

Land Use,
Zoning &
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Socioeconomic
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Shadows

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A TALE OF TWO REZONINGS // TAKING A HARDER LOOK AT

Water &
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C E Q R

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Gas Emissions

Noise

Public Health

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A TALE OF TWO REZONINGS

// Taking A Harder Look at CEQR

2018

Executive Summary

This year, the Municipal Art Society of New York (MAS) celebrates its 125th year of promoting thoughtful planning and urban design for all New Yorkers. In 2017, we released our latest *Accidental Skyline* report, which identified several loopholes in the City's existing regulations that can be exploited to create larger buildings than ever intended by zoning. One of the key recommendations in the report called for strengthening the flawed City Environmental Quality Review (CEQR) process, which frequently underestimates the scale of developments, leaving decision makers with incomplete information. Ultimately, without associated planning, neighborhoods are left unequipped to successfully absorb the impacts.

As an advancement of some of the issues raised in *Accidental Skyline*, MAS is proud to present our next report, *A Tale of Two Rezoning: Taking a Harder Look at CEQR*. This study exposes the shortcomings of the existing environmental review process through the lens of two recent rezonings in Long Island City (2001) and Downtown Brooklyn (2004). We selected these neighborhoods because their respective build years have passed, allowing us to study their long-term outcomes.

We arrive at a simple, but consequential conclusion: although the City intended to create two new central business districts, the expected boom in commercial development never materialized. Instead, these neighborhoods were transformed by an explosion of high-end, high-rise residential development, fueled—unintentionally—by the City's zoning changes. Demographically, they are now whiter, wealthier, and more crowded than ever.

The City's miscalculations were not trivial. The Final Environmental Impact Statement (FEIS) for Long Island City's rezoning predicted that the neighborhood would see just 300,000 square feet of residential development across 300 new units. The zoning changes have in fact produced 8.74 million square feet in new residential development across more than 10,000 new units. The FEIS for Downtown Brooklyn's rezoning predicted that the neighborhood would see an addition of 979 residential units by the build year of 2013. In fact, it saw more than 3,000 new units by 2013, with an additional 5,000 built since.

The growth has been so rapid and so extensive that Long Island City is now recognized as the fastest growing neighborhood in the country; Downtown Brooklyn ranks as eighth on the list. By some measures, it is indeed the best of times for these two neighborhoods. However, as local residents can attest, there are real and lasting consequences when the development that the City expects diverges so dramatically from the development that actually takes place.

For example, the FEIS for Long Island City estimated that the already-overcrowded Queens Community School District 30 would need only 99 additional school seats by the build year 2010; that estimate was off by nearly 250 percent. As of 2018, the zoning changes have brought more than 3,200 new students to the neighborhood, where seven of nine schools are now overcrowded and one elementary school in particular operates at over 200 percent capacity.

Similarly, the Downtown Brooklyn rezoning was expected to bring 446 new students to its neighboring school district. It has in fact resulted in the addition of nearly 4,400 school-age children with no adequate mitigation plan for adding school seats.

We see this same trend play out across countless measures of neighborhood livability: from open space, to traffic congestion, to affordable housing, the CEQR process produced mitigation plans that have no bearing on the ultimate needs of the neighborhoods being transformed by large-scale rezoning efforts. Residents—both new arrivals and those displaced—are left to shoulder the burden of these miscalculations.

We recognize that no City official or planning practitioner has a crystal ball with which to forecast future development. We also acknowledge that economic trends shape the city and often unexpectedly create vibrant and exciting places. However, when the City initiates a large-scale neighborhood rezoning plan, even one with laudable goals, New Yorkers deserve a reliable representation of expected development and a realistic evaluation of its impacts; too often, they receive neither.

The following report summarizes why the CEQR process is broken, why that matters, and how the City can do better in the future.

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Part I: Taking a Harder Look at CEQR Evaluations

Introduction

Prior to the rezonings, Long Island City and Downtown Brooklyn were ripe for development due to their proximity to Manhattan and advantageous public transportation network. Although the neighborhoods served different functions and had their own distinct senses of place, the framers of both proposals shared a common vision for the future of these districts: an expansion of commercial office space to create two new central business districts (CBDs), buttressing those in Lower and Midtown Manhattan.

