TECHNICAL MEMORANDUM

363-365 Bond Street – As-of-Right Development
CEQR No. 08DCP033K
ULURP No. N130226 CMK
March 14, 2013

A. INTRODUCTION AND BACKGROUND

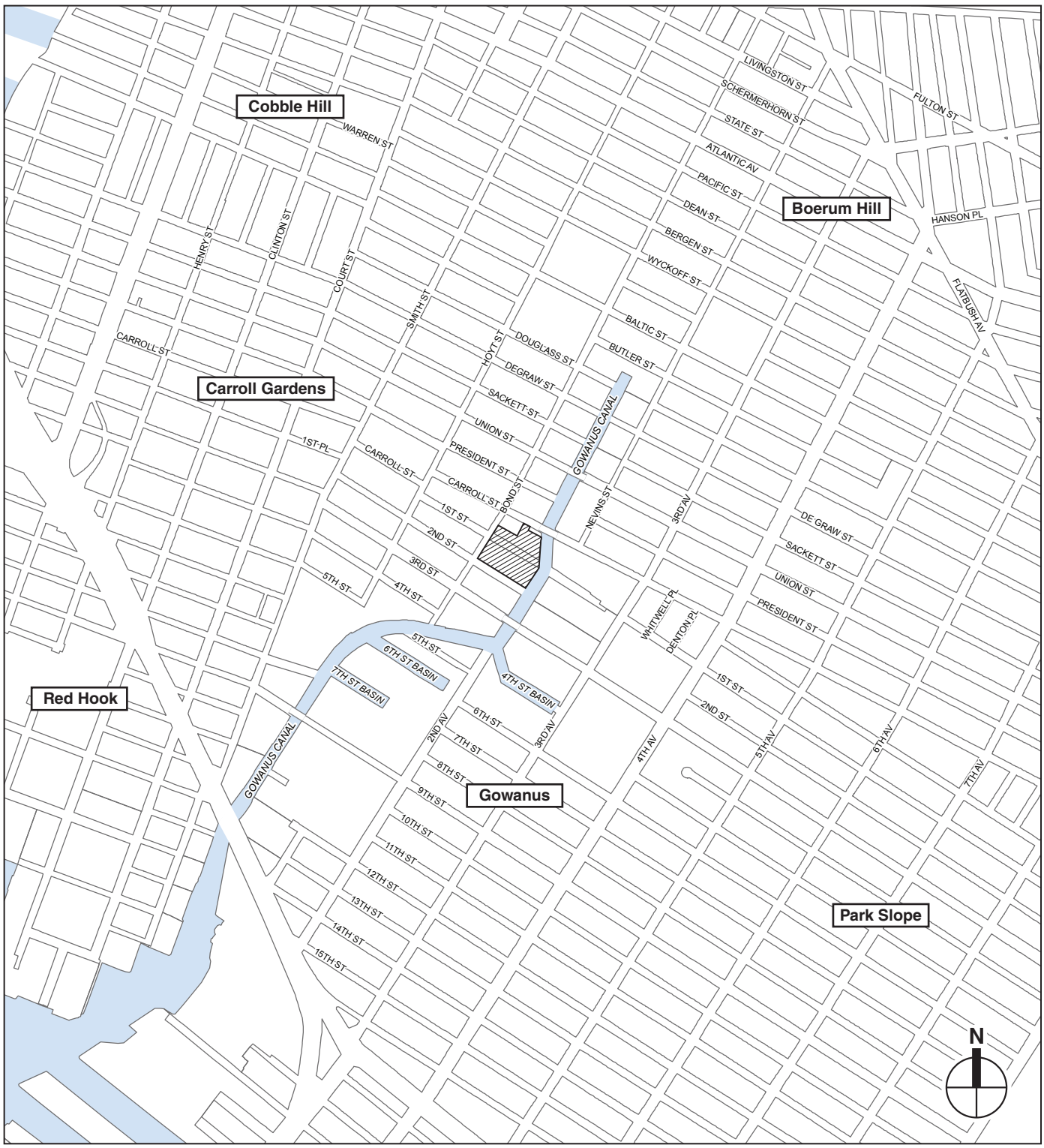
This Technical Memorandum analyzes the environmental impacts of a proposed as-of-right project (the "As-of-Right Project") to be developed in lieu of the previously approved development program ("Special Permit Project") on the project site located at 363-365 Bond Street and 400 Carroll Street ("Project Site") in the Gowanus section of Brooklyn.

In addition, this Technical Memorandum assesses the potential for significant adverse environmental impacts utilizing the 2012 edition of the *City Environmental Quality Review (CEQR) Technical Manual*, whereas the Special Permit Project was analyzed utilizing the 2001 *CEQR Technical Manual*. The analyses also utilize 2010 U.S. Census data, 2000 *Highway Capacity Manual* data, and data from the New York City Department of City Planning (DCP), Department of Buildings (DOB), Department of Education (DOE), School Construction Authority (SCA), Administration for Children's Services (ACS), and Department of Finance (DOF). Thus, the analyses assess potential impacts from the As-of-Right Project, in the context of changes in CEQR methodology, where necessary.

The Project Site is 146,152 square feet (sf), and includes portions of two blocks located along the west waterfront of the Gowanus Canal in Brooklyn Community District 6. The Project Site comprises two separate zoning lots consisting of Brooklyn Tax Block 452 (Lots 1 and 15), and Tax Block 458 (Lot 1), and is bounded by the midpoints of Carroll Street to the north, Bond Street and a New York City EMS facility to the west, 2nd Street to the south, and the channel of the Gowanus Canal to the east (see **Figure 1**).

As compared to the Special Permit Project, the As-of-Right Project would:

1. Increase the number of residential units from 447 to up to 700 by reducing average unit size;
2. Increase the number of off-street accessory parking spaces from 268 to 316 and relocate the entrances to the on-site accessory parking facilities;
3. Make minor variations in the base heights, building heights and footprints of portions of the buildings, including variations of approximately 2 to 6 feet in the heights of street walls;
4. Increase the amount of clearance (or "freeboard") between the Base Flood Elevation (BFE) and the top of the slab of the first residential story of each building;
5. Increase the depth of portions of the proposed publicly accessible open spaces along the Gowanus Canal by over 20 feet and make other design revisions to comply with applicable waterfront zoning regulations and to accommodate the development, by others, of the Sponge Park at the end of 2nd Street;
6. Make minor changes to the size of commercial uses (to 2,600 gross square feet [gsf]) of retail space, a 600 gsf increase over the Special Permit Project) and community facility uses (to 2,250 gsf of community facility space, a 250 gsf increase over the Special Permit Project);
7. Revise the lot area to conform to an updated survey of the Project Site;



Site Location
Figure 1

8. Eliminate previously approved waivers for height and setback, inner court recesses and rear yards; and
9. Change the Build year from 2011 to 2015.

In February 2009, the following discretionary actions (the "Approved Actions") were approved by the New York City Planning Commission (CPC):

- N 090049ZRK, Zoning text amendment to:
  - Sections 123-63 and 123-90 to establish a Special Mixed-Use (MX) District in Gowanus (MX-11);
  - Section 23-144 and former Sections 23-922 and 23-942 (current Appendix F) to apply the Inclusionary Housing Program to specified R7-2 districts;
  - Former Section 23-942 (current Section 23-954) to apply standard height and setback regulations of MX districts to developments utilizing the Inclusionary Housing Program in certain non-contextual MX districts;
- C 0900047 ZMK, Amendment to the zoning map changing from an M2-1 district to an M1-4/R7-2 Special Mixed-Use District; and
- C 090047 ZSK, Special Permit pursuant to Section 74-743 to modify bulk regulations for height and setback (Section 123-662), inner court recesses (Section 23-852), and yards (Sections 23-47 and 123-65) in a large-scale general development.

On February 6, 2009, CPC issued a Notice of Completion for the 363-365 Bond Street Final Environmental Impact Statement (FEIS) (CEQR No. 08DCP033K) in support of the Approved Actions and Special Permit Project.

The Lightstone Group (Lightstone) would construct the As-of-Right Project in lieu of the Special Permit Project. The Approved Actions included approval of a Restrictive Declaration to be executed and recorded against the Project Site to ensure that the development of the Project Site would be consistent with the environmental analysis in the 2009 FEIS and, if developed pursuant to the Special Permit, with the plans and drawings approved by the CPC or CPC Chairperson for the Special Permit Project (the "2009 Approved Plans"). Under the Restrictive Declaration, the Project Site may be developed with an as-of-right project in lieu of the Special Permit Project, subject to approval by the CPC of modifications to the Approved Plans ("Modified Plans"). Lightstone has filed an application (No. N130226 CMK) seeking approval of the Modified Plans for the As-of-Right Project (the "As-of-Right Application). [1] Since the Modified Plans are subject to CPC approval, the As-of-Right Project is subject to environmental review under CEQR.

The As-of-Project will also require certifications (one for each zoning lot) pursuant to Zoning Resolution Section 62-811 confirming that the designs of the waterfront public access areas to be provided on the Project Site comply with the applicable requirements set forth in Zoning Resolution Article VI, Chapter 2. Lightstone will pursue the waterfront certifications under separate applications. The issuance of the certifications is a pre-requisite to obtaining building permits for the As-of-Right Project.

As described in greater detail below, the As-of-Right Project would not cause any new significant adverse environmental impacts.

[1] Lightstone previously sought CPC approval for renewal of the Special Permit under Application Number N130044 CMK and for a minor modification to the Special Permit under Application Number M090048A ZSK, for which a Technical Memorandum, dated August 31, 2012, was prepared and submitted to and reviewed by the Department of City Planning. Lightstone would pursue the As-of-Right Project in lieu of the minor modification of the Special Permit.

B. PROJECT DESCRIPTION

SPECIAL PERMIT PROJECT

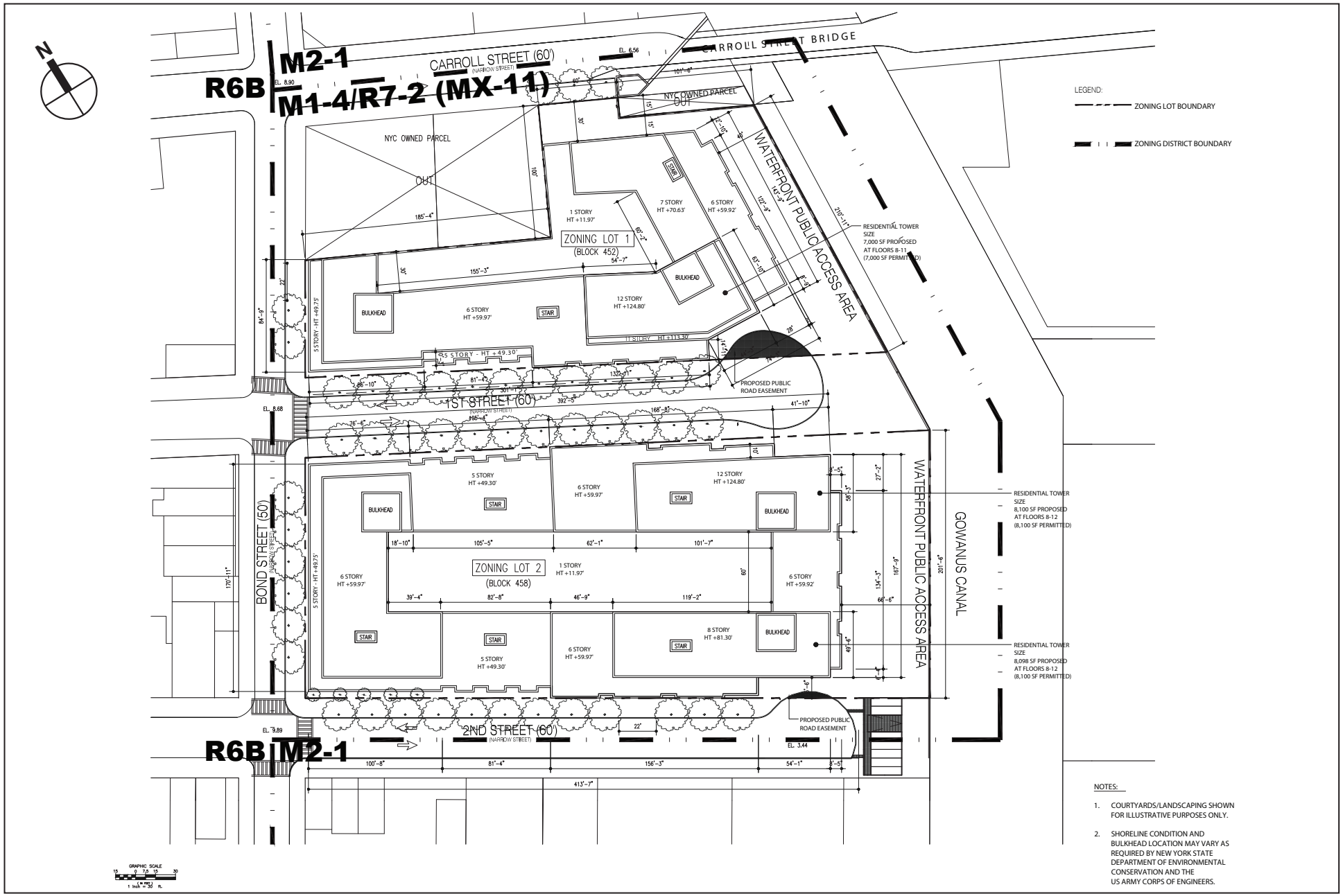
The 2009 FEIS for the Special Permit Project analyzed the development over a two-year period of 447 dwelling units (approximately 130 affordable), approximately 2,000 gsf of community facility space, approximately 2,000 gsf of local retail space, and approximately 268 accessory parking spaces. The total size of the Special Permit Project was 525,309 zoning square feet (zsf), or 602,603 gsf. Each block would be developed with multiple separate residential buildings sharing enclosed at-grade parking with private, landscaped courtyards above. The west ends of each block would be developed with 5-story (plus penthouse) multifamily buildings fronting Bond Street containing the affordable units, while the east ends of each block would be developed with a 5- to 12-story multifamily buildings fronting the Gowanus Canal and containing market-rate units. Four-story, market-rate townhomes would be located between the affordable and market-rate buildings along the west ends of the mid-blocks of 1st and 2nd Streets. The project also included approximately 33,380 sf of new publicly accessible–open space, comprised of 23,165 sf along the portions of the Project Site adjacent to the Canal and 10,215 sf in the street ends of 1st Street and 2nd Street.

AS-OF-RIGHT PROJECT

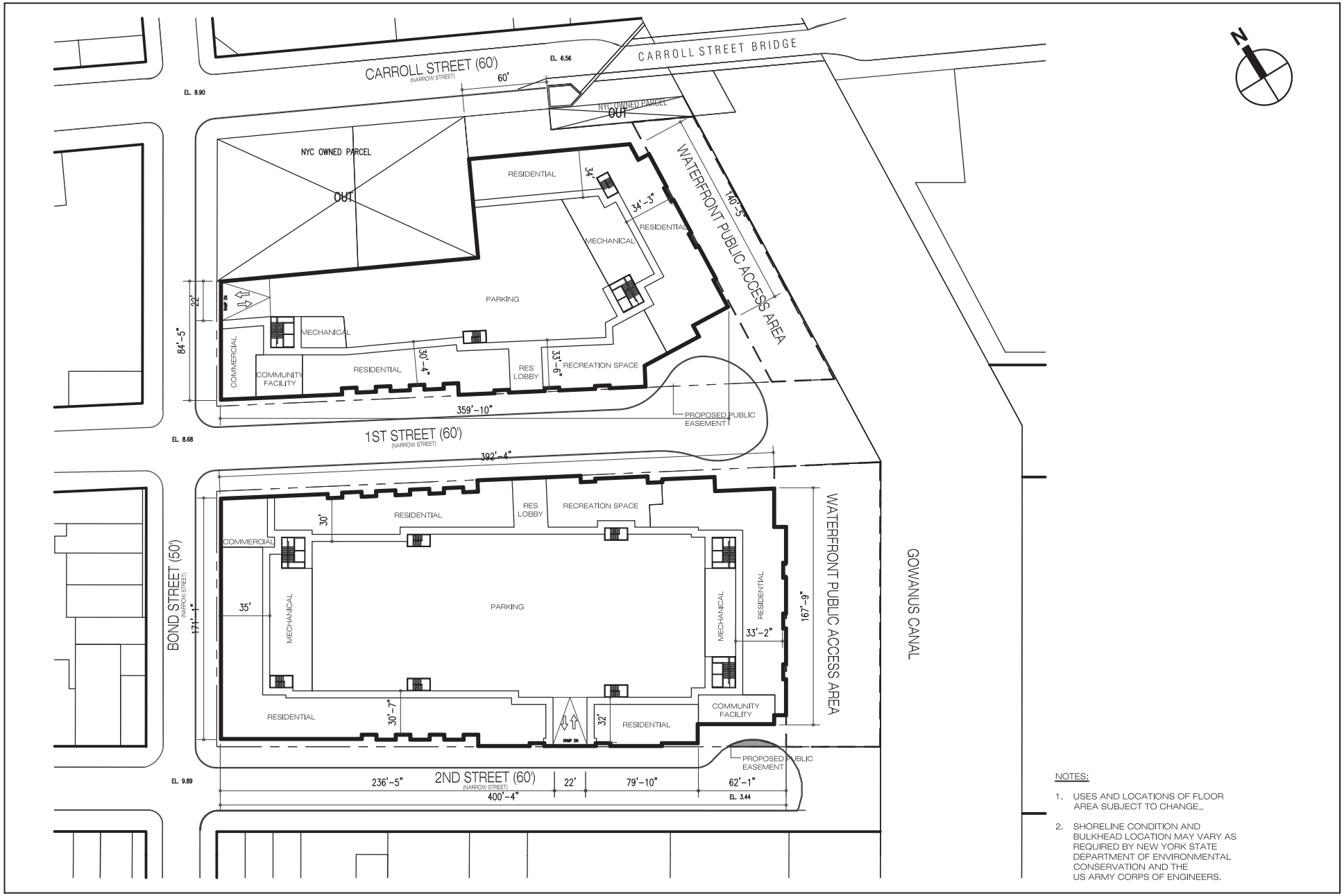
Although the total residential zsf for the As-of-Right Project would be nearly the same as the Special Permit Project (521,279 zsf versus 521,369 zsf), the average unit size would decrease resulting in an additional 253 units for a total of up to approximately 700 units. Of the 700 units, approximately 140 would be reserved for low income households, an incremental increase of 10 units. The As-of-Right Project would also include approximately 2,600 gsf of retail space (a 600 gsf increase over the Special Permit Project) and approximately 2,250 gsf of community facility space (a 250 gsf increase over the Special Permit Project). With the As-of-Right Project, up to approximately 316 accessory off-street parking spaces would be provided, an incremental increase of 47 spaces, in enclosed, attended parking facilities on the ground floor of each building. Entrances to the facilities would be located on Bond Street (for the north building) and the mid-block of 2nd Street (for the south building), as opposed to both sides of the mid-block of 1st Street under the Special Permit Project. The total size of the As-of-Right Project would be approximately 526,143 zsf, a minimal increase of 834 zsf (about 0.16 percent). See **Figures 2a and 2b** for a roof site plan and a ground floor site plan for the As-of-Right Project.

The massing and footprint of the As-of-Right Project would generally be the same as the Special Permit Project with a few minor variations to allow the affordable apartments to be distributed throughout the development, to accommodate the future development by others of a 2,517 sf "sponge park" at the end of 2nd Street, to provide required supplemental public access areas on the south block and to comply with additional height and setback requirements applicable to developments on waterfront zoning lots under the provision of Article VI, Chapter 2 of the Zoning Resolution (Special Regulations Applying in the Waterfront Area). Like the Special Permit Project, the massing with the As-of-Right Project would be distributed to maintain the low-rise character of the Bond Street frontage and the mid-block portions of Carroll, 1st, and 2nd Streets, with taller mid-rise elements (reaching a maximum height of 125 feet above base plane ["ABP"]) along the canal frontage of the Project Site. In lieu of segregating the affordable housing component in separate buildings from the market-rate units, the As-of-Right Project would integrate the entire residential program into two buildings—one on each block (the "North Building" and the "South Building"). With the As-of-Right Project, the affordable and market-rate units would share the same building entrances, lobbies and amenity spaces and have the same average size and floor-to-ceiling heights.

Along Bond Street, the height of the 5-story street walls would increase by approximately 2 feet (to 49.3 feet ABP) and the height of the penthouses would increase by 3 to 4 feet (to approximately 60 feet ABP). Maisonnettes having 5-story street walls (49.3 feet ABP) would replace the townhouses that were



Project Site Roof Plan
Figure 2a



Project Site Ground Floor Plan

Figure 2b

previously approved. Further to the east, the heights of street walls would generally be decreased by 5 feet (to approximately 60 feet ABP), eliminating the need for the height and setback waivers granted pursuant to the Special Permit (see **Figures 3**, **4**, and **5**). Minor variations would also be made in the recesses and articulations of the building façades and in the shapes of the internal courtyards. The addition of the Sponge Park requires the turnaround at the end of 2nd Street to be relocated to the west. To provide the amount of required on-site publicly accessible open space and to accommodate the addition of the Sponge Park and the relocation of the street turnaround, the South Building would be set back over 66 feet from the Gowanus Canal, increasing the amount of on-site publicly accessible open space by 2,955 sf from 23,165 sf under the Special Permit Project to 26,120 sf under the As-of-Right Project. The total on-site and off-site publicly accessible space (including the Sponge Park) would increase to 36,596 sf (0.8 acres). **Figure 6** provides a schematic plan of the proposed open spaces. Under separate applications, Lightstone will seek certifications confirming that the designs of the open spaces conform to the waterfront regulations set forth in Article VI, Chapter 2 of the Zoning Resolution. See **Figures 7a** and **7b** for illustrative renderings of the As-of-Right Project.

The current Base Flood Elevation (also known as the '100-year flood plain') for Brooklyn is 7.45 feet above Brooklyn Highway Datum ("BHD"). The majority of the Project Site and the adjacent portions of 1st, 2nd and Carroll Streets lie below the 100-year Base Flood Elevation. Accordingly, the Special Permit Project included design elements to raise the base elevations of portions of the Project Site to reduce the potential for flood damage or impacts on the proposed residential units. The lowest occupied floor elevation for each of the buildings in the Special Permit Project was proposed to be constructed at 8.65 feet above BHD, providing approximately 1.2 feet of clearance (or "freeboard") above the Base Flood Elevation.

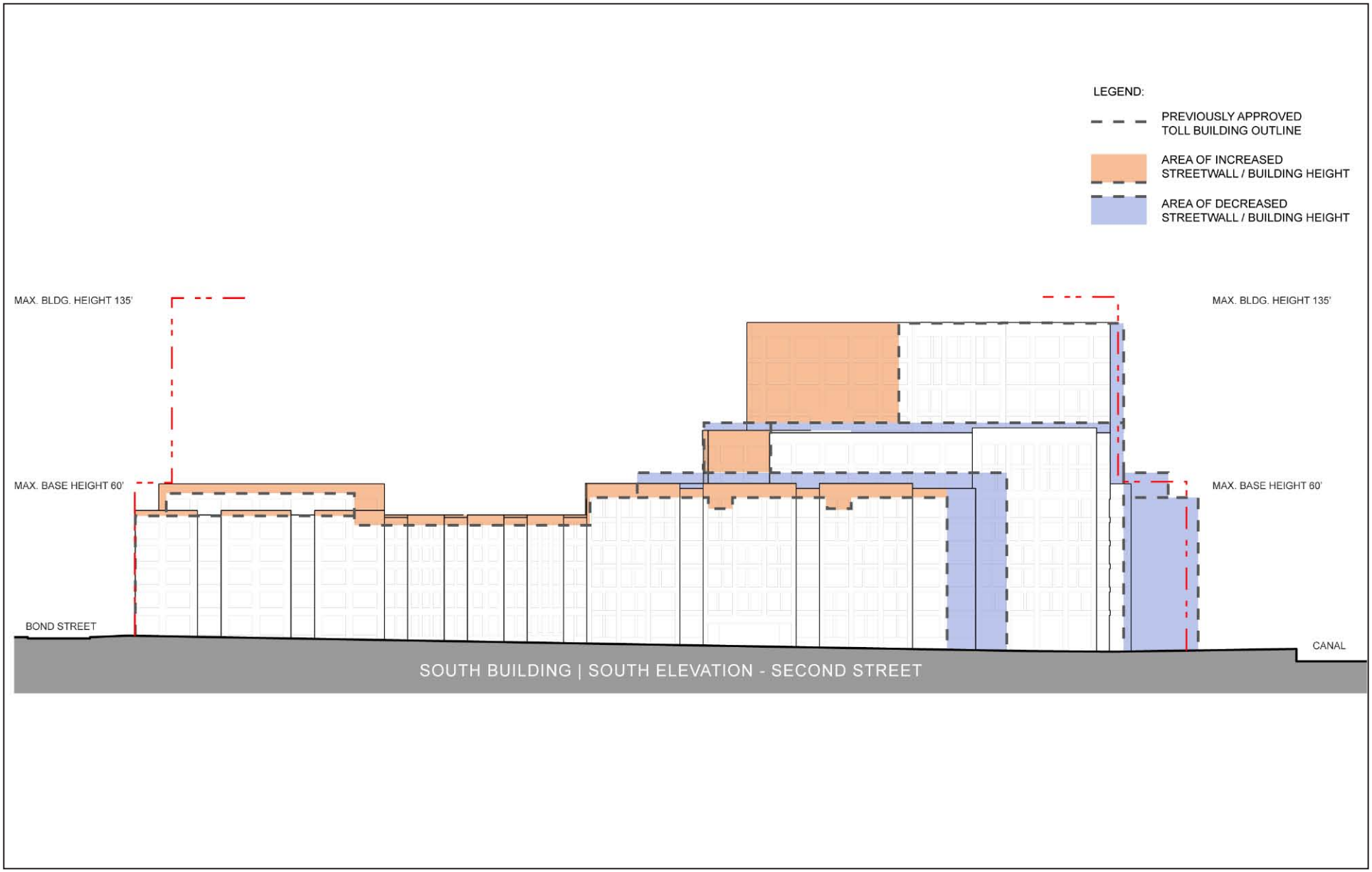
During Hurricane Sandy, storm surge from the Gowanus Canal caused flooding of the Project Site and the surrounding area above the current Base Flood Elevation. According to the flood data provided by the Federal Emergency Management Agency (FEMA) and the United States Geological Survey (USGS), flooding in the vicinity of the Project Site rose to a height of 9.62 feet above BHD.

In response to Hurricane Sandy, FEMA has issued Advisory Base Flood Elevation Maps which set the Advisory Base Flood Elevation for the Project Site at 8.54 feet above BHD. On January 31, 2013, the Department of Buildings promulgated an emergency rule (1 RCNY 3606-04) to amend Appendix G ("Flood Resistant Construction") of the New York City Building Code requiring that multifamily residential buildings provide at least 1 foot of freeboard over the Base Flood Elevation. On February 5, 2013, the Mayor issued Executive Order No. 233 allowing building heights to be measured from a Zoning Design Flood Elevation equal to the Advisory Base Flood Elevation plus the amount of freeboard required under Appendix G, which would equal 9.54 feet above BHD for the As-of-Right Project. The Executive Order anticipates that these modifications will be made permanent through a subsequent amendment to the Zoning Resolution.

The proposed design for the As-of-Right Project sets the level of the lowest floors of the buildings occupied for residential use, as well as all lift and safety systems and major mechanical equipment, at a minimum of 10.62 feet above BHD, which would be 3.17 feet above the current Base Flood Elevation, 2.08 feet above the Advisory Base Flood Elevation and 1.0 feet above the Hurricane Sandy flood level.

