THE CITY OF NEW YORK
OFFICE OF THE MAYOR
NEW YORK, N.Y. 10007

MEMORANDUM

To: Distribution

From: Robert R. Kulikowski, Ph.D.
Assistant to the Mayor, on Behalf of the Deputy Mayor for Economic Development and Rebuilding

Re: Modification of a Site Analyzed in the Downtown Brooklyn Development (DBD) FEIS
CEQR # 03DME016K

Date: March 23, 2007

Attached for your review and comment is a Modification Technical Memorandum (MTM) to the DBDFEIS (incorporating the Final Supplemental Environmental Impact Statement, dated April 2004) for which the Office of the Deputy Mayor for Economic Development and Rebuilding acted as lead agency.

The MTM analyzes the effects of various changes to the proposed development on Site Q (Block 149, Lots 1 and 49) as currently proposed, compared to the effects of the development of Site Q as proposed and analyzed in the FEIS of April 2004, to ascertain if new impacts would be created or existing impacts previously disclosed would be exacerbated by the changes in the development now proposed for Site Q. The memorandum also examines changes in background conditions from 2004 to the present.

The differences in the proposed development analyzed in the 2004 FEIS and the currently proposed development are as follows. The site analyzed in the FEIS of 2004 was to be developed with a 615 foot tall primarily office building with 1,233,000 sf of zoning floor area (zfa) of office space and 415,000 sf of zfa of retail space for a total of 1,648,000 zfa with a 225-space accessory parking facility. The currently proposed development envisions a 764 foot tall primarily residential building with 125,000 sf of zfa of office space, 475,000 sf of zfa of retail space and 987,624 sf of zfa of residential space (1,064 residential units) and 404-spaces of accessory parking, for a total of 1,587,624 sf of zfa,

and will encompass a total of 1,882,102 gross square feet (gsf). In addition to the difference in height and floor area of the two developments, the massing of the two buildings differs as well. The build year remains the same for both development scenarios and the draft MTM concludes that the currently proposed development of Site Q would not result in new impacts not disclosed in the 2004 FEIS or exacerbate any impacts disclosed in that document.

Please review and forward any comments on the MTM to contact person for this project.

Contact Person:

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Modification Technical Memorandum to the FEIS (Incorporating Final Supplemental Environmental Impact Statement) CEQR#: 03DME016K for the Downtown Brooklyn Development Project

The purpose of this technical memorandum is to determine whether the changes to the previously approved Downtown Brooklyn Development project, which was the subject of the April 2004 Downtown Brooklyn Development Final Environmental Impact Statement (FEIS), or changes in background conditions from 2004 to 2007 would alter the conclusions presented in the 2004 FEIS and would result in any significant adverse environmental impacts that were not previously identified.

The program and building proposed for Site Q (Block 149, Lots 1 and 49) have several differences from the projected development analyzed in the FEIS. These are: the building would be primarily occupied with residential, rather than office uses; the building would include an approximately 404-space accessory parking facility, instead of a 225-space accessory parking facility; and the tower portion of the building would be approximately 764 feet in height, rather than 615 feet. Completion of the project is planned for no later than 2013.

As described in the New York State Department of Environmental Conservation's SEQRA regulations, 6 NYCRR §§617.9(a)(7)(i)(a), (b), and (c), and the 2001 *New York City Environmental Quality Review* (CEQR) *Manual*, the lead agency may require the preparation of a supplemental EIS if there are significant adverse environmental impacts not addressed or inadequately addressed in the EIS that arise from changes proposed for the project, or newly discovered information; or a change in circumstances related to the project. As reflected in the technical analyses that follow, neither the changes in the project program nor background conditions would create any significant adverse environmental impacts that were not identified in the 2004 FEIS. Furthermore, there are no changes in circumstances surrounding the project, nor is there any newly discovered information that would create any new significant adverse environmental impacts.

A. PROJECT DESCRIPTION

2004 PROJECT

The Downtown Brooklyn Development project is a public planning effort to create opportunities for stimulating and integrating commercial, academic, cultural, and residential development in the Downtown Brooklyn area. The project seeks to reinforce Downtown Brooklyn's role as a regional central business district; to provide viable development sites for future market cycles; to capture regional employment growth and strengthen New York City's economic base by attracting new businesses and retaining businesses considering relocation outside Manhattan; to increase opportunities for commercial, residential, and academic growth in Downtown Brooklyn; to promote connections between the area's commercial core and surrounding academic, cultural, and residential neighborhoods; and to reinforce the positive character of surrounding neighborhoods.

The 2004 project required a number of discretionary actions that were subject to environmental review pursuant to City Environmental Quality Review (CEQR). These actions included: zoning map

amendments and text changes to the Special Downtown Brooklyn District, to allow for greater commercial and residential density in the downtown area and to provide height and setback regulations and other massing and streetscape controls; mapping actions to demap certain streets and widen others; amendments to the Brooklyn Center Urban Renewal Plan, MetroTech Urban Renewal Plan, and Atlantic Terminal Urban Renewal Plan; modification of the MetroTech General Large-Scale Development Special Permit; disposition of City-owned property pursuant to urban renewal; site selection for a visual and performing arts public library; and special permits for parking facilities.

The proposed actions were projected to stimulate approximately 6.7 million square feet of new development, including 4.6 million square feet of office space, 979,000 square feet of residential use (approximately 979 units), 844,000 square feet of retail, and 260,000 square feet of community facility and cultural space. The proposed project also included provisions for approximately 1,617 public parking spaces, as well as new public spaces at several locations. Although the proposed actions affected the entire project area, the analysis of changes to allowable use and bulk and other land use provisions was focused on those sites that were reasonably likely to undergo development within the foreseeable 10-year timeframe (by 2013). These sites were known as "projected development sites." The current project site—Site Q—was analyzed as a projected development site in the 2004 FEIS. It was assumed that by 2013, the site would be developed with up to 1,648,000 zoning floor area of retail and office uses.

The bulk of the development activity was projected to take place along Willoughby Street near Flatbush Avenue Extension. Enhancing the uses and streetscapes of Flatbush Avenue Extension was a central goal of the Downtown Brooklyn Development project, and Flatbush Avenue was envisaged as becoming an inviting entrance to Downtown Brooklyn. Similarly, Willoughby Street was envisaged as a "front door" to the corporate buildings that would surround this street, particularly between Adams Street and Flatbush Avenue. The streetscape of Willoughby Street would be improved, like Flatbush Avenue, with widened sidewalks and improved subway entrances included within new buildings and/or plazas. As part of these streetscape improvements, the project included the mapping of the northern portion of Site Q in order to widen Willoughby Street between Flatbush Avenue Extension and Albee Square West from 60 feet to 95 feet.

The New York City Office of the Deputy Mayor for Economic Development and Rebuilding (ODMEDR) served as the CEQR lead agency in this project's environmental review. A draft scope of work for the EIS was presented at a public scoping meeting held on May 23, 2003. The period to receive public comments on the proposed scope of work remained open until May 30, 2003, and a final scope was issued that incorporated relevant public comments. A Draft Environmental Impact Statement (DEIS) for the project was prepared, and the Notice of Completion and DEIS were certified and distributed on November 28, 2003. Subsequent to the certification of the DEIS, an announcement was made regarding the potential development of a large, mixed-use arena project with commercial, residential and retail uses along Atlantic Avenue just east of the project area. The size of the proposed Arena project and its proximity to the Downtown Brooklyn Development project area necessitated revisions to the future baseline conditions analyzed in the DEIS. A positive declaration and notice of intent to prepare a Draft Supplemental Environmental Impact Statement (DSEIS) were issued on January 22, 2004, and a public scoping meeting was held on February 23, 2004. Additional comments were accepted during a 10-day period that followed, until Thursday, March 4, 2004. A final supplemental scope was issued that incorporated relevant public comments. A DSEIS for the project was prepared, and the Notice of Completion and DSEIS were certified and distributed on March 8, 2004. A public hearing on the DEIS/DSEIS was held on March 24, 2004 at Klitgord Auditorium at the New York City College of Technology to afford all interested parties the opportunity to submit oral and/or written comments. The record remained open through April 7, 2004, to allow submission of additional written comments on the DEIS/DSEIS. The FEIS, dated April 2004, was accepted as complete by ODMEDR.

CURRENT PROJECT

The following are the significant changes in the project program for Site Q since the 2004 FEIS (Figure 1 shows the revised plan). As noted in Table 1, the zoning floor area to be developed is slightly smaller than what was analyzed in the 2004 FEIS (1,587,624 zfa vs. 1,648,000 zfa), and the program has been modified to include approximately 987,624 zfa of residential use. The projected office use has declined considerably, from 1,233,000 zfa to 125,000 zfa, and the retail use has increased slightly, from 415,000 zfa to 475,000 zfa. The number of accessory parking spaces has increased from 225 to approximately 404. Table 1 also provides gross square footages for each use, which were not available in 2004 as the conceptual development of Site Q was not fully defined.

Table 1
Site Q Program, 2004 vs. 2007

Use	2004 FEIS (zfa)	2007 (zfa)	2007 (gsf)
Office	1,233,000	125,000	126,504
Retail	415,000	475,000	624,383*
Residential	0	987,624 (1,064 units)	1,017,253 (1,064 units)
Accessory Parking	225 spaces	404 spaces	113,962
Total ZFA	**1,648,000**	**1,587,624**	**1,882,102**

Notes: *Includes square footages for the building's mechanical, loading, staging, and common areas. The gsf for retail use only is 531,008.

As analyzed in the 2004 FEIS, the current project includes the mapping of the northern portion of the site to widen Willoughby Street from 60 to 95 feet, resulting in a site area of approximately 126,802 square feet (compared to the existing site area of 132,302 sf). The 2004 FEIS assumed that the site development would be focused on the northern portion of the block (see Figures 2 and 3), and that the office tower would rise 615 feet. Furthermore, the 2004 FEIS assumed that the existing retail uses at the Gallery at Fulton Street would remain on site within a reconfigured building. The current project plans would utilize the full Site Q block. The tower portion of the development would be slimmer and taller, rising to 764 feet, but would still be located on the northern portion of the block, facing Willoughby Street and the MetroTech complex of buildings (see Figure 4). The proposed building would be approximately 187 feet at its widest point, and 644 feet long. The residential portion of the development would include an 80/20 affordable housing component. The Site Q development would be expected to generate approximately 2,234 residents, 38 employees related to the residential building, 506 commercial office employees, 7 parking garage employees, and 1,039 retail employees.[1] Construction of the building is projected to take place over a 24-month period. As analyzed in the 2004 FEIS, the project would involve demolition of the existing buildings on the site, as well as subsurface disturbance. The build year for the Site Q redevelopment is still planned for no later than 2013.

The discretionary actions required for the current project are as follows:

[1] Based on the average household size of 2.1 in Downtown Brooklyn, 1 worker per 400 gsf of general retail, 1 worker per 930 gsf of large-scale retail, 1 worker per 25 dwelling units, 1 worker per 250 gsf of office , and 1 worker per 50 parking spaces.

- Approval of New York City Industrial Development Agency (IDA) financing for the project, in the form of a mortgage recording tax exemption and sales and use tax exemptions for the proposed office space; and
- Approval of financing for the project from either the New York City Housing Development Corporation (HDC) or the New York State Housing Finance Agency (HFA).

In addition, the Mayor's Office of Contracts will hold a public hearing on the disposition of the site. Prior to commencing construction, the Chair of the New York City Planning Commission and the New York City Art Commission will review the plans and confirm their consistency with the requirements and objectives of the Downtown Brooklyn zoning and Brooklyn Center Urban Renewal Plan.

B. UPDATED ENVIRONMENTAL CONDITIONS

As described below, the proposed revisions to the program for Site Q would not alter the conclusions for most of the environmental areas examined in the 2004 FEIS. However, several technical areas—land use, community facilities, open space, shadows, traffic and transportation, air quality, and noise—were further examined to determine if changes in background conditions could alter the conclusions and mitigation measures of the 2004 FEIS.

LAND USE, ZONING, AND PUBLIC POLICY

LAND USE

Land use conditions within the Downtown Brooklyn Development FEIS study area were updated to account for existing (2007) conditions and the status of development projects anticipated for completion through 2013. The updated information was reviewed to determine whether future land use conditions are expected to remain consistent with the conclusions in the 2004 FEIS. The analysis uses the same study area as the 2004 FEIS. An updated land use map is shown in Figure 5.

There have been no changes to the land use of the Site Q project site, which is currently occupied by a 3-story, ±31-foot-tall, 252,260 sf building housing retail use in the form of an interior shopping mall (named "The Gallery at Fulton Street"), and a 2-story, ±490-space public parking garage. There is also approximately 925 sf of vacant land on Lot 49. Site Q's street address is 70-90 Albee Square and/or 1 DeKalb Avenue, and the site is bounded by Willoughby Street and Flatbush Avenue to the north, Fleet Street to the east, DeKalb Avenue to the south, and Gold Street/Albee Square West to the west. The project site has approximately 645' of frontage along Gold Street/Albee Square West, 165' along Willoughby Street, 50' along DeKalb Avenue, and 300' along Flatbush Avenue Extension. Site Q is located within a C6-4.5 zoning district in the Special Downtown Brooklyn District, Fulton Mall Subdistrict. The zoning classifications within a ¼-mile radius of the site are residential (R6, R6B, and R7-1), and commercial (C5-4, C6-1, C6-1A, C6-2A, C6-4, C6-4.5, and C1-1 and C2-4 overlays). The predominant land uses within a ¼-mile of the site are commercial and office buildings, institutional, residential, parking facilities, and open space. The project site is located within Brooklyn Community District 2. Lot 49 is currently controlled by the City of New York and would be acquired by the project sponsor as a result of the project actions.

Although land uses in both Downtown Brooklyn and the surrounding study area have not changed remarkably since 2004, there is a trend toward higher-density residential and mixed-use development to accommodate Brooklyn's increased housing demand. Downtown Brooklyn does show signs of increased development activity, evidenced by the number of recently completed projects and sites under

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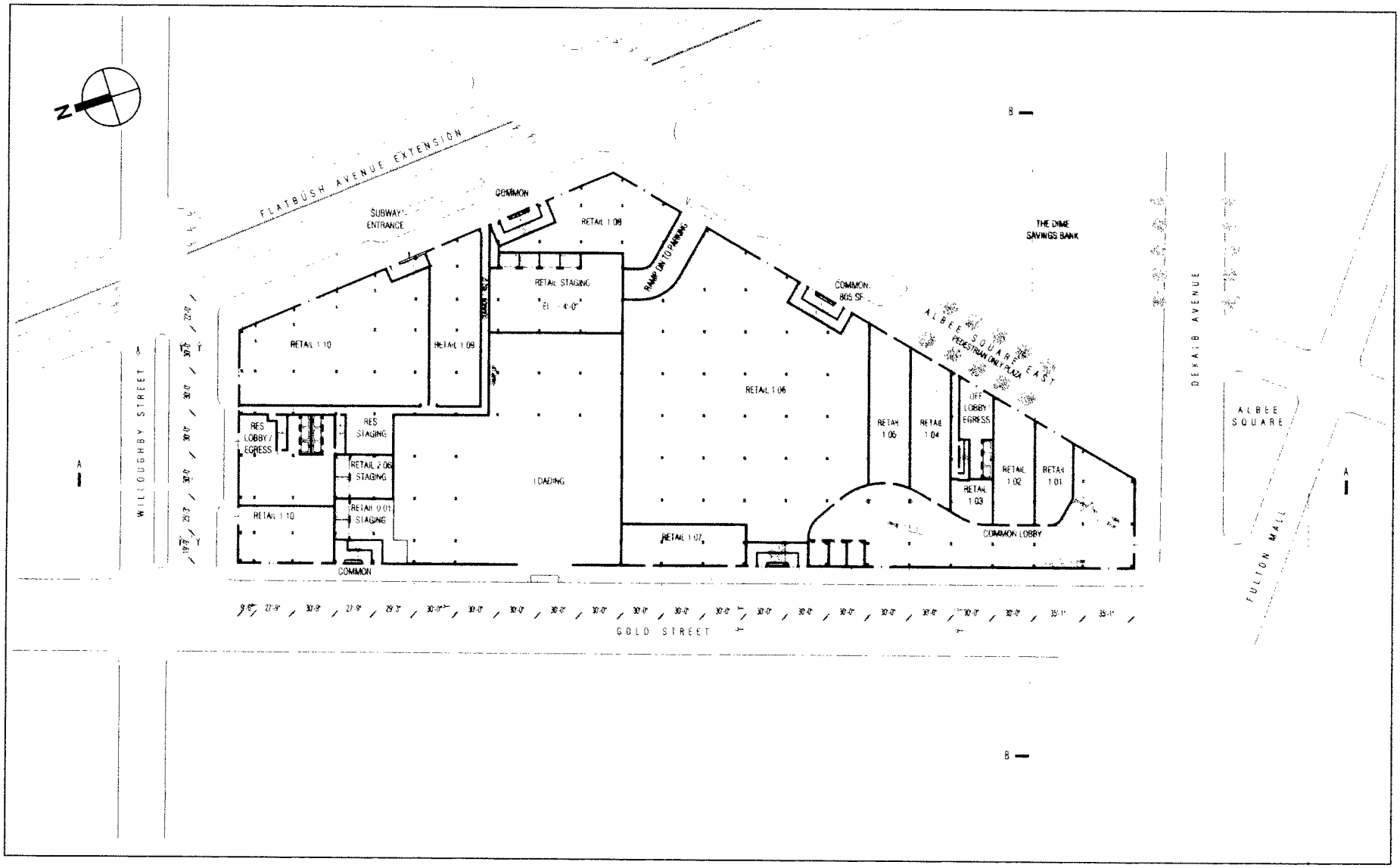
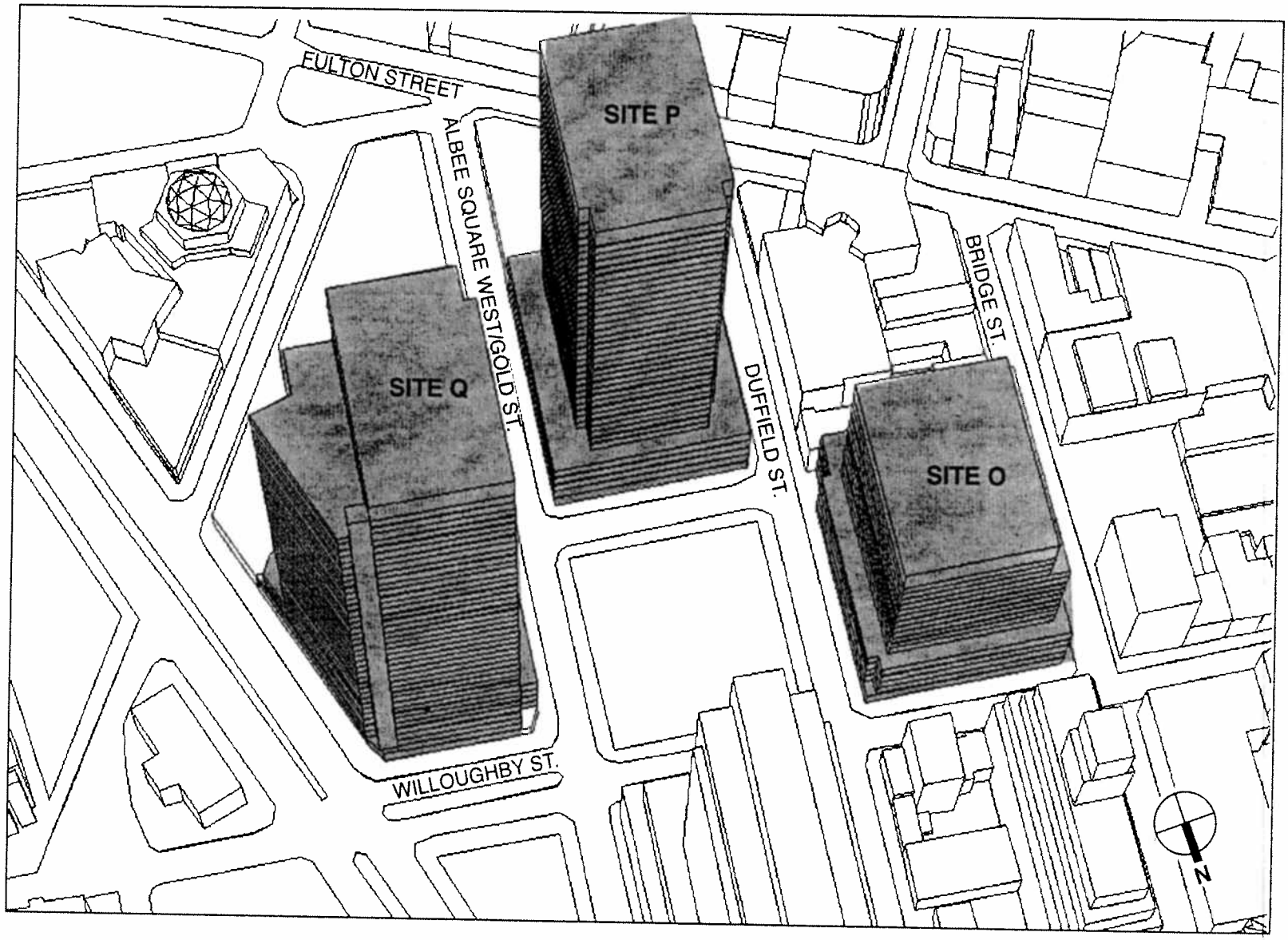