The City's goal was to retain or lure back commercial tenants wooed by nearby suburban hubs offering modern buildings and cheaper rent. By incentivizing the construction of new office buildings with large floorplates, lower rents, and convenient access to public transportation, this new, primarily commercial office development would meet the demands of growing businesses and provide much needed back-office space for firms that were relocating outside the five boroughs.^{1,2}

Before 2001, Long Island City was viewed by many as a gritty, undesirable place lacking in adequate infrastructure.³ Commercial development experienced several false starts. While the completion of Citigroup's One Court Square in 1990 was projected to usher in a new era of growth, the supposed building boom languished for the better part of two decades. Within the last ten years, however, changing residential market forces have taken hold, catalyzing unrelenting acceleration of luxury residential development.⁴

Downtown Brooklyn was hardly a hub of activity in 2004. Prior revitalization efforts enjoyed some initial success due largely to the development of the MetroTech Center in

1991, which included nearly 3.4 million square feet (sf) of corporate offices and 3.5 acres of privately owned public space. However, similar to the development trajectory of Long Island City, the initial success slowed to a virtual halt during the recession of the early 1990s, which sharply reduced the financial sector's demand for office space.⁵ Through the Downtown Brooklyn Development (Downtown Brooklyn Rezoning), the New York City Economic Development Corporation (EDC) sought to foster commercial growth, focusing specifically on office buildings and a relatively minor amount of residential development. This wave of construction has continued unabated, transforming Downtown Brooklyn into a neighborhood dominated by private market, luxury residential and mixed-use towers.

What is CEQR?

CEQR is the process by which potential adverse environmental effects of discretionary land use actions under consideration by the City Planning Commission (CPC), or other authorized City agencies, are identified and evaluated for their significance. It is designed to allow decision makers to systematically balance social, economic, and environmental factors early in the planning process and require project modification as needed to avoid adverse impacts.⁶

For City-sponsored rezonings, like the ones we will study in this report, the New York City Department of City Planning (DCP) typically serves as the project lead agency facilitating the environmental review process. The overarching document used in CEQR evaluations is the Environmental Impact Statement (EIS). EISs are usually prepared by planning consultants hired by the City.

¹ NYC Department of City Planning, *Long Island City Zoning Changes and Related Actions FEIS* (May 2001).

² NYC Office of the Deputy Mayor for Economic Development and Rebuilding, *Downtown Brooklyn Rezoning FEIS Development Final EIS* (April 2004).

³ Michael Stoler, "The Remaking of Gritty Long Island City" (2005).

⁴ Carl Swanson, "Life in Long Island City, the Country's Fastest-Growing Neighborhood" (2017).

⁵ NYU Wagner Rudin Center, *Downtown Rising: How Brooklyn Became a Model for Urban Redevelopment* (2016).

⁶ NYS Department of Environmental Conservation, Title 6 of the New York Codes, Rules, and Regulations of the State of New York (Accessed: October 18, 2018).

EISs are substantive, technical documents that allow decision makers to review the potential impacts of a project and weigh the merits of identified alternatives. An EIS must include a clear description of the project and all of the various approvals that it requires. In addition, the purpose and need of the project must be stated, framing how it meets these goals and responds to public policies.

EISs come in two forms. Most of the time, a site- or project-specific EIS is used for projects requiring height or bulk waivers, or for actions that apply to small areas such as a single block, or for multi-block rezonings. In cases in which actions have a wider application, or when a number of separate actions are expected to occur, Generic EISs (GEISs) can be used. GEISs help identify and broadly analyze the cumulative impacts of several actions or a combination of impacts from one action. The lead agency determines whether a site-specific EIS or a GEIS is used.

The *CEQR Technical Manual*, published by the Mayor's Office of Environmental Coordination (MOEC), lays out the environmental topics and areas to be evaluated, methodologies for the various analyses, and other required project information.⁷ The environmental categories include land use, traffic, historic resources, air quality, noise, socioeconomics, open space, schools, and shadows. When significant adverse impacts are identified, mitigation measures are proposed.

The Reasonable Worst Case Development Scenario (RWCDs) is the standard analytic framework for CEQR evaluations. It represents the incremental difference between the predicted future in the absence of the proposed action (No-Action) and the predicted future with the discretionary action (With Action). The RWCDs considers future conditions with the highest level of development anticipated and the worst environmental consequences from a range of reasonable and likely development possibilities. Theoretically, the RWCDs is designed to ensure that regardless of the future development

scenario, the impacts will be no worse than those evaluated.