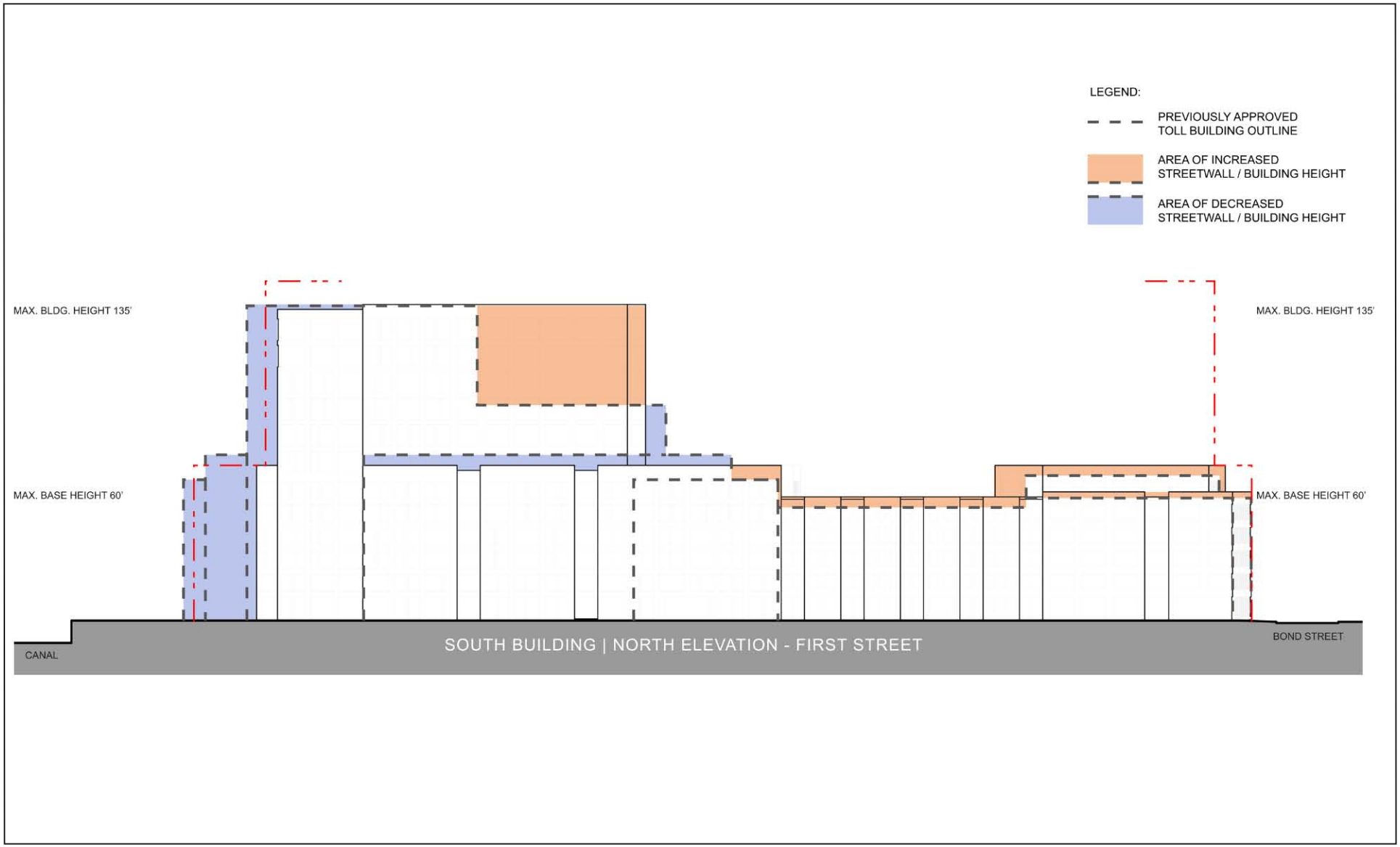
Although the entrance to the off-street parking facility on Second Street cannot be raised to be as high as the elevation of the lowest occupied floor of the proposed building because of the existing street grade, the entrance will be raised to the maximum elevation that is practical and floodgates will be incorporated into the building design and operation to provide flood protection of the facility up to an elevation of 10.62 feet above BHD. In accordance with the 2008 Building Code, parking facilities would be designed as 'bathtub' structures, with walls and floors designed to resist the hydrostatic forces of flood water.

The As-of-Right Project would be built by 2015.



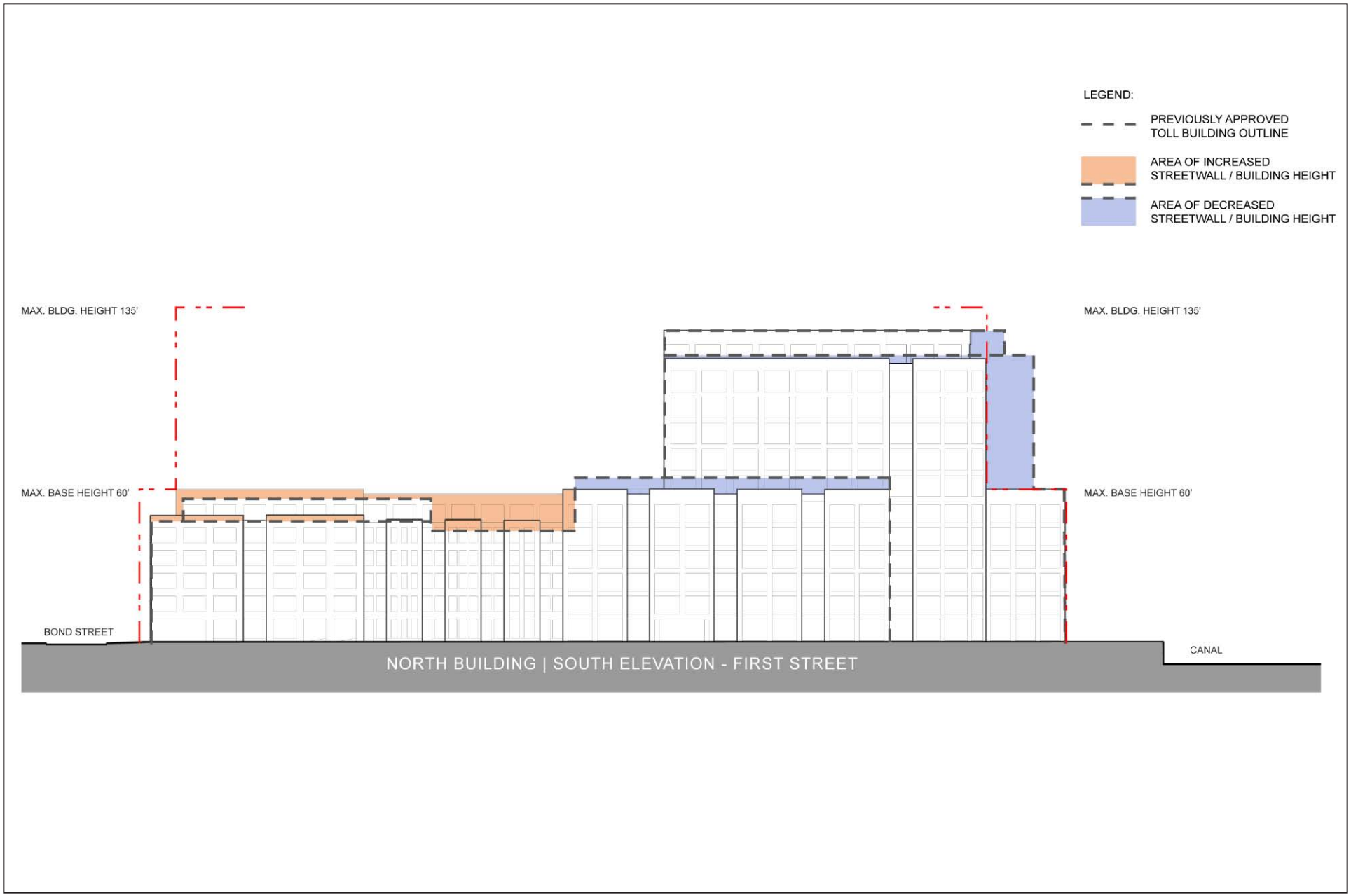
NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Massing–
South Building South Elevation
Figure 3



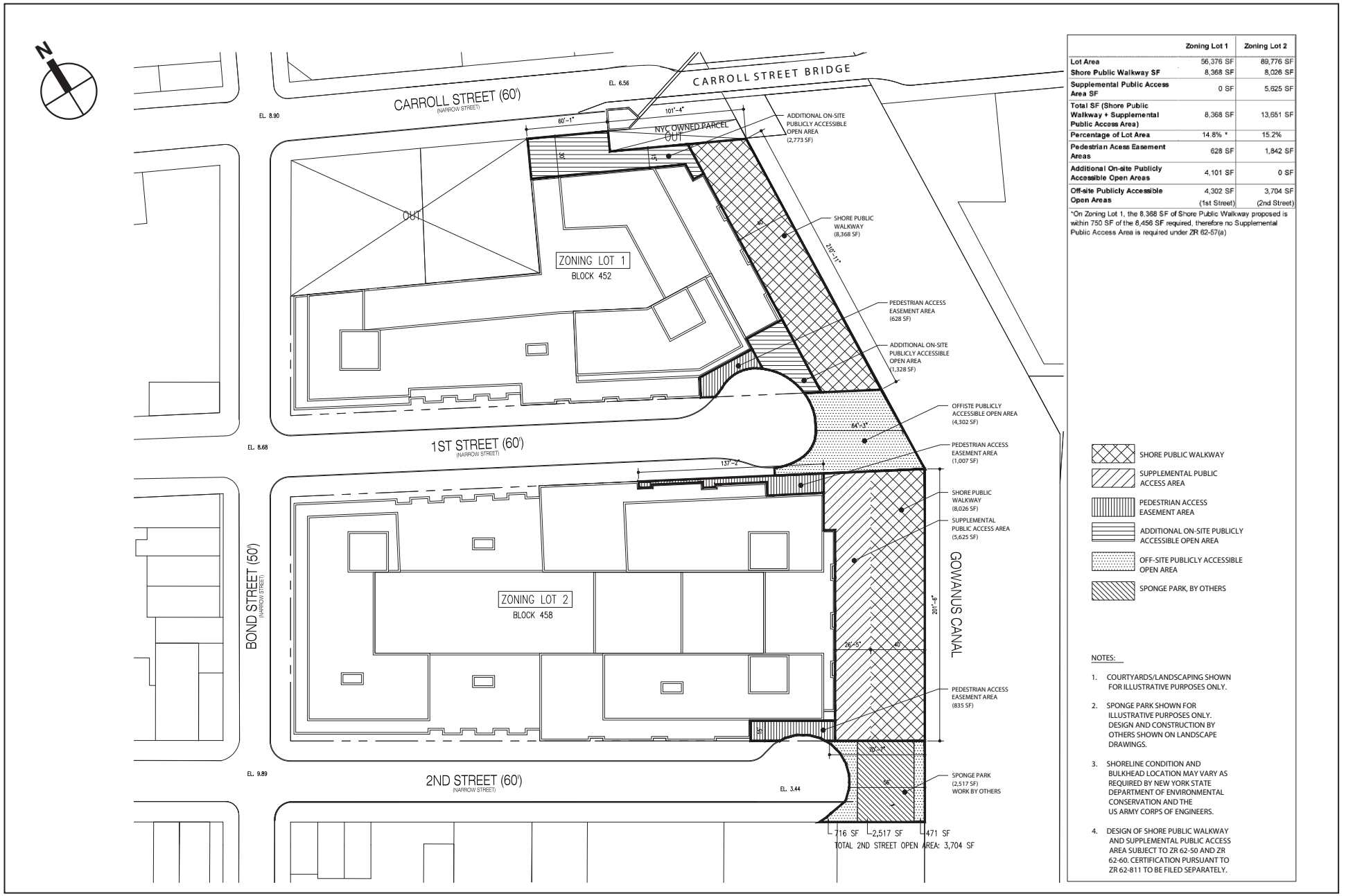
NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Massing–
South Building North Elevation
Figure 4



Proposed Massing–
North Building South Elevation

Figure 5



	Zoning Lot 1	Zoning Lot 2
Lot Area	56,376 SF	89,776 SF
Shore Public Walkway SF	8,368 SF	8,026 SF
Supplemental Public Access Area SF	0 SF	5,625 SF
Total SF (Shore Public Walkway + Supplemental Public Access Area)	8,368 SF	13,651 SF
Percentage of Lot Area	14.8% *	15.2%
Pedestrian Acess Easement Areas	628 SF	1,842 SF
Additional On-site Publicly Accessible Open Areas	4,101 SF	0 SF
Off-site Publicly Accessible Open Areas	4,302 SF (1st Street)	3,704 SF (2nd Street)

*On Zoning Lot 1, the 8,368 SF of Shore Public Walkway proposed is within 750 SF of the 8,456 SF required, therefore no Supplemental Public Access Area is required under ZR 62-57(a)

- SHORE PUBLIC WALKWAY
- SUPPLEMENTAL PUBLIC ACCESS AREA
- PEDESTRIAN ACCESS EASEMENT AREA
- ADDITIONAL ON-SITE PUBLICLY ACCESSIBLE OPEN AREA
- OFF-SITE PUBLICLY ACCESSIBLE OPEN AREA
- SPONGE PARK, BY OTHERS

NOTES:

1. COURTYARDS/LANDSCAPING SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
2. SPONGE PARK SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. DESIGN AND CONSTRUCTION BY OTHERS SHOWN ON LANDSCAPE DRAWINGS.
3. SHORELINE CONDITION AND BULKHEAD LOCATION MAY VARY AS REQUIRED BY NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND THE US ARMY CORPS OF ENGINEERS.
4. DESIGN OF SHORE PUBLIC WALKWAY AND SUPPLEMENTAL PUBLIC ACCESS AREA SUBJECT TO ZR 62-50 AND ZR 62-60. CERTIFICATION PURSUANT TO ZR 62-811 TO BE FILED SEPARATELY.

Open Space Plan
Figure 6

Illustrative Rendering–From Gowanus Canal Facing South

Figure 7a

Illustrative Rendering–Aerial View

Figure 7b

FUTURE WITHOUT THE PROPOSED PROJECT (NO BUILD) ASSUMPTIONS

2009 FEIS

The 2009 FEIS identified ten No Build projects in the study area for the Special Permit Project that were anticipated to be built by 2011. As shown in **Table 1**, these projects are typically residential, and all but two have been built. Recently, a variance was approved by the Board of Standards and Appeals for a new Whole Foods Market at the southwest corner of 3rd Avenue and 3rd Street. This project has not yet been built.

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Table 2 below presents the updated assumptions for No Build development within a 1/4-mile radius of the Project Site. 12 projects are anticipated to be built, including the Whole Foods Market. The No Build projects include a mix of residential, commercial, community facility, and manufacturing uses.

Table 1
No Build Projects from 2009 FEIS

Location	Use	Development Program	Status
340–346 Bond Street (at Carroll Street)	Residential	24 dwelling units	Built
Whole Foods Market/220 3rd Street (at 3rd Avenue)	Commercial retail (supermarket)	52,000 gsf	Unbuilt (variance approved Feb. 2012)
Con Edison/ block bounded by 1st and 3rd Streets, 3rd and 4th Avenues	Office	49, 552 gsf	Built
361 Carroll Street	Residential	15 dwelling units	Built
103–113 3rd Street	Residential	45 dwelling units	Built
306 Bond Street	Residential	11 dwelling units	Built
265 3rd Avenue	Hotel	18,130 gsf	Built
410 4th Avenue	Residential	59 dwelling units	Built
436 4th Avenue	Residential	Unknown	Unbuilt
360 Smith Street	Residential	46 dwelling units	Built

Table 2
No Build Projects for the 2013 Technical Memorandum

Location	Use	Development Program	Build Year
190-220 3rd Street	Retail (Whole Foods Market)	58,000 gsf.	2014
381 3rd Avenue	Community Facility	35,000 gsf	2014
330-332 Bond Street	Residential	4 dwelling units	2014
288-298 Sackett Street	Residential	11 dwelling units	2014
184 3rd Avenue	Community Facility	170,000 gsf	2014
468 Baltic Street	Manufacturing	17,000 gsf	2014
441 Carroll Street	Residential	2 dwelling units	2014
241 8th Street	Residential	2 dwelling units	2014
357 7th Street	Residential	1 dwelling unit	2014
340 4th Avenue	Office	13,386 gsf	2014
563 Carroll Street	Residential	4 dwelling units	2014
465 Carroll Street	Manufacturing	5,555 gsf	2014

C. POTENTIAL FOR SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS UNDER THE AS-OF-RIGHT PROJECT

METHODOLOGY

As noted above, the 2009 FEIS analyzed 447 residential units (comprising 521,369 zsf) on the Project Site. With the As-of-Right Project, the average unit size would decrease allowing for a total of up to 700

units, an incremental increase of 253 units. There would be a 90 sf decrease in total residential zsf (to 521,279 zsf). The As-of-Right Project would also include approximately 2,600 gsf of retail space (a 600 gsf increase over the Special Permit Project) and approximately 2,250 gsf of community facility space (a 250 gsf increase over the Special Permit Project). In addition, the As-of-Right Project would provide approximately 0.8 acres of new publicly accessible open space complying with the waterfront regulations. The As-of-Right Project would be built by 2015. As analyzed below for each CEQR technical area, the development program with the As-of-Right Project would not result in any significant adverse impacts beyond those disclosed in the 2009 FEIS. These analyses utilize the methodologies set forth in the 2012 *CEQR Technical Manual*.

LAND USE, ZONING AND PUBLIC POLICY

The As-of-Right Project would not have any significant adverse impacts on land use, zoning, or public policy. The As-of-Right Project would not change the uses for the Project Site from those of the Special Permit Project. The Project Site would be redeveloped with: market-rate and affordable housing; community facility and commercial uses; and accessory parking. Approximately 0.8 acres of new publicly accessible open space on the Gowanus Canal along the entire project waterfront from 2nd Street on the south to Carroll Street on the north would also be provided on and adjacent to the Project Site. The additional 253 units that would be built as a result of the As-of-Right Project (including 10 additional affordable units) would not alter the conclusion of the 2009 FEIS that the proposed development would be consistent with surrounding uses and existing neighborhood trends. The 2009 FEIS noted a trend toward additional residential development in the area. Since the 2009 FEIS, additional residential projects in the area have been built, including the nearby Third + Bond condominiums at 103-115 3rd Street. Therefore, the As-of-Right Project is consistent with existing land uses in the study area, and would not result in any significant adverse land use impacts. Further, the 0.8-acres of new public open space would provide a land use benefit to the community.

The As-of-Right Project would not result in significant adverse zoning impacts, as they would eliminate the need for height and setback, inner court and rear yard relief. The Project Site lies within the City's waterfront area. Although the Special Permit Project was exempted from having to comply with the regulations set forth in Article VI, Chapter 2 of the Zoning Resolution governing new developments in waterfront areas, the As-of-Right Project is required to comply fully with such regulations. As a result, the 7th through 12th story portions of the North Building would be set back an additional 10 to 20 feet from the Canal in order to provide the required minimum 30-foot setback from the shore public walkway. Likewise, the base of the South Building would be set back an additional 16 to 26 feet from the Canal in order to provide a required supplemental public access area adjacent to the shore public walkway. The base heights of the portions of North Building and South Building fronting the Canal would be reduced from 65 feet ABP to approximately 60 feet ABP. The amount of on-site publicly accessible open space would be increased by 2,955 sf. While the Modified Plans reflect this amount of open space, the ultimate design of such open space is subject to future waterfront certifications (one for each zoning lot comprising the Project Site) by the CPC Chairperson pursuant to Zoning Resolution Section 62-811. The issuance of the certifications is a pre-requisite to obtaining a building permit for the As-of-Right Project.

The As-of-Right Project would continue to support the City's public policy goals with respect to the revitalization of the Gowanus area, and the production of affordable housing. The As-of-Right Project would continue to be consistent with the City's Waterfront Revitalization Program. Therefore, there would not be any significant adverse impacts on land use, zoning, and public policy.

SOCIOECONOMIC CONDITIONS

Neither the Special Permit Project nor the As-of-Right Project would result in direct displacement of residents or businesses from the Project Site. Therefore, there would not be any significant adverse direct displacement impacts due to the As-of-Right Project.

According to the *CEQR Technical Manual*, assessments of indirect displacement are appropriate if a project would introduce 200 residential units or more or 200,000 sf or more of commercial use that is markedly different from existing uses, development, and activities in the neighborhood. The As-of-Right Project would introduce approximately 2,600 gsf of retail space, which is below the CEQR threshold; therefore it would not result in indirect business displacement. The 700 residential units that would be developed as part of the As-of-Right Project would exceed the 200-unit threshold warranting an assessment of indirect residential displacement. However, according to the *CEQR Technical Manual*, if the population increase is less than 5 percent within the study area, the proposed project would not be expected to substantially change the demographic composition or alter real estate market conditions in the study area. An additional 700 units would increase the population of the study area by 1,533 residents.[2] According to the 2010 U.S. Census data, the population of the ½-mile study area is 35,489.[3] Therefore, the As-of-Right Project would increase the population of the study area by 4.3 percent. As this increase does not meet the CEQR threshold of five percent, the As-of-Right Project would not result in any significant adverse socioeconomic impact due to indirect residential displacement.

Similar to the Special Permit Project, the As-of-Right Project would not significantly affect business conditions in any industry or any category of businesses within or outside the study area, nor would they indirectly substantially reduce employment or have an impact on the economic viability in the industry or category of businesses. Therefore, the As-of-Right Project would not result in significant adverse impacts on any specific industries. Overall, the As-of-Right Project would not result in any significant adverse socioeconomic impacts.

COMMUNITY FACILITIES

The As-of-Right Project would not have any significant adverse impact on community facilities. As analyzed below, the As-of-Right Project would result in an increase in elementary school students in the study area of approximately three percent, which is below the five percent threshold for a significant adverse impact. Intermediate schools in the study area would operate with surplus capacity in the Build condition, and therefore the As-of-Right Project would not significantly adversely impact intermediate schools. The As-of-Right Project would result in 700 new residential units on the Project Site, which is below the CEQR threshold of 734 units for a preliminary analysis of impacts on libraries. Child care facilities in the study area would operate with surplus capacity in the Build condition, and therefore the As-of-Right Project would not result in any significant adverse impacts on public child care services. The As-of-Right Project would not result in the development of a substantial new neighborhood, and therefore would not adversely impact healthcare or police and fire protection services.

PUBLIC SCHOOLS

The *CEQR Technical Manual* recommends conducting a detailed analysis of public schools if a project would generate more than 50 elementary/intermediate school students and/or more than 150 high school students. Based on the development of 700 residential units and the student generation rates provided by the 2012 *CEQR Technical Manual* (0.29 elementary, 0.12 intermediate, and 0.14 high school students per housing unit in Brooklyn), the As-of-Right Project would generate approximately 203 elementary school students, 84 intermediate school students, and 98 high school students. This number of students warrants a detailed analysis of the projects' potential impacts on elementary and intermediate schools. The analysis below finds that the As-of-Right Project would not result in any significant adverse impacts on public schools in the study area.

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[2] Assuming an average household size of 2.19 (Brooklyn Community District 6, U.S. Census, 2010).

[3] This includes all census tracts that are at least 50 percent within a ½-mile radius from the Project Site. See Table 8, below.

Methodology

This analysis uses the methodologies set forth in the *CEQR Technical Manual*. The assessment considers existing enrollment and capacity in local schools and future conditions based on a draft list of No Build developments prepared by AKRF, SCA enrollment projections, the SCA capital plan, and the residential program of the As-of-Right Project. The analysis assumes that the As-of-Right Project would contain 700 residential units and would be completed by 2015. The assessment uses the most current available data from SCA, including the *2011-2012 Enrollment/Capacity/Utilization Report*, and enrollment projections for 2009-2018.

This analysis concludes that the As-of-Right Project would not result in significant adverse impacts on elementary or intermediate schools, based on the current *CEQR Technical Manual* methodology. No analysis of high schools is required because the As-of-Right Project would not introduce more than 150 high school students.

According to the *CEQR Technical Manual*, the primary study area for analyses of elementary and intermediate schools is the sub-district of the school district in which the project is located. The sub-district study areas are the study areas used for the determination of impacts on elementary and intermediate schools. The Project Site is located in Sub-district 3 of Community School District (CSD) 15. The boundary of the sub-district is shown on **Figure 8**. This preliminary analysis considers the potential for impacts on the sub-district, based on the number of units that the As-of-Right Project would introduce into the sub-district.

The tables below provide the data used in this analysis. **Table 3** provides information on the schools that serve the study area and presents the most current enrollment and capacity data for these schools. **Table 4** outlines the number of new students that would be introduced by nearby development in the future without the As-of-Right Project (the No Build condition) and those that would be introduced by the As-of-Right Project in each study area. **Table 5** incorporates the new students projected from No Build developments and planned new school capacity and estimates the enrollment and capacity of elementary and intermediate schools in the No Build condition. **Table 6** adds the new students introduced by the As-of-Right Project and estimates the enrollment and capacity of schools in the future (the Build condition).

Existing Conditions

As shown in **Table 3**, there are nine elementary schools and five middle schools in Sub-District 3/CSD 15. Elementary schools in the sub-district are currently operating at 90 percent utilization, with a surplus of 514 seats. Intermediate schools are currently operating at 67 percent utilization, with a surplus of 621 seats.

Future without the As-of-Right Project (No Build Condition)

In the No Build condition, enrollment at elementary and intermediate schools in the study area is expected to increase. This analysis accounts for increases in enrollment predicted in the SCA enrollment projections and, as a conservative measure, also includes students introduced by other specific No Build developments.

The latest available SCA enrollment projections for Sub-District 3/CSD 15 project an increase to elementary and intermediate enrollment over the next several years (to 2018). These enrollment increases form the baseline projected enrollment in the No Build condition, shown in **Table 5** in the column named "Projected Enrollment in 2015." The students introduced by other specific No Build developments are added to this baseline projected enrollment.

As per the guidelines of the *CEQR Technical Manual*, the SCA No-Build Student Numbers for Sub-District 3/CSD 15 (derived from the SCA's "Projected New Housing Starts") were used for the No Build analysis. As shown in **Table 4**, approximately 589 elementary and 97 intermediate school students are expected to be added to the sub-district.

Public Elementary and Intermediate Schools Serving the Study Area

Figure 8

Table 3
Public Elementary and Intermediate Schools Serving the Study Area, Enrollment and Capacity Data, 2011-2012 School Year

Map No.	Name	Address	Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
Sub-district 3 of CSD 15						
1	PS 15 Patrick F. Daly	71 Sullivan Street	380	407	27	93%
2	PS 29 John M. Harrington	425 Henry Street	708	760	52	93%
3	PS 32 Samuel Mills Sprole	317 Hoyt Street	171	389	218	44%
3	PS 32 Transportable	317 Hoyt Street	127	164	37	77%
4	PS 38 The Pacific School	450 Pacific Street	464	673	209	67%
5	PS 58 The Carroll School	330 Smith Street	869	760	-109	114%
6	PS 146	610 Henry Street	638	493	-145	129%
7	PS 261 Philip Livingston	314 Pacific Street	786	736	-50	107%
7	PS 261 Transportable	314 Pacific Street	36	27	-9	133%
8	Red Hook Neighborhood School	27 Huntingdon Street	255	544	319	41%
9	PS 418 Children's School	512 Carroll Street	326	291	-35	112%
Sub-district 3 of CSD 15 Total			**4,730**	**5,244**	**514**	**90%**
Intermediate Schools						
Sub-district 3 of CSD 15						
10	IS 447 Math and Science Exploratory School	345 Dean Street	491	726	235	68%
11	K429 School for Global Studies (IS component)	284 Baltic Street	96	225	130	42%
11	K497 School for Intl Studies (IS component)	284 Baltic Street	156	245	90	63%
6	IS 448 (IS component)	610 Henry Street	325	340	15	96%
3	IS 442 New Horizons	317 Hoyt Street	174	325	151	54%
Sub-district 3 of CSD 15 Total			**1,241**	**1,862**	**621**	**67%**

Notes: See Figure 2
Sources: DOE *Utilization Profiles: Enrollment/Capacity/Utilization, 2011-2012*.

Table 4
Projected Estimated Number of New Students Introduced In the Study Area: 2015 Future No Build Condition

Study Area	Projected New Students	
	Elementary	Intermediate
Sub-district 3 of CSD 15	589	97

Source: SCA Capital Planning Division

According to the SCA's capital plan, no changes in capacity affecting Sub-district 3/CSD 15 will occur by 2015.

As shown in **Table 5**, elementary schools and intermediate schools in the sub-district study area would operate over capacity (128 percent utilization) with a deficit of 1,446 seats in the future without the As-of-Right Project. Intermediate schools would operate with a surplus of 432 seats (77 percent utilization).