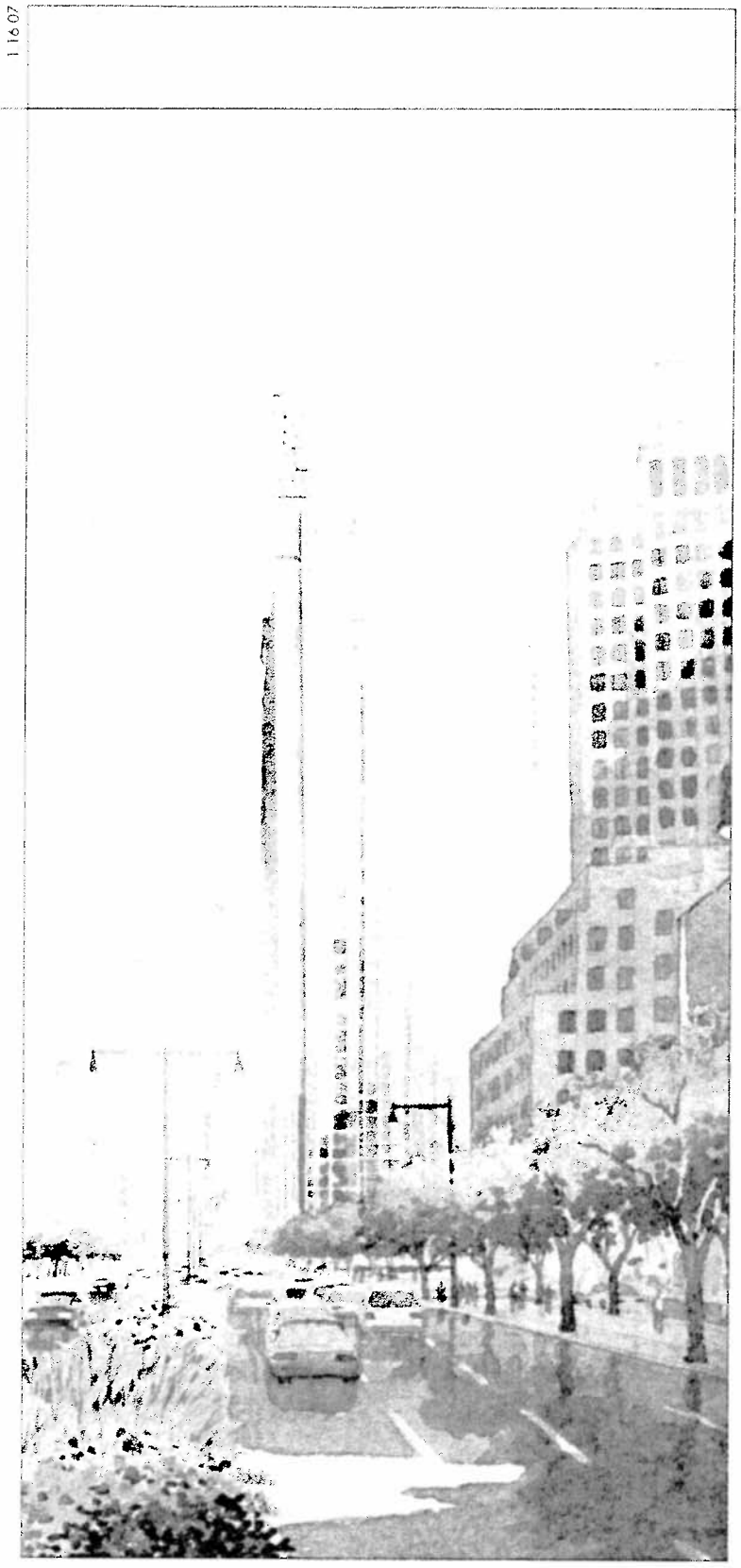
Ground Floor Plan of Proposed Building

Figure 1



Site Q Illustrative Bulk Diagram, 2004 FEIS

Figure 2



Illustrative Rendering of Site Q, 2004 FEIS
Figure 3

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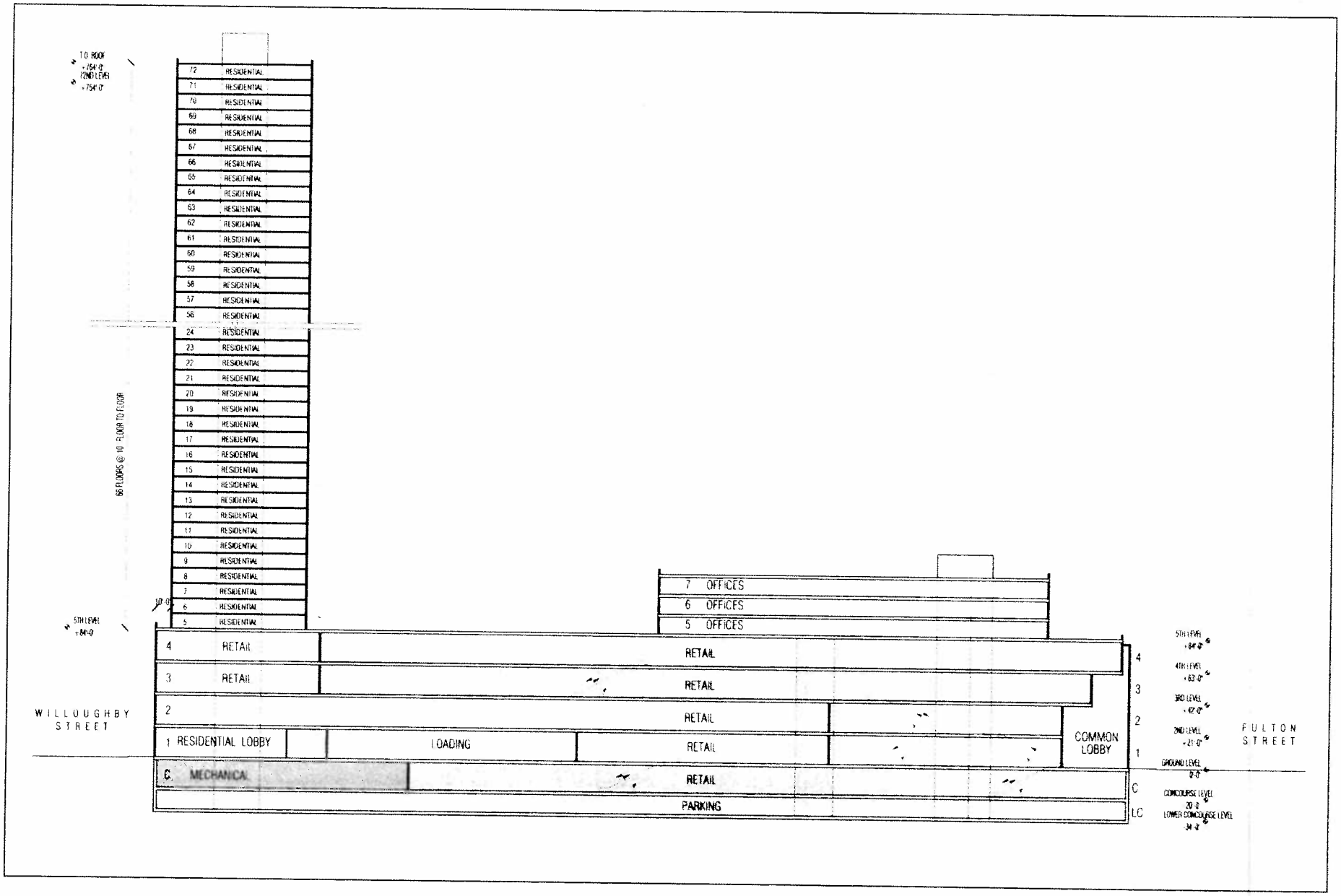


Section of Proposed Building
Figure 4

Land Use Map
Figure 5

construction, notably along Flatbush Avenue (and Flatbush Avenue Extension), Atlantic Avenue, and Schermerhorn Street.

Many of the 32 "no build" projects listed in the 2004 FEIS have been completed, including: 9 MetroTech (home to Empire Blue Cross-Blue Shield and the City's Human Resources Administration); 12 MetroTech (home to New York State Supreme Court and Kings County Family Court); the United States District Court for the Eastern District of New York (225 Cadman Plaza East); the Long Island University (LIU) Recreation, Wellness, and Athletic Center; a dormitory for the Brooklyn Law School; a 280-room expansion to the New York Marriott at the Brooklyn Bridge; and the Atlantic Terminal/Bank of New York Tower (see Table 2 and Figure 6). The programs of two of the larger proposed projects in the study area, Brooklyn Bridge Park (No. 15 in Table 2 and Figure 6) and the Atlantic Yards Arena and Redevelopment Project (No. 28), have been modified since the 2004 FEIS. The proposed Brooklyn Bridge Park would encompass 85 acres in size (instead of 70) and would incorporate a limited amount of development (including residential) to provide financial resources to support the park's maintenance and operation. The program of the proposed Atlantic Yards Arena and Redevelopment Project would include more residential units (6,430 units as currently proposed, compared to 5,500 units as envisioned in 2004), less commercial office space (336,000 square feet versus 1.8 million square feet), and more publicly accessible open space (eight acres versus six acres). This project would be completed in two phases: 2010 and 2016.

In addition to the no build projects listed in the 2004 FEIS, there are a number of recently completed projects and projects anticipated to be complete by 2013 in the study area, most of which are residential. The former industrial neighborhood near the Fulton Ferry and the East River, now known as "DUMBO" (Down Under the Manhattan Bridge Overpass), is fast becoming a residential neighborhood, as evidenced by the rapid conversion of loft buildings to residential use and new medium-density residential construction. There are also several tall residential developments planned along Flatbush Avenue (and Flatbush Avenue Extension), including the 21-story building at 85 Flatbush Avenue Extension (No. 45 on Figure 6), the 18-story Bridgeview Tower at 189 Bridge Street (No. 40), the 35- and 40-story Oro Condo towers at 306 and 313 Gold Street (No. 50), and the residential conversion of the landmark Williamsburg Savings Bank building (No. 51). Residential redevelopment is also expected along Atlantic Avenue (Nos. 6, 52, 55, and 56) and Schermerhorn Street (Nos. 19, 27, 49, and 58).

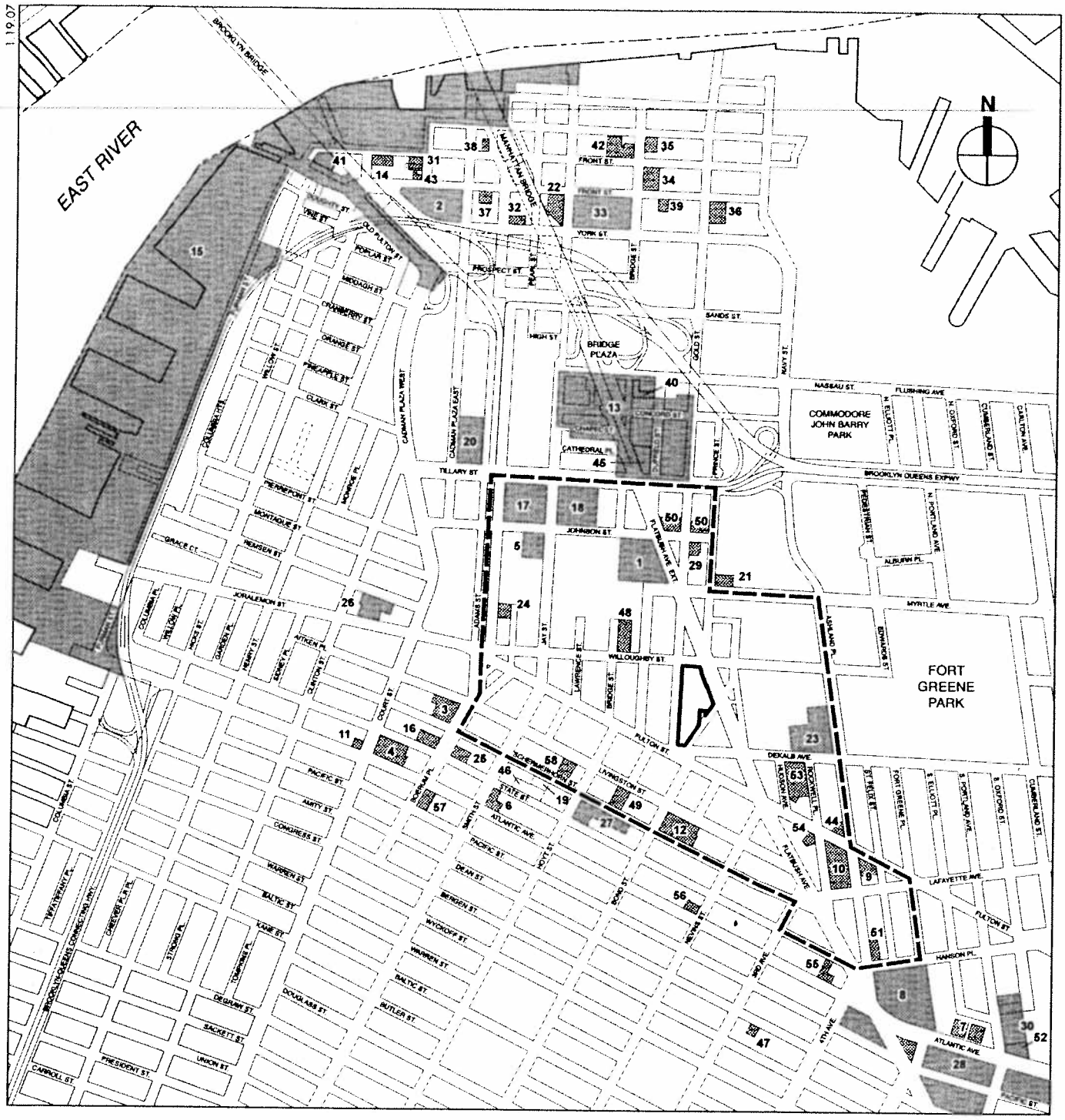
Table 2
Study Area Developments Recently Completed/Anticipated to be Complete by 2013