Additional information pertaining to environmental review legislative background and CEQR evaluation methodology including soft site analysis, criteria for determining build years, and other areas related to this study are included in Appendix A.

Introduction

This section explores the CEQR Final Environmental Impact Statements (FEISs) for the Long Island City and Downtown Brooklyn rezonings based on the stated purpose, need, and descriptions of each; the overall projected development; the environmental impacts that were evaluated; and the development alternatives and mitigation measures that were presented.

Long Island City Rezoning Environmental Review

DCP's proposal to rezone Long Island City was outlined in its 1993 report *Long Island City: A Framework for Development (A Framework for Development)*, which sought to create a 24-hour, pedestrian-oriented, mixed-use and office district between Queens Plaza and Court Square. Since the middle of the 19th century, Long Island City had been defined by its manufacturing use and transportation connections to Manhattan. Prior to the rezoning, Long Island City had retained its industrial character, consisting largely of factories, warehouses and art studios, with some pockets of low-scale, residential use. The City planned for the transformation of Long Island City in the late 1980s and early 1990s, when zoning changes and new investments resulted in the construction of the 1.25 million-sf Citigroup office building in Court Square, and the approximately 725,000-sf, 522-unit Citylights Building along the East River waterfront.

The environmental review process was led by DCP. The scoping process began in 2000, and the *Long Island City Zoning Changes and Related Actions Final Environmental*

⁷ NYC Mayor's Office of Environmental Coordination, *2014 CEQR Technical Manual* (2014).



Figure 1: Rezoning and Study Areas, Long Island City

Impact Statement (Long Island City Rezoning FEIS) was issued on May 11, 2001. Many non-profits, including the Center for an Urban Future and the Pratt Center for Community Development, trade associations, and LIC-based businesses provided testimony before the CPC, expressing concern about the displacement of industrial businesses. The New York City Council approved the rezoning on July 26, 2001.

Long Island City Rezoning FEIS

The stated rationale for the rezoning in the FEIS was the changing economy of New York City and the United States at large. The decline in manufacturing coupled with growing demand for corporate office space placed pressure on low-density industrial neighborhoods, like Long Island City, to be redeveloped as higher-density commercial hubs that could provide needed office space.

Project Description

A *Framework for Development* recommended that areas of Long Island City farther from public transit remain industrial, while those between transit-rich Court Square and Queens Plaza be rezoned to allow high-density, mixed-use development. The rezoning would initiate the creation of a new CBD and would maintain New York's role as a premiere business center, curtailing office relocation to suburban areas.

Rezoning Project Area

The Long Island City Rezoning proposal involved zoning map and text amendments, as well as other related actions that would affect 39 blocks between 23rd Street, 41st Avenue, Northern Boulevard, and Sunnyside Yards (Figure 1). This area is at the convergence of eight subway lines, a Long Island Rail Road station, and multiple bus routes. It also is

accessible to the Long Island Expressway and Queensboro Bridge.

The Rezoning included the following primary actions:

- Created the Special Long Island City Mixed Use District (LIC District) and established the 34-block Queens Plaza Subdistrict, the three-block Court Square Subdistrict, and Hunters Point Subdistrict within it;⁸
- Rezoned 34 blocks in the LIC District from M1-4, M1-5, and R7A/C2-5 to M1-5/R7-3, M1-5/R9, and M1-6/R10;
- Established special provisions for use, bulk (including two Special Permits for bulk modifications), parking and loading, mandatory sidewalk widening, and other urban design requirements;⁹
- Eliminated the special use provisions in the Court Square Subdistrict, thereby permitting all uses allowed under C5-3 Districts, including residential uses;
- Demapped West Street to allow up 72,000 sf of additional development; and
- Disposed of the City-owned Queens Plaza Municipal Garage.

The rezoning was designed to reinforce the area's historic residential and industrial character. The LIC District allowed new mixed-use development and facilitated commercial development within a compact, pedestrian-oriented precinct anchored by three subway stations.

