DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK

ENVIRONMENTAL ASSESSMENT AND REVIEW DIVISION

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Department of City Planning

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NOTICE OF COMPLETION OF
THE FINAL ENVIRONMENTAL IMPACT STATEMENT

Gowanus Rezoning and Related Actions

Project Identification
CEQR No. 19DCP157K
ULURP Nos. 210177ZMK, N210178ZRK, 210052HAK, 210053PPK, 210179MMK, 210180MMK
SEQRA Classification: Type I

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Pursuant to City Environmental Quality Review (CEQR), Mayoral Executive Order No. 91 of 1977, CEQR Rules of Procedure of 1991 and the regulations of Article 8 of the State Environmental Conservation Law, State Environmental Quality Review Act (SEQRA) as found in 6 NYCRR Part 617, a Final Environmental Impact Statement (FEIS) has been prepared for the action described below. The proposal involves an action by the City Planning Commission and Council of the City of New York. Copies of the FEIS are available for public inspection at the office of the undersigned as well as online at the Department of City Planning website: www.nyc.gov/planning. A public hearing on the Draft Environmental Impact Statement (DEIS) for the proposal was held on July 28, 2021, at the City Planning Commission Hearing Room, Lower Level, 120 Broadway, New York, NY 10271, accessible in person and remotely in conjunction with the City Planning Commission's citywide public hearing pursuant to ULURP. Written comments from the public were requested and received by the Lead Agency through August 9, 2021. The FEIS addresses all substantive comments made on the DEIS during the public hearing and subsequent comment period.

A. INTRODUCTION

The City of New York, acting through the Department of City Planning (DCP), together with the Department of Housing Preservation and Development (HPD), the Department of Parks and Recreation (NYC Parks), and the Department of Citywide Administrative Services is proposing a series of land use actions—including zoning map amendments, zoning text amendments, City Map amendments, and disposition of City-owned property (collectively, the "Proposed Actions")—to implement land use and zoning recommendations in the Gowanus Rezoning and Related Actions (the "Neighborhood Plan" or "Plan"). The area subject to the Proposed Actions (the "Project Area") is generally bounded by Bond, Hoyt, and Smith Streets to the west; 3rd and 4th Avenues to the east; Huntington, 3rd, 7th, and 15th Streets to the south; and Warren, Baltic, and Pacific Streets to the north. The Proposed Actions would affect an approximately 81-block area of the Gowanus neighborhood of Brooklyn, Community Districts 2 and 6.

The Proposed Actions are intended to facilitate development patterns that meet the long-term vision of a thriving, inclusive, and more resilient Gowanus where existing and future residents and workers can participate in civic, cultural, and economic activities and where a wholly unique resource—the Gowanus Canal—can thrive and play an active role in that equitable and sustainable growth.

Overall, the Proposed Actions are expected to result in a net increase of approximately 8,500 dwelling units (DU), 735,000 square feet (sf) of commercial space, 251,000 sf of community facility space (inclusive of a new, 500-seat public school), and approximately six acres of new open space, including over an acre of newly mapped parkland. The Proposed Actions would result in net decreases of approximately 132,000 sf of warehouse space, 125,000 sf of self-storage space, and 60,000 sf of other industrial space. On privately owned sites, the Proposed Actions could result in a net increase of approximately 7,500 DUs, including approximately 2,000 permanently affordable DUs for lower-income New Yorkers in accordance with the Mandatory Inclusionary Housing Program (MIH). On City-owned sites, the Proposed Actions would result in approximately 1,000 affordable DUs, designated to serve a wide range of incomes. It is expected that the projected development shown in the Reasonable Worst Case Development Scenario (RWCDS) would be built by 2035, following approval of the proposed actions.

B. BACKGROUND AND EXISTING CONDITIONS

Proposed Rezoning Area

The Proposed Actions affect an approximately 81-block area surrounding the Gowanus Canal and a segment of 4th Avenue. The area directly affected by the Proposed Actions, or Project Area, is generally bounded by Bond, Hoyt, and Smith Streets to the west; 3rd and 4th Avenues to the east; Huntington, 3rd, 7th, and 15th Streets to the south; and Warren, Baltic, and Pacific Streets to the north. The area encompasses approximately 200 acres, and is defined by the 1.8-mile-long, man-made Gowanus Canal, which splits the neighborhood, and the major north–south and east–west corridors that connect the upland areas to the surrounding neighborhoods.

At 120 feet wide, 4th Avenue is the widest street corridor running through the neighborhood and is one of the main thoroughfares in the Project Area, and in Brooklyn. The D/N/R subway lines run below 4th Avenue and include local stops at Union Street and 4th Avenue/9th Street, which is also an F/G subway station. Uses along 4th Avenue vary and include one-story semi-industrial uses, various commercial uses (including local retail shops), and residential apartment and walk-up buildings. A portion of 4th Avenue was rezoned in 2003 to R8A/C2-4. That rezoning was implemented at the request of the community to protect the scale of development in Park Slope and to allow for housing growth along 4th Avenue. The rezoning leveraged 4th Avenue's width and access to transit to accommodate new housing, albeit without any zoning tools to encourage or require the inclusion of affordable housing. New residential developments are not currently required to provide affordable housing.

Brooklyn's 3rd Avenue is a major corridor in the Project Area and is one of two truck routes that serve Gowanus and the Southwest Brooklyn Industrial Business Zone (IBZ) to the south of the Project Area. The width of the road and land uses along 3rd Avenue vary within the Project Area. The northern portion of 3rd Avenue from Baltic to Union Streets is a narrow, 70-foot-wide street. Uses along this portion of 3rd Avenue include a hotel and parking lot, a gas station, former industrial buildings reused for commercial activities, and industrial or commercial businesses (including distribution/warehousing, contractor's storage yards, or fuel oil truck parking and repair). In response to new housing construction containing unappealing blank walls along 4th Avenue, and a lack of retail and services produced as a result of the 2003 rezoning, at the request of the community, DCP initiated a follow-up zoning text amendment in 2011 to map the first Enhanced Commercial District in the City to require ground floor commercial and community facility uses and apply transparency and curb cut location requirements for ground floors in new developments, thus enhancing the pedestrian streetscape.

The remaining portion of 4th Avenue within the Project Area, between Douglass Street and 6th Street, is currently zoned M1-2 and C8-2.

Bridge connections across the Canal and east-west thoroughfares across the neighborhood are limited, with three bridges traversing the waterbody, including only one bridge (at 3rd Street) that allows westbound traffic. Baltic Street is a key corridor that traverses the Project Area and neighborhood north of the Canal.One of the few major east–west commercial corridors in the neighborhood, Union Street is a wide street that crosses the Canal. 3rd Street is a wide street that runs from Hoyt Street to 4th Avenue in the Project Area and is the only cross-canal connector that allows westbound traffic. Carroll Street is a narrow cross-canal corridor with traffic moving east to west. Restored in 1989, the Carroll Street Bridge is an LPC-designated landmark and is just north of the 363-365 Bond Street development.

In the mid-2000s, the neighborhoods surrounding Gowanus were the focus of contextual zoning changes that sought to prevent out-of-scale, height factor towers. The zoning changes also had the effect of restricting opportunities for new housing production, including affordable housing.

In addition, several Citywide text amendments are anticipated to be in public review concurrent with the Proposed Actions, including the Zoning For Transit Accessibility, Health & Fitness, Open Restaurants, and Hotels text amendments. The Proposed Actions include certain provisions that would be obviated by approval of these pending proposals. While the Proposed Actions contain these provisions to reflect the desired outcomes of the Gowanus Neighborhood Plan, it is anticipated that the citywide zoning texts, which would have the same effect in Gowanus, would ultimately supersede these provisions

Planning Efforts in Gowanus

In the last decade, Brooklyn gained over 100,000 new residents and 50,000 new jobs. Without providing additional residential capacity or new spaces for jobs, it will be increasingly difficult to balance the anticipated growth expected in Brooklyn. Strong demand for housing Citywide has played out locally by pushing up prices and limiting housing that is affordable for households at lower incomes. Below are brief descriptions of the planning efforts in the neighborhood.

In 2009, the Carroll Gardens Rezoning mapped contextual zoning districts that established height and bulk regulations to ensure that future development reflected the predominantly brownstone, walk-up apartment building character of the area, while allowing for modest growth on appropriate corridors and limited building upgrades. The rezoning focused on 86 blocks in the Carroll Gardens and Columbia Street neighborhoods that were primarily zoned R6.

The City also proposed zoning changes in 2009 that would have affected 25 blocks along the waterfront area and a portion of the upland area south of Sackett Street and north of 3rd Street. Building upon the existing mixed-use character of the area, the study proposed the following: a mix of uses, including residential uses, in certain areas zoned for manufacturing uses; continued industrial use as well as commercial uses; the redevelopment of the waterfront and the provision of public access at the Canal's edge; the enlivening of the streetscape with pedestrian-friendly, active ground-floor uses; the promotion of new housing production, including affordable housing through the City's Inclusionary Housing Program (IH); and the establishment of height and density limits that consider neighborhood context and other shared goals. The proposal was put on hold in 2010. The rezoning would have facilitated thousands of new homes adjacent to thriving communities where recent zoning changes otherwise limited new housing capacity.

In 2011, the Boerum Hill Rezoning mapped contextual zoning districts to reflect existing building forms and uses to protect the character and scale of the neighborhood while allowing for limited expansions and development on vacant sites. The rezoning, which focused on a 31-block area formerly known as North

Gowanus, also refined commercial overlays on many of the thoroughfares to more closely tailor them to the existing distribution of mixed uses, bringing existing uses into conformance, and preventing the expansion of commercial activity into residential mid-blocks where such uses would threaten existing neighborhood character.

Based on an iterative process of engagement and feedback DCP, in cooperation with other City agencies, developed *Gowanus: A Framework for a Sustainable, Inclusive, Mixed-use Neighborhood* (the "Framework"), a comprehensive framework of goals and strategies, including recommended land use changes that would be developed into a comprehensive rezoning proposal and implemented as part of an overall Gowanus Neighborhood Plan. The Framework was released in June 2018.

Through refinement and community input on the Framework, a draft Neighborhood Plan and draft zoning proposal were developed and shared with the public in February 2019. DCP held pre-certification meetings in the fall and winter of 2020 to provide updates on key aspects of the zoning proposal and to support the community's upcoming formal review of the proposal. DCP will continue to work with local elected officials and community stakeholders in refining the proposal based on the ongoing community process and advancing aspects of the Framework toward a Neighborhood Plan. A Neighborhood Plan is designed to implement a shared vision by aligning community and government resources and effectuating zoning and land use changes through the City's Uniform Land Use Review Procedure (ULURP) process, where the community and stakeholders will continue to have many opportunities to provide comments and input and shape the final Neighborhood Plan.

The Proposed Actions are the culmination of many years of planning work in and around Gowanus by local community members, elected officials, and City agencies, and reflect DCP's ongoing engagement process with community boards, residents, business owners, community-based organizations, elected officials, and other stakeholders to achieve the following land use objectives:

- Support existing clusters of economic activity and promote development of new job-generating uses through increased industrial and commercial density and updated parking and loading regulations in key areas;
- Provide opportunities for the creation of new, permanently affordable housing with options for low- and moderate-income households, while bringing existing residences into conformance with zoning;
- Facilitate the creation of new waterfront open space and neighborhood parks along the Canal through the establishment of a Waterfront Access Plan (WAP) and changes to the City Map;
- Facilitate several shared neighborhood-wide goals, including promoting a walkable, vibrant, mixed-use neighborhood, brownfield remediation, and activation of key areas by allowing higher densities and a broader range of uses and incentivizing or requiring non-residential uses in select areas;
- Create special rules to establish limits for height, bulk envelope, and density that consider neighborhood context as well as other shared goals, including encouraging variation and diversity of future programing, open spaces, site planning, and design along the Canal; and
- Support a successful Neighborhood Plan by institutionalizing a comprehensive planning framework that is inclusive of relevant capital infrastructure needs and services to support current demand and future growth.

Neighborhood Context

The existing zoning in the Project Area, most of which has been in place since 1961, is composed of M1-1, M1-2, M2-1, M3-1, C8-2, M1-4/R7-2, R6, R6B, R8A, and R8A/C2-4 districts. Three zoning map or text amendments have been adopted since 2000. A portion of 4th Avenue was rezoned in 2003 from R7A/C2-4 (north of President Street) and R6 (south of President Street) to R8A/C2-4. The Park Slope Rezoning changed the zoning on the superblocks between 3rd and 4th Avenues from M1-2 to C8-2 to reflect the existing land uses and broaden the permitted range of commercial activities. The Special

Enhanced Commercial District (EC-1) is mapped along 4th Avenue from Pacific Street south to 24th Street. From Pacific Street to Douglass Street and from 6th Street to the Prospect Expressway, the district encompasses block frontages on the east and west sides of 4th Avenue. Between Douglass Street and 6th Street and south of the Prospect Expressway, the district encompasses only the frontages on the east side of 4th Avenue. EC-1 provisions apply ground-floor use regulations, retail transparency requirements, and limitations on parking and curb cuts to promote a vibrant mix of commercial and community facility uses on the ground floor of new developments and enlargements, enhance the pedestrian environment, and create an active streetscape on 4th Avenue.

C. DESCRIPTION OF THE PROPOSED ACTIONS

The Proposed Actions include discretionary land use approvals that are subject to review under ULURP, Section 200 of the City Charter, and the CEQR process. The discretionary approvals are summarized below.

- ***Zoning Map Amendments.*** The Proposed Actions would replace all or portions of existing R6, R6B, R8A, R8A/C2-4, C8-2, M1-1, M1-2, M2-1, and M3-1 zoning districts with R6A, R6B, M1-4/R6A, M1-4/R6B, M1-4/R7-2, M1-4/R7A, M1-4/R7X, C4-4D, and M1-4 zoning districts. The Proposed Actions would also eliminate an existing C2-4 overlay along 4th Avenue within the Project Area, and replace it with the C4-4D district within the Special Gowanus Mixed-Use District (GSD).
- ***Zoning Text Amendments.*** The Proposed Actions include amendments to the text of New York City's Zoning Resolution (ZR) to establish the GSD within the Project Area, create the Gowanus WAP for waterfront blocks within the Project Area, remove the Special Enhanced Commercial District – 1 (EC) within the Project Area, and amend Appendix F of the ZR to apply MIH to proposed R6A, M1-4/R6A, M1-4/R6B, M1-4/R7-2, M1-4/R7A, M1-4/R7X, and C4-4D zoning districts to require a share of new housing to be permanently affordable where significant new housing capacity would be created. In addition, the text of the ZR would be amended to:
  - create a Special Permit to allow hotels in the Project Area (as permitted by the underlying zoning district regulations);
  - create an Authorization to allow for the exemption of school floor area and modified bulk under certain conditions throughout the GSD;
  - create an Authorization to modify the use, streetscape, and bulk envelope (height and setback) regulation) for existing, large mixed-use sites seeking to redevelop while integrating new development with substantial, existing building(s); and
  - create a Chairperson Certification to allow an increase in density in exchange for identified transit improvements at the Union Street (R train) subway station.
- ***Disposition Approval and Urban Development Action Area Project (UDAAP) Designation.*** Urban Development Action Area Project (UDAAP) designation of City-owned property on Block 471 and project approval for the purpose of disposition and development pursuant to the proposed zoning is sought by HPD. In addition, HPD is seeking an amendment to a previously approved UDAAP designation for a City-owned property on Block 1028, Lot 7, which requires approval by the City Council and Mayor.
- ***City Map Amendments.*** The Proposed Actions include amendments to the City Map to acquire and map portions of Block 471, Lots 1 and 100, as parkland and streets; remove the "Public Place" designation on Block 471; and demap 7th Street between Smith Street and the Gowanus Canal.
- ***Disposition of City-Owned Property.*** The Proposed Actions include the disposition of City-owned property under the jurisdiction of DCAS. DCAS, on behalf of the New York City Economic Development Corporation (EDC), is seeking the disposition of development rights from a City-owned property located on Block 456, Lot 29 pursuant to the proposed zoning.

D. PURPOSE AND NEED FOR THE PROPOSED ACTIONS

The Proposed Actions are necessary because existing land use patterns and zoning do not permit for the implementation of the Neighborhood Plan. Current land use and development patterns have been shaped by the Canal and the existing zoning that has been in place since 1961. Without zoning changes, much of Gowanus will likely remain underdeveloped and underutilized and nearby neighborhoods will continue to become more costly. Strong demand for housing Citywide along with a rapidly growing and diversifying economy will continue to push up housing prices and limit housing that is affordable for households at lower incomes.

While the Canal was originally designed to support many of the industrial uses in the immediately surrounding area with water access to shipping lanes, its utilization as an industrial waterway has waned over the years and has ceased north of the 9th Street Bridge. Today, Gowanus is significantly changed from the peak of its industrial past and is characterized by a mix of building forms and uses, including one- to two-story former industrial buildings, vacant or underutilized lots that are primarily used for open storage or parking, and larger loft-style buildings, many of which have been adaptively reused for commercial and art-related uses. The waterfront blocks contain a mix of commercial activity, parking lots, storage facilities, and light industrial facilities interspersed with vacant buildings and land. While the Canal is no longer used for industrial or commercial transport, it is accessed and used for recreational, educational, and stewardship purposes. Many of the properties are contaminated from former industrial waste or through subsurface migration of pollutants.

Current zoning around the Canal allows industrial and some commercial uses with no new residential uses or affordable housing permitted. However, new non-residential development has been precluded by the existing zoning's relatively low permitted densities coupled with high parking, loading, and other requirements. The combination of outdated zoning and broader economic and demographic conditions has resulted in few new buildings constructed within the Project Area in recent decades other than hotels and self-storage facilities. Since new commercial and industrial construction is mostly infeasible, former industrial buildings have been adaptively reused for commercial, light industrial, and arts-related uses. Two new apartment buildings were recently constructed after a private rezoning was approved in 2010 to allow a mix of uses, including residential.

Absent the Proposed Actions, future development in Gowanus would occur in a piecemeal manner and without the benefit of a comprehensive plan to coordinate redevelopment activities, infrastructure investments, and appropriate densities and urban design controls. New residential development along 4th Avenue would continue without any requirements to provide needed affordable housing. The Proposed Actions seek to avoid a haphazard approach to neighborhood development and would facilitate the implementation of the Neighborhood Plan by comprehensively updating the zoning on an approximately 81-block area to allow a wide range of uses including residential, commercial, retail, light industrial, arts-related, community facilities, and new open space.

