of the Greyhound Bus parking lot would not result in a significant adverse impact.

The Proposed Actions would result in the direct displacement of a NYCT surface parking lot from the Ninth Avenue Site. NYCT is a government agency and, therefore, the NYCT parking lot is not subject to direct displacement analysis under CEQR, since it is expected that government agencies will continue in operation with or without the Proposed Actions. Therefore, the Proposed Actions would not result in a significant adverse impact due to direct business displacement at the Ninth Avenue Site.

The Tenth Avenue Site includes the air space above a below-grade Amtrak rail cut. The development plan for the Tenth Avenue Site would require construction of a platform over the existing Amtrak line. The Amtrak line would continue to operate below the Tenth Avenue Site after construction, and no interruption in Amtrak service would occur. Therefore, the Proposed Actions would not result in a significant adverse impact due to direct business displacement at the Tenth Avenue Site.

INDIRECT BUSINESS AND INSTITUTIONAL DISPLACEMENT

The Proposed Actions would not result in a significant adverse impact due to indirect business and institutional displacement. All of the uses under the Proposed Actions are currently present and well-established in the study areas, and additional similar uses are projected to be in place by the 2017 and 2019 analysis years. The Proposed Actions would not introduce any new types of economic activities to the study areas, nor would they be expected to alter or accelerate an ongoing trend to alter existing economic patterns.

None of the uses directly displaced by the Proposed Actions directly support businesses in the Development Site study area or bring people to the area who form a customer base for local businesses. The Proposed Actions would add up to 2.2 million gsf of commercial office space to the Development Site study area, which would bring more people to the area that form a customer base for local businesses. The net effect of the Proposed Actions would be a substantial increase in the number of residents and daytime workers and visitors, thereby providing significant numbers of new customers for the existing and proposed business uses.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

The Proposed Actions would not result in a significant adverse impact on any industry or any category of business within or outside the study areas. The Proposed Actions would not introduce any regulations or policies that would restrict any business or process from continuing to function within or outside the project sites' study areas. Nor would the Proposed Actions result in a significant adverse impact from the direct displacement of uses currently located on the project sites. Therefore, the Proposed Actions would not have any direct effects on business conditions in any industry or category of business within the study areas or New York City more broadly.

Similarly, the Proposed Actions would not indirectly displace a substantial amount of employment or impair the economic viability in any one industry sector or category of business. The study areas include a mix of commercial office, retail, residential, industrial, and transportation uses. According to data from the U.S. Census Bureau, there is not a substantial concentration of any one category of business or industry within the study areas. Therefore, any potential indirect business displacement resulting from the Proposed Actions would not impair the economic viability of any industry or category of business.

H. COMMUNITY FACILITIES AND SERVICES

The *CEQR Technical Manual* defines community facilities as public or publicly funded facilities including schools, hospitals, libraries, child care centers, and fire and police protection services. A summary of the analysis for each community facility is below.

PUBLIC SCHOOLS

The analysis of potential school impacts considers elementary and intermediate schools within Community School District 2 (CSD2), where the project sites are located, as well as within ½-mile of the Development Site and the Additional Housing Sites. The analysis of high schools considers the potential impacts on the entire Borough of Manhattan.

Under the anticipated building sequencing described in Chapter 1, "Project Description," the PS/IS school would be constructed on the Development Site by July 2017. However, for the

purposes of a conservative analysis, a second scenario considers the potential effects if the school were not completed by 2017 ("Scenario Without the PS/IS School in 2017"). In 2017, the Proposed Actions would not exceed the threshold for conducting a high school analysis, and, therefore, high schools were analyzed for the 2019 analysis year only.

2019

The construction of the PS/IS school (420 elementary seats and 330 intermediate seats) as part of the Proposed Actions would partially offset the demand for school seats introduced by the Proposed Actions (792 elementary and 243 intermediate seats) in 2019. Elementary schools in the study area would continue to operate well over capacity in the Future with the Proposed Actions. Furthermore, the 792 elementary students generated by the Proposed Actions would exceed the 420 elementary seats to be provided by the Proposed Actions' PS/IS school on the Development Site. However, elementary school utilization rates in the study area would change minimally as a result of the Proposed Actions (169 to 170 percent) and would increase by approximately two percentage points (from 113 to 115) in the CSD. According to the *CEQR Technical Manual*, an increase in the utilization rate of 5 percentage points may indicate a significant adverse impact; under this standard, although elementary schools in the CSD would operate with a substantial deficiency of seats that would be exacerbated by the Proposed Actions, the Proposed Actions would not result in a significant adverse elementary school impact for either the study area or CSD 2 in 2019.

The development of the new PS/IS school on the Development Site would substantially decrease the deficiency of intermediate seats in the study area (from 134 to 123 percent utilization rate), because the intermediate seats to be provided at the PS/IS school on the Development Site would exceed the project-generated intermediate students. Although the intermediate schools within the study area would continue to operate well over capacity, for the CSD as a whole, intermediate school utilization rates would decrease and these schools would continue to operate with a surplus of seats. As a result, the Proposed Actions would not have a significant adverse impact on intermediate schools within the study area or within CSD 2 in 2019.

With the Proposed Actions, high schools utilization rates at the borough level would not change. Sufficient space would exist in Manhattan high schools for the 364 project-generated high school students. Therefore, the Proposed Actions would not have a significant adverse impact on high schools in 2019.

2017

Proposed Actions—with the PS/IS School in 2017

The Proposed Actions would include the construction of an approximately 120,000 square-foot PS/IS school on the Development Site. According to the SCA, a school of this size would include of a total of 750 seats, with 420 for elementary students and 330 for intermediate students. The Proposed Actions would also generate approximately 247 elementary students and 82 intermediate students by 2017. Based on the anticipated construction sequencing schedule for the Development Site, the proposed PS/IS school is expected to be completed by the 2017 analysis year.

In 2017, construction of the PS/IS school on the Development Site would provide sufficient seats for elementary and intermediate students generated by the Proposed Actions, and the proposed PS/IS school would help alleviate the prevailing deficit of elementary seats within both

the study area and the CSD, decreasing elementary school utilization rates in both the study area (from 169 to 150 percent) and the CSD (from 113 to 112 percent). Utilization rates at intermediate schools would also decrease in the study area (from 134 to 114 percent) and within the CSD (94 compared to 91 percent).

Therefore, with the PS/IS school on the Development Site, the Proposed Actions would not result in a significant adverse impact on elementary or intermediate schools in the 2017 analysis year.

Proposed Actions—Scenario Without the PS/IS School in 2017

Identification of Impacts

If the proposed PS/IS school were not completed by 2017, the Proposed Actions could result in a significant adverse impact on elementary and intermediate schools in the study area in 2017, but this impact would not remain once the school is completed. Elementary school utilization rates would increase by 5 or more percentage points in the study area, from 169 to 182 percent, which is considered a significant adverse elementary school impact, although the increase would not be significant for CSD 2 as a whole.

Intermediate schools within the study area would also experience an increase in the utilization rate (from 134 to 139 percent) and a shortfall of seats (approximately 577 seats). While the utilization rate would increase, it would not exceed the CEQR threshold indicating the potential for a significant adverse impact. Intermediate schools within the CSD would continue to operate with excess capacity.

Mitigation

Mitigation for this impact would be to build and complete the school by 2017. In the event that the school could not be completed by 2017, the Proposed Actions would result in a temporary unmitigated significant adverse impact to elementary schools in the study area.

LIBRARIES

The analysis considers the Proposed Actions' impact on the Muhlenberg, Columbus, and Riverside Libraries, the three branch libraries of the New York Public Library (NYPL) system within a ¾-mile radius of the Development Site and Additional Housing Sites. According to the *CEQR Technical Manual*, if a proposed project increases the study area population by 5 percent or more over the Future without the Proposed Actions condition, this increase would impair the delivery of library services in the study area, and a significant impact could occur.

2019

By full build out of the Proposed Actions in 2019, the Columbus and Riverside Branches catchment area populations would each increase by less than one percent. The combined catchment area would increase by 3 percent. In all cases, the increase in population would be less than 5 percent, and, therefore, would not cause a noticeable change in the delivery of library services to the Columbus Library, Riverside Library, or the combined catchment area.

The Muhlenberg Library would receive the majority of the population growth since it serves the Development Site. As compared to the population in the Future without the Proposed Actions in 2019, the Muhlenberg catchment area populations would increase by 7 percent. While the catchment area population would increase by more than 5 percent, the increase would not impair the delivery of library services within this catchment area, since residents of the Muhlenberg

catchment area and the Proposed Actions would have access to the five central libraries located within the study area. Furthermore, residents would also have access to libraries near their place of work. Therefore, there would not be a significant adverse impact on library services in the study area in 2019 as a result of the Proposed Actions.

2017

In 2017, new population would be introduced to the area as a result of the Proposed Actions. The Muhlenberg Library catchment area would experience a 2 percent increase in population. The Columbus and Riverside Branch populations would each increase by less than one percent. The combined catchment area population would increase by one percent. Therefore, no significant adverse library impacts are expected by 2017.

CHILD CARE CENTERS

IDENTIFICATION OF IMPACTS

The analysis considers the Proposed Actions' impact on publicly funded child care and Head Start facilities within a one-mile radius of the Development Site and Additional Housing Sites. The Proposed Actions would introduce 105 and 147 children under the age of 6 who would be eligible for publicly funded child care in 2017 and 2019, respectively. Publicly funded child care and Head Start facilities in the area will already be operating above capacity in the Future without the Proposed Actions in both analysis years. The new children from the Proposed Actions would exacerbate the predicted shortage in child care and Head Start slots. These new children represent 24 percent by 2017 and 33 percent by 2019 of the existing collective capacity of publicly funded child care and Head Start centers in the study area. Given that this exceeds the CEQR threshold of a 5 percent increase of the collective capacity, if no new public child care and Head Start facilities or private providers accepting vouchers are created to increase the study area's capacity, significant adverse impacts could occur in 2017 and 2019 as a result of the Proposed Actions.

MITIGATION

This potential increase in demand could be offset by a number of factors. Some of the increased child care demand would likely be offset by parents who choose to take their children to child care centers outside of the study area (e.g., closer to work). Some of the Family Day Care Networks serve children residing in the study area and could potentially absorb some of the demand. This new demand may also be considered in future Request for Proposal planning for contracted services. Finally, new capacity could potentially be developed as part of the New York City Administration for Children's Services' (ACS) public-private partnership initiatives. As partial mitigation for this impact, ACS will monitor the demand and need for additional capacity and implement change to the extent practicable.

HEALTH CARE FACILITIES (OUTPATIENT)

The analysis considers the Proposed Actions' impacts on St. Luke's Roosevelt Hospital and St. Vincent's Hospital. The Proposed Actions could increase the demand for health care facilities by less than one percent, which is below the CEQR threshold of 5 percent that could cause a significant adverse impact. Therefore, a significant adverse impact on area hospitals is not anticipated as a result of the Proposed Actions.

POLICE PROTECTION SERVICES

The Proposed Actions would not result in direct effects on the physical operations of, or access to and from, a New York City Police Department (NYPD) precinct house. By 2019, the new worker, residential, and visitor population generated by the Proposed Actions could increase the demand for police protection. In coordination with the NYPD, the development associated with the Proposed Actions has been reviewed for potential impacts on police coverage. According to a letter from the NYPD Office of Management Analysis and Planning, NYPD would continue to evaluate its staffing needs and assign personnel based on a variety of factors, including demographics, calls for service, and crime conditions. Accordingly, there would be no significant adverse impact on police services.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The Proposed Actions would not result in any direct effects to New York City Fire Department (FDNY) or Emergency Medical Services (EMS) facilities. By 2017, the new worker, residential, and visitor population generated in the Future without the Proposed Actions could increase the demand for fire protection and for emergency medical services. According to the FDNY, based on anticipated No Build development in the Development Site Study Area, the mitigation of a new firehouse as first proposed in the *Hudson Yards FGEIS* would need to be in place in 2017 (some eight years earlier than envisioned in the *Hudson Yards FGEIS*). However, FDNY would continue to evaluate its needs and determine the specific timing for this mitigation based on the actual completion of development in the Hudson Yards area. The FDNY has indicated that if the firehouse is in place by 2017, it would accommodate the demands from the Proposed Actions, as well as surrounding No Build development. Therefore, the Proposed Actions would not result in a significant adverse impact to fire services.

I. OPEN SPACE

The Proposed Actions would result in direct significant adverse impacts on open spaces due to shadows. The build out of the Proposed Actions would also result in significant adverse indirect active and total open space impacts in the Development Site Study Area, as discussed below.

The Proposed Actions would create approximately 5 acres of open space on the Development Site. This new open space would provide a considerable open space amenity for residents and workers in an area that currently lacks open space or parks. It would contain a variety of elements, including lawns, landscaped areas, walking paths, seating areas, plazas, and two playgrounds and would serve an important role as a link in the open space network that will be developed throughout the Hudson Yards area. In the Future without the Proposed Actions, a network of open spaces will be developed extending southward from West 36th Street through the first phase of Hudson Park and Boulevard into the Eastern Rail Yard and continuing along the High Line to the south. Approximately 1.63 acres of the proposed open space would be completed in the interim Build year (2017) with the remainder completed by 2019.

No publicly accessible open space is proposed at the two Additional Housing Sites. However, development at the Additional Housing Sites would comply with the recreation space requirements of the New York City Zoning Resolution Quality Housing Program. To comply with the requirements, the proposed developments would provide a minimum amount of recreation space for the building's residents to utilize. While this space would be for use by the building's residents only and is not considered publicly accessible for the purposes of the

quantitative analysis in the Open Space chapter, the additional space would provide an on-site resource for the proposed residents.