Study Area

The FEIS also considered the impacts of the rezoning on a larger, quarter-mile radius Study Area (Figure 1). The Study Area was further divided into six subareas, each defined by unique land use and zoning characteristics: Dutch Kills, Queensbridge, Long Island City West, Hunters

⁸ The Hunters Point Subdistrict, previously the Special Hunters Point Mixed Use District, covers much of the Hunters Point neighborhood. Although it was added to the LIC District under the rezoning, the Hunters Point Subdistrict was not actually rezoned until 2004, under a separate action. The Queens Plaza Subdistrict was further divided into four subareas: Area A-1 (Queens Plaza), Area A-2 (North of Court Square Subdistrict), Area B (Queens Plaza West/Jackson Avenue North), and Area C (41st Avenue, Hunter Street, South of Thomsom Avenue), each having different allowable restrictions for bulk and height.

⁹ One of the Special Permit provisions required CPC approval pursuant to Section 117-56 of the New York City Zoning Resolution and would apply to zoning lots of at least 50,000 sf on three blocks (86, 72 and 403) in the Queens Plaza Subdistrict. The Special Permit would allow an additional 3.0 FAR of development under the condition that all open spaces on the site would be publicly accessible, and one open space would be a minimum of 20,000 sf. In total, the Special Permit would allow the construction of a 977,248-sf primarily office building.

Point, Sunnyside Yards, and Queens Boulevard. The zoning districts in the Study Area did not change under the rezoning.

Zoning

Prior to the rezoning, permitted land uses included light manufacturing, office, most retail uses, and community facilities by Special Permit. With the rezoning, residential and all retail uses were permitted, and community facilities were allowed as-of-right. The rezoning offered greater density in areas closest to the Court Square and Queens Plaza subway stations and less density on peripheral blocks. The Court Square Subdistrict maintained its underlying commercial zoning district (C5-3), but residential, retail, and commercial uses were allowed, as were community facilities.

The four subareas of the Queens Plaza Subdistrict, previously zoned as manufacturing districts (M-1) with a small section zoned for mixed-use (R7A/C2-5), were rezoned to manufacturing (M1-5 and M1-6) and residential (R9 and R10) with increased FARs ranging from 5.0 to 12.0 (Figure 2).¹⁰

Land Use

The FEIS stated that land use changes in the Study Area would be effectively limited by the market and other factors, and that the rezoning would result in a “much more intensely developed area characterized by uses that lean more heavily toward office and retail.” Under the rezoning, office uses would increase dramatically and would ultimately define the area.

In addition to the approximately 3.9 million sf of new office space expected, the new offices would “fuel the redevelopment

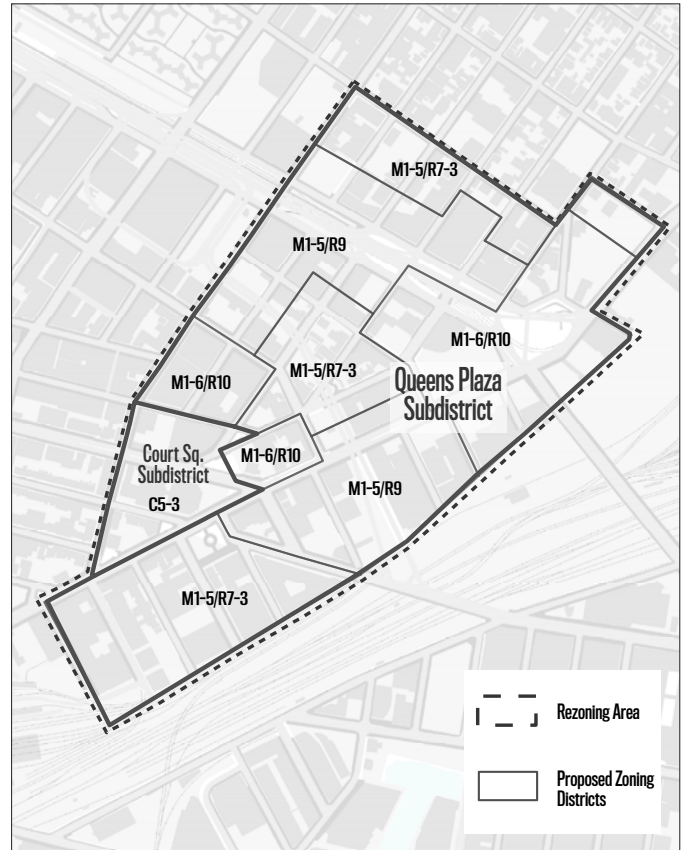


Figure 2: Proposed Zoning Map, Long Island City

of existing retail spaces and spur the upgrading of some 250,000 sf of existing office spaces.”¹¹