Future with the As-of-Right Project (Build Condition)

As summarized in **Table 6**, the As-of-Right Project would introduce approximately 700 residential units. These units could introduce approximately 203 elementary students and 84 intermediate school students to Sub-district 3/CSD 15.

Table 5
Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization: 2015 Future No Build Condition

Study Area	Projected Enrollment in 2015[1]	Students Introduced by Residential Development in No Build	Total No Build Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
Sub-district 3 of CSD 15	6,101	589	6,690	5,244	-1,446	128%
Intermediate Schools						
Sub-district 3 of CSD 15	1,333	97	1,430	1,862	432	77%

Notes:
[1] Elementary and intermediate school enrollment in each sub-district study area in 2015 was calculated by applying SCA supplied percentages for each sub-district to the relevant district enrollment projections. For CSD 3/Sub-District 15, the district's 2015 elementary projection of 21,309 was multiplied by 28.63 percent. The sub-district's intermediate projection of 4,850 was multiplied by 27.48 percent.
Sources: DOE *Enrollment Projections 2009-2018 by the Grier Partnership*; DOE, *Utilization Profiles: Enrollment/Capacity/Utilization, 2011-2012*, DOE 2010-2015 *Five-Year Capital Plan, Proposed Amendment*, November 2011; School Construction Authority.

Table 6
Estimated Number of Students Introduced in the Study Area: 2015 Future Build Condition

Study Area	Housing Units	Elementary Students	Intermediate Students
Sub-district 3 of CSD 15	700	203	84

Sources: 2012 *CEQR Technical Manual*, Table 6-1a.

As shown in **Table 7**, the total elementary school enrollment of CSD 15/Sub-District 3 would increase to 6,893, resulting in a deficit of 1,649 seats (131 percent utilization). The total intermediate school enrollment of the sub-district would increase to 1,514, with a surplus of 348 seats (81 percent utilization).

Table 7
Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization: 2015 Future Build Condition

Study Area	Future No Build Enrollment	Students Introduced by the As-of-Right Project	Total With Project Enrollment	Capacity	Available Seats	Utilization	Increase in Utilization over No Build
Elementary Schools							
Sub-district 3 of CSD 15	6,690	203	6,893	5,244	-1,649	131	**3%**
Intermediate Schools							
Sub-district 3 of CSD 15	1,430	84	1,514	1,862	348	81%	**4%**

Sources: DOE *Enrollment Projections 2009-2018 by the Grier Partnership*; DOE, *Utilization Profiles: Enrollment/Capacity/Utilization, 2011-2012*, DOE 2010-2015 *Five-Year Capital Plan, Proposed Amendment*, November 2011; School Construction Authority.

According to the *CEQR Technical Manual*, a significant adverse impact may occur if a proposed project would result in:

1. A utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 100 percent in the future Build condition; and
2. An increase of five percentage points or more in the collective utilization rate between the No Build and Build conditions.

Although elementary schools in the sub-district would operate with a shortfall of seats in 2015, the increase attributable to the As-of-Right Project would be approximately 3 percent, which is below the five percent CEQR threshold for a significant adverse impact. Therefore, the As-of-Right Project would not result in a significant adverse impact on elementary schools.

Intermediate schools in the sub-district would operate with a surplus of seats in 2015, and the As-of-Right Project would increase the intermediate school enrollment of the sub-district by approximately four percent. As intermediate schools in Sub-district 3/CSD 15 would operate with surplus capacity and the increase attributable to the As-of-Right Project would be less than five percent, the As-of-Right Project would not result in a significant adverse impact.

Overall, the As-of-Right Project would not result in any significant adverse impacts on public schools in the study area by 2015.

LIBRARIES

The As-of-Right Project would result in 700 new residential units on the Project Site. As with the Special Permit Project, this number is below the CEQR threshold of 734 units for a preliminary analysis of impacts on libraries. Therefore the modified program would not result in significant adverse impact on public libraries.

CHILD CARE

Introduction

According to the *CEQR Technical Manual*, if a project would add more than 20 children eligible for child care to the study area's child care facilities, a detailed analysis of its impact on publicly funded child care facilities is warranted. This threshold is based on the number of low-income and low/moderate-income units introduced by a proposed project.[4] In Brooklyn, projects introducing 110 or more low- to moderate-income units would introduce 20 or more children eligible for child care services. Because the As-of-Right Project is anticipated to introduce approximately 140 affordable housing units through the City's Inclusionary Housing program, a detailed child care analysis is warranted.

Methodology

The New York City Administration for Children's Services (ACS) provides subsidized child care in center-based group child care, family based child care, informal child care, and Head Start. Publicly financed child care services are available for income-eligible children up to the age of 12. In order for a family to receive subsidized child care services, the family must meet specific financial and social eligibility criteria that are determined by federal, state, and local regulations. In general, children in families that have incomes at or below 200 percent Federal Poverty Level (FPL), depending on family size, are financially eligible, although in some cases eligibility can go up to 275 percent FPL. The family must also have an approved "reason for care," such as involvement in a child welfare case or participation in a "welfare-to-work" program. Head Start is a federally funded child care program that provides children with half-day or full-day early childhood education; program eligibility is limited to families with incomes 130 percent or less of federal poverty level.

Most children are served through contract with private and nonprofit organizations that operate child care programs throughout the City. Registered or licensed providers can offer family based child care in their homes. Informal child care can be provided by a relative or neighbor for no more than two children. Children aged two months through 12 years old can be cared for either in group child care centers licensed by the Department of Health or in homes of registered child care providers. ACS also issues vouchers to eligible families, which may be used by parents to pay for child care from any legal child care provider in the City.

[4] Low-income and low/moderate-income are the affordability levels used in the *CEQR Technical Manual*. They are intended to approximate the financial eligibility criteria established by the Administration for Children's Services, which generally corresponds to 200 percent Federal Poverty Level or 80 percent of area median income.

Publicly financed child care centers, under the auspices of the New York City Division for Child Care and Head Start (CCHS) within ACS, provide care for the children of income-eligible households. Space for one child in such child care centers is termed a "slot." These slots may be in group child care or Head Start centers, or they may be in the form of family based child care in which 7 to 12 children are placed under the care of a licensed provider and an assistant in a home setting.

Since there are no locational requirements for enrollment in child care centers, and some parents or guardians choose a child care center close to their employment rather than their residence, the service areas of these facilities can be quite large and not subject to strict delineation in order to identify a study area. However, according to the current methodology for child care analyses in the *CEQR Technical Manual*, the locations of publicly funded group child care centers within 1½ miles or so of the Project Site should be shown, reflecting the fact that the centers closest to the Project Site are more likely to be subject to increased demand. Current enrollment data for the child care and Head Start centers closest to the Project Site was gathered from ACS.

The child care enrollment in the No Build condition was estimated by multiplying the number of new low-income and low/moderate-income housing units expected in the 1½-mile study area by the *CEQR Technical Manual* multipliers for estimating the number of children under age six eligible for publicly funded child care services (Table 6-1b). For Brooklyn, the multiplier estimates 0.178 public child care-eligible children under age six per low- and low/moderate-income household. The estimate of new public child care-eligible children was added to the existing child care enrollment to estimate enrollment in the No Build condition.

The child care-eligible population introduced by the As-of-Right Project was also estimated using the *CEQR Technical Manual* child care multipliers. The population of public child care eligible children under age six was then added to the child care enrollment calculated in the No Build condition. According to the *CEQR Technical Manual*, if a proposed action would result in a demand for slots greater than remaining capacity of child care centers, and if that demand constitutes an increase of 5 percent or more of the collective capacity of the child care centers serving the area of the proposed action, a significant adverse impact may result.

Existing Conditions

There are 14 publicly funded group child care facilities and 2 Head Start facilities within the study area (see **Figure 9).** The child care and head start facilities have a total capacity of 951 slots and have 117 available slots (88 percent utilization). **Table 8** shows the current capacity and enrollment for these facilities. Family based child care facilities and informal care arrangements provide additional slots in the study area, but these slots are not included in the quantitative analysis.

The Future without the As-of-Right Project (No Build Condition)

In the No Build condition, approximately 322 new affordable housing units will be developed in the 1½-mile study area by 2015.[5] Based on the CEQR generation rates for the projection of children eligible for publicly funded day care multipliers, this amount of development would introduce approximately 57 new children under the age of six who would be eligible for publicly funded child care programs.

Based on these assumptions, the number of available slots in the No Build condition will decrease, but utilization will remain below 100 percent. As described above, there is currently a combined surplus of 117 seats in group child care and head start programs. When the estimated 57 children under age six introduced by planned development projects are added to this total, there will be a surplus of 60 seats in publicly funded child care programs in the study area (94 percent utilization).

[5] Assuming that 20 percent of units in developments of 20 or more units would be occupied by low- or low/moderate-income households meeting the financial and social criteria for publicly funded child care.

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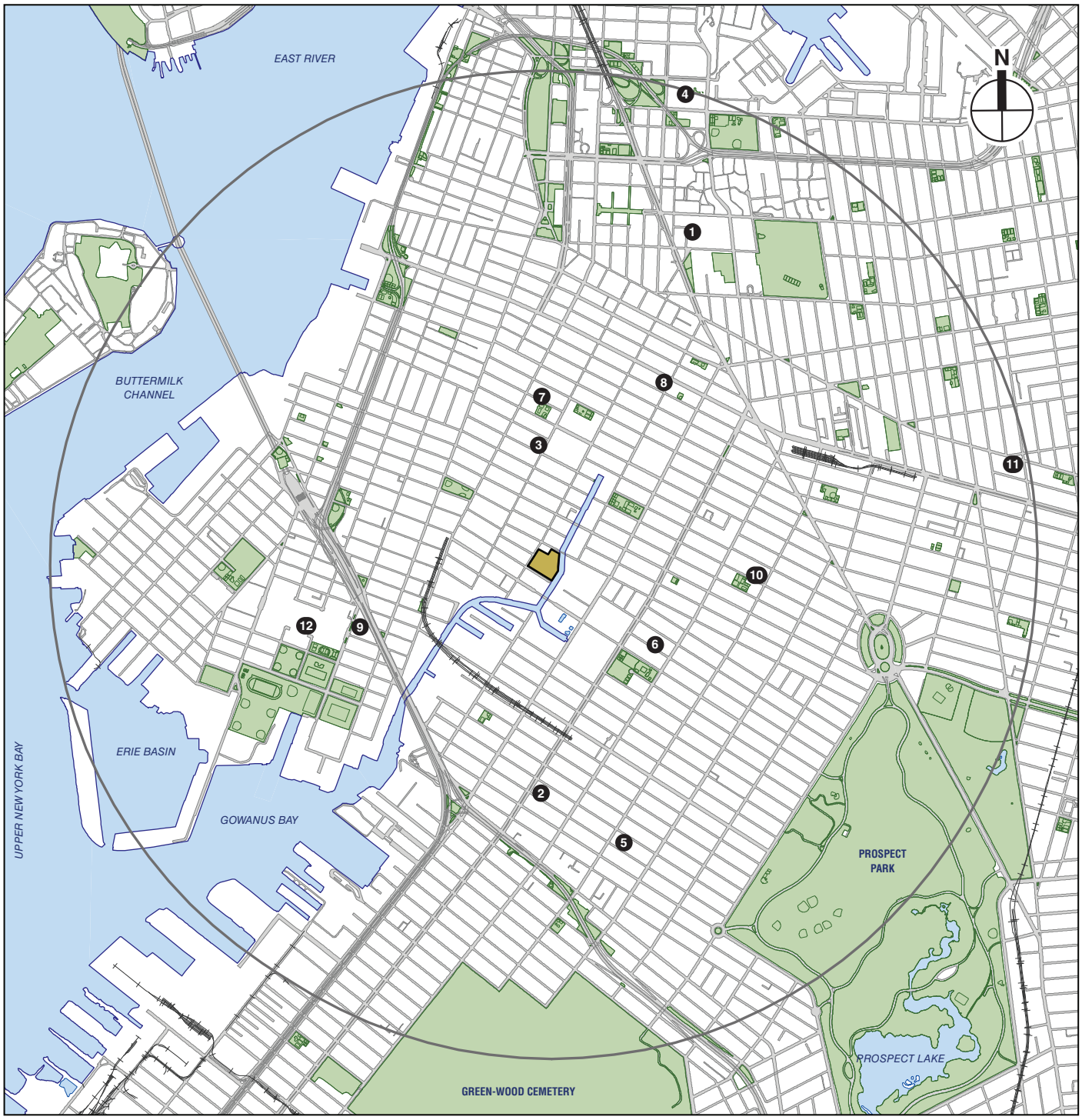

Project Site

1-1/2-Mile Perimeter from Project Site

1 Child Care Facility

0 3000 FEET

SCALE

Public Child Care Facilities
Serving the Study Area

Figure 9

Table 8
Publicly Funded Child Care Facilities Serving the Study Area

Map ID	Name	Address	Enrollment	Capacity	Available Slots	Utilization Rate
		Child Care				
1	Brooklyn Bureau of Community Service	101 Fleet Place	79	90	11	88
2	A.C.E. Early Childhood Center	199 14 St	33	35	2	94
3	Bethel Baptist Day Care Center	242 Hoyt St	32	40	8	80
3	Strong Place Day Care Center	242 Hoyt St	47	55	8	85
4	Farragut Children's Center	32 Navy St	30	44	14	68
5	Shirley Chisholm Day Care Center	333 14th St	68	85	17	80
6	Alonzo A. Daughtry Memorial Day Care Center 2	333 2nd St	49	55	6	89
7	Warren Street Center for Children and Families	343 Warren St	73	80	7	91
8	Nevins Day Care Center	460 Atlantic Ave	52	60	8	87
8	Nat Turner Day Care Center	460 Atlantic Ave	27	30	3	90
8	Alonzo A. Daughtry Memorial Day Care Center	460 Atlantic Ave	32	30	-2	107
9	Police Athletic League Miccio Daycare Center	595 Clinton St	50	75	25	67
10	Helen Owen Carey Child Development Center	71 Lincoln Place	97	105	8	92
11	Young Minds Day Care Center	972 Fulton St	60	62	2	97
	Child Care Total		***729***	***846***	***117***	***86***
		Head Start				
12	Police Athletic League Miccio Head Start	120 W 9 St	57	57	0	100
13	Police Athletic League World of Little People Head Start	565 Baltic St	48	48	0	100
	Head Start Total		***105***	***105***	***0***	***100***
	Grand Total		**834**	**951**	**117**	**88**

Sources: ACS, November and December 2011.

Future with the As-of-Right Project (Build Condition)

The As-of-Right Project would introduce approximately 140 affordable units by 2015. To provide a conservative analysis, it is assumed that all of these units would meet the financial and social eligibility criteria for publicly funded child care. Based on CEQR child care multipliers, this development would generate approximately 25 children under the age of six who would be eligible for publicly funded child care programs.

As noted above, the *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 5 percent of the study area capacity could result in a significant adverse impact. With the addition of these children, child care facilities in the study area would operate at 96 percent utilization, with a surplus of 35 slots. Total enrollment in the study area would increase to 916 children, compared with a capacity of 951 slots, which represents an increase in the utilization rate of 2 percentage points over the No Build condition. As child care facilities in the study area would continue to operate with a surplus of seats, and the increase in the utilization rate due to the As-of-Right Project would be less than five percent, the As-of-Right Project would not 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 ACS-contracted 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 public center 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 public child care centers outside of the study area.

HEALTH CARE AND POLICE AND FIRE PROTECTION SERVICES

According to the *CEQR Technical Manual*, a project must have a direct effect on a health care, police, or fire services facility, or introduce a sizeable new neighborhood (e.g., Hunters' Point South) to warrant an

analysis. As with the Special Permit Project, the As-of-Right Project would not meet either criteria and would not result in a significant adverse impact on healthcare, police, or fire protection services.

OPEN SPACE

The As-of-Right Project would not have a significant adverse impact on open space resources because none of the applicable thresholds would be exceeded. According the *CEQR Technical Manual* a project may have a direct effect on open space by displacing existing open space resources or an indirect on open space by introducing a new population that would overburden existing resources. The Project Site does not contain any existing open spaces, and therefore, an analysis of direct impacts is not warranted. As the Project Site is located in an area that is neither well-served nor under-served by existing open space resources, an assessment of indirect impacts is warranted if a project would introduce 200 residents or 500 employees. As the As-of-Right Project would introduce over 200 residents, an assessment of indirect impacts on open space from these residents is provided below. The As-of-Right Project would not result in a substantial new worker population, and therefore, an assessment of non-residential impacts is not warranted. The analysis below finds that the As-of-Right Project would not result in any new significant adverse impacts on public open space in the study area.

Methodology

The As-of-Right Project would include 700 residential units, which would introduce 1,533 new residents to the Project Site.[6] Because more than 200 new residents would be introduced to the project area, a preliminary analysis was conducted to assess the As-of-Right Project' potential indirect impacts on open space resources in the area. Using the methodology of the *CEQR Technical Manual*, the adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population—the open space ratio. This quantitative measure is then used to assess the changes in the adequacy of open space resources in the future, both with and without the As-of-Right Project. In addition, qualitative factors are considered in making an assessment of the As-of-Right Project' impacts on open space resources.

Study Area

The *CEQR Technical Manual* recommends establishing study area boundaries as the first step in an open space analysis. Residents are considered likely to use both passive and active open spaces within a ½ mile of their residence. The residential study includes all census tracts that fall at least 50 percent within a ½-mile radius around the Project Site. **Figure 10** shows all census tracts included in the residential study area.

Open Space User Populations: Existing Conditions

2010 U.S. Census data was used to calculate the residential population of the study area, including all census tracts that fall at least 50 percent within a ½-mile radius around the Project Site.

Open Space User Populations: Future without the As-of-Right Project (No Build Condition)

By 2015, new No Build developments are anticipated to add 24 residential units to the study area. Assuming an average household size of 2.19 persons per household (Brooklyn Community District 6, U.S. 2010 Census), the number of new residents introduced by these developments was added to the existing study area populations to calculate the total resident population in the study area in the future No Build condition.

Open Space User Populations: Future with the As-of-Right Project (Build Condition)

The residential population introduced by the As-of-Right Project was estimated by multiplying the number of units by 2.19 (the average household size for Brooklyn Community District 6). The number of

[6] Assuming an average household size of 2.19 (Brooklyn Community District 6, U.S. Census, 2010).

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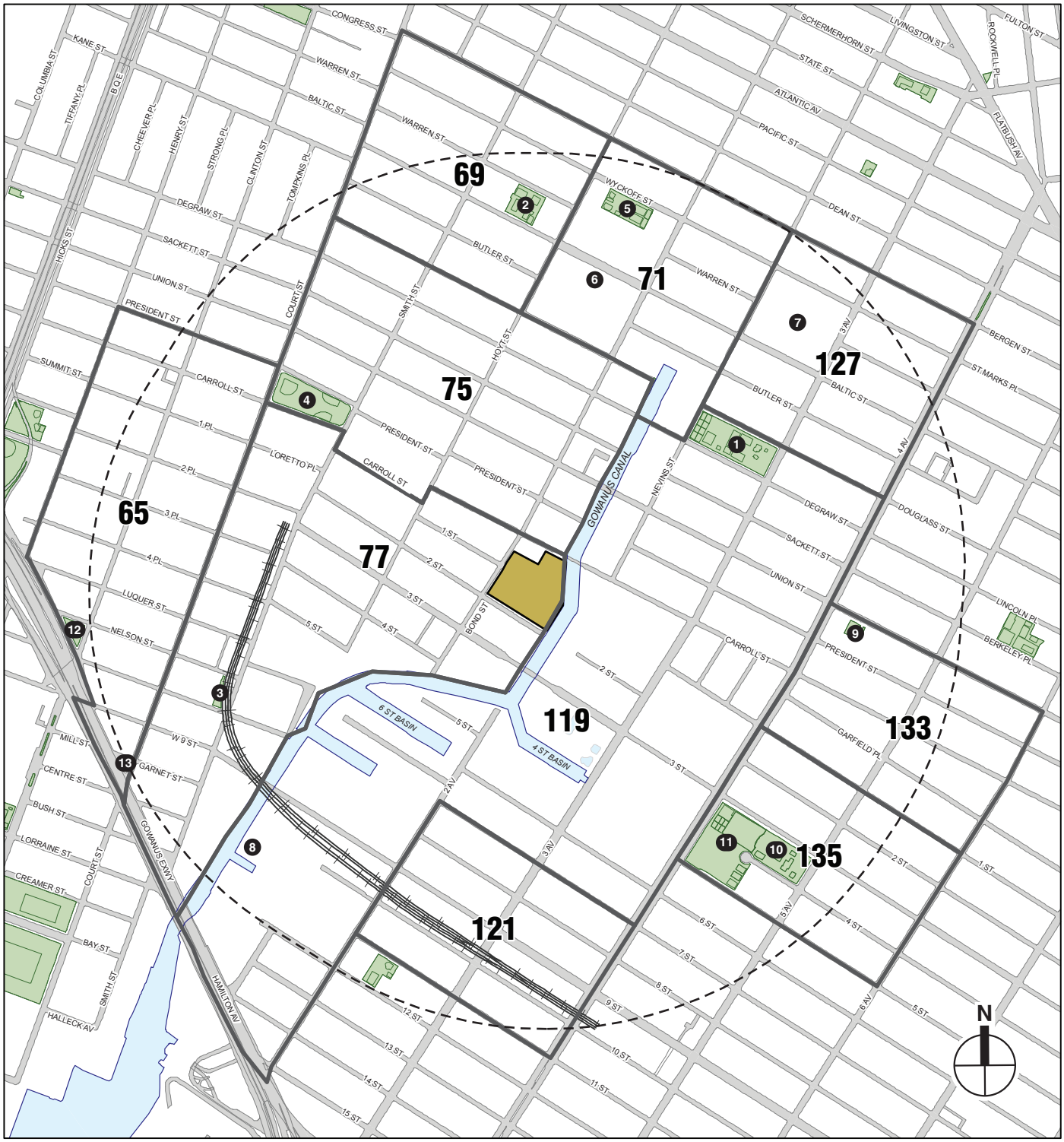


Project Site

1/2-Mile Perimeter from Project Site

Study Area Census Tract Boundary

119 *Study Area Census Tract Number*

1 *Open Space Resource (see Table 1 for reference)*

0 800 FEET

SCALE

Study Area Open Spaces

Figure 10

new residents introduced by the As-of-Right Project was added to the study area population in the No Build condition to calculate the total resident population in the study area in the Build condition.

Inventory of Open Space Resources

The *CEQR Technical Manual* defines public open space as open space that is regularly open to the public during designated daily periods. Open spaces that do not fit this definition because they are not available to the public on a regular basis or are available only to a limited set of users are considered private open space and are not included in the quantitative open space analysis. A private, fee-charging health club or a roof deck for residents of a particular building is an example of a private open space.

All publicly accessible open spaces and recreational facilities within the study areas were identified. The inventory of open spaces was assembled based on field visits conducted in February 2012 and information from the New York City Department of Parks and Recreation (DPR). Published EISs for recent projects in or near the study area were also consulted.

The character, condition, and use of the publicly accessible open spaces and recreational facilities within the study areas were recorded during field visits. Active and passive amenities were noted at each open space. Active facilities are intended for vigorous activities, such as jogging, field sports, and children's active play. Such facilities might include basketball and handball courts, jogging paths, ball fields, and playground equipment. Passive facilities encourage such activities as strolling, reading, sunbathing, and people watching. Passive open spaces are characterized by picnic areas, walking paths, or gardens. Certain areas, such as lawns or public esplanades, can serve as both active and passive open spaces.

Adequacy of Open Space Resources: Comparison to City Guidelines

The adequacy of open space in the study area was quantitatively assessed using a ratio of useable open space acreage to the study area population (the "open space ratio"). The open space ratio was compared to City open space planning guidelines. The following guidelines are used in this type of analysis:

For residential populations, two guidelines are used. The first is a citywide median open space ratio of 1.5 acres per 1,000 residents. In New York City, local open space ratios vary widely, and the median ratio at the Community District level is 1.5 acres of open space per 1,000 residents. The second is an open space planning goal established for the City of 2.5 acres per 1,000 residents—2.0 acres of active and 0.5 acres of passive open space per 1,000 residents—for large scale plans and proposals. However, these goals are often not feasible for many areas of the City, and they are not considered an impact threshold. Rather, they are used as benchmarks to represent how well an area is served by its open space resources.

Adequacy of Open Space Resources: Impact Assessment

Impacts are based on how a project would change the open space ratios in the study area. According to the *CEQR Technical Manual*, if a proposed project would result in a decrease approaching or exceeding 5 percent, it is considered to substantially change open space conditions and a detailed analysis may be warranted.

The *CEQR Technical Manual* recommends that the quantitative open space analysis described above be supplemented by an examination of qualitative factors. These factors include the proximity to "destination" resources, the beneficial impacts of any open space added by a proposed project, and the comparison of projected open space ratios with established City guidelines. It is recognized that the open space ratios of the City guidelines described above are not feasible for many areas of the City, and they are not considered impact thresholds on their own. Rather, they are benchmarks that indicate how well an area is served by open space.

Existing Conditions

Table 9 and **Figure 10** show the 13 publicly accessible open space and recreational resources located within the ½-mile study area. The study area contains a total of 16.33 acres (711,335-sf) of open space, of

which 5.86 acres (255,262-sf) are passive open space and 10.47 acres (456,073-sf) are active open space. As of February 2012, three study area parks are closed for renovations: St. Mary's Park, Nicholas Naquan Heyward Jr. Park, and J.J. Byrne Park. These parks are listed in **Table 1** but are not included in the open space acreage totals for the analysis of existing conditions. Excluding these closed resources, the total available open space is 11.89 acres (517,928-sf), of which 4.88 acres (212,573-sf) are passive open space and 7.01 acres (305,356-sf) are active open space.

Table 9
Open Space Inventory

Map Ref.	Name	Owner/ Agency	Features	Acres of Active Open Space	Acres of Passive Open Space	Condition/ Utilization
1	Thomas Greene Playground	DPR	Playing courts, playground, outdoor swimming pool, benches, trees	2.15	0.38	Good/ Moderate
2	Boerum Park	DPR	Playing courts, playground, play fountain, trees, benches	0.83	0.09	Good/ Heavy
3	St. Mary's Park	DPR	N/A (under construction)	0.31[1]	0.06[1]	Closed
4	Carroll Park	DPR	Playing courts, playing fields, playground, play fountain, restroom facilities, war memorial	1.12	0.75	Good/ Heavy
5	Nicholas Naquan Heyward Jr. Park	DPR	Playing courts, playground, play fountain, trees, benches, rest room facilities	0.73[1]	0.31[1]	Closed
6	Gowanus Houses Open Space	NYCHA	Trees, benches, paved walkways	0.00	2.29	Good/ Moderate
7	Wyckoff Gardens Open Space	NYCHA	Playing courts, playground, trees, benches, paved walkways,	1.30	0.56	Good/ Light
8	Lowe's Waterfront Esplanade	Lowe's	Trees, benches, walkways	0.00	0.26	Moderate/ Light
9	Gardens of Union	DPR	Community garden	0.00	0.20	Good/ Unknown
10	J.J. Byrne Park	DPR	Playground	2.42[1]	0.61[1]	Closed
11	Washington Park	DPR	Playing courts, playing fields, benches	1.50	0.00	Good/ Heavy
12	Admiral Triangle	DPR	Playground, benches, planters	0.11	0.32	Good/ Light
13	Cough Triangle	DPR	Trees, benches	0.00	0.03	Moderate/ Light
			Study Area Total:	**7.01**	**4.88**	

Notes: [1] This park is closed and its acreage is not included in the study area total for existing conditions.
Sources: DPR open space data base; AKRF, Inc. field surveys, February 2012.

The population of the ½-mile study area has been calculated by assembling the census tracts from the 2010 U.S. Census that are primarily located within the study area (see **Table 10**). The estimated population of the study area is 35,489.

Table 10
Existing Residential Population in the Residential Study Area – 2010 Census

Tract	Residential Population
119	1,530
65	5,191
69	3,537
71	4,495
75	4,383
77	3,901
121	1,619
127	3,507
133	3,730
135	3,596
TOTAL	**35,489**

Source: U.S. Census Bureau, 2010 Census

The existing open space ratios are provided in **Table 11**. Currently, the study area's open space ratios are well below the DCP open space guidelines. The active open space ratio is 0.20 and the passive open space ratio is 0.14, for a total open space ratio of 0.34 acres per 1,000 residents.