No.[1]	Name/Address	Build Year	Residential Use	Office/ Commercial Use	Other Uses
1	9 MetroTech (NW corner Flatbush Avenue Extension and Myrtle Avenue)	Completed		670,000 square feet (sf) for Empire Blue Cross-Blue Shield, NYC Human Resources Administration	272-space parking facility (includes 133 public spaces), 6,000 sf retail
2	70 Washington Street	Completed	260 units		
3	110 Livingston Street	2007	300 units		6,000-sf theater, 225 below-grade parking spaces
4	Court House (125 Court Street/164 Atlantic Avenue)	Completed	320 units		20,000 sf retail, 40,000-sf YMCA, 700-car public parking facility
5	12 MetroTech (330 Jay Street)	Completed		170,000 sf	780,000 sf court space, 150-space accessory car parking facility

Table 2 (cont'd)

Study Area Developments Recently Completed/Anticipated to be Complete by 2013

No.[1]	Name/Address	Build Year	Residential Use	Office/ Commercial Use	Other Uses
6	The Smith Condominiums and Hotel (75 Smith Street at Atlantic Avenue)	2007	50 units		93-unit hotel, 15,000 sf ground-floor retail, 8,500 sf community facility, 130 space parking facility
7	Atlantic Center	2013	850,000 sf	500,000 sf	395,000 sf ground-floor retail (same as in existing conditions)
8	Atlantic Terminal	Completed		425,000 sf office	470,000 sf retail, rehabilitated LIRR station[2]
9	BAM LDC East (Block 2108 bounded by Ashland Place, Fulton, Lafayette and St. Felix Streets)	(2013)	150 units		60,000 sf cultural uses
10	BAM LDC North (Block 2107 bounded by Ashland and Rockwell Places and Lafayette and Fulton Streets)	2013	570,000 sf		10,000 sf retail, 7,000 sf open space, 43,000-sf dance center, 160,000-sf museum/gallery, 50,000-sf theater, and 465-space parking facility
11	205 Court Street (at Atlantic Avenue)	Completed			10,900-sf pharmacy
12	Bond Street Garage	Completed			14,000 sf retail, 4,000-sf community facility
13	Bridge Plaza Rezoning (area bounded by Tillary, Prince, Nassau and Jay Streets)	Completed	295 anticipated[3]		Rezoning from M1-1 to R6B, C6-2 and C4-3
14	Bridgefront Condominiums (42 Main Street)	Completed	21 units		
15	Brooklyn Bridge Park	2012			85-acre park on East River shoreline, including landscaped areas and ecological habitats; recreational facilities for sports such as soccer and basketball; a marina for recreational boating; protected waters for kayaking; and a limited amount of development essential to the park's maintenance and operation, including retail, restaurant, residential, and hotel space.
16	Brooklyn Law School dormitory (NW corner State Street and Boerum Place)	Completed			371-bed dormitory, 212-space public parking facility
17	City University (Site A, 300 Jay Street)	(2013)			590,777 sf additional academic/community facility use per University master plan



Project Site Boundary

Downtown Brooklyn Rezoning Area Boundary

No Build Project Location (see Table 2 for reference)

Recently Completed and No Build Project Locations

Figure 6

Table 2 (cont'd)
Study Area Developments Recently Completed/Anticipated to be Complete by 2013

No.[1]	Name/Address	Build Year	Residential Use	Office/ Commercial Use	Other Uses
18	City University (Site B)	(2013)			258,938 sf additional academic/community facility use per University master plan
19	Schermerhorn House (160 Schermerhorn Street)	2008	217 affordable units		2,000-sf 200-seat "black box" theater and multipurpose room for community use
20	Federal Courthouse (225 Cadman Plaza East)	Completed			700,000 sf for courtrooms and judges' chambers for U.S. Eastern District of New York, operations for U.S. District Court, U.S. Bankruptcy Court, as well as other court-related agencies.
21	Ingersoll Community Center	2007			New 18,250-sf community center to replace former 9,000 sf center
22	J Condominium (100 Jay Street)	2007	267 units		33,000 sf retail, 280 parking spaces
23	LIU Recreation, Wellness, and Athletic Center (site of present Goldner Building and LIU tennis courts)	Completed		10,000 sf for Brooklyn Hospital Center/athletic staff	117,000-sf wellness/recreation center with natatorium, tennis courts, track, 3,500 seating for athletic events
24	New York Marriott Brooklyn Expansion (Adams Street N of Willoughby Street)	Completed			280-room hotel annex, 8,500 sf retail
25	53 Boerum Place	Completed	99 units		85 parking spaces
26	Saint Francis College - Anthony J. Genovesi Center	Completed			10,000-sf athletic facility that will serve as a space for athletic competition, special events, community activities and academic affairs
27	State Renaissance Court (200 Schermerhorn Street)	2007	158 mixed-income units		17,000 sf ground-floor retail and 72 parking spaces
28	Atlantic Yards Arena and Redevelopment Project—Phase I[4]	2010	2,110 mixed-income units	336,000 sf office space, 91,000 sf retail space	850,000-sf arena 18,000 seats), 180-room hotel, 2,346 parking spaces, 1 acre of private rooftop open space
29	Site G (Block 2049, Lot 8)	2013	60 units		
30	South Portland Avenue at Atlantic Avenue (Block 2004)	Completed	32 3-family houses		
31	Sweeney Building (30 Main Street)	Completed	87 units		
32	Beacon Tower (85 Adams Street)	2007	79 units		Ground-floor retail, below-grade parking
33	Watchtower Project (85 Jay Street)	(2008)	1,000 units	26,000 sf	1,100 parking spaces

Table 2 (cont'd)

Study Area Developments Recently Completed/Anticipated to be Complete by 2013

No.[1]	Name/Address	Build Year	Residential Use	Office/ Commercial Use	Other Uses
34	53 Bridge Street	2007	150,000 sf		Addition of 6 stories to loft building
35	37 Bridge Street	2007	60 units		Conversion of loft building
36	99 Gold Street	2007	88 units		24 parking spaces, basketball court
37	The Nexus (84 Front Street)	Completed	58 units		Ground-floor retail, below-grade parking
38	133-137 Water Street	2007	52 units		
39	The Vista (206 Front Street)	Completed	31 units		Below-grade parking
40	Bridgeview Tower (189 Bridge Street)[5]	2007	58 units		On-site parking
41	Fulton Ferry Condos (4 Water Street)	2007	13 units		Ground-floor retail
42	50 Bridge Street	Completed	58 units		
43	Riverfront (57 Front Street)	Completed	33 units		Conversion of loft building
44	The Forté at 230 Ashland Place	2007	108 units		Ground-floor retail
45	85 Flatbush Avenue Extension[5]	(2008)	108 units		Ground-floor retail, community facility space, street-level parking
46	14 Townhouses (267 State Street)	Completed	14 townhouses		
47	324 and 328 Dean Street	2007	20 units		
48	BellTel Lofts (365 Bridge Street/101 Willoughby Street)	(2007)	219 units		Ground-floor retail
49	230 Livingston Street and 225 Schermerhorn Street	(2008)	226 units		18,000 sf retail space
50	Oro Condos (306 and 313 Gold Street)	2008	303 units (306 Gold Street); 214 units (313 Gold Street)		Ground-floor retail, below-grade parking
51	One Hanson Place (Williamsburgh Savings Bank Building)	2007	189 units	30,000 sf dental offices, 23,000 sf retail space	
52	Atlantic Terrace (Atlantic Avenue between S. Portland Ave. and S. Oxford St.)	2008	80 units	11,960 sf retail	Rezoning: C6-1 to C6-2 completed
53	80 DeKalb Avenue (between Hudson Ave. and Rockwell Pl.)	2009	430,000 sf		
54	Fulton Street/Rockwell Place	(2007)	140 units		
55	557 Atlantic Avenue (556 State Street)	2007	72 units		

Table 2 (cont'd)
Study Area Developments Recently Completed/Anticipated to be Complete by 2013

No.[1]	Name/Address	Build Year	Residential Use	Office/ Commercial Use	Other Uses
56	477 Atlantic Avenue	2007	21 units		Ground-floor retail
57	252 Atlantic Avenue	(2008)	65 units		Ground-floor retail, on-site parking
58	189 Schermerhorn Street[6]	(2008)	214 units		Ground-floor retail

Notes:
[1] See Figure 6.
[2] The LIRR station rehabilitation is currently under construction.
[3] The Downtown Brooklyn Development 2004 FEIS conservatively assumed 295 new residential units would result from the Bridge Plaza Rezoning. To date, only 166 units have been planned for this area: Bridgeview Tower (No. 40)—58 units, and 85 Flatbush Avenue Extension (No. 45)—108 units.
[4] The Atlantic Yards Arena and Redevelopment Project would be built in two phases and completed in 2016. Upon completion, this project would include an additional 4,320 mixed-income residential units, 156,000 sf of retail, 1,324 parking spaces, and 8 acres of publicly-accessible open space.
[5] Included as part of Bridge Plaza Rezoning.
[6] Identified as potential development site (Z) in the Downtown Brooklyn Development FEIS.
Sources: Downtown Brooklyn Council, New York City Economic Development Corporation (EDC), New York City Department of City Planning (DCP), Empire State Development Corporation (ESDC), New York City Department of Housing Preservation and Development (HPD), DUMBO NYC, South Oxford Street Block Association, Fulton Mall Improvement Association, AKRF.

Furthermore, two sites analyzed as projected and potential development sites within the 2004 FEIS are currently under development. The site identified as projected Site I(A) in the FEIS is under construction with 240 luxury condos, 60,000 sf of retail, and 457 public parking spaces, and thus the project falls within the project envelope assumed in the FEIS. The project on this site will also support the construction of 48 units of affordable housing off-site at 15 Quincy Street in the neighborhood of Bedford-Stuyvesant. The site identified as potential Site H in the FEIS is currently projected for development with residential and retail uses, and it is anticipated that this development would be complete by 2013.

It is also likely that other smaller projects and renovations—typically as-of-right and not requiring environmental review—have occurred throughout the study area since the completion of the 2004 FEIS. Despite this growth and development, the essential land use patterns within the study area have remained similar to what was detailed in the 2004 FEIS. It is also expected that smaller projects and renovations will continue to occur through the project's 2013 build year.

ZONING AND PUBLIC POLICY

Since 2004, there have been no major changes to the zoning of or public policy for the Downtown Brooklyn Development project area. However, there have been several changes to zoning and public policy in the study area. In addition to the rezoning as a result of the 2004 FEIS, there have been a number of other rezoning actions in the study area in the past few years, including:

1) Bridge Plaza Rezoning (2003): rezoning of eight blocks near the Manhattan Bridge approach at Tillary Street from M1-1 to R6B, C4-3, and C6-2 (no. 13) to allow for higher-density residential and commercial development, resulting in the 58-unit Bridgeview Tower (No. 40) and the 108-unit development at 85 Flatbush Avenue Extension (No. 45), both currently under construction;

2) Watchtower Project Rezoning (2004): rezoning of two blocks in DUMBO along York Street between Jay and Bridge Streets from M1-2 to M1-2/R8 (MX-2) (north of York Street) and M1-

2/R6 (MX-2) (south of York Street) to permit the 1,000-unit Watchtower Project at 85 Jay Street (No. 33);

3) 99 Gold Street Rezoning (2004): rezoning of one lot (Block 56, Lot 3) from M1-2 to R6A to facilitate the conversion to residential use of a five-story warehouse located at the southeastern corner of Gold and Front Streets (No. 36);

4) Water Street Rezoning (2004): rezoning of a portion of the block bounded by Water, Front, Main, and Dock Streets from M1-2 to an M1-2/R8 (MX-2) to allow residential development; and

5) Atlantic Terrace (2006): rezoning of property on the north side of Atlantic Avenue between South Oxford Street and South Portland Avenue from C6-1 to C6-2 to facilitate the development of approximately 80 housing units under the New York City Department of Housing Preservation and Development's (HPD's) Cornerstone Program (No. 52).

Since issuance the 2004 FEIS, the Brooklyn Academy of Music Local Development Corporation (BAM LDC), working with both EDC and the New York City Department of Cultural Affairs (DCA), has continued its effort to create the BAM Cultural District—a vibrant, mixed-use, multicultural arts district in Downtown Brooklyn that will be a resource for the arts, the local community, the borough of Brooklyn, and the City as a whole. The proposed BAM Cultural District extends to DeKalb Avenue to the north, Hanson Place to the south, St. Felix Street to the east (including the Fulton Street streetscape as far east as South Oxford Street), and Flatbush Avenue Extension and Albee Square to the west. A primary goal of the planned Cultural District is to convert underutilized property into affordable, desirable space for nonprofit visual, performing, media, and other arts groups to create and present their work. Diverse arts-related educational offerings, mixed-income housing, amenities such as restaurants, cafés, retail, and underground parking, as well as public space, will define the essence of the Cultural District.

The land use policy expressed in this (BAM Cultural District) proposal is to support, enhance, and expand Downtown Brooklyn's cultural district, using moderate-to-dense residential and arts development, and to distinguish this district through a concentration of cultural uses from the expanding, dense commercial and residential development to the west in Downtown Brooklyn. Several large developments have already been planned for this district, including the Visual and Performing Arts Library designed by Enrique Norten, and the Theatre for a New Audience designed by both Frank Gehry and Hugh Hardy. Both facilities, as well as two other mixed-use developments including both residential and cultural uses, would be located on the block bounded by Ashland Place and Lafayette and Flatbush Avenues (see Nos. 9 and 10 in Table 2).

Other public policy initiatives in the study area, including the Atlantic Terminal Urban Renewal Area (ATURA), the Brooklyn Center Urban Renewal Area (BCURA), the MetroTech Urban Renewal Area, and the Schermerhorn-Pacific Urban Renewal Area, have remained unchanged since the issuance of the 2004 FEIS.

The revised Site Q project would include approximately 404 parking spaces and comply with the C6 commercial district parking requirement mapped on the project site, which requires parking for residential use. No parking is required for commercial or community facility use. Depending on the type of affordable housing component incorporated (publicly-assisted housing, units for low income tenants, or government-assisted housing), the revised Site Q project would need to include between 366 and 404 parking spaces.

CONCLUSIONS

The land use, zoning, and public policy of the project site remain similar to that analyzed in the 2004 FEIS. As discussed above, Downtown Brooklyn has and is expected to continue to experience the revitalizing trends that were anticipated in the 2004 FEIS. The development of the project, with a slight reduction in the overall program, would remain equally compatible with existing and future land uses within the study area. Although the program would change from mostly office to mostly residential with a sizable retail component, these changes to the project program, and taking into account changes in background conditions since 2004, would not substantially alter any conclusions presented in the 2004 FEIS for land use, zoning, and public policy. The proposed project would be compatible with and would not require modification of underlying zoning or public policy. As with the previously approved project, the revised project would not have any significant adverse impacts to land use, zoning, or public policy.

SOCIOECONOMIC CONDITIONS

The 2004 FEIS disclosed the location and magnitude of the direct residential, business, and institutional displacement that would occur due to the proposed actions. The analysis concluded that the proposed actions would not result in a significant adverse socioeconomic impact under CEQR, and that any negative displacement effects would be offset by the creation of hundreds of new residences and thousands of new jobs. As in the previously approved project, the revised program for Site Q would involve no direct residential displacement and is not anticipated to result in indirect residential displacement within the study area. The 2004 FEIS identified approximately 731 jobs in existing conditions on Site Q, between the Gallery at Fulton Street and the adjacent parking lot, and concluded that this existing employment would not be affected by the proposed actions, as businesses on Site Q would not be displaced; instead, retail uses would be maintained in the mixed-use development projected for this site. With the revised program for Site Q, it is not anticipated that existing retail uses would be maintained in the proposed building. Therefore, unlike the previously approved project, the revised project would result in the direct displacement of the jobs currently located on Site Q. Since 2004, however, the number of retail tenants on the project site has declined, and only approximately 60 percent of the Gallery at Fulton Street is currently occupied. There are approximately 77 commercial establishments on the site, of which 21 are vacant; current total employment is estimated at 332 workers. The displacement of these businesses and employees would not represent a significant adverse impact under CEQR or substantively change the conclusions of the socioeconomic analysis provided in the 2004 FEIS. The businesses located in Gallery at Fulton Street do not meet the criteria for significant adverse displacement as outlined in the 2001 *CEQR Technical Manual*; they do not have substantial economic value to the City, they do not sell products or services that are unique to the study area or region, they do not define the neighborhood's character, and they do not belong to a special category of business that is protected by special regulations or publicly adopted plans. Furthermore, these businesses represent less than 1 percent of 2002 total study area employment, as reported in the 2004 FEIS. The current owner of the site has already reached agreements with some of the tenants currently located in Gallery at Fulton Mall. Once the project sponsor has purchased the property, it intends to meet with each of the remaining tenants individually to understand their needs and current status. If tenants wish to relocate, the sponsor will work with them to identify new space and will assist them in addressing physical issues such as store layout and fixture requirements. The project sponsor also will work with the tenants to identify assistance programs they may be able to utilize, including programs administered through the U.S. Small Business Administration (SBA), Brooklyn Chamber of Commerce, and New York City Department of Small Business Services (SBS).

COMMUNITY FACILITIES AND SERVICES

The 2004 FEIS concluded that the previously-approved project would not have any direct effects to the physical operations of, or access to, NYPD or FDNY facilities. The project's introduction of office, retail, and residential uses to the area may necessitate the assignment of additional police personnel, resources, and equipment to the project area; however, a commitment of resources would be based on demonstrated need. Overall, the role of the NYPD in providing effective, efficient service was not expected to be adversely affected by the developments that could result from the proposed actions. In addition, FDNY could provide adequate fire protection services to the project area and surrounding neighborhoods. All development would be constructed in accordance with all applicable fire and safety codes. The changes to the project program and background conditions since 2004 would not substantially alter any conclusions presented in the 2004 FEIS for police and fire services. A comparison of the current program for Site Q to the 2004 FEIS in regard to libraries, day care facilities, and schools is provided below.