The Proposed Actions would support new housing and jobs in a neighborhood with strong public transit access and in close proximity to the Central Business Districts of Downtown Brooklyn and Lower Manhattan. In addition, the Proposed Actions would work in tandem with the remediation activities in Gowanus by allowing new residential use where it is currently prohibited, by increasing density at select locations, and by requiring appropriate safeguards during construction and operation to protect the health and safety of workers and future occupants of new mixed-use developments from contamination. These changes are expected to spur the cleanup and redevelopment of Brownfield sites. The creation of a WAP as part of the zoning changes and proposed mapping of new parkland would create new waterfront public open space along the Canal, providing a recreational amenity for current and future residents.

Specifically, the Proposed Actions would create opportunities for new housing in mixed-use developments, particularly along major north–south corridors (3rd and 4th Avenues) and east–west corridors (Union, Carroll, and 3rd Streets), around Thomas Greene Playground, and along the Canal. In these areas, the Proposed Actions would provide significant amounts of new housing for current and future residents. The affordable housing that would be produced through the application of MIH would promote a diverse and inclusive mixed-income neighborhood.

The Proposed Actions would also create opportunities for new light industrial space, commercial space, arts-related space, and community facility space. The Proposed Actions would promote these opportunities in both new mixed-use buildings throughout the Project Area and, more directly, in portions of the Project Area that would be reserved exclusively for non-residential activity (portions of the midblocks between 3rd and 4th Avenues and an area around 4th and Hoyt Streets). In mixed-use buildings, the Proposed Actions would promote the integration and mixing of uses through ground-floor use requirements at key locations and floor area incentives.

Throughout the Project Area, zoning changes to allow a wider range of uses and flexibility for evolving business and land use types would be made, and would promote new community resources for civic, arts, and cultural organizations.

The Proposed Actions would support the mixed-use character of the neighborhood and support the generation of new job opportunities. The development that would occur on waterfront blocks with the Proposed Actions would achieve a variety of shared goals such as reactivating contaminated, vacant, and underutilized land; facilitating the creation of new housing including permanently affordable housing; facilitating the creation of publicly accessible open space at the water's edge; facilitating the creation of new non-residential space; and balancing the unusual physical conditions of Canal-front blocks. Development along the waterfront would also be required to raise the shoreline based on future projections of sea level rise, which would support on-going neighborhood-wide resiliency efforts.

The Proposed Actions would encourage a range of heights and building forms, allowing sufficient flexibility for building heights to achieve the development goals identified for the area while: addressing unique site conditions and reflecting the existing built character of the Gowanus neighborhood. The range of permitted heights per the proposal would address the existing low-scale context of certain adjacent areas while allowing limited portions of buildings to rise higher on certain blocks and frontages.

In order to provide an active and varied pedestrian experience, help foster a mixed-use neighborhood, and respond to site conditions and constraints, the proposal includes provisions that would require active ground-floor uses in key locations, reducing or eliminating parking requirements, and screening parking and inactive ground-floor portions of buildings, where appropriate. The Proposed Actions would also encourage new community resources and facilities through special floor area regulations and new open space through the mapping of parkland to support planning for a growing neighborhood.

The Proposed Actions also include approvals necessary to facilitate development of a nearly six-acre site commonly referred to as Public Place (also referred herein as the "Gowanus Green Site" or "Gowanus Green"). The site is a major community asset and a brownfield site in need of substantial remediation. The Proposed Actions would facilitate new mixed-use development consisting of affordable housing, commercial uses, community facility space, and new waterfront open space, and would advance many community priorities raised during the neighborhood planning process.

In addition, the Proposed Actions include approvals necessary to dispose of development rights from a City-owned property located at 276 4th Avenue (Block 456, Lot 29). The property is under the jurisdiction of DCAS and is currently leased to New York City Transit Authority (NYCT). Unused

development rights from the City-owned property would be transferred to an adjacent development pursuant to the proposed zoning.

The Proposed Actions reflect DCP's on-going engagement process with community boards, residents, business owners, community-based organizations, elected officials, and other stakeholders to achieve the following land use objectives:

- Support existing clusters of economic activity and promote development of new job-generating uses through increased industrial and commercial density and updated parking and loading regulations in key areas;
- Provide opportunities for the creation of new, permanently affordable housing with options for low- and moderate-income residents, while bringing existing residences into conformance with zoning;
- Facilitate the creation of new waterfront open space and neighborhood parks along the Canal through establishing a WAP and changes to the city map;
- Facilitate several shared neighborhood-wide goals, including promoting a walkable, vibrant, mixed-use neighborhood, brownfield remediation and activating key areas through permitting higher densities and a broader range of uses and incentivizing or requiring non-residential uses in select areas;
- Create special rules to establish limits for height, bulk envelope and density that consider neighborhood context as well as other shared goals, including encouraging variation and diversity of future programming, open spaces, site planning, and design along the Canal; and
- Support a successful Neighborhood Plan by institutionalizing a comprehensive planning framework that is inclusive of relevant capital infrastructure needs and services to support current demands and future growth

E. DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Actions are intended to facilitate development patterns that meet the long-term vision of a thriving, inclusive, and more resilient Gowanus where existing and future residents and workers can participate in civic, cultural, and economic activities and where a wholly unique resource—the Gowanus Canal—can thrive and play an active role in that equitable and sustainable growth. The Proposed Actions include discretionary land use approvals that are subject to review under ULURP, Section 200 of the City Charter, and the CEQR process.

Overall, the Proposed Actions are expected to result in a net increase of approximately 8,500 dwelling units (DU), 735,000 square feet (sf) of commercial space, 251,000 sf of community facility space (inclusive of a new, 500-seat public school), and approximately six acres of new open space, including over an acre of newly mapped parkland. The Proposed Actions would result in net decreases of approximately 132,000 sf of warehouse space, 125,000 sf of self-storage space, and 60,000 sf of other industrial space. On privately owned sites, the Proposed Actions could result in a net increase of approximately 7,500 DUs, including approximately 2,000 permanently affordable DUs for lower-income New Yorkers in accordance with the Mandatory Inclusionary Housing Program (MIH).[1] On City-owned sites, the Proposed Actions would result in approximately 1,000 affordable DUs, designated to serve a wide range of incomes (see Section F, "Analysis Framework," for discussion of the Reasonable Worst-Case Development Scenario [RWCDS]).

Over the past four years, thousands of stakeholders, residents, workers, business owners, and elected officials have participated in over 100 hours of meetings and workshops, including large public events and 26 working group meetings covering five broad topics (Arts and Culture, Housing, Industry and Economic Development, Public Realm, and Sustainability and Resiliency). Coupled with DCP's first online public engagement platform (*PlanGowanus.com*), members of a broad cross-section of the

community have articulated challenges and needs that Gowanus faces today and in the future. In October 2016 DCP, together with other City agencies, launched a study of the neighborhood surrounding the Gowanus Canal. The Study builds upon a number of previous reports and planning efforts, including *Bridging Gowanus*, which was led by New York City Council Members (CM) Brad Lander and Stephen Levin from 2013 to 2015.

The Study is a collaboration between the City of New York and local elected officials and community members that takes a broad, comprehensive look at ways to support existing and future resiliency and sustainability efforts; encourage and expand neighborhood services and amenities; improve streetscapes, pedestrian safety, and access along the Canal; explore ways to support and develop space for job-generating uses—including industrial, arts, and cultural uses; promote opportunities for new housing with required permanently affordable housing and protect residential tenants against harassment and displacement; and coordinate necessary infrastructure improvements throughout the area to support the continued cleanup of the Gowanus Canal to accommodate existing and future needs.

F. ANALYSIS FRAMEWORK

The Proposed Actions would change the regulatory controls governing land use and development at the Development Site. The 2020 *CEQR Technical Manual* serves as the general guide on the methodologies and impact criteria for evaluating the Proposed Actions' potential effects on the various environmental areas of analysis.

Construction of the Proposed Development is expected to be complete by 2035. This build year was determined in consideration of the amount of time necessary for the Projected Development sites to reasonably be developed. As the Proposed Development would be operational in 2035, its environmental setting is not the current environment, but the future environment. Therefore, the technical analyses and consideration of alternatives assess current conditions and forecast these conditions to the expected 2035 Build Year for the purposes of determining potential impacts. Each chapter of the EIS provides a description of the "Existing Condition" and assessment of future conditions without the Proposed Actions ("No-Action" condition) and future conditions with the Proposed Actions ("With-Action" condition).

Reasonable Worst-Case Development Scenario (RWCDS)

In order to assess the possible effects of the Proposed Actions and resulting Proposed Development, a reasonable worst-case development scenario (RWCDS) was established for both the future without the Proposed Actions (No-Action) and the future with the Proposed Actions (With-Action) for an analysis year, or Build Year, of 2035. The incremental difference between the No-Action and With-Action conditions will serve as the basis of the impact category analyses.

To produce a reasonable, conservative estimate of future growth, the development sites have been divided into two categories: projected development sites and potential development sites. Projected development sites are sites considered more likely to be developed within the anticipated 14 year analysis year. The potential development sites are deemed less likely to be developed by the analysis year. These sites are considered for site-specific effects of the Proposed Actions in the EIS.

The Future Without the Proposed Actions (No-Action)

In the future without the Proposed Actions (No Action condition), the projected development sites are assumed to either remain unchanged from existing conditions or become occupied by uses that are permitted on an as-of-right basis under existing zoning. It is anticipated that in the No Action condition there would be a total of approximately 2.3 million square feet (msf) of built floor area on the 63 projected development sites. Under the RWCDS, the total No Action development would comprise

approximately 800 DUs (including about 100 affordable DUs), approximately 190,000 sf of medical office space, 27,000 sf of other community facility space, 241,000 sf of local retail space, 104,000 sf of destination retail space, 375,000 sf of office space, 133 hotel rooms, 84,000 sf of auto-related commercial uses, and 415,000 sf of industrial space. The No Action Scenario estimated population would include approximately 1,800 residents and 3,200 workers on the projected development sites.

The Future With the Proposed Actions (With-Action)

The Proposed Actions would allow for the development of new uses and higher densities at the projected and potential development sites. Under the Proposed Actions, the total development expected to occur on the 63 projected development sites would consist of approximately 10.1 msf of built floor area, including 9,300 DUs, approximately 89,000 sf of medical office space, 380,000 sf of other community facility space, 594,000 sf of local retail space, 20,000 sf of destination retail space, 937,000 sf of office space, 133 hotel rooms, and 99,000 sf of industrial space. The projected incremental (net) change between the No Action and With Action conditions that would result from the Proposed Actions would be an increase of 8,500 DUs (a substantial proportion of which are expected to be affordable); approximately 353,000 sf of other community facility space; 353,000 sf of local retail space; 562,000 sf of office space; and a net loss of medical office space, industrial space, destination retail, and auto-related commercial space.

The Proposed Actions would support the development of the City-owned site on Lot 125, Block 471 with a mixed-use development known as Gowanus Green Development. The Gowanus Green Development would include new housing, of which a substantial amount would be affordable, and a variety of non-residential space, including a potential new school, a new neighborhood park, and other uses allowed under the proposed zoning. The new open space would be over one acre in size and located along the Canal.

The Proposed Actions would also support significant transit improvements in the Project Area. The GSD would require owners of lots adjacent to subway stations along 4th Avenue to coordinate with MTA and DCP prior to any development to determine whether an easement, zoning relief, or other interventions would be needed to allow for station improvements. The GSD would create an authorization that would allow for an increase in density in exchange for improvements to transit infrastructure and access to transit facilities such was subway stations. In addition, the Proposed Actions would specifically support transit improvements at the Union Street (R train) subway station by creating a chair certification that would allow an increase in height and density in exchange for a new entrance to the southbound platform at a projected development on the west side of 4th Avenue between Union and Sackett Streets.

Based on 2010 Census data, the average household size for residential units in Brooklyn Community District 6 is 2.19. Based on these ratios and standard ratios for estimating employment for commercial, community facility, and industrial uses also provides an estimate of the number of residents and workers generated by the Proposed Actions. The Proposed Actions would result in a net increase of approximately 18,600 residents and 3,500 workers.

A total of 71 sites were considered less likely to be developed within the near future and were thus considered potential development sites. As noted earlier, the potential development sites are deemed less likely to be developed because they did not closely meet the criteria listed above. However, as discussed above, the analysis recognizes that a number of potential development sites could be developed under the Proposed Actions in lieu of one or more of the projected development sites in accommodating the development anticipated in the RWCDS. The potential development sites are therefore also analyzed in the EIS for site-specific effects.

G. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

Land Use, Zoning, and Public Policy

No significant adverse impacts on land use, zoning, or public policy are anticipated in the future with the Proposed Actions in the primary or secondary study areas in the 2035 analysis year. The Proposed Actions would not result in significant adverse impacts to land use and zoning. The analysis methodology is based on the guidelines of the *CEQR Technical Manual* and examines the effects of the Proposed Actions on land use, zoning, and public policy, and determines the potential for the Proposed Actions to result in significant adverse impacts. According to the *CEQR Technical Manual*, a detailed assessment of land use, zoning, and public policy is appropriate if an action would result in a significant change in land use or would substantially affect regulations or policies governing land use. An assessment of zoning is typically performed in conjunction with a land use analysis when the action would result in a change in zoning. Therefore, a detailed analysis was prepared that describes existing and anticipated future conditions for the 2035 Build Year, assesses the nature of any changes on these conditions created by the Proposed Actions, and identifies those changes, if any, that could be significant or adverse.

DCP, in conjunction with other City agencies, developed an approach that achieves a number of objectives through zoning changes and other land use actions. The Proposed Actions would introduce zoning changes to allow greater densities and new uses in order to create affordable housing; spur economic and job growth; facilitate brownfield remediation; foster safer, active streets; create a vibrant, accessible, and resilient waterfront; and generate new community resources.

Gowanus is a vibrant neighborhood and interest in living and working in the area is growing. However, current zoning does not allow the development of housing throughout much of the Project Area, and low allowable densities and outdated parking and loading requirements have stymied the growth of new non-residential development. In areas where residential use is permitted, such as along 4th Avenue, the existing zoning does not require affordable housing.

The Proposed Actions are intended to facilitate development patterns that meet the long-term goals of the existing residents, adjacent neighborhoods, and the City as a whole. The Proposed Actions would facilitate the development of approximately 3,000 permanently affordable DUs in the Project Area through MIH. MIH would be mapped on most of the Project Area, excluding those areas where residential development would not be permitted, and the area rezoned to R6B on Warren Street. Areas that would be mapped with MIH include 4th Avenue, 3rd Avenue, parts of Nevins Street, and parts of the Canal waterfront. The Proposed Actions would create new opportunities for affordable housing development by allowing residential development (with MIH) in areas where it is currently prohibited and by allowing greater density and applying MIH in areas such as 4th Avenue, where market rate residential development would continue to occur without the Proposed Actions.

The creation of special mixed-use districts in the Canal Corridor Subarea, the Upland Mixed Use Subarea, and the Industrial and Commercial Subarea would bring non-conforming residential development in existing M1-2 and M2-1 districts into conformance with zoning. These existing clusters of legal non-complying residential buildings are primarily located on the east side of the Canal around Carroll Street and 3rd Avenue. By bringing these residential uses into conformance, the Proposed Actions would allow homeowners to make improvements to their homes and access financing for flood adaptation.

The Proposed Actions would facilitate the creation of approximately four acres of open space mainly located along the Canal. General WPAA guidelines are difficult to achieve on the varied lot configurations and unique conditions of the Canal. The Proposed Actions would establish the Gowanus WAP which would modify standard WPAA guidelines to fit the specific context of the Canal. The development spurred by the Proposed Actions would be required to comply with the WAP's public access requirements, facilitating the creation of a continuous shore public walkway along the Canal. The WAP would ensure public access on all sites along the Canal, at street ends, and at bridge crossings.

The Proposed Actions include several City Map amendments, including mapping portions of Block 471, Lots 1 and 100 as parkland, mapping new public streets on Block 471, and demapping 7th Street between

Smith Street and the Canal. The new neighborhood park created on the Gowanus Green Site would contribute to the network of waterfront open space on the Canal, which would be connected by a continuous esplanade. New mapped streets would include the extension of Luquer and Nelson Streets and a new street along the Canal. These City Map amendments would create new waterfront parkland and the new streets would physically and visually connect the waterfront to Carroll Gardens to the west. The newly mapped parkland on Block 471 would total 1.6 acres of waterfront open space.

The Proposed Actions would promote a walkable, vibrant, mixed-use neighborhood through proposed zoning changes and the establishment of the GSD. Certain areas (the Industrial and Commercial Subarea) would be reserved for non-residential use and would be mapped as an M1-4 district. The Proposed Actions would allow a higher density than what is permitted under the current zoning. The GSD would modify the M1-4 district to allow a broader range of uses including retail and entertainment uses, industrial, community facility, and other commercial uses such as office and arts-related uses.

Most of the primary study area would be mapped as special mixed-use (MX) districts that pair an M1-4 district (modified by the GSD) with a residential district. The Upland Mixed-Use Subarea would be mapped with M1-4/R6A, M1-4/R6B, M1-4/R7A, and M1-4/R7X districts and the Canal Corridor Subarea would be mapped with an M1-4/R72 district. These MX districts would allow the broad range of non-residential uses allowed in the modified M1-4 district to be located adjacent to or within the same building as residential uses. Active ground-floor use requirements on key corridors (4th and 3rd Avenues, Union and 3rd Streets), around planned investments such as Thomas Greene Playground, and at Canal crossings and floor area incentives for active ground-floor use would promote non-residential development and create an active, pedestrian-friendly environment.

The Proposed Actions promote remediation of contaminated sites by allowing increased density and residential development on brownfield sites. Remediation is a costly process and a deterrent to redevelopment. By allowing residential development and increased density, these sites become a more attractive investment, thereby incentivizing redevelopment. The Proposed Actions would also facilitate development that supports neighborhood goals in areas surrounding planned investment such as the Gowanus Canal and Thomas Greene Playground. As described further in, the Canal is on the EPA's National Priorities (Superfund) List and will be undergoing remediation including dredging, remediation of former Manufactured Gas Plant (MGP) sites, and combined sewer overflow (CSO) reduction. NYC Parks' Thomas Greene Playground is one of the former MGP sites and will be remediated as part of the Superfund requirements.

The Proposed Actions would support the goals and objectives of the city-wide zoning for coastal resiliency text amendment. The Proposed Actions would help catalyze new development along the Canal, which would be required to meet Appendix G requirements through strategies such as elevation, dry floodproofing or wet floodproofing. The Proposed Actions would also require portions of the required waterfront open space be elevated based on future projections of sea level rise.