Reasonable Worst Case Development Scenario

Of the 5.7 million sf of projected new development, the rezoning was expected to add significant office space and 300,000 sf of residential development (Table 1).¹² The rezoning also included 600,000 sf of space in existing buildings that would be upgraded to office use. However, these sites were not evaluated under the RWCDs (shown in orange in Figure 4).¹³

¹⁰ At the time of the rezoning, the City had recently adopted (1997) a Special Mixed Use District (MX District), which was mapped throughout the city to enhance neighborhoods with mixed residential and industrial uses in close proximity and expand opportunities for new mixed use communities. Use provisions of the MX District were applied to the Queens Plaza Subdistrict and included allowing residential uses in the same buildings as manufacturing uses and prohibiting non-residential uses on floors above residential uses.

¹¹ See note 1.

¹² The RWCDs included a 977,248-sf primarily office building with ground floor retail space (Block 86, Lots 1 and 22, and Block 72, Lot 80) in the Queens Plaza Subdistrict that would be allowed through a CPC Special Permit as well as an additional 47,768 sf of office space. The original application was modified based on concerns raised by the Queens Borough President’s Office about high density in the Queens Plaza area, as outlined in the Queens Subdistrict Zoning Alternative.

¹³ Although the *CEQR Technical Manual* did not formalize the RWCDs as the analytical framework for evaluations until 2010, the FEIS used the term reasonable worst case development scenario. However, it did not differentiate between Projected and Potential Development sites.

The impacts of the projected development under the RWCDs were evaluated under a 10-year build period.¹⁴

Table 1: Long Island City Rezoning RWCDs

Use	Projected Development
Office	4,800,000 sf
Residential	300,000 sf (300 dwelling units)
Retail	200,000 sf
Total	5,700,000 sf

Source: Long Island City Zoning Changes and Related Actions FEIS

Projected Development Sites

The 12 Projected Development sites evaluated included six new residential developments, five new office buildings, and one new site with a mix of residential and institutional uses (Figure 4). Seven existing buildings were identified as likely to undergo upgrades or conversions under the rezoning, six of which were for office upgrades and one for a residential conversion (Appendix B, Table 1).

No-Action Development Sites

There were several No-Action development sites that would be built by 2010 independent of the rezoning. Two of these developments—an office space upgrade of the Brewster Building at 27-10 Queens Plaza North, and a new office building at 24-19 Jackson Avenue in the Court Square Subarea—were within the Rezoning Project Area. Of the other four, three were in the Queens Boulevard Subarea and one was in the Long Island City West Subarea (Figure 3).

The FEIS identified the following adverse impacts:

- Open Space - Under the rezoning, the ratio of passive open space within the quarter-mile Study Area was expected to decrease by approximately 40 percent, to 0.05 acres per 1,000 workers. Under the rezoning, the



Figure 3: No-Action Development Sites, Long Island City

Project Area would reach only one-third of the City’s goal of 0.15 acres of open space per 1,000 workers. No mitigation measures were proposed. The evaluation did not determine there would be adverse open space impacts with regard to residents of the area.

- Cultural Resources - Part of West Street and Office Site B on Block 264 was believed to potentially contain sensitive remains of a cemetery site belonging to the Van Alst family.
- Transportation (Traffic/Parking and Transit/Pedestrian) - Significant traffic impacts were expected on Jackson Avenue, approaches to the Queensboro Bridge, Northern Boulevard, Van Dam Street, Hunters Point Avenue, and Thomson Avenue, and at more than 30 nearby intersections. According to the FEIS, adverse impacts

¹⁴ The FEIS stated that CEQR assessments of large area-wide rezoning proposals not associated with specific development projects assume a 10-year build period. According to the FEIS, the 10-year time frame is a period that can be reasonably predicted without engaging in potential unrealistic speculation.