DIRECT EFFECTS

IDENTIFICATION OF IMPACTS

The Proposed Actions would not displace or eliminate any existing open space resources. However, shadows from the proposed buildings on the Development Site are expected to result in a significant adverse impact on the planned Eastern Rail Yard open space during the spring, summer, and fall, when large incremental shadows would remove the remaining sunlight on the open space. The Proposed Actions would also result in significant shadow impacts at the Tenth Avenue Site. As a result of the Proposed Actions, much of the open space that will be constructed immediately to the east of the Tenth Avenue Site would be in shadow from early afternoon to the end of the day during each analysis day.

MITIGATION

As partial mitigation for both the Eastern Rail Yard and the Tenth Avenue Site, the design and layout for this future open space would take into consideration the shadows from the Proposed Actions. Such measures could be the placement of features requiring sunlight to be located in areas of the open space where shadows are cast for a short duration, and the use of shade tolerant vegetation for landscaping. Additionally for the Tenth Avenue Site, measures could include the programming of active recreation features.

INDIRECT EFFECTS

DEVELOPMENT SITE

Identification of Impacts

While the Proposed Actions would provide a substantial amount of additional new open space in a part of the City largely devoid of parks and open space, the Proposed Actions would nevertheless result in a significant decrease in the active and total open space ratios (the amount of active or total open space per 1,000 persons) in the study area due to the introduction of workers and residents in the larger "residential" study area surrounding the Development Site. Thus, literal compliance with the *CEQR Technical Manual* methodology would result in a significant adverse environmental impact to open space. While the Proposed Actions would result in decreases to the passive open space ratios in the smaller "non-residential" and larger residential study areas, these decreases are not considered significant adverse impacts.

To ensure that open space ratio increments remain at the level of the Future without the Proposed Actions, thereby avoiding significant adverse open space impacts, in addition to the open space that would be provided the project would need to add another 2.24 acres of open space (0.41 acres of active and 1.83 acres of passive open space) in 2017 and 6.20 acres of open space (2.28 acres of active and 3.92 acres of passive open space) in 2019. The total open space on the Development Site would need to increase to 3.87 acres in 2017 and 11.2 acres in 2019. In 2017, this would represent most of the open space to be provided on the Development Site at full build out. This is not feasible when considering construction activities and staging. In 2019, the necessary amount of open space (11.20 acres) would almost equal the size of the 13-acre

Development Site. Nonetheless, in both the 2017 and 2019 analysis years, the ratio declines (as shown in Table S-6) coupled with the active open space deficiencies in the area, indicate that the Proposed Actions would result in significant adverse indirect total open space impacts in 2017 and significant adverse indirect total and active open space impacts in 2019.

Table S-6
Development Site Study Areas
Summary Open Space Ratios, 2017 and 2019

Ratio	City Guideline Ratio*	Existing Ratio	Future Without the Proposed Actions Ratio	Future with the Proposed Actions Ratio	Percent Change**
2017 Non-Residential Study Area					
Passive/Workers	0.15	0.16	0.30	0.27	-10.00
Passive/Total Population	0.22	0.15	0.24	0.21	-12.50
2017 Residential Study Area					
Total/Residents	2.5	1.01	1.15	1.09	**-5.22**
Active/Residents	2.0	0.61	0.44	0.43	-2.27
Passive/Residents	0.5	0.40	0.71	0.67	-5.63
Passive/Total Population	0.23	0.09	0.15	0.15	0.00
2019 Non-Residential Study Area					
Passive/Workers	0.15	0.16	0.30	0.31	3.33
Passive/Total Population	0.24	0.15	0.24	0.23	-4.17
2019 Residential Study Area					
Total/Residents	2.5	1.01	1.15	1.02	**-11.30**
Active/Residents	2.0	0.61	0.44	0.39	**-11.36**
Passive/Residents	0.5	0.40	0.71	0.63	-11.27
Passive/Total Population	0.24	0.09	0.15	0.16	6.67

Notes: * Ratios in acres per 1,000 people.
** **BOLD** signifies that the ratio percent change indicates the potential for the Proposed Actions to result in a significant adverse impact.

The exception is that open space ratios in the smaller "non-residential" study area would continue to be at or above City goals for workers and total population in 2017 and for both workers and total population in 2019.

Mitigation

Potential mitigation measures for the Proposed Actions could include, among others: creating additional active open space programming on the Development Site; funding for improvements, renovation, or maintenance at existing local parks; adding amenities to existing parks to increase park usage year-round or at night; and opening schoolyards to the public outside of school hours.

These options will be further explored and evaluated in consultation with DPR between the DEIS and FEIS. If the proposed mitigation measures are determined to be infeasible, the significant adverse impact would remain unmitigated.

ADDITIONAL HOUSING SITES

The locations of the Additional Housing Sites are a sufficient distance away from the Development Site such that there would not be cumulative demand for open space resources. In the Future with the Proposed Actions, the study area would continue to experience an open space deficiency. While this is the case, the Proposed Actions would not result in a significant adverse impact for this study area in either analysis year because the open space ratios would change minimally.

J. SHADOWS

IDENTIFICATION OF IMPACTS

The Shadows chapter assesses whether the proposed buildings would result in new shadows that would adversely affect any nearby shadow-sensitive resources, including publicly accessible open spaces, historic resources with sunlight-dependent architectural features, or important natural features. The incremental shadows created by the full build out of the Proposed Actions on the Development Site in 2019 would cause a significant adverse shadow impact on the Eastern Rail Yard open space. In addition, shadows from the Tenth Avenue Site would be cast on the future open space adjacent to its east for several hours in all seasons. The design for this open space is still in development. However, the analysis conservatively assumes the entire open space would be heavily programmed with passive open space features, such as benches and other sitting areas. As such, the Proposed Actions would result in a significant adverse impact.

The proposed buildings at the Development Site would cast new shadows westward in the mornings throughout the year. Several hours of new shadows would fall on portions of the Hudson River, Hudson River Park, and the Route 9A Bikeway. Despite the long durations of new shadows, only small sections of these large resources would be affected overall. The new shadows would not create a significant adverse impact on the biota of the Hudson River, or on the Route 9A Bikeway, because it is an active linear recreation resource extending for miles north and south of the Development Site. Similarly, there would be no significant adverse impact on Hudson River Park from the incremental shadows, extending as it does for miles north and south of the site. All three of these resources would experience many hours of sun from around noon until sunset, providing both users and vegetation with substantial direct sunlight for much of the day all year.

The analysis also concluded that the planned Hudson Park and Boulevard would experience two to three hours of new shadows through the spring, summer, and fall. The incremental shadows would occur late in the afternoon and would generally be quite small in extent throughout the affected period. Further, Hudson Park and Boulevard would experience ample sunlight through the morning and afternoon. As the design of this park is still in development, the City will take into consideration the location and duration of shadows to enhance the use and landscaping of the space. Given all these factors, the Proposed Actions would not result in a significant adverse impact on this space.

The analysis determined that incremental shadows would fall across portions of the Eastern Rail Yard open space for over four hours through the late spring and summer, and for two and a half hours on March 21 and September 21. The large areas of new shadow would remove most of the remaining sunlight for much of the affected period, and would therefore result in a significant adverse impact on this open space resource. Mitigation measures to reduce or fully mitigate the

Proposed Actions' shadow impact on the Eastern Rail Yard open space are discussed in Chapter 24, "Mitigation."

The Proposed Actions at the Development Site would create several new publicly accessible open spaces, including a large central open space, an open space overlooking the waterfront on the west side of the site, and an open space in the southwest section of the site. In general, the new central spaces would be mostly shady in the mornings but at least partially sunny in the afternoons. The open space overlooking the waterfront and in the southwest portion of the site in particular would be mostly or totally in direct sun throughout the afternoons in the spring, summer and fall, and for much of the afternoon in winter. The High Line, the former freight rail viaduct that runs along the southern and western boundaries of the Development Site, would be adaptively reused as passive open space as part of the Proposed Actions. Like the other proposed open spaces on the Development Site, these sections of the High Line would generally be shady in the mornings and sunny during the afternoons.

The analysis found that the Additional Housing Site on Ninth Avenue would not cast a shadow long enough to reach any open spaces or historic resources with sun-sensitive features on any analysis day. Therefore, the development that would result at the Ninth Avenue Additional Housing Site from the Proposed Actions would not result in a significant adverse shadow impact.

MITIGATION

Mitigation measures to reduce or fully mitigate the Development Site's shadow impact on the Eastern Rail Yard open space are discussed above, in "Open Space."

K. HISTORIC RESOURCES

The Development Site and the two Additional Housing Sites were determined not sensitive for archaeological sensitivity by the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP). Therefore, the Proposed Actions would not have a significant adverse impact on archaeological resources.

The Proposed Actions would directly affect the High Line, a known architectural resource with a section located on the Development Site. With the Proposed Actions, this section of the High Line is proposed to be integrated into the overall site plan for the Development Site as a passive open space resource and pedestrian pathway that would also connect with the portion of the High Line on the Eastern Rail Yard and the 1.5 mile High Line Park to the south. In order to fully integrate the High Line with the planned open space network on the Development Site, features, such as railings, of the High Line's Twelfth Avenue section would be removed. OPRHP has agreed that construction near the High Line is historically appropriate, but has expressed concerns about the relationship of the High Line to certain improvements included in the Proposed Actions. To address those concerns, the co-leads will consult with OPRHP between the DEIS and FEIS in compliance with Section 14.09 of the New York State Historic Preservation Act of 1980.

As currently contemplated, the proposed site plan for the Development Site would result in four, out of a total of eight, buildings located immediately adjacent to the High Line. In order to preserve the integrity of this architectural resource, a five-foot-wide set back would be located between the High Line and all proposed building development fronting on the High Line. To protect the High

Line from any potential construction-related adverse physical impacts, such as ground-borne construction-period vibrations, falling debris, and damage from heavy machinery, a Construction Protection Plan (CPP) would be developed in coordination with OPRHP and LPC.

There are no architectural resources located within 90 feet of the Tenth Avenue Site or the Ninth Avenue Site. Therefore, the development of the two Additional Housing Sites would have no direct physical effect on any architectural resources in their study areas.

It is not expected that the Proposed Actions would have adverse visual or contextual impacts on any architectural resources. The context of the portion of the High Line located on the Development Site would be altered under the Proposed Actions due to the added bulk and height of the proposed development. However, the proposed development would be in keeping with the bulk, height, and modern design of the various No Build projects that are planned for completion by 2019 in the Future without the Proposed Actions. Specifically, the development of the Eastern Rail Yard site, located directly east of the Development Site, would also abut the High Line and similarly alter the context of this architectural resource. In addition, the High Line runs adjacent to and sometimes through large buildings constructed both recently and contemporary to the High Line; therefore, the construction of new buildings adjacent to or cantilevering over the historic structure would not change the High Line's existing context. In comparison to the Future without the Proposed Actions, the Future with the Proposed Actions would not create a significant adverse impact on this architectural resource. Further, the development of the two Additional Housing Sites would not result in any adverse visual or contextual impacts on any architectural resources due to the relatively low-scale of the proposed developments and their distance from any architectural resources.

L. URBAN DESIGN AND VISUAL RESOURCES

The Urban Design and Visual Resources chapter considers the potential for the Proposed Actions to adversely affect the urban design characteristics and visual resources of the project sites and their surrounding study areas. Although, the Proposed Actions would create pedestrian wind conditions on and adjacent to the Development Site that exceed the safety criterion, these conditions would be similar to conditions at comparable locations in Manhattan near the Hudson River. In consideration of that and other relevant factors relating to urban design, these exceedances would not be considered a significant adverse impact.

DEVELOPMENT SITE

URBAN DESIGN

The Proposed Actions would positively affect the urban design of the Development Site. They would result in the construction of up to eight mixed-use towers and a varied five-acre open space network on the Development Site. The Proposed Actions would enliven the Development Site, its street frontages, and the surrounding area with active ground-floor retail and school uses, anticipated widened sidewalks, and a street-tree program for the interior of the site and the sidewalks that border the perimeter of the site. The Proposed Actions would provide access to the currently inaccessible site through the creation of two roadways roughly aligned with the formerly mapped West 31st and West 32nd Streets. A large open space network with a variety of elements would provide landscaped areas, including vantage points from which one could enjoy unobstructed views of the Hudson River.

The Proposed Actions would alter the existing topography of the Development Site by constructing the proposed buildings on a platform over the LIRR rail yard below, so the topography of the Development Site would vary to promote unobstructed views west and southwest of the Hudson River and Hudson River Park through the site from the publicly accessible open spaces located within the center of the site. In addition, the Proposed Actions would result in the regrading of West 33rd Street adjacent to the Development Site, which would change the street profile between Eleventh and Twelfth Avenues to provide better service access to and from the platform level. The design and construction of this profile change will be completed in coordination with the platform design and construction.

The Proposed Actions would alter the street pattern and block form of the Development Site. Changes in the street pattern would result from the creation of two private roadways that would partially break up the superblock of the Development Site. These two roadways would terminate in cul-de-sacs near the western portion of the site and would be generally aligned with the two private but publicly accessible vehicular roadways on the east side of Eleventh Avenue that are part of plans for the independent development of the Eastern Rail Yard (to be developed in the Future without the Proposed Actions).