Portions of the Project Area are within the coastal zone; therefore, the Proposed Actions must be reviewed by CPC, in its capacity as the City Coastal Commission, to determine whether the Proposed Actions are consistent with WRP policies. As discussed in the WRP assessment, the Proposed Actions are consistent with the City's WRP policies and would promote several policies affecting the waterfront, including the provision of new waterfront open space and increased visual and physical access to the Canal. The analysis concludes that the proposed actions would not introduce an incongruous land use, nor adversely affect the existing mixed-use character of the area, nor adversely affect public policy, which represent the thresholds of impact significance in the 2020 CEQR Technical Manual. Therefore, no significant adverse impacts related to Land Use, Zoning, and Public Policy would result from the proposed actions.

Socioeconomic Conditions

This preliminary assessment determined that the Proposed Actions would not result in significant adverse socioeconomic impacts. The following summarizes the conclusions for each of the five CEQR areas of socioeconomic concern.

DIRECT RESIDENTIAL DISPLACEMENT

The screening-level assessment found that the Proposed Actions would not result in significant adverse impacts due to direct residential displacement. Under the Reasonable Worst-Case Development Scenario (RWCDS), the Proposed Actions could directly displace an estimated 20 residents living in nine dwelling units (DUs) by 2035. The nine DUs that would be displaced are located on Projected Development Sites 4, 5, 28, 45, and 55.

According to the *CEQR Technical Manual*, direct displacement of fewer than 500 residents would not typically be expected to substantially alter the socioeconomic character of a neighborhood. The potentially displaced residents represent less than one-hundredth of one percent of the estimated 137,944 residents within the socioeconomic study area;[2] therefore, this potential direct displacement would not substantially alter the socioeconomic character of the neighborhood.

DIRECT BUSINESS DISPLACEMENT

A preliminary assessment found that the Proposed Actions would not result in significant adverse impacts due to direct business displacement. Under the RWCDS, projected development generated by the Proposed Actions by the 2035 Build Year could directly displace an estimated 42 businesses on projected development sites and an estimated 565 jobs associated with those businesses. The 42 potentially displaced businesses include: five Construction sector businesses; five Manufacturing sector businesses; five Wholesale Trade sector businesses; four Retail Trade sector businesses; four Transportation and Warehousing sector businesses; four Information sector businesses; one Administrative and Support and Waste Management and Remediation Services sector business; two Arts, Entertainment, and Recreation sector businesses; two Accommodation and Food Services sector businesses; and ten "Other Services (except Public Administration)" sector businesses. The 42 businesses do not represent a majority of study area businesses or employment for any given industry sector. While all businesses contribute to neighborhood character and provide value to the City's economy, there are alternative sources of goods, services, and employment provided within the socioeconomic study area; therefore, the potential displacement of these businesses does not constitute a significant adverse impact on the socioeconomic conditions of the area as defined by CEQR. None of the potentially displaced businesses are within a category of business that is the subject of regulations or publicly adopted plans to preserve, enhance, or otherwise protect it.

The Proposed Actions would result in the incremental development within the Project Area of 8,292 DUs, including 3,017 affordable DUs; 752,552 sf of commercial space; 251,413 sf of community facility space; and a loss of 316,919 sf of industrial space. Comparable services and employment opportunities to those provided by directly displaced commercial businesses are expected to be provided as part of the development resulting from the Proposed Actions. In addition to the employees who work at potentially displaced businesses, there are many freelance and self-employed artists in the study area who rent space for hosting cultural events, displaying art, and practicing and recording music. While the Proposed Actions would result in the direct displacement of some of these spaces (e.g., 501 Union at Projected Development Site 22 and Band Spaces NYC at Projected Development Site 13), there would continue to be alternative venues that host events and/or provide rehearsal and recording space in the study area. Therefore, the potential displacement of spaces supporting local artists would not constitute a significant adverse impact under CEQR.

INDIRECT RESIDENTIAL DISPLACEMENT

A detailed assessment found that the Proposed Actions would not result in any significant adverse impacts due to indirect residential displacement. The Proposed Actions would result in an increment of

8,292 DUs above the No Action condition and a net increase of approximately 18,158 residents. The preliminary assessment found that for most of the study area the average household income of the new population in the With Action condition would be lower than the average household income of the existing population. However, for two subareas more analysis was required to determine the potential for significant adverse impacts. The detailed assessment focused on Subarea A[3], roughly bounded by Douglass Street/St. John's Place, 4th Avenue, the Prospect Expressway, and the Gowanus Canal; and Subarea B[4] roughly bounded by Wyckoff Street/St. Marks Place, 4th Avenue, Douglass Street, and Hoyt Street. These subareas overlap with the Project Area and have lower average household incomes than other parts of the study area. The analysis found that while the Proposed Actions would add a substantial new population with potentially higher incomes to both subareas, in Subarea A the mixed-income composition of the new population would not cause substantial changes in the real estate market that would lead to indirect displacement of all vulnerable renters in unprotected units. Further, the Proposed Actions would be expected to introduce more affordable housing than in the future without the Proposed Actions, potentially slowing the existing trend of increasing rents and maintaining a more diverse mix of incomes within the subarea as compared to the No Action condition. In Subarea B, the analysis found that most low income renters in the subarea reside in protected rental units and would not be vulnerable to indirect residential displacement as a result of the Proposed Actions.

INDIRECT BUSINESS DISPLACEMENT

A preliminary assessment found that the Proposed Actions would not result in significant adverse impacts due to indirect business displacement. Concerns under CEQR are whether the Proposed Actions could lead to changes in local market conditions that could lead to increases in commercial property values and rents within the study area, making it difficult for some categories of businesses to remain in the area, and whether the Proposed Actions could lead to displacement of a use type that directly supports businesses in the study area or brings people to the area that forms a customer base for local businesses.

The Project Area and broader study area have well-established residential, retail, office, and manufacturing markets such that the Proposed Actions would not introduce new economic activities to the projected development sites or to the study area or add to a concentration of a particular sector of the local economy enough to significantly alter or accelerate existing economic patterns. The Proposed Actions would add an increment above the No Action Condition of 8,292 DUs, providing significant amounts of new housing for current and future residents, including in areas where residential development is not currently permitted. This would introduce a new residential population, but the demand for goods and services from existing residents has already established a strong commercial market such that the influence of new residents would not markedly increase commercial property values and rents throughout the study area. In addition, the introduction of a new residential population would increase demand for the goods and services provided by existing businesses. The Proposed Actions would add an increment of 264,855 sf of Retail Trade space (local retail, with a decrease in destination retail compared to the No Action condition) and an increment of 561,756 sf of office space. There is an existing trend of increasing retail development in the study area and adaptive reuse of former industrial buildings for commercial uses. The retail added under the RWCDS would not be enough to alter or accelerate ongoing trends. In terms of office uses, within the wider study area, there are many businesses in industries that are often sited in office buildings, and the Proposed Actions would reinforce existing trends of office space development in the study area. In particular, commercial businesses, offices, and other uses that serve the surrounding residential communities have increased in recent years within the Project Area. The reinvestment in, and reactivation of, older loft buildings for a variety of commercial office and artist spaces indicate a growing local demand for new office and other workspaces. The new office space is expected to respond to the local demand for office space and other workspaces, and is not enough to substantively alter or accelerate trends.

The Proposed Actions would not directly displace uses that provide substantial direct support for businesses in the area or that bring people into the area that form a substantial portion of the customer base for local businesses. The Proposed Actions would result in increasing economic activity in an area where commercial corridors are currently fragmented. Further, the Proposed Actions' resident population (increment of 8,292 DU, and 3,300 employee population generated by the Proposed Actions on the

projected development sites would become new customers at many of the existing retail businesses in the Project Area and study area, and the mix of market-rate and affordable DUs resulting from the Proposed Actions would maintain a diverse customer base to shop at retail stores offering products at a range of price points.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

A preliminary assessment found that the Proposed Actions would not result in significant adverse impacts due to adverse effects on specific industries. An analysis is warranted if a substantial number of residents or workers depend on the goods or services provided by the affected businesses or if it would result in the loss or substantial diminishment of a particularly important product or service within the industry. The Proposed Actions would not significantly affect the business conditions in any industry or any category of business within or outside the study area. By 2035 the Proposed Actions could directly displace an estimated 42 businesses and 565 employees in several economic sectors. The businesses that could be displaced do not represent a critical mass of businesses within any City industry, category of business, or category of employment. Although these businesses are valuable individually and collectively to the City's economy, the goods and services offered by potentially displaced uses can be found elsewhere within the socioeconomic study area, within a broader trade area, and within the City as a whole. The products and services offered by potentially displaced businesses are not essential to the viability of other businesses within or outside the study area. The Proposed Actions would not result in significant indirect business displacement, and therefore would not indirectly substantially reduce employment or have an impact on the economic viability in any specific industry or category of business.

Open Space

A detailed open space analysis was conducted and determined that the Proposed Actions have the potential to result in a significant adverse direct and indirect active open space impact. According to the *CEQR Technical Manual,* a proposed action may result in a significant impact on open space resources if (a) there would be direct displacement or alteration of existing open space within the study area that would have a significant adverse effect on existing users; or (b) it would reduce the open space ratio and consequently result in the overburdening of existing facilities or further exacerbating a deficiency in open space.

According to the *CEQR Technical Manual*, the significance of a project's effects on open space is assessed taking into consideration qualitative and quantitative factors. A significant adverse open space impact may occur if a proposed action would reduce the total open space ratio by more than 5 percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. These reductions may result in overburdening existing facilities or further exacerbating a deficiency in open space. **Table 1** expresses the percentage change from the No Action condition to the With Action condition for both the non-residential and residential study areas.

Table 1
Open Space Ratio Summary

Ratio	*CEQR Technical Manual* Open Space Guideline	Open Space Ratios per 1,000			Percent Change (No Action to With Action)
		Existing	No Action	With Action	
Non-Residential Study Area					
Passive	0.15	0.184	0.178	0.231	29.78%
Residential Study Area					
Total	2.5	0.330	0.336	0.332	--1.19%
Passive	0.5	0.127	0.151	0.152	0.66%
Active	2.0	0.203	0.185	0.180	-2.70%

DIRECT EFFECTS

The Proposed Actions would not result in the direct displacement of any existing open space resources, or any significant adverse impacts related to construction, air quality, or noise impacts on open space resources. Since no open space resources would be physically displaced under the Proposed Actions, this chapter uses information from Chapter 6, "Shadows," Chapter 15, "Air Quality," and Chapter 17, "Noise," to determine whether the Proposed Actions would directly affect any open spaces within, or in close proximity to, the Project Area.

As discussed in Chapter 6, "Shadows," the detailed shadow analysis concluded that development under the Proposed Actions could result in significant adverse shadow impacts to the Douglass and Degraw Pool in Thomas Greene Playground on the May 6/August 6 analysis day. The new shadow would not significantly alter the utilization of the rest of the open space, the vitality of the plant life within the park, or the public's enjoyment of the full resource. The analysis found, however, that the shadows would significantly reduce the utility of the Douglass and Degraw Pool on the May6/August 6 analysis dayin a way that has a significant adverse effect on existing users. Therefore, it is concluded that there would be a direct significant adverse open space impact due to incremental shadows.

INDIRECT EFFECTS
In the non-residential study area, the detailed analysis of open space conditions finds that with the Proposed Actions the passive open space ratio would increase by approximately 30 percent, to 0.231 acres per 1,000 workers, as compared to the No Action condition. As this is above the City's planning guideline of 0.15 acres of passive space per 1,000 workers, the Proposed Actions would not result in any significant adverse impacts to passive open space in the non-residential study area.

Within the residential study area, the detailed analysis of open space conditions finds that with the Proposed Actions the total open space ratio would decrease by 1.19 percent, to 0.332 acres per 1,000 residents; the passive open space ratio would increase by 0.66 percent to 0.152 acres per 1,000 residents; and the active open space ratio would decrease by 2.7 percent, to 0.180 acres per 1,000 residents. Though the change with respect to the open space ratios would not surpass 5 percent and the passive open space ratio would not be reduced in the With Action condition, the Proposed Actions would result in significant adverse impacts to total open space and active open space due to the existing low open space per population ratio. Therefore, it is concluded that the Proposed Actions would result in a significant adverse impact on open space resources in the residential study area.

NON-RESIDENTIAL STUDY AREA
As shown in **Table 1**, in the With Action condition the non-residential study area's passive open space ratio would increase by approximately 30 percent between the No Action condition and the With Action condition (from 0.184 acres per 1,000 residents to 0.231 acres per 1,000 residents, respectively), and the passive open space utilization rate in the With Action condition would remain above the City's guideline ratio of 0.15 acres per 1,000 workers.

RESIDENTIAL STUDY AREA
In the With Action condition the total, active, and passive open space ratios would remain below the City's guideline ratios of 2.5 acres, 2.0 acres, and 0.5 acres per 1,000 residents, respectively. The With Action condition total open space ratio would decrease by 1.19 percent as compared with the No Action condition. The passive open space ratio would increase by 0.66 percent as compared with the No Action condition. The active open space ratio would decrease by approximately 2.70 percent over the No Action condition. Therefore, the Proposed Actions would result in a significant adverse impact to open space primarily due to the low active open space ratio and decreases between the No Action and With Action conditions. Potential mitigation measures to address the significant adverse impact are discussed in the Mitigation section below.

The reduction in active open space in the With Action condition would most likely affect the study area's adult and teenager population, which is expected to make up approximately 69 percent of the total study area population. Both groups use court facilities (e.g., basketball courts) and sports fields, such as football or soccer fields. They may also use facilities that provide more individualized recreation, such as cycle paths and other grade-separated jogging paths. The quantitative assessment indicates that the residential study area population is currently underserved in active open space—a trend expected to continue in the future with or without the Proposed Actions.

According to the *CEQR Technical Manual*, open space ratios are often not feasible for many areas of the City and do not constitute an absolute impact threshold. Rather, they are benchmarks that represent how well an area is served by its open space. For large-scale land use proposals, such as area-wide rezonings that could introduce a large population and increased demand on open space, qualitative considerations should be taken into account when assessing the effects of a change in the open space ratio, and a determination of impact significance should consider the balance of passive and active open space resources appropriate to support the affected population.

As described above, the Proposed Actions would increase the passive open space ratio and decrease the active open space ratio in the study area. Users of passive and active open spaces have different needs, and active open space users are typically willing to travel farther than users of passive space resources. Existing and future residents will have access to nearby destination open spaces, such as Prospect Park, the Red Hook Recreation Area, and Fort Greene Park, which together total approximately 615 acres. Walk times to these open spaces range between 10 and 25 minutes.

Prospect Park is approximately one block from the eastern boundary of the residential study area, and approximately five blocks from 4th Avenue corridor, which would be the highest-density district in the Project Area with the proposed zoning changes. Red Hook Recreation Area is located closest to the southwestern portion of the study area and the F/G subway station. This portion of the study area contains the largest development sites. Approximately 1,800 new DUs are anticipated in this area (roughly 21 percent of the overall projected DUs). Fort Greene Park is located closest to the northern portion of the study area, which includes the area around Thomas Greene Playground and the planned open space at the Head End Facility, where a substantial portion of new DUs are projected to be developed. While the three large, destination open spaces are just beyond the boundaries of the residential study area, they are within a 10- to 25-minute walk from portions of the Project Area that are projected to contain the most residential development. The three open spaces would provide amenities for the area's residential population. Considered in relation to the quantitative changes identified above, the open space resources described in the qualitative assessment would alleviate the increased utilization of active open space in the residential study area, and would provide a variety of high quality open space and recreational amenities accessible to the study area population.

The Proposed Actions would facilitate the creation of approximately six acres of new, high quality open space through the mapping of parks and implementation of the Gowanus WAP. The waterfront esplanade and new parks would provide new active recreational space in addition to passive open space for current and future residents, and reconnect the community to the Gowanus Canal. The Proposed Actions would facilitate the creation of new active open space features, which can be used by teens and adults, including paths for running and cycling, open lawn areas, and future programming that could include active features such as court facilities and fitness equipment. In addition, large destination parks (such as Prospect Park) are located just outside the residential study area, and would provide a range of athletic and recreational facilities for users ages 20 to 64. Improvements to existing open spaces with active features expected in the No Action condition, including open spaces and recreational facilities at NYCHA developments and private recreational venues which may open and operate in new mixed-use developments, could address some of the demand placed on active open spaces in the residential study area.

Shadows

The detailed shadow analysis concludes that development resulting from the Proposed Actions would result in significant adverse shadow impacts to two sunlight-sensitive resources: Our Lady of Peace Church due to increased shadows on stained glass windows and at the Douglas and Degraw Pool in Thomas Greene Playground due to increased spring/summer shadows on this public open space resource.

In addition to these two resources, the detailed analysis identified other sunlight-sensitive resources that would receive new shadows as a result of the Proposed Actions. The new shadows affecting these resources would not be significant due to their limited extent, duration, or for other reasons as explained in detail below.

With respect to the Douglass and Degraw Pool, in its current location in the park, incremental shadow would enter the western edge of the large, main pool at 3:15 PM on the May 6/August 6 analysis day. Both the main and the smaller kiddie pool would be mostly covered by incremental shadow from 4:00 PM until 6:00 PM, when the pool closes. On the June 21 analysis day, in its current location in the park, the pools would remain in direct sunlight throughout the day until 3:30 PM when incremental shadow would enter the southeast corner of the main pool. Incremental shadow would cover the southern portion of the main pool from 4:00 PM until 5:15 PM, after which it would again be entirely in sunlight. The kiddie pool would be in incremental shadow from 4:20 PM to 5:30 PM and the incremental shadow would cover the entire pool for most of that period. Incremental shadow would again enter the main pool at 5:30 PM and cover the southern part of it until closing time at 6:00 PM (7:00 PM EDT), leaving most of it in sun during this time. Incremental shadow would also cover a portion of the kiddie pool from 5:45 PM to 6:00 PM. In summary, the Proposed Actions would result in a significant adverse shadow impact to the use of the Douglass and Degraw Pool on the May 6/August 6 analysis day based on the hours of incremental shadow on the pool during a time of heavy utilization of the resource. No other significant adverse shadow impacts to either use or vegetation of Thomas Greene Playground would occur on this or any other analysis day.

Our Lady of Peace Roman Catholic Church Complex is located along Carroll Street between Whitwell and Denton Places (two single-block streets), and includes a church at mid-block, flanked by a school to the west and a rectory and war memorial to the east. The church, built between 1902 and 1904 was constructed in the Romanesque Revival style. Sunlight-sensitive features include 11 stained glass windows on the front (north) façade of the church, six stained glass windows on the east façade, and six on the west façade. There is a rounded arched chapel at the back of the church which also has five stained glass windows that open into the main sanctuary space. A one-story circular chapel with eight stained glass windows is located on the south side of the building located at the northeast corner of 1st Street and Whitwell Place in the Our Lady of Peace Church Complex. The chapel, built sometime between 1966 and 1980, is attached to a building that was formerly a convent associated with Our Lady of Peace, which was constructed ca. 1920. Project-generated incremental shadows would reach a maximum of six of the church's 23 stained glass windows at any one time, but would result in the complete elimination of direct sunlight on the stained glass windows of this historic resource for approximately 37 minutes in the morning of the March 21/September analysis day and for approximately 55 minutes on the morning of the winter analysis day. These incremental shadows may have the potential to affect the enjoyment of this historic resource for a total duration of approximately 2 hours and 19 minutes, during the mornings of the winter analysis day, which is typically a time when the church holds holiday services. Therefore the incremental shadow is being considered a significant adverse shadow impact. Incremental shadow would fall on the church windows on the spring, summer, and fall analysis days as well, but the extent and duration would be limited and not significant.