Table 11
Existing Conditions: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residential (½-Mile) Study Area										
Residents	35,489	11.89	7.01	4.88	0.34	0.20	0.14	2.5	2.0	0.50
Note: Ratios in acres per 1,000 people.										

Future without the As-of-Right Project (No Build Condition)

Independent of the As-of-Right Project, No Build development projects will add 24 residential units to the study area by 2015. Assuming an average household size of 2.19 people, these units will add 53 additional residents to the study area. Therefore, the population of the study area will increase to 35,542.

The three parks that are currently closed for renovations are expected to re-open by 2015. These parks will add 0.98 passive acres (42,689-sf) and 3.46 active acres (150,718-sf) of open space to the study area.

As shown in **Table 12**, with the addition of these new residents and re-opened parks, the open space ratios in the future Build condition will increase to 0.29 for active open space, 0.17 for passive open space, and a total of 0.46 acres of open space per 1,000 residents by 2015. The open space ratios will remain below the DCP open space guidelines.

Table 12
2015 Future No Build Condition:
Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residential (½-Mile) Study Area										
Residents	35,542	16.34	10.47	5.86	0.46	0.29	0.17	2.5	2.0	0.50
Note: Ratios in acres per 1,000 people.										

Future with the As-of-Right Project (Build Condition)

The As-of-Right Project would add 700 units to the study area. Assuming an average household size of 2.19 persons, these new housing units would result in approximately 1,533 new residents by 2015. The As-of-Right Project would also add approximately 0.8 acres of new passive open space, through the provision of a publicly accessible promenade along the Gowanus Canal, including accommodating the 0.06-acre (2,500-sf) Sponge Park that would be built by others. The amount of active open space would not change. The probable impacts of the As-of-Right Project are shown in **Table 13**.

Table 13
2015 Future Build Condition:
Adequacy of Open Space Resources

	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines			Percent Change No Build to Build Condition		
Total Population	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residential (½-Mile) Study Area												
37,075	17.13	10.47	6.66	0.46	0.28	0.18	2.5	2.0	0.50	0%	-3%	6%
Notes: Ratios in acres per 1,000 people.												

As shown in **Table 13**, the As-of-Right Project would result in a 6 percent increase in the passive open space ratio, due to the new open space that would be provided. The As-of-Right Project would result in a 3 percent decrease in the active open space ratio. Overall, the combined ratio of active and passive open space to residents would not change.

According to the *CEQR Technical Manual*, a significant adverse impact may result if a project results in a decrease in an open space ratio of five percent. As all of the Build ratios are below this threshold, there would not be any significant adverse impacts on open space as a result of the As-of-Right Project.

SHADOWS

As with the Special Permit Project, new shadows from the As-of-Right Project would not fall on any sunlight-sensitive resources, and consequently the As-of-Right Project would not result in any significant adverse shadow impacts. According to the *CEQR Technical Manual*, sunlight-sensitive resources of concern potentially include publicly accessible open spaces, important natural features such as water bodies, and sunlight-dependent features of historic and cultural resources.

With the As-of-Right Project, there would be modest changes to the massing of the development, although the overall building height would not increase, compared to the Special Permit Project (see **Figure**s **3**, **4**, and **5**). A revised shadows screening assessment was performed for the As-of-Right Project following CEQR methodology, to determine whether the changed massing would result in any new shadows on sunlight-sensitive resources.

METHODOLOGY

Following the guidelines of the 2012 *CEQR Technical Manual*, a screening assessment must first be conducted to ascertain whether a project's shadow could reach any sunlight-sensitive resources at any time of year. The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the proposed building representing the longest shadow that could be cast. If there are sunlight-sensitive resources within this radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project shadow by accounting for the fact that shadows can never be cast between a certain range of angles south of the Project Site due to the path of the sun through the sky at the latitude of New York City.

SCREENING ASSESSMENT

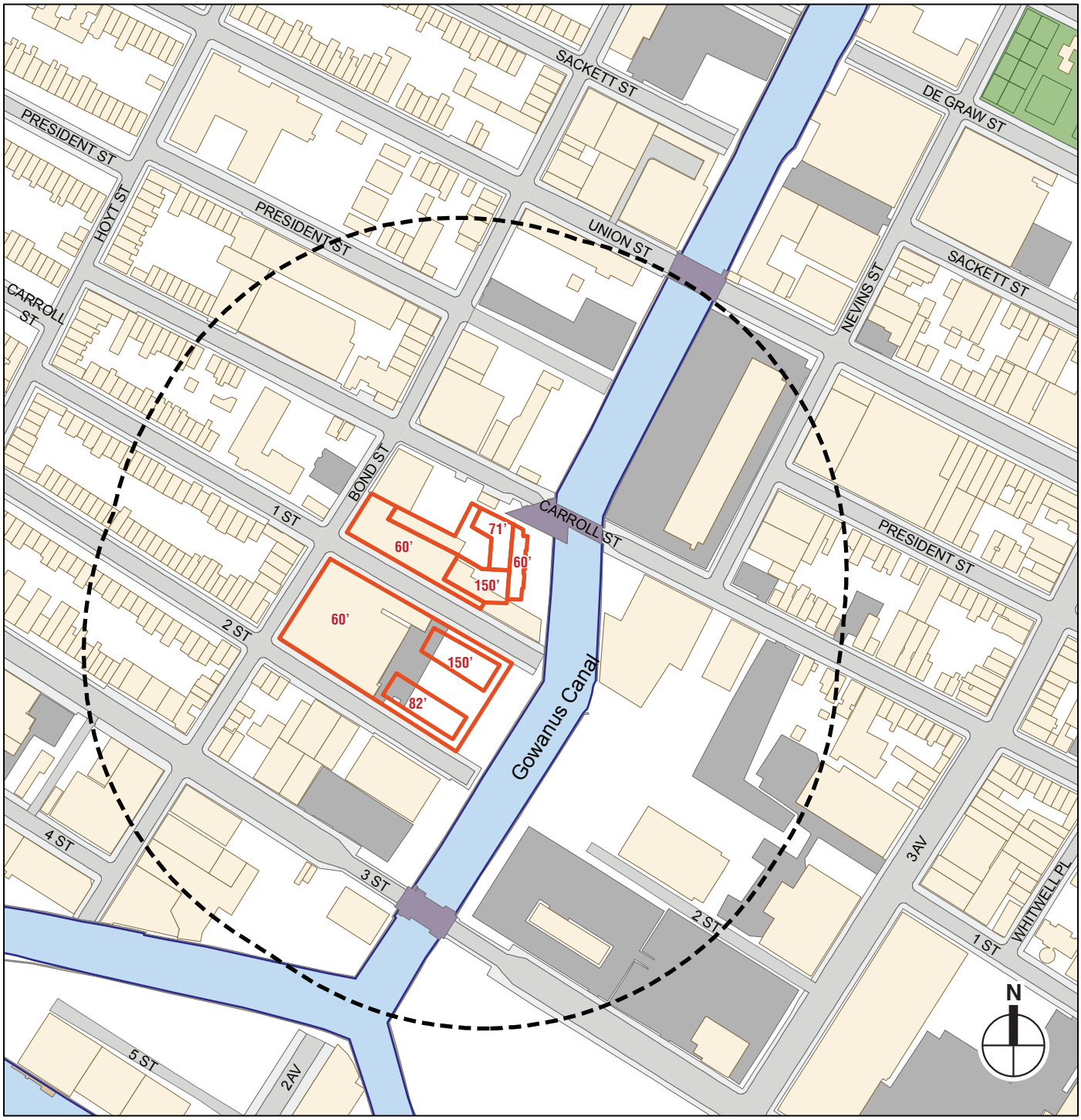
A base map was developed using Geographic Information Systems (GIS)[7] showing the location and massing configuration of the As-of-Right Project and the surrounding street layout (see **Figure 11**). In coordination with the open space, historic and cultural resources, and natural resources assessments presented in other sections of this Technical Memorandum, potentially sunlight-sensitive resources were identified and shown on the map.

For the Tier 1 assessment, the longest shadow that the proposed structure could cast is calculated, and, using this length as the radius, a perimeter is drawn around the Project Site. Anything outside this perimeter representing the longest possible shadow could never be affected by project generated shadow, while anything inside the perimeter needs additional assessment.

According to the *CEQR Technical Manual*, the longest shadow that a structure can cast at the latitude of New York City occurs on December 21, the winter solstice, at the start of the analysis day at 8:51 AM, and is equal to 4.3 times the height of the structure.

[7] Software: Esri ArcGIS 10.1; Data: New York City Department of Information Technology and Telecommunications (DoITT), New York City Landmarks Preservation Commission, and other City agencies.

3.12.13



Tier 1: Longest Shadow Study Area (height of structure in feet multiplied by 4.3)

Publicly-Accessible Open Space

Proposed Buildings

No historic resources with sunlight-sensitive features are located in the longest shadow study area.

Building heights shown include bulkheads and mechanical penthouses.

Tier 1 Shadows Assessment
Figure 11

The tallest elements of the proposed development—the rooftop mechanical equipment of the two tower portions—would reach a maximum height of up to approximately 150 feet, and could therefore cast shadows of up to approximately 645 feet. Using this distance as a radius, a perimeter was drawn around these two elements of the proposed development. The other elements of the proposed development would reach heights of approximately 82 feet, 71 feet, and 60 feet. These elements could cast shadows of up to 353 feet, 305 feet and 258 feet, respectively. Using these distances, perimeters were drawn around the remaining elements of the proposed development. All the resulting perimeters were then merged, to show the combined longest shadow study area for the As-of-Right Project.

Figure 11 shows the results of the Tier 1 assessment. As with the Special Permit Project, no publicly accessible open spaces or sunlight-dependent features of historic resources are located within the longest shadow study area. A portion of the Gowanus Canal waterway falls within the longest shadow study area. However, the FEIS found that the portion of the Gowanus Canal adjacent to the Project Site is an environmentally stressed condition, with contaminated sediments, limited opacity and a poor benthic community structure as a result of a history of heavy industrial uses. Any species using the waterway must be tolerant of highly variable conditions. Therefore, the Gowanus Canal would not be considered a natural feature that is significantly sensitive to sunlight intensity. In conclusion, no sunlight-sensitive resources could be affected by the As-of-Right Project, and these minor changes in massing would not result in any significant adverse shadows impacts.[8]

HISTORIC RESOURCES

There would not be any new significant adverse impact on Historic Resources as a result of the As-of-Right Project. As with the Special Permit Project, the As-of-Right Project would construct a new steel sheet pile bulkhead along the length of the eastern boundary of the Project Site either in place or outside of the existing, archaeologically sensitive bulkhead to make possible the construction of the proposed open space along the canal. The installation of the new bulkhead could require removal of portions of the existing one. In addition, two new stormwater outfalls would be constructed through the existing bulkhead. As noted in the 2009 FEIS, the New York City Landmarks Preservation Commission (LPC) has determined that the bulkhead rehabilitation work and stormwater outfall installation would adversely impact portions of the bulkhead at the Project Site. Therefore, an archaeological field investigation would be undertaken in coordination with LPC that would document the extent and significant characteristics of the Gowanus Canal bulkhead. This archaeological documentation would serve as mitigation of the adverse impact to the bulkhead under CEQR. The field investigation would occur either in advance of or in concert with the bulkhead reconstruction and stormwater outfall installation. An Archaeological Testing Protocol in compliance with the LPC Guidelines for Archaeological Work in New York City would be prepared and implemented in coordination with LPC. In addition, as requested by SHPO, an Unanticipated Discovery Plan for both human and non-human remains would be prepared in consultation with SHPO and implemented during projected-related construction at the site.

The modified program would not alter the conclusions of the 2009 FEIS, and would not result in any new impacts.

URBAN DESIGN AND VISUAL RESOURCES

The As-of-Right Project would not have any adverse impacts on Urban Design or Visual Resources. The massing and footprint with the As-of-Right Project would generally be the same as the Special Permit Project that was studied in the 2009 FEIS, with a few minor variations. The massing with the As-of-Right Project would be distributed to maintain the low-rise character of the Bond Street frontage and the mid-block portions of Carroll, 1st, and 2nd Streets, with taller mid-rise elements (reaching a maximum height

[8] Shadows on project-generated open space are not considered significant under CEQR (*CEQR Technical Manual,* January 2012 edition, page 8-2).

of 125 feet ABP) along the canal frontage of the Project Site. Unlike the Special Permit Project, building segments with the As-of-Right Project would have uniform floor-to-floor heights to facilitate internal circulation, which would generally increase street wall heights by approximately 2 to 6 feet along Bond Street and the western mid-block portions of 1st and 2nd Streets, while reducing street wall heights by approximately 5 feet along the eastern mid-block portions of those streets and along the Gowanus Canal frontage (see **Figure**s **3**, **4**, and **5**). The South Building would be pulled back an additional 20 feet from the Gowanus Canal to provide the amount of on-site publicly accessible open space required under the waterfront regulations and to accommodate the Sponge Park and relocation of the vehicle turnaround at the end of 2nd Street. Likewise, the 7th through 12th stories of the North Building would be set back an additional 10 to 20 feet to comply with the waterfront regulations. Like the Special Permit Project, the As-of-Right Project would employ a variety of architectural techniques to break up the relatively long street walls along 1st Street and 2nd Street and generate an enlivened street presence, including: utilizing a mix of street wall and building heights; recesses, bays and other street wall articulations; individual garden areas and entrances; and a variety of façade treatments.

As with the Special Permit Project and as shown on **Figure**s **6, 7a** and **7b**, the As-of-Right Project would replace underutilized land with a new development and approximately 0.8-acres of publicly accessible open space that would improve urban design conditions on the Project Site and study area. Therefore, the As-of-Right Project would not result in any significant adverse impacts on urban design and visual resources.

NATURAL RESOURCES

There would be no significant adverse impacts on natural resources due to the As-of-Right Project. The As-of-Right Project would result in the remediation of the Project Site prior to construction, which would remove on-site sources of groundwater contamination, thus providing a benefit with respect to local groundwater quality. The As-of-Right Project would also create approximately 0.8-acres of new open space, which would be beneficial in terms of absorbing stormwater. No threatened, endangered, or special concern species have been identified on or in the immediate vicinity of the Project Site. As with the Special Permit Project, the As-of-Right Project would install approximately 555 linear feet of steel sheet pile bulkhead either in place of or against the existing timber sheathing along the Gowanus Canal. Installation of the new sheet pile bulkhead may result in minimal loss (i.e., approximately 300 sf) of the New York State Department of Environmental Conservation (DEC) littoral zone tidal wetlands that may be located within the footprint of the new bulkhead. Therefore, a *de minimis* impact on littoral zone wetlands would occur as a result of bulkhead installation. This impact would be minimized to the extent possible through the implementation of measures identified during the permitting process for these shoreline improvements by federal and state agencies. This *de minimis* impact would not be considered a significant impact on tidal wetlands that would require mitigation. In addition, any *de minimis* filling would be offset by the development of the Sponge Park or a tidal wetland area of the same square footage and transitional plantings in the vicinity of the end of 2nd Street. Overall, the As-of-Right Project would not alter the findings of the 2009 FEIS with regard to natural resources, and would not result in any significant adverse natural resource impacts.

HAZARDOUS MATERIALS

The As-of-Right Project would not have any significant adverse impacts due to hazardous materials. As indicated in the 2009 FEIS, a Phase I ESA and Phase II Investigations were prepared for the Project Site, and a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) were subsequently approved by the New York City of Department of Environmental Protection in 2009. Since that time, environmental remediation of privately-owned sites required under CEQR is now administered by the New York City Mayor's Office of Environmental Remediation (OER). Accordingly, as with the Special Permit Project, all subsurface soil disturbance work associated with the As-of-Right Project would be performed in accordance with a Remedial Action Plan (RAP)/Construction Health and Safety Plan

(CHASP), now under OER's oversight. The remediation will also be approved, and the implementation overseen, by DEC in order to close any active spill numbers. If required by OER, the following measures would be ensured through an (E) designation assigned by DCP to the Project Site:

- Prior to construction or renovation involving subsurface disturbance or conversion from non-residential to residential use, the property owner would conduct a Phase I ESA in accordance with ASTM E1527-05.
- If required by OER and based on the findings of the Phase I ESA, a soil and groundwater testing protocol approved by the OER would be prepared and implemented before development-related building permits can be issued by the DOB. If warranted by the findings of the subsurface investigation, site redevelopment would be conducted in accordance with an OER-approved RAP and CHASP, with a closure report prepared following construction documenting compliance with the RAP/CHASP. Following construction, if long-term monitoring (e.g., of groundwater quality) is required by OER, a Site Management Plan (SMP) would be prepared specifying the necessary and appropriate procedures for operation, maintenance, testing and reporting that remediation efforts, if any, have been employed.

With these measures and oversight, significant adverse impacts related to hazardous materials would be avoided during and post construction. Therefore, the As-of-Right Project would not alter the findings of the 2009 FEIS with respect to hazardous materials, and would not result in any significant adverse hazardous materials impacts.

On March 2, 2010, United States Environmental Protection Agency (EPA) placed the Gowanus Canal on its National Priorities List (NPL) of Hazardous Waste Sites requiring investigation and a remedial feasibility study in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Placing the Gowanus Canal on the list allows EPA to further investigate contamination in the Gowanus Canal and develop an approach to address the contamination. The purpose of the NPL listing and a final remedy is to cleanup sediments in the bottom of the Gowanus Canal that adversely effect fish and may be ingested by humans. Ingestion of contaminated fish was the identified pathway for humans to be exposed to the contaminants.

The EPA released its proposed plan for remedying the contamination in the Canal in January 2013 and is accepting public comments on the plan through April 27, 2013. The proposed plan recommends removing, to the extent feasible, the contaminated sediment that has accumulated as a result of industrial and sewer discharges from the bottom of the Canal by dredging. The dredged areas would then be capped. The EPA also recommends controls to prevent combined sewer overflows (CSO's) and other land-based sources of contamination from compromising the cleanup. The proposed remediation would be undertaken pursuant to a CHASP to avoid any adverse impacts on human health and safety during remediation. Due to the current health advisories against eating fish taken from the canal and the CHASP, there will not be any significant adverse impacts due to the As-of-Right Project or the remediation of the Gowanus Canal.

EPA actively wants to see the Gowanus Canal developed except for certain "parcels of interest," which were historically the major contributors of pollution to the canal. EPA has established that the Project Site does not fall into this category.

WATER AND SEWER INFRASTRUCTURE

There would be no significant adverse impacts on water supply and sewer infrastructure as a result of the As-of-Right Project. Based on the water use projection of the *CEQR Technical Manual*, the expected water consumption and sewage generation under the As-of-Right Project would be approximately 154,940 gallons per day, which is well below the threshold for detailed analysis of water use under the *CEQR Technical Manual*. In addition, actual water consumption and sanitary sewage generation is

expected to be less than the conservative CEQR projections based on the potential unit size and projected population of the proposed project.

As with the previously approved Special Permit Project, two new stormwater sewers would be installed (one at 1st Street and one at 2nd Street) that would convey all site-generated stormwater to the Gowanus Canal via two new storm sewer outfalls. In addition, to meet DEC requirements, pre-treatment would be provided for all stormwater collected on the project site prior to discharge to the storm sewers. Thus, with the As-of-Right Project, the Project Site would not contribute any stormwater flows to the combined sewer in Bond Street or to combined sewer overflow (CSO) discharges to the Gowanus Canal. In addition to removing stormwater from the Project Site, the As-of-Right Project would also redirect stormwater street runoff from the streets in the vicinity of Bond Street and 1st Street away from the combined sewers by providing drainage inlets at this location and connecting these inlets to the proposed new storm sewer to be built in 1st Street. The redirection of this additional stormwater runoff would improve local conditions relative to local street flooding at this location.

Overall, the As-of-Right Project would not alter the findings of the 2009 FEIS with regard to stormwater and sanitary sewer infrastructure, and would not result in any significant adverse infrastructure impacts.

SOLID WASTE AND SANITATION SERVICES

There would not be any significant adverse impact on solid waste or sanitations services. The As-of-Right Project would generate approximately 13 tons (29,648 pounds) per week of solid waste, which is well below the CEQR threshold of 50 tons per week for a detailed analysis.[9] Therefore, the As-of-Right Project would not alter the findings of the 2009 FEIS with regard to solid waste, and would not result in any significant adverse solid waste impacts.

ENERGY

As with the Special Permit Project, the As-of-Right Project would not affect the transmission or generation of energy, and would therefore not result in any significant adverse energy impacts. The As-of-Right Project is expected to consume approximately 76,350 million BTUs of energy annually.[10]

TRANSPORTATION

INTRODUCTION

Overall, the As-of-Right Project would not result in any new significant adverse impacts beyond what was disclosed in the 2009 FEIS. As with the Special Permit Project, the As-of-Right Project is expected to result in significant adverse traffic impacts at two intersections. Measures to mitigate these impacts are discussed below. The As-of-Right Project would not result in any significant adverse transit, pedestrian or parking impacts.

2009 FEIS FINDINGS

The 2009 FEIS determined that activities generated by the Special Permit Project would result in the potential for significant adverse impacts at two signalized intersection approaches during one or more peak periods, including:

- The eastbound approach of Carroll Street at 3rd Avenue during the AM and PM peak hours; and
- The eastbound approach of Carroll Street at 4th Avenue during the AM and PM peak hours.

To mitigate these significant adverse traffic impacts, measures summarized in **Table 14** were proposed.

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[9] This was calculated using the rates supplied in Table 14-1 of the *CEQR Technical Manual*.

[10] Assuming 602,603-gsf development and using the rates supplied in Table 15-1 of the *CEQR Technical Manual.*

Table 14
2009 FEIS Proposed Mitigation Measures

Intersections	AM Peak Hour	PM Peak Hour
3rd Avenue and Carroll Street	Prohibit parking on the south curb of eastbound Carroll Street approach for approximately 150 feet to provide an additional moving lane of traffic.	Shift 3 seconds of green time from the northbound/southbound phase to the eastbound phase.
4th Avenue and Carroll Street	Shift 4 seconds of green time from the northbound/southbound phase to the eastbound phase.	Shift 2 seconds of green time from the northbound/southbound phase to the eastbound phase.

It should be noted that the above mitigation measures were based on the detailed analyses presented in the 2009 FEIS, which accounted for the travel demand estimates associated with the Special Permit Project and assumed future background conditions for the year 2011. To determine whether these intersections would continue to experience significant adverse traffic impacts with the As-of-Right Project, a comparison was performed of the travel demand associated with the Special Permit Project and the As-of-Right Project.

TRAVEL DEMAND ESTIMATES

The Special Permit Project analyzed in the 2009 FEIS included 447 residential units, 2,000 gsf of retail space, 2,000 gsf of community facility space, and approximately 0.7 acres of open space. With the As-of-Right Project, the current overall development program contemplated includes 700 residential units, 2,600 gsf of retail space, 2,250 gsf of community facility space, and approximately 0.8 acres of open space.

A comparison of trip generation estimates was conducted to determine whether the As-of-Right Project would result in any changes to the trip generation estimates determined for the Special Permit Project. For this comparison, the transportation planning factors generally presented in the 2009 FEIS for all the development components were applied to the As-of-Right Project to determine the number of trips. In addition to these factors, updated transportation planning factors from the 2012 *CEQR Technical Manual* and the updated modal splits obtained from the 2006-2010 American Community Survey (ACS) census estimates were used to estimate trip generation activities for the residential, retail, and open space components.

PRELIMINARY ANALYSIS METHODOLOGY

The *CEQR Technical Manual* describes a two-tier screening procedure for the preparation of a "preliminary analysis" to assess the travel demand characteristics of a project. The preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trips attributable to a project. Based on CEQR guidelines, if a project is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that a project would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts.

LEVEL 1 SCREENING ASSESSMENT

The Special Permit Project (2009 FEIS)

The trip generation analysis presented in the 2009 FEIS indicated that the Special Permit Project would result in approximately 390, 278, and 489 person trips, and approximately 80, 48, and 100 vehicle trips during the weekday AM, midday, and PM peak hours, respectively (see **Table 15**). Therefore, as per the

CEQR criteria, detailed analysis of traffic conditions was conducted for the Special Permit Project for the weekday AM and PM peak hours.

With regard to transit use, the Special Permit Project was estimated to result in 235, 134, and 282 subway trips and 7, 8, and 11 bus trips during the weekday AM, midday, and PM peak hours, respectively. Because there are a number of subway lines and bus routes available in the area with numerous access locations, it was determined that the projected transit trips would be dispersed among these facilities and the CEQR threshold of 200 peak hour transit riders would not be exceeded at any single subway station or bus stop. Therefore, no quantified transit analysis was conducted for the Special Permit Project and it was determined to have no potential for any significant adverse transit impacts.

With regard to pedestrians, the Special Permit Project was estimated to result in 390, 278, and 489 total person trips during the weekday AM, midday, and PM peak hours, respectively. However, since the Special Permit Project provided multiple pedestrian entrances/exits along Bond, 1st, and 2nd Streets to the residential buildings and the proposed local retail and community facility spaces, the project-generated pedestrian trips were widely distributed, and no single pedestrian element in the vicinity of the Project Site experienced project generated pedestrian levels of 200 or more. Therefore, based on CEQR guidelines, no quantified pedestrian analysis was conducted for the Special Permit Project, and it was determined to have no potential for any significant adverse pedestrian impacts.

The As-of-Right Project (2015)

As discussed above, the 2009 FEIS analyzed 447 residential units on the Project Site, whereas 700 residential units are planned for the Project Site under the As-of-Right Project resulting in increase of approximately 253 units. The As-of-Right Project would also result in 2,600 gsf of retail space and 2,250 gsf of community facility space, resulting in an increase of approximately 600 gsf of retail space and an increase of approximately 250 gsf of community facility space, compared to the Special Permit Project. As with the Special Permit Project, the As-of-Right Project would provide approximately 0.8 acres of open space along the Canal.

Trip Generation

Trip generation analysis for the 2015 Special Permit Project with the As-of-Right Project was conducted based on the updated trip generation factors for residential use presented in the 2012 *CEQR Technical Manual*. The modal split estimates and vehicle occupancies for the residential use were obtained from the 2006-2010 ACS data. Trip generation factors used in estimating the trips generated by the retail space and open space changed slightly (compared to the factors used in the 2009 FEIS), with minor updates to the temporal distributions as identified in the *CEQR Technical Manual.* Trip generation factors for the community facility and open space are the same as used in the trip generation analysis for these components in the 2009 FEIS. The trip generation factors used in estimating the trips generated by all the development components, based on the updated information from the 2012 CEQR Technical Manual, are summarized in **Table 16**.