LIBRARIES

The current development program for Site Q would add 1,064 residential units to the Downtown Brooklyn Development project area, above the 2001 *CEQR Technical Manual*'s 734-unit threshold warranting a library analysis. An assessment of the potential effects of the changes to the Site Q program on library service in the ¾-mile study area was conducted assuming the same baseline existing conditions as the 2004 FEIS, and updated 2013 future background conditions for the service area. The 2004 FEIS concluded that the previously-approved project would not have any significant impacts on library service. The changes to the Site Q program and in background conditions would not be expected to alter this conclusion.

As determined by the 2004 FEIS, the Downtown Brooklyn Development project area is well served by the Brooklyn Public Library system (BPL). No libraries are located in the project area, but seven are located within the ¾-mile study area. Libraries include the Brooklyn Central Library, which houses the largest of all circulating and general collections in BPL. As noted in the 2004 FEIS, the 2004 volumes-to-resident ratio of 7.0 to 1 in the Downtown Brooklyn Development service area was significantly higher than the borough of Brooklyn ratio (0.87 to 1). In 2013, the number of volumes in the library service area is conservatively assumed to remain at 1,066,841, the same as in the existing conditions scenario. However, as discussed in the 2004 FEIS, BPL has planned a number of program and facility improvements. Projects include the construction of the Visual and Performing Arts Library (which was part of the proposed actions analyzed in the FEIS).

Based on the updated 2007 conditions, the population in the library service area would grow to 181,236 in 2013 (see Table 3). This population includes the 1,930 residents added as a result of the reasonable worst-case development scenario analyzed in the 2004 FEIS, and 2,234 residents added by the proposed reconfiguration of Site Q.

The 5.9 to 1 volumes-to-resident ratio with the modified Site Q program is lower than the 6.1 to 1 ratio in the 2004 FEIS analysis, as a result of the cumulative impacts of additional planned projects in the service area as well as the addition of residential uses on Site Q. The number of new residents added to the service area would be an insignificant share of the total annual library users. Furthermore, library services within the study area would be enhanced by the proposed creation of the Visual and Performing Arts Library. Therefore, the changes to the Site Q program would not result in any new adverse library service impacts.

Table 3
Expected 2013 Volumes-to-Resident Ratios in the ¾-Mile Library Service Area, 2004 FEIS vs. 2007

	2004 FEIS	2007
Residents*	175,934	181,236
Volumes-to-Resident Ratio	6.1 to 1	5.9 to 1

Notes: * Populations include the residents added by developments that are planned or under construction in the ½-mile around the Downtown Brooklyn Development project site, and the residential population in the remaining portion of the ¾-mile area that was assumed to grow 0.5% annually between 2003 and 2013.
Sources: Census 2000; April 2004 Downtown Brooklyn Development Final Environmental Impact Statement (FEIS), AKRF, Inc.

DAY CARE FACILITIES

By 2013, the revised development program for Site Q would result in the addition of 213 low- to moderate-income units to the Downtown Brooklyn Development project area. Therefore, a reassessment of the conclusions of the 2004 day care analysis was warranted. An update of day care facilities and the population eligible for public day care service was conducted for the 1-mile study area around the Downtown Brooklyn Development project area. Day care capacity and enrollment information were updated using 2006 Administration for Children's Services (ACS) data, and background conditions were updated to reflect projects that are under construction or planned for completion by 2013. The 2004 FEIS concluded that the previously-approved project would not have any significant impacts on day care service. The changes to the Site Q program and background conditions would not be expected to alter this conclusion.

The 2004 FEIS determined that in existing conditions, the Downtown Brooklyn Development project area was well served by publicly funded day care facilities, with 314 available day care slots in the 1-mile study area. Enrollment in 2006, including child-care and Head Start programs, was 2,518, with 546 available day care slots.

With the updates to background conditions, the population in the day care service area would grow to 228,289 by 2013 (see Table 4). It was conservatively assumed that the no-build residential developments projected for the Downtown Brooklyn Development project area would include an 80/20 housing affordability mix, resulting in 1,543 market rate units and 386 low- to moderate-income units. Including this background development, a total of 1,742 affordable units would be added to the study area by 2013, yielding 599 children eligible for publicly funded day care. This population includes the 72 and 67 children (ages 0 to 12) that would be added with the revised Site Q program and the reasonable worst-case development scenario for the other projected development sites analyzed in the 2004 EIS, respectively, as well as 460 children that would be added by the no-build projects to be developed by 2013 in the remainder of the study area.

In summary, with the changes to background conditions as well as the revised Site Q program, only 14 eligible children would be added to the study area over the 585 children analyzed in 2004. The number of eligible children added to the service area would be an insignificant share of the total day care users, particularly given that the number of available day care slots in or near the project area has increased. As noted in the 2004 FEIS, the majority of children over age 5 would be unlikely to utilize the available day care facilities, since they would attend public school. In addition, it is likely that some of the parents of eligible children would use ACD vouchers for private day center services. Therefore, the changes to the Site Q program would not result in any new adverse day care service impacts.

Table 4
Expected 2013 Additional Affordable Housing Units, Additional Number of Children Eligible for Day Care, and Available Day Care Slots, 2004 FEIS vs. 2007

	2004 FEIS	2007
Additional Affordable Housing Units	1,642	1,742
Low-Income	900	223
Low- to Moderate-Income	742	1,519
Additional Children Eligible for Day Care (ages 0 to 12)	585	599
Available Day Care Slots In or Near the Project Area	314	546*

Notes: *Day care centers include child-care and Head Start programs.
Sources: ACS, 2006; April 2004 Downtown Brooklyn Development Final Environmental Impact Statement (FEIS), AKRF, Inc.

SCHOOLS

The 2004 FEIS concluded that there would be ample capacity in surrounding public schools for the students expected to be generated by the previously-approved project. As opposed to the program assumed for Site Q in the 2004 FEIS, the current program for Site Q includes the development of approximately 1,064 residential units. As noted above, it is anticipated that 20 percent (213) of these units would be affordable, and the balance (851) would be market rate. The number of students generated by the revised Site Q program would double the number of elementary and intermediate students that were previously analyzed (from 383 to 834). Therefore, an updated schools analysis was conducted to determine the potential effect on schools of the proposed changes to the Site Q program. Enrollment, utilization, and projections data were updated to reflect the most recent information available. The 2004-2005 utilization and enrollment as well as the 2004 projections were used for this analysis. Since the 2004 FEIS, some schools previously included in the analysis no longer exist, and other, new schools have been added. Background conditions in the surrounding area have also been updated, as shown in Table 2, above. Given that most of the residential projects have been completed recently, it is considered unlikely that the students generated by the completed projects were included in the 2004-2005 enrollment data. Therefore, for the purposes of a conservative analysis, all of the no-build projects listed above in Table 2 have been added to projected enrollment numbers[1].

Elementary Schools

The revisions to the proposed Site Q program, together with the students that were expected to be generated by other potential development sites in the 2004 FEIS, would add 580 elementary students to the study area. As a result, by 2013 schools within a ½ mile of the project area would have 344 available seats and a utilization rate of 96 percent (see Table 5). It is expected that Community School District (CSD) 13 Regions 1 and 2, and CSD 15 Region 3 would have 1,381 available seats, with a utilization rate of 88 percent. CSD 13 would be operating at 66 percent, with 4,250 seats available. CSD 15 would be

[1] Given that Brooklyn Bridge Park is not located within the 1/2-mile study area, it was not included as a no-build project in the schools analysis.

operating over capacity at 105 percent, with a shortfall of 899 seats; however, CSDs 13 and 15 combined would have ample capacity (3,351 seats) and would be operating with a utilization rate of 88 percent.

With the exception of CSD 15, schools in the study area have sufficient space to accommodate the additional students generated by the revised Site Q program. Although CSD 15 would be over capacity, it is likely that students from the proposed project would attend the schools closest to Site Q and the project area. In addition, Site Q is wholly located within CSD 13 which would have space available to accommodate all of the students that are expected to be generated by the proposed additional residential development. As previously noted, given that the schools within ½-mile of the DBD project area—more specifically within CSD 13—would have ample capacity, no significant adverse impact to elementary schools is expected as a result of the proposed revisions to the actions previously analyzed in the 2004 FEIS.

Intermediate Schools

The intermediate schools analysis in the 2004 FEIS assumed that 103 intermediate students would be generated by the proposed actions. The revised Site Q program would be expected to generate another 113 intermediate school students. Combined, it is expected that 216 intermediate students would be added to the area by 2013. As detailed in Table 5, in 2013 the intermediate schools within ½ mile of the project area would be operating with available capacity at 82 percent utilization (723 seats). Schools within Regions 1 and 2 of CSD 13 and Region 3 of CSD 15 also have sufficient space, with 873 seats and a utilization rate of 81 percent. CSD 13 is also operating under capacity, at 71 percent utilization and space for 1,857 additional students. CSD 15 is operating with a shortfall of 439 seats, and over capacity at 107 percent utilization. Combined, CSDs 13 and 15 would have sufficient space for the students expected to be generated by the proposed actions, including the revisions to the Site Q program; together, they would operate with 1,417 available seats at a utilization rate of 89 percent. Although CSD 15 would continue to operate over capacity with the introduction of students generated by the proposed actions, there is sufficient capacity in the schools closest to the project area and Site Q. As previously mentioned, given that Site Q is located within CSD 13, it is likely that all of the students generated from this site would attend schools within CSD 13 which would have sufficient space to accommodate them. Therefore, no significant adverse impact to intermediate schools is expected as a result of the revisions to the actions analyzed in the FEIS.

Table 5
Estimated Public Elementary/Intermediate School Enrollment, Capacity, and Utilization: Future with the Revised Site Q Program

Region/District	2013 No Build Projected Enrollment	Students Generated from Proposed Actions	2013 Total Projected Future Enrollment	Program Capacity	Available Seats In Program	Program Utilization
Elementary Schools						
Totals, Elementary Schools within ½ Mile of Project Area*	8,123	580	8,703	9,047	344	96%
Totals, CSD 13 Regions 1 and 2 and CSD 15 Region 3	10,029	580	10,609	11,990	1,381	88%
Totals, CSD 13	7,895	306	8,201	12,451	4,250	66%
Totals, CSD 15	17,026	274	17,300	16,401	-899	105%
Totals, CSDs 13 and 15 Combined	24,921	580	25,501	28,852	3,351	88%
Intermediate Schools						
Totals, Intermediate Schools within ½ Mile of Project Area	3,167	216	3,383	4,106	723	82%
Totals, CSD 13 Regions 1 and 2 and CSD 15 Region 3	3,406	216	3,622	4,495	873	81%
Totals, CSD 13	4,464	114	4,578	6,435	1,857	71%
Totals, CSD 15	6,706	102	6,808	6,369	-439	107%
Totals, CSDs 13 and 15 Combined	11,171	216	11,387	12,804	1,417	89%

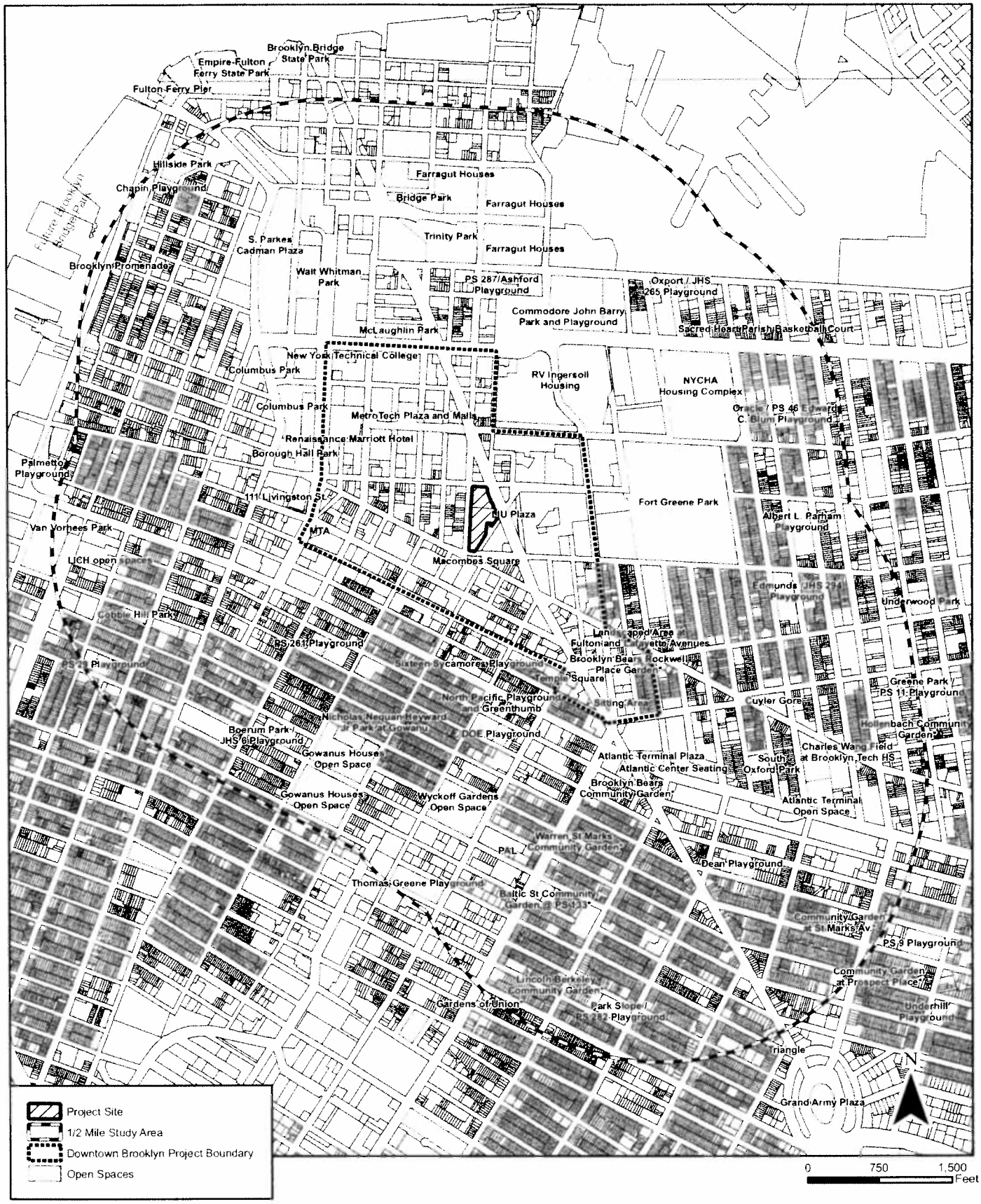
Notes: *2013 estimates for enrollment in schools within the vicinity of the project area were derived proportionally from total enrollment for CSDs 13 and 15.

Sources: Totals for CSDs 13 and 15 projected enrollment: New York City Department of City Planning and New York City Department of Education, Enrollment Projections (Actual 2004, Projected 2005-2014). DCP enrollment projections do not include Pre-K enrollment. Capacity numbers for CSDs 13 and 15: New York City Department of Education, *Utilization Profiles: Enrollment/ Capacity/ Utilization, 2004-2005.*

OPEN SPACE

Under the revised program for Site Q, the project would introduce approximately 2,234 additional residents and 4,100 fewer workers than the program analyzed for the 2004 FEIS. No significant adverse open space impacts were identified in the 2004 FEIS. Given that the revised Site Q program would generate substantially fewer workers, the proposed revision to the development would not result in any new significant adverse impacts within the non-residential (1/4-mile) study area, and no further analysis is required.