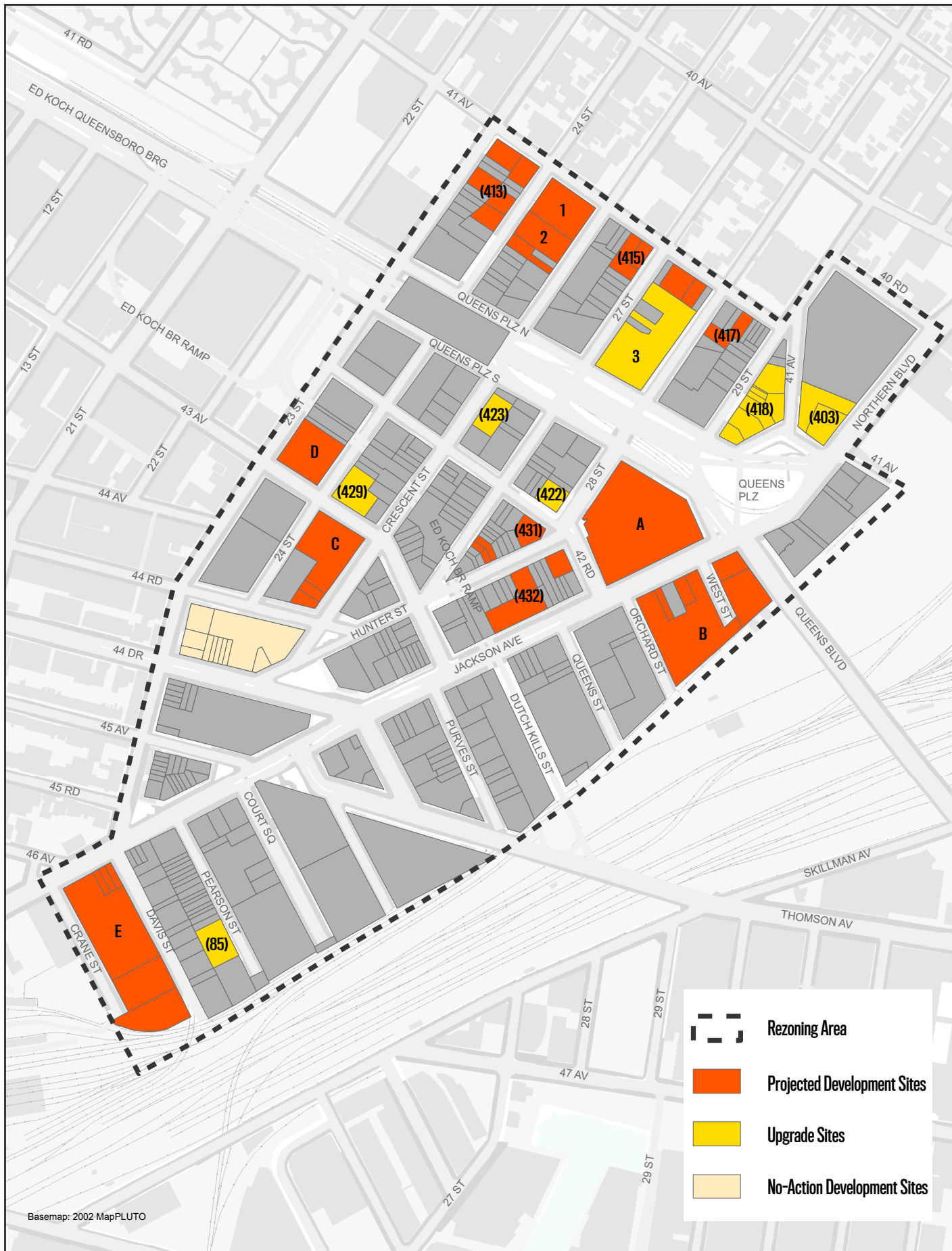


Figure 4: Projected, Upgrade, and No-Action Sites, Long Island City

at four intersections (Queens Plaza North at Crescent Street, JFK Commuter Plaza, and Crescent Street at 41st Avenue) could not be mitigated by standard traffic engineering measures due to the level of congestion prevalent in this area and would remain unmitigated.

- Transit - Significant pedestrian access impacts were expected on the E, F, N, and 7 trains, as well as several staircases at the Queensboro Plaza station. Pedestrians were also expected to face significant impacts at crosswalks of the intersections at 27th and 28th Streets and Queens Plaza North and South. The Q102 bus route was expected to operate over capacity during afternoon hours.
- Air Quality - Of the five intersection sites tested, two prominent locations, Queens Boulevard and Jackson Avenue and Jackson Avenue and 42nd Road, were expected to have significant adverse mobile-source air quality impacts.