The Proposed Actions would result in the development of up to eight tall buildings on the Development Site, which would be similar to proposed developments planned for completion in the surrounding area in the Future without the Proposed Actions. The building uses, bulk, height, density, and setback of the Proposed Actions would be compatible with the planned development of the Eastern Rail Yard and the high-rise residential and mixed-use buildings planned and under construction throughout the study area between West 26th and West 38th Streets and Tenth and Eleventh Avenues. The eight buildings proposed to be constructed on the Development Site would range in height from approximately 350 to 950 feet, and the six buildings planned for development on the Eastern Rail Yard will range in height from approximately 150 to 900 feet. Additionally, the planned office tower on the Extell Development site on the east side of Eleventh Avenue between West 33rd and West 34th Streets will range in height from approximately 650 to 700 feet, and the planned office and residential tower on the Moinian Group development site one block to the north between West 34th and West 35th Streets will range in height from 900 to 1,000 feet. The buildings proposed on the Development Site would have similar massing to those planned on the Eastern Rail Yard and many of the other No Build projects planned on Eleventh Avenue in the study area, including the Extell Development, Moinian Group, and Avalon Bay Properties developments. The buildings on the Eastern Rail Yard and those planned adjacent to the future Hudson Park and Boulevard would be set back from adjacent streets and front onto public plazas and open spaces. The proposed buildings on the Development Site would be similar to the height, setback, and bulk of the other planned developments along the Eleventh Avenue corridor and side streets expected to be completed in the Future without the Proposed Actions.

The Proposed Actions would greatly improve the streetscape of the Development Site and study area with the creation of active ground floor uses and unique open spaces. Tree-lined sidewalks and ground floor uses would greatly enhance the streetscape from the currently inactive and blank concrete walls and chain link fencing that surround the Development Site. The adaptive reuse of the portion of the High Line located on the Development Site as a publicly accessible open space and connection to the rest of High Line Park would contribute to a new and unique open space, which would be easily accessed from the Development Site. The site's diverse and large open space network would include both passive and active uses with seating and playgrounds.

An assessment was undertaken to determine whether the Development Site would experience pedestrian level wind speeds that would be potentially hazardous. This assessment found that such conditions would occur with strong winds from the west and northwest Measures that could reduce such conditions have been incorporated into the proposed zoning although full avoidance would not be feasible under the proposed zoning and site plan. These conditions would be similar to conditions at other comparable locations in Manhattan near the Hudson River. In consideration of that and other relevant factors relating to urban design, these exceedances would not be considered a significant adverse impact.

VISUAL RESOURCES

The Proposed Actions would not directly block views of any visual resources from streets or publicly accessible open spaces. They would, however, result in some altered views in the study area, but as described more fully below, these altered views would not result in significant adverse impacts. Views of the Jacob K. Javits Convention Center ("Convention Center") along the Eleventh Avenue view corridor and views of the Starrett-Lehigh Building along the Eleventh and Twelfth Avenue view corridors would be altered, as these two buildings are currently visible to the north and south over the Development Site. However, the Convention Center would still be visible along the Eleventh Avenue view corridor north of the Development Site, and the Starrett-Lehigh Building would still be visible along the Eleventh and Twelfth Avenue view corridors south of the Development Site. North-south views of the Daily News Building (formerly the Westyard Distribution Center), a 15-story modern office building with a sloping façade, along Tenth Avenue in the study area would not be affected by development on the proposed Development Site. Views east to the Daily News Building will already be partially or entirely obstructed due to the development of the Eastern Rail Yard in the Future without the Proposed Actions. Views east to the Empire State Building will already be partially or entirely obstructed due to the development of the Brookfield Properties site on the west side of Ninth Avenue between West 31st and West 33rd Streets in the Future without the Proposed Actions.

The High Line, a visual resource located on the Development Site, would not be adversely affected by the Proposed Actions. The context of the visual resource would be altered due to the construction of tall buildings on the Development Site; however, this would not result in a significant adverse impact since the resource will be surrounded by tall buildings with the construction of other projects in the study area in the Future without the Proposed Actions. Further, as a result of the Proposed Actions, the High Line would be adaptively reused as a publicly accessible open space and would provide unencumbered views west of the Hudson River and north, south, and east to the City skyline.

The Proposed Actions would result in the creation of new east-west views across the site through the construction of two roadways through the site; currently, the concrete wall surrounding the site obstructs views through the site from Eleventh Avenue west to the Hudson River. These new roadways would open views through the site. Further, they would roughly align with the two planned east-west roadways on the Eastern Rail Yard, which would result in extended views west from the publically accessible paved plazas and open spaces in the Eastern Rail Yard through the Development Site and to the Hudson River.

ADDITIONAL HOUSING SITES

URBAN DESIGN

The Proposed Actions would not alter the block form, street pattern and hierarchy of the two Additional Housing Sites. Both developments would occupy existing blocks and lots and would be in keeping with the existing building arrangement in each study area. By changing the topography on the Tenth Avenue Site (i.e., placing a building above the Amtrak cut), the Proposed Actions would reinforce the block form and street grid on West 48th and West 49th Street.

The Proposed Actions would improve the streetscape of the two Additional Housing Sites. Both developments would connect to the existing streetwalls of adjacent buildings. The Proposed Actions would allow for ground floor retail uses on the Tenth Avenue Site, which would greatly enhance the existing streetscape of the project site that includes a concrete wall and chain-link fencing. The Proposed Actions would allow for ground floor retail uses on the Ninth Avenue Site, which would improve the project site from the currently fenced-in surface parking lot that occupies the lot.

The Proposed Actions would result in development that would be similar with respect to existing building use, bulk, height, setbacks, and density of adjacent buildings for each of the Additional Housing Sites. The Proposed Actions would result in the construction of an 11-story residential building with ground floor retail on the Tenth Avenue Site, similar in height and massing to existing development in the study area. The Proposed Actions would result in the construction of a 12-story residential and office building with ground floor retail on the Ninth Avenue Site, similar to the use, bulk, height, and massing of existing development in the study area.

VISUAL RESOURCES

The proposed buildings at the two Additional Housing Sites would not result in a significant adverse impact to visual resources. The proposed building at the Tenth Avenue Site would not directly obstruct any visual resources or block any view corridors. Views east over the project site of the varied skyline of Midtown Manhattan would be partially obstructed; however, the skyline would still be visible from cross streets in the study area, like West 48th and West 49th Streets adjacent to the project site. The proposed building at the Ninth Avenue Site would not directly obstruct any visual resources or block any view corridors. Background skyline views of the Time Warner Center and Hearst Building to the north and Worldwide Plaza to the south, visible over the Ninth Avenue Site would be partially obstructed with the development of the Ninth Avenue Site. However, these visual resources would still be prominently visible to the north and south along the Ninth Avenue view corridor adjacent to the project site and along east-west cross streets in the study area.

M. NEIGHBORHOOD CHARACTER

The Proposed Actions would have a beneficial effect on neighborhood character on the project sites and in the surrounding study areas. Development of Western Rail Yard would fulfill a long-standing public policy to promote productive use of the site with a lively mix of uses, open spaces, and streets that would complement and support the development in the Hudson Yards area and West Chelsea. Construction of permanently affordable housing on the Tenth Avenue

and Ninth Avenue Sites would support the Clinton neighborhood by emphasizing its residential character and the mixed-income character of its residents.

DEVELOPMENT SITE

The Proposed Actions would change the character of the Development Site, and this change would be, on balance, decidedly beneficial. The site, which presents a blank wall to the surrounding neighborhood on two sides and transportation/maintenance uses where it can be seen, would be transformed with a mix of residential and commercial uses and open spaces, clearly visible and accessible to the public. Two publicly accessible roadways, on axis with West 31st and West 32nd Streets, would break up the perception of a formidable superblock, allowing vehicles and people to move into and through the site with ease. The approximately five acres of publicly accessible open space would draw people into and through the site as well, helping to make connections to other existing and planned parks and open spaces. The High Line would be preserved and adaptively reused as passive open space at the site and would help extend the experience of the High Line Park, now in development, west to Twelfth Avenue and north to West 33rd Street. The streetscape surrounding the site would be greatly improved, with street trees and views into and through the development. Moreover, with this change on the Development Site, the Proposed Actions also would advance long-standing policy goals of both the City and MTA to encourage development above the Western Rail Yard.

Specifically, the analyses of land use, urban design and visual resources, historic resources, socioeconomic conditions, and traffic and pedestrian conditions, found no significant impacts that would adversely affect neighborhood character on the site. Noise levels at the site would be high, but noise attenuation in building design would ameliorate this condition. The levels within the new open spaces would also be high, but comparable to the levels in many other New York City parks and open spaces in Manhattan, such as Hudson River Park, Riverside Park, Central Park, and Bryant Park. Similarly, although the Development Site would experience high pedestrian-level winds on days when the prevailing winds are high and from the northwest and west, these conditions would be to conditions at comparable locations in Manhattan near the Hudson River and would not be considered a significant adverse impact on neighborhood character.

In summary, the Proposed Actions would not result in a significant adverse neighborhood character impact on the Development Site and would significantly improve neighborhood character on the Development Site.

DEVELOPMENT SITE STUDY AREA

The decided change in neighborhood character on the Development Site would also have, on balance, a positive effect on neighborhood character in the Development Site Study Area. Instead of facing a large seemingly empty space on the western side of the neighborhood, surrounding development would benefit from the new, compatible land uses on the Development Site, by its urban form that would extend the grid into the site, by the level of density and building forms that would be similar to those on the Eastern Rail Yard site and several other developments anticipated in the future without the Proposed Actions, and by the site's open spaces, which would provide an important link in a network of open spaces now emerging in the Study Area. In short, the Proposed Actions would complement the emerging developments in the Special Hudson Yards District and the Special West Chelsea District, as well as areas of Midtown, Clinton, and Chelsea more broadly.

Specifically, the land use analysis found that the development resulting from the Proposed Actions would be compatible and consistent with development trends in the Development Site study area. The urban design and visual resources analysis found that the building heights and forms, mix of uses, and plan of the Development Site would be compatible with building heights, forms and mix of uses of the new development anticipated in the future without the Proposed Actions. Although the tall buildings would rise on the Development Site, they would not block any views to visual or architectural resources in the study area. The context for historic resources in the study area would change under the Proposed Actions, but this context would already be altered by development in the future without the Proposed Actions. The socioeconomic analysis found that while the Proposed Actions would introduce a substantial amount of housing to the study area, this housing would not be more costly than the new housing currently in construction and anticipated in the future without the Proposed Actions.

The analysis of traffic and pedestrians identified a number of locations of significant adverse impacts in the study area. However, in the future without the Proposed Actions most of the study area is expected to be characterized by congested traffic and pedestrian conditions, particularly during peak periods of activity, so that even though these conditions would worsen, the general character of traffic and pedestrian conditions in the area would not change. Noise levels in the study area also would increase—from increased traffic, proposed playgrounds, and building mechanical equipment—but the magnitude of the increases would be generally imperceptible to most listeners and below the CEQR threshold for a significant adverse noise impact.

In summary, the change in character on the Development Site would be consistent with the character of the surrounding areas as they would be developed by 2019, and the Proposed Actions would help create a new 24-hour neighborhood that complements the emerging developments in the Hudson Yards and the West Chelsea neighborhoods. The Proposed Actions would not have a significant adverse impact on neighborhood character in the Development Site's study area.

TENTH AVENUE SITE

The proposed building on the Tenth Avenue Site would complement the mixture of densities and uses in the surrounding area, and would not have a significant adverse impact on neighborhood character. Moreover, by building over the rail cut and adding residential use, the proposed building would greatly improve the character of the Tenth Avenue Site.

The change in character on the Tenth Avenue Site would have a positive effect on neighborhood character in the Tenth Avenue Site Study Area. By providing a compatible residential use and removing the rail cut, thus reinforcing the grid on West 48th and West 49th Streets, the new development would support neighborhood character. Although the building would be taller than nearby structures, at 99 feet it would not be out of scale with the northern area of Clinton. Finally, by providing permanently affordable housing on the site, the Proposed Actions would greatly support the character of the Clinton neighborhood as one whose residents are characterized by a true mix of incomes.

NINTH AVENUE SITE

The proposed building on the Ninth Avenue Site would complement the mixture of densities and uses in the surrounding area, and would not have a significant adverse impact on neighborhood character. By replacing a gravel parking lot with a new residential mixed-use building, the Proposed Actions would improve the character of the Ninth Avenue Site.

The Proposed Actions would not have a significant adverse impact on neighborhood character in the Ninth Avenue Site study area. Similar to the Tenth Avenue Site, by providing compatible residential use, the new development would support neighborhood character. Although the building would be taller than nearby structures, at 115 feet it would not be out of scale with the surrounding area of Clinton. Finally, by providing permanently affordable housing on the site, the Proposed Actions would greatly support the character of the Clinton neighborhood as one whose residents are characterized by a true mix of incomes.

N. NATURAL RESOURCES

The *CEQR Technical Manual* defines natural resources as "plant and animal species and any area capable of providing habitat for plant and animal species or capable of functioning to support ecological systems and maintain the City's environmental balance." The Proposed Actions would not have a significant adverse impact on these resources, as discussed below.

GROUNDWATER

Construction and operation of the Development Site Project would not result in a significant adverse impact to groundwater. Groundwater is not used as a source of drinking water in Manhattan.