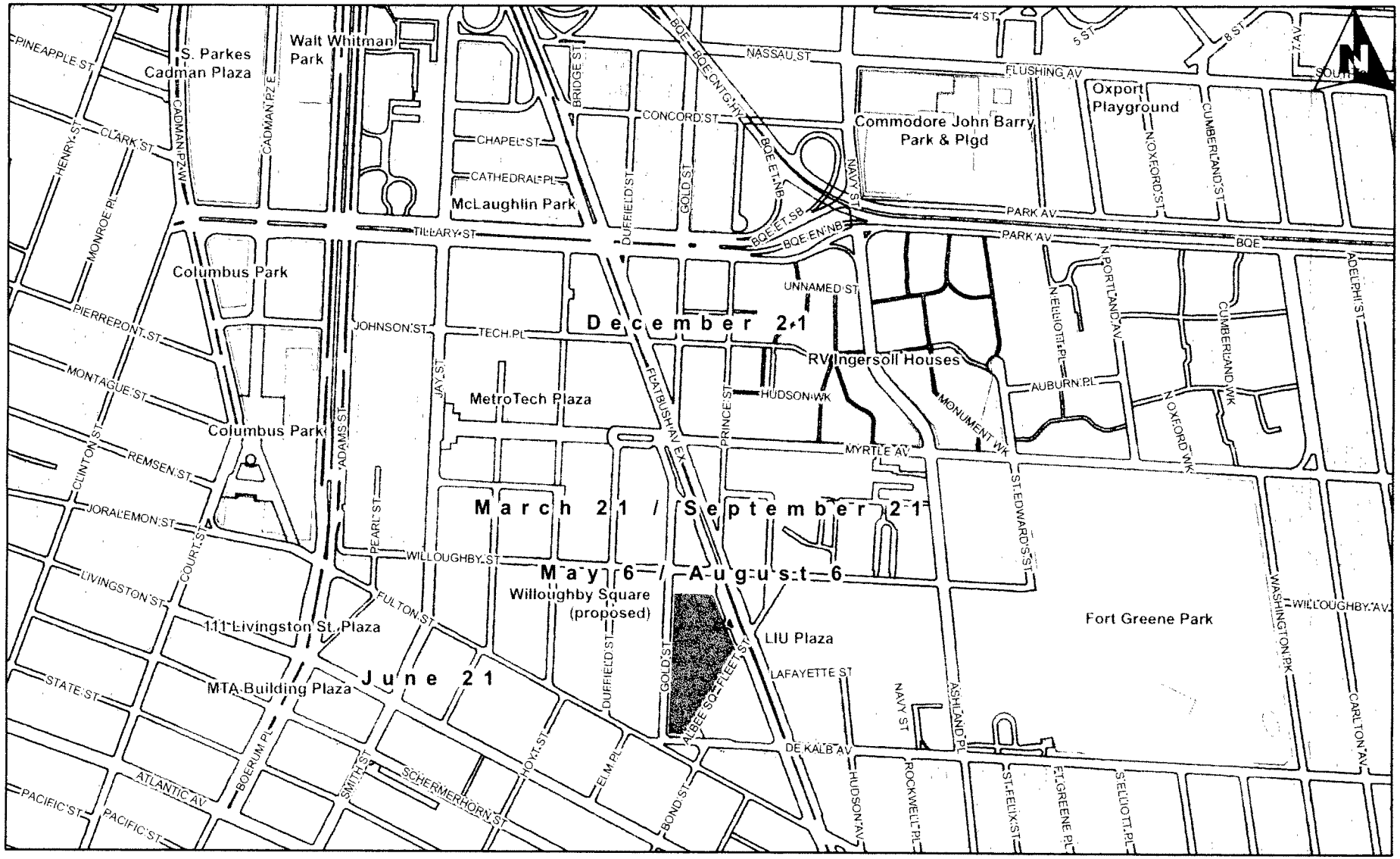
Further analysis was conducted for the residential study area, given the increased residential population that would be added by the proposed revisions to the Site Q development. An assessment of the potential effects of the changes to the Site Q program on open space in the 1/2-mile (residential) study area was conducted assuming the same baseline existing conditions as the 2004 FEIS, and updated 2013 future background conditions for the study area. Several new open spaces were added to the study area that were not noted in 2004 FEIS analysis, including Atlantic Terminal/Bank of New York Plaza, South Oxford Park, and the Charles Wang Field at Brooklyn Tech High School (see Figure 7). Additional changes to background conditions—including the revised build years and development program for Atlantic Yards Arena and Redevelopment Project—are expected to result in more study area residents (129,416, rather



* Community gardens have not been included in the quantitative analysis

Updated Open Space Inventory

Figure 7



Maximum Shadow Sweep

Figure 8

than 128,248), fewer study area workers (149,726, rather than 157,954), and a lower total population (279,142, rather than 286,202) than was anticipated for 2013 no-build conditions in the 2004 FEIS. Based on these changes in background conditions, it is expected that there will be a smaller amount of passive open space acreage (71.17, rather than 75.77), greater active open space acreage (62.30, rather than 61.79), and a lower total acreage (137.56, rather than 133.47) than noted in the 2004 FEIS. As shown in Table 6, the no-build active open space ratio is the same (0.48) under both the 2004 FEIS and the revised program. The recommended weighted average passive open space ratio for residents and workers is also the same under both no-build scenarios. The change in background conditions results in a decrease to the passive open space ratio for residents and workers from the 2004 FEIS (0.27 to 0.26).

Table 6
Adequacy of Open Spaces in the Residential Study Area, 2004 FEIS vs. 2007

	2004 FEIS		2007	
	No Build Condition	Build Condition	No Build Condition	Build Condition
Study Area Population				
Residents	128,248	130,304	129,416	133,706
Workers	157,954	178,668	149,726	166,346
Total	286,202	308,972	279,142	300,052
Open Space Acreage				
Total	137.56	138.71	133.47	134.62
Active	61.79	61.79	62.30	62.30
Passive	75.77	76.92	71.17	72.32
Open Space Ratios				
Active (Residents)	0.48/1,000 residents	0.47/1,000 residents	0.48	0.47
Recommended Weighted Average Ratio for Passive	0.31/1,000 residents and workers	0.30/1,000 residents and workers	0.31	0.31
Combined Passive (Residents and Workers)	0.27/1,000 residents and workers	0.25/1,000 residents and workers	0.26	0.24
Percent Change in Ratios		**No Build to Build**		**No Build to Build**
Active (Residents)		-1.58		-3.21
Combined Passive (Residents and Workers)		-5.96		-5.47

In the 2004 FEIS, the active open space ratio from no-build to build conditions decreased by 1.58 percent, from 0.48 to 0.47 acres per 1,000 residents. The active open space ratio with the revised project would be expected to decrease by 3.21 percent, from 0.48 to 0.47 acres per 1,000 residents. Although it is expected that there would be a greater decrease in the percent change than previously analyzed, it is not considered a substantial decrease. In addition, the ratios in the build conditions in the 2004 FEIS and revised project are expected to be the same (0.47 acres per 1,000 residents). Therefore, the conclusions of the open space analysis in the 2004 FEIS remain valid, and the proposed revisions to Site Q would not result in new significant adverse active open space impacts.

From no-build to build conditions, the recommended weighted average ratio for passive open space for the combined (residential and worker) population was expected to decrease from 0.31 to 0.30 acres per 1,000 residents and workers in the 2004 FEIS. With the revised program, from no-build to build conditions the recommended weighted average for passive open space for the combined population would remain at 0.31 acres per 1,000 residents and workers. The combined passive open space ratio under the 2004 analysis was expected to decrease by 5.96 percent, from 0.27 to 0.25 acres per 1,000 residents and workers. The revised project is expected to decrease by 5.47 percent, from 0.26 to 0.24 acres per 1,000 residents and workers. Although the build ratio in the revised project would be lower than what was calculated in the 2004 FEIS (0.24 and 0.25, respectively), this is a result of changes in background

conditions, rather than the project. It is expected that the decrease in the percent change would be slightly improved under the revised project (5.47 percent decrease) as compared with the 2004 FEIS (5.96 percent decrease). Therefore, the proposed changes to the Site Q program are not expected to result in any new significant adverse passive open space impacts.

In addition, the actions approved in the 2004 FEIS provided for the creation of a new, 1.15-acre public space—Willoughby Square—to be located on the south side of Willoughby Street between Duffield Street and Gold Street/Albee Square West, across the street from Site Q. It is expected that when this public space is developed, the workers, residents, and visitors to Site Q would be among the main beneficiaries of this new amenity.

SHADOWS

The 2004 FEIS concluded that the previously-approved project would not have any significant adverse shadows impacts. Based on illustrative bulk configurations for the projected development sites, including Site Q, it was determined that the projected buildings would substantially block the sunlight on Willoughby Square (a public space to be created by the proposed actions, directly west of Site Q). As the public space would not exist without the buildings to be constructed adjacent to it, however, this condition would not constitute a significant adverse impact. Incremental shadows from the buildings generated by the proposed actions also would fall on the RV Ingersoll Housing open space, Columbus Park/Borough Hall Park, 111 Livingston Street public plaza, and LIU Plaza; however, the incremental shadows were not expected to have significant adverse impacts on these open spaces.

The shadow-generating capability of the proposed building was compared to the Site Q illustrative bulk configuration analyzed in the 2004 FEIS (see Figure 8). The proposed building's residential tower floorplate is smaller—approximately half the width in the north-south direction—than the tower portion of the 2004 Site Q bulk configuration. Therefore, the analysis concluded that the coverage area of the project's incremental shadow on the open spaces to the immediate east and west—LIU Plaza and Willoughby Square, respectively—would be lessened in the early morning and late afternoon hours of the March, May, and June analysis periods.

Similar to the 2004 Site Q bulk configuration, the proposed building's shadow would fall on the RV Ingersoll Housing open space from 12:15-2:53 PM on the December analysis day; however, the incremental shadow from the proposed building would have slightly more coverage on this open space from 12:15-2:15 PM. This small amount of increased coverage would not have an adverse effect on the utility of the RV Ingersoll Housing open space. The public plaza at 111 Livingston Street was determined in 2004 to lie outside the shadow sweep of Site Q. Though this open space lies within the shadow sweep of the proposed building on the June analysis day, the tall buildings surrounding this plaza would eliminate any incremental shadows from the proposed building.

The increased height of the proposed building's tower could reach several additional open spaces. In the 2004 FEIS analysis, Fort Greene Park, McLaughlin Park, S. Parkes Cadman Plaza/Walt Whitman Park, Commodore John Barry Park and Playground, and Oxport/JHS 265 Playground fell within the maximum potential shadow sweep of the Site Q development; however, these open spaces were screened out of the detailed analysis because it was determined that intervening buildings would have blocked the development's incremental shadow. As detailed in Table 7, incremental shadows from the proposed building could now reach these open spaces, but the coverage area and duration would be brief in all cases (less than 15 minutes in the case of S. Parkes Cadman Plaza/Walt Whitman Park and Oxport/JHS 265 Playground).

Table 7
Increases in 2007 Project Shadow Durations, vs. 2004 FEIS

Open/Public Space	March 21 8:36 AM-5:29 PM EDT	May 6 7:27 AM-6:18 PM EDT	June 21 6:57 AM-7:01 PM EDT	December 21 8:51 AM-2:53 PM EST
Fort Greene Park*	4:45–5:29 PM	5:30-6:18 PM	6:15-7:01 PM	—
	44m	48m	46m	—
Columbus Park/Borough Hall Park	8:36–8:45 AM	—	—	—
	9m	—	—	—
Commodore John Barry Park and Playground	—	—	—	1:45–2:53 PM
	—	—	—	1h 8m
Oxport/JHS 265 Playground	—	—	—	2:45–2:53 PM
	—	—	—	8 m
S. Parkes Cadman Plaza/ Walt Whitman Park	—	—	—	9:00–9:15 AM
	—	—	—	15m
McLaughlin Park	—	—	—	9:45-10:45 AM
	—	—	—	1h

Notes:
* Shadow area on this open space is very small during the following times 3:45-4:15 pm (March/September), and 5:30-5:45 pm (May/August).
EST—Eastern Standard Time
DST—Daylight Saving Time
September 21 is the equivalent of March 21, but one hour later.
August 6 is the equivalent of May 6, but EST.

On the March/September, May/August, and June analysis days, incremental shadow also could reach a portion of Fort Greene Park in the final analysis hour; however, the shadow coverage area on this open space would be very small for the majority of its duration. The proposed building could add approximately one hour of additional shadow coverage on small areas of McLaughlin Park and Commodore John Barry Park and Playground on the December analysis day (see Figures 9 and 10). On the March analysis day only, the increased height of the proposed building could add a small area of shadow to Columbus Park/Borough Hall Park for nine minutes in the early morning.

In summary, the changes to the Site Q bulk configuration since 2004 would lessen the project's incremental shadows on LIU Plaza and Willoughby Square, and would increase by small amounts the project's incremental shadows on several other open spaces. The changes to the project's incremental shadows are not expected to create any new, significant adverse shadows impacts on open spaces.

HISTORIC RESOURCES

For the 2004 FEIS, the New York City Landmarks Preservation Commission (LPC) determined that Site Q had no archaeological sensitivity. Therefore, as with the previously approved project, the current project would not have any significant adverse effects to archaeological resources. The structure on Site Q itself is not a designated architectural resource and was not determined to be a potential architectural resource in the 2004 FEIS. Dime Savings Bank (NYCL, interior and exterior) is located within 90 feet of Site Q; therefore, as with the previously approved project, the revised project would require a construction protection plan in order to avoid potential physical impacts to this building from ground-borne vibrations or other potential construction-related issues. In addition, the 2004 FEIS described 436

Gold Street (aka 436 Albee Square West) as one of several properties that were identified during public review as potentially having historic significance in relation to the Underground Railroad. This property is within 90 feet of Site Q. The project sponsor would prepare—if requested by LPC—a construction protection plan for this building.

As described in the 2004 FEIS, the new, modern development that could occur as a result of the proposed actions would be expected to alter the context of the surrounding architectural resources, changing it from a mixed context of low-, medium-, and high-rise structures on lots of varied size to one with a greater concentration of high-rise structures on large sites. However, the bulk of the larger development—including the development on Site Q—would be located on the boundaries of the MetroTech area, which already contains a mix of tall office buildings and low-rise historic structures. Therefore, this change in context would not constitute a significant adverse impact on architectural resources.

The changes to the project program would not be expected to alter any conclusions of the historic resources analysis presented in the 2004 FEIS. The revised project would not have any new significant adverse impacts to historic resources.

URBAN DESIGN AND VISUAL RESOURCES

The 2004 FEIS did not identify any significant adverse urban design or visual resources impacts for the project, although the changes to the study area's urban design and visual resources would be considerable. The changes to the project program and background conditions would not be expected to alter this conclusion. As anticipated in the FEIS, the height and floorplate of the proposed building on Site Q (as well as at Sites M, O, and P) would be most comparable to the MetroTech development and would serve to expand its urban design and form into the surrounding area. The project area's streetscape would still be improved by the mandatory sidewalk widening on the south side of Willoughby Street and improved subway entrances included in new buildings (including the proposed building). Glazing, security gate transparency, and retail uses, which would be mandatory on the ground floor of most developments, and signage controls would contribute to a lively, pedestrian-oriented environment.

Because of the increased height of the proposed building (specifically its residential tower), it would be more noticeable in surrounding views than the 2004 illustrative bulk configuration for Site Q; however, its slimmer profile would minimize perceived bulk in other views. No views to visual resources—such as views east along Willoughby to the Prison Ship Martyrs Monument in Fort Greene Park, or south on Flatbush Avenue Extension to the Williamsburg Savings Bank—would be significantly adversely affected by the change in the building's height and bulk. As with the previously-approved project, the context of views to the Dime Savings Bank from Macomber Square would be altered due to the greater density and different appearance of the new development on adjacent Site Q. Views along Willoughby Street and Flatbush Avenue Extension still would be enhanced by the proposed improvements to streetscape elements on these streets. In summary, the revised project would not have any new significant adverse impacts to urban design or visual resources.

NEIGHBORHOOD CHARACTER

The 2004 FEIS did not identify any significant adverse neighborhood character impacts for the project. It was noted that with the proposed actions, the land use composition of Willoughby Street would change from primarily low-rise commercial uses to high-density office uses, and as a result what is currently a transitional area would become part of the Downtown Brooklyn core. The proposed actions also would encourage the development of buildings that would be significantly different in terms of bulk, form, size, and scale from the buildings that would exist in absence of the proposed actions. The buildings to be developed along Willoughby Street—including on Site Q—would be considerably different in design and