Table 15
Trip Generation Summary for the Special Permit Project (2009 FEIS): Person Trips by Mode

Analysis Period and Use	Auto		Taxi		Bus		Subway		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM PEAK PERIOD													
Residential	11	61	0	3	0	3	34	190	4	22	49	279	328
Local Retail	0	0	0	0	0	0	1	1	5	5	7	7	14
Daycare	9	8	0	0	2	2	5	4	7	7	23	21	44
Waterfront Open Space	0	0	0	0	0	0	0	0	3	3	3	3	6
TOTAL	**20**	**69**	**0**	**3**	**2**	**5**	**40**	**195**	**19**	**37**	**81**	**309**	**390**
MIDDAY PEAK PERIOD													
Residential	19	19	1	1	1	1	58	58	7	7	86	86	172
Local Retail	1	1	1	1	2	2	8	8	27	27	39	39	78
Daycare	3	3	0	0	1	1	1	1	2	2	7	7	14
Waterfront Open Space	0	0	0	0	0	0	0	0	7	7	7	7	14
TOTAL	**23**	**23**	**2**	**2**	**4**	**4**	**67**	**67**	**43**	**43**	**139**	**139**	**278**
PM PEAK PERIOD													
Residential	59	25	3	1	3	1	184	79	22	9	271	115	386
Local Retail	0	0	1	1	1	1	4	4	14	14	20	20	40
Daycare	9	11	0	1	2	3	5	6	9	7	25	28	53
Waterfront Open Space	0	0	0	0	0	0	0	0	5	5	5	5	10
TOTAL	**68**	**36**	**4**	**3**	**6**	**5**	**193**	**89**	**50**	**35**	**321**	**168**	**489**

Vehicle Trips by Type

Analysis Period and Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM PEAK PERIOD									
Residential	10	54	2	2	1	1	13	57	70
Local Retail	0	0	0	0	0	0	0	0	0
Daycare	5	5	0	0	0	0	5	5	10
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**15**	**59**	**2**	**2**	**1**	**1**	**18**	**62**	**80**
MIDDAY PEAK PERIOD									
Residential	17	17	2	2	1	1	20	20	40
Local Retail	0	0	2	2	0	0	2	2	4
Daycare	2	2	0	0	0	0	2	2	4
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**19**	**19**	**4**	**4**	**1**	**1**	**24**	**24**	**48**
PM PEAK PERIOD									
Residential	52	22	3	3	1	1	56	26	82
Local Retail	0	0	2	2	0	0	2	2	4
Daycare	6	6	1	1	0	0	7	7	14
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**58**	**28**	**6**	**6**	**1**	**1**	**65**	**35**	**100**

Table 16
Transportation Planning Assumptions:
As-of-Right Project

Use	Day of the Week	Daily Trip Rate [1] (per Dwelling Unit) Person	Delivery	Peak Hour	Person Trips [1,3] Temporal	In	Out	Total	Delivery Trips [1,3] Temporal	In	Out	Total
Residential	Weekday											
	Initial	8.075	-	AM	10%	15.0%	85.0%	100.0%	12%	50.0%	50.0%	100.0%
	Link Credit	0%	-	MD	5%	50.0%	50.0%	100.0%	9%	50.0%	50.0%	100.0%
	Final	8.075	0.06	PM	11%	70.0%	30.0%	100.0%	2%	50.0%	50.0%	100.0%
			Mode of Transportation [2]							Vehicle Occupancy [2,3]		
	Peak Hour		Auto	Taxi	Subway	Bus	Walk	Total		Auto	Taxi	
	Weekday	AM	12.0%	0.0%	72.0%	2.0%	14.0%	100.0%		1.08	1.40	
		MD	12.0%	0.0%	72.0%	2.0%	14.0%	100.0%		1.08	1.40	
		PM	12.0%	0.0%	72.0%	2.0%	14.0%	100.0%		1.08	1.40	
Local Retail		Daily Trip Rate [1] (per 1,000 sf)			Person Trips [1,4]				Delivery Trips [1,4]			
	Day of the Week	Person	Delivery	Peak Hour	Temporal	In	Out	Total	Temporal	In	Out	Total
	Weekday											
	Initial	205	-	AM	3%	50.0%	50.0%	100.0%	8%	50.0%	50.0%	100.0%
	Link Credit	0%	-	MD	19%	50.0%	50.0%	100.0%	11%	50.0%	50.0%	100.0%
	Final	205	0.35	PM	10%	50.0%	50.0%	100.0%	2%	50.0%	50.0%	100.0%
			Mode of Transportation [4]							Vehicle Occupancy [4]		
	Peak Hour		Auto	Taxi	Subway	Bus	Walk	Total		Auto	Taxi	
	Weekday	AM	2.0%	3.0%	20.0%	5.0%	70.0%	100.0%		2.00	2.00	
		MD	2.0%	3.0%	20.0%	5.0%	70.0%	100.0%		2.00	2.00	
		PM	2.0%	3.0%	20.0%	5.0%	70.0%	100.0%		2.00	2.00	
Community Facility (Daycare)		Daily Trip Rate [5] (per 1,000 sf)			Person Trips [5]				Delivery Trips [5]			
		Person	Delivery	Peak Hour	Temporal	In	Out	Total	Temporal	In	Out	Total
	Weekday											
	Initial	138	-	AM	16%	53.0%	47.0%	100.0%	9.6%	50.0%	50.0%	100.0%
	Link Credit	0%	-	MD	5%	50.0%	50.0%	100.0%	11.0%	50.0%	50.0%	100.0%
	Final	138	0.07	PM	19%	47.0%	53.0%	100.0%	1.0%	50.0%	50.0%	100.0%
			Mode of Transportation [5]							Vehicle Occupancy [5]		
	Peak Hour		Auto	Taxi	Subway	Bus	Walk	Total		Auto	Taxi	
	Weekday	AM	38.0%	2.0%	20.0%	10.0%	30.0%	100.0%		1.65	1.40	
		MD	38.0%	2.0%	20.0%	10.0%	30.0%	100.0%		1.65	1.40	
		PM	38.0%	2.0%	20.0%	10.0%	30.0%	100.0%		1.65	1.40	
Open Space		Daily Trip Rate [1] (per 1,000 sf)			Person Trips [1]				Delivery Trips [1]			
		Person	Delivery	Peak Hour	Temporal	In	Out	Total	Temporal	In	Out	Total
	Weekday											
	Initial	139	-	AM	3%	50.0%	50.0%	100.0%	0%	50.0%	50.0%	100.0%
	Link Credit	0%	-	MD	5%	50.0%	50.0%	100.0%	0%	50.0%	50.0%	100.0%
	Final	139	0.00	PM	6%	50.0%	50.0%	100.0%	0%	50.0%	50.0%	100.0%
			Mode of Transportation [6]							Vehicle Occupancy [1]		
	Peak Hour		Auto	Taxi	Subway	Bus	Walk	Total		Auto	Taxi	
	Weekday	AM	5.0%	5.0%	5.0%	5.0%	80.0%	100.0%		2.00	2.00	
		MD	5.0%	5.0%	5.0%	5.0%	80.0%	100.0%		2.00	2.00	
		PM	5.0%	5.0%	5.0%	5.0%	80.0%	100.0%		2.00	2.00	

1. 2012 *CEQR Technical Manual*
2. U.S. Census Bureau 2006-2010 American Community Survey 5-Year Estimates for Kings County (Brooklyn) Census Tracts 75; 77; and 119.
3. *Western Rail Yard FEIS*, 2009
4. *Atlantic Yards Redevelopment Project FEIS*, 2006
5. *No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS*
6. New York City Department of City Planning, *Retail and Industrial Zoning Text Amendments FGEIS* (1996)

The total number of person and vehicle trips expected to be generated by the As-of-Right Project are summarized in **Table 17**. The net vehicle trip increments (based on the comparison of the 2009 and 2015 development programs) are presented in **Table 18**.

As presented in **Table 18**, the As-of-Right Project would result in net increments of approximately 2, 2, and -13 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. Compared to the trips projected for the Special Permit Project, the incremental vehicle trips are either slightly higher or lower during all analysis peak periods.

Table 17
Trip Generation Results for the As-of-Right Project
Person Trips by Mode

Analysis Period and Use	Auto		Taxi		Bus		Subway		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM PEAK PERIOD													
Residential	10	58	0	0	2	10	61	346	12	67	85	481	566
Local Retail	0	0	0	0	0	0	2	2	6	6	8	8	16
Daycare	10	9	1	0	3	2	5	5	7	7	26	23	49
Waterfront Open Space	0	0	0	0	0	0	0	0	1	1	1	1	2
TOTAL	**20**	**67**	**1**	**0**	**5**	**12**	**68**	**353**	**26**	**81**	**120**	**513**	**633**
MIDDAY PEAK PERIOD													
Residential	17	17	0	0	3	3	102	102	20	20	142	142	284
Local Retail	1	1	2	2	3	3	10	10	35	35	51	51	102
Daycare	3	3	0	0	1	1	2	2	2	2	8	8	16
Waterfront Open Space	0	0	0	0	0	0	0	0	2	2	2	2	4
TOTAL	**21**	**21**	**2**	**2**	**7**	**7**	**114**	**114**	**59**	**59**	**203**	**203**	**406**
PM PEAK PERIOD													
Residential	52	22	0	0	9	4	313	134	61	26	435	186	621
Local Retail	1	1	1	1	1	1	5	5	19	19	27	27	54
Daycare	11	12	1	1	3	3	6	6	7	9	28	31	59
Waterfront Open Space	0	0	0	0	0	0	0	0	2	2	2	2	4
TOTAL	**64**	**35**	**2**	**2**	**13**	**8**	**324**	**145**	**89**	**56**	**492**	**246**	**738**

Vehicle Trips by Type

Analysis Period and Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM PEAK PERIOD									
Residential	9	54	0	0	3	3	12	57	69
Local Retail	0	0	0	0	0	0	0	0	0
Daycare	6	5	1	1	0	0	7	6	13
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**15**	**59**	**1**	**1**	**3**	**3**	**19**	**63**	**82**
MIDDAY PEAK PERIOD									
Residential	16	16	1	1	2	2	19	19	38
Local Retail	1	1	3	3	0	0	4	4	8
Daycare	2	2	0	0	0	0	2	2	4
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**19**	**19**	**4**	**4**	**2**	**2**	**25**	**25**	**50**
PM PEAK PERIOD									
Residential	48	20	0	0	0	0	48	20	68
Local Retail	0	0	2	2	0	0	2	2	4
Daycare	6	7	1	1	0	0	7	8	15
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**54**	**27**	**3**	**3**	**0**	**0**	**57**	**30**	**87**

Table 18
As-of-Right Project
Net Project-Generated Trips
Vehicle Trips by Type

Analysis Period and Use	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM PEAK PERIOD									
Residential	-1	0	-2	-2	2	2	-1	0	-1
Local Retail	0	0	0	0	0	0	0	0	0
Daycare	1	0	1	1	0	0	2	1	3
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**-1**	**-1**	**2**	**2**	**1**	**1**	**2**
MIDDAY PEAK PERIOD									
Residential	-1	-1	-1	-1	1	1	-1	-1	-2
Local Retail	1	1	1	1	0	0	2	2	4
Daycare	0	0	0	0	0	0	0	0	0
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**1**	**2**
PM PEAK PERIOD									
Residential	-4	-2	-3	-3	-1	-1	-8	-6	-14
Local Retail	0	0	0	0	0	0	0	0	0
Daycare	0	1	0	0	0	0	0	0	1
Waterfront Open Space	0	0	0	0	0	0	0	0	0
TOTAL	**-4**	**-1**	**-3**	**-3**	**-1**	**-1**	**-8**	**-5**	**-13**

Based on the above discussion, the As-of-Right Project would generate either slightly higher or fewer overall vehicle trips as compared to the Special Permit Project during the AM, midday and PM peak periods. Hence, the As-of-Right Project would not alter the conclusions presented in the 2009 FEIS.

The overall transit and pedestrian trips expected to be generated by the As-of-Right Project (700 residential units, 2,600 gsf of retail space, 2,250 gsf of community facility space, and approximately 0.8 acres of open space) would exceed the *CEQR Technical Manual* threshold of 200 peak hour transit riders and 200 pedestrian trips per element. Therefore, a Level 2 assessment for transit and pedestrians was conducted which is discussed in the proceeding section.

LEVEL 2 SCREENING ASSESSMENT FOR TRANSIT

Subway

As shown in **Table 17**, the proposed project is expected to result in 421, 228, and 469 project-generated subway trips during the weekday AM, midday, and PM peak hours, respectively. Based on an analysis of 2000 U.S. Census journey-to-work (JTW) origin-destination data for the study area census tracts, 84 percent of these subway trips were assigned to the Carroll Street Station (F,G), and 16 percent were assigned to the Union Street (R) Station (see **Table 19**).

Table 19
Subway Trip Assignments to Study Area Subway Stations

Peak Hour	Carroll Street (F,G) Station	Union Street (R) Station
AM	354	67
Midday	192	36
PM	394	75

As shown in Table 20, based on the distribution of riders to individual subway lines, the project-generated peak hour subway trips are not expected to add 5 or more riders per car during the weekday morning and evening peak hours; therefore, a detailed subway line-haul analysis is not required.

Table 20
Subway Line Haul Screening

Subway Line and Direction	Number of Cars*	Project Generated Subway Riders	Number of Project Generated Riders per Subway Car
AM Peak Hour			
R – Downtown	64	45	0.7
F/G - Downtown	188	126	0.7
R – Uptown	72	22	0.3
F/G - Uptown	188	228	1.2
PM Peak Hour			
R – Downtown	80	31	0.4
F/G - Downtown	146	229	1.6
R – Uptown	64	45	0.7
F/G - Uptown	166	165	1.0
Note: * Number of cars available for each line during the peak hour is obtained from NYCT 2010 cordon counts			

However, based on the distribution of project-generated subway trips (Level 2 analysis), the following station elements were identified for analysis during the weekday morning and evening peak periods:

- Station stairways (S4) at the Carroll Street (F,G) Station on the east sidewalk of Smith Street at 2nd Street and the adjoining control area elements, including three two-way turnstiles and two High Entry/Exit Turnstiles (HEETs).

Bus

As presented in **Table 17**, the proposed project is expected to result in 17, 14, and 21 project-generated bus trips during the weekday morning, midday, and evening peak hours, respectively. Therefore, the project-generated peak hour bus trips are not expected to add 50 or more peak hour bus trips in one direction, and a detailed bus line-haul analysis is not required.

TRANSIT OPERATIONS

Subway Station Elements

The methodology for assessing station circulation (stairs, escalators, and passageways) and fare control (regular turnstiles, high entry/exit turnstiles, and high exit turnstiles) elements compares the user volume with the analyzed element's design capacity, resulting in a volume-to-capacity (v/c) ratio.

For stairs, the design capacity considers the effective width of a tread, which accounts for railings or other obstructions, the friction or counter-flow between upward and downward pedestrians (up to 10-percent capacity reduction applied to account for counter-flow friction), surging of exiting pedestrians (up to 25-percent capacity reduction applied to account for detraining surges near platforms), and the average area required for circulation. For passageways, similar considerations are made. For escalators and turnstiles, capacities are measured by the number and width of an element and the MTA New York City Transit (NYCT) optimum capacity per element, and also account for the potential for surging of exiting pedestrians. In the analysis for each of these elements, volumes and capacities are presented for 15-minute intervals.

The estimated v/c ratio is compared with NYCT criteria to determine a level-of-service (LOS) for the operation of an element, as summarized in **Table 21**.

Table 21
LOS Criteria for Subway Station Elements

LOS	V/C Ratio
A	0.00 to 0.45
B	0.45 to 0.70
C	0.70 to 1.00
D	1.00 to 1.33
E	1.33 to 1.67
F	Above 1.67

Source: New York City Mayor's Office of Environmental Coordination, 2012 *CEQR Technical Manual*.

At LOS A ("free flow") and B ("fluid flow"), there is sufficient area to allow pedestrians to freely select their walking speed and bypass slower pedestrians. When cross and reverse flow movement exists, only minor conflicts may occur. At LOS C ("fluid, somewhat restricted"), movement is fluid although somewhat restricted. While there is sufficient room for standing without personal contact, circulation through queuing areas may require adjustments to walking speed. At LOS D ("crowded, walking speed restricted"), walking speed is restricted and reduced. Reverse and cross flow movement is severely restricted because of congestion and the difficult passage of slower moving pedestrians. At LOS E ("congested, some shuffling and queuing") and F ("severely congested, queued"), walking speed is restricted. There is also insufficient area to bypass others, and opposing movement is difficult. Often, forward progress is achievable only through shuffling, with queues forming.

Significant Impact Criteria

The determination of significant impacts for station elements varies based on their type and use. For stairs and passageways, significant impacts are defined in terms of width increment threshold (WIT) based on the minimum amount of additional capacity that would be required either to mitigate the location to its service conditions (LOS) under the future No Build levels, or to bring it to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Significant impacts are typically considered to occur once the WITs in **Table 22** are reached or exceeded.

Table 22
Significant Impact Guidance for Stairs and Passageways

No Build V/C Ratio	WIT for Significant Impact (inches)	
	Stairway	Passageway
1.00 to 1.09	8.0	13.0
1.10 to 1.19	7.0	11.5
1.20 to 1.29	6.0	10.0
1.30 to 1.39	5.0	8.5
1.40 to 1.49	4.0	6.0
1.50 to 1.59	3.0	4.5
1.60 and up	2.0	3.0

Notes: WIT = Width Increment Threshold
Sources: New York City Mayor's Office of Environmental Coordination, 2012 *CEQR Technical Manual*.

For escalators and control area elements, impacts are significant if the proposed action causes a v/c ratio to increase from below 1.00 to 1.00 or greater. Where a facility is already at or above its capacity (a v/c of 1.00 or greater) in the No Build condition, a 0.01 increase in v/c ratio is also significant.

SUBWAY LINE HAUL CAPACITIES

Per the *CEQR Technical Manual*, line-haul capacities are evaluated when a proposed action is anticipated to generate a perceptible number of passengers on particular subway and bus routes. For subways, if, on

average, a subway car for a particular route is expected to incur five or more riders from a proposed action, a review of ridership level at its maximum load point and/or other project-specific load points would be required to determine if the route's guideline (or practical) capacity would be exceeded. NYCT operates six different types of subway cars with different seating and guideline capacities. The peak period guideline capacity of a subway car, which ranges from 110 to 175 passengers, is compared with ridership levels to determine the acceptability of conditions.

Significant Impact Criteria

For subways, projected increases from the future No Build condition within guideline capacity to a future With Action condition that exceeds guideline capacity may be a significant impact. Since there are constraints on what service improvements are available to NYCT, significant line-haul capacity impacts on subway routes are generally disclosed but would usually remain unmitigated. For buses, an increase in bus load levels greater than the maximum capacity at any load point is defined as a significant adverse impact. While subject to operational and fiscal constraints, bus impacts can typically be mitigated by increasing service frequency. Therefore, mitigation of bus line-haul capacity impacts, where appropriate, would be recommended for NYCT's approval.

TRANSIT STUDY AREA

Subway Service

The Project Site is well served by various subway and bus routes operated by the NYCT. The Project Site is located two blocks east of Smith Street, which is a transportation corridor providing both subway service (F and G Trains) and bus service (Brooklyn No. 57). The Carroll Street Station includes entrances to both the Manhattan and Brooklyn bound subway lines at both 2nd Street and Carroll Streets. The entrance at 2nd Street is about 1,500 feet west of the Project Site and the entrance at Carroll Street and Smith Streets is about the same distance. In addition, nearby to the east is 4th Avenue, which provides subway access to the R train in both the Manhattan and Brooklyn bound directions (the station is located at Union Street). The Union Street Station is located about 2,000 feet east of the Project Site and is accessible via the Carroll Street Bridge. In addition, the area is served by various bus routes including the No. 103 along 3rd Avenue, No. 57 along Court and Smith Streets, and the No. 61 along 9th Street.

A detailed analysis of transit operations during the critical weekday AM and PM peak periods is presented below. During other time periods, background transit ridership and station utilization, and project trip generation, are comparatively lower. Hence, potential transit impacts were evaluated only for the weekday AM and PM peak periods.

Below is a summary of subway lines that would most likely serve the Project Site (see **Figure 12**):

- The F subway line (Queens Boulevard Express/6th Avenue Local) operates between Stillwell Avenue, Brooklyn and Jamaica, Queens via the 63rd Street connector. The F line runs express along Queens Boulevard.
- The G subway line (Brooklyn-Queens Crosstown Local) operates between Court Square, Queens and Church Avenue, Brooklyn.
- The R subway line (Queens Boulevard/Broadway/4th Avenue Local) operates between Forest Hill-71st Avenue in Queens and Bay Ridge-95th Street in Brooklyn.

LEVEL 2 SCREENING ASSESSMENT FOR PEDESTRIANS

As shown in **Table 17**, the proposed project is expected to result in 633, 406, and 738 project-generated pedestrian trips during the weekday AM, midday, and PM peak hours, respectively. Based on CEQR guidelines, a Level 2 pedestrian screening assessment was performed. A Level 2 pedestrian screening assessment involves the distribution and assignment of projected pedestrian trips to the transportation network and the determination of whether specific locations are expected to incur incremental trips

Subway Options
Figure 12

exceeding CEQR thresholds. If the results of this analysis show that the As-of-Right Project would generate 200 or more peak hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse pedestrian impacts. For the As-of-Right Project, pedestrian trips projected for the 2015 Build year were assigned to the area's pedestrian network.

Pedestrian trip assignments were developed by distributing project generated person trips to surrounding pedestrian facilities, including sidewalks, crosswalks, and corner reservoirs, that would be most affected by new trips. The pedestrian walk assignments by individual mode are discussed as follows:

- Auto Trips – Motorists would park on site and would have direct access to the site without traversing any pedestrian elements.
- Taxi Trips – Taxi riders would get dropped off and picked up near their destination on the project site blocks.
- Bus Trips – Bus riders would use one of the two bus routes serving the area (B57 and B61) and would get on and off at the bus stops nearest to the destinations and walk to and from the project sites
- Subway Trips – Subway riders were assigned to the nearest stations and would walk to and from the proposed sites. The distribution of the subway riders to nearby subway stations is based on the proximity of the stations, the number of subway lines available at each station, and the transfer opportunities that each line provides at other stations. The majority of the subway trips were assigned to the Carroll Street Station (F and G lines) and the remaining trips were assigned to the Union Street Station (R line).
- Walk-Only Trips – Pedestrians who walk to and from the project site were distributed to the area's pedestrian facilities (i.e. crosswalks, sidewalks, and corners) based on the neighborhood land-use characteristics and 2010 Census population data.

As shown in **Figures 13** and **14**, pedestrian activities resulting from the As-of-Right Project are expected to concentrate along Bond Street and 1st Street, and the connecting sidewalks on 2nd Street, and the sidewalks, crosswalks, and corners on 3rd Street.

Based on this assessment, it was determined that the unsignalized intersection of Bond Street and 1st Street would exceed the CEQR threshold of 200 peak hour project generated pedestrian trips at two sidewalks during the AM peak hour, and three sidewalks during the PM peak hour. However, because of the isolated nature of the study area's pedestrian elements due to the presence of the Gowanus Canal on the east side of the study area, and consequent limited pedestrian circulation within the study area, an expanded pedestrian network was selected for analysis. The pedestrian elements selected for detailed analysis are shown in **Table 23** and in **Figure 15**.

Pedestrian Operations

The adequacy of the study area's sidewalks, crosswalks, and corner reservoir capacities in relation to the demand imposed on them is evaluated based on the methodologies presented in the 2000 *Highway Capacity Manual* (HCM), pursuant to procedures detailed in the *CEQR Technical Manual*.

Sidewalks are analyzed in terms of pedestrian flow. The calculation of the average pedestrians per minute per foot (PMF) of effective walkway width is the basis for a sidewalk level of service (LOS) analysis. The determination of walkway LOS is also dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume.

Table 23
Pedestrian Analysis Locations

Sidewalks		
Intersection No.	**Location**	**Sidewalk**
1	Bond Street between Carroll Street and President Street	East
	Bond Street between Carroll Street and President Street	West
	Carroll Street between Bond Street and Nevins Street	North
	Carroll Street between Bond Street and Nevins Street	South
	Carroll Street between Bond Street and Hoyt Street	North
	Carroll Street between Bond Street and Hoyt Street	South
2	Bond Street between Carroll Street and 1st Street	East
	Bond Street between Carroll Street and 1st Street	West
	1st Street between Bond Street and the Gowanus Canal	North
	1st Street between Bond Street and the Gowanus Canal	South
	1st Street between Bond Street and Hoyt Street	North
	1st t Street between Bond Street and Hoyt Street	South
3	Bond Street between 1st Street and 2nd Street	East
	Bond Street between 1st Street and 2nd Street	West
	2nd Street between Bond Street and the Gowanus Canal	North
	2nd Street between Bond Street and Hoyt Street	North
4	Bond Street between 2nd Street and 3rd Street	East
	Bond Street between 2nd Street and 3rd Street	West
	3rd Street between Bond Street and Nevins Street	North
	3rd Street between Bond Street and Nevins Street	South
	3rd Street between Bond Street and Hoyt Street	North
	3rd Street between Bond Street and Hoyt Street	South
Corners		
Intersection No.	**Location**	**Corner**
4	Bond Street and 3rd Street	Northeast
		Northwest
Crosswalks		
Intersection No.	**Location**	**Crosswalk**
4	Bond Street and 3rd Street	North
		South
		East
		West

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of square feet per pedestrian (SFP).

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS

analysis also accounts for vehicular turning movements that traverse the crosswalk. The LOS standards for sidewalks, corner reservoirs, and crosswalks are summarized in **Table 24**. The *CEQR Technical Manual* specifies acceptable LOS in non-Central Business District (CBD) areas is the upper limit of LOS C or better.

Table 24
Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks		Corner Reservoirs and Crosswalks
	Non-Platoon Flow	Platoon Flow	
A	≤ 5 PMF	≤ 0.5 PMF	> 60 SFP
B	> 5 and ≤ 7 PMF	> 0.5 and ≤ 3 PMF	> 40 and ≤ 60 SFP
C	> 7 and ≤ 10 PMF	> 3 and ≤ 6 PMF	> 24 and ≤ 40 SFP
D	> 10 and ≤ 15 PMF	> 6 and ≤ 11 PMF	> 15 and ≤ 24 SFP
E	> 15 and ≤ 23 PMF	> 11 and ≤ 18 PMF	> 8 and ≤ 15 SFP
F	> 23 PMF	> 18 PMF	≤ 8 SFP

Notes: PMF = pedestrians per minute per foot; SFP = square feet per pedestrian.
Source: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (February 2012).

Significant Impact Criteria

The determination of significant pedestrian impacts considers the level of predicted deterioration in pedestrian flow or decrease in pedestrian space between the No Build and Build conditions. For different pedestrian elements, flow conditions, and area types, the CEQR procedure for impact determination corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks

There are two sliding-scale formulas for determining significant sidewalk impacts. For non-platoon flow, the increase in average pedestrian flow rate (Y) in PMF needs to be greater or equal to 3.5 minus X divided by 8.0 (where X is the No-Action pedestrian flow rate in PMF [$Y \geq 3.5 - X/8.0$]) for it to be a significant impact. For platoon flow, the sliding-scale formula is $Y \geq 3.0 - X/8.0$. Since deterioration in pedestrian flow within acceptable levels would not constitute a significant impact, these formulas would apply only if the With-Action pedestrian flow exceeds LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 25** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant sidewalk impacts.

Corner Reservoirs and Crosswalks

The determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.3$, where Y is the decrease in pedestrian space in SFP and X is the No Build pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the Build pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table 26** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant corner reservoir and crosswalk impacts.