Historic and Cultural Resources

The Proposed Actions would result in direct and indirect significant adverse impacts to architectural resources situated within the State and National Registers of Historic Places (S/NR)-eligible Gowanus

Canal Historic District. In addition, the Proposed Actions may result in construction-related impacts to contributing properties located within the boundaries of the S/NR-eligible Gowanus Canal Historic District from adjacent projected construction and to other resources located in the study area, and would result in shadow impacts to the S/NR-eligible Our Lady of Peace Church Complex.

The Proposed Actions would result in significant adverse impacts on archaeological resources. The projected and potential development sites may be archaeologically sensitive for resources associated with the Gowanus Canal bulkhead and associated landfill; 19th century shaft features; and/or evidence associated with milling or agricultural activities dating between the 17th and 19th centuries, including evidence of the role of forced labor and enslavement as they related to those efforts. The Project Area was determined to have low sensitivity for precontact archaeological resources, some of which may be deeply buried; evidence of industrial uses in the 19th and 20th centuries; and for human remains associated with the Revolutionary War or with homestead burial grounds.

Direct (Physical) Impacts

The Proposed Actions would result in significant direct adverse impacts to the S/NR-eligible Gowanus Canal Historic District. The impact would be the result of the demolition of contributing resources of the historic district, and alterations to the Gowanus Canal bulkheads related to implementation of the Gowanus Waterfront Access Plan (WAP).

Indirect (Contextual) Impacts

Projected and potential development sites are located within the boundaries of the S/NR-eligible Gowanus Canal Historic District, and the Proposed Actions would result in the demolition of contributing resources in the historic district. The demolition of contributing resources within the historic district and construction of new buildings on the development sites also have the potential to result in indirect impacts to the S/NR-eligible Gowanus Canal Historic District by changing the setting of contributing resources that would not be directly affected and by constructing new buildings that may not be contextual with the primarily industrial character of the district. In addition, as discussed in Chapter 6, "Shadows," incremental shadows would fall on some of the stained glass windows of Our Lady of Peace Church (S/NR-eligible), which may have the potential to affect the enjoyment of this historic resource for a total duration of approximately 2 hours and 19 minutes, during the mornings of the winter analysis day, which is typically a time when the house of worship holds holiday services, and attendance is typically high. Therefore this incremental shadow is considered a significant adverse shadow impact.

With respect to the other architectural resources in the Project Area and study area, although the developments that are anticipated to occur under the Reasonable Worst-Case Development Scenario (RWCDS) associated with the Proposed Actions would somewhat alter the setting and visual context of certain architectural resources, such changes would not constitute significantly adverse impacts. The Proposed Actions would not alter the relationship of an architectural resource to the streetscape or isolate an architectural resource from its immediate setting. No projected or potential developments would eliminate or substantially obstruct important public views of the other architectural resources, as significant elements of the other architectural resources would remain visible in view corridors on public streets. In addition, no incompatible visual, audible, or atmospheric elements would be introduced by the Proposed Actions to any of the other architectural resources' setting such that they would compromise or diminish the characteristics for which an architectural resource has been determined significant.

Construction-Related Impacts

Potential significant adverse impacts would occur to contributing resources in the S/NR-eligible Gowanus Canal Historic District as a result of construction taking place on sites located within 90 feet of S/NR-eligible resources: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway Viaduct.

Buildings or structures that are S/NR-Listed or New York City Landmarks (NYCLs) would be afforded standard protection under the New York City Department of Buildings' (DOB's) *Technical Policy and Procedure Notice (TPPN) #10/88*, regulations applicable to all buildings located adjacent (within 90 feet) to construction sites; however, since the resources identified above are not S/NR-Listed or NYCLs, they are not afforded the added special protections under DOB's *TPPN #10/88*. Additional protective measures afforded under DOB *TPPN #10/88*, which include a monitoring program to reduce the likelihood of construction damage to adjacent S/NR-Listed resources or NYCLs, would only become applicable if the S/NR-eligible resources are listed or designated in the future prior to the initiation of construction. Otherwise, there is the potential for inadvertent construction damage and impacts to occur as a result of adjacent development resulting from the Proposed Actions.

Designated NYCL or S/NR-Listed architectural resources located within 90 feet of a projected or potential new construction site are subject to the protections of DOB's *TPPN #10/88*. As such, development resulting from the Proposed Actions would not cause any significant adverse construction-related impacts to NYCLs and S/NR-Listed resources. Five resources: the Carroll Street Bridge and Operator's House (NYCL, S/NR-eligible), the Brooklyn Improvement Co. Office (NYCL, S/NR-eligible), the Brooklyn Rapid Transit Company (BRT) Central Power Station Engine House (NYCL, S/NR-eligible), the Gowanus Canal Flushing Tunnel Pumping Station and Gate House (NYCL, S/NR-eligible), and the former Somers Brothers Tinware Factory (NYCL, S/NR-eligible), which are within 90 feet of projected development sites, are not expected to experience significant adverse construction-related impacts as a result of the Proposed Actions.

Shadows Impacts

Incremental shadows would fall on some of the stained glass windows of Our Lady of Peace Church (Resource No. 7), which may have the potential to affect the enjoyment of this historic resource for a total duration of approximately 2 hours and 19 minutes, during the mornings of the winter analysis day, which is typically a time when the church holds holiday services and attendance is high. Therefore this incremental shadow is considered a significant adverse shadow impact.

Project-generated incremental shadows would reach a maximum of six of the church's 23 stained glass windows at any one time, but would result in the complete elimination of direct sunlight on the stained glass windows of this historic resource for approximately 37 minutes in the morning of the March 21/September analysis day and for approximately 55 minutes on the morning of the winter analysis day. These incremental shadows may have the potential to affect the enjoyment of this historic resource for a total duration of approximately 2 hours and 19 minutes, during the mornings of the winter analysis day, which is typically a time when the church holds holiday services. Therefore the incremental shadow is being considered a significant adverse shadow impact. Incremental shadow would fall on the church windows on the spring, summer, and fall analysis days as well, but the extent and duration would be limited and not significant.

Urban Design

A detailed assessment four that the Proposed Actions would not result in significant adverse impacts to urban design and visual resources. The Proposed Actions would facilitate new mixed-use developments at densities that accommodate and support the goals identified in the Gowanus Neighborhood Plan (the "Neighborhood Plan"). The zoning changes would provide for sufficient flexibility and variety for building envelopes that account for the unique conditions in Gowanus (such as the Canal), appropriate transitions between lower and medium density adjacencies, the creation of new waterfront open space, enhanced pedestrian oriented sidewalk conditions, and lively, active streets. Though some visual resources in the secondary study area could be obscured from certain vantage points by development facilitated by the Proposed Actions, the visual resources would be visible from other north–south and east–west streets and from the new, previously inaccessible vantage points such as the

waterfront esplanade and neighborhood parks along the Canal. The Proposed Actions also include mapping actions to facilitate the creation of new streets, including the eastern prolongations of Nelson and Luquer Streets east of Smith Street, and a new street along the west side of the Canal that would run into Hoyt Street (at 5th Street). The new streets would provide access to the Canal, proposed waterfront esplanade and the new park on the Gowanus Green Site, bringing this long-underutilized, waterfront City-owned site into productive community use. The WAP would ensure long-term continuity of public access across all sites along the Canal (including at street ends and bridge crossings). Therefore, there would be no significant adverse impacts to urban design in the subarea with the Proposed Actions.

The Proposed Actions would allow for new residential, mixed-use, and non-residential developments at a greater density than what is currently permitted as-of-right and support existing and new clusters of industrial and commercial activity by expanding the potential for job-generating uses. The actions would also allow for new housing, including affordable housing, along key corridors, particularly 3rd and 4th Avenues, the area surrounding Thomas Greene Playground, and the Canal Corridor. The proposed zoning changes are intended to promote a walkable, vibrant, mixed-use neighborhood where increased densities can help sustain existing and new businesses, provide employment opportunities and facilitate the creation of an urban fabric that enhances the pedestrian experience and the Canal's unique character.

The proposed mapping actions would facilitate the creation of new streets, including the eastern prolongations of Nelson and Luquer Streets, east of Smith Street, and a new street along the west side of the Canal that would run into Hoyt Street (at 5th Street). The new streets would provide access to the Canal's future waterfront esplanade areas and the new mapped park on the Gowanus Green Site. The taller buildings projected along the Canal would limit some existing views, but, because of the width of the Canal, views would not be entirely eliminated along the waterfront, and new vantage points along the Canal and to the Canal, such as the waterfront esplanade and the proposed new streets, would be created with the Proposed Actions.

While the buildings anticipated under the Proposed Actions would be taller than existing buildings in the area, the bulk controls included as part of the zoning changes would ensure that new developments are compatible with existing and planned buildings. Bulk controls also ensure sufficient flexibility where needed to promote a variety of new built forms. New developments expected under the Proposed Actions would be concentrated along major avenues and streets, preserving the low-rise character of the narrower cross streets, particularly north of 1st Street and east of the Canal. Contextual zoning envelopes would ensure that new development complements the existing scale by reinforcing the street wall, requiring minimum and maximum base heights that are contextual to existing buildings, and responding to street widths and the overall vision for the neighborhood identified in the Neighborhood Plan.

The Proposed Actions would establish the Special Gowanus Mixed-Use District (GSD), which would create special use, floor area, and special height and setback regulations for buildings on waterfront blocks and select corridors, among other special rules including tree planting, curb cut locations, and streetscape requirements. The Proposed Actions would align zoning and land use to help facilitate efforts to preserve and adaptively reuse buildings, while promoting integration and a mixing of uses throughout most of the Project Area.

The Proposed Actions would support a walkable mixed-use neighborhood and generate new neighborhood parks and open space to activate the waterfront and facilitate public access to the waterfront. New mixed-use residential, commercial, community facility and light industrial development would be encouraged along key corridors: the Canal, 3rd Avenue, the area around Thomas Greene Playground, and Block 471 (which includes lot 200 and the City-owned lots 1 and 100 known as "Gowanus Green") by encouraging development on vacant and underutilized sites. The zoning changes would provide for sufficient flexibility and variety for building envelopes that account for

the unique conditions in Gowanus (such as the Canal), appropriate transitions between lower and medium density adjacencies, the creation of new waterfront open space, enhanced pedestrian oriented sidewalk conditions, and lively, active streets. Though some visual resources in the secondary study area could be obscured from certain vantage points by development facilitated by the Proposed Actions, the visual resources would be visible from other north–south and east–west streets and from the new, previously inaccessible vantage points such as the waterfront esplanade and neighborhood parks along the Canal. Therefore, there would be no significant adverse impacts to urban design in the subarea with the Proposed Actions.

Hazardous Materials

The Proposed Actions would not result in significant adverse impacts related to hazardous materials with the placement of an (E) designation on the projected and potential development sites. To reduce the potential for adverse impacts associated with new construction resulting from the Proposed Actions, further environmental investigations and remediation will be required. To ensure that these investigations are undertaken, hazardous materials (E) designations would be placed on the projected and potential development sites listed in the EIS hazardous materials chapter.

By assigning an (E) designation to the Projected Development Sites where Recognized Environmental Conditions (RECs) have been identified relating to soil, groundwater, and soil vapor, the potential for an adverse impact to human health and the environment resulting from the projected and potential development sites would be avoided. The New York City Office of Environmental Remediation (OER) would provide the regulatory oversight of any required supplemental sampling; including environmental scope, investigation, and potential remedial action during this process. Building permits are not issued by the New York City Department of Buildings (DOB) without prior OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements).

The proposed (E) designation would require that any required supplemental subsurface investigations be conducted and have an approved Remedial Action Plan (RAP), where appropriate, under the review and approval of OER. The RAP provided to OER to satisfy the (E) designation must also include a mandatory Construction Health and Safety Plan (CHASP).

With the inclusion of the remedial measures described above, which involve the assignment of an (E) designation (E-601) on the Development Site, the Proposed Actions and resultant Proposed Development would not result in any significant adverse impacts related to hazardous materials.

Water and Sewer Infrastructure

An assessment of water and sewer infrastructure determined that the Proposed Actions would not result in significant adverse impacts on the City's water supply or wastewater and stormwater conveyance and treatment.

Water Supply

The Proposed Actions were assessed using the preliminary screening level standards in accordance with the CEQR Technical Manual. The Proposed Actions would not result in significant adverse impacts on the City's water supply system. Projected development resulting from the Proposed Actions would be expected to generate a water demand of approximately 4.3 million gallons per day (mgd) in the With Action condition, an increase of 3.5 mgd, compared with demand in the No Action condition. Future incremental demand from the projected developments would be dispersed throughout the Project Area and would represent approximately 0.35 percent of the City's average daily water supply of

approximately one billion gpd. This added demand would therefore not result in a significant impact on the City's water supply system.

Wastewater Treatment

The Proposed Actions were assessed using the preliminary screening level standards in accordance with the CEQR Technical Manual. The projected development sites are located within the Gowanus Canal sewershed. The Project Area is served by the Red Hook Wastewater Resource Recovery Facility (WRRF) and the Owls Head WRRF. Within the Project Area there are five subcatchment drainage areas for the Red Hook WRRF service area and one subcatchment area in the Owls Head WRRF service area. Development under the With Action condition is expected to generate a total of approximately 2.4 mgd of sanitary sewage of which 1.6 mgd would be directed to the Red Hook WRRF and the balance, approximately 0.8 mgd, would be directed to the Owls Head WRRF.

In the Red Hook WRRF service area, the With Action sanitary sewage generation of approximately 1.6 mgd would represent an increase of approximately 1.3 mgd over the No Action condition. With an existing flow of 27 mgd (below the maximum dry weather flow permitted capacity of 60 mgd) and the addition of approximately 1.3 mgd on the projected development sites, which represents 2.2 percent of the permitted capacity, the Red Hook WRRF would continue to have reserve capacity. Similarly, the With Action sanitary sewage generation in the Owls Head WRRF service area of approximately 0.8 mgd would represent an increase of approximately 0.6 mgd over the No Action condition. With an existing flow of 94 mgd (below the maximum dry weather flow permitted capacity of 120 mgd) and the addition of approximately 0.6 mgd on the projected development sites, which represents 0.5 percent of the permitted capacity, the Owls Head WRRF would also continue to have reserve capacity. Therefore, no significant adverse impacts to the City's wastewater treatment services would occur as a result of the Proposed Actions.

Stormwater and Drainage Management

Based on the guidance of the *CEQR Technical Manual*, a detailed analysis was performed to determine the potential for the Proposed Actions to affect CSO discharges to the Gowanus Canal as well as any other impacts to the City's sewer system.

The detailed analysis in Appendix F of the FEIS was based on hydrologic and hydraulic modeling utilizing the InfoWorks Integrated Catchment Models (ICM) developed for DEP's long-term control plan1 (LTCP) and Superfund projects for the Red Hook WRRF and Owls Head WRRF service areas, and updated to incorporate the stormwater infrastructure improvements being undertaken and proposed by DEP for the Gowanus Canal drainage area and the forthcoming citywide Unified Stormwater Rule. Independent of the Proposed Actions, DEP has undertaken extensive stormwater infrastructure improvements in the Gowanus Canal sewershed to control CSOs being discharged into the waterbody, including an updated Gowanus Wastewater Pumping Station, High Level Storm Sewers (HLSS), and Green Infrastructure, as described below in the No Action condition. Future additional improvements are expected to be constructed, in particular CSO control facilities mandated by the U.S. Environmental Protection Agency (EPA) in connection with the ongoing Superfund remediation of the Canal.

The analysis found that, under the With Action condition, with the additional development facilitated by the Proposed Actions, CSO volumes would decrease as compared with the No Action condition despite the increase to sanitary flows from new development. This reduction in CSO volumes is a result of the new on-site stormwater management volume requirements under the Unified Stormwater Rule, which increases the total volume of water that must be managed on new and redeveloped properties as well as updates the type and performance of on-site stormwater management practices that must be implemented.

1 https://www1.nyc.gov/site/dep/water/gowanus-canal.page

In the Project Area, the Unified Stormwater Rule ensures that redeveloped properties manage more total stormwater and manage it more efficiently than prior to redevelopment. This improved on-site stormwater management on the redeveloped properties is substantial enough that it would offset the increase in sanitary flow, so CSO volumes to the Canal would decrease overall. While the Proposed Actions are anticipated to add approximately 18,000 new residents to the Project Area on 63 projected development sites, generating additional sanitary flow of 1.29 mgd (see description of detailed analysis methodology below), the vast majority of this additional flow would be conveyed to the WRRF for treatment, with the exception of during more intense wet weather events. The Unified Stormwater Rule benefits in the Project Area more than offset the increase in sanitary flows and, even with the increased population and sanitary flow, would result in approximately 5 million gallons per year of CSO reduction to the Gowanus Canal. In addition, in the With Action condition, CSO volumes discharged to the Canal would remain well below existing conditions, and the Proposed Actions would not affect the City's ability to meet the EPA Superfund requirements.

A pollutant load assessment was also performed to analyze whether the Proposed Actions and associated development would result in greater pollutant loadings discharged to the Gowanus Canal. The assessment found that the estimated pollutant loads to Gowanus Canal decreased, due to the decrease in CSO volumes as described above. Therefore, the Proposed Actions are not projected to affect CSO discharges or water quality in the Gowanus Canal, and would not result in significant adverse impacts on DEP infrastructure in the Gowanus Canal drainage area.

Transportation

A detailed transportation analysis was conducted and concludes that the Proposed Actions would result, as detailed below, in significant adverse impacts to: a) vehicular traffic at 43 intersections, b) four subway stairs and one fare array at one station, and c) pedestrians at nine sidewalks and five crosswalks.

TRAFFIC

Traffic conditions were evaluated for the weekday 7:45–8:45 a.m., 1:00–2:00 p.m. (midday), 4:30–5:30 p.m., and Saturday 3:00–4:00 p.m. peak hours at 60 intersections in the traffic study area where additional traffic resulting from the Proposed Actions would be most heavily concentrated. As summarized in **Table 2**, the traffic impact analysis indicates the potential for significant adverse impacts at 43 intersections (31 signalized and 12 unsignalized) during one or more analyzed peak hours. Significant adverse impacts were identified to 60 lane groups at 37 intersections during the weekday AM peak hour, 31 lane groups at 23 intersections in the midday peak hour, 60 lane groups at 36 intersections in the PM peak hour, and 43 lane groups at 33 intersections during the Saturday peak hour. Chapter 21, "Mitigation," discusses potential measures to mitigate these significant adverse traffic impacts.