WETLANDS

The Proposed Actions would not result in in-water construction activities within the Hudson River. Implementation of the stormwater pollution prevention plan (SWPPP) prepared in accordance with the DEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-08-001 during construction and operation of the Development Site Project would avoid a significant adverse impact to designated DEC littoral zone tidal wetlands in the Hudson River from the discharge of stormwater generated within the Development Site. Post-construction stormwater management measures for the Development Site Project would decrease the rate and quantity and improve the quality of stormwater discharged from the Development Site and conveyed to the Hudson River. As a result, the Proposed Actions would not result in any significant adverse environmental impacts to designated DEC littoral zone tidal wetlands in the Hudson River.

FLOODPLAINS

The majority of the Development Site is located within the 100-year floodplain, which is affected by coastal flooding. Unlike fluvial flooding, which is affected by activities within the floodplain of a river, coastal flooding is influenced by tidal and meteorological forces and is not affected by activities within the floodplain. Therefore, the Development Site Project would not adversely affect flooding of areas adjacent to the Development Site. Furthermore, approximately two-thirds of the Development Site Project would be located on the platform over the LIRR facilities and would be elevated above the existing 100-year floodplain as well as the projected 100-year elevation due to sea level rise. Any development that would occur within the terra firma portion of the Development Site would have the elevation of the lowest floor set forth in the Restrictive Declaration for the Development Site. The placement of the elevation of the lowest floor for the base of structures WR-2, WR-3, and WR-4 (all would be located on terra firma) at least one foot above the current base flood elevation (BFE) for the 100-year flood would result in an elevation of the lowest floor that would be above the New York City Panel on

Climate Change (NPCC) projected increased 100-year flood elevation in the 2020s. Therefore, the design for these structures would minimize the potential for public and private losses due to flood damage under current and projected flood conditions.

TERRESTRIAL RESOURCES

The Proposed Actions would not result in a significant adverse impact to terrestrial resources. Construction of the Development Site Project would result in loss of limited habitat present within the project sites, and wildlife displacement. However, vegetation and wildlife at the project sites is primarily composed of common species tolerant of urban ecosystems, including native species (i.e., Eastern gray squirrel), non-native species (i.e., European starling). The loss of existing vegetation and wildlife would not result in a significant adverse impact on terrestrial resources of the New York City metropolitan region.

The construction of the Development Site Project would create approximately five acres of open space (including approximately one acre of the High Line open space). These proposed open spaces would be planted with a variety of native and ornamental trees, shrubs, grasses, and herbaceous perennials. This habitat enhancement would likely improve the resource value of the Development Site beyond its current value, and would provide potential habitat for urban wildlife, including migratory songbirds, small mammals and butterflies. The potential losses of birds due to daytime and nighttime collisions with buildings during the fall and spring migratory periods would not be expected to result in a significant adverse impact to migratory bird populations.

WATER QUALITY AND AQUATIC BIOTA

The Proposed Actions would not result in a significant adverse impact on water quality or aquatic biota of the Hudson River. No in-water construction activities would occur as a result of the Proposed Actions. During construction of the Development Site Project, implementation of the SWPPP prepared in accordance with the DEC SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-08-001 would avoid any significant adverse impacts on water quality or aquatic resources of the Hudson River from the discharge of stormwater from the Development Site.

Although additional discharge of sanitary sewage would occur as a result of the Proposed Actions, the incremental increase (1.24 million gallons per day [mgd]) is small and would not be expected to cause the North River Water Pollution Control Plant to be above its permitted daily flow limit of 170 mgd or adversely affect compliance of the North River Water Pollution Control Plant effluent with its SPDES permit limits.

Under existing conditions, stormwater generated within the northern two-thirds of the Development Site is discharged to the LIRR stormwater drainage system within the Western Rail Yard. Stormwater generated within the southern third of the Development Site along the West 30th Street frontage is conveyed to the combined sewer system within West 30th Street. Stormwater from the Additional Housing Sites is discharged to the combined sewer system. The Proposed Actions would result in the removal of stormwater generated within the southern third of the Development Site from the combined sewer system, discharging it instead to the existing LIRR stormwater drainage system. As detailed in Chapter 14, “Infrastructure,” stormwater generated within the northern half of the Development Site would be discharged to the separate storm sewer that will be installed within West 33rd Street in the Future without the Proposed Actions as part of the City’s Amended Drainage Plan for the Hudson Yard area. With the

implementation of stormwater management best management practices (BMPs) proposed for the Development Site Project, the Proposed Actions would result in a decrease in the quantity and rate at which stormwater runoff would be discharged from the Development Site, and an improvement in the quality of stormwater discharged to the Hudson River. Therefore, stormwater generated by the Proposed Actions would not result in a significant adverse impact on the aquatic resources of the Hudson River.

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT

The Proposed Actions would not result in in-water construction activities. The discharge of stormwater originating from the Development Site and the discharge of sanitary sewage resulting from the Proposed Actions to the combined sewer system would not result in a significant adverse impact to water quality. Therefore, the Proposed Actions would not result in a significant adverse impact to Significant Coastal Fish and Wildlife Habitat.

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

No in-water work would be conducted as part of the Proposed Actions, and the construction and operation of the Development Site Project would not result in a significant adverse impact to water quality. Moreover, rare, special concern, threatened, endangered and candidate species with the potential to occur within the vicinity of the Development Site and Additional Housing Sites are limited to aquatic species that are likely transient. For these reasons, the Proposed Actions would not result in any significant adverse impacts to State-listed or federally-listed species.

O. HAZARDOUS MATERIALS

The Hazardous Materials chapter assesses the potential impacts from hazardous materials and contaminants encountered in the soil, groundwater, or existing structures during construction of the project sites and the likelihood of such contaminants to persist after development. It also assesses and summarizes specific measures to be employed to minimize the potential for exposure to such materials. Based on the findings and conclusions of the environmental assessments completed for the three project sites, the Proposed Actions are not anticipated to result in a significant adverse impact with respect to hazardous materials. With the implementation of the following remediation and protective measures, the risk of exposure to contaminated soil and groundwater would be minimal:

- Preparation of a site-specific Construction Health and Safety Plan (CHASP) describing precautionary measures and safety procedures to be followed to minimize pathways of exposure to contaminants prior to any excavation or construction activity. The CHASP would include a Materials Handling Plan identifying specific protocols and procedures to be employed to manage the contaminated soil and groundwater at the Development Site and at both the Ninth Avenue and Tenth Avenue Additional Housing Sites in accordance with applicable regulations. For the Development Site, the requirement for a CHASP will be included in the Restrictive Declaration. For the Additional Housing Sites, the requirement for a CHASP will be included in a MOU between DCP, HPD, and DEP;
- Installation of appropriate vapor mitigation systems to protect buildings in “terra firma” of the Development Site and the Ninth Avenue Site. If required, the design of new buildings at both sites would consider soil vapor mitigation measures to prevent any volatile contaminants that may remain present in the soil and groundwater from migrating into the

buildings. The Restrictive Declaration for the Development Site and the MOU for the Ninth Avenue Site will include these vapor mitigation requirements. Those documents will specify that, based upon further testing and review of any additional analytical data, the Developer (for the Development Site) and HPD (for the Ninth Avenue Additional Housing Site) will have the opportunity to demonstrate to DEP's satisfaction which of these measures are required.

- Installation of appropriate permanent ventilation systems for areas under the platform at the Development Site in accordance with LIRR's engineering design criteria for yard ventilation.

P. WATERFRONT REVITALIZATION PROGRAM

The New York City Waterfront Revitalization Program (WRP) is the City's principal coastal zone management tool. The WRP encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. All discretionary land use actions within the mapped coastal zone must be found consistent with the policies and intent of the WRP (i.e., they must not hinder the achievement of any of the policies and, where practicable, advance one or more policy). The entire Development Site is located within New York City's coastal zone boundary. Both of the Additional Housing Sites are outside the City's coastal zone boundary. Therefore, the Waterfront Revitalization Program analysis only examines the Proposed Actions' compliance with Federal, State, and local coastal zone policies as they relate to the Development Site.

The Proposed Actions would be consistent with the WRP, and would advance the goal of encouraging commercial and residential redevelopment in appropriate portions of the coastal zone (WRP Policy 1.1) where public facilities and infrastructure are or will be adequate (WRP Policy 1.3), and the goal of providing public access to and along the City's coastal waters (WRP Policy 8.0). The Proposed Actions would result in the addition of approximately five acres of publicly accessible open space within the City's coastal area. The new publicly accessible open space would provide passive recreational opportunities and attractive pedestrian connections between the Development Site, the High Line, the open space planned for the Eastern Rail Yard and surrounding neighborhoods—areas long separated visually and physically by the largely below-grade rail yard. The proposed open space would also serve an important role as a link in the open space network that will be developed throughout the Hudson Yards area.

While the Proposed Actions would provide a substantial amount of open space in a part of the City coastal zone largely devoid of parks and open space, the Proposed Actions would nevertheless result in a significant decrease in the active and total open space ratios due to the introduction of workers and residents in the larger "residential" study area surrounding the Development Site. This decrease in active and total open space ratios would result in a significant adverse impact, and requires consideration of measures to mitigate these impacts to the greatest extent practicable. These measures will be further explored and evaluated in consultation with DPR between the DEIS and FEIS. The determination of consistency with WRP Policy 1.3 will be made following the evaluation of mitigation or partial mitigation measures for the significant adverse open space impact.

The Proposed Actions would not impair any existing views of the waterfront and would open views of the waterfront from the Development Site that are currently not accessible to the public. The creation of two east-west vehicular roadways, and a north-south pedestrian corridor located midblock on West 33rd Street, would improve vehicular and pedestrian access to the

Development Site, and create new east-west and north-south view corridors. A large and diverse approximately 5-acre open space network would provide unique landscaped areas from which one could enjoy views of the Hudson River and access the waterfront via an at-grade crossing at West 30th Street and Twelfth Avenue, furthering the goal of providing public access along the City's coastal waters (WRP Policy 8.0).

The Proposed Actions would not occur within a Special Natural Area District (SNAD), Significant Natural Waterfront Area (SNWA) or Recognized Ecological Complex, nor would they result in a significant adverse impact on terrestrial plants or animals, wetlands, water quality, or aquatic biota (see Chapter 11, "Natural Resources"). As discussed in Chapter 11, "Natural Resources," the Development Site does not contain tidal or freshwater wetlands. No in-water work would be conducted as part of the Proposed Actions.

Implementation of stormwater best management practices (BMPs) and sustainable, green components for the Development Site would reduce the quantity and rate at which stormwater runoff would be discharged from the Development Site to the separate storm sewer that would be developed in the Future without the Proposed Actions as part of the Amended Drainage Plan.[1] Implementation of these measures, as well as other stormwater management measures specified in the stormwater pollution prevention plan (SWPPP) developed for the Proposed Actions, would avoid a significant adverse impact to tidal wetlands, and the water quality and aquatic biota of the Hudson River due to discharge of stormwater from the Development Site. Additionally, the discharge of sanitary sewage resulting from the Proposed Actions would not cause the North River Water Pollution Control Plant to exceed its permitted daily flow limit, or adversely affect its compliance with its SPDES permit limits. Implementation of water conservation measures to reduce sanitary sewage would minimize the potential for the Proposed Actions to result in a significant adverse impact to the water quality and aquatic biota of the Hudson River due to increased combined sewer overflows (CSOs).

The construction and operation of the Proposed Project would not result in a significant adverse impact to groundwater resources. The majority of the Development Site is located within the 100-year floodplain. Approximately two-thirds of the proposed development at the Development Site would be located on the platform over the LIRR facilities. The Proposed Project elements that would be developed on the platform would not affect the 100-year flood elevation on or adjacent to the Development Site. Any development that would occur within the terra firma portion of the Development Site would have the elevation of the lowest floor set forth in the Restrictive Declaration for the Development Site. The placement of the elevation of the lowest floor for the base of structures WR-2, WR-3, and WR-4 (all would be located on terra firma) at least one foot above the current base flood elevation BFE for the 100-year flood would result in an elevation of the lowest floor that would be above the New York City Panel on Climate Change (NPCC) projected increased 100-year flood elevation in the 2020s. Therefore, the design for these structures would minimize the potential for public and private losses due to flood damage under current and projected flood conditions.

[1] DEP has prepared an Amended Drainage Plan for the Hudson Yards area (generally bounded by: Route 9A to the west; West 46th to the north; West 27th Street to the south; and between Seventh and Tenth Avenues to the east) to accommodate additional sanitary sewage that would result from the rezoning of this area, and modify the storm sewer system. The Amended Drainage Plan, and future changes to the combined and separate storm systems associated with the Amended Drainage Plan would occur in the Future without the Proposed Actions.

Q. INFRASTRUCTURE

The Infrastructure chapter evaluates the potential effects of the Proposed Actions on New York City's water supply, sanitary sewage treatment, and stormwater management infrastructure. It describes the existing water supply and wastewater infrastructure in the vicinity of the project sites and identifies changes to water supply, stormwater, and wastewater conditions that would occur in the Future with and without the Proposed Actions.

The Proposed Actions would result in increased demands on New York City's water supply and sanitary sewage treatment systems by as much as 1.25 million gallons per day. The municipal systems have adequate overall capacity to meet the projected demands, though local improvements in City water mains and sewer infrastructure will be necessary to relieve local constraints in water supply, sewer infrastructure, and stormwater management networks in order to accommodate the Proposed Actions. The City has committed to make these improvements, in the required timeframe, to support the proposed development that would result from the Proposed Actions. Therefore, the Proposed Actions would not have any significant impacts on the City water supply, sanitary sewage, and stormwater management systems.