Table 25
Significant Impact Guidance for Sidewalks

Non-Platoon Flow				Platoon Flow			
Sliding Scale Formula: *Y ≥ 3.5 – X/8.0*				**Sliding Scale Formula:** *Y ≥ 3.0 – X/8.0*			
Non-CBD Areas		**CBD Areas**		**Non-CBD Areas**		**CBD Areas**	
No-Action Ped. Flow (X, PMF)	**With-Action Ped. Flow Incr. (Y, PMF)**	**No-Action Ped. Flow (X, PMF)**	**With-Action Ped. Flow Incr. (Y, PMF)**	**No-Action Ped. Flow (X, PMF)**	**With-Action Ped. Flow Incr. (Y, PMF)**	**No-Action Ped. Flow (X, PMF)**	**With-Action Ped. Flow Incr. (Y, PMF)**
7.4 to 7.8	≥ 2.6	–	–	3.4 to 3.8	≥ 2.6	–	–
7.9 to 8.6	≥ 2.5	–	–	3.9 to 4.6	≥ 2.5	–	–
8.7 to 9.4	≥ 2.4	–	–	4.7 to 5.4	≥ 2.4	–	–
9.5 to 10.2	≥ 2.3	–	–	5.5 to 6.2	≥ 2.3	–	–
10.3 to 11.0	≥ 2.2	10.3 to 11.0	≥ 2.2	6.3 to 7.0	≥ 2.2	6.3 to 7.0	≥ 2.2
11.1 to 11.8	≥ 2.1	11.1 to 11.8	≥ 2.1	7.1 to 7.8	≥ 2.1	7.1 to 7.8	≥ 2.1
11.9 to 12.6	≥ 2.0	11.9 to 12.6	≥ 2.0	7.9 to 8.6	≥ 2.0	7.9 to 8.6	≥ 2.0
12.7 to 13.4	≥ 1.9	12.7 to 13.4	≥ 1.9	8.7 to 9.4	≥ 1.9	8.7 to 9.4	≥ 1.9
13.5 to 14.2	≥ 1.8	13.5 to 14.2	≥ 1.8	9.5 to 10.2	≥ 1.8	9.5 to 10.2	≥ 1.8
14.3 to 15.0	≥ 1.7	14.3 to 15.0	≥ 1.7	10.3 to 11.0	≥ 1.7	10.3 to 11.0	≥ 1.7
15.1 to 15.8	≥ 1.6	15.1 to 15.8	≥ 1.6	11.1 to 11.8	≥ 1.6	11.1 to 11.8	≥ 1.6
15.9 to 16.6	≥ 1.5	15.9 to 16.6	≥ 1.5	11.9 to 12.6	≥ 1.5	11.9 to 12.6	≥ 1.5
16.7 to 17.4	≥ 1.4	16.7 to 17.4	≥ 1.4	12.7 to 13.4	≥ 1.4	12.7 to 13.4	≥ 1.4
17.5 to 18.2	≥ 1.3	17.5 to 18.2	≥ 1.3	13.5 to 14.2	≥ 1.3	13.5 to 14.2	≥ 1.3
18.3 to 19.0	≥ 1.2	18.3 to 19.0	≥ 1.2	14.3 to 15.0	≥ 1.2	14.3 to 15.0	≥ 1.2
19.1 to 19.8	≥ 1.1	19.1 to 19.8	≥ 1.1	15.1 to 15.8	≥ 1.1	15.1 to 15.8	≥ 1.1
19.9 to 20.6	≥ 1.0	19.9 to 20.6	≥ 1.0	15.9 to 16.6	≥ 1.0	15.9 to 16.6	≥ 1.0
20.7 to 21.4	≥ 0.9	20.7 to 21.4	≥ 0.9	16.7 to 17.4	≥ 0.9	16.7 to 17.4	≥ 0.9
21.5 to 22.2	≥ 0.8	21.5 to 22.2	≥ 0.8	17.5 to 18.2	≥ 0.8	17.5 to 18.2	≥ 0.8
22.3 to 23.0	≥ 0.7	22.3 to 23.0	≥ 0.7	18.3 to 19.0	≥ 0.7	18.3 to 19.0	≥ 0.7
> 23.0	≥ 0.6	> 23.0	≥ 0.6	> 19.0	≥ 0.6	> 19.0	≥ 0.6

Notes: PMF = pedestrians per minute per foot; Y = increase in average pedestrian flow rate in PMF; X = No-Action pedestrian flow rate in PMF.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (February 2012).

Table 26
Significant Impact Guidance for Corners and Crosswalks

Sliding Scale Formula: *Y ≥ X/9.0 – 0.3*			
Non-CBD Areas		**CBD Areas**	
No-Action Pedestrian Space (X, SFP)	**With-Action Pedestrian Space Reduction (Y, SFP)**	**No-Action Pedestrian Space (X, SFP)**	**With-Action Pedestrian Space Reduction (Y, SFP)**
25.8 to 26.6	≥ 2.6	–	–
24.9 to 25.7	≥ 2.5	–	–
24.0 to 24.8	≥ 2.4	–	–
23.1 to 23.9	≥ 2.3	–	–
22.2 to 23.0	≥ 2.2	–	–
21.3 to 22.1	≥ 2.1	21.3 to 21.5	≥ 2.1
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3
< 5.1	≥ 0.2	< 5.1	≥ 0.2

Notes: SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No-Action pedestrian space in SFP.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (February 2012).

Transit Analysis

2012 Existing Conditions – Subway Station Operations

As presented in **Table 19**, the proposed development is expected to result in approximately 350 and 391 project-generated subway trips to the Carroll Street (F, G) Station during the AM and PM peak hours, respectively. As shown in Figure 12, the Carroll Street (F, G) station consists of five stairways connected to three separate fare control areas. On the north side of the station, at Smith Street and President Street, a stairway on the northwest corner connects to the downtown fare control area, while two stairways on the northwest and southwest corners connect to the uptown fare control area. On the south side of the station, on Smith Street between 2nd Street and 2nd Place, a stairway on the southeast corner of Smith Street and 2nd Street and a stairway on the northwest corner of Smith Street and 2nd Place both connect to one fare control area which serves both uptown and downtown trains. Because of the project site's proximity to the stairway located at the southeast corner of Smith Street and 2nd Street, all project generated subway trips (using the F and G lines) were assigned to this stairway and its associated fare control area. Subsequently, as detailed in Section D, "Level 2 Screening Assessment," the following station elements were identified for analysis:

- Station stairways at Carroll Street (F,G) Station on the east sidewalk of Smith Street at 2nd Street (S4) and the adjoining control area elements, including three two-way turnstiles and two High Entry/Exit Turnstiles (HEETs).

Field surveys conducted on August 7, 2012 during the hours of 7:00 to 9:30 AM and 4:00 to 6:30 PM provided the baseline volumes for the analysis of the above subway station elements. These volumes were adjusted to account for seasonal variations as well as trips generated by schools when they are in session during the non-summer months. In total, the volumes were adjusted by 6 percent for the AM peak period and 11 percent for the PM peak period based on NYCT's Metro Card Entry Data from March 2012. As shown in **Tables 27 and 28**, all analyzed stairways and control areas currently operate at acceptable levels during the weekday AM and PM peak periods at LOS A.

Table 27
2012 Existing Conditions Subway Stairway Analysis

Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Down	Up				
Carroll Street Station (F,G Lines)								
Weekday AM Peak 15 Minutes								
SE (S4) – Smith Street and 2nd Street	5.0	4.0	63	20	0.90	0.90	0.16	A
Weekday PM Peak 15 Minutes								
SE (S4) – Smith Street and 2nd Street	5.0	4.0	16	7	0.90	0.90	0.04	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 28
2012 Existing Conditions Subway Control Area Analysis

Station Control Elements	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		In	Out				
Carroll Street Station (F,G Lines)							
North Side of 2nd Place between Smith Street and Court Street							
Weekday AM Peak 15-Minute							
Two-Way Turnstiles	3	354	135	0.80	0.90	0.41	A
HEET	2	72	26	0.80	0.90	0.19	A
Weekday PM Peak 15-Minute							
Two-Way Turnstiles	3	79	455	0.80	0.90	0.40	A
HEET	2	21	2	0.80	0.90	0.05	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin/ Cin* Ff] + [Vx/ Cx* Sf*Ff]
Where
Vin = Peak 15-minute entering passenger volume
Cin = Total 15-minute capacity of all turnstiles for entering passengers
Vx = Peak 15-minute exiting passenger
Cx = Total 15-minute capacity of all turnstile for exiting passengers
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

2015 No Build Condition – Subway Station Operations

Estimates of peak hour transit volumes in the 2015 No Build condition were developed by applying the *CEQR Technical Manual* recommended annual background growth rates. As per CEQR guidelines, an annual compounded background growth rate of 0.50 percent was applied to the transit volumes from 2012 to 2015. In addition, a total of five potential No Build development projects were identified in coordination with DCP as being planned for the study area. However, most of these planned projects are modest in size. After reviewing the development programs for each of these projects, it was determined that background growth will address the increase in transit levels for four out of the five projects in the study area. The subway activities generated by an approximately 58,000 square-foot Whole Foods supermarket at 190-220 3rd Street were assumed to occur at the Smith-9th Street (F,G) station, and the 4th Avenue-9th Street (F,G,R) Stations. Therefore, subway trips generated by this No Build project were not incorporated into this analysis.

As shown in **Tables 29 and 30**, all station stairways and control area elements would continue to operate at acceptable levels in the No Build Condition.

2015 Build Condition – Subway Station Operations

As discussed above, approximately 84 percent of the 421 project generated subway trips (68 in and 353 out) during the AM peak period were assigned to the Carroll Street Station and its corresponding station elements. Likewise, during the PM peak period, 84 percent of the 469 project generated subway trips (324 in and 145 out) were assigned to the Carroll Street Station and its corresponding station elements. As shown in **Tables 31 and 32**, all station stairways and control elements would continue to operate at acceptable levels.

Table 29
2015 No Build Conditions Subway Stairway Analysis

Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Down	Up				
Carroll Street Station (F,G Lines)								
Weekday AM Peak 15 Minutes								
SE (S4) – Smith Street and 2nd Street	5.0	4.0	64	20	0.90	0.90	0.16	A
Weekday PM Peak 15 Minutes								
SE (S4) – Smith Street and 2nd Street	5.0	4.0	16	7	0.90	0.90	0.04	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 30
2015 No Build Conditions Subway Control Area Analysis

Station Control Elements	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		In	Out				
Carroll Street Station (F,G Lines)							
North Side of 2nd Place between Smith Street and Court Street							
Weekday AM Peak 15-Minute							
Two-Way Turnstiles	3	359	137	0.80	0.90	0.41	A
HEET	2	73	26	0.80	0.90	0.19	A
Weekday PM Peak 15-Minute							
Two-Way Turnstiles	3	80	462	0.80	0.90	0.40	A
HEET	2	21	2	0.80	0.90	0.05	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin/ Cin* Ff] + [Vx/ Cx* Sf*Ff]
Where
Vin = Peak 15-minute entering passenger volume
Cin = Total 15-minute capacity of all turnstiles for entering passengers
Vx = Peak 15-minute exiting passenger
Cx = Total 15-minute capacity of all turnstile for exiting passengers
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 31
2015 Build Conditions Subway Stairway Analysis

Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Down	Up				
Carroll Street Station (F,G Lines)								
Weekday AM Peak 15 Minutes								
SE (S4) – Smith Street and 2nd Street	5.0	4.0	147	36	0.90	0.90	0.35	A
Weekday PM Peak 15 Minutes								
SE (S4) – Smith Street and 2nd Street	5.0	4.0	50	83	0.90	0.90	0.26	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
Where
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table 32
2015 Build Conditions Subway Control Area Analysis

Station Control Elements	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		In	Out				
Carroll Street Station (F,G Lines)							
North Side of 2nd Place between Smith Street and Court Street							
Weekday AM Peak 15-Minute							
Two-Way Turnstiles	3	418	144	0.80	0.90	0.47	B
HEET	2	97	35	0.80	0.90	0.26	A
Weekday PM Peak 15-Minute							
Two-Way Turnstiles	3	104	495	0.80	0.90	0.45	A
HEET	2	31	45	0.80	0.90	0.13	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin/ Cin* Ff] + [Vx/ Cx* Sf*Ff]
Where
Vin = Peak 15-minute entering passenger volume
Cin = Total 15-minute capacity of all turnstiles for entering passengers
Vx = Peak 15-minute exiting passenger
Cx = Total 15-minute capacity of all turnstile for exiting passengers
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Therefore, based on the transit analysis of the Carroll Street Station, no potentially significant adverse impacts at the station elements were identified during either of the peak analysis periods.

Pedestrian Analysis

2012 Existing Conditions

Existing pedestrian levels are based on field surveys conducted in February 2012 during the hours of 8:00 to 10:00 AM and 4:00 to 6:00 PM. A total of two days of pedestrian counts were conducted at the analysis locations mentioned above in accordance with the criteria identified in the *CEQR Technical Manual*.

Peak hours were determined by comparing rolling hourly averages and the highest 15-minute volumes within the peak hours were selected for analysis. The existing peak 15-minute weekday AM and PM pedestrian analysis networks are presented in **Figures 16 and 17**. As shown in **Tables 33 through 35**, all sidewalks, corner reservoir, and crosswalk analysis locations operate at acceptable LOS C or better (maximum of 6.0 PMF platoon flows for sidewalks; minimum of 24 SFP for corners and crosswalks).

The Future without the As-of-Right Project (No Build Condition)

The Future 2015 No Build condition was estimated by increasing existing pedestrian levels to reflect expected growth in overall travel through and within the study area. As per the CEQR guidelines, an annual background growth rate of 0.5 percent was assumed for an overall compounded growth of approximately 1.5 percent by 2015. In addition, a total of five potential No Build development projects were identified in coordination with DCP as being planned for the study area. However, most of these planned projects are modest in size. After reviewing the development programs for each of these projects, it was determined that background growth will address the increase in pedestrian levels for four out of the five projects in the study area. The pedestrian activities generated by an approximately 58,000 square-foot Whole Foods supermarket at 190-220 3rd Street were incorporated into the No Build Scenario. The No Build peak 15-minute weekday AM and PM pedestrian analysis networks are presented in **Figures 18 and 19**.

As shown in **Tables 36** through **38**, all sidewalks, corner reservoir, and crosswalk analysis locations would continue to operate at acceptable levels (maximum of 6 PMF platoon flows for sidewalks; minimum of 24 SFP for corners and crosswalks) during both the AM and PM peak 15-minute periods in the 2015 No Build condition.

The Future with the As-of-Right Project (Build Condition)

The future Build condition would result in increased pedestrian trips as compared to the No Build condition. The Build peak 15-minute weekday AM and PM pedestrian analysis networks are presented in **Figures 20 and 21**.

As shown in **Tables 39 through 41**, all sidewalks, corner reservoir, and crosswalk analysis locations would continue to operate at acceptable levels (maximum of 6 PMF platoon flows for sidewalks; minimum of 24 SFP for corners and crosswalks) during both the AM and PM peak 15-minute periods in the 2015 Build condition.

Therefore, in line with the conclusions of the pedestrian analyses presented in the February 2009 FEIS, the As-of-Right Project would not result in any significant adverse pedestrian impacts during the AM and PM peak hours.

Table 33
2012 Existing Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
					PMF	LOS
AM Peak Period						
1	Bond Street between Carroll Street and President Street	East	5.0	9	0.12	A
	Bond Street between Carroll Street and President Street	West	6.0	12	0.13	A
	Carroll Street between Bond Street and Nevins Street	North	7.0	29	0.28	A
	Carroll Street between Bond Street and Nevins Street	South	7.0	43	0.41	A
	Carroll Street between Bond Street and Hoyt Street	North	10.0	18	0.12	A
	Carroll Street between Bond Street and Hoyt Street	South	9.0	35	0.26	A
2	Bond Street between Carroll Street and 1st Street	East	8.0	7	0.06	A
	Bond Street between Carroll Street and 1st Street	West	4.0	11	0.18	A
	1st Street between Bond Street and the Gowanus Canal	North	10.0	6	0.04	A
	1st Street between Bond Street and the Gowanus Canal	South	10.0	1	0.01	A
	1st Street between Bond Street and Hoyt Street	North	9.0	4	0.03	A
	1st Street between Bond Street and Hoyt Street	South	7.0	7	0.07	A
3	Bond Street between 1st Street and 2nd Street	East	8.0	5	0.04	A
	Bond Street between 1st Street and 2nd Street	West	6.0	6	0.07	A
	2nd Street between Bond Street and the Gowanus Canal	North	11.0	0	0.00	A
	2nd Street between Bond Street and Hoyt Street	North	4.0	9	0.15	A
4	Bond Street between 2nd Street and 3rd Street	East	5.0	11	0.15	A
	Bond Street between 2nd Street and 3rd Street	West	4.0	10	0.17	A
	3rd Street between Bond Street and Nevins Street	North	7.0	17	0.16	A
	3rd Street between Bond Street and Nevins Street	South	9.0	6	0.04	A
	3rd Street between Bond Street and Hoyt Street	North	4.0	18	0.30	A
	3rd Street between Bond Street and Hoyt Street	South	16.0	15	0.06	A
PM Peak Period						
1	Bond Street between Carroll Street and President Street	East	5.0	13	0.17	A
	Bond Street between Carroll Street and President Street	West	6.0	12	0.13	A
	Carroll Street between Bond Street and Nevins Street	North	7.0	36	0.34	A
	Carroll Street between Bond Street and Nevins Street	South	7.0	23	0.22	A
	Carroll Street between Bond Street and Hoyt Street	North	10.0	15	0.10	A
	Carroll Street between Bond Street and Hoyt Street	South	9.0	10	0.07	A
2	Bond Street between Carroll Street and 1st Street	East	8.0	7	0.06	A
	Bond Street between Carroll Street and 1st Street	West	4.0	7	0.12	A
	1st Street between Bond Street and the Gowanus Canal	North	10.0	7	0.05	A
	1st Street between Bond Street and the Gowanus Canal	South	10.0	5	0.03	A
	1st Street between Bond Street and Hoyt Street	North	9.0	7	0.05	A
	1st Street between Bond Street and Hoyt Street	South	7.0	3	0.03	A
3	Bond Street between 1st Street and 2nd Street	East	8.0	6	0.05	A
	Bond Street between 1st Street and 2nd Street	West	6.0	6	0.07	A
	2nd Street between Bond Street and the Gowanus Canal	North	11.0	8	0.05	A
	2nd Street between Bond Street and Hoyt Street	North	4.0	12	0.20	A
4	Bond Street between 2nd Street and 3rd Street	East	5.0	17	0.23	A
	Bond Street between 2nd Street and 3rd Street	West	4.0	11	0.18	A
	3rd Street between Bond Street and Nevins Street	North	7.0	16	0.15	A
	3rd Street between Bond Street and Nevins Street	South	9.0	14	0.10	A
	3rd Street between Bond Street and Hoyt Street	North	4.0	12	0.20	A
	3rd Street between Bond Street and Hoyt Street	South	16.0	13	0.05	A

Note: PMF = pedestrians per minute per foot

Table 34
2012 Existing Conditions: Corner Analysis

Intersection No.	Location	Corner	AM Peak Period		PM Peak Period	
			SFP	LOS	SFP	LOS
4	Bond Street and 3rd Street	Northeast	611.4	A	538.1	A
		Northwest	1131.8	A	1334.9	A

Note: SFP = square feet per pedestrian

Table 35
2012 Existing Conditions: Crosswalk Analysis

Intersection No.	Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles					
					AM			PM		
					2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
4	Bond Street and 3rd Street	North	26.0	15.0	11	909.5	A	8	1722.8	A
		South	26.0	11.0	5	2280.1	A	11	1032.0	A
		East	54.0	12.0	2	3061.9	A	3	2020.8	A
		West	44.0	11.0	4	1575.0	A	2	3154.3	A

Note: SFP = square feet per pedestrian

Table 36
2015 No Build Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
					PMF	LOS
AM Peak Period						
1	Bond Street between Carroll Street and President Street	East	5.0	12	0.16	A
	Bond Street between Carroll Street and President Street	West	6.0	14	0.16	A
	Carroll Street between Bond Street and Nevins Street	North	7.0	29	0.28	A
	Carroll Street between Bond Street and Nevins Street	South	7.0	44	0.42	A
	Carroll Street between Bond Street and Hoyt Street	North	10.0	18	0.12	A
	Carroll Street between Bond Street and Hoyt Street	South	9.0	37	0.27	A
2	Bond Street between Carroll Street and 1st Street	East	8.0	7	0.06	A
	Bond Street between Carroll Street and 1st Street	West	4.0	11	0.18	A
	1st Street between Bond Street and the Gowanus Canal	North	10.0	8	0.05	A
	1st Street between Bond Street and the Gowanus Canal	South	10.0	1	0.01	A
	1st Street between Bond Street and Hoyt Street	North	9.0	4	0.03	A
	1st Street between Bond Street and Hoyt Street	South	7.0	9	0.09	A
3	Bond Street between 1st Street and 2nd Street	East	8.0	5	0.04	A
	Bond Street between 1st Street and 2nd Street	West	6.0	6	0.07	A
	2nd Street between Bond Street and the Gowanus Canal	North	11.0	0	0.00	A
	2nd Street between Bond Street and Hoyt Street	North	4.0	11	0.18	A
4	Bond Street between 2nd Street and 3rd Street	East	5.0	11	0.15	A
	Bond Street between 2nd Street and 3rd Street	West	4.0	10	0.17	A
	3rd Street between Bond Street and Nevins Street	North	7.0	22	0.21	A
	3rd Street between Bond Street and Nevins Street	South	9.0	19	0.14	A
	3rd Street between Bond Street and Hoyt Street	North	4.0	21	0.35	A
	3rd Street between Bond Street and Hoyt Street	South	16.0	20	0.08	A
PM Peak Period						
1	Bond Street between Carroll Street and President Street	East	5.0	20	0.27	A
	Bond Street between Carroll Street and President Street	West	6.0	16	0.18	A
	Carroll Street between Bond Street and Nevins Street	North	7.0	36	0.34	A
	Carroll Street between Bond Street and Nevins Street	South	7.0	23	0.22	A
	Carroll Street between Bond Street and Hoyt Street	North	10.0	15	0.10	A
	Carroll Street between Bond Street and Hoyt Street	South	9.0	14	0.10	A
2	Bond Street between Carroll Street and 1st Street	East	8.0	7	0.06	A
	Bond Street between Carroll Street and 1st Street	West	4.0	7	0.12	A
	1st Street between Bond Street and the Gowanus Canal	North	10.0	9	0.06	A
	1st Street between Bond Street and the Gowanus Canal	South	10.0	7	0.05	A
	1st Street between Bond Street and Hoyt Street	North	9.0	7	0.05	A
	1st Street between Bond Street and Hoyt Street	South	7.0	7	0.07	A
3	Bond Street between 1st Street and 2nd Street	East	8.0	6	0.05	A
	Bond Street between 1st Street and 2nd Street	West	6.0	6	0.07	A
	2nd Street between Bond Street and the Gowanus Canal	North	11.0	10	0.06	A
	2nd Street between Bond Street and Hoyt Street	North	4.0	16	0.27	A
4	Bond Street between 2nd Street and 3rd Street	East	5.0	17	0.23	A
	Bond Street between 2nd Street and 3rd Street	West	4.0	11	0.18	A
	3rd Street between Bond Street and Nevins Street	North	7.0	26	0.25	A
	3rd Street between Bond Street and Nevins Street	South	9.0	41	0.30	A
	3rd Street between Bond Street and Hoyt Street	North	4.0	19	0.32	A
	3rd Street between Bond Street and Hoyt Street	South	16.0	22	0.09	A

Note: PMF = pedestrians per minute per foot

Table 37
2015 No Build Conditions: Corner Analysis

Intersection No.	Location	Corner	AM Peak Period		PM Peak Period	
			SFP	LOS	SFP	LOS
4	Bond Street and 3rd Street	Northeast	418.5	A	289.7	A
		Northwest	868.6	A	728.8	A

Note: SFP = square feet per pedestrian

Table 38
2015 No Build Conditions: Crosswalk Analysis

Intersection No.	Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles					
					AM			PM		
					2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
4	Bond Street and 3rd Street	North	26.0	15.0	14	716.5	A	15	659.7	A
		South	26.0	11.0	12	961.5	A	26	440.6	A
		East	54.0	12.0	7	814.3	A	14	406.3	A
		West	44.0	11.0	7	846.3	A	9	658.2	A

Note: SFP = square feet per pedestrian

Table 39
2015 Build Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
					PMF	LOS
AM Peak Period						
1	Bond Street between Carroll Street and President Street	East	5.0	34	0.45	A
	Bond Street between Carroll Street and President Street	West	6.0	17	0.19	A
	Carroll Street between Bond Street and Nevins Street	North	7.0	29	0.28	A
	Carroll Street between Bond Street and Nevins Street	South	7.0	47	0.45	A
	Carroll Street between Bond Street and Hoyt Street	North	10.0	19	0.13	A
	Carroll Street between Bond Street and Hoyt Street	South	9.0	38	0.28	A
2	Bond Street between Carroll Street and 1st Street	East	8.0	31	0.26	A
	Bond Street between Carroll Street and 1st Street	West	4.0	16	0.27	A
	1st Street between Bond Street and the Gowanus Canal	North	10.0	69	0.46	A
	1st Street between Bond Street and the Gowanus Canal	South	10.0	56	0.37	A
	1st Street between Bond Street and Hoyt Street	North	9.0	45	0.33	A
	1st Street between Bond Street and Hoyt Street	South	7.0	49	0.47	A
3	Bond Street between 1st Street and 2nd Street	East	8.0	10	0.08	A
	Bond Street between 1st Street and 2nd Street	West	6.0	6	0.07	A
	2nd Street between Bond Street and the Gowanus Canal	North	11.0	35	0.21	A
	2nd Street between Bond Street and Hoyt Street	North	4.0	41	0.68	B
4	Bond Street between 2nd Street and 3rd Street	East	5.0	22	0.29	A
	Bond Street between 2nd Street and 3rd Street	West	4.0	10	0.17	A
	3rd Street between Bond Street and Nevins Street	North	7.0	30	0.29	A
	3rd Street between Bond Street and Nevins Street	South	9.0	19	0.14	A
	3rd Street between Bond Street and Hoyt Street	North	4.0	24	0.40	A
	3rd Street between Bond Street and Hoyt Street	South	16.0	20	0.08	A

Table 39, cont'd
2015 Build Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
					PMF	LOS
PM Peak Period						
1	Bond Street between Carroll Street and President Street	East	5.0	45	0.60	B
	Bond Street between Carroll Street and President Street	West	6.0	20	0.22	A
	Carroll Street between Bond Street and Nevins Street	North	7.0	36	0.34	A
	Carroll Street between Bond Street and Nevins Street	South	7.0	27	0.26	A
	Carroll Street between Bond Street and Hoyt Street	North	10.0	17	0.11	A
	Carroll Street between Bond Street and Hoyt Street	South	9.0	16	0.12	A
2	Bond Street between Carroll Street and 1st Street	East	8.0	35	0.29	A
	Bond Street between Carroll Street and 1st Street	West	4.0	15	0.25	A
	1st Street between Bond Street and the Gowanus Canal	North	10.0	81	0.54	B
	1st Street between Bond Street and the Gowanus Canal	South	10.0	71	0.47	A
	1st Street between Bond Street and Hoyt Street	North	9.0	54	0.40	A
	1st Street between Bond Street and Hoyt Street	South	7.0	52	0.50	A
3	Bond Street between 1st Street and 2nd Street	East	8.0	13	0.11	A
	Bond Street between 1st Street and 2nd Street	West	6.0	6	0.07	A
	2nd Street between Bond Street and the Gowanus Canal	North	11.0	50	0.30	A
	2nd Street between Bond Street and Hoyt Street	North	4.0	49	0.82	B
4	Bond Street between 2nd Street and 3rd Street	East	5.0	30	0.40	A
	Bond Street between 2nd Street and 3rd Street	West	4.0	11	0.18	A
	3rd Street between Bond Street and Nevins Street	North	7.0	36	0.34	A
	3rd Street between Bond Street and Nevins Street	South	9.0	41	0.30	A
	3rd Street between Bond Street and Hoyt Street	North	4.0	23	0.38	A
	3rd Street between Bond Street and Hoyt Street	South	16.0	22	0.09	A

Note: PMF = pedestrians per minute per foot

Table 40
2015 Build Conditions: Corner Analysis

Intersection No.	Location	Corner	AM Peak Period		PM Peak Period	
			SFP	LOS	SFP	LOS
4	Bond Street and 3rd Street	Northeast	318.5	A	221.8	A
		Northwest	778.5	A	645.0	A

Note: SFP = square feet per pedestrian

Table 41
2015 Build Conditions: Crosswalk Analysis

Intersection No.	Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles					
					AM			PM		
					2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
4	Bond Street and 3rd Street	North	26.0	15.0	17	586.5	A	19	511.4	A
		South	26.0	11.0	12	961.5	A	26	440.6	A
		East	54.0	12.0	7	814.3	A	14	406.3	A
		West	44.0	11.0	7	846.3	A	9	658.2	A

Note: SFP = square feet per pedestrian

PARKING

2012 Existing Conditions

An inventory of on- and off-street parking within a ¼-mile of the Project Site was conducted in February 2012. The on-street survey involved recording curbside regulations and performing general observations of daytime utilization. The off-street survey provided an inventory of the area's public parking facilities and their legal capacities and daytime utilization. It was determined that there are no off-street public parking facilities with a ¼-mile of the proposed project.

On-Street Parking

The curbside regulations within a ¼-mile of the proposed project generally consist of alternate-side parking to accommodate street-cleaning. Based on field observations, on-street parking in the area is generally near full utilization (93 percent) during weekday AM hours.

The Future without the As-of-Right Project (No Build Condition)

The utilization of on-street parking spaces in the study area would increase due to the area's background growth in traffic (1.5 percent over existing by the year 2015). As described above, one potential No Build project consisting of an approximately 58,000 square-foot Whole Foods supermarket at 190-220 3rd Street was considered to have significant enough potential traffic demand to be included in the No Build analysis. However, this supermarket would provide on-site parking and was therefore not included in the overall parking utilization estimates. In general, the overall utilization rate of on-street parking in the study area would increase to approximately 94 percent (with 1,579 utilized and 99 available spaces) during the overnight/early morning hours (see **Table 42**).