The FEIS identified the following mitigation measures:

- Traffic and Parking - The FEIS proposed the adoption of a package of standard traffic engineering improvements and a parking strategy plan to mitigate a majority of adverse traffic impacts. These standard improvements included adding traffic lanes, curb parking prohibitions, signal phasing, and timing changes. Even with the prescribed measures in place, traffic impacts would remain unmitigated at four key intersections in the Project Area, resulting in unavoidable adverse impacts.¹⁵
- Open Space - Due to the large number of workers expected under the rezoning, the ratio of passive open space for the quarter-mile Study Area was expected to decrease by 40 percent to a mere 0.01 acres per 1,000 workers. The citywide average for workers is 0.15 acres of passive open space per 1,000 non-residential users. The FEIS stated that DCP and the Parks Department

considered upgrading two existing open spaces in the vicinity, but concluded that upgrades would not be feasible.

The FEIS identified the following four alternatives:

- No-Action Alternative - This alternative considered development in the Project Area by the 2010 build year without the rezoning. It functioned as the baseline by which the incremental difference of the impacts under the rezoning were measured.
- Lesser Density Alternative - This alternative is nearly identical to the proposed rezoning with the exception that the permitted FAR would be reduced by 25 percent across the district. This would have resulted in 3.7 million sf of new commercial development, 135,000 sf of institutional use, and 300 residential units. This alternative was not advanced because it would fail to create the building typology necessary for a CBD.
- Alternative with Accessory Parking - This alternative required that the rezoning include an accessory parking provision which would effectively add 800 parking spaces in the Project Area. This alternative was not advanced because it would not help mitigate traffic impacts.
- Queens Plaza Subdistrict Zoning Alternative - This alternative was based on concerns raised by the Queens Borough President's Office about the high density of development in Queens Plaza. It involved FAR changes that reduced density in some areas and increased density in others. The alternative resulted in an additional 600,000 sf of office development. It also included 977,248 sf of primary office space that would be permitted through a Special Permit. The DCP proposed that the rezoning be modified to reflect this alternative. Therefore, this alternative actually became the RWCDs.¹⁶

¹⁵ The FEIS also referred to the creation of the Long Island City Mitigation Implementation Task Force, which was to include representatives from New York City Department of Transportation (NYCDOT), DCP, and MTA/NYCT, and would be responsible for a traffic monitoring plan. According to the FEIS, NYCDOT agreed to fund and implement all Task Force studies and recommendations on traffic mitigation measures. The FEIS referenced a letter of agreement. However, the only letter addressing the Task Force was from the New York City Police Department (May 9, 2001). MAS research has found no further evidence of the Task Force.

¹⁶ The alternative increased the permitted FAR of two blocks from 8.0 to 12.0, reduced the FAR on one block from 12.0 to 8.0, and resulted in a net increase in office development of 660,000 sf. Also under this alternative, the Special Permit Site (Block 86, Lots 1 and 22 and Block 72, Lot 80) would

Downtown Brooklyn Rezoning FEIS

The Downtown Brooklyn Rezoning sought to foster commercial, academic, cultural, and residential development to strengthen the neighborhood's role as New York's third-largest CBD. The redevelopment of Downtown Brooklyn had been a decades-long initiative and was executed through various government planning actions. The neighborhood had been substantially shaped by the provisions of New York's Urban Renewal Law, which allows the City to acquire and dispose of property for redevelopment in accordance with the requirements of an Urban Renewal Plan (URP). Downtown Brooklyn has been included in four URPs.¹⁷

Another major government-led planning effort was the establishment of the Special Downtown Brooklyn District (SDBD) in 2001. The SDBD was designed to encourage commercial development, preserve the pedestrian orientation of ground-floor uses, and provide new public amenities and improved streetscaping.¹⁸ The *Downtown Brooklyn Development: Final Environmental Impact Statement* (Downtown Brooklyn Rezoning FEIS) was completed in April 2004. The City Council approved the rezoning on June 28, 2004.