In addition, these sewer and water demands would be reduced because the proposed developments would include sustainable design strategies to reduce potable water usage and sewage demands. For the Development Site, the Developer has committed to incorporating water conservation measures (i.e., low-flow fixtures), rainwater collection systems and green roofs into the Development Site that would reduce demands on New York City's water supply and stormwater management systems. The Developer has also committed to seek LEED Silver certification from the Green Building Certification Institute (GBCI), which prescribes at least a 20 percent reduction in water usage compared to the baseline condition. In addition, a portion of the increased sanitary sewage flow would be offset by diverting stormwater runoff from the combined sewer system to separate storm sewers and implementing water conservation measures as part of the Proposed Actions.

The DEP water supply system has adequate capacity to supply the necessary water to meet the demands associated with each of the project sites; however, some new local distribution mains in the immediate vicinity of the Development Site would be required in order to meet project-generated demands and maintain service supply pressures for customers and fire protection. The *Hudson Yards FGEIS* identified necessary modifications to water supply infrastructure to ensure that users throughout the Hudson Yards area have an adequate water supply at stable pressure for all conditions and to accommodate the redevelopment of the adjacent Hudson Yards area, including the Development Site.

The Proposed Actions would result in an increase in the volume of sanitary sewage generated and discharged into the DEP combined sewer system. The North River Water Pollution Control Plant has ample dry weather capacity to handle this additional sewage. New sanitary flows into the combined sewer system from the Development Site may exacerbate the combined sewer overflows (CSOs) at affected outfalls by displacing other wastewater volumes from other sources. Nevertheless, because of the available assimilative capacity of the Hudson River, those increases were determined not to have a significant adverse impact on water quality. Under existing conditions, some stormwater runoff drains into the combined sewer system and can contribute to CSO events. Under the Proposed Actions, stormwater runoff would drain directly to the Hudson River and, therefore, would not contribute to CSO events. The Proposed Actions would also implement mechanisms at the Development Site to decrease sanitary flows, relative

to the base flow analysis, to the combined sewer system and slow down and treat stormwater runoff to the Hudson River.

The Proposed Actions would reduce the quantity and improve the quality of stormwater runoff discharged from the Development Site with several measures. Landscaped areas would allow for some subsurface infiltration of rainfall, and green roofs and rainwater harvesting systems would provide additional runoff capture, and reduce the rate of discharges that would occur. The incorporation of best management practices (BMPs) into the stormwater management plan for the Development Site would result in reduced levels of suspended solids and other contaminants carried by surface runoff, thereby improving the quality of existing stormwater runoff from the Development Site that discharges directly into the Hudson River.

DEP has developed an Amended Drainage Plan for the Hudson Yards area that identifies improvements to the existing storm and combined sewer system infrastructure that are necessary to accommodate the full build out of the Hudson Yards area. The Amended Drainage Plan provides for the construction of new storm sewers along the West 33rd Street and Twelfth Avenue frontages of the Development Site that would divert existing stormwater runoff from the combined sewer system. The Amended Drainage Plan also identifies replacement of the existing combined sewer in West 33rd Street with a separate storm sewer and sanitary sewer. These sewers would be adequately sized to handle the flows that would be discharged from the Development Site as well as the adjacent Hudson Yards area, based on the development density allowed by the proposed zoning under the Proposed Actions.

The two Additional Housing Sites would generate minor additional sanitary sewage flows and sanitary sewage flows and site stormwater runoff would drain into the existing combined sewer system. Design and construction for the two Additional Housing Sites would incorporate BMPs and sustainable measures to control the rates of stormwater discharges from each site. Existing combined sewer infrastructure in the vicinity of the Additional Housing Sites is adequate to accommodate the relatively minor increases in flows that would be generated by the developments in these sites.

PlaNYC, the City's long-term sustainability plan, and the Sustainable Stormwater Management Plan (2008) developed by the Mayor's Office as a key initiative of PlaNYC, identify a number of strategies for meeting water quality goals that focus on promoting cost-effective source controls for stormwater management. While the majority of the initiatives are targeted towards City agencies for implementation, the Proposed Actions would include the following measures consistent with PlaNYC and the Sustainable Stormwater Management Plan: (1) divert runoff from the combined sewer system into high level storm sewers (HLSS); (2) incorporate various source control features into proposed buildings and site open space design to promote stormwater collection and management to reduce the quantity of offsite discharges and improve the quality of runoff that is discharged into the Hudson River; and (3) incorporate measures to promote the efficient use and conservation of domestic water to reduce sewage generation rates.

R. SOLID WASTE AND SANITATION SERVICES

While the Proposed Actions would generate additional solid waste and require the relocation of existing DSNY facilities, a significant adverse impact on solid waste and sanitation services would not occur as a result of the Proposed Actions.

DSNY is responsible for the collection and disposal of municipal solid waste, including the collection of recyclables, generated by residences, some nonprofit institutions, tax exempt

properties, and City agencies. Private carters provide these services to commercial and other users. DSNY is also responsible for street cleaning, snow and ice removal from City streets, and enforcement of the City's Recycling Law and other Sanitation Code provisions. The Proposed Actions would increase volumes of generated solid waste and recyclables that would have to be managed, but would not pose a significant strain to overall capacity of the City's municipal and private solid waste system or hamper the provision of adequate sanitation services.

Municipal waste collection services within the surrounding area are provided by DSNY in accordance with a new 20-year Comprehensive Solid Waste Management Plan (SWMP) dated September 2006. The Proposed Actions are consistent with, and do not require amendments to, the City's SWMP.

The Proposed Actions would require the relocation of existing DSNY facilities from the Development Site to existing feasible alternative sites, which may be subject to necessary approvals. DSNY would identify suitable interim relocation sites. A generic analysis was conducted to determine the potential environmental impacts that could result from the relocation of the DSNY facilities from the Development Site. The analysis concluded that, depending on the interim site, relocation of the DSNY facilities could result in significant adverse impacts in the following areas: land use, zoning, and public policy; architectural historic resources; and noise. The assessment is conservative, and many, if not all, of the potential impacts may not occur. In the absence of site-specific details at this time, it is possible that the relocation of the DSNY facilities would result in one or more of the significant adverse impacts noted above. In that event, a range of measures would be available to eliminate or avoid those possible impacts.

S. ENERGY

Overall, the Proposed Actions would not have a significant adverse impact on energy supply and distribution systems. The Proposed Actions would result in increased energy demands of approximately 32 megawatts (MW) for electricity and 0.12 million cubic feet per hour (CFH) for natural gas. Because these increases overall are small relative to the capacity of these systems and the current and future projected levels of service needs within New York City, these demand increases would not have a significant adverse impact on either electricity or natural gas services; however, some improvements to the local utility infrastructure would be required to connect the Development Site to the local utility distribution networks for electricity and natural gas.

Con Edison is responsible for providing electric and gas services throughout Manhattan, including constructing and maintaining the local utility infrastructure necessary to service customer requirements. Con Edison plans for the expansion of local utility infrastructure as necessary to accommodate projected growth citywide and the local demand increases for development projects such as the Proposed Actions.

The New York Independent System Operator (NYISO), as the responsible body for overseeing the safe and reliable operation of the electric transmission system across the State of New York, performs an annual review of the electricity needs for the State, and monitors the system supply and distribution capabilities for adequacy to meet projected demand growth. NYISO in its *2009 Reliability Needs Assessment* for the period from 2009 through 2018 anticipates that the resources needed to meet the forecast electricity needs of New York will be adequate in 2018.

The Developer has committed to achieve higher energy efficiency for the proposed buildings on the Development Site, resulting in 14 percent less energy use than would be achieved by

complying with the current building code. The Developer has also committed to seek LEED Silver certification for all proposed buildings. For the Additional Housing Sites, HPD would require energy reduction measures in compliance with the New York State Energy Research and Development Authority's Green Affordable Housing Component and Enterprise Community Partners' Green Communities program. Therefore, the Proposed Actions would be consistent with and advance the energy reduction goals of PlaNYC.

T. TRAFFIC AND PARKING

IDENTIFICATION OF IMPACTS

The Proposed Actions include substantial commercial and residential development on the Development Site, resulting in an increase in the number of vehicle trips into and out of the Development Site study area. Although anticipated development of the Additional Housing Sites would generate a minimal volume of additional vehicle trips, the number of vehicle trips that would be cumulatively generated by the Development Site and Additional Housing Sites forms the basis of the traffic impact evaluation within the traffic study area, which extends from West 23rd Street to West 54th Street and from Twelfth Avenue east to Broadway. Within this study area, 112 intersections were selected for detailed traffic impact analysis, consisting of 109 signalized and three unsignalized intersections. These intersections were analyzed for weekday AM weekday midday, weekday PM, and Saturday midday peak hour conditions. Due to the remoteness of the Additional Housing Sites from the Development Site and the minimal off-site parking demand that they would generate, the parking study area was focused within one-half mile of the Development Site.

Existing conditions traffic analysis indicated that although most intersections in the traffic study area operate at overall acceptable levels during the four analysis peak hours, individual approach movements at numerous intersections operate at mid-Level of Service (LOS) D or worse. Specifically, 62 approach movements at 38 intersections operate at mid-LOS D, LOS E or LOS F in the AM peak hour; 37 approach movements at 32 intersections operate at mid-LOS D, LOS E or LOS F in the midday peak hour; 90 approach movements at 59 intersections operate at mid-LOS D, LOS E or LOS F in the PM peak hour; and 34 approach movements at 27 intersections operate at mid-LOS D, LOS E or LOS F in the Saturday midday peak hour. Little on-street parking is available weekdays in the parking study area, with most parking supply restricted to commercial vehicles and the few unrestricted spaces are fully utilized. Off-street parking surveys indicated a midday weekday off-street utilization rate of 79 percent with approximately 1,100 spaces available and a weekday overnight utilization rate of 37 percent with approximately 2,350 spaces available.

Significant levels of development were assumed within and in the area surrounding the traffic study area for analysis of the Future without the Proposed Actions condition. Vehicle trips generated by this development would result in a substantial deterioration in traffic operations from existing 2008 conditions to the 2019 full Build analysis year, with similar conditions projected for the 2017 interim analysis year. For example, in the weekday PM peak hour, the most congested condition in the study area, the number of intersection approach movements that would operate at mid-LOS D or worse would deteriorate from the 90 approach movements at 59 intersections indicated above for existing conditions to 143 approach movements at 84 intersections that would operate at mid-LOS D, LOS E or LOS F in the traffic study area under the 2019 Future without the Proposed Actions condition. Off-street parking demand would also

increase significantly in the parking study area in the Future without the Proposed Actions condition. Off-street parking demand is projected to increase to 134 percent of supply during the weekday midday in 2019, but it is estimated that over 1,100 overnight spaces would be available. Interim year 2017 conditions would be similar.

For the Future with the Proposed Actions condition, the worst-case development scenario at the Development Site was analyzed for each traffic and parking analysis time period. Although traffic volumes generated by the Proposed Actions would cause further deterioration in traffic operations, the number of intersection approach movements that would operate at mid-LOS D or worse would not substantially increase. For example, in the weekday 2019 PM peak hour, the number of intersection approach movements that would operate at LOS E or LOS F is projected to increase from 130 intersection approach movements to 140 intersection approach movements with a slight reduction in the number of approach movements projected to operate in mid-LOS D. The 2017 Future with the Proposed Actions condition would be essentially the same with 138 intersection approach movements projected to operate in LOS E or F, as compared to 129 approach movements projected to operate at these levels in the 2017 Future without the Proposed Actions condition.

Under the 2019 Future with the Proposed Actions condition, significant adverse traffic impacts were identified for 81 intersection approaches at 64 intersections during the weekday AM peak hour, 75 approach movements at 60 intersections during the weekday midday peak hour, 96 approach movements at 75 intersections during the weekday PM peak hour, and 51 approach movements at 47 intersections during the Saturday midday peak hour. Under the 2017 Future with the Proposed Actions condition, significant adverse impacts were identified at 70 approach movements at 59 intersections during the weekday AM peak hour, 64 approach movements at 51 intersections during the weekday midday peak hour, 88 approach movements at 72 intersections during the weekday PM peak hour, and 42 approach movements 41 intersections during the Saturday midday peak hour. In nearly all cases, the intersection approach movements on which significant adverse traffic impacts would occur in 2017 would also have significant adverse traffic impacts in 2019.

The Proposed Actions would further exacerbate the weekday midday off-street parking shortfall in the parking study area, but not substantially. It is assumed that 1,600 accessory parking spaces would be provided at the Development Site, but the parking analysis found that this supply would not accommodate all the parking demand generated by the Proposed Actions during the weekday midday time period. However, it is expected that the available off-street parking supply would be able to accommodate the expected increase in overnight demand for all scenarios of the Proposed Actions in both 2017 and 2019. The reasonable worst-case development scenario would increase weekday midday off-site parking demand by approximately 320 spaces above 2019 demand levels in the Future without the Proposed Actions with the off-street utilization rate increasing from 134 percent to 139 percent of parking supply. Interim year 2017 weekday midday conditions would be slightly worse due to the assumption that only 850 of the 1,600 accessory spaces would be available in 2017 with a worst case off-site weekday demand of approximately 460 parking spaces. However, according to the *CEQR Technical Manual*, for proposed actions within the Manhattan Business District (defined as the area south of 61st Street), the inability of a proposed action or the surrounding area to accommodate projected future parking demands would be considered a parking shortfall, but is not deemed to be a significant adverse impact. The unsatisfied demand for parking spaces during the midday peak utilization period would result in vehicles parking outside of the parking study area and

motorists walking greater distances to their destinations. As parking shortfalls do not constitute significant adverse impacts for CEQR purposes, mitigation is not required.