Table 42
2015 No Build Conditions: Overnight On-Street Parking Utilization

2012 Existing Conditions	
Capacity (spaces)	1,678
Demand (spaces)	1,556
Available Spaces (Capacity minus Demand)	122
Utilization	93%
2015 No Build Conditions	
Capacity (spaces)	1,678
2012 Existing Demand	1,556
Demand due to Background Growth	23
Parking Demand from No Build Projects*	0
Total Demand	1,579
Available Spaces (Capacity minus Demand)	99
Utilization	94%

Note:
* Parking demand from No Build projects does not include the 58,000-square-foot supermarket which would accommodate its parking demand on site.

The Future with the As-of-Right Project (Build Condition)

For the Special Permit Project, overnight residential parking demand was estimated by applying the specific homeowner and renter vehicle ownership rates from the 2000 Census Data for Census Tracts No. 75, 77, 123, and 125. Based on that information, the vehicle ownership rates for owner and renter occupied units in the Special Permit Project were approximately 88 and 35 percent, respectively, resulting in a peak parking demand for approximately 331 spaces. The Special Permit Project provided 268 accessory parking spaces. Therefore, with a demand for 331 spaces, there was a shortfall of 63 during the peak overnight hours.

To accommodate the parking demand, approximately 316 accessory spaces would be provided under the As-of-Right Project. Given the residential character of the As-of-Right Project, the peak demand for parking would occur during the overnight hours. In contrast to the Special Permit Project, which was planned to include a mix of owner- and renter-occupied housing, for the As-of-Right Project, it is assumed that it will contain only renter-occupied housing. Renters typically have lower auto ownership rates than owners. The overnight parking demand generated by the residential component of the revised development program was estimated by applying the vehicle ownership rates from the 2006-2010 ACS

estimates for Census Tracts No. 75, 77, and 119 (tracts 123 and 125 from the 2000 Census were consolidated into tract 119 in the new ACS data). Based on the ACS data, the vehicle ownership rate for the renter-occupied units is approximately 36 percent, resulting in a peak parking demand for approximately 252 spaces. The total parking demand generated by the revised development program will be approximately 259 spaces (including the residential, local retail, and community facility components) as summarized in **Table 43**. Therefore**,** under the As-of-Right Project, all of the project generated parking demand would be fully accommodated on-site.

Table 43
Parking Accumulation

	Residential								
	Owner Occupied Units		Renter Occupied Units		Local Retail		Community Facility		
Program Size	0 units		700 units		2,600 gsf		2,250 gsf		
Vehicles Parked Overnight	0		252		0		0		**Total**
Time	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**Accumulation**
12:00 AM–1:00 AM	0	0	5	5	0	0	0	0	252
1:00 AM–2:00 AM	0	0	2	2	0	0	0	0	252
2:00 AM–3:00 AM	0	0	1	1	0	0	0	0	252
3:00 AM–4:00 AM	0	0	1	1	0	0	0	0	252
4:00 AM–5:00 AM	0	0	1	1	0	0	0	0	252
5:00 AM–6:00 AM	0	0	1	1	0	0	0	0	252
6:00 AM–7:00 AM	0	0	1	3	0	0	0	0	250
7:00 AM–8:00 AM	0	0	5	20	0	0	0	0	235
8:00 AM–9:00 AM	0	0	9	54	0	0	6	5	191
9:00 AM–10:00 AM	0	0	11	32	0	0	0	0	170
10:00 AM–11:00 AM	0	0	14	19	0	0	0	0	166
11:00 AM–12:00 PM	0	0	15	14	0	0	1	0	168
12:00 PM–1:00 PM	0	0	16	16	1	1	2	2	168
1:00 PM–2:00 PM	0	0	15	14	2	0	5	5	171
2:00 PM–3:00 PM	0	0	14	13	2	2	3	3	172
3:00 PM–4:00 PM	0	0	21	14	0	2	3	3	177
4:00 PM–5:00 PM	0	0	26	14	0	0	3	3	189
5:00 PM–6:00 PM	0	0	48	20	0	0	6	7	216
6:00 PM–7:00 PM	0	0	35	18	0	0	3	3	233
7:00 PM–8:00 PM	0	0	34	18	0	0	3	3	249
8:00 PM–9:00 PM	0	0	17	7	0	0	1	1	259
9:00 PM–10:00 PM	0	0	6	12	0	0	1	1	253
10:00 PM–11:00 PM	0	0	10	10	0	0	0	0	253
11:00 PM–12:00 AM	0	0	8	8	0	0	0	0	253

In the 2015 Build condition, the overall on-street parking utilization rate in the study area would remain unchanged from the No Build condition (94 percent) during the overnight hours (see **Table 44**). Therefore, the As-of-Right Project is not expected to result in significant adverse parking impacts in the study area.

Table 44
2015 Build Conditions: Overnight On-Street Parking Utilization

2012 Existing Conditions	
Capacity (spaces)	1,678
Demand (spaces)	1,556
Available Spaces (Capacity minus Demand)	122
Utilization	93%
2015 No Build Conditions	
Capacity (spaces)	1,678
2012 Existing Demand	1,556
Demand due to Background Growth	23
Parking Demand from No Build Projects*	0
Total Demand	1,579
Available Spaces (Capacity minus Demand)	99
Utilization	94%
2015 Build Conditions	
Capacity (spaces)	1,678
2015 No Build Demand	1,579
Parking Demand from Build Project	
2015 Proposed Project	259
On-site Parking Spaces	316
Project-generated On-street Parking Demand	0
Total On-street Parking Demand	1,579
Available On-street Parking Spaces (Capacity minus Demand) within a ¼-mile	99
Utilization	94%

Note:
* Parking demand from No Build projects does not include the 58,000-square-foot supermarket which would accommodate its parking demand on site.

AIR QUALITY

The As-of-Right Project would not result in any new significant adverse air quality impacts beyond what was disclosed in the 2009 FEIS. The As-of-Right Project would not result in a significant adverse impact due to mobile sources because none of the applicable screening thresholds would be exceeded. With regard to stationary sources, the As-of-Right Project would not result in any significant adverse impacts due to emissions from heating, ventilation and air conditioning (HVAC) sources or industrial sources; however, the As-of-Right Project would result in a significant adverse odor impact due to concentrations of hydrogen sulfide, as was disclosed in the 2009 FEIS.

MOBILE SOURCES

The As-of-Right Project would result in minor changes to traffic conditions as compared to the 2009 FEIS. The number of project-generated trips for the As-of-Right Project would not exceed the 170 vehicle trip screening threshold for conducting a quantified analysis of carbon monoxide (CO) emissions from mobile sources. In addition, the As-of-Right Project would not exceed the particulate matter (PM) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual.* Therefore, a mobile source air quality analysis is not required, and no significant adverse air quality impacts from mobile sources would result from the As-of-Right Project.

Emissions from vehicles using the proposed garages could potentially affect ambient levels of CO in the immediate vicinity of the ventilation outlets. The Special Permit Project provided 268 accessory parking spaces. As discussed, approximately 316 accessory spaces would be provided under the As-of-Right Project. Therefore, the proposed parking garages were analyzed using the modified capacities, updated garage utilization, and 2015 Build year.

As with the Special Permit Project, the analysis of emissions from the outlet vents and their dispersion was performed using the methodology set forth in the *CEQR Technical Manual*. The vent for each of the garages was modeled at a height of 10 feet above ground level, along 1st Street. Pollutant levels were predicted at the height of the vents at a distance of 15 feet, accounting for the minimum vent to window distance requirements specified by the New York City Mechanical Code. Receptors (locations where CO levels were predicted) were also modeled along the 1st Street sidewalks.

The maximum predicted 8-hour average CO concentration associated with the garage on Block 452 at a sensitive receptor would be 0.15 ppm and the maximum predicted 8-hour average CO concentration associated with the garage on Block 458 at a sensitive receptor would be 0.21 ppm. Including the ambient background CO concentrations and on-street traffic emissions, the maximum predicted 8-hour average CO level associated with the garage on Block 452 would be 2.34 ppm and the maximum predicted 8-hour average CO concentration associated with the garage on Block 458 at a sensitive receptor would be 2.40 ppm. The combined effect of the two garages at a sensitive receptor would also be 2.40 ppm (i.e. the Block 452 garage would have a negligible effect on the CO concentration at the location where the effect of the Block 458 garage is maximum). These maximum predicted CO levels would be in compliance with the applicable CO federal ambient air quality standards and the CO *de minimis* criteria. As these results show, although the As-of-Right Project would result in an increase in the total parking capacity as compared with the Special Permit Project, the overall concentrations would be lower and no significant adverse impacts on air quality would occur as a result of the garages with the As-of-Right Project.

STATIONARY SOURCES

HVAC Analysis

The 2009 FEIS included an analysis of fuel-fired HVAC systems from the Special Permit Project, which concluded that by utilizing natural gas as the type of fuel for HVAC systems and locating boiler exhaust stacks on the highest tier of each building, no significant adverse impacts on air quality would occur. The As-of-Right Project would include a total of 244,047 gsf of development on Block 452 and 396,304 gsf of development on Block 458, comprising primarily residential uses with some community facility and commercial space, and accessory parking. An analysis of the As-of-Right Project was performed based on the screening procedures outlined in the *CEQR Technical Manual*, assuming the use of natural gas as fuel and using CEQR default stack parameters.

The results of the analysis determined that with restrictions on the placement of stacks exhausts of fossil fuel-fired equipment no significant adverse air quality impacts would be predicted.

To ensure that the As-of-Right Project would not result in any significant air quality impacts from HVAC emissions, the following measures would be required through (E) designations assigned by DCP to the Project Site:

> Tax Block 452, Tax Lots 1, 15: Any new development must use natural gas as the type of fuel for HVAC systems. Fuel-fired HVAC exhaust stacks for the development shall be located on the highest tier of the building and should be located at least 118 feet way from any operable window or air intakes on buildings of greater height on Tax Block 458.
>
> Tax Block 458, Lot 1: Any new development must use natural gas as the type of fuel for HVAC systems. Fuel-fired HVAC exhaust stacks for the development shall be located on the highest tier

of the building and should be located at least 152 feet way from any operable window or air intakes on buildings of greater height on Tax Block 452.

With these restrictions in place, no significant adverse air quality impacts would result from the As-of-Right Project' HVAC systems.

Industrial Source Analysis

The As-of-Right Project is located within 400 feet of a manufacturing district. The results of a field survey for manufacturing sites and the New York City Department of Environmental Protection (DEP) permit inquiry conducted for the 2009 FEIS indicated that only one permitted industrial site (associated with a single business) was located within 400 feet of the Project Site. A February 2012 survey confirmed these findings.

An analysis of potential impacts from industrial sources was conducted for the As-of-Right Project using updated dispersion factors found in Table 17-1 in the 2012 *CEQR Technical Manual* for the analysis. **Table 45** shows the air contaminants, calculated concentrations, and the respective, recommended short-term and annual guideline concentrations. The concentrations shown represent predicted impacts on the Project Site nearest to the industrial source in order to determine worst-case impacts on the As-of-Right Project.

Table 45
Maximum Predicted Impacts on Special Permit Project with the As-of-Right Project from the Industrial Sources

Potential Contaminants	CAS No.	Estimated Short-term Impact (ug/m^3)	SGC (ug/m^3)	Estimated Long-term Impact (ug/m^3)	AGC (ug/m^3)
Acetone	00067-64-1	7.10	180,000	0.032	30,000
Ammonium Chloride	12125-02-9	0.35	380	0.004	24
Boric Acid	10043-35-3	0.35	N/A	0.004	4.8
Butyl Acetate	00123-86-4	347.88	95,000	1.591	17,000
Hydrogen Chloride	07647-01-0	0.71	2,100	0.008	20
Isopropyl Alcohol	00067-63-0	340.78	98,000	1.558	7,000
Particulates	NY075-00-0	4.26	380	0.038	45
Sodium Hydroxide	01310-73-2	28.4	200	0.325	N/A
Toluene	00108-88-3	702.87	37,000	3.214	5,000

Source: Guideline concentrations were obtained from NYSDEC DAR-1 (Air Guide-1) AGC/SGC Tables, October 2010
AGC - Annual Guideline Concentrations; SGC - Short-term Guideline Concentrations

The conservative screening procedure used to estimate maximum potential impacts from this business showed that the operations would not result in any predicted violations of the NAAQS or any exceedances of the recommended SGC or AGC. Therefore, based on the data available on the surrounding industrial uses, the As-of-Right Project would not experience significant adverse air quality impacts from nearby industrial sources.

The industrial source analysis presented in the 2009 FEIS also included an analysis for two nearby concrete batching plants that are located within 1,000 feet of the Project Site. That analysis concluded that the combined emissions from the two concrete batching plants would not result in any significant adverse air quality impacts on the Special Permit Project. The As-of-Right Project would not result in any changes that would alter the findings of the 2009 FEIS.

Odor Analysis

Site sampling conducted for the 2009 FEIS determined that concentrations of hydrogen sulfide (H_2S)—an indicator of odors—exceeded the New York State ambient air standard of 10 parts per billion (ppb) on a 1-hour average under certain conditions. According to the state regulations, this is not a health-based

standard, but rather its primary objective is nuisance control to prevent disagreeable odors. Assuming that this condition is unchanged since the 2009 FEIS, under the conditions when the hourly average concentration exceeds 10 ppb, this would be considered a significant adverse odor impact of the As-of-Right Project. This finding is unchanged from the Special Permit Project and was disclosed in the 2009 FEIS. The potential for measures to mitigate this significant adverse impact are discussed below under "Mitigation."

GREENHOUSE GAS EMISSIONS

The As-of-Right Project would result in approximately 4,674 metric tons of GHG emissions annually, of which 3,232 metric tons would be from building operations, and 1,593 would be from mobile sources. The proximity of the Project Site to public transportation coupled with a commitment to a building design that would be 10 percent more energy efficient than code, along with the provision of bicycle storage space, are factors that collectively contribute to improved energy efficiency. Specific energy efficiency measures that would be implemented and best practicable construction methods would therefore lower the potential GHG emissions from the project. Based on these project components and efficiency measures, the proposed project would be consistent with the City's emission reduction goals, as defined in the *CEQR Technical Manual*.

Given the Project Site's location within the 100-year floodplain, the potential effects of global climate change were also considered in both the 2009 FEIS and this Technical Memorandum in accordance with the *CEQR Technical Manual*. The current Federal Emergency Management Agency (FEMA) designated 100-year floodplain is the only regulatory standard relating to the building elevation of new development. Under the As-of-Right Project, the occupied floor area of the building would comply with FEMA and the City code and the project first floor elevation would be 3.17 feet above the current floodplain level, thereby reducing project vulnerability to flooding.

The City is working with FEMA to update the Flood Insurance Rate Maps (FIRMs) which includes collecting new highly accurate Light Detection and Ranging (LiDAR) data which will serve as the base for new FIRMs. The New York City Green Codes Task Force has also recommended nine measures to increase the climate resilience of buildings. Some of the recommendations call for further study, while others could serve as the basis for revisions to the building code. One recommendation is to develop flood hazard area maps that reflect projected sea-level rise and potential increases in coastal flooding through 2080 and to require new developments susceptible to future flooding to meet the projected 100-year flood zone. The As-of-Right Project would need to incorporate the building code requirements at the time of filing the application with DOB and would also consider any prudent guidance and design information as to sea level rise resilience. In addition, the proposed project would include a number of features, in addition to the requirements of the building code such as landscaping and stormwater reduction methods. These features would be part of a site stormwater management plan that would improve on-site drainage and reduce on-site flood prevention.

NOISE

The As-of-Right Project would not result in any significant adverse noise impacts. The 2009 FEIS identified a need for 26 dB(A) of window wall attenuation to achieve the required interior residential noise levels (45 dB(A) L_{10} or less). The purpose of this noise attenuation is to reduce the effects of exterior ambient noise on the interior residential spaces. This interior noise level is achievable through a closed-window condition, which requires an alternative means of ventilation that does not diminish the acoustical performance of the building façade. The 26 dB(A) attenuation requirement stated in the 2009 FEIS was based on the 2001 *CEQR Technical Manual*. Those attenuation requirements have subsequently been revised and using the 2012 *CEQR Technical Manual*, the attenuation requirement would be at least 28 dB(A). Under ZR Section 123-32, however, all new dwelling units in Special Mixed Use Districts are required to be provided with a minimum attenuation of 35 dB(A), which exceeds the 28 dB(A) required

under the 2012 *CEQR Technical Manual.* Therefore, as with the Special Permit Project, the As-of-Right Project would comply with CEQR interior noise level requirements.

PUBLIC HEALTH

The As-of-Right Project would not result in any significant adverse impacts on public health. A screening-level public health assessment was conducted in the 2009 FEIS for the purposes of determining the potential public health impacts of the Special Permit Project. That screening concluded that the Special Permit Project would not result in any public health impacts due to air quality, noise, hazardous materials, or solid waste management practices. Local groundwater would also not be used for any purpose and there would be no exposure pathway to groundwater. In addition, the Special Permit Project would not introduce dermal absorption pathways with respect to surface water contact on the Gowanus Canal. The Special Permit Project included public access along the bulkhead, but no access onto the Gowanus Canal, and all residential units of the buildings would be constructed above the 100-year elevation. Also, raising the elevation of the Project Site above the 100-year flood elevation would not exacerbate coastal flooding impacts at off-site properties (i.e., in the vicinity of the Project Site). Therefore, the 2009 FEIS found that no further public health analysis was warranted and the Special Permit Project would not result in significant adverse public health impacts.

Since the issuance of the 2009 FEIS, the City has released the 2012 *CEQR Technical Manual*. The current Manual does not amend the screening level analysis methods or impact thresholds from that performed in 2009. In addition, on March 2010 EPA placed the Gowanus Canal on the National Priorities List of hazardous waste sites requiring further investigation (i.e., Superfund designation). EPA cited exposure to surface water and sediments as the human health risk issues, specifically ingestion or dermal contact of surface water or the consumption of fish from the canal waters. These health risk findings are also consistent with the 2009 FEIS which concluded that the Special Permit Project would not increase exposure to surface water or sediments and would not allow fishing.

In addition, following Hurricane Sandy in late 2012, EPA took samples of flood water from the ground floors of two area buildings that had been flooded as well as directly from the canal. These samples of flood water were analyzed for bacteria and 139 different chemicals, including metals, volatile organic compounds, petroleum related compounds and semi-volatile organic compounds. Testing found that levels of bacteria were high; EPA concluded that this result reinforces the need for people to take proper sanitary measures when cleaning up flood waters that contain sewage and therefore contain bacteria. The results for the remaining four categories of pollutants tested were below levels of concern or not detected. EPA's conclusions are consistent with the findings of the 2009 FEIS, which concluded that public health impacts due to storm events or sea surge would be avoided if proper sanitary measures are observed.

The site plan and use program for the As-of-Right Project are similar to the Special Permit Project. As with the Special Permit Project, the As-of-Right Project would not create or expand exposure pathways to surface waters, sediments or fish. Therefore, as with the Special Permit Project, the As-of-Right Project would not result in any public health impacts.

NEIGHBORHOOD CHARACTER

The As-of-Right Project would not result in any significant adverse impacts on neighborhood character. The impacts of the As-of-Right Project on neighborhood character would be similar to those of the Special Permit Project analyzed in the 2009 FEIS.

As discussed above, the As-of-Right Project would not result in any new significant adverse impacts to any of the contributing elements that define neighborhood character, including land use, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, traffic, and noise. As with the Special Permit Project, the As-of-Right Project would mitigate any significant adverse impacts to the on-site bulkheads through an archaeological investigation that would have the potential to yield knowledge as to the historical methods used in developing the canal.

In addition, the As-of-Right Project would not alter the overall mix of proposed land uses, the location of the proposed buildings, or the quality or character of the proposed open space, compared to the Special Permit Project. The As-of-Right Project would not change the overall mix of land uses in the study area, as it would extend the residential character of nearby residential neighborhoods eastward onto the two underutilized project blocks.

Overall, the As-of-Right Project would improve neighborhood character by introducing new residential development that would activate the project site and create new publicly accessible open space.

CONSTRUCTION

The As-of-Right Project would not result in any significant adverse construction impacts. Under the As-of-Right Project, the duration of construction and the types of equipment used would be the same as described in the 2009 FEIS for the Special Permit Project. The duration of construction for both projects would be approximately 24-months. Although a greater number of units would be built with the As-of-Right Project relative to the Special Permit Project, the overall project size would be essentially the same and the construction duration would be unchanged,

During this time, construction activities for the As-of-Right Project would normally take place Monday through Friday, although the delivery or installation of certain critical equipment could occur on weekend days. The permitted hours of construction are regulated by DOB and apply to all areas of the City. In accordance with those regulations, work would begin at 7:00 AM on weekdays, although some workers would arrive and begin to prepare work areas between 6:00 and 7:00 AM.

The construction of the As-of-Right Project would comply with applicable control measures for construction noise. Construction noise is regulated by the New York City Noise Control Code and by the Environmental Protection Agency noise emission standards for construction equipment. These federal and local requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards. Except under exceptional circumstances, construction activities must be limited to weekdays between the hours of 7 AM and 6 PM. Construction material must also handled and transported in such a manner as to not create unnecessary noise. Therefore, no significant adverse noise impacts are expected to occur as a result of the construction.

Dust emissions can occur from hauling debris and traffic over unpaved areas. All appropriate fugitive dust control measures would be employed to reduce the generation and spread of dust, and to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed.

Overall, due to the factors discussed above, the As-of-Right Project would not alter the findings of the 2009 FEIS, and would not result in any significant adverse construction impacts.

MITIGATION

The mitigation required with the proposed project would be the same as that identified in the 2009 FEIS. No new significant adverse impacts would result with the modified program and no additional mitigation would be needed. As with the previously Special Permit Project, the following mitigation measures would be employed with the proposed project:

- Historic resources: archaeological documentation would serve as mitigation of the adverse impact to the bulkhead;
- Transportation: signal modifications would serve as document of adverse impacts at two intersections: the eastbound approach of Carroll Street at 3rd Avenue during the AM and PM peak hours; and the eastbound approach of Carroll Street at 4th Avenue during the AM and PM peak hours.

In addition, three potential measures were identified in the 2009 FEIS for the significant adverse air quality impact due to odors: rehabilitation of the Gowanus Canal Flushing Tunnel; reconstruction of the

Gowanus Pump Station; and dredging of about 750 linear feet at the head of the Gowanus Canal. If undertaken by DEP, these measures would occur independently of the proposed project. Assuming that these projects will not be completed by 2015, the significant adverse air quality impact with regard to odor would be unmitigated with the As-of-Right Project as it was with the Special Permit Project.

UNAVOIDABLE ADVERSE IMPACTS

No new unmitigated significant adverse impacts would result from the As-of-Right Project. The 2009 FEIS disclosed one potential unavoidable significant adverse impact to air quality, due to concentrations of hydrogen sulfide (as described above under "Air Quality"). The 2009 FEIS also stated that this impact could be addressed independent of the Special Permit Project by DEP through the following measures: rehabilitation of the Gowanus Canal Flushing Tunnel; reconstruction of the Gowanus Pump Station; and dredging about 750 linear feet at the head of the Gowanus Canal. This conclusion is unchanged from the findings of the 2009 FEIS, and the As-of-Right Project would not result in any new unavoidable significant adverse impacts. ✷

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM

CONSISTENCY ASSESSMENT FORM

AND

RESPONSES TO POLICY QUESTIONS

For Internal Use Only:	WRP no._____
Date Received:_____	DOS no._____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed action subject to CEQR, ULURP, or other Local, State or Federal Agency Discretionary Actions that are situated within New York City's designated Coastal Zone Boundary must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)*. The WRP was adopted as a 197-a Plan by the Council of the City of New York on October 13, 1999, and approved in coordination with local, state and Federal laws and regulations, including the State's Coastal Management Program (Executive Law, Article 42) and the Federal Coastal Zone Management Act of 1972 (P.L. 92-583). As a result of these approvals, state and federal discretionary actions within the city's coastal zone must be consistent to the maximum extent practicable with the WRP policies and the city must be given the opportunity to comment on all state and federal projects within its coastal zone.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, other State Agency or the New York City Department of City Planning in its review of the applicant's certification of consistency.

A. APPLICANT

1. Name:
The Lightstone Group

Address:
c/o Nick Hockens, Greenberg Traurig, LLP.
200 Park Avenue, New York, NY 10166

3. Telephone: **212.801.3088** Fax: **212.309.9588**

E-mail Address:
hockensn@gtlaw.com

4. Project site owner:
The Lightstone Group

B. PROPOSED ACTIVITY

1. Brief description of activity:
Mixed-use development containing 700 residential units (including approximately 140 for low income households), approximately 2,600 gsf of retail space, approximately 2,250 gsf of community facility space, 316 enclosed parking spaces, and approximately 33,380 square feet of new publicly accessible open space.

2. Purpose of activity:
To create a new, vibrant development on the Gowanus Canal waterfront, including new publicly-accessible open space and affordable housing units.

3. Location of activity: **Gowanus/Carroll Gardens** Borough: **Brooklyn**

Street Address or Site Description:
363-365 Bond Street (Tax Block 452 [Lots 1 and 15] and Tax Block 458 [Lot 1])

Proposed Activity Cont'd

4. If a federal or state permit or license was issued or is required for the proposed activity, identify the permit type(s), the authorizing agency and provide the application or permit number(s), if known:

5. Is federal or state funding being used to finance the project? If so, please identify the funding source(s).
No.

6. Will the proposed project result in any large physical change to a site within the coastal area that will require the preparation of an environmental impact statement? **Yes** **No**
If yes, identify Lead Agency: **X**
An Environmental Impact Statement (EIS) was previously prepared for the Special Permit Project; the New York City Planning Commission (CPC) issued a Notice of Completion on February 6, 2009 for the 363-365 Bond Street Final FEIS (CEQR No. 08DCP033K).
A Technical Memorandum has been prepared in support of the As-of-Right Project. The leady agency for review is the New York City Department of City Planning (DCP).

7. Identify **City** discretionary actions, such as **zoning amendment or adoption of an urban renewal plan**, required for the proposed project.
As compared to the Special Permit Project, the As-of-Right Project would: Increase the number of residential units from 447 to up to 700 by reducing average unit size; Increase the number of off-street accessory parking spaces from 268 to 316 and relocate the entrances to the on-site accessory parking facilities; Make minor variations in the base heights, building heights and footprints of portions of the buildings, including variations of approximately 2 to 6 feet in the heights of street walls; Increase the amount of clearance (or "freeboard") between the Base Flood Elevation (BFE) and the top of the slab of the first residential story of each building; Increase the depth of portions of the proposed publicly accessible open spaces along the Gowanus Canal by over 20 feet and make other design revisions comply with applicable waterfront zoning regulations and to accommodate the development, by others, of the Sponge Park at the end of 2nd Street; Make minor changes to the size of commercial uses (to 2,600 gross square feet [gsf]) of retail space, a 600 gsf increase over the Special Permit Project) and community facility uses (to 2,250 gsf of community facility space, a 250 gsf increase over the Special Permit Project); Revise the lot area to conform to an updated survey of the Project Site; Eliminate previously approved waivers for height and setback, inner court recesses, and rear yards;; and Change the Build year from 2011 to 2015.

C. COASTAL ASSESSMENT

The following questions represent, in a broad sense, the policy of the WRP. The number in the parentheses after each question indicated the policy or policies that are the focus of the question. A detailed explanation of the Waterfront Revitalization Program and its policies are contained in the publication the *New York City Waterfront Revitalization Program.*

Check either "Yes" or "No" for each of the following questions. Once the checklist is completed, assess how the proposed project affects the policy or standards indicated in "( )" after each question with a Yes response. Explain how the action is consistent with the goals of the policy or standard.