Table 2
Number of Impacted Intersections and Lane Groups by Peak Hour

	Peak Hour			
	Weekday AM	**Weekday Midday**	**Weekday PM**	**Saturday Midday**
Impacted Lane Groups	60	31	60	43
Impacted Intersections	37	23	36	33

TRANSIT

SUBWAY

Subway Stations

The Proposed Actions would generate a net increment of approximately 5,823 and 6,430 new subway trips during the weekday AM and PM commuter peak hours, respectively. The analysis of subway station conditions focuses on four Metropolitan Transportation Authority (MTA) New York City Transit (NYCT) subway stations in proximity to the Project Area where incremental demand from the Proposed Actions would exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or both peak hours.

These include the following stations, three of which are served by F and G trains operating on the Culver Line, and one of which is served by R trains operating on the 4th Avenue Line:

- Bergen Street (F/G)
- Carroll Street (F/G)
- Smith-9th Streets (F/G)
- Union Street (R)

As summarized in **Table 3**, in the With Action condition, a total of four street stairs and one fare array at the Union Street station would be significantly adversely impacted by project-generated demand in at least one peak hour.

Table 3
Summary of Significant Subway Station Impacts

Subway Station	Station Element	Impacted Time Period
Union Street (R)	Street Stair S2/P2	AM
	Street Stair S4/P4	AM
	Street Stair S1/P1	PM
	Street Stair S3/P3	PM
	Fare Array C010	AM

Subway Line Haul
The Project Area is served by 11 NYCT subway routes—the Nos. 2, 3, 4, and 5 trains operating along the Eastern Parkway Line; B and Q trains operating on the Brighton Line; D, N, and R trains operating on the 4th Avenue Line; and F and G trains operating along the Culver Line. The peak direction of travel is typically Manhattan-bound (northbound) in the AM peak hour and Brooklyn-bound (southbound) in the PM peak hour. (G trains are an exception, as they only operate between Brooklyn and Queens and do not enter Manhattan.)

In the With Action condition, northbound F trains are expected to be operating over capacity in the AM peak hour, and would experience an average incremental increase of 13.98 persons/car during this period, greater than the five persons/car *CEQR Technical Manual* impact threshold. As summarized in **Table 4**, northbound F service would therefore be considered significantly adversely impacted by the Proposed Actions in the AM peak hour. All other analyzed subway routes are projected to operate below capacity in the peak direction in both the AM and PM peak hours and would therefore not be significant adversely impacted by the Proposed Actions in either period.

Table 4
Summary of Significant Subway Line Haul Impacts

Route	Direction	Impacted Time Period
F	NB	AM

BUS
The Project Area is served by a total of 10 local bus routes, nine operated by NYCT and one operated by MTA Bus Company (MTA Bus). These include both local and limited stop (LTD) service on the B41 route, and the limited stop service on the B103 operated by MTA Bus. It is estimated that the Proposed Actions would generate a net total of approximately 399 and 492 incremental bus trips on these routes during the weekday AM and PM peak hours, respectively. Incremental demand is expected to meet or exceed the 50-trip (per direction) *CEQR Technical Manual* analysis threshold in the AM and/or PM peak hour at the maximum load points along three routes—the B37 and B57 operated by NYCT and the B103 LTD operated by MTA Bus. As these routes would continue to operate with available capacity in

both the AM and PM peak hours in the With Action condition, the Proposed Actions are not expected to result in significant adverse impacts to local bus service in either period.

PEDESTRIANS

The Proposed Actions would generate a net increment of approximately 2,801 walk-only trips in the weekday AM peak hour, 5,952 in the weekday midday, and 3,8312 in the weekday PM peak hour. Persons en route to and from subway station entrances and bus stops would add 6,222, 3,452, and 6,922 additional pedestrian trips to Project Area sidewalks and crosswalks during these same periods, respectively. Peak hour pedestrian conditions were evaluated at a total of 217 pedestrian elements where new trips generated by projected developments are expected to be most concentrated. These elements—81 sidewalks, 85 corner areas, and 51 crosswalks—are primarily located in the vicinity of major projected development sites and corridors connecting these sites to area subway station entrances and bus routes. As shown in **Table 5**, based on *CEQR Technical Manual* criteria, nine sidewalks and four crosswalks would be significantly adversely impacted by the Proposed Actions in one or more of the analyzed peak hours, and there would be no significant impacts to any corner areas.

Table 5
Summary of Significant Pedestrian Impacts

Corridor/Intersection	Impacted Element	Peak Hour		
		AM	Midday	PM
Smith Street between 3rd and 4th Streets	East Sidewalk	X		X
Smith Street between 4th and 5th Streets	East Sidewalk	X		X
5th Street between Smith and Hoyt Streets	North Sidewalk		X	
Union Street between Bond Street and the Gowanus Canal	South Sidewalk	X	X	X
Bond Street between 2nd and 3rd Streets	East Sidewalk	X		X
3rd Avenue between Carroll and 1st Streets	West Sidewalk	X	X	X
3rd Street between the Gowanus Canal and Third Ave	North Sidewalk			X
4th Avenue between Union Street and Subway Entrance Stair	East Sidewalk	X		
4th Avenue between Union Street and Subway Entrance Stair	West Sidewalk			X
Smith Street at President Street	North Crosswalk	X		X
3rd Avenue at Union Street	North Crosswalk			X
	South Crosswalk			X
3rd Avenue at Carroll Street	South Crosswalk	X		X
4th Avenue at President Street	East Crosswalk	X		

VEHICULAR AND PEDESTRIAN SAFETY

Under the *Vision Zero Brooklyn Pedestrian Safety Action Plan*, much of the area north of Degraw Street and east of Smith Street is located within a "Priority Area," where safety issues were found to occur systematically at an area-wide level. Court Street and Atlantic, Flatbush, and 4th Avenues are identified as Priority Corridors, and the intersection of Flatbush and Atlantic Avenues is identified as a Priority

Intersection.

Crash data for intersections in the traffic and pedestrian study areas were obtained from the New York City Department of Transportation (DOT) for the three-year period between January 1, 2016, and December 31, 2018 (the most recent three-year period for which data are available). During this period, a total of 748 reportable and non-reportable crashes, 122 pedestrian/bicyclist-related injury crashes, and three fatalities occurred at analyzed study area intersections.

Under *CEQR Technical Manual* guidance, high crash locations are defined as those with 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurring in any consecutive 12 months of the most recent three-year period for which data are available. A review of the crash data identified two study area intersections as high crash locations. As shown in Table 6, 3rd Avenue at Prospect Avenue experience 59 total crashes in 2018 (although no pedestrian/bicyclist-related crashes in any year during the period), and 4th Avenue at Union Street experienced six pedestrian/bicyclist-related crashes in 2016 and five in 2017. Lane restriping and improvements to pavement markings and street lighting may warrant consideration as potential safety improvement measures at the 3rd Avenue/Prospect Avenue intersection. Improvements to enhance pedestrian and cyclist safety have been implemented at the 4th Avenue/Union Street intersection, including high-visibility crosswalks and sidewalk extensions (to reduce pedestrian crossing distance). Additional improvements that may warrant consideration at this intersection could include improved street lighting and modifying the traffic signal timing plan to provide a leading pedestrian interval (LPI) for pedestrians crossing 4th Avenue.

Table 6
High Crash Locations

Intersection	Total Pedestrian/Bicycle Injury Crashes			Total Crashes (Reportable +Non-Reportable)		
	2016	2017	2018	2016	2017	2018
3rd Avenue at Prospect Avenue	0	0	0	16	24	59
4th Avenue at Union Street	6	5	1	16	8	8

PARKING

The parking analysis documents changes in parking supply and utilization within a study area extending ¼-mile from projected development sites. Within this study area, there are a total of 16 off-street public parking lots and garages, one of which is located on a projected development site and would be displaced by new development under the Proposed Actions.

The RWCDS assumes that a total of 1,940 accessory parking spaces would be provided on 24 of the projected development sites under the With Action condition, compared to approximately 2,156 accessory spaces that would be provided under the No Action condition. The total number of accessory spaces in the With Action condition conservatively assumes that up to 30 percent of new residential development would be designated as affordable and would therefore not include accessory parking.

After accounting for new parking demand and the number of required accessory spaces provided on a site-by-site basis under the RWCDS, it is estimated that compared to the No Action condition, incremental parking demand from new development associated with the Proposed Actions would total approximately 2,214 spaces at off-street public parking facilities and on-street in the weekday midday period and 2,221 spaces during the overnight period. In addition, under the Proposed Actions, 120 spaces in one existing public parking facility located on a projected development site would be displaced, and no new public off-street parking capacity would be provided. Based on these changes in parking supply and demand, it is estimated that in the With Action condition there would be deficits of approximately 2,980 spaces of on-street and off-street public parking capacity within ¼-mile of projected

development sites in the weekday midday period and 2,838 spaces during the overnight period. These deficits would reflect project demand not otherwise accommodated in accessory or off-street public parking facilities as well as demand displaced from existing parking facilities on projected development sites. While some drivers destined for the Project Area would potentially have to travel a greater distance (e.g., between ¼ and ½-mile) to find available parking in the midday, these shortfalls would not be considered a significant adverse impact based on *CEQR Technical Manual* criteria due to the magnitude of available alternative modes of transportation. Therefore, the Proposed Actions are not expected to result in significant adverse parking impacts during the weekday midday peak period for commercial and retail parking demand, nor during the overnight peak period for residential demand.

Air Quality

The analyses conclude that the Proposed Actions would not result in any significant adverse air quality impacts on sensitive uses in the surrounding community, and the Proposed Actions would not be adversely affected by existing sources of air emissions in the rezoning area. A summary of the general findings is presented below.

The stationary source analyses determined that there would be no potential significant adverse air quality impacts from fossil fuel-fired heat and hot water systems at the projected and potential development sites. At certain sites, an (E) Designation (E-601) would be mapped in connection with the Proposed Actions to ensure that future developments would not result in any significant adverse air quality impacts from fossil fuel-fired heat and hot water systems emissions. For the City-owned parcels (located within Projected Development Site 47), restrictions would be necessary to ensure that emissions from fossil fuel-fired heat and hot water systems would not result in any significant adverse air quality impacts. These restrictions would be set forth in a Land Disposition Agreement (LDA) to ensure that the developer(s) satisfy these restrictions with oversight provided through the New York City Department of Housing Preservation and Development (HPD).

The analysis of existing manufacturing uses in the surrounding study area determined that emissions of air toxic compounds would not result in any potential significant adverse air quality impacts on the Proposed Project. An analysis of the cumulative impacts of existing industrial sources on projected and potential development sites was performed. Maximum concentration levels at projected and potential development sites were found to be below the applicable health risk criteria.

The analysis of the industrial sources associated with the RWCDS determined that certain use group categories had the potential to result in a significant adverse air quality impact at receptor locations due to emissions from one or more air toxic compounds. To ensure that there are no potential significant adverse impacts of identified air toxic compounds in the proposed Gowanus Special District (GSD), certain restrictions would be required as part of the Proposed Actions. The mobile source analyses determined that concentrations of CO and fine particulate matter less than ten microns in diameter (PM_{10}) due to project-generated traffic at intersections would not result in any violations of National Ambient Air Quality Standards (NAAQS), and furthermore, CO concentrations were predicted to be below CEQR *de minimis* criteria. The results show that the daily (24-hour) $PM_{2.5}$ increments are predicted to be below the *de minimis* criteria. At four of the five intersection sites analyzed, the maximum annual incremental $PM_{2.5}$ concentration is below the *de minimis* criteria; however, the annual $PM_{2.5}$ maximum annual incremental concentration is predicted to exceed the *de minimis* criteria at the intersection of Smith and 5th Streets. This would be considered a significant adverse air quality impact. Therefore, traffic mitigation measures were examined to avoid a potential significant impact at this intersection location. Mitigation measures are discussed in Chapter 21, "Mitigation."

The parking facilities assumed to be developed as a result of the Proposed Actions were analyzed for potential air quality effects. The analysis found that these parking facilities would not be expected to result in any significant adverse air quality impacts.

Greenhouse Gas Emissions and Climate Change

The Proposed Development would not result in significant adverse impacts related to greenhouse gases as it would be consistent with the City's GHG emissions reduction goals, as defined in the *CEQR Technical Manual*. Furthermore, the Proposed Development would be consistent with policies regarding adaptation to climate change as identified in OneNYC.

Greenhouse Gas Emissions

The assessment of greenhouse gas (GHG) emissions estimated that the building energy and vehicle uses associated with the Proposed Actions would result in up to approximately 131 thousand metric tons of carbon dioxide equivalent (CO_2e) emissions per year. It also found that the Proposed Actions are consistent with the applicable citywide GHG emissions reduction and climate change goals, and that there would be no significant adverse GHG emission or climate change impacts.

The Proposed Actions involve zoning changes that would primarily affect privately owned properties. Decisions regarding construction and building design for those sites, which would affect energy use and GHG emissions, would be made by the property developers in accordance with the City's building code requirements in effect at the time. The City is addressing citywide building energy efficiency and other GHG-related design questions through its ongoing long-term GHG policy development and implementation process.

Development sites on City-owned properties may have specific energy efficiency requirements that are beyond the code requirements (e.g., if developers apply for affordable housing construction funding) that would be implemented under contractual agreements with HPD or other government funding agencies). Development at these sites would meet sustainable design requirements, which would result in lower GHG emissions—these features would be specified and required through land disposition and/or funding agreements or other legally binding agreements between the City and developer(s).

The Proposed Actions would support other GHG goals by virtue of the nature and location of the projected development, including proximity to public transportation and use of natural gas (i.e., natural gas would be required to address the requirements presented in the proposed air quality (E)Designations). The Proposed Actions would be consistent with the City's emissions reduction goals, as defined in the *CEQR Technical Manual*.

Regarding resilience to potential climate conditions, the City's long-term process for addressing coastal flooding risk in New York City may ultimately include large-scale projects providing coastal protection. The Proposed Actions would not adversely affect other resources (including ecological systems, public access, visual quality, water-dependent uses, infrastructure, and adjacent properties) due to climate change.

Noise

A noise assessment was undertaken to determine the levels of noise attenuation that may be needed to achieve interior noise levels that are acceptable and in accordance with the *CEQR Technical Manual* guidance. The *CEQR Technical Manual* has noise attenuation values for buildings based on exterior $L_{10(1)}$ noise levels for the purposes of achieving interior noise levels of 45 dBA or lower for residential and community facility uses and 50 dBA or lower for commercial office uses. The With Action condition $L_{10(1)}$ noise levels were determined by adjusting the existing noise measurements to account for future increases in traffic with the Proposed Actions based on the Noise PCE proportional analysis results including the noise contribution from vehicular traffic on adjacent

roadways and by calculating the cumulative noise level in the future condition based on the playground noise and future vehicular traffic noise on adjacent roadways.

Based on the projected noise levels, up to 33 dBA window/wall attenuation would be required to achieve acceptable interior noise levels per the *CEQR Technical Manual* noise exposure guideline at sites expected to be developed with residential and community facility uses.

To implement the attenuation requirements at non-residential spaces within the GSD and at projected and potential development sites not within the GSD, an (E) designation for noise would be applied specifying the appropriate window/wall attenuation. By meeting the design guidelines specified in the Noise (E) Designation, buildings developed as a result of the Proposed Actions would provide sufficient attenuation to achieve the *CEQR Technical Manual* interior noise level guidelines of 45 dBA L_{10} for residential or community facility uses and 50 dBA L_{10} for commercial office uses.

For the condition in which a newly introduced noise-sensitive use (i.e., residential or daycare) would exist on the same lot with manufacturing use, the two uses would be separated by a demising partition, required by DOB Building Code to achieve an STC 50 rating, which would provide sufficient noise attenuation to ensure a 45 dBA interior noise level for residential or daycare uses. For non-residential noise-sensitive spaces (i.e., community facility uses) developed on the same lot as manufacturing use at these sites, a requirement to provide demising partitions of at least STC 50, such that noise levels inside the noise-sensitive space would be less than 45 dBA, would be implemented by application of a newly-introduced (E) Designation. With these measures in place, there would be no significant adverse impacts with the Proposed Actions on lots with mixed uses.

Public Health

As described in the relevant analyses of the EIS, the Proposed Development would not have the potential for unmitigated significant adverse impacts in any of the technical areas related to public health (hazardous materials, water quality, air quality, or noise). Therefore, the Proposed Development would not have the potential for significant adverse impacts related to public health and no further analysis is warranted.

Neighborhood Character

The Proposed Actions would not result in any significant adverse impacts on neighborhood character. The Proposed Actions would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; open space; urban design and visual resources; or noise. Although there would be significant adverse impacts with respect to historic resources, shadows, and transportation, these impacts would not result in a significant adverse impact to the determining elements of neighborhood character.

In the No Action condition, development is expected to occur in a piecemeal manner and without the benefit of a comprehensive plan to coordinate appropriate densities and urban design controls across the neighborhood. In contrast, the Proposed Actions would provide for sufficient predictability, flexibility, and variety for building envelopes that account for the unique conditions in the Gowanus neighborhood, including the Canal, with appropriate transitions between lower and medium density adjacencies, the creation of new waterfront open space, enhanced pedestrian-oriented sidewalk conditions, and lively, active streets.

While the character of Gowanus has changed throughout the years and will continue to change with or without the Proposed Actions, the Proposed Actions would facilitate predictable development patterns that meet the long-term vision of Gowanus as a sustainable, mixed-use neighborhood anchored by a

vibrant and resilient Canal waterfront. Therefore, the Proposed Actions would not result in any significant adverse neighborhood character impacts.

Construction

Construction of projected developments assumed in the Reasonable Worst-Case Development Scenario (RWCDS) developed for the Proposed Actions would result in temporary disruptions in the surrounding area. As described in detail below, construction activities associated with the Proposed Actions would result in temporary significant adverse impacts related to noise and historic and cultural resources and could potentially result in temporary significant adverse transportation impacts. Additional information for key technical areas is summarized below.

TRANSPORTATION
Construction travel demand is expected to peak in the second quarter of 2027, and the first quarter of 2032 was selected as a reasonable worst-case analysis period for assessing potential cumulative transportation impacts from operational trips for completed portions of the project and construction trips associated with construction activities. Both of these periods were therefore analyzed for potential transportation impacts during construction.