MITIGATION

Most of the impacts could be mitigated through the implementation of traffic engineering improvements, including:

- Modification of traffic signal phasing and/or timing;
- Elimination of on-street parking within 150 feet of intersections to add a limited travel lane, known as "daylighting";
- Enforcement of existing parking restrictions to ensure that traffic lanes are available to moving traffic;
- Channelization and lane designation changes to make more efficient use of available street widths; and
- Installation of traffic signals at unsignalized intersections if warranted.

In addition, a comprehensive traffic monitoring and management program will be implemented under the auspices of the New York City Department of Transportation (NYCDOT) to improve traffic conditions throughout the study area.

Of the more than 360 intersection movements evaluated for the 2019 Future with the Proposed Actions condition, 14 intersection movements would have unmitigated significant adverse impacts during the weekday AM peak hour, 4 intersection movements would have unmitigated significant adverse impacts during the weekday midday peak hour, 17 intersection movements would have unmitigated significant adverse impacts during the weekday PM peak hour and 6 intersection movements would have unmitigated significant adverse impacts during the Saturday midday peak hour.

U. TRANSIT AND PEDESTRIANS

Analyses of transit elements included operations of subway lines (line-haul) and subway stations (turnstiles, High Entrance/Exit Turnstiles [HEETs], service gates, stairways, and escalators), bus services, and ferry services, as well as pedestrian elements (sidewalks, crosswalks, corners, and bicycle routes). The Proposed Actions would not cause a significant adverse impact to subway line haul, ferry operations or bicycle routes. However, the Proposed Actions would cause significant adverse impacts to one subway station stairway, certain bus lines, and certain pedestrian elements. Most of these could be mitigated through implementation of the measures described below. In the absence of such measures, these impacts would remain unmitigated.

TRANSIT

SUBWAY LINE

A line haul assessment was performed for the Flushing Line (No. 7) in the peak direction (Manhattan bound) in the AM peak hour. The Proposed Actions would not result in a significant adverse impact on the Flushing Line during the AM peak hour.

SUBWAY STATIONS

Identification of Impacts

For both 2017 and 2019, 113 subway station elements were analyzed for the weekday AM and PM peak periods, including 13 turnstiles, 6 HEETs, 13 service gates, 25 escalators, and 56 stairways. The Proposed Actions would not result in any significant adverse impacts at these station elements, except for one subway stairway—the M23/24 at Control Area N67 at the 34th Street-Penn Eighth Avenue Station.

Mitigation

The subway stairway impact would be mitigated by widening the stairway.

BUS ROUTES

2019

Identification of Impacts

Seven bus routes (M10, M11, M16, M20, M23, M34, and M42) currently provide service within a ½-mile radius of the redevelopment area. The Proposed Actions would add fewer than 200 new riders each to three of these routes (M16, M23, and M42) and, in accordance with CEQR methodology, these routes would not be required to be analyzed.[1] The remaining four routes (M10, M11, M20, and M34) were analyzed for existing service conditions and potential significant adverse impacts from increased utilization in the 2019 Future with the Proposed Actions. Based on the existing service plans, all four routes analyzed would not provide sufficient capacity in the future during both the weekday AM and PM peak hours.

Mitigation

Additional regular or articulated bus service for these routes would be necessary to meet the projected demand for the 2019 Future with the Proposed Actions condition. For the weekday AM peak hour, the potential significant adverse bus impacts could be mitigated by adding two additional regular or articulated buses to the M10/M20, three additional regular buses or two articulated buses to the M11, and 13 additional regular buses or ten articulated buses to the M34/M16. For the weekday PM peak hour, the potential significant adverse bus impacts could be mitigated by adding two additional regular or articulated buses to the M10/M20, four additional regular buses or three articulated buses to the M11, and 15 additional regular buses or 11 articulated buses to the M34/M16. If these measures are implemented, no unmitigated significant adverse impacts would occur to bus service as a result of the Proposed Actions.

The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints. Based on NYCT's ongoing passenger monitoring program and as development is implemented throughout the study area, a comprehensive service plan would be generated to respond to specific, known needs with capital and/or operational improvements where fiscally feasible and operationally practicable. MTA-NYCT's capital program is developed on a five-year cycle; through this program, expansion of bus services would be provided as needs are determined, subject to operational and financial feasibility.

[1] The M16 nevertheless appears in the analysis because the M16 and M34 NYCT ridership data are collected together and cannot be disaggregated.

2017

Identification of Impacts

The same four bus routes were analyzed in the 2017 Future with the Proposed Actions condition. Based on the existing service plans, all four routes analyzed would not provide sufficient capacity in the future during both the AM and PM peak hours with the Proposed Actions in 2017

Mitigation

Additional regular or articulated bus service for these routes would be necessary to meet the projected demand for the 2017 Future with the Proposed Actions condition. For the weekday AM peak hour, the potential significant adverse bus impacts could be mitigated by adding one additional regular or articulated bus to the M10/M20, three additional regular buses or two articulated buses to the M11, and 13 additional regular buses or nine articulated buses to the M34/M16. For the weekday PM peak hour, the potential significant adverse bus impacts could be mitigated by adding one additional regular or articulated bus to the M10/M20, four additional regular buses or three articulated buses to the M11, and 14 additional regular buses or ten articulated buses to the M34/M16. If these measures are implemented, no unmitigated significant adverse impacts would occur to bus service as a result of the 2017 Future with the Proposed Actions condition.

PEDESTRIANS

2019

Under the 2019 Future with the Proposed Actions, 373 pedestrian elements were analyzed for the weekday AM, midday and PM peak periods, including 188 sidewalks, 95 crosswalks, and 90 corners. For the Saturday midday peak period, 289 pedestrian elements were analyzed, including 146 sidewalks, 73 crosswalks, and 70 corners. Below is a summary of significant adverse pedestrian impacts generated in the Future with the Proposed Actions. Significant adverse impacts due to traffic mitigation measures, such as changes in traffic signal timing, are also discussed.

Identification of Impacts

Sidewalks

Of the 188 sidewalks that were analyzed in the weekday peak periods, two sidewalks would have significant adverse impacts in the AM peak period. During the midday peak period, one sidewalk would have a significant adverse impact. During the PM peak period, five sidewalks would have significant adverse impacts. In addition, of the 146 sidewalks that were analyzed in the Saturday midday peak period, one sidewalk would have a significant adverse impact (see Table S-7).

During the AM peak period, of the two significant adverse sidewalk impacts, one impact would be mitigated and one impact would be unmitigated. During the weekday PM peak period, of the five significant adverse impacts, one would be mitigated and four would be unmitigated significant adverse sidewalk impacts. During both the weekday midday peak period and Saturday midday peak period, there would be one unmitigated significant adverse impact. All of the unmitigated significant adverse impacts would include sidewalks along West 33rd Street between Eighth and Tenth Avenues.

Table S-7
2019 Future with the Proposed Actions:
Summary of Pedestrian Element Locations with Significant Adverse Impacts

Time Period	# of Elements Analyzed	Mitigated Significant Adverse Impacts	Unmitigated Significant Adverse Impacts		Total Significant Adverse Impacts		
			From Proposed Project	From Traffic Mitigation	From Proposed Project	From Traffic Mitigation	Total
Sidewalks							
AM	188	1	1	0	2	0	2
Midday	188	0	1	0	1	0	1
PM	188	1	4	0	5	0	5
Saturday	146	0	1	0	1	0	1
Crosswalks							
AM	95	7	2	3	9	3	12
Midday	95	4	3	5	7	5	12
PM	95	7	3	0	10	0	10
Saturday	73	7	1	0	8	0	8
Corners							
AM	90	10	3	0	13	0	13
Midday	90	2	5	2	7	2	9
PM	90	9	3	0	12	0	12
Saturday	70	7	0	0	7	0	7

Crosswalks

During the weekday AM peak period, nine crosswalks would have significant adverse impacts from the Proposed Actions. In addition, three crosswalks would have significant adverse impacts due to the implementation of traffic mitigation. During the weekday midday peak period, seven crosswalks would have significant adverse impacts from the Proposed Actions. In addition, due to traffic mitigation, five crosswalks would have significant adverse impacts during the weekday midday peak period. Due to the Proposed Actions, significant adverse impacts would occur at 10 crosswalks during the weekday PM peak period and at 8 crosswalks during the Saturday midday peak period.

As discussed above, during the weekday AM peak period, there would be 9 significant adverse crosswalk impacts due to the Proposed Actions. Of these impacts, there would be seven mitigated significant adverse impacts and two unmitigated significant adverse impacts. In addition, three crosswalks would have unmitigated significant adverse impacts due to traffic mitigation during this time period. During the weekday midday peak period, of the seven significant adverse crosswalk impacts from the Proposed Actions, there would be four mitigated significant adverse impacts and three unmitigated significant adverse impacts. An additional five crosswalks would have unmitigated significant adverse impacts due to traffic mitigation. During the PM peak period, of the 10 significant adverse crosswalk impacts from the Proposed Actions, seven impacts would be mitigated and 3 impacts would be unmitigated. During the Saturday midday peak period, there would be one unmitigated significant adverse crosswalk impact from the Proposed Actions. Seven significant adverse impacts during the Saturday midday peak period would be mitigated. Most of the unmitigated significant adverse impacts would include crosswalks along West 31st, West 33rd, and West 34th Streets between Eighth and Tenth Avenues.

Corners

In total, 90 corners were analyzed during the weekday peak periods in the Future with the Proposed Actions. As a result of the Proposed Actions, there would be significant adverse impacts at 13 corners during the AM peak period and at 12 corners during the PM peak period. During the weekday midday peak period, there would be seven significant adverse impacts due to the Proposed Actions and two significant adverse impacts due to the implementation of traffic mitigation measures. In addition, of the 70 corners that were analyzed during the Saturday midday peak period, 7 corners would have significant adverse corner impacts.

During the weekday AM peak period, of the 13 significant adverse corner impacts, there would be 3 unmitigated significant adverse impacts and 10 mitigated significant adverse impacts. During the weekday midday peak period, of the seven significant adverse impacts that would be generated from the Proposed Actions, there would be 2 mitigated significant adverse impacts and five unmitigated significant adverse impacts. There would be an additional two unmitigated significant adverse corner impacts during the weekday midday peak period due to the implementation of traffic mitigation. Of the 12 significant adverse corner impacts during the PM peak period, 9 impacts would be mitigated and 3 impacts would be unmitigated. During the Saturday midday peak period, all seven significant adverse impacts would be mitigated. Most of the unmitigated significant adverse impacts would include corners along West 33rd Street between Eighth and Eleventh Avenues.

Mitigation

Standard mitigation for projected significant adverse impacts to pedestrian conditions includes relocation or removal of obstacles on sidewalks, construction of wider sidewalks and corners and repainting crosswalks for additional width. Certain pedestrian adverse significant impacts cannot be mitigated without resulting in significant adverse impacts on traffic conditions beyond those identified in the traffic analysis.

In addition, a comprehensive traffic monitoring and management program will be implemented under the auspices of NYCDOT to improve traffic and pedestrian conditions throughout the study area.

Upon incorporation of the mitigation measures, unmitigated adverse impacts would remain at one sidewalk location during the weekday AM peak period, one sidewalk location during the midday period, four sidewalk locations at three intersections during the weekday PM peak period, and one sidewalk location during the Saturday midday peak period. Upon incorporation of the mitigation measures, unmitigated adverse impacts would remain at two crosswalk locations at two intersections during the weekday AM peak period, three crosswalk locations at two intersections during the midday peak period, three crosswalk locations at three intersections during the weekday PM peak period, and one crosswalk locations at one intersection during the Saturday midday peak period.

In addition, unmitigated significant adverse impacts would occur at three crosswalk locations at two intersections during the weekday AM peak period and five crosswalk locations in three intersections during the midday peak period due to changes in signal timing as part of traffic mitigation measures. Upon incorporation of the mitigation measures, unmitigated adverse impacts would remain at three corner locations at two intersections during the weekday AM peak period, five corner locations at four intersections during the midday peak period, three corner locations two intersections during the weekday PM peak period, and no corner locations during the Saturday midday peak period. In addition, unmitigated significant adverse impacts

would occur at two corners locations at two intersections during the midday peak period due to changes in signal timing as part of traffic mitigation measures.

2017

Identification of Impacts

A total of 373 pedestrian elements (188 sidewalks, 95 crosswalks, and 90 corners) were analyzed for the weekday AM, midday and PM peak periods and 289 pedestrian elements (146 sidewalks, 70 corners, and 73 crosswalks) were analyzed for the Saturday midday peak period.

Sidewalks

In total, 188 sidewalks were analyzed in the weekday peak periods in the 2017 Future with the Proposed Actions condition. Of these sidewalks, there were two significant adverse impacts during the AM weekday peak period and 4 significant adverse impacts during the weekday PM peak period. In addition, 146 sidewalks were analyzed during the Saturday midday peak period. None of these sidewalks had significant adverse sidewalk impacts.

During the AM peak period, there would be one unmitigated significant adverse impact, which is the same as 2019 Future with the Proposed Actions condition. During the PM peak period, there would be 3 unmitigated significant adverse impacts, which would be one less than the 2019 Future with the Proposed Actions condition. There would be no unmitigated significant adverse impacts during the weekday and Saturday midday peak periods. This is one less unmitigated significant adverse impact compared with the 2019 Future with the Proposed Action condition.