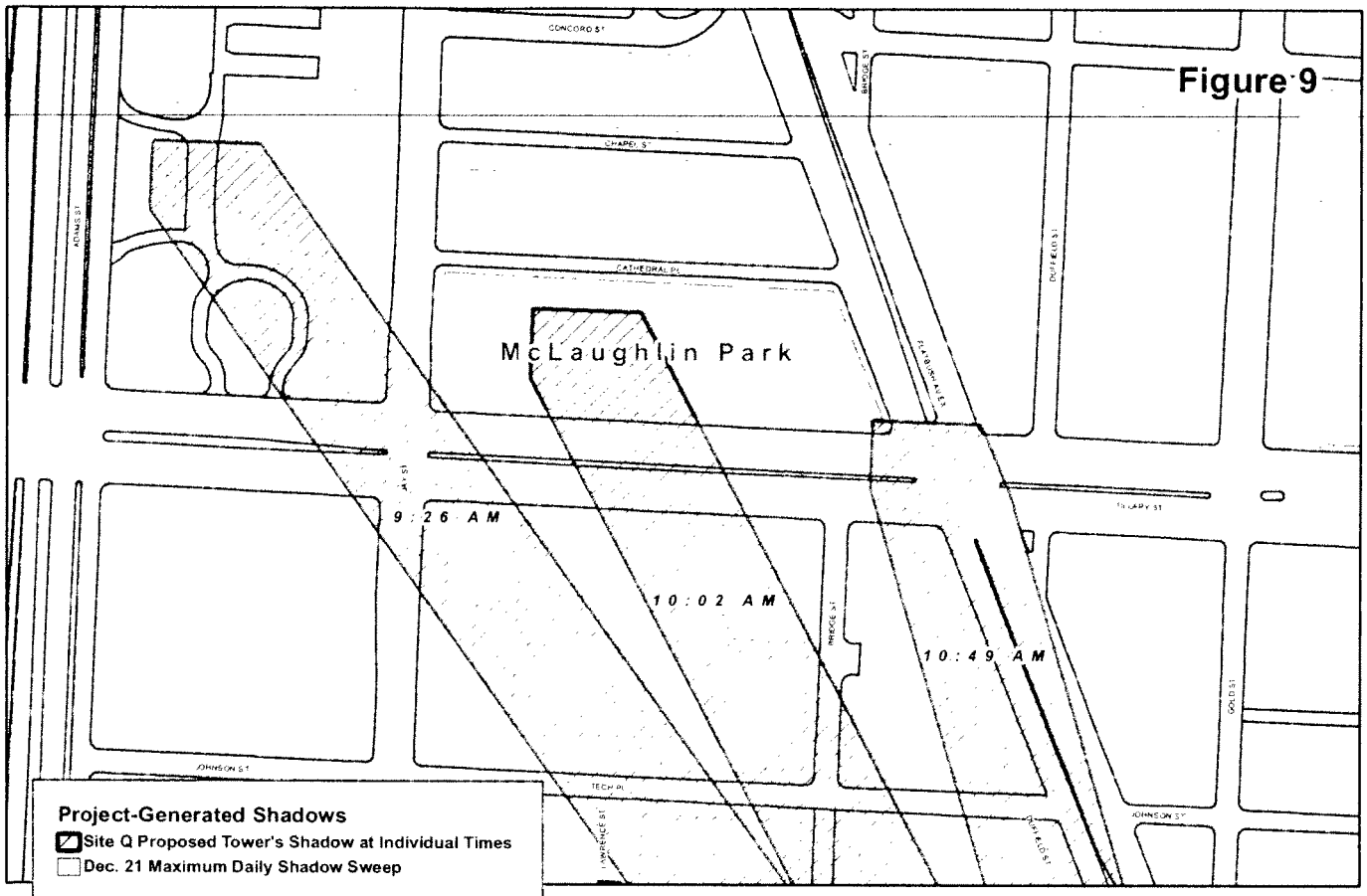


Figure 9

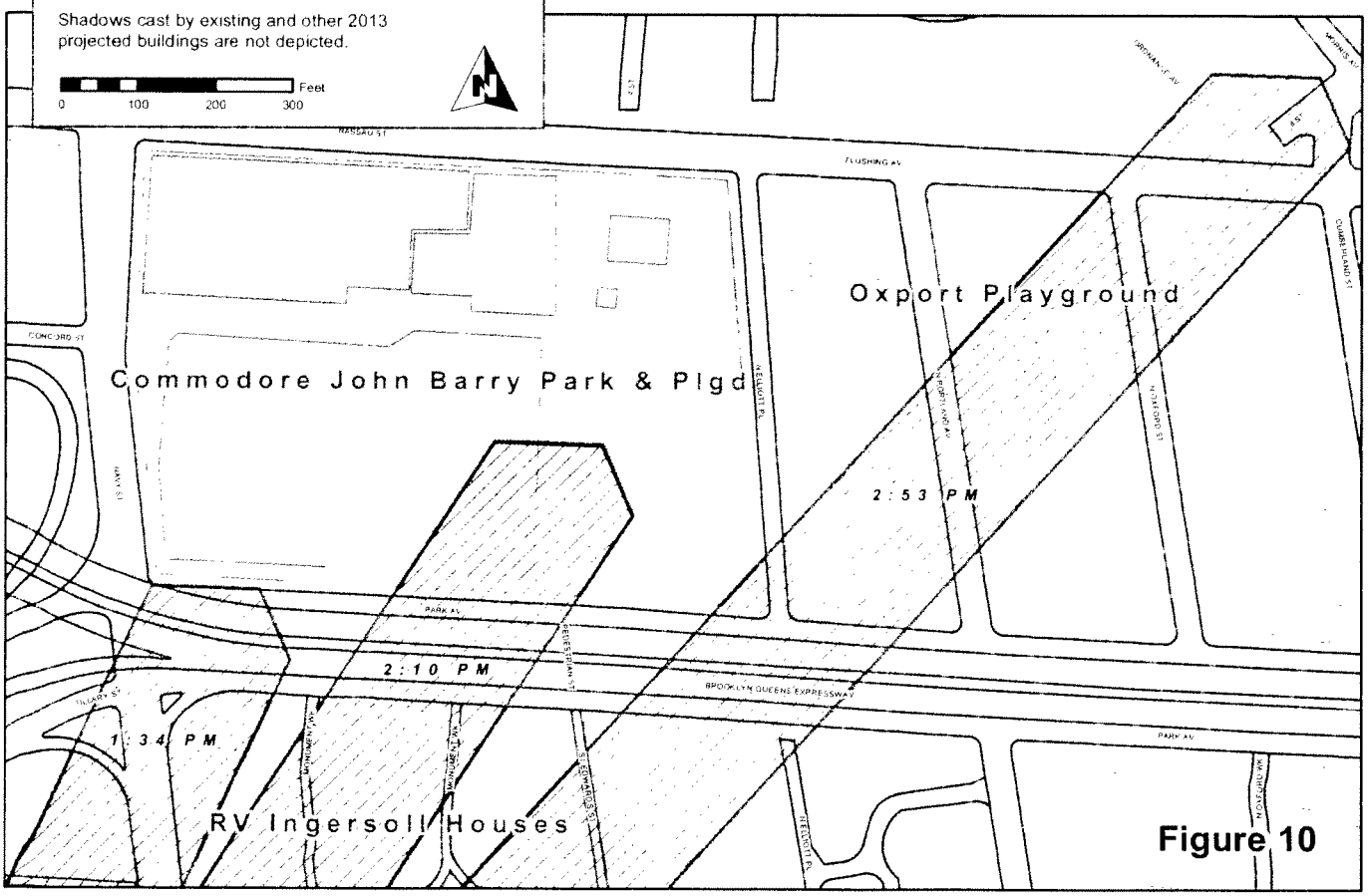


Figure 10

- Undocumented releases of petroleum products from a gasoline storage tank located across Albee Square/Fleet Street from the project site in 1969.

In addition, the Phase I identified the potential for PCBs, asbestos containing material (ACM), and lead-based paint at the site. There also is one 35-gallon diesel AST on site for an emergency generator. The Phase I recommended the performance of a Phase II Environmental Site Investigation of the RECs, consisting of subsurface investigation and sampling to assess whether contamination is present and, if present, what remedation measures would be appropriate. As recommended by the Phase I, and as required by the E-designation, the site owner would conduct any necessary testing and sampling protocols and remediation to the satisfaction of DEP.

Both the previously-approved project and the revised project would require construction activities on the site. Therefore, a Construction Health and Safety Plan (CHASP) would be developed for the on-site construction workers. As noted in the 2004 FEIS, the CHASP will be reviewed and approved by DEP. Therefore, the changes to the project program and build year would not result in any new hazardous materials impacts.

WATERFRONT REVITALIZATION PROGRAM/COASTAL ZONE MANAGEMENT

The 2004 FEIS did not provide an analysis of the project's consistency with coastal zone policies or, specifically, the New York City Waterfront Revitalization Program (WRP), as the project site is not located within the designated boundaries of New York City's Coastal Zone. The changes to the project program would not alter these conditions, and therefore a WRP analysis is not necessary.

INFRASTRUCTURE

As described in the 2004 FEIS, the previously-approved project would generate increased demands for water and treatment of sewage. The anticipated demands for water and sewage treatment would be increased with the changes to the Site Q project program (see Table 8); however, this increased demand would not be large enough to significantly impact the New York City water supply system's ability to deliver water reliably, and demand for water is not expected to affect local water pressure. Furthermore, the additional expected sanitary sewage would not cause the Red Hook WPCP to exceed its design capacity or SPDES permit flow limit. Therefore, the changes to the Site Q program would not result in any new infrastructure impacts.

Table 8
Expected Water Demand on Site Q, 2004 FEIS vs. 2007

	Use	Size(zfa)	Domestic Use (gpd)	Air Conditioning (gpd)	Total Water Demand (gpd)
2004 FEIS	Office	1,138,000	113,800	113,800	227,600
	Retail	510,000	86,700	86,700	173,400
	Total	**1,648,000**	**200,500**	**200,500**	**401,000**
2007	Retail	475,000	80,750	80,750	161500
	Residential	987,624	250,253	167,896	418,149
	Office	125,000	12,500	12,500	25,000
	Total	**1,587,624**	**343,503**	**261,146**	**604, 649**
2007 (GSF)	Retail	624,383	106,145	106,145	212,290
	Residential	1,017,253	250,253	172,933	423,186
	Office	126,504	12,650	12,650	25,300
	Total	**1,882,102**	**369,048**	**291,428**	**660,776**

Notes: Usage rates from the *City Environmental Quality Review (CEQR) Technical Manual.* Residential units are 928 square feet and occupied by 2.1 persons on average. Each office worker occupies 250 square feet.

visual character than existing buildings on the sites, and would be more in keeping with buildings to the north of Willoughby Street.

In addition, the 2004 neighborhood character analysis noted that as a result of the construction of these buildings along Willoughby Street, additional workers and visitors in the area would be expected to increase demand for retail and other services in the area. The proposed changes in land use and building bulks also would result in changes to the socioeconomic makeup of the area which, in turn, would influence the character of the neighborhood as a whole. New businesses in the project area would increase demand for business services from companies in existing buildings; this activity was considered likely to spur an upgrading in the types of retail and office establishments in the area, which could have a moderate effect on neighborhood character. Finally, the increased levels of traffic on formerly less-traveled streets, the increases in street-level pedestrian activity throughout the project area, and the unmitigated traffic impacts of the project were expected to change neighborhood character, but not at a level that would constitute a significant adverse impact.

These conclusions would not be expected to change with the revised program for Site Q or the changes in background conditions.

NATURAL RESOURCES

The 2004 FEIS did not provide an analysis of natural resources, as the project site is not located on the waterfront, there is no direct public access to the shoreline, and the site does not contain any streams, tidal or freshwater wetlands, vulnerable plant, fish, or wildlife species, or rare ecological communities. The changes to the project program would not alter these conditions, and therefore a natural resources analysis is not necessary.

HAZARDOUS MATERIALS

The hazardous materials analysis of the 2004 FEIS identified the potential for VOCs, SVOCs, PCBs, pesticides, and metals to exist on Site Q. Therefore, an E-designation for hazardous materials was placed on the site. The E-designation was used to ensure that further hazardous materials investigation (and, where necessary, remediation) would be performed at this site, among others, before development. The E-designation requires that the site owner conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of DEP before issuance of a building permit by the New York City Department of Buildings. The E-designation also includes mandatory construction-related health and safety plans, which must also be approved by DEP.

Subsequent to the 2004 FEIS, a Phase I Environmental Site Assessment of Site Q was prepared by Fleming Lee Shue, Inc., and Biene, Ltd. (January 2007). The Phase I identified several recognized environmental conditions (RECs) in connection with the siteI:

- Potential undocumented releases of hazardous materials and petroleum products that may have occurred during the former use of the site ca. 1904 by a painter;
- Potential undocumented releases of hazardous materials and petroleum products that may have occurred during the former use of the site from at least 1938 to 1950 by used car sales, an auto laundry, a parking lot with 10 gasoline storage tanks, and a filling station with 8 gasoline storage tanks;
- Undocumented releases of petroleum products from three filling stations, located across Flatbush Avenue Extension from the project site from at least 1938 until the early 1980s; and

SOLID WASTE

As described in the 2004 FEIS, the previously-approved project would generate increased demands for solid waste and sanitation services. The anticipated solid waste demands of the project would be increased with the changes to the Site Q project program (see Table 9); however, private solid waste services have adequate capacity to meet the increases in demand. Therefore, the changes to the Site Q program would not result in any new adverse solid waste impacts.

Table 9
Expected Solid Waste Generation on Site Q, 2004 FEIS vs. 2007

	Use	Size (zfa)	Privately handled waste (pounds per week)	Increase Over Existing Conditions (pounds per week)
2004 FEIS	Office	1,138,000	59,176	
	Retail	510,000	161,160	
	Total	**1,648,000**	**220,336**	**102,468**
2007	Retail	475,000	150,100	
	Residential	987,624	40,493	
	Office	125,000	6,500	
	Total	**1,587,624**	**197,053**	**79,225**
2007 (GSF)	Retail	624,383	197,305	
	Residential	1,017,253	41,707	
	Office	126,504	6,578	
	Total	**1,822,102**	**245,591**	**127,723**

Notes: Generation rates from *City Environmental Quality Review (CEQR) Technical Manual.* Residential units are 928 square feet and occupied by 2.1 persons on average. Each office worker occupies 250 square feet.

ENERGY

The 2004 FEIS anticipated that the development resulting from the proposed actions would place an increased demand on energy services; however, the increase in energy consumption was not identified as a significant adverse energy impact. The energy needs of the project would be higher with the current program for Site Q than with the previously-assumed program (see Table 10); however, this increase is very small and no new adverse energy impacts are anticipated. Electricity, gas, and steam, supplied by Con Ed or another power company, would continue to provide heating, cooling, and lighting to Downtown Brooklyn.

Table 10
Expected Annual Energy Consumption on Site Q, 2004 FEIS vs. 2007

	Use	Size (zfa)	BTUs (in millions)
2004 FEIS	Office	1,138,000	88,650
	Retail	510,000	28,458
	Total	**1,648,000**	**117,108**
2007	Retail	475,000	26,505
	Residential	987,624	143,699
	Office	125,000	9,738
	Total	**1,587,624**	**179,942**
2007 (GSF)	Retail	624,383	34,841
	Residential	1,017,253	148,010
	Office	126,504	9,855
	Total	**1,822,102**	**192,706**

Notes: Generation rates from *City Environmental Quality Review (CEQR) Technical Manual.* Residential units are 928 square feet and occupied by 2.1 persons on average. Each office worker occupies 250 square feet.

TRAFFIC AND PARKING

2004 FEIS FINDINGS

The 2004 FEIS determined that project-generated activities would result in the potential for significant adverse impacts at 29 intersections during one or more peak periods. Out of these 29 intersections, 3 intersections were located in the immediate vicinity of Site Q, including:

- Flatbush Avenue at Myrtle Avenue;
- Flatbush Avenue at Willoughby Street; and
- Flatbush Avenue at DeKalb Avenue.

The following measures were proposed for the above intersections to mitigate the significant adverse traffic impacts:

- Flatbush Avenue at Myrtle Avenue: Implement a no standing anytime regulation for 100 feet along east curb on NB approach. Transfer 3 seconds of green time from NB/SB to SB-LT in midday peak hour;
- Flatbush Avenue at Willoughby Street: Channel NB left-turns on to Fleet Place and WB Willoughby Street. Eliminate the NB left-turn phase and implement two phase signalization for the intersection; and
- Flatbush Avenue at DeKalb Avenue: Implement a no standing anytime regulation along the south curb of the WB approach and restripe to four lanes. Transfer 2 seconds of green time from WB to the NB/SB phase in the AM and PM peak hour.

It should be noted that the above mitigation measures were based on the detailed analyses presented in the 2004 FEIS, which accounted for the travel demand estimates associated with the previously-analyzed development program for Site Q and assumed future background conditions for the year 2013. To determine whether these measures remain valid with the changes to the development program proposed for Site Q, a comparison was performed of the travel demand associated with the previously-analyzed and currently proposed programs for Site Q. In addition, a comparison of the future baseline traffic conditions for 2013 was performed to determine whether there would likely be significant changes in traffic conditions.

TRAVEL DEMAND ESTIMATES

The 2004 FEIS analyzed the projected development site—Site Q—with approximately 1,648,000 sf of zoning floor area consisting of retail and office uses. The current overall development program contemplated for Site Q is smaller than the one analyzed in the 2004 FEIS, with approximately 987,624 gsf of residential use, 125,000 gsf of office use and 624,383 gsf of retail use. In addition, the revised development program would provide approximately 404 accessory parking spaces.

A comparison of trip generation estimates was conducted to determine whether the revised program for Site Q would result in any changes to the trip generation estimates determined for the previously-analyzed development program. For this comparison, the transportation planning factors presented in the 2004 FEIS were applied to the revised development program for Site Q to determine the number of trips. The travel demand estimates for the currently proposed residential, retail and office uses are presented in Tables 11 through 13. Tables 14 and 15 present travel demand estimates for the previously-analyzed office and retail development program for Site Q, as presented in the 2004 FEIS.

Table 11
Site Q Revised Development Program, Residential Travel Demand Estimates

Residential Use	1,064 (D.U.)												
Daily Trip Rate	Person Trips (Trips/D.U.)		Truck Trips (Trips/D.U.)										
	8.075		0.07										
Temporal Distribution	Person Trips		Truck Trips										
AM Peak Hour	9.1%		12.0%										
Midday Peak Hour	4.7%		9.0%										
PM Peak Hour	10.7%		2.0%										
In/Out Distribution	Person Trips		Truck Trips										
	In	Out	In	Out									
AM Peak Hour	20%	80%	100%	100%									
Midday Peak Hour	51%	49%	100%	100%									
PM Peak Hour	65%	35%	100%	100%									
Modal Split (%)	Auto		Taxi		Subway		Bus		Walk/Other		Total		
AM Peak Hour	13%		1%		65%		4%		17%		100%		
Midday Peak Hour	13%		1%		65%		4%		17%		100%		
PM Peak Hour	13%		1%		65%		4%		17%		100%		
Vehicle Occupancy	Auto		Taxi										
	1.19		1.40										
Peak Hour Person Trips	Auto		Taxi		Subway		Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	20	81	2	6	102	407	6	25	27	106	157	625	782
Midday Peak Hour	27	26	2	2	134	129	8	8	35	34	206	199	405
PM Peak Hour	78	42	6	3	388	209	24	13	102	55	598	322	920
Taxi Trips	Demand		Shared Trips		Inbound Only		Outbound Only		Total Trips				
	In	Out	In	Out	In	Out	In	Out	In	Out			
AM Peak Hour	1	4	1	1	0	0	3	3	4	4			
Midday Peak Hour	1	1	1	1	0	0	0	0	1	1			
PM Peak Hour	4	2	2	2	2	2	0	0	4	4			
Peak Hour Vehicle Trips	Auto		Taxi		Delivery		Total						
	In	Out	In	Out	In	Out	In	Out	Total				
AM Peak Hour	17	68	4	4	9	9	30	81	111				
Midday Peak Hour	22	22	1	1	7	7	30	30	60				
PM Peak Hour	65	35	4	4	1	1	70	40	110				

Table 12
Site Q Revised Development Program, Destination Retail Travel Demand Estimates

Destination Retail Use 531 (1,000 gsf)

Daily Trip Rate	Person Trips	Truck Trips (Trips/1,000 gsf)
	41,987	0.35

Temporal Distribution	Person Trips	Truck Trips
AM Peak Hour	2.4%	8.0%
Midday Peak Hour	8.7%	11.0%
PM Peak Hour	8.9%	2.0%

In/Out Distribution	Person Trips		Truck Trips	
	In	Out	In	Out
AM Peak Hour	61%	39%	100%	100%
Midday Peak Hour	55%	45%	100%	100%
PM Peak Hour	47%	53%	100%	100%

Modal Split (%)	Auto	Taxi	Subway	Bus	Walk/Other	Total
AM Peak Hour	20%	2%	22%	30%	26%	100%
Midday Peak Hour	20%	2%	22%	30%	26%	100%
PM Peak Hour	20%	2%	22%	30%	26%	100%