Location Questions:	**Yes**	**No**
1. Is the project site on the waterfront or at the water's edge?	**X**	
2. Does the proposed project require a waterfront site?		**X**
3. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land underwater, or coastal waters?	**X**	

Policy Questions:	**Yes**	**No**
The following questions represent, in a broad sense, the policies of the WRP. Numbers in parentheses after each questions indicate the policy or policies addressed by the question. The new Waterfront Revitalization Program offers detailed explanations of the policies, including criteria for consistency determinations. Check either "Yes" or "No" for each of the following questions. For all "yes" responses, provide an attachment assessing the effects of the proposed activity on the relevant policies or standards. Explain how the action would be consistent with the goals of those policies and standards.		
4. Will the proposed project result in revitalization or redevelopment of a deteriorated or under- used waterfront site? (1)	**X**	
5. Is the project site appropriate for residential or commercial redevelopment? (1.1)	**X**	

Policy Questions cont'd:		Yes	No
6.	Will the action result in a change in scale or character of a neighborhood? (1.2)		X
7.	Will the proposed activity require provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (1.3)		X
8.	Is the action located in one of the designated Significant Maritime and Industrial Areas (SMIA): South Bronx, Newtown Creek, Brooklyn Navy Yard, Red Hook, Sunset Park, or Staten Island? (2)		X
9.	Are there any waterfront structures, such as piers, docks, bulkheads or wharves, located on the project sites? (2)	X	
10.	Would the action involve the siting or construction of a facility essential to the generation or transmission of energy, or a natural gas facility, or would it develop new energy resources? (2.1)		X
11.	Does the action involve the siting of a working waterfront use outside of a SMIA? (2.2)		X
12.	Does the proposed project involve infrastructure improvement, such as construction or repair of piers, docks, or bulkheads? (2.3, 3.2)	X	
13.	Would the action involve mining, dredging, or dredge disposal, or placement of dredged or fill materials in coastal waters? (2.3, 3.1, 4, 5.3, 6.3)		X
14.	Would the action be located in a commercial or recreational boating center, such as City Island, Sheepshead Bay or Great Kills or an area devoted to water-dependent transportation? (3)		X
15.	Would the proposed project have an adverse effect upon the land or water uses within a commercial or recreation boating center or water-dependent transportation center? (3.1)		X
16.	Would the proposed project create any conflicts between commercial and recreational boating? (3.2)		X
17.	Does the proposed project involve any boating activity that would have an impact on the aquatic environment or surrounding land and water uses? (3.3)		X
18.	Is the action located in one of the designated Special Natural Waterfront Areas (SNWA): Long Island Sound-East River, Jamaica Bay, or Northwest Staten Island? (4 and 9.2)		X
19.	Is the project site in or adjacent to a Significant Coastal Fish and Wildlife Habitats? (4.1)		X
20.	Is the site located within or adjacent to a Recognized Ecological Complex: South Shore of Staten Island or Riverdale Natural Area District? (4.1 and 9.2)		X
21.	Would the action involve any activity in or near a tidal or freshwater wetland? (4.2)	X	
22.	Does the project site contain a rare ecological community or would the proposed project affect a vulnerable plant, fish, or wildlife species? (4.3)		X
23.	Would the action have any effects on commercial or recreational use of fish resources? (4.4)		X

Policy Questions cont'd:		Yes	No
24.	Would the proposed project in any way affect the water quality classification of nearby waters or be unable to be consistent with that classification? (5)		X
25.	Would the action result in any direct or indirect discharges, including toxins, hazardous substances, or other pollutants, effluent, or waste, into any water body? (5.1)		X
26.	Would the action result in the draining of stormwater runoff or sewer overflows into coastal waters? (5.1)	X	
27.	Will any activity associated with the project generate nonpoint source pollution? (5.2)	X	
28.	Would the action cause violations of the National or State air quality standards? (5.2)		X
29.	Would the action result in significant amounts of acid rain precursors (nitrates and sulfates)? (5.2C)		X
30.	Will the project involve the excavation or placing of fill in or near navigable waters, marshes, estuaries, tidal marshes or other wetlands? (5.3)		X
31.	Would the proposed action have any effects on surface or ground water supplies? (5.4)		X
32.	Would the action result in any activities within a Federally designated flood hazard area or State designated erosion hazards area? (6)	X	
33.	Would the action result in any construction activities that would lead to erosion? (6)\	X	
34.	Would the action involve construction or reconstruction of flood or erosion control structure? (6.1)	X	
35.	Would the action involve any new or increased activity on or near any beach, dune, barrier island, or bluff? (6.1)		X
36.	Does the proposed project involve use of public funds for flood prevention or erosion control? (6.2)		X
37.	Would the proposed project affect a non-renewable source of sand? (6.3)		X
38.	Would the action result in shipping, handling, or storing of solid wastes; hazardous materials, or other pollutants? (7)	X	
39.	Would the action affect any sites that have been used as landfills? (7.1)		X
40.	Would the action result in development of a site that may contain contamination or has a history of underground fuel tanks, oil spills, or other form or petroleum product use or storage? (7.2)	X	
41.	Will the proposed activity result in any transport, storage, treatment, or disposal of solid wastes or hazardous materials, or the siting of a solid or hazardous waste facility? (7.3)		X
42.	Would the action result in a reduction of existing or required access to or along coastal waters, public access areas, or public parks or open spaces? (8)		X
43.	Will the proposed project affect or be located in, on, or adjacent to any federal, state, or city park or other land in public ownership protected for open space preservation? (8)		X
44.	Would the action result in the provision of open space without the provision for its maintenance? (8.1)		X
45.	Would the action result in any development along the shoreline but NOT include new water enhanced or water dependent recreational space? (8.2)		X

Policy Questions cont'd:		Yes	No
46.	Will the proposed project impede visual access to coastal lands, waters and open space? (8.3)		X
47.	Does the proposed project involve publically owned or acquired land that could accommodate waterfront open space or recreation? (8.4)		X
48.	Does the project site involve lands or waters held in public trust by the state or city? (8.5)	X	
49.	Would the action affect natural or built resources that contribute to the scenic quality of a coastal area? (9)		X
50.	Does the site currently include elements that degrade the area's scenic quality or block views to the water? (9.1)	X	
51.	Would the proposed action have a significant adverse impact on historic, archeological, or cultural resources? (10)	X	
52.	Will the proposed activity affect or be located in, on, or adjacent to an historic resource listed on the National or State Register of Historic Places, or designated as a landmark by the City of New York? (10)	X	

D. CERTIFICATION

The applicant must certify that the proposed activity is consistent with New York City's Waterfront Revitalization Program, pursuant to the New York State Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If the certification can be made, complete this section.

"The proposed activity complies with New York State's Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent Name: **Robert M. White (Applicant's agent)**

Address: **C/O AKRF, Inc., 440 Park Avenue South, NY, NY, 10016**

Telephone

Applicant/Agent Signature: _____ Date: **March 14, 2013**

Waterfront Revitalization Program

The New York City Waterfront Revitalization Program (WRP) is the City's principal coastal zone management tool. As originally adopted in 1982 and revised in 1999, it establishes the City's policies for development and use of the waterfront. All proposed actions subject to City Environmental Quality Review (CEQR), Uniform Land Use Review Procedure (ULURP), or other local, state, or federal agency discretionary actions that are situated within New York City's designated Coastal Zone Boundary must be reviewed and assessed for their consistency with the WRP.

The project site is located within the City's designated Coastal Zone Boundary. Therefore, in accordance with the guidelines of the 2012 *CEQR Technical Manual*, an evaluation of the As-of-Right Project' consistency with WRP policies was undertaken (see the attached WRP Coastal Assessment Form [CAF]).

Consistency of the Proposed Modifications with the Waterfront Revitalization Program Policies

New York City's WRP consists of 10 policies that are intended to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among these objectives. Each of the policies that were identified in the CAF as requiring further assessment are presented below, followed by a discussion of the As-of-Right Project's consistency with the policy.

Policy 1: Support and facilitate commercial and residential development in areas well-suited to such development.

Policy 1.1: Encourage commercial and residential redevelopment in appropriate coastal zone areas.

The As-of-Right Project would result in new residential, commercial, community facility, parking, and open space uses on underutilized waterfront land. The proposed redevelopment that would occur as a result of the As-of-Right Project would include residential and commercial development consistent with other development in the area.

Over the last three decades, the Gowanus Canal waterfront, juxtaposed between the Carroll Gardens and Park Slope residential communities, has experienced a pronounced decline in water-dependent industrial activity which has resulted in both vacant and underutilized waterfront properties. For example the project site includes vacant land and buildings, open vehicle storage and warehouses, none of which is labor intensive, is water dependent, or requires a waterfront location for operation. Moreover, industrial sectors in the city such as garment and textile manufacturing, have seen dramatic declines as companies have closed or moved their operations abroad. With the closure of the Bayside Oil facility, the canal north of the 9th Street Bridge no longer contains any active waterborne commerce (the last barge delivery of oil to the Bayside Oil terminal at Sackett Street was in 2003).

Conversely, while the industrial sector has declined in the area, the neighboring Carroll Gardens and Park Slope neighborhoods have experienced substantial growth in their residential population, with an increasing demand for new housing units.

In response to these land use and demographic changes, CPC approved the Special Permit Project for the purposes of providing opportunities for new residential development along the Gowanus Canal waterfront. The As-of-Right Project would create the opportunity for new housing development on underutilized waterfront land as well as public waterfront access where there is no longer a strong demand for manufacturing, particularly water-dependent manufacturing, and where strong demand for housing exists.

The As-of-Right Project would advance the redevelopment of one segment of the Gowanus Canal waterfront and would provide the opportunity for future waterfront open space connections along the canal if additional waterfront development occurs in the future. The project site is not within a Special Natural Waterfront Area or Significant Maritime and Industrial Area nor does it contain any unique or significant natural features. Due to these factors, the As-of-Right Project would be appropriate for the project site and is consistent with this policy.

1.2 Encourage non-industrial development that enlivens the waterfront and attracts the public.

Consistent with this policy, the As-of-Right Project would create new waterfront residential development with commercial and community facility uses supporting these waterfront uses along with approximately 33,380 square feet (0.8 acres) of new publicly-accessible waterfront open space that would attract the public with both physical and visual access to the water's edge.

The new development would revitalize and enliven the local waterfront, by bringing a 24-hour population to this underutilized reach of the Gowanus Canal waterfront. In addition, the proposed and potential commercial and community facility uses would support the local residential community and further enhance and enliven the waterfront.

The As-of-Right Project would be the first step in the opportunity for a continuous waterfront walkway along the Gowanus Canal that would link public spaces along the canal waterfront (recognizing that any future development could be subject to requirements for a waterfront open space, and could be subject to future discretionary actions). Such an open space at the project site (a total of approximately 0.8 acres on the project site) and potentially along the larger canal would provide a significant neighborhood amenity and open space in an area that is largely developed and where other new open space opportunities of this magnitude are very limited.

In sum, by allowing the proposed waterfront development, opening public access to the waterfront of the project site and bringing a 24-hour population into the neighborhood, the As-of-Right Project would revitalize this underutilized waterfront and support the adjoining residential community. Thus, the As-of-Right Project would encourage greater public use of this segment of the coastal zone, and would be consistent with this policy.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

The study area is largely developed with residential uses to the west and already served by existing streets and utilities that were created to support the local residential communities

and the waterfront industry that is no longer present in the area. In addition, consistent with this policy, infrastructure on and along the project site would be upgraded to meet current design standards and needs with respect to stormwater management and treatment including the separation of sanitary and storm sewers and pre-treatment of stormwater runoff. For these reasons, the As-of-Right Project would be consistent with this policy.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

Working waterfront uses have siting requirements that make portions of the City's coastal zone especially valuable as industrial areas. These areas have been recognized by the designation of the six Significant Maritime and Industrial Areas (SMIAs) in the New York City Comprehensive Waterfront Plan. The principal criteria used to delineate these areas include: concentrations of M2 and M3 zoned land with active industries; presence of or potential for intermodal transportation, marine terminal and pier infrastructure; concentrations of water dependent and industrial activity; relatively good transportation access and proximity to markets; or availability of publicly owned land. All six of the designated SMIAs exhibit combinations of most of these characteristics. The project site is not within one of these six areas and therefore this policy does not apply.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

As discussed above, the Gowanus Canal waterfront has experienced a significant decline in industrial activity over the past several decades, particularly with respect to water-dependent industry. It is also not a waterfront that is directly accessible to shipping and other uses as it requires the opening of several bridges across the canal (the canal has bridges at a number of locations beginning at the open water of Gowanus Bay). As a result, the waterfront of the project site and much of the Gowanus Canal is characterized by many large vacant or underutilized industrial properties formerly used for manufacturing. None of these are used for maritime-related industries, including the project site.

Although the southern segment of canal does have active barge activity (near Hamilton Avenue) working waterfront uses are not prevalent along the Gowanus Canal waterfront and neither the expansion of, or the demand for, such uses is expected in the future. Neither the project site nor the nearby waterfront properties are suitable for contemporary waterborne freight access or cargo handling facilities, since the bulkhead and the maritime infrastructure has not been upgraded or improved for many decades. Moreover, if any waterborne commerce were considered for the canal it would require major and significant waterfront improvements and there is no known or viable waterborne commercial activity that would support these improvements or the investment it would require. Thus, no restoration of such waterborne commercial activities is proposed or contemplated for the future in this segment of the canal and the As-of-Right Project would not conflict with the City's policy to encourage working waterfront uses at appropriate sites outside the SMIAs. In addition, the As-of-Right Project would not displace any active water-dependent or maritime uses in the area. Due to these factors, the As-of-Right Project would be consistent with this policy.

Policy 2.3: Provide infrastructure improvements necessary to support working waterfront uses.

The As-of-Right Project is not a working waterfront project and therefore this policy does not apply.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.1 Support and encourage recreational and commercial boating in New York City's maritime centers.

The project site is part of a maritime area that was historically used for working waterfront uses which are no longer present. There is informal use of the canal for recreational boating and the As-of-Right Project would not conflict with that activity since the waterfront would be dedicated to publicly-accessible open space. Therefore, the As-of-Right Project would not conflict with this policy.

Policy 3.2: Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The As-of-Right Project does not involve recreational, commercial, or ocean-going freight vessels and there is no such combination of activities in the Gowanus Canal. Therefore, this policy does not apply.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The As-of-Right Project would not introduce new commercial or recreational boating activities that would impact the aquatic environment. Therefore, this policy does not apply.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

Policy 4.1: Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes and Significant Coastal Fish and Wildlife Habitats.

The project site is not a special natural waterfront area, a recognized ecological complex or a significant coastal fish and wildlife habitat and therefore this policy does not apply.

Policy 4.2: Protect and restore tidal and freshwater wetlands.

There are no freshwater wetlands in the study area, as all wetlands are tidal along the Gowanus Canal. The shoreline along the project site consists primarily of urban bulkhead and pier. There are no higher quality tidal wetlands such as tidal marsh or submerged aquatic vegetation. However, the Gowanus Canal is designated as littoral zone wetland (with shallow waters 1.8 meters [6 feet] or less in depth) by the New York State Department of Environmental Conservation (DEC). The littoral zone is defined under 6NYCRR 661.4(hh) as any "land under tidal waters" that is not part of other tidal wetland resource areas with specific ecological function (such as intertidal marsh, etc.) and is less than 1.8 meters (6 feet) deep at mean low water. The As-of-Right Project would involve the construction of a new sheet pile bulkhead that would have the least practicable impact on the waterbody and littoral zone wetlands by minimizing the width of the sheet pile to 12 inches. This would allow stabilization of the water's edge and implementation of the proposed waterfront open space. In addition, the As-of-Right Project would change the land cover at the site from industrial to residential and open space and would install new storm water collection and

treatment systems that would reduce pollutant loads from the project site, thereby reducing the effect on local water quality and wetlands. In sum, the As-of-Right Project would not impact any freshwater wetlands and would protect tidal wetlands through its design of the waters edge and a reduction in pollutant loading. Therefore, the As-of-Right Project would be consistent with this policy.

Policy 4.3: Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.

Neither the project site nor the adjacent canal waterway contains any vulnerable plant, fish or wildlife species or rare ecological communities. Therefore this policy does not apply.

Policy 5: Protect and improve water quality in the New York City coastal area.

Policy 5.1: Manage direct or indirect discharges to waterbodies.

Consistent with this policy, the As-of-Right Project would manage stormwater runoff and sanitary discharges in a way that would not directly or indirectly impact local water quality. The project site is currently mostly covered by buildings or paved surfaces. Currently, stormwater sheet flows off the site or is conveyed by drains to the sewer in Bond Street. With the As-of-Right Project, all site generated stormwater flows would be captured, managed and treated as part of an overall stormwater management plan. Two new storm sewers would be installed under 1st and 2nd with new outfalls to the canal at the street ends. All stormwater from the project site would be conveyed to these new storm sewers and discharged directly to the canal. This would eliminate currently uncontrolled flows off the edge of the property into the Gowanus Canal. Sanitary flows from the As-of-Right Project would be conveyed to the combined sewer under Bond Street. The proposed stormwater plan is subject to the approval of DEC for the two new proposed outfalls to the canal at 1st and 2nd Streets. Consistent with this policy, the As-of-Right Project would properly manage direct and indirect stormwater discharges to local water bodies and would not adversely impact the coastal water quality.

Policy 5.2: Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

The As-of-Right Project would manage stormwater runoff and other sources of potential non-point source pollution both during its operational and construction phases. With the As-of-Right Project, stormwater flows from the project site would be captured, managed, and treated. This would eliminate currently uncontrolled flows from the industrial site into the Gowanus Canal. In addition, change in land use from industrial to residential and landscaped open space would allow for more water quality treatment and attenuation of stormwater than with existing conditions, thereby reducing pollutant loads. Therefore, the As-of-Right Project would be consistent with this policy.

Policy 5.3: Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.

The As-of-Right Project would not involve any dredging or filling in navigable waters. Consistent with this policy, construction activities would need to comply with the requirements of a general stormwater pollution prevention plan and a permit would be obtained from DEC prior to construction. This plan would require erosion and sediment control practices during construction to ensure that the As-of-Right Project does not

adversely impact local water quality or the adjacent tidal wetlands. With these protection measures in place, no adverse impacts would occur on the water quality of the Gowanus Canal.

Policy 5.4: Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.

As described above, the As-of-Right Project would include measures to protect local water quality and source water for tidal wetlands. Therefore, the As-of-Right Project would be consistent with this policy.

Policy 6: Minimize loss of life, structures, and natural resources caused by flooding and erosion.

Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

The majority of the project site and the adjacent portions of 1st, 2nd and Carroll Streets lie below the 100-year floodplain. This area is subject to tidal flooding during major storm events.

The City's Building Code contains required flood protection measures for all construction in flood hazard areas. Any new development in the coastal zone is subject to zoning and other applicable controls on building construction, height, and bulk in order to minimize the potential for damage caused by flooding and erosion. This includes, as applicable, development procedures that meet the Federal Emergency Management Agency (FEMA)'s floodplain regulations (44 CFR 60.3), which includes the following:

> If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

Consistent with this policy, all buildings on the project site would comply with both FEMA and New York City Building Code requirements regulating construction within flood hazard areas. The current Base Flood Elevation (also known as the '100-year flood plain') for Brooklyn is 7.45 feet above Brooklyn Highway Datum ("BHD"). During Hurricane Sandy, storm surge from the Gowanus Canal caused flooding of the project site and the surrounding area above the current Base Flood Elevation. According to the flood data provided by the FEMA and the United States Geological Survey (USGS), flooding in the vicinity of the Project Site rose to a height of 9.62 feet above BHD.

In response to Hurricane Sandy, FEMA has issued Advisory Base Flood Elevation Maps which set the Advisory Base Flood Elevation for the Project Site at 8.54 feet above BHD. On January 31, 2013, the Department of Buildings promulgated an emergency rule (1 RCNY 3606-04) to amend Appendix G ("Flood Resistant Construction") of the New York City Building Code requiring that multifamily residential buildings provide at least 1 foot of freeboard over the Base Flood Elevation. On February 5, 2013, the Mayor issued Executive

Order No. 233 allowing building heights to be measured from a Zoning Design Flood Elevation equal to the Advisory Base Flood Elevation plus the amount of freeboard required under Appendix G, which would equal 9.54 feet above BHD for the As-of-Right Project.

The proposed design for the As-of-Right Project sets the level of the lowest floors of the buildings occupied for residential use, as well as all lift and safety systems and major mechanical equipment, at a minimum of 10.62 feet above BHD, which would be 3.17 feet above the current Base Flood Elevation, 2.08 feet above the Advisory Base Flood Elevation and 1.0 feet above the Hurricane Sandy flood level.

Although the entrance to the off-street parking facility on Second Street cannot be raised to be as high as the elevation of the lowest occupied floor of the proposed building because of the existing street grade, the entrance will be raised to the maximum elevation that is practical and floodgates will be incorporated into the building design and operation to provide flood protection of the facility up to an elevation of 10.62 feet above BHD. In accordance with the 2008 Building Code, parking facilities would be designed as 'bathtub' structures, with walls and floors designed to resist the hydrostatic forces of flood water.

Therefore, the As-of-Right Project would be consistent with this policy.

6.2 Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.

The As-of-Right Project would not involve any public funding for flood prevention or erosion control measures. Therefore, this policy does not apply.

6.3 Protect and preserve non-renewable sources of sand for beach nourishment.

The As-of-Right Project would not affect any sand or beach nourishment areas. Therefore, this policy does not apply.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

Policy 7.1: Manage solid waste materials, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution, and prevent degradation of coastal ecosystems.

The As-of-Right Projectwould create new residential uses on the waterfront and eliminate manufacturing and vacant uses. All cleaners, paints, and related materials used in residential buildings would be stored and used within the enclosed service area of the proposed building and handled, and used in accordance with all City, state, and federal regulations applicable to these materials. No project activities would involve the discharge of hazardous or toxic pollutants. As described in the "Hazardous Materials" section of the Technical Memorandum, there is the potential for the project site to have hazardous materials from prior and current uses. Any regulated hazardous materials that need to be removed from the site would therefore be handled and removed during construction in accordance with the requirements of the City and the applicable State and Federal requirements. All subsurface soil disturbance would be performed in accordance with a Remedial Action Plan/Construction Health and Safety Plan (RAP/CHASP), under the oversight of the New York City Mayor's Office of Environmental Remediation (OER). The RAP would provide for the appropriate handling, stockpiling, testing, transportation and disposal of these materials in accordance with all applicable federal, state and local regulations. The CHASP would ensure that all such work is done in a manner protective of both human health and the

environment. Implementation of these measures would prevent impacts from hazardous materials.

If required by OER, these measures would be ensured through an (E) designation assigned by DCP to the Project Site. With these measures in place, significant adverse impacts related to hazardous materials would be avoided during and post construction, and the As-of-Right Project would be consistent with this policy.

7.2 Prevent and remediate discharge of petroleum products.

Consistent with this policy, petroleum products on the site would be addressed as part of the hazardous materials program presented under Policy 7.1, above. With these measures in place, the As-of-Right Project would be consistent with this policy.

7.3 Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

As is standard practice in the City, solid waste generated on the project site is expected to be collected by either the New York City Department of Sanitation (DSNY) (for residential uses) with a small amount collected by private solid waste management companies (for commercial uses) and transported to a licensed solid waste management facility. The As-of-Right Project is not expected to generate significant solid waste and limited household hazardous substances that would be characteristic of households in New York City. No solid waste or hazardous waste facilities, such as landfills or transfer stations, are proposed as part of the Proposed Modifications. In addition, the As-of-Right Project is not expected to conflict with the City's Solid Waste Management Plan and would meet all recycling requirements of the City. Due to these factors, the As-of-Right Project would be consistent with this policy.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.

The project site is largely underutilized waterfront property and is almost entirely inaccessible to the public with the exception of the existing street ends. The As-of-Right Project would protect these publicly-accessible access points and integrate them into an overall open space plan that would provide important access to the waterfront and the City's coastal zone along the Gowanus Canal. Thus, the As-of-Right Projectwould create new waterfront open spaces and linkages along two privately held blocks of the canal, linking them with the publicly held street ends at 2nd and 1st Streets and connecting to Carroll Street on the north.

The proposed waterfront walkway would provide a substantial neighborhood open space that would allow both existing and future residents of the study area and project site the enjoyment of the water's edge, which is currently mostly inaccessible. Therefore, the As-of-Right Project would be consistent with this policy.

8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

As described above, the As-of-Right Projectwould convert the upland from underutilized vacant lands and industrial uses to residential uses with commercial and community facility uses which would allow a compatible publicly-accessible open space along the waterfront.

This proposed open space would be approximately 0.8 acres, and would dramatically improve public access to the waterfront, while serving as an important recreational amenity to the community. For these reasons, the As-of-Right Project would be consistent with this policy.

8.3 Provide visual access to coastal lands, waters and open space where physically practical.

As described above, the As-of-Right Projectwould convert the upland from underutilized vacant lands and industrial uses to residential uses with commercial and community facility uses which would create the opportunity for a publicly-accessible open space along the waterfront. This proposed open space would be approximately 0.8 acres, and would dramatically improve visual access to the water and historic resources such as the historic Carroll Street Bridge. For these reasons, the As-of-Right Project would be consistent with this policy.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

The project site does not include any public land. Therefore, this policy does not apply.

8.5 Preserve the public interest in and use of lands and waters held in public trust by the state and city.

The As-of-Right Projectwould provide direct public access to the water and would facilitate waterfront redevelopment including lands along the Gowanus Canal. Therefore, the As-of-Right Project would be consistent with this policy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

Policy 9.1: Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

Historic and visual features adjoining the project site include the historic Gowanus Canal waterway and the historic Carroll Street Bridge. There is also the historic Former Brooklyn Rapid Transit Power House building across the canal from the project site. The As-of-Right Project would project open views of these resources from the proposed open space. It would also provide a new attractive landscaping along the canal that would be visible from other locations along the canal including the Carroll Street Bridge. Due to these factors, the As-of-Right Project would be consistent with this policy.

9.2 Protect scenic values associated with natural resources.

There are no scenic natural resources on the project site. Consistent with this policy the As-of-Right Project would protect the Gowanus Canal waterbody as a scenic natural resource and would protect its views of the water and open new views. Therefore, the As-of-Right Project would be consistent with this policy.

Policy 10: Protect, preserve, and enhance resources significant to the historical, archaeological, and cultural legacy of the New York City coastal area.

Policy 10.1: Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The only historic resource on the project site is a portion of the Gowanus Canal bulkhead, which has been identified as a contributing feature to the S/NR-eligible Gowanus Canal Historic District. The As-of-Right Project's proposed improvements along the water's edge includes improvements to the existing bulkhead. The existing bulkhead along the project site is a timber crib design that, though currently functioning, could not be utilized or repaired for the purposes of meeting the proposed waterfront access goals of both the project and the City. In order to make possible the construction of the proposed waterfront open space along the canal, the As-of-Right Projectwould modify the existing infrastructure by installing a new steel sheet pile bulkhead for the entire length of the waterfront. As described in the "Historic Resources" section of the Technical Memorandum, the bulkhead rehabilitation work and storm water outfall installation would adversely impact portions of the bulkhead at the project site. To mitigate this impact, the reconstructed bulkhead would be faced in wood to match the existing face. In addition, an Archaeological Testing Protocol would be developed and implemented in coordination with the New York City Landmarks Preservation Commission (LPC) to identify and document any significant characteristics of the Gowanus Canal bulkhead along the site's eastern boundary. The field investigation would occur either in advance of or in concert with the As-of-Right Project and its waterfront improvements. The Archaeological Testing Protocol would be prepared in compliance with LPC's Guidelines for Archaeological Work in New York City (2002). These measures would have the potential to lend knowledge as to the historical methods used in building the bulkhead. In addition, the project proposes adding steel sheathing with a three inch thick by 14 inch wide timber veneer that will be visually consistent with the remnants of the original wooden bulkhead.

The As-of-Right Projectwould also create new public access to and along the Gowanus Canal including an esplanade and plaza area adjacent to the historic Carroll Street Bridge. This amenity would be expected to improve access to, and the visibility of the canal, and other nearby historic resources such as the Carroll Street Bridge and the Former Brooklyn Rapid Transit Power House.

Due to these factors, the As-of-Right Project would be consistent with this policy.

Policy 10.2: Protect and preserve archaeological resources and artifacts.

As described in detail above for Policy 10.1, the As-of-Right Project's proposed improvements along the water's edge would adversely impact a segment of the existing S/NR-eligible Gowanus Canal bulkhead, an archeological resource on the project site. Consistent with this policy, the rehabilitation work on the bulkhead would be designed to preserve and protect the existing bulkhead to the greatest extent possible, and the proposed mitigation measures would have the potential to yield information as to the historical methods used in bulkhead construction (see discussion under Policy 10.1 above).