Crosswalks

During the weekday peak periods, 95 crosswalks were analyzed in the 2017 Future with the Proposed Actions condition. During the weekday AM peak period, there were significant adverse impacts at 7 crosswalks due to the Proposed Actions and at 2 crosswalks due to traffic mitigation. During the weekday midday peak period, there were significant adverse impacts at 3 crosswalks due to the Proposed Actions and 6 crosswalks due to traffic mitigation. As a result of the Proposed Actions, there were significant adverse crosswalk impacts at 8 crosswalks during the PM peak period and at one crosswalk during the Saturday midday peak period.

Upon incorporation of mitigation measures, unmitigated adverse impacts would remain at 5 crosswalks during the AM peak period, which is the same number of impacts generated in the 2019 Future with the Proposed Actions condition. In the weekday midday peak period, there would be 7 unmitigated significant adverse impacts, which would be one less impact than the 2019 Future with the Proposed Actions condition. During the weekday PM peak period, there would be 2 unmitigated significant adverse impacts, which would be one less impact compared to the 2019 Future with the Proposed Actions condition. During the Saturday midday peak period in both the 2017 and 2019 Future with the Proposed Actions conditions, there would be one unmitigated significant adverse crosswalk impact.

Corners

During the weekday peak periods, 90 corners were analyzed in the 2017 Future with the Proposed Actions condition. During the weekday AM peak period, there were significant adverse impacts at 13 corners due to the Proposed Actions. During the weekday midday peak period, there were significant adverse impacts at 6 corners due to the Proposed Actions. As a result of the Proposed Actions, there were significant adverse corner impacts at 11 corners during the PM peak period and at 1 corner during the Saturday midday peak period.

Upon incorporation of mitigation measures, unmitigated adverse impacts would remain at 1 corner during the AM peak period, compared to 3 unmitigated significant adverse corner impacts in the 2019 Future with the Proposed Actions condition. In the weekday midday peak period, there would be 3 unmitigated significant adverse impacts, which would is four fewer unmitigated significant adverse impacts compared to the 2019 Future with the Proposed Actions condition. During the weekday PM peak period, there would be two unmitigated significant adverse impacts, which would be one less impact compared to the 2019 Future with the Proposed Actions condition. There would be no unmitigated significant adverse corner impacts during the Saturday midday peak periods in both the 2017 and 2019 Future with the Proposed Actions conditions.

Mitigation

Standard mitigation for projected significant adverse impacts to pedestrian conditions includes relocation or removal of obstacles on sidewalks, construction of wider sidewalks and corners and repainting crosswalks for additional width. Certain pedestrian adverse significant impacts cannot be mitigated without resulting in a significant adverse impact on traffic conditions beyond those identified in the traffic analysis.

Based on the application of mitigation measures, the analysis indicates that the 2017 Future with the Proposed Actions condition would have 4 unmitigated significant adverse sidewalk impacts compared to 7 unmitigated significant adverse impacts in the 2019 Future with the Proposed Actions condition. In addition, there would be 15 unmitigated significant adverse crosswalk impacts in the 2017 Future with the Proposed Actions condition compared to the 17 unmitigated significant adverse crosswalk impacts in the 2019 Future with the Proposed Actions condition. In the 2017 Future with the Proposed Actions condition, there would be 6 unmitigated significant adverse corner impacts. In comparison, there would be 13 unmitigated significant adverse corner impacts in the 2019 Future with the Proposed Actions condition.

V. AIR QUALITY AND GREENHOUSE GAS EMISSIONS

AIR QUALITY

Air quality is a general term used to describe pollutant levels in the atmosphere that are affected by numerous sources and activities that introduce air contaminants into the atmosphere. The following two broad classifications are often used to describe these sources: “mobile source” emissions from motor vehicles, and “stationary source” emissions from fixed-location facilities. The air quality chapter documents the assessment of the following emission sources: increased traffic or changes in traffic patterns on congested intersections of the local street network; proposed parking facilities; emissions from the heating, ventilation, and air conditioning (HVAC) systems of the proposed buildings; and toxic air emissions generated by existing industrial sources that would affect the proposed buildings. The chapter also estimates the effects of the Proposed Actions on greenhouse gas emissions (GHG).

MOBILE SOURCE ANALYSIS

Emissions from increased traffic or changed traffic patterns as a result of the Proposed Actions would not cause or exacerbate a violation of the National Ambient Air Quality Standards (NAAQS) or cause an exceedance of DEC/ DEP significant threshold values (STVs) for $PM_{2.5}$

or of the DEP *de minimis* criteria for CO, and thus will not have a significant adverse impact on the environment.

The parking facilities included as part of the Proposed Actions would not cause a violation of the NAAQS or an exceedance of the STVs, and thus would not have a significant adverse impact on the environment.

STATIONARY SOURCE ANALYSIS

HVAC Analysis

Based on evaluation of emissions from the HVAC systems of the proposed buildings and assuming specified numbers, heights and locations of exhaust stacks, and air intake duct restrictions (which would be included in the Restrictive Declaration for the Development Site Project), the Proposed Actions would not cause a violation of the NAAQS or an exceedance of the STVs—either from the impacts of the HVAC emissions of the buildings to be constructed as part of the Proposed Actions on other Proposed Actions buildings (building-on-building impacts) or on existing and future No Build developments. In addition, the HVAC emissions of existing and future No Build developments, as well as "major" existing emission sources, will not significantly impact the Proposed Actions' buildings. Therefore, the proposed HVAC system would not result in a significant adverse air quality impact.

Air Toxics Analysis

The analysis of the potential impacts of the air toxic emissions from existing nearby industrial facilities indicates that the proposed sensitive land uses associated with the Proposed Actions would not experience a significant adverse air quality impact.

GREENHOUSE GAS EMISSIONS

Overall, the site selection, the dense and mixed-use design, the commitment to seek LEED Silver certification for all buildings and achieve a significant reduction in energy use, and other measures incorporated in the Proposed Actions, would result in lower GHG emissions than would otherwise be achieved by similar residential and commercial uses, and thus would advance New York City's GHG reduction goals stated in PlaNYC.

The annual GHG emissions from the uses at the Development Site are predicted to be approximately 102,026 metric tons of carbon dioxide equivalent (MT CO_2e, defined below), while the GHG emissions from the uses at the Additional Housing Sites are predicted to be approximately 4,364 MT CO_2e. The total GHG emissions associated with the Proposed Actions would be approximately 106,390 metric tons of CO_2e per year. This would not necessarily represent a net increment in GHG emissions, since similar GHG emissions would occur elsewhere if residents and associated uses were to be constructed elsewhere, and could be higher if constructed as lower density residential, further from employment and commercial uses, with less immediate access to transit service.

W. NOISE

The Proposed Actions would not result in significant adverse exterior noise impacts from increased traffic, proposed playgrounds, or building mechanical equipment. However, without noise attenuation, interior noise levels in the proposed buildings would be above CEQR significant impact criteria and New York City Noise Code limits. As part of the Proposed

Actions, however, the proposed buildings would include noise attenuation measures as part of the building design and would meet interior noise standards. Therefore, no significant adverse noise impacts or violations of New York City Noise Code limits would occur as a result of the Proposed Actions.

For the Development Site, projected noise levels in the Future with the Proposed Actions would be the greatest along Twelfth and Eleventh Avenues, with lower levels along West 33rd and West 30th Streets. Window wall building attenuation of 40 decibels would be required along building façades on the Development Site facing Eleventh and Twelfth Avenues, with lower attenuation requirements on West 30th and West 33rd Streets and on the interior façades. These measures would be included in the Restrictive Declaration for the Development Site. For the Additional Housing Sites, various façades would require between 25- and 35-decibel window wall building attenuation; which would be included in a MOU between DCP, HPD, and DEP.

In addition, noise levels within the new open space areas on the Development Site that would be created by the Proposed Actions would be above the *CEQR Technical Manual* noise exposure guideline of 55 dBA $L_{10(1)}$ for outdoor areas requiring serenity and quiet. Although noise levels in the new open space areas would be above the CEQR guideline, they would be comparable to noise levels in other open space areas and parks located in Midtown Manhattan, including Hudson River Park, Riverside Park, Central Park, and Bryant Park, and would not result in a significant adverse noise impact.

X. CONSTRUCTION

The potential environmental effects resulting from construction of the Proposed Actions have been analyzed based on a detailed assessment of likely construction activities throughout the construction period. Key findings regarding air quality, noise, vibration and historic resources, and natural resources are summarized below. The construction impact analyses determined that the Proposed Actions would not have a significant adverse impact on land use, neighborhood character, socioeconomic conditions, community facilities, open space, infrastructure, and hazardous materials.

AIR QUALITY

Potential air emissions from construction activity, both on-site from construction machinery and activity, and mobile sources from material delivery and disposal, were estimated, and the maximum project increments (on-site plus off-site) and total concentrations (maximum project increments plus background values) for each pollutant of concern were calculated. Following the DEP interim guidance, the maximum $PM_{2.5}$ project increments were compared to the CEQR Significant Threshold Values (STV) for $PM_{2.5}$. It was determined that air emissions for CO, NO_2 and PM_{10} due to construction activity associated with the Proposed Actions would not cause the pollution concentrations to exceed the National Ambient Air Quality Standards (NAAQS) and would not have significant air quality impacts. It was also determined that $PM_{2.5}$ impacts from the on-site construction activities and off-site mobile sources associated with construction would be below the CEQR STVs.

The emission contribution from other projects in the area of the Development Site was considered for a cumulative impact analysis. Cumulative increments, when added to background levels for nitrogen dioxide (NO_2) and $PM_{10,}$ indicated that total concentrations for the Proposed Actions would not exceed the NAAQS at any of the analysis sites considered.

Emissions from construction at the Additional Housing Sites would be of short duration and would not produce significant adverse air quality impacts.

NOISE, VIBRATION, AND HISTORIC RESOURCES

DEVELOPMENT SITE

Given the scope and duration of construction activities for the Development Site, a quantified construction noise and vibration analysis was performed. The purpose of this analysis was to determine if any significant adverse noise or vibration impacts would occur during construction.

Construction-related noise impacts can result from noise generated on the Development Site by construction equipment operation, and from construction vehicles and delivery vehicles traveling to and from the site. Results of an evaluation of potential worst-case construction noise conditions for the 102-month construction period indicate that no significant adverse noise impacts would occur at any analysis location. This is because predicted noise levels would be below acceptable CEQR impact criteria. Construction operations and noise levels are also expected to comply with the New York City Construction Noise Regulations with respect to equipment noise emission levels.

A construction vibration assessment was performed for the existing elevated High Line historic rail structure. It was determined that the use of certain high-vibration-producing equipment within one foot of the High Line should be limited in order to minimize the potential of damage to the structure. A Construction Environmental Protection Plan established for the project, as required by the New York City Department of Buildings (NYCDOB) under their Technical Policy and Procedure Notice (PPN) #10/88 (and integrated along with other commitments in a the Restrictive Declaration for the Development Site Project), would specify measures and construction procedures, such as vibration limits and monitoring that would be implemented during construction of the Proposed Actions. With these measures, there would not be a significant adverse impact to the High Line due to construction of the Proposed Actions.

ADDITIONAL HOUSING SITES

Construction noise associated with the Additional Housing Sites is expected to be temporary, typical of other similar construction projects in the city. While there may be short periods of high noise levels, no significant adverse impacts would be expected based on the limited duration and intensity of construction-related activities.

Historical and archaeological resources in the vicinity of the Proposed Actions include three tenement buildings located across West 54th Street from the Ninth Avenue Site at 357 West 54th Street and 824-826 Ninth Avenue. Vibration levels may be perceptible in the vicinity of the Additional Housing Sites for limited periods of time, but because of their minor intensity and limited duration, these levels would not be considered a significant adverse impact. With the use of proper construction techniques and standard protective measures, including conditions set forth in the Construction Environmental Protection Plan, no significant adverse vibration impacts would and, specifically, no significant adverse impacts would occur at these historic resources.

TRAFFIC AND PARKING

IDENTIFICATION OF IMPACTS

Construction of the Development Site from 2011 to 2019 would result in local traffic disruptions and generate construction worker and truck traffic, and some significant adverse construction-related traffic impacts are anticipated as construction activities peak in late 2016.

Within the study area, 25 critical intersections were selected for detailed traffic impact analysis. These intersections were analyzed for weekday AM, weekday midday, and weekday PM conditions. Under 2016 conditions with construction, significant adverse impacts would occur at 10 locations in the weekday AM; 8 intersections in the weekday midday, and 11 intersections in the weekday PM. In terms of intersection movements, 72 movements were assessed during the weekday AM; and 71 were evaluated under midday and evening conditions. As a result of construction activities under 2016 conditions with construction, 15, 11, and 17 intersection movements would be significantly impacted during the AM, midday, and PM peak hours, respectively.

Analysis indicated that as a result of construction of the Proposed Actions, the weekday midday off-street parking shortfall in the parking study area would increase from 1,982 to 2,332 spaces and the overall parking utilization would increase from 134 to 140 percent.

MITIGATION

Of the approximately 70 intersection movements evaluated for the 2016 peak construction year 2016, seven intersection movements would have unmitigated significant adverse impacts during the weekday AM peak hour, six intersection movements would have unmitigated significant adverse impacts during the weekday midday peak hours, and seven intersection movements would have unmitigated significant adverse impacts during the weekday PM peak hour.