Vehicle Occupancy	Auto	Taxi
	2.00	2.00

Peak Hour Person Trips	Auto		Taxi		Subway		Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	123	79	12	8	135	86	184	118	160	102	614	393	1,007
Midday Peak Hour	402	329	40	33	442	362	603	493	522	427	2,009	1,644	3,653
PM Peak Hour	348	399	35	40	383	439	522	599	453	519	1,741	1,996	3,737

Taxi Trips	Demand		Shared Trips		Inbound Only		Outbound Only		Total Trips	
	In	Out	In	Out	In	Out	In	Out	In	Out
AM Peak Hour	6	4	3	3	3	3	1	1	7	7
Midday Peak Hour	20	16	10	10	10	10	6	6	26	26
PM Peak Hour	17	20	9	9	8	8	11	11	28	28

Peak Hour Vehicle Trips	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	61	39	7	7	15	15	83	61	144
Midday Peak Hour	201	164	26	26	20	20	247	210	457
PM Peak Hour	174	200	28	28	4	4	206	232	438

Note: Ln(T) = 0.643Ln(X) + 5.866, X = 1,000 gsf and T = vehicle trips
6.27478 9.90068 19944 39887.9 41987.3

Table 13
Site Q Revised Development Program, Office Use Travel Demand Estimates

Office Use: 125 (1,000 gsf)

Daily Trip Rate

	Person Trips (Trips/1,000 gsf)	Truck Trips (Trips/1,000 gsf)
	18.00	0.29

Temporal Distribution

	Person Trips	Truck Trips
AM Peak Hour	11.8%	10.0%
Midday Peak Hour	14.5%	11.0%
PM Peak Hour	13.7%	2.0%

In/Out Distribution

	Person Trips		Truck Trips	
	In	Out	In	Out
AM Peak Hour	96%	4%	100%	100%
Midday Peak Hour	39%	61%	100%	100%
PM Peak Hour	5%	95%	100%	100%

Modal Split (%)

	Auto	Taxi	Subway	Bus	Walk/Other	Total
AM Peak Hour	12%	1%	71%	6%	10%	100%
Midday Peak Hour	2%	1%	7%	7%	83%	100%
PM Peak Hour	12%	1%	71%	6%	10%	100%

Vehicle Occupancy

Auto	Taxi
1.42	1.42

Peak Hour Person Trips

	Auto		Taxi		Subway		Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	31	1	3	0	181	8	15	1	25	1	255	11	266
Midday Peak Hour	3	4	1	2	9	14	9	14	106	165	128	199	327
PM Peak Hour	2	35	0	3	11	208	1	18	2	29	16	293	309

Taxi Trips

	Demand		Shared Trips		Inbound Only		Outbound Only		Total Trips	
	In	Out	In	Out	In	Out	In	Out	In	Out
AM Peak Hour	2	0	0	0	2	2	0	0	2	2
Midday Peak Hour	1	1	1	1	0	0	0	0	1	1
PM Peak Hour	0	2	0	0	0	0	2	2	2	2

Peak Hour Vehicle Trips

	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	22	1	2	2	4	4	28	7	35
Midday Peak Hour	2	3	1	1	4	4	7	8	15
PM Peak Hour	1	25	2	2	1	1	4	28	32

Table 14
Site Q Previously-Analyzed Development Program (2004 FEIS)
Destination Retail Travel Demand Estimates

Destination Retail Use	415 (1,000 gsf)												
Daily Trip Rate	Person Trips		Truck Trips (Trips/1,000 gsf)										
	35,833		0.35										
Temporal Distribution	Person Trips		Truck Trips										
AM Peak Hour	2.4%		8.0%										
Midday Peak Hour	8.7%		11.0%										
PM Peak Hour	8.9%		2.0%										
In/Out Distribution	Person Trips		Truck Trips										
	In	Out	In	Out									
AM Peak Hour	61%	39%	100%	100%									
Midday Peak Hour	55%	45%	100%	100%									
PM Peak Hour	47%	53%	100%	100%									
Modal Split (%)	Auto		Taxi		Subway		Bus		Walk/Other		Total		
AM Peak Hour	20%		2%		22%		30%		26%		100%		
Midday Peak Hour	20%		2%		22%		30%		26%		100%		
PM Peak Hour	20%		2%		22%		30%		26%		100%		
Vehicle Occupancy	Auto		Taxi										
	2.00		2.00										
Peak Hour Person Trips	Auto		Taxi		Subway		Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	105	67	10	7	115	74	157	101	136	87	523	336	859
Midday Peak Hour	343	281	34	28	377	309	514	421	446	365	1,714	1,404	3,118
PM Peak Hour	297	341	30	34	327	375	446	511	386	443	1,486	1,704	3,190
Taxi Trips	Demand		Shared Trips		Inbound Only		Outbound Only		Total Trips				
	In	Out	In	Out	In	Out	In	Out	In	Out			
AM Peak Hour	5	3	3	3	2	2	0	0	5	5			
Midday Peak Hour	17	14	9	9	8	8	5	5	22	22			
PM Peak Hour	15	17	8	8	7	7	9	9	24	24			
Peak Hour Vehicle Trips	Auto		Taxi		Delivery		Total						
	In	Out	In	Out	In	Out	In	Out	Total				
AM Peak Hour	52	34	5	5	12	12	69	51	120				
Midday Peak Hour	171	140	22	22	16	16	209	178	387				
PM Peak Hour	149	170	24	24	3	3	176	197	373				

Note: Ln(T) = 0.643Ln(X) + 5.866, X = 1,000 gsf and T = vehicle trips

6.02828 9.74218 17020.7 34041.3 35833

Table 15
Site Q Previously-Analyzed Development Program (2004 FEIS)
Office Use Travel Demand Estimates

Office Use 1,233 (1,000 gsf)

Daily Trip Rate

	Person Trips (Trips/1,000 gsf)	Truck Trips (Trips/1,000 gsf)
	18.00	0.29

Temporal Distribution

	Person Trips	Truck Trips
AM Peak Hour	11.8%	10.0%
Midday Peak Hour	14.5%	11.0%
PM Peak Hour	13.7%	2.0%

In/Out Distribution

	Person Trips		Truck Trips	
	In	Out	In	Out
AM Peak Hour	96%	4%	100%	100%
Midday Peak Hour	39%	61%	100%	100%
PM Peak Hour	5%	95%	100%	100%

Modal Split (%)

	Auto	Taxi	Subway	Bus	Walk/Other	Total
AM Peak Hour	12%	1%	71%	6%	10%	100%
Midday Peak Hour	2%	1%	7%	7%	83%	100%
PM Peak Hour	12%	1%	71%	6%	10%	100%

Vehicle Occupancy

Auto	Taxi
1.42	1.42

Peak Hour Person Trips

	Auto		Taxi		Subway		Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	302	13	25	1	1,785	74	151	6	251	10	2,514	104	2,618
Midday Peak Hour	25	39	13	20	88	137	88	137	1,042	1,629	1,256	1,962	3,218
PM Peak Hour	18	347	2	29	108	2,051	9	173	15	289	152	2,889	3,041

Taxi Trips

	Demand		Shared Trips		Inbound Only		Outbound Only		Total Trips	
	In	Out	In	Out	In	Out	In	Out	In	Out
AM Peak Hour	18	1	1	1	17	17	0	0	18	18
Midday Peak Hour	9	14	5	5	4	4	9	9	18	18
PM Peak Hour	1	20	1	1	0	0	19	19	20	20

Peak Hour Vehicle Trips

	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	212	9	18	18	36	36	266	63	329
Midday Peak Hour	18	28	18	18	39	39	75	85	160
PM Peak Hour	13	244	20	20	7	7	40	271	311

The summary of the total number of person and vehicle trips (by individual modes) for both the revised and previously-analyzed development programs for Site Q is presented in Table 16. Based on this summary the revised development program for Site Q would result in approximately 1,422, 1,951, and 1,265 fewer peak hour person trips as compared to the previously-analyzed program presented in the 2004 FEIS during the weekday AM, midday and PM peak hours, respectively. As for the vehicle trips, the revised program would result in 159, 15, 104 fewer peak hour vehicle trips as compared to the previously-analyzed program in the 2004 FEIS during the weekday AM, midday and PM peak hours, respectively.

Table 16
Comparison of Peak Hour Person and Vehicle Trips
Revised and Previously-Analyzed Development Programs

Peak Hour Person Trips	Auto		Taxi		Subway		Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	-233	82	-19	6	-1,483	352	-102	37	-176	112	-2,011	589	-1,422
Midday Peak Hour	63	39	-3	-11	120	58	18	-43	-825	-1,368	-627	-1,324	-1,951
PM Peak Hour	112	-211	10	-17	348	-1,569	92	-55	154	-129	717	-1,982	-1,265

Peak Hour Vehicle Trips	Auto		Taxi		Delivery		Total		
	In	Out	In	Out	In	Out	In	Out	Total
AM Peak Hour	-164	65	-10	-10	-20	-20	-194	35	-159
Midday Peak Hour	36	21	-12	-12	-24	-24	0	-15	-15
PM Peak Hour	78	-154	-10	-10	-4	-4	64	-168	-104

BACKGROUND CONDITIONS

As discussed above, the 2004 FEIS provided an assessment of the project-related traffic impacts and recommended potential mitigation measures for the 2013 build year. With the proposed changes to the Site Q development program, a comparison of future baseline conditions was conducted to determine whether there would likely be significant changes in traffic conditions.

Based on the information provided in the 2004 FEIS, traffic volumes at three study area intersections were selected for evaluation. These three intersections: Flatbush Avenue at Myrtle Avenue, Flatbush Avenue at Willoughby Street, and Flatbush Avenue at DeKalb Avenue, were selected because they are expected to serve a substantial number of trips generated by the Site Q development. In addition, the 2004 FEIS had identified them as critical intersections, where noticeable changes in background traffic levels could alter the conclusions made previously. To perform a comparison of background traffic conditions for the year 2013 at these 3 critical intersections, future background traffic volumes presented in the 2004 FEIS were compared with the future background traffic volumes presented in the Atlantic Yards Arena Redevelopment Project FEIS ("the Arena FEIS").

It should be noted that the traffic projections presented in the Arena FEIS are for the year 2016. These projections incorporate an annual background growth of 0.5 percent—as recommended by the *CEQR Technical Manual*—as well as the traffic generated by other no build projects that are expected to be completed by 2016. To normalize these traffic projections to the 2013 future levels, the 2016 future traffic volumes presented in the Arena FEIS were revised. These revisions included:

- Reducing the 2016 future traffic volumes by a total of 1.5 percent to account for the 0.5 percent per year growth between 2013 and 2016 future years; and
- Adjusting the 2016 volumes to account for the fewer number of trips generated by the revised development program for Site Q as compared to the previously-analyzed development program presented in the 2004 FEIS.

Table 17 presents a comparison of the intersection and approach volumes between the 2013 future background conditions of the 2004 FEIS and the adjusted/revised 2013 future background conditions from the Arena FEIS for the three critical intersections described above. This comparison shows that, overall, the total volumes for the three intersections would be similar, with the 2013 projections from the Arena FEIS being slightly lower by 4.3 and 0.6 percent for the weekday AM and PM peak hours, respectively.

Table 17
2013 Future Background Traffic Volumes Comparison

Intersection	Approach	Peak Hour	Downtown Brooklyn FEIS: 2013 BD	Atlantic Yards FEIS: 2016 BD	Projection: AY 2013	2013 DB vs. 2013 AY
Flatbush Avenue & Myrtle Avenue	Eastbound	Wd AM	373	148	113	-69.6%
		Wd PM	451	211	217	-51.8%
	Westbound	Wd AM	525	509	496	-5.5%
		Wd PM	363	281	275	-24.3%
	Northbound	Wd AM	2152	2212	2168	0.7%
		Wd PM	1907	1943	1894	-0.7%
	Southbound	Wd AM	2027	1925	1864	-8.1%
		Wd PM	2566	2657	2607	1.6%
	Intersection Total	*Wd AM*	*5077*	*4794*	*4640*	*-8.6%*
		Wd PM	*5287*	*5092*	*4993*	*-5.6%*
Flatbush Avenue & Willoughby Street	Eastbound	Wd AM	194	243	235	21.0%
		Wd PM	604	709	684	13.2%
	Westbound	Wd AM	545	521	513	-5.8%
		Wd PM	395	356	345	-12.7%
	Northbound	Wd AM	1920	1919	1901	-1.0%
		Wd PM	1465	1489	1474	0.6%
	Southbound	Wd AM	1769	1735	1694	-4.2%
		Wd PM	2182	2337	2297	5.3%
	Intersection Total	*Wd AM*	*4428*	*4418*	*4343*	*-1.9%*
		Wd PM	*4646*	*4891*	*4800*	*3.3%*
Flatbush Avenue & DeKalb Avenue	Westbound	Wd AM	753	831	817	8.5%
		Wd PM	811	781	766	-5.5%
	Northbound	Wd AM	1974	1987	1947	-1.3%
		Wd PM	1503	1506	1480	-1.6%
	Southbound	Wd AM	1598	1523	1493	-6.6%
		Wd PM	2384	2548	2503	5.0%
	Intersection Total	*Wd AM*	*4325*	*4341*	*4258*	*-1.5%*
		Wd PM	*4698*	*4835*	*4749*	*1.1%*
GRAND TOTAL	**Weekday AM**		**13830**	**13553**	**13241**	**-4.3%**
	Weekday PM		**14631**	**14818**	**14543**	**-0.6%**

Sources: Downtown Brooklyn Redevelopment FEIS (2004)
Atlantic Yards Arena and Redevelopment Project FEIS (2006)

CONCLUSION

The above discussion shows that the revised development program for Site Q would generate fewer overall person and vehicle trips as compared to the previously-analyzed program during the three peak periods, and the updated background traffic levels in the study area for the year 2013 would be slightly lower than those presented in the 2004 FEIS. It should be noted that the reduced number of person and vehicle trips generated under the revised development program envisioned for Site Q, coupled with the lower background traffic levels at the three critical intersections, are not expected to result in potential significant adverse impacts to the traffic, transit, and pedestrian conditions that were not previously disclosed. In addition, operational measures identified in the 2004 FEIS would still be adequate to mitigate any significant adverse impacts resulting from the revised development program for Site Q. Hence, the proposed changes to the development program for Site Q, along with the updated background traffic conditions, would not alter the conclusions presented in the 2004 FEIS.

TRANSIT AND PEDESTRIANS

2004 FEIS FINDINGS

In addition to the traffic impacts, the 2004 FEIS determined that the proposed rezoning would result in significant adverse pedestrian impacts at one crosswalk on Jay Street at Willoughby Street and at one crosswalk at Gold Street/Albee Square West at Willoughby Street. To mitigate these pedestrian impacts, the following measures were proposed:

- The north crosswalk at Jay Street and Willoughby Street: Widen the crosswalk to 13 feet from the existing 11.5 feet; and
- The south crosswalk at Gold Street/Albee Square West and Willoughby Street: Widen the crosswalk to 14 feet from the existing 10.3 feet.

In terms of transit, based on the information from the 2004 FEIS, the demand from the proposed rezoning would impact two street stairs at the Jay Street-Borough Hall subway station in the AM and/or PM peak periods. To mitigate the subway stairway impacts, the following measures were proposed:

- Stair S3 (northwest corner of Jay and Fulton Streets): A new entrance to the station as part of a new transit plaza at Jay Street between Willoughby and Fulton Streets would relieve congestion on this stair and would fully mitigate the impact; and
- Stair S4 (northeast corner of Jay and Willoughby Streets): Double the width of this stairway from five feet to ten feet, either by widening the existing stairway or by constructing a new, adjacent five foot stairway.

The 2004 FEIS also concluded that the demand from the proposed rezoning would impact the New York City Transit's (NYCT) B25 bus route in the eastbound direction during the PM peak period. Since NYCT regularly monitors transit ridership and modifies its service to maintain adequate service standards; no project-sponsored mitigation was proposed in the 2004 FEIS to address the potential impact on the B25 bus route.

CONCLUSION

The above discussion shows that the revised development program for Site Q would generate fewer overall person and vehicle trips as compared to the previously-analyzed program during the three peak periods, and the updated background traffic levels in the study area for the year 2013 would be slightly lower than those presented in the 2004 FEIS. The reduced number of person and vehicle trips generated under the revised Site Q development program, coupled with the lower background traffic levels at the three critical intersections, are not expected to result in potential significant adverse impacts to traffic or parking.

With respect to transit and pedestrian conditions, based on the travel demand estimates the overall walk and transit trips generated by the revised Site Q program would be lower than the trips generated by the previously-analyzed program during the AM and PM peak periods. During the midday peak period, the subway and bus trips would be slightly higher—by approximately 149 and 27 trips, respectively—than those identified in the 2004 FEIS. Therefore, it is expected that with the revised Site Q program, the pedestrian and transit conditions in the vicinity of Site Q would remain similar to those disclosed in the 2004 FEIS.

It is expected that the operational measures identified in the 2004 FEIS and listed above would still be adequate to mitigate any significant adverse impacts to traffic, transit and pedestrian conditions resulting from the revised development program for Site Q. Therefore, the proposed changes to the development

program for Site Q, along with the updated background traffic conditions, would not alter the conclusions presented in the 2004 FEIS.

AIR QUALITY

2004 FEIS FINDINGS

The screening analysis of air emissions due to heating, ventilation and air conditioning (HVAC) equipment as presented in the 2004 FEIS determined that there would be no significant adverse air quality impacts due to the proposed development on Site Q. A parking analysis was performed to determine potential air quality impacts for a nearby prototypical parking facility that would accept the combined parking demand from Sites O, P and Q. That analysis determined that no significant adverse air quality impacts would occur from vehicles using the proposed garage.