Traffic
During construction, traffic would be generated by construction workers commuting via autos and by trucks making deliveries to projected development sites. In 2027 and 2032, traffic conditions during the 6 to 7 AM and 3 to 4 PM construction peak hours are expected to be generally better than during the analyzed operational peak hours with full build-out of the Proposed Actions in 2035. Consequently, there would be less likelihood of significant adverse traffic impacts during both the 2027 peak construction period and the 2032 cumulative analysis period than with full build-out of the Proposed Actions in 2035. It is expected that the mitigation measures identified for 2035 operational traffic impacts would be similarly effective at mitigating any potential impacts from construction traffic during both the 2027 period for peak construction activity and the 2031 construction and operational cumulative analysis period.

Transit
The construction sites are located in an area that is well served by public transportation, with a total of seven subway stations or station complexes and 10 bus routes located in the vicinity of the Project Area. In 2027 and 2032, transit conditions during the 6 to 7 AM and 3 to 4 PM construction peak hours are expected to be generally better than during the analyzed operational peak hours with full build-out of the Proposed Actions in 2035 as incremental demand would be lower during construction, and most construction trips would not occur during the peak hours of commuter demand. Consequently, there would be less likelihood of significant adverse subway and bus transit impacts during both the 2027 peak construction period and the 2032 cumulative analysis period than with full build-out of the projected development in 2035. It is anticipated that possible mitigation measures for the subway station and line haul impacts from the Proposed Actions' operational demand in 2035 will be evaluated with New York City Transit (NYCT) between the Draft Environmental Impact Statement (DEIS) and Final Environmental Impact Statement (FEIS), and that any such measures would also be effective at mitigating any potential impacts from construction subway trips during both the 2027 peak construction period and the 2032 construction and operational cumulative analysis period. Should any significant adverse subway station and/or line haul impacts occur in either of these periods, they would potentially remain unmitigated pending the implementation of practicable mitigation measures.

Pedestrians
In the 2027 peak construction period, pedestrian trips by construction workers would be widely dispersed among the nine projected development sites that would be under construction in this period. They would also primarily occur outside of the weekday AM and PM commuter peak periods and the weekday midday peak period when area pedestrian facilities typically experience the greatest demand. No single

sidewalk, corner, or crosswalk is expected to experience 200 or more peak-hour trips, the threshold below which significant adverse pedestrian impacts are considered unlikely to occur based on *CEQR Technical Manual* guidelines. Consequently, significant adverse pedestrian impacts in the 2029 peak construction period are not anticipated.

In the 2032 construction and operational cumulative analysis period, pedestrian conditions during the 6 to 7 AM and 3 to 4 PM construction peak hours are expected to be generally better than during the analyzed operational peak hours with full build-out of the Proposed Actions in 2035. The Proposed Actions' significant adverse sidewalk and crosswalk impacts would therefore be less likely to occur during this construction period than with full build-out of the Proposed Actions in 2035. It is expected that the mitigation measures identified for the 2035 operational pedestrian impact would be similarly effective at mitigating any potential impacts from construction pedestrian trips during the 2032 construction and operational cumulative analysis period.

Parking
Construction worker parking demand would be equivalent to approximately 463 spaces in the 2027 peak construction period and 335 spaces during the 2032 analysis period for cumulative construction and operational travel demand. While this demand would potentially contribute to a parking shortfall in the midday within ¼-mile of projected development sites, it would not be considered a significant adverse parking impact under *CEQR Technical Manual* criteria given the availability of alternative modes of transportation near the Project Area.

AIR QUALITY
Measures required to reduce pollutant emissions during construction include all applicable laws, regulations, and the City's building codes as well as New York City Local Law 77. These include dust suppression measures, idling restriction, and the use of ultra-low sulfur diesel (ULSD) fuel and best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and on-road sources determined that particulate matter ($PM_{2.5}$ and PM_{10}), annual-average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Therefore, construction under the Proposed Actions would not result in significant adverse air quality impacts due to construction sources.

NOISE AND VIBRATION
Noise
Based on the projected construction predicted at each development site, construction generated noise is expected to exceed the *CEQR Technical Manual* noise impact thresholds as well as result in "objectionable" and "very objectionable" noise level increases at some receptors. One peak construction period per year was analyzed, from 2021 to 2035. Receptors where noise level increases were predicted to exceed the construction noise evaluation thresholds for extended durations were identified.

The noise analysis results show that the predicted noise levels could exceed the *CEQR Technical Manual* impact criteria throughout the Project Area due to construction.

As projected development sites are completed and occupied while other nearby or adjacent projects are under construction, construction activities are predicted to result in "clearly unacceptable noise levels" and interior noise levels exceeding the 45 dBA criterion considered acceptable by up to 18 dBA. Construction could produce noise levels that would be noticeable and potentially intrusive during the most noise-intensive nearby construction activities. While the highest levels of construction noise would not persist throughout construction, and noise levels would fluctuate, resulting in noise increases that would be intermittent, these locations would experience construction noise levels whose magnitude and duration could constitute significant adverse impacts.

At locations predicted to experience an exceedance of the noise impact threshold criteria, the exceedances would be due principally to noise generated by on-site construction activities (rather than construction-related traffic). As previously discussed, the noise analysis examined the reasonable worst-case peak hourly noise levels resulting from construction in an analyzed month, and is therefore conservative in predicting increases in noise levels. Typically, the loudest hourly noise level during each month of construction would not persist throughout the entire month. Finally, this analysis is based on RWCDS conceptual site plans and construction schedules. It is possible that the actual construction may be of less magnitude, or that construction on multiple projected development sites may not overlap, in which case construction noise would be less intense than the analysis predicts.

Vibration
The buildings of most concern with regard to the potential for structural or architectural damage due to vibration are historic buildings that are S/NR-Listed or New York City Landmarks (NYCLs) and NYCT structures immediately adjacent to the projected development sites. Since these historic buildings and structures would be within 90 feet of the projected development sites, vibration monitoring would be required per New York City Department of Buildings (DOB) Technical Policy and Procedure Notices (TPPN) #10/88 regulations, and peak particle velocity (PPV) during construction would be prohibited from exceeding the 0.50 inches/second threshold.

For non-historic buildings and other structures immediately adjacent to projected development sites, vibration levels within 25 feet may result in PPV levels between 0.50 and 2.0 in/sec, which is generally considered acceptable for a non-historic building or structure.

In terms of potential vibration levels that would be perceptible and annoying, the equipment that would have the most potential for producing levels that exceed the 65 vibration decibels (VdB) limit is also the pile driver. However, the operation would only occur for limited periods of time at a particular location and therefore would not result in any significant adverse impacts.
Consequently, there is no potential for significant adverse vibration impacts with the Proposed Actions.

HISTORIC AND CULTURAL RESOURCES
The Proposed Actions would result in direct significant adverse impacts to the State and National Registers of Historic Places (S/NR)-eligible Gowanus Canal Historic District as a result of demolition of contributing buildings. In addition, the Proposed Actions may result in construction-related impacts to contributing properties located within the boundaries of the S/NR-Eligible Gowanus Canal Historic District from adjacent construction. As described in greater detail Chapter 7, "Historic and Cultural Resources," the Proposed Actions would result in significant adverse impacts on archaeological resources. Adherence to these existing regulations would prevent impacts from construction activities at the Development Site.

H. MITIGATION

The Proposed Actions would result in significant adverse impacts related to community facilities (child care), shadows, historic and cultural resources (architectural and archaeological resources), transportation (traffic, pedestrians, and transit), air quality, and construction (noise). Mitigation measures being proposed to address those impacts, where feasible and/or practical, are discussed below. If no possible mitigation can be identified, an unavoidable significant adverse impact would result. Measures to further mitigate adverse impacts have been evaluated between the Draft Environmental Impact Statement (DEIS) and Final EIS (FEIS). This chapter has been updated to include more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Actions.

COMMUNITY FACILITIES

The Proposed Actions would result in a significant adverse impact on publicly funded child care facilities. With the Proposed Actions, child care facilities would operate over capacity by approximately 1,654 slots and exhibit an increase in the utilization rate of approximately 25 percentage points over the No Action condition.

Between the DEIS and the FEIS, feasible and practical mitigation measures were not identified. Absent the implementation of mitigation measures, if needed, the Proposed Actions would have an unmitigated significant adverse impact on publicly funded child care facilities.

OPEN SPACE
The Proposed Actions would result in a significant adverse impact associated with the active open space ratio. Open spaces within this study area are concentrated in the residential neighborhoods of Park Slope, Boerum Hill, and—to a lesser extent—Carroll Gardens. To the south of the non-residential study area, there are a number of open spaces that follow the route of the Prospect Expressway. These open spaces include the Purple Playground and Prospect Expressway Park, often simply labeled as "Park" on NYC Parks signage. These open spaces are primarily passive and include seating areas and planted landscaping. The existing non-residential study area includes a total of 15.34 acres of open space, of which approximately 3.87 acres (25 percent) are utilized for passive recreation. A total of 31,599 people work and 10,551 residents live within the non-residential study area. The combined residential and non-residential population is estimated to be 102,150 persons. The non-residential study area has a passive open space ratio of 0.122 acres per 1,000 workers, which is slightly below the City's guideline of 0.15 acres per 1,000 workers. For informational purposes, the combined worker and resident passive open space ratio is 0.038 acres per 1,000 residents. As noted in the CEQR Technical Manual, residents are more likely to travel farther to reach parks and recreational facilities and they use both passive and active open spaces.

The Proposed Actions would result in 5.46 acres of new publicly accessible open spaces including a new approximately 1.48-acre park at the Gowanus Green Site and approximately 3.98 acres of new publicly accessible waterfront open space. As a result, within the non-residential study area the total public open space would increase from 16.94 acres in the No Action condition to 22.40 acres in the With Action condition. In the residential study area, total publicly accessible open space would increase from 57.42 acres in the No Action condition to 62.88 acres in the With Action condition. However, the active open space ratio would decrease by approximately 2.16 percent over the No Action condition. Therefore, the Proposed Actions would result in a significant adverse impact to open space primarily due to the low active open space ratio.

The reduction in the active open space ratio would most likely affect adults and younger people. These populations use court facilities (e.g., basketball courts) and sports fields, such as football or soccer fields. They may also use facilities that provide more individualized recreation, such as fitness stations, or cycle paths and other grade-separated jogging paths. The quantitative assessment indicates that the residential study area population is currently underserved in active open space—a trend expected to continue in the future with or without the Proposed Actions.

Measures were considered to mitigate the significant adverse open space impact include making improvements to existing parks to allow for expanded programming and enhanced usability, and making New York City public school playgrounds accessible to the community after school hours through the Schoolyards to Playgrounds program. The Department of Parks and Recreation's (NYC Parks) Schoolyards to Playgrounds Program converts elementary and middle school schoolyards to community playgrounds for use by the general public after school hours, on the weekends, and during school breaks. These measures were explored by DCP in consultation with (NYC Parks and the Department of Education (DOE) between the DEIS and FEIS, and a partial mitigation measure was identified through the Schoolyards to Playground program, providing use of an additional 22,000 sf of active open space at PS 32 in the open space studyarea.

SHADOWS
The Proposed Actions would result in significant adverse impacts to two sunlight-sensitive resources: Our Lady of Peace Church, located on Carroll Street between Whitwell and Denton Places, and the Douglass and Degraw Pool in Thomas Greene Playground. With regard to the church, project-generated incremental shadows would fall on some of the stained-glass windows for a portion of the day, and the extent and/or duration of the shadows would be substantial enough to significantly affect the potential enjoyment or appreciation by the public of the church's interior spaces. With regard to the Douglass and Degraw Pool, project-generated incremental shadows would cover most of the large main pool and the small kiddie pool for approximately two hours in the late afternoon of the May 6/August 6 analysis day, significantly impacting the user experience of the pool on this analysis day.

The CEQR Technical Manual identifies potential mitigation strategies to reduce or eliminate, to the greatest extent practicable, adverse shadow impacts to sunlight-sensitive architectural features, including changes to the bulk or configuration of projected or potential development sites that cause or contribute to the adverse impact. For adverse impacts to stained-glass windows, potential mitigation measures could also include the provision of artificial lighting to simulate the effect of direct sunlight. DCP, as lead agency, explored possible mitigation measures between publication of the DEIS and FEIS. No feasible measures were identified to mitigate the shadow impact on Our Lady of Peace Church, and therefore this significant adverse shadows impact remains unmitigated.

Thomas Greene Playground occupies the entire block bounded by Douglass Street, Degraw Street, 3rd Avenue, and Nevins Street. It currently contains seating areas, planted landscaping, a playground with spray showers, handball courts, basketball courts, a skate park, and the Douglass and Degraw Pool—which is open in the summer months only. In the No Action condition (as well as the With Action condition) Thomas Greene Playground is anticipated to be substantially renovated, as discussed in Chapter 5, "Open Space." Currently, the programming and layout of the reconstructed park is not confirmed. The analysis in Chapter 6, "Shadows," therefore focused on identifying the extent and duration of incremental shadows on various areas of the park, and how potential features and vegetation might fare in the resulting shade conditions. However, given the heavy use of the Douglass and Degraw Pool in the summer months, the analysis included a consideration of incremental shadow effects on the pool at its current location in the western part of the park, on the May 6/August 6 and June 21 analysis days. The facility includes two pools—a large main pool and a small "kiddie" pool—and a concrete deck surrounding them. The pool is open in the summer from 11:00 AM to 7:00 PM Eastern Daylight Time (EDT), with a break for pool cleaning between 3:00 PM and 4:00 PM EDT. The pool's operating hours in Eastern Standard Time (which is used throughout the analysis per CEQR guidelines) are from 10:00 AM to 6:00 PM, with a cleaning break from 2:00 PM to 3:00 PM.

On the May 6/August 6 analysis day the pool would be entirely in sun from the time it opens until 3:15 PM, when incremental shadow would enter from the west. From 4:00 PM to closing time at 6:00 PM (7:00 PM EDT), both the main pool and the kiddie pool would be mostly covered by incremental shadow. This substantial extent and duration of new shadow would significantly impact the user experience of the pools on this analysis day. Incremental shadow would fall on a portions of the pool in the late afternoon of the June 21 analysis day, but the extent would be limited and large areas of the pool would remain in sun during that time. The CEQR Technical Manual identifies potential mitigation strategies to reduce or eliminate, to the greatest extent practicable, adverse shadow impacts to active as well as passive recreational features in parks and open spaces, including changes to the bulk or configuration of projected or potential development sites that cause or contribute to the adverse impact. Other mitigation measure include relocating the affected feature within the open space or to another nearby location if feasible. However, the feasibility of this option is not yet known, and is contingent upon the renovation of Thomas Greene Playground. As mentioned above, Thomas Greene Playground may be renovated in the No

Action condition. Currently, the programming and layout of the reconstructed park is not confirmed. If relocation is a feasible option given scheduling and programming associated with the park renovations, relocating the pool in the northern half of the park, which would receive much less shadow than the southern half throughout the summer months, could potentially mitigate this significant adverse impact. DCP explored potential mitigation measures between the DEIS and FEIS, and identified bulk modifications to adjacent Potential Development Site W, which are presented in the new CPC Modifications Alternative (see Chapter 22, Alternatives). The changes in the tower height significantly reduce the shadows cast on the resources, and the with that modification in place the significant adverse impact would be considered partially mitigated.

HISTORIC AND CULTURAL RESOURCES
The Proposed Actions would result in direct and indirect significant adverse impacts to both archaeological and architectural resources.

Architectural Resources
The Proposed Actions would result in a significant adverse impact to architectural resources as a result of demolition and adjacent construction. The Proposed Actions would result in significant adverse direct impacts to architectural resources situated within the State and National Registers of Historic Places (S/NR)-eligible Gowanus Canal Historic District and the Gowanus Canal bulkheads as a result of the demolition of contributing resources to the historic district. In addition, potential significant adverse impacts would occur to contributing resources in the S/NR-eligible Gowanus Canal Historic District as a result of adjacent construction located within 90 feet of projected or potential development sites, and such impacts may also result to three other S/NR-eligible resources as a result of adjacent construction: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway Viaduct.

The significant adverse impacts as a result of demolition would be unavoidable, as the contributing buildings and Gowanus Canal bulkheads are privately owned and would be demolished and modified to allow for developments constructed as-of-right subsequent to approval of the Proposed Actions. The resources identified above that could experience construction-related damage are not S/NR-listed or New York City Landmarks (NYCL) and would therefore, as discussed in more detail below, not be afforded the added special protections under New York City Department of Buildings (DOB) requirements.

The Proposed Actions would result in a significant adverse impact on Our Lady of Peace Church as a result of incremental shadows. Mitigation for this impact is discussed above, under "Shadows."

Archaeological Resources
The Proposed Actions would result in construction activity on 54 projected or potential development sites that were identified as potentially archaeologically significant by LPC. A Phase 1A Archaeological Documentary Study of those sites identified all or portions of 46 potential and projected development sites as archaeologically sensitive. In order to mitigate the significant adverse impact on archaeological resources, additional archaeological analysis would be required on each of the development sites prior to redevelopment. However, there are no mechanisms currently in place to ensure that such archaeological analysis would occur on private property subsequent to the rezoning, and such analysis can only be legally required on City-owned properties. Only one of the 46 archaeologically sensitive sites (Projected Development Site 47 on Block 471, Lot 100) is currently owned by the City of New York. With the completion of additional archaeological analyses as necessary and continued consultation with LPC, the Proposed Actions would not result in significant adverse impacts on Projected Development Site 47. However, none of the remaining 45 development sites identified as archaeologically sensitive are under City control. Future development on these properties would occur on an as-of-right basis and there would be no mechanism available to require archaeological analysis to determine the presence of archaeological resources; therefore, these impacts would be unmitigated.

In order to mitigate the significant adverse impact on archaeological resources, additional archaeological analysis would be required on each of the development sites before they are redeveloped. However, there are no mechanisms currently in place to ensure that such archaeological analysis would occur on privately owned property subsequent to the rezoning, and such analysis can only be legally required on City-owned properties. Only one of the 46 archaeologically sensitive sites (Projected Development Site 47 on Block 471, Lot 100) is currently owned by the City of New York—the site, also known as the Gowanus Green site, is under the jurisdiction of the Department of Housing Preservation and Development (HPD). With the completion of additional archaeological analyses as necessary and continued consultation with LPC, the Proposed Actions would not result in significant adverse impacts on Projected Development Site 47. The additional archaeological analysis at Projected Development Site 47 would be required through the Land Disposition Agreement between HPD and the selected developer of the Gowanus Green site. None of the remaining 45 development sites identified as archaeologically sensitive are under the City's control. Future development on these properties would occur on an as-of-right basis and there would be no mechanism available to require archaeological analysis to determine the presence of archaeological resources (i.e., Phase 1B testing) or mitigation for any identified significant resource through avoidance or excavation and data recovery (i.e., Phase 2 or Phase 3 archaeological testing). Therefore, the Proposed Actions would result in significant adverse impacts on archaeological resources. However, it should be noted that if any of these sites were to be developed through future discretionary actions that would be subject to review under CEQR, additional archaeological analysis would be completed to confirm the presence or absence of archaeological resources.