TRANSIT AND PEDESTRIANS

Construction workers would commute to work either by walking, driving alone or carpooling, or using public transportation. Because typical construction hours throughout New York City begin at 7:00 AM it is expected that an eight-hour shift would begin at 7:00 AM and end at 3:30 PM. For construction of those portions of the Proposed Actions that would employ two shifts, the first shift would begin at 7:00 AM and end at 3:30 PM and the second would begin at 2:30 PM and end at 11:00 PM. In either case—one eight-hour shift or two eight-hour shifts per day—construction workers' commutes would not coincide with the AM, midday, or PM peak hour for public transportation or the AM, midday, or PM peak hour for vehicular traffic. There would not be significant adverse impacts to pedestrian circulation due to construction of the Proposed Actions.

NATURAL RESOURCES

The western edge of the Development Site is located approximately 250 feet from the Hudson River. Therefore, uncontrolled construction activities could allow sediment to migrate from the construction site to the river. Provisions of the Construction Environmental Protection Plan would specify measures to be implemented in order to prevent sediments from exiting the Development Site as well as each Additional Housing Site.

Dewatering activities would likely be necessary at the Development Site and the Additional Housing Sites. A dewatering plan would be developed as part of the Construction Environmental Protection Plan to address procedures for handling groundwater encountered during construction of the Proposed Actions. A description of the methods used to collect, store, and dispose of water collected during dewatering activities would be provided. Additionally, the dewatering plan would identify the necessary permits required from either DEP or DEC to discharge the water into the city's sewers or surface waters, respectively. (Permit requirements are discussed below.)

The Development Site and Additional Housing Sites are situated in dense urban environs and maintain no significant biotic habitat. No state- or federal-listed Threatened or Endangered Species, nor habitat for these species, are known to inhabit the Development Site, the Additional Housing Sites or the areas surrounding these sites, and no wetlands are located on or surrounding these sites. Overall, there would not be a significant adverse impact on Natural Resources as a result of construction activities associated with the Proposed Actions.

Y. PUBLIC HEALTH

This analysis finds that the Proposed Actions would not result in any significant adverse public health impacts.

Z. ENVIRONMENTAL JUSTICE

An environmental justice analysis has been prepared under the standards set forth in *CP-29 Environmental Justice and Permitting* (the Policy), issued by DEC on March 19, 2003, to identify and address any potential adverse impacts on minority or low-income populations that could result from the Proposed Actions.

The Proposed Actions would not result in disproportionate significant adverse impacts on environmental justice populations. However, certain portions of the study area have been determined to be a potential environmental justice area, because of the presence of low-income and minority populations higher than the thresholds provided in DEC's Policy. The Proposed Actions would mitigate significant adverse impacts to the extent practicable. The Proposed Actions would be expected to have significant adverse impacts that cannot be fully mitigated in the following areas: child care, open space, shadows, traffic, transit, pedestrians, and construction-related traffic. Many impacts may not fall within a potential environmental justice area. In addition, these impacts would affect environmental justice populations as well as non-environmental justice populations.

In addition to the significant adverse environmental impacts discussed above, the Proposed Actions would also result in substantial benefits for residents and workers in the environmental justice study area. Among other benefits, these would include the addition of open space and a substantial number of units of affordable housing.

Overall, based on the analyses in this chapter, the Proposed Actions would not result in disproportionate significant adverse impacts on environmental justice populations.

AA. ALTERNATIVES

In accordance with SEQRA and CEQR, the Alternatives chapter presents and analyzes alternatives to the Proposed Actions. Alternatives selected for consideration in an EIS are

generally those which are feasible and have the potential to reduce, eliminate, or avoid adverse impacts of a proposed action while meeting some or all of the goals and objectives of the action. In addition to a comparative impact analysis, the alternatives in this chapter are assessed to determine to what extent they would meet the goals and objectives of the Proposed Actions.

The chapter considers the following four alternatives to the Proposed Actions:

- A No Action Alternative, which assumes that the Proposed Actions are not approved and the project sites remain in their current uses;
- A No Unmitigated Significant Adverse Impact Alternative, which considers development that would not result in any identified significant, unmitigated adverse impacts; and
- A Reduced Density Alternative, which considers a smaller project on the Development Site that avoids some or all of the significant adverse impacts identified in the EIS analyses;
- A Tri-Generation Energy Supply Alternative to improve energy efficiency and reliability while reducing greenhouse gas emissions from the Development Site Project.

Neither the No Action Alternative nor the No Unmitigated Significant Adverse Impact Alternative would meet the goals and objectives of the Proposed Actions. Moreover, the latter alternative is not feasible in view of the substantial initial costs required to construct a platform over the operating LIRR rail yard on the Development Site. The Reduced Density Alternative, even if feasible, would result in significant adverse environmental impacts only slightly less than those of the Proposed Actions while failing to realize principal project goals of maximizing revenue for MTA's capital plan and reducing the number of affordable housing units constructed on the Development Site. The Tri-Generation Energy Supply Alternative, while requiring somewhat greater initial investment, would meet the goals and objectives of the Proposed Actions and offer the opportunity to achieve greater energy efficiency and reduced GHG emissions.

For each alternative, the principal conclusions of the analysis are as follows:

NO ACTION ALTERNATIVE

Consideration of the No Action Alternative is mandated by both SEQRA and CEQR, and is intended to provide the co-lead and involved agencies with an assessment of the consequences of not selecting the Proposed Actions. The No Action Alternative assumes that the Proposed Actions—including disposition of the Development Site by MTA and TBTA, disposition by the City of the Additional Housing Sites, zoning map and text amendments, and site selection for the public school—would not be implemented. Under the No Action Alternative, no material changes would occur on the Development Site or at the Additional Housing Sites. Instead, it is assumed that the Development Site and the Additional Housing Sites would remain in their current states.

With no new buildings on the project sites and no new residents or workers, none of the significant adverse impacts anticipated for the Proposed Actions would occur in the No Action Alternative. At the same time, however, the No Action Alternative would not meet the goals and objectives of the Proposed Actions. Specifically, the No Action Alternative would not provide additional revenues for MTA's transportation improvements, nor would it encourage the development of new residential, commercial, public school, and open space uses within a largely underutilized area of Far West Midtown, nor would it enhance the vitality of the Hudson Yards area, build the City's tax base, or create a new 24-hour neighborhood that complements the

adjacent areas of Midtown and Chelsea and the emerging development in West Chelsea and the Hudson Yards area. The No Action Alternative would not provide new publicly accessible open space, nor would it provide a substantial number of new permanently affordable housing units.

NO UNMITIGATED SIGNIFICANT ADVERSE IMPACT ALTERNATIVE

To eliminate all unmitigated significant adverse impacts, the Proposed Actions would have to be reduced in size or modified to a point where they would not be feasible and could not realize the principal goals of the Proposed Actions. This analysis finds that:

- To eliminate the Proposed Actions' significant adverse impact on child care capacity by reducing the number of children at the project sites who would be eligible for publicly funded child care, the Proposed Actions would have to be reduced to only 104 apartments (up to an approximately 85 percent reduction) affordable to low- to moderate-income households at the project sites. This potential alternative would not meet the Proposed Actions' goal of maximizing affordable housing opportunities.
- To eliminate the Proposed Actions' significant adverse impacts on total and active open space ratios, the project would have to be reduced to a maximum of 2,539 residential units (a 56 percent reduction), or would have to include an additional 6.2 acres of open space—for a total of 11.2 acres on the 13-acre Development Site or in the surrounding area. The inability to locate such acreage on-site or to find suitable locations nearby makes this potential alternative infeasible.
- To eliminate the Proposed Actions' significant adverse shadow impact on the planned Eastern Rail Yard open space, the three residential buildings along the midblock of Eleventh Avenue and at the southeast corner of the Development Site (WR-1, WR-2, and WR-3) would have to be reduced in height by 58 to 75 percent, which would require a substantial reduction in bulk over the entire site. Such reduction in bulk would negatively affect the overall project viability and such a redistribution of bulk from this corner to other buildings on the site, which would not be consistent with the design intent for the Development Site. To eliminate the significant adverse shadow impact on the planned open space adjacent to the Tenth Avenue Site, the new building on the site could not exceed 40 feet in height, providing little or no realistic development opportunity and not meeting the goal of maximizing new permanently affordable housing at that site.
- Because of existing and congestion at a number of intersections and the anticipated congestion in the Future without the Proposed Actions, even a minimal increase in traffic would result in unmitigated impacts at some locations and, therefore, any substantial development on the Development Site would result in unmitigated significant adverse traffic impacts.

REDUCED DENSITY ALTERNATIVE

The Reduced Density Alternative assumes the same mix of uses as the Proposed Actions, but with a lesser amount of total development (an 8.0 FAR, rather than 10.0 FAR under the Proposed Actions). On the Development Site, the Reduced Density Alternative would include the same overall site plan layout, including location of buildings, open space, and internal roadways, as those currently contemplated for the Proposed Actions. Like the Proposed Actions, the Reduced Density Alternative would provide residential, commercial (retail and office or hotel space), a public school, publicly accessible open space, and enclosed accessory parking on the Development Site. The Additional Housing Sites would have the same development program

as with the Proposed Actions. Overall, the Reduced Density Alternative would provide approximately 20 percent less total development on the Development Site than with the Proposed Actions, with approximately 5.0 million to 5.1 million gsf of development compared to between 6.2 million and 6.4 million gsf of development for the Proposed Actions. Building heights would generally range from approximately 350 to 750 feet compared to building heights ranging from 350 to 950 feet under the Proposed Actions.

The Reduced Density Alternative would result in significant adverse environmental impacts similar to those of the Proposed Actions while failing to realize a principal project goal—to maximize revenue for MTA's capital plan—and reducing the number of affordable housing units constructed on the Development Site. The Reduced Density Alternative would still require the extraordinary cost of constructing a platform over the operating LIRR rail yard in order to erect any commercial and residential buildings and open space over the rail yard. The cost of the platform and other required infrastructure would have to be amortized by a smaller number of residential units and reduced commercial space, thereby reducing the monetary value of the Development Site Project and making it unlikely to realize all of the goals and objectives of the Proposed Actions as set forth in Chapter 1, "Project Description." Specifically, it is highly unlikely that the Reduced Density Alternative would be able to contribute as substantially as the Proposed Actions to the MTA's capital budget for critical transportation improvements. The Reduced Density Alternative would also fail to provide the same number of residential units—particularly affordable units—as the Proposed Actions; nor would it provide the same level of economic development to the City. Given the fixed infrastructure costs at the Development Site, the viability of constructing a reduced density development with the features of the Proposed Actions is questionable.

In areas where the Proposed Actions are anticipated to result in significant adverse impacts, the Reduced Density Alternative would not eliminate those impacts. Like the Proposed Actions, the Reduced Density Alternative would result in significant adverse impacts related to publicly funded child care space, total and active open space utilization, and shadow impacts on the planned Eastern Rail Yard open space and the open space planned adjacent to the Tenth Avenue Site. The Reduced Density Alternative would, like the Proposed Actions, also result in significant adverse traffic, transit, and pedestrian impacts. The total number of intersections with significant adverse traffic impacts under the Reduced Density Alternative would be essentially the same as the Proposed Actions, although more intersection movements would be unmitigated with the Proposed Actions. The Reduced Density Alternative would reduce the number of unmitigated significant adverse pedestrian impacts in comparison with the Proposed Actions, but significant adverse impacts would remain that could not be mitigated. Like the Proposed Actions, the Reduced Density Alternative would result in incidents of high winds at the pedestrian level for certain locations and prevailing winds.

TRI-GENERATION ENERGY SUPPLY ALTERNATIVE

Under the Tri-Generation Energy Supply Alternative, on-site facilities to generate electricity, heat, and cooling would be constructed as part of the Development Site Project. All other aspects of the Proposed Actions would remain the same for this Alternative. The Tri-Generation Energy Supply Alternative is under consideration by the Developer as part of an overall effort to create a sustainable community, conserve energy and minimize GHG emissions. Tri-generation systems provide three key building requirements—electricity, heat, and cooling. With tri-generation, the thermal byproduct of electricity generation is captured and used to supply heat, hot water, and air conditioning needs on-site. The overall feasibility of the Tri-Generation Energy Supply

Alternative was evaluated to further the goals of improved energy efficiency, energy reliability, and reducing the GHG emissions from the Development Site Project. With the same overall development program, the Tri-Generation Alternative would achieve the goals and objectives established for the project and offer the opportunity to achieve greater energy efficiency and reduced GHG emissions, although the cost effectiveness and total financial feasibility of the alternative requires further analysis.

The differences between the Proposed Actions and the Tri-Generation Alternative include:

- Consideration of the Tri-Generation Alternative of on-site energy capacity is specifically responsive to public policies in PlaNYC.
- While the Tri-Generation Energy Supply Alternative would meet the same annual energy demand for the Development Site Project as the Proposed Actions, the alternative's on-site production of energy would be more efficient than the combined regional electricity distribution system (Con Edison) and on-site boilers for heat and hot water. The additional efficiency would lead to a reduction in GHG emissions associated with the production of energy necessary to serve the Development Site. Like the Proposed Actions, the alternative would still require improvements to the local electrical and natural gas distribution systems servicing the site and adjacent Hudson Yards area.
- Like the Proposed Actions, the Tri-Generation Alternative would not result in any significant adverse air quality impacts. In addition, while local emissions of some pollutants at the Development Site could be marginally higher than with the Proposed Actions, GHG emissions associated with the proposed development electricity, heat, hot water, and air conditioning use could be reduced by five to six percent, or greater with additional optimization.

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