MOBILE SOURCES

As discussed in the Traffic and Parking section of this Technical Memorandum, the revised development program for Site Q would generate fewer vehicle trips as compared to the previously-analyzed program during the three peak periods. Therefore, no additional analysis of air emissions from mobile sources is required. However, since the revised Site Q development would include a parking garage located on the lower level, an analysis was performed to assess potential air quality impacts pollutants due to emissions from vehicles using the garage. The parking garage analysis was performed assuming a 404-space mechanically-ventilated accessory garage for residential use. Using *CEQR Technical Manual* procedures, it was assumed the air from the proposed parking garage would be vented through a single outlet at a height of approximately 12 feet. The vent face was modeled to directly discharge to the Flatbush Avenue Extension, and "near" and "far" receptors were placed along the sidewalks at a pedestrian height of 6 feet and at a distance 6 feet and 134 feet, respectively, from the vent. A persistence factor of 0.81, supplied by DEP for the Downtown Brooklyn area, was used to convert the calculated 1–hour average maximum concentrations to 8–hour averages, accounting for meteorological variability over the average 8-hour period. Background and on–street CO concentrations were added to the modeling results to obtain the total predicted CO concentration. The maximum overall predicted future CO concentrations, with ambient background levels, at sidewalk receptor locations, would be 6.13 ppm and 4.10 ppm for the 1- and 8-hour periods, respectively. The maximum 1- and 8-hour contribution from the proposed project's parking facility would be 0.49 ppm and 0.27 ppm, respectively. The values are the highest predicted concentrations for any time period analyzed. The total 1- and 8-hour CO concentrations from the parking facility are substantially below the applicable standards. Therefore, it can be concluded that the proposed parking facility would not result in any significant adverse air quality impact.

STATIONARY SOURCES

Compared to the Site Q program analyzed in the 2004 FEIS, the proposed residential building is significantly taller, with an overall height of approximately 764 feet. Since it would be the tallest building within a 400-ft radius (the maximum *CEQR Technical Manual* screening distance), no existing or proposed buildings would be affected by the project's HVAC sources. Therefore, the proposed project would not result in any significant air quality impacts with respect to its HVAC sources.

The addition of residential uses to the proposed site development necessitated a review of industrial and HVAC sources for their potential impacts on the Site Q project. Utilizing industrial source emissions obtained for the 2004 FEIS, and more recent DEC, USEPA, and DEP permit data, no industrial emission sources were found within a 400-ft radius, and no large emission sources were found within a 1,000-ft

radius of the proposed project, the studies areas defined by the *CEQR Technical Manual.* Therefore, no significant adverse air quality impacts are anticipated from existing sources of emissions in the area.

The Site Q project site is adjacent to the projected development Site P, as identified in the 2004 FEIS. Since the revised Site Q program would include a substantial residential component, an analysis of the potential effects of Site P HVAC emissions on the project site was undertaken, using the screening procedure outlined in the *CEQR Technical Manual.* The screening analysis indicated that dispersion modeling would be required to assess the potential air quality impacts of HVAC stationary source emissions from the projected development Site P on receptors at the proposed development site. Computations with the AERMOD model to determine impacts from exhaust stack(s) were made assuming stack tip downwash, buoyancy-induced dispersion, gradual plume rise, urban dispersion coefficients and wind profile exponents, no collapsing of stable stability classes, and elimination of calms. AERMOD was run without building downwash algorithms enabled (higher pollutant concentrations are anticipated at elevated receptor locations without the building downwash option enabled). The analysis was conducted using No. 2 oil or natural gas as the fuel types. The primary pollutant of concern is nitrogen dioxide when burning natural gas, and sulfur dioxide when burning oil. The meteorological data set consisted of 5 years of concurrent meteorological data: surface data collected at La Guardia Airport (2000-2004) and concurrent upper air data collected at Brookhaven, New York. The estimated concentrations from the modeling were added to the background concentrations to estimate total air quality concentrations at each proposed projected development site. The results of the analysis determined that the maximum predicted concentrations for the pollutants analyzed are below the respective standards. Therefore, no significant adverse air quality impacts would occur on the Site Q development from nearby HVAC systems.

NOISE

The 2004 FEIS concluded that an E-designation would be placed on projected and potential development sites in order to create a mechanism for providing sufficient building noise attenuation. The E-designation would state that in order to ensure an acceptable interior noise environment at these sites, future uses on the site must provide a minimum window/wall attenuation of 25, 30, 35, or 40 dBA, depending on the site. Prior to development on these sites, the New York City Department of Buildings would be furnished with a report from DEP stating that the environmental requirements related to the E-designation have been met. In addition, mechanical equipment such as heating, ventilation, and air conditioning (HVAC), and elevator motors would utilize sufficient noise reduction devices to comply with applicable noise regulations and standards.

The changes to the proposed project since 2004 would not generate sufficient traffic to have the potential to cause a significant noise impact (i.e., it would not result in a doubling of passenger car equivalents [PCEs] which would be necessary to cause a 3 dBA increase in noise levels). However, ambient noise levels adjacent to the project site must be considered in order to address CEQR noise abatement requirements and the E-designation for Site Q. For Site Q, the required attenuation for the portion of the site facing Gold Street/Albee Square West is 30 dBA, and 25 dBA for the portion of the site facing Fleet Street. This potential is assessed below.

NEW YORK CEQR NOISE STANDARDS

The *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise level (see Table 18, "Required Attenuation Values to Achieve Acceptable Interior Noise Levels"). Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower, and are determined based on exterior $L_{10(1)}$ noise levels.

Table 18
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Acceptable	Marginally Unacceptable		Clearly Unacceptable		
Noise Level With Proposed Action	$65 < L_{10} \leq 70$	$70 < L_{10} \leq 75$	$75 < L_{10} \leq 80$	$80 < L_{10} \leq 85$	$85 < L_{10} \leq 90$	$90 < L_{10} \leq 95$
Attenuation*	25 dB(A)	(I) 30 dB(A)	(II) 35 dB(A)	(I) 40 dB(A)	(II) 45 dB(A)	(III) 50 dB(A)

Note: * The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

Source: New York City Department of Environmental Protection

EXISTING NOISE LEVELS

Existing noise levels were measured for 20-minute periods during the three weekday peak periods—AM (8:00–9:00 AM), midday (MD) (12:00–2:00 PM), and PM (5:00–6:00 PM)—between January 9 and 11, 2007 at four receptor sites at the project site (see Figure 11 for locations). Site 1 was located on Fleet Street. Site 2 was located on Flatbush Avenue Extension between Willoughby Street and Fleet Street. Site 3 was located on Willoughby Street between Flatbush Avenue Extension and Gold Street/Albee Square West. Site 4 was located on Gold Street/Albee Square West.

The instrumentation used for the 20-minute noise measurements was a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2260 Type 1 (according to ANSI Standard S1.4-1983) sound level meter. This assembly was mounted at a height of 5 feet above the ground surface on a tripod and at least 6 feet away from any large sound-reflecting surface to avoid major interference with sound propagation. The meter was calibrated before and after readings with a Brüel & Kjær Type 4231 sound-level calibrator using the appropriate adaptor. Measurements at each location were made on the A-scale (dBA). The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. All measurement procedures conformed with the requirements of ANSI Standard S1.13-1971 (R1976).

The results of the measurements of existing noise levels are summarized in Table 19.

At all monitoring sites, traffic noise was the dominant noise source. Measured noise levels are moderate to relatively high and reflect the level of vehicular activity on the adjacent streets. In terms of the CEQR criteria, the existing noise levels at Site 1 would be in the "acceptable" category, existing noise levels at Site 4 would be in the "marginally acceptable" category, and existing noise levels at Sites 2 and 3 would be in the "marginally unacceptable" category.

Table 19
2007 Noise Levels
(in dBA)

Site	Measurement Location	Time	L_{eq}	L_1	L_{10}	L_{50}	L_{90}
1	Fleet Street between DeKalb Avenue and Flatbush Avenue Extension	AM	62.1	68.4	64.8	60.8	57.9
		MD	61.0	67.9	63.1	60.0	57.4
		PM	60.9	65.6	62.9	60.4	58.1
2	Flatbush Avenue Extension between Willoughby Street and Fleet Street	AM	73.9	83.6	77.2	71.1	62.8
		MD	72.5	80.4	76.4	70.5	61.7
		PM	70.4	78.5	73.0	68.4	63.6
3	Willoughby Street between Flatbush Avenue Extension and Gold Street/Albee Square West	AM	69.8	79.4	72.0	67.0	62.5
		MD	71.6	82.2	74.2	67.3	63.9
		PM	67.9	76.6	70.9	65.8	62.6
4	Gold Street/Albee Square West between DeKalb Avenue and Willoughby Street	AM	64.1	72.1	67.5	61.6	57.8
		MD	64.5	73.4	66.9	62.2	58.9
		PM	64.3	72.1	67.2	62.5	59.3

Note: Field measurements were performed by AKRF, Inc. in January, 2007.

NOISE ATTENUATION MEASURES

As shown in Table 18, the *CEQR Technical Manual* has set noise attenuation quantities for buildings, based on exterior $L_{10(1)}$ noise levels, and in order to maintain interior noise levels of 45 dBA or lower in a residential space, and 50 dBA or lower in a commercial or institutional space. The design of the residential portion of the project will include packaged terminal air conditioning (PTAC) units as an alternate means of ventilation and well sealed double-glazed windows. With these measures, the window/wall attenuation would provide more than 35 dBA for all facades of the building.

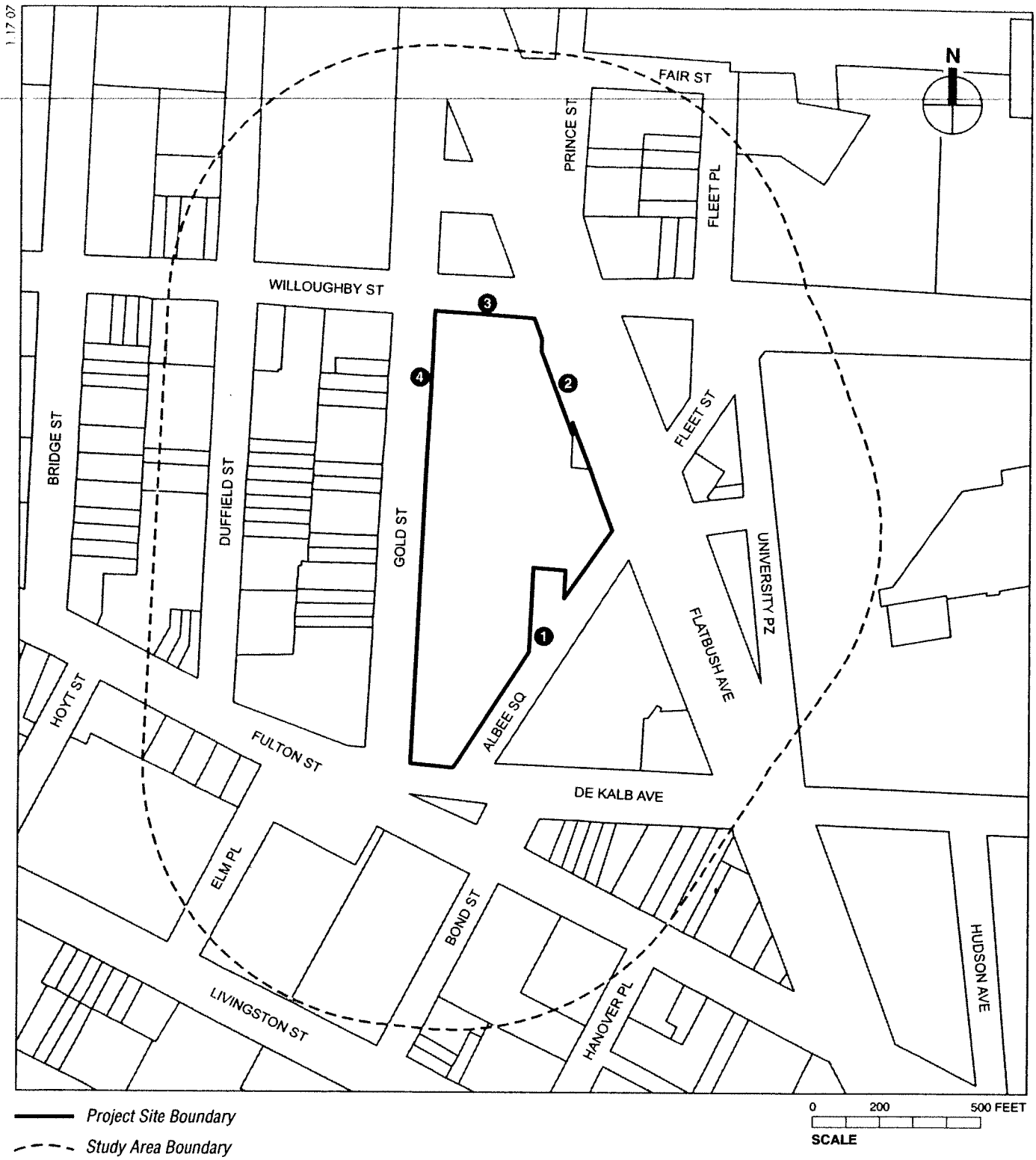
Based upon the $L_{10(1)}$ values measured at the project site, these design measures would provide sufficient attenuation to meet the CEQR requirements. Furthermore, this level of attenuation satisfies the E-designation requirements of the 2004 FEIS.

In addition, the building mechanical system (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations and to avoid producing levels that would result in any significant increase in ambient noise levels.

CONSTRUCTION IMPACTS

The 2004 FEIS construction impacts assessment concluded that, for the most part, the potential impacts of the development associated with the proposed actions would be temporary and similar to those experienced elsewhere in the City's business districts. Impacts specific to conditions in the study area would relate mainly to the potential physical effects to historic resources and potential effects on traffic conditions, particularly on Flatbush Avenue and Adams Street, where congestion exists currently.

The general assumptions about the length and parameters of construction, including the temporary use of sidewalks/parking lanes, remain the same for Site Q. As noted above, construction protection plans would be created to protect surrounding historic resources. For Site Q, the relevant historic resource is the Dime Savings Bank. If requested by LPC, a construction protection plan also would be prepared for 436 Gold



Noise Receptor Location
Figure 11

Street (aka 436 Albee Square West). As described in the 2004 FEIS, the New York City Department of Transportation's Office of Construction Mitigation and Coordination (OCMC) would review all measures contained in the project's construction logistics plan before issuing any construction permits. Furthermore, approvals for all temporary sidewalk and curb lane closures during construction would be worked out in coordination with OCMC, as well as with the Downtown Brooklyn Transportation Coordinator, to minimize potential impacts to pedestrian and vehicular circulation surrounding the site. All relevant local and federal regulations regarding construction noise would be carefully followed, and all appropriate fugitive dust control measures would be employed. Potential localized increases in mobile source emissions would be minimized by incorporating the traffic maintenance requirements outlined in the 2004 FEIS into construction contract documents.

While some localized shortfalls in parking capacity may occur in the vicinity of Site Q, dependent in part on the phasing of construction, any such shortfall would be temporary in nature. As assumed in the previously-approved project, the development of Site Q would include an accessory parking facility to accommodate the new demand from this site along with a portion of the displaced existing demand.

As described above, further hazardous materials investigation and/or remediation would be performed on Site Q prior to and/or during redevelopment. All construction activities would be governed by a DEP-approved Construction Health and Safety Plan (CHASP).

In summary, the changes to the Site Q program would not result in any new construction-period adverse impacts.

PUBLIC HEALTH

The 2004 FEIS did not provide an analysis of public health, as the project did not meet any of the thresholds warranting a public health assessment according to the guidelines of the *CEQR Technical Manual*. The changes to the project would not alter these conditions, as no new significant air quality, hazardous materials, or noise impacts have been identified, and no changes to anticipated solid waste management practices would occur. Therefore, a public health analysis is not necessary.

C. 2004 FEIS COMMITMENTS

The 2004 FEIS disclosed the potential for significant adverse impacts with respect to historic resources, traffic and parking, transit and pedestrians, and noise, and provided commitments to mitigate those potential impacts. The impacts and mitigation that relate specifically to the Site Q development are described below.

The EIS concluded that future demand from the projected development sites—including Site Q—and the effects of street system changes related to the proposed actions would combine to result in significant adverse traffic impacts at 29 signalized intersections in one or more peak periods. To address these impacts, a mitigation plan was developed for the Downtown Brooklyn street network. Some of the proposed mitigation elements would occur directly around Site Q, including the conversion of Gold Street/Albee Square West between Willoughby Street and Flatbush Avenue Extension to one-way northbound operation, the elimination of the northbound left-turn from Flatbush Avenue Extension to Willoughby Street, and various modifications to intersection signalizations. The EIS also concluded that pedestrian trips to and from projected development sites—including Site Q—would result in significant adverse pedestrian impacts to the south crosswalk on Gold Street/Albee Square West at Willoughby Street. The proposed mitigation measure for this impact was to widen this crosswalk to 14 feet in width from the existing 10.3 feet.

The 2013 noise levels at the proposed Willoughby Square public space—which would be adjacent to Site Q—would be higher than those generally recommended for outdoor activities (i.e., they would exceed the CEQR Exposures Guideline value of 55 dBA L10 for this use) but would be comparable to levels in existing parks in New York City which are adjacent to moderately to heavily trafficked streets and roadways. This exceedance of the CEQR Exposure Guideline value would result in elevated noise levels on future public space users. There are no feasible mitigation measures to reduce noise levels within an urban public space such as this to within recommended levels for this type of use; however, the design of this new public space would consider layout or design features to minimize potential adverse effects on its viability.

The changes in the project program for Site Q would not require any changes to the 2004 FEIS commitments. It is assumed that the project sponsor would consult with NYCDOT's Downtown Brooklyn Transportation Coordinator regarding the implementation of the recommended 2004 mitigation measures, particularly those most relevant to Site Q.

CONCLUSION

The changes in the program for Site Q would not result in any significant adverse environmental impacts that were not identified in the 2004 FEIS. No additional analysis or supplemental environmental impact statement is warranted for the proposed changes to the project. ✷