TRANSPORTATION

As described below, the Proposed Actions would result in significant adverse impacts to: a) vehicular traffic at 43 intersections, b) four stairs and a fare array at one subway station, and c) pedestrians at nine sidewalks and four crosswalks. Mitigation measures that could address the significant adverse transportation impacts are discussed below.

Traffic

As described in greater detail in Chapter 14 of the FEIS, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 43 study area intersections (31 signalized and 12 unsignalized) during one or more analyzed peak hours; specifically 60 lane groups at 37 intersections during the weekday AM peak hour, 31 lane groups at 23 intersections during the midday peak hour, 60 lane groups at 36 intersections during the PM peak hour, and 43 lane groups at 33 intersections during the Saturday peak hour. Implementation of traffic engineering improvements such as signal timing changes, the installation of new traffic signals, and modifications to lane striping and curbside parking regulations are being proposed and would provide mitigation for many of the anticipated traffic impacts. These proposed traffic engineering improvements are subject to review and approval by the New York City Department of Transportation (DOT). Absent the identification and implementation of feasible mitigation measures that would mitigate the traffic impacts to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse traffic impacts.

Assuming all the proposed mitigation measures were implemented, **Table 7** shows that significant adverse impacts would be fully mitigated at 10 lane groups in the weekday AM peak hour, 13 lane groups in the midday peak hour, 12 lane groups in the weekday PM peak hour, and 12 lane groups in the Saturday peak hour. Intersections where all impacts would be fully mitigated would total 7, 12, 9, and 11 during these same periods, respectively. **Table 8** provides a more detailed summary of the intersections and lane groups that would have unmitigated significant adverse traffic impacts. In total, impacts to one or more lane groups would remain unmitigated in one or more peak hours at 34 intersections.

Table 7
Summary of Lane Groups/Intersections with Significant Adverse Traffic Impacts

Peak Hour	Lane Groups/ Intersections Analyzed	Lane Groups/ Intersections With No Significant Impacts	Lane Groups/ Intersections With Significant Impacts	Mitigated Lane Groups/ Intersections	Unmitigated Lane Groups/ Intersections

Weekday AM	198/60	138/23	60/37	10/7	50/30
Weekday Midday	198/60	167/37	31/23	13/12	18/11
Weekday PM	198/60	138/24	60/36	12/9	48/27
Saturday	198/60	155/27	43/33	12/11	31/22

Table 8
Lane Groups With Unmitigated Significant Adverse Traffic Impacts

	Peak Hour			
	Weekday AM	**Weekday Midday**	**Weekday PM**	**Saturday**
Signalized Intersections				
Court Street & 4th Place	WB-TR	---	---	---
Smith Street & 3rd Street	WB-R	WB-R	WB-R	WB-R
Smith Street & Union Street	---	---	NB-TR	NB-TR
Smith Street & 9th Street	WB-R, NB-LT	---	---	---
Hoyt Street & Union Street	EB-TR	---	EB-TR	---
Bond Street & Baltic Street	NB-LTR	---	NB-LTR	---
Bond Street & Union Street	NB-TR	---	EB-LT	---
Bond Street & 3rd Street	EB-LT, WB-TR, NB-LTR	---	WB-TR, NB-LTR	WB-TR
3rd Avenue & Union Street	EB-LTR, WB-LR, NB-TR	WB-LR, NB-TR	WB-LR, NB-TR	WB-LR, NB-TR
3rd Avenue & Carroll Street	EB-LTR	EB-LTR	EB-LTR	EB-LTR
3rd Avenue & 1st Street/Driveway	WB-LTR	---	WB-LTR, SB-TR	WB-LTR
3rd Avenue & 3rd Street	EB-L, EB-TR, WB-LTR, NB-L, SB-L, SB-TR	EB-L, EB-TR, WB-LTR, NB-L, SB-L, SB-TR	EB-L, EB-TR, WB-LTR, NB-L, SB-L, SB-TR	EB-L, EB-TR, WB-LTR, NB-L, SB-TR, SB-L
3rd Avenue & 9th Street	EB-L, WB-TR, SB-TR	NB-L, SB-TR	WB-TR, NB-L, NB-TR, SB-TR	NB-L, SB-TR
3rd Avenue & Prospect Avenue	SB (on-ramp)-TR	---	SB (on-ramp)-TR	SB (on-ramp)-TR
4th Avenue & Union Street	EB-LTR, WB-LTR	---	EB-LTR	SB-L
4th Avenue & Carroll Street	---	---	---	SB-L
4th Avenue & 3rd Street	EB-LTR, NB-TR, SB-TR	---	EB-LTR, NB-L, SB-TR	---
4th Avenue & 9th Street	EB-LT	---	EB-LT, SB-TR	---
4th Avenue & 17th Street	EB-LTR, SB-L	EB-LTR	EB-LTR, NB-T, SB-L	EB-LTR, SB-L
5th Avenue & Union Street	WB-LTR	---	NB-LTR	---
Atlantic Avenue & Bond Street	NB-LTR	---	NB-LTR	NB-LTR
Atlantic Avenue & Nevins Street	WB-LT, SB-TR	WB-LT	EB-TR, SB-TR, WB-LT	SB-TR, WB-LT
Atlantic Avenue & 3rd Street	WB-T, NB-LTR	---	NB-LTR---	---
Atlantic Avenue & 4 Avenue	WB-T, NB-LR, SB-LT	---	EB-T, WB-T, NB-LR, SB-LT	SB-LT
Unsignalized Intersections				
Court Street & Luquer Street	EB-TR	---	EB-TR	EB-TR
Smith Street & 4th Street/5th Place	NB-LT	---	---	---
Smith Street & Luquer Street	NB-TR	---	---	NB-TR
Smith Street & Huntington Street	EB-LT	EB-LT	EB-LT	EB-LT
Hoyt Street & Sackett Street	WB-LT	---	---	---
Hoyt Street & 3rd Street	WB-LT	---	---	---

Hoyt Street & 4th Street	EB-TR	EB-TR	EB-TR	EB-TR
Bond Street & Butler Street	WB-R	WB-R	WB-R	WB-R
Nevins Street & Degraw Street	---	WB-LT	WB-LT	WB-LT
Nevins Street & Carroll Street	---	---	SB-LR	SB-LR
Notes: NB—northbound, SB—southbound, EB—eastbound, WB—westbound L—left-turn, T—through, R—right-turn				

Transit

Subway Stations

The Proposed Actions would result in significant impacts to two street stairs and one fare array in the AM peak hour and two stairs in the PM peak hour at the Union Street (R) subway station on the 4th Avenue Line. Stairway widening is the most common form of mitigation for significant stairway impacts, provided that New York City Transit (NYCT) deems it practicable (i.e., that it is worthwhile to disrupt service on an existing stairway to widen it and that a given platform and sidewalk affected by such mitigation are wide enough to accommodate the stairway widening). Another potential mitigation measure would be to add vertical capacity (i.e., adding an elevator, escalator, or additional stairway) in the vicinity of the impacted stairway. Increasing the number of turnstiles is a common form of mitigation for significant fare array impacts. Absent the identification and implementation of feasible mitigation measures that would mitigate the AM and PM peak hour subway stair and fare array impacts at the Union Street (R) subway sation to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse subway station impacts.

Subway Line Haul

In the 2035 future with the Proposed Actions, northbound F trains are expected to be operating over capacity in the AM peak hour, and the Proposed Actions would increase this demand by an average of approximately 13.98 passengers per car. This significant adverse impact could be fully mitigated by the addition of two northbound F trains during the AM peak hour. As standard practice, NYCT routinely conducts periodic ridership counts and adjusts subway frequency to meet its service criteria, within fiscal and operating constraints.

Pedestrians

Incremental demand from the Proposed Actions would significantly adversely impact nine sidewalks and four crosswalks in one or more analyzed peak hours. There would be no significant impacts to any corner areas in any period. Recommended mitigation measures consisting of the relocation/removal of impediments to sidewalk flow and the widening of crosswalks would fully mitigate the impacts to three sidewalks and all four crosswalks. Implementation of the proposed mitigation measures would be subject to review and approval by DOT, as well as NYC Parks if a street tree is to be removed. DCP, as lead agency, explored potential mitigation measures in coordination with DOT and NYC Parks between publication of the DEIS and FEIS. Absent the identification and implementation of additional feasible mitigation measures that would mitigate the pedestrian impacts to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse pedestrian impacts.

AIR QUALITY

The Proposed Actions would result in a significant adverse mobile source air quality impact at the intersection of Smith Street and 5th Street, which is predicted to exceed the annual *de minimis* criterion for fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), defined as an incremental increase greater than 0.1 micrograms per cubic meter ($\mu g/m^3$).

The intersection of Smith Street and 5th Streets would experience a significant adverse traffic impact. The proposed mitigation measures for the impact is the installation of a traffic signal, and providing an additional turning lane by installing “No Stopping Anytime” restrictions along the east and west curbs of Smith Street and on the south curb of 5th Street to the east of Smith Street. As discussed below, the results of a mobile source analysis with the proposed traffic mitigation measures developed to reduce congestion and increase speeds along corridors in the affected area indicate that the maximum annual incremental concentration of $PM_{2.5}$ would be significantly lower than the With Action condition, and

would not exceed the *de minimis* criteria for $PM_{2.5}$. Therefore, the incorporation of the traffic mitigation measures would mitigate the significant adverse air quality impact.

CONSTRUCTION
Chapter 20, "Construction," concludes that the Proposed Actions would have the potential to result in significant adverse construction noise impacts throughout the Project Area as well as significant adverse impacts to historic architectural resources from construction.

Architectural Resources
ARCHITECTURAL RESOURCES: Potential significant adverse impacts associated with inadvertent construction damage would occur to contributing resources in the S/NR-Eligible Gowanus Canal Historic District as a result of adjacent construction located within 90 feet of projected or potential development sites. Furthermore, such impacts would result in significant adverse impacts to three other S/NR-Eligible resources as a result of adjacent construction: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway Viaduct. Buildings or structures that are S/NR-Listed or NYCLs would be afforded standard protection under DOB's TPPN #10/88, regulations applicable to all buildings located adjacent (within 90 feet) to construction sites; however, since the resources identified above are not S/NR-Listed or NYCLs, they are not afforded the added special protections under DOB's TPPN #10/88. Additional protective measures afforded under DOB TPPN #10/88, which include a monitoring program to reduce the likelihood of construction damage to adjacent S/NR-Listed resources or NYCLs, would only become applicable if the S/NR-Eligible resources are listed or designated in the future prior to the initiation of construction. These mitigation measures were not feasible, and therefore there is the potential for inadvertent construction damage and impacts to occur as a result of adjacent development resulting from the Proposed Actions and this would result in an unavoidable adverse impact to architectural resources due to construction.

Construction Noise
This analysis was based on a conceptual site plan and construction schedule. The conceptual construction schedule conservatively accounts for overlapping construction activities at development sites in proximity to one another to capture the cumulative nature of construction impacts with respect to number of worker vehicles, trucks, and construction equipment at any given time, within reasonable construction scheduling constraints for each of the development sites in the rezoning area. Because the analysis is based on construction phases, it does not capture the natural daily and hourly variability of construction noise at each receptor. The level of noise produced by construction fluctuates throughout the days and months of the construction phases, while the construction noise analysis is based on the worst-case time periods only, which is conservative.

Construction of the Proposed Project would be required to follow the requirements of the NYC Noise Control Code for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the NYC Noise Control Code. These measures could include a variety of source and path controls.
The following proposed mitigation measures beyond the noise control measures already identified may partially mitigate significant adverse impacts (and substantially reduce construction-related noise levels) at some locations:

- •Noise barriers constructed from plywood or other materials at a height of 12 to 16 feet utilized to provide shielding;
- •Utilization of isolation pads between the pile driver hammer and piles;
- •Acoustical shrouds surrounding the pile driver hammer and piles;
- •Electric cranes or cranes with exhaust silencers that have lower noise emission levels; and
- •Excavators with exhaust silencers that have lower noise emission levels.

Between publication of the DEIS and FEIS, the above mitigation measures were explored, however none were determined feasible and practicable. It should be noted that even if all of the above mitigation measures were determined to be feasible and practicable, some significant adverse construction noise

impacts could potentially continue to be experienced at sensitive receptors and, as the result, be unavoidable. Therefore, the significant adverse construction noise impacts associated with Projected Development Site 47, Projected Development Sites represented by Site 15, and Projected Development Sites represented by Site 19, as identified in FEIS Chapter 20, "Construction," would be unavoidable.

I. Alternatives

As described in the 2020 *City Environmental Quality Review (CEQR) Technical Manual*, alternatives selected for consideration in an environmental impact statement (EIS) are generally those that are feasible and have the potential to reduce, eliminate, or avoid any adverse impacts of a proposed action while meeting some or all of the goals and objectives of the action. The Proposed Actions consist of several land use actions—including zoning map amendments, zoning text amendments, City Map amendments, and disposition of City-owned property (collectively, the "Proposed Actions")—to implement land use and zoning recommendations in the Gowanus Neighborhood Plan (the "Neighborhood Plan" or "Plan"). The Proposed Actions are intended to facilitate development patterns that meet the long-term vision of a thriving, inclusive, and more resilient Gowanus where existing and future residents and workers can participate in civic, cultural, and economic activities and where a wholly unique resource—the Gowanus Canal—can thrive and play an active role in that equitable and sustainable growth.

This FEIS considers the following alternatives to the Proposed Actions:

- A No Action Alternative, which is mandated by CEQR and the State Environmental Quality Review Act (SEQRA), and is intended to provide the lead and involved agencies with an assessment of the expected environmental impacts of no action on their part.
- A No Unmitigated Significant Adverse Impacts Alternative, which considers a development scenario that would not result in any identified significant, unmitigated adverse impacts.
- A Lower Density Alternative, which considers lower density zoning that would result in reduced residential development.
- Lastly, a new alternative was added to the FEIS, the CPC Modifications Alternative, which considers modifications to the Proposed Actions including bulk modifications that change tower location and height on Potential Development Site W and a modification to include a new chairperson's certification to allow brownfield remediation to occur in tandem with excavation and foundation work along the Canal, which would sunset 1.5 years after the adoption of the Proposed Actions. The modifications are intended to reduce the shadows cast on Thomas Greene Playground under the Proposed Actions and to spur near-term remedial activities along the Canal. To assess the remediation certification, the alternative considers an accelerated excavation and foundation start for the three development sites (Projected Development Sites 18, 37, and 44).

The alternatives analyses are qualitative, except in those technical areas where significant adverse impacts for the Proposed Actions have been identified. The level of analysis provided depends on a preliminary assessment of project impacts as determined by the analysis connected with the appropriate tasks.

J. UNAVOIDABLE ADVERSE IMPACTS

According to the *City Environmental Quality Review* (CEQR) *Technical Manual*, unavoidable significant adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is infeasible. As described in "Mitigation," the Proposed Actions would result in significant adverse impacts with respect to community facilities, open space, shadows, historic and cultural resources, transportation (traffic, pedestrians, and transit), air quality and construction (architectural resources and construction noise). To the extent practicable, mitigation has been proposed for these identified significant adverse impacts, and for air quality, the mitigation described in Chapter 21 would fully mitigate the significant adverse air quality impact. However, in some instances no practicable mitigation has been identified to fully mitigate significant adverse impacts, and there are no reasonable alternatives to the Proposed Actions that would meet the Proposed Actions' purpose and need, eliminate potential impacts, and not cause other or similar significant adverse impacts.

In other cases mitigation has been proposed, but absent a commitment to implement the mitigation, the impacts may not be eliminated.

COMMUNITY FACILITIES

The Proposed Actions would result in a significant adverse impact on publicly funded child care facilities.

CHILD CARE

Based on the *CEQR Technical Manual* child care multipliers, the development would result in approximately 615 children under the age of six who would be eligible for publicly funded child care programs. With the addition of these children, child care facilities in the study area would operate at 169.3 percent utilization with a deficit of 1,700 slots. Total enrollment in the study area would increase to 4,159 children, compared with a capacity of 2,459 slots, which represents an increase in the utilization rate of approximately 25 percentage points over the No Action condition.

CEQR Technical Manual guidelines indicate that a demand for slots greater than the remaining capacity of child care facilities and an increase in demand of five percentage points of the study area capacity could result in a significant adverse impact. In the With Action condition, child care facilities in the study area would operate over capacity by approximately 1,700 slots and exhibit an increase in the utilization rate of approximately 25 percentage points as compared with the No Action condition. Therefore, the Proposed Actions would result in a significant adverse impact on child care facilities.

Several factors may reduce the number of children in need of publicly funded child care slots in DOE child care facilities. Families in the study area could make use of alternatives to publicly funded child care facilities. There are slots at homes licensed to provide family-based child care that families of eligible children could elect to use instead of publicly funded child care. As noted above, these facilities provide additional slots in the study area but are not included in the quantitative analysis. Parents of eligible children are also not restricted to enrolling their children in child care facilities in a specific geographical area and could use publicly funded child care centers outside of the study area.

Possible mitigation measures for this significant adverse impact developed in consultation with DOE may include provision of suitable space on-site for an early childhood program, provision of a suitable location off-site and within a reasonable distance (at a rate affordable to DOE providers), or funding or making program or physical improvements to support adding capacity to existing facilities if determined feasible through consultation with DOE, or providing a new early childhood program within or near the project sites. As a city agency, DOE does not directly provide new early childhood programs, instead it contracts with providers in areas of need. DOE is also working to create public/private partnerships to facilitate the development of new early childhood programs where there is an area of need. As part of that initiative, DOE may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new early childhood programs. Between the DEIS and the FEIS, feasible and practical mitigation measures were not identified. Absent the implementation of mitigation measures, the Proposed Actions would result in an unmitigated significant adverse impact on publicly funded early childhood programs.

OPEN SPACE

The Proposed Actions would result in an (indirect) significant adverse impact related to the active open space ratio, and a (direct) significant adverse impact attributed to incremental shadows on the Douglass and Degraw Pool in Thomas Greene Playground. The direct impact related to shadows on the Douglass and Degraw Pool, and the partial mitigation measure that was identified between the Draft and Final EIS, is discussed below under “Shadows.”

The reduction in active open space in the With Action condition would most likely affect the study area's adult and teenager population, which is expected to make up approximately 69 percent of the total study area population. Both groups use court facilities (e.g., basketball courts) and sports fields, such as football or soccer fields. They may also use facilities that provide more individualized recreation, such as cycle paths and other grade-separated jogging paths. The quantitative assessment indicates that the residential study area population is currently underserved in active open space—a trend expected to continue in the future with or without the Proposed Actions.

Measures being considered to mitigate the significant adverse open space impact include improvements to existing parks to allow for expanded programming and enhanced usability, and making New York City public school playgrounds accessible to the community afterschool hours through the Schoolyards to Playgrounds program. These measures were explored by DCP in con¬sul¬ta¬tion with the Department of Parks and Recreation (NYC Parks) and the Department of Education (DOE) between the DEIS and FEIS, and a partial mitigation measure was identified through the Schoolyards to Playground program, providing use of an additional 22,000 sf of active open space at PS 32 in the open space study area. As noted above, the study area exhibits a very low open space ratio under existing conditions. Creating less project-generated demand for active open space by reducing the amount of housing to eliminate the impact would not meet the goals and objectives of the Proposed Actions, which call for the provision of housing, including a substantial amount of needed affordable housing. Because the above measures would partially mitigate the significant adverse open space impact, the impact would be an unavoidable adverse impact of the Proposed Actions.

SHADOWS

As described in Chapter 6, "Shadows," the Proposed Actions would result in significant adverse impacts to the Our Lady of Peace Roman Catholic Church, located on Carroll Street between Whitwell and Denton Places. Project-generated incremental shadows would fall on some of the stained-glass windows for a portion of the day, the extent and/or duration of which would be substantial enough to significantly affect the potential enjoyment or appreciation by the public of the churches' interior spaces.

Our Lady of Peace Church (listed on the State and National registers of historic places [S/NR]) is located on the south side of Carroll Street, between Whitwell and Denton Places. On the morning of the winter analysis day, Projected Development Site 38, located a block southeast of the church, would cast new shadows resulting in the complete elimination of direct sunlight on the stained-glass windows for approximately 55 minutes. The total duration of incremental shadow would be approximately 2 hours and 19 minutes (from 8:51 AM to 11:10 AM), including the 55-minute period when all remaining direct sunlight would be eliminated. The long duration and at times complete elimination of direct sun would significantly affect the public's enjoyment or appreciation of the church interior during this time, especially given that winter mornings are typically when the church holds holiday services.

The CEQR Technical Manual identifies potential mitigation strategies to reduce or eliminate, to the greatest extent practicable, adverse shadow impacts to sunlight-sensitive architectural features, including changes to the bulk or configuration of projected or potential development sites that cause or contribute to the adverse impact. For adverse impacts to stained-glass windows, potential mitigations measures could also include the provision of artificial lighting to simulate the effect of direct sunlight. DCP, as lead agency, explored possible mitigation measures between publication of the DEIS and FEIS. No feasible measures were identified to mitigate the shadow impact on Our Lady of Peace Church, and therefore this significant adverse shadows impact remains unmitigated.

Thomas Greene Playground occupies the entire block bounded by Douglass Street, Degraw Street, 3rd Avenue, and Nevins Street. Thomas Greene Playground is anticipated to be substantially renovated, as discussed in Chapter 5, "Open Space," with or without the Proposed Actions. Currently, the programming

and layout of the reconstructed park is not confirmed. The analysis in Chapter 6, "Shadows," therefore focused on identifying the extent and duration of incremental shadows on various areas of the park, and how potential features and vegetation might fare in the resulting shade conditions. However, given the heavy use of the Douglass and Degraw Pool in the summer months, the analysis included a consideration of incremental shadow effects on the pool at its current location in the western part of the park, on the May 6/August 6 and June 21 analysis days. The pool is open in the summer months from 11:00 AM to 7:00 PM Eastern Daylight Time (EDT). On the May 6/August 6 analysis day the pool would be entirely in sun from the time it opens until 3:15 PM, when incremental shadow would enter from the west. From 4:00 PM to closing time at 6:00 PM (7:00 PM EDT), both the main pool and the kiddie pool would be mostly covered by incremental shadow. This substantial extent and duration of new shadow would significantly impact the user experience of the pools on this analysis day. In order to eliminate this significant adverse impact, Potential Development Site W would have to be reduced in height from 20 stories to approximately 8 stories and Projected Development Site 18 would have to be reduced from 18 to approximately 12 stories. These height reductions would reduce incremental shadow duration in the late afternoon on the pool from 2 and three-quarter hours to one hour, and much of the pool would remain in sun during the one hour duration of incremental shadow. The reduction in building height and corresponding floor area would result in the loss of needed housing, including affordable housing, and would not meet the goals and objectives of the Proposed Actions.

Potential measures that could mitigate the significant adverse shadow impact to Douglass and Degraw Pool may include modifications to the height, shape, size, or orientation of proposed developments that cause or contribute to the significant adverse shadow impact. Thomas Greene Playground is anticipated to be reconstructed, as discussed in Chapter 5, "Open Space." Currently, the programming and layout of the reconstructed park is not confirmed. Locating the pool in the northern half of the park, which would receive much less shadow than the southern half throughout the summer months, could potentially mitigate this significant adverse impact.

DCP explored potential mitigation measures be¬tween the DEIS and FEIS, and identified bulk modifications to adjacent Potential Development Site W, which are presented in the new CPC Modifications Alternatives. The changes in the tower height significantly reduce the shadows cast on the resources, and the with that modification in place the significant adverse impact would be considered partially mitigated. , Although the CPC Modifications Alternative greatly reduces the extent of shadow impact to Thomas Greene Playground, it is considered partial mitigation, and therefore the unavoidable adverse impact of the Proposed Actions would remain

HISTORIC AND CULTURAL RESOURCES

As discussed in Chapter 7, "Historic and Cultural Resources," the Proposed Actions would result in direct and indirect significant adverse impacts to both archaeological and architectural resources, as described in greater detail below. This includes direct and indirect impacts on the S/NR-Eligible Gowanus Canal Historic District, construction-related impacts to contributing properties located within the boundaries of the district from adjacent projected construction, and construction-related impacts on properties that were determined to be archaeologically sensitive.

ARCHITECTURAL RESOURCES

The Proposed Actions would result in significant direct adverse impacts to architectural resources situated within the S/NR-Eligible Gowanus Canal Historic District as a result of the demolition of contributing resources to the historic district. These significant adverse impacts would be unavoidable, as the contributing buildings are privately owned and would be demolished to allow for developments constructed as-of-right under the proposed zoning.

Potential significant adverse impacts associated with inadvertent construction damage would occur to contributing resources in the S/NR-Eligible Gowanus Canal Historic District as a result of adjacent construction located within 90 feet of projected or potential development sites. Furthermore, such impacts

would result in significant adverse impacts to three other S/NR-Eligible resources as a result of adjacent construction: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway Viaduct.

Buildings or structures that are S/NR-Listed or New York City Landmarks (NYCLs) would be afforded standard protection under the New York City Department of Building (DOB) Technical Policy and Procedure Notice (TPPN) #10/88, regulations applicable to all buildings located adjacent (within 90 feet) to construction sites; however, since the resources identified above are not S/NR-Listed or NYCLs, they are not afforded the added special protections under DOB TPPN #10/88. Additional protective measures afforded under DOB TPPN #10/88, which include a monitoring program to reduce the likelihood of construction damage to adjacent S/NR-Listed resources or NYCLs, would only become applicable if the S/NR-Eligible resources are listed or designated in the future prior to the initiation of construction. Otherwise, there is the potential for inadvertent construction damage, and unavoidable adverse impacts to architectural resources would occur as a result of adjacent development resulting from the Proposed Actions.

ARCHAEOLOGICAL RESOURCES

The Proposed Actions would result in construction activity on 54 projected or potential development sites that were identified as potentially archaeologically significant by LPC. A Phase 1A Archaeological Documentary Study of those sites identified all or portions of 46 potential and projected development sites as archaeologically sensitive for resources associated with the Gowanus Canal bulkhead and associated landfill; 19th century shaft features; and/or evidence associated with milling or agricultural activities dating between the 17th and 19th centuries, including evidence of the role of forced labor and enslavement as they related to those efforts. The Project Area was determined to have low sensitivity for precontact archaeological resources, some of which may be deeply buried; evidence of industrial uses in the 19th and 20th centuries; and for human remains associated with the Revolutionary War or with homestead burial grounds.

As discussed in "Historic and Cultural Resources," the Phase 1A Study recommended additional archaeological analysis for certain development sites, including archaeological monitoring; Phase 1B Archaeological Testing; a geomorphological assessment of deeply buried landscapes; and the preparation of an Unanticipated Human Remains Discoveries Plan in addition to continued consultation with LPC and submission and concurrence of all required work plans.

The Proposed Actions have the potential to result in an unmitigated significant adverse archaeology impact associated with all or portions of 46 potential and projected development sites. All but one of the affected development sites are under private ownership. With respect to sites under private ownership, there is no mechanism in place to require a developer to conduct archaeological testing or require the preservation or documentation of archaeological resources, should they exist. Because there is no mechanism to avoid or mitigate potential impacts at these sites, the significant adverse impact would be unmitigated, resulting in unavoidable adverse impacts to archaeological resources.

TRANSPORTATION

The Proposed Actions would result in significant adverse traffic impacts at 43 study area intersections during one or more analyzed peak hours; specifically, 37 intersections during the weekday AM peak hour, 23 intersections during the weekday midday peak hour, 36 intersections during the weekday PM peak hour, and 33 intersections during the Saturday peak hour. Implementation of traffic engineering improvements, such as signal timing changes or modifications to curbside parking regulations would provide mitigation for many of the anticipated traffic impacts. Specifically, the significant adverse impacts would be fully mitigated at 10 lane groups in the weekday AM peak hour, 13 lane groups in the midday, 12 lane groups in the PM, and 12 lane groups in the Saturday peak hour. Intersections where all impacts would be fully mitigated would total 7, 12, 9, and 11 during these same periods, respectively. In

total, impacts to one or more lane group would remain unmitigated in one or more peak hours at 34 intersections.

Because of existing congestion at a number of these intersections, even a minimal increase in traffic would result in unmitigated impacts. Specifically, in the No Action Condition, a total of 39 intersections would have at least one congested lane group in one or more peak hours, and a total of 24, 9, 18 and 19 intersections would have one or more lane groups operating at or over capacity in the weekday AM, midday and PM, and Saturday peak hours, respectively. According to the CEQR Technical Manual, for a lane group that would operate at LOS F in the No Action Condition, a projected delay of three or more seconds is considered a significant impact. As such, small increases in incremental With Action traffic volumes at some of the congested intersection approach movements would result in significant adverse impacts that could not be fully mitigated during one or more analysis peak hours, and almost any new development in the rezoning area could result in unmitigated traffic impacts. Therefore, no reasonable alternative could be developed to completely avoid such impacts without substantially compromising the Proposed Actions' stated goals and this would result in unavoidable adverse impacts to transportation.

CONSTRUCTION

Architectural Resources

Potential significant adverse impacts associated with inadvertent construction damage would occur to contributing resources in the S/NR-Eligible Gowanus Canal Historic District as a result of adjacent construction located within 90 feet of projected or potential development sites. Furthermore, such impacts would result in significant adverse impacts to three other S/NR-Eligible resources as a result of adjacent construction: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway Viaduct.

Buildings or structures that are S/NR-Listed or NYCLs would be afforded standard protection under DOB's TPPN #10/88, regulations applicable to all buildings located adjacent (within 90 feet) to construction sites; however, since the resources identified above are not S/NR-Listed or NYCLs, they are not afforded the added special protections under DOB's TPPN #10/88. Additional protective measures afforded under DOB TPPN #10/88, which include a monitoring program to reduce the likelihood of construction damage to adjacent S/NR-Listed resources or NYCLs, would only become applicable if the S/NR-Eligible resources are listed or designated in the future prior to the initiation of construction. Otherwise, there is the potential for inadvertent construction damage and impacts to occur as a result of adjacent development resulting from the Proposed Actions and this would result in an unavoidable adverse impact to architectural resources due to construction.

Noise

Noise level increases exceeding *CEQR Technical Manual* impact criteria would occur at several locations throughout the rezoning area.

Construction activities would follow the requirements of the *NYC Noise Control Code* (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the *NYC Noise Control Code*. These measures could include a variety of source and path controls. In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the *NYC Noise Control Code*:

- Equipment that meets the sound level standards specified in Subchapter 5 of the *NYC Noise Control Code* would be utilized from the start of construction.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable.

- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the *NYC Administrative Code*.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practicable:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Noise barriers constructed from plywood or other materials would be erected to provide shielding; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) for certain dominant noise equipment would be employed to the extent feasible and practical based on the results of the construction noise calculations.

Construction activity is expected to follow the requirements of the NYC Noise Control Code. However, the implementation of these measures would not eliminate the identified significant adverse construction noise impacts predicted to occur during hours when the loudest pieces of construction equipment are in use. In order to completely avoid significant adverse construction noise impacts, project-generated construction would have to be restricted in such a manner so as to not occur on the same block as, or within one to two blocks from, existing sensitive receptors, which would require elimination of the proposed rezoning area in the vicinity of these sensitive receptors. This would severely limit achievable development density and the Proposed Actions' goals and objectives. Because there is no mechanism to fully avoid or mitigate potential impacts while still accomplishing the Proposed Actions' goals, the significant adverse impact would be unmitigated, resulting in an unavoidable adverse impact to construction noise.

K. GROWTH-INDUCING ASPECTS OF THE PROPOSED ACTIONS

The term "growth-inducing aspects" generally refers to "secondary" impacts of a proposed action that trigger further development outside the directly affected area. The 2020 *City Environmental Quality Review (CEQR) Technical Manual* indicates that an analysis of the growth-inducing aspects of a proposed action is appropriate when the project: (1) adds substantial new land use, residents, or new employment that could induce additional development of a similar kind or of support uses, such as retail establishments, to serve new residential uses; and/or (2) introduces or greatly expands infrastructure capacity.

The Proposed Actions would facilitate the development of residential space, including affordable housing; create new commercial, light industrial, arts-related, and community facility space to support job creation; and preserve existing neighborhood character. The Proposed Actions reflect DCP's ongoing engagement process with the community to achieve the following land use objectives:

- Support existing clusters of economic activity and promote development of new job-generating uses through increased industrial and commercial density and updated parking and loading regulations in key areas;
- Provide opportunities for the creation of new, permanently affordable housing with options for low- and moderate-income residents, while bringing existing residences into conformance with zoning;
- Facilitate the creation of new waterfront open space and neighborhood parks along the Canal through establishing a Waterfront Access Plan and changes to the city map;
- Facilitate several shared neighborhood-wide goals, including promoting a walkable, vibrant, mixed-use neighborhood, brownfield remediation and activating key areas through permitting

higher densities and a broader range of uses and incentivizing or requiring non-residential uses in select areas;
- Create special rules to establish limits for height, bulk envelope and density that consider neighborhood context as well as other shared goals, including encouraging variation and diversity of future programing, open spaces, site planning, and design along the Canal; and
- Support a successful Gowanus Neighborhood Plan by institutionalizing a comprehensive planning framework that is inclusive of relevant capital infrastructure needs and services to support current demands and future growth.

The Proposed Actions are expected to result in a net increase of approximately 8,500dwelling units (DU), 735,000 square feet (sf) of commercial space, 251,000 sf of community facility space (inclusive of a new, 455-seat public school), and approximately six acres of new open space, including over an acre of newly mapped parkland. The Proposed Actions would result in net decreases of approximately 132,000 sf of warehouse space, 125,000 sf of self-storage space, and 60,000 sf of other industrial space. On privately owned sites, the Proposed Actions could result in a net increase of approximately 7,500 DUs, including approximately 2,000 permanently affordable DUs for lower-income New Yorkers in accordance with the Mandatory Inclusionary Housing Program (MIH). On City-owned sites, the Proposed Actions would result in approximately 1,000 affordable DUs, designated to serve a wide range of incomes.

The projected increase in residential population is likely to increase the demand for neighborhood services in the Project Area, ranging from community facilities to local goods and services. This would enhance the growth of local commercial corridors in the Project Area. The potential growth that would be generated by the Proposed Actions is taken into account as part of the Reasonable Worst-Case Development Scenario (RWCDS) under the assumed commercial, light industrial, arts-related, and community facility space. The Proposed Actions could also lead to additional growth in the City and State economies, primarily due to employment and fiscal effects during construction on the projected and/or potential development sites and operation of these developments after construction completion. However, this secondary growth would be expected to occur incrementally throughout the region and is not expected to result in any significant impacts in any particular area or at any particular site.

The Proposed Actions would result in more intensive land uses within the Project Area. However, it is not anticipated that the Proposed Actions would generate significant secondary impacts resulting in substantial new development in nearby areas. The Proposed Actions would not introduce a new economic activity that would alter existing economic patterns in the study area. As the study area includes portions of older surrounding Brooklyn neighborhoods, it already has a well-established residential market and a critical mass of non-residential uses, including retail, industrial, and community facility uses, and the Proposed Actions would not create the critical mass of uses or populations that would induce additional development outside of the Project Area. Therefore, the Proposed Actions would not induce significant new growth in the surrounding area

L. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Resources, both natural and man-made, would be expended in the construction and operation of developments and open space projected to occur as a result of the Proposed Actions. These resources include the building materials used in construction; energy in the form of gas and electricity consumed during construction and operation of project-generated development by various mechanical and processing systems; and the human effort (time and labor) required to develop, construct, and operate various components of project-generated development. These are considered irretrievably committed because their reuse for some other purpose would be highly unlikely.

The projected and/or potential development under the Proposed Actions also constitutes a long-term commitment of land resources, thereby rendering land use for other purposes highly unlikely in the foreseeable future. However, the land use changes that would occur as a result of the Proposed Actions would be compatible in terms of use and scale with existing conditions and trends in the area as a whole. None of the projected or potential development sites possess any natural resource of significant value, and

the sites are in large part developed or have been previously developed. The Proposed Actions would facilitate the creation of new open space, including new neighborhood parks and a waterfront esplanade along the Canal, enhancing the value of the Canal as a natural resource for the use and enjoyment of New Yorkers and for the overall improvement of the natural environment in Gowanus.

In addition, the public services provided in connection with the projected and/or potential development under the Proposed Actions (e.g., police and fire protection, public education, open space, and other city resources) also constitute resource commitments that might otherwise be used for other programs or projects. However, the Proposed Actions would enliven the area and produce economic growth that would generate substantial tax revenues providing a new source of public funds that would offset these expenditures.

The commitments of resources and materials are weighed against the benefits of the Proposed Actions. The Proposed Actions would promote new resilient development, including residential development with significant amounts of permanently affordable housing, encourage new mixed-use development along key corridors, enhance and revitalize major thoroughfares through new economic activity, and preserve existing neighborhood character while promoting growth in key areas of the neighborhood.

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