Project Description

Similar to Long Island City, the Downtown Brooklyn Rezoning sought to foster the development of high-density office buildings to attract and retain businesses that might otherwise relocate to less expensive suburban locations. Prior to the rezoning, Downtown Brooklyn was an assortment of land uses, including the Fulton Mall retail corridor, several universities, and multiple parking facilities, as well as municipal and court buildings. The rationale for the rezoning focused on comprehensive planning that encouraged a mix

of uses to generate economic development and connect Downtown Brooklyn to the surrounding neighborhoods. The FEIS evaluated a 10-year build period that considered impacts from the projected development until 2013.

Rezoning Project Area

The Downtown Brooklyn Rezoning affected 33 blocks in the SDBD, roughly between Tillary Street, Adams Street, Schermerhorn Street, and Ashland Place (Figure 5). The FEIS described the strategic location of the neighborhood, noting Downtown Brooklyn's proximity to Wall Street and access to multiple public transit modes (15 subway lines, multiple bus routes, and LIRR commuter rail access at Atlantic Terminal).

The FEIS addressed the impacts of the rezoning on a larger Study Area comprising properties within a quarter-mile radius from the Project Area (Figure 5). The Study Area covered the low-density residential neighborhoods of Brooklyn Heights, Fort Greene, and Boerum Hill, as well as the Brooklyn Civic Center, Atlantic Terminal, and the approaches of the Brooklyn and Manhattan Bridges.

The Rezoning included the following primary actions:

- Increased FAR on portions of the SDBD that would allow greater commercial and residential density, as well as commercial and residential uses that were not previously permitted;
- Expanded the boundary of the SDBD;
- Created special height and setback regulations and other massing controls to allow higher density commercial districts and new requirements for sidewalk widening, ground-floor retail continuity, streetwall continuity, street tree plantings, and other changes;

allow an additional 3.0 FAR provided that a publicly accessible open space of at least 20,000 sf would be provided that met the recreational needs of the community. The building that would be permitted under the Special Permit would be reduced from 1,025,016 sf to 977,248 sf and would have less open space (34,911 sf compared to 45,000 sf).

¹⁷ The URPs include: Atlantic Terminal URP (1968), Brooklyn Center URP (1970), Schermerhorn-Pacific URP (1976), and MetroTech URP (1986). The MetroTech URP led to the construction of MetroTech Center, an urban office park on the northern side of the rezoning area consisting of several high-rise office buildings occupied by City agencies, utility companies, banks, and more. See <https://www1.nyc.gov/site/hpd/community/urban-renewal-areas.page>.

¹⁸ The Atlantic Yards Project (Barclays Center) was approved just after the release of the *Downtown Brooklyn Development Draft Environmental Impact Statement* (DEIS). Although not located within the Downtown Brooklyn rezoning area, the project required the completion of a *Draft Supplemental Environmental Statement* (DSEIS) that incorporated the arena project in the future baseline conditions.



Figure 5: Rezoning, Project, and Study Areas, Downtown Brooklyn

- Facilitated the demapping of portions of four streets;
- Amended the area's URPs;
- Disposed of City-owned property;
- Selected a site for a visual and performing arts public library; and
- Allowed four below-grade parking facilities through a Special Permit.

Zoning

Prior to the rezoning, the majority of the Project Area was zoned for commercial use (C6-1 with a maximum 6.0 FAR and C5-4 with a maximum FAR of 10.0) with manufacturing (M1-1) and mixed residential-commercial zones interspersed throughout. Under the rezoning, the majority of the Project Area was upzoned to C6-4 and C6-4.5, which increased the allowable FAR to 10.0 and 12.0, respectively (Figure 6). The zoning change from C6-1 to C6-4 was particularly important since it increased the residential FAR from 3.44 to 10.0, which allowed the development of apartment buildings at the same density as office buildings.

Land Use

The FEIS acknowledged that that the rezoning would lead to changes in the Project Area's land use patterns. The area would continue to be defined by a mix of office, retail, and residential uses, but the density of these uses would increase. Furthermore, the rezoning would result in a much more intensely developed downtown commercial-core area with transitional zones to neighboring residential areas. Office space would dramatically increase, with an additional 4.6 million sf anticipated by 2013. The development was expected to create inexpensive floor plates large enough to accommodate businesses "for ready to go space for consolidation of office uses or back office space."²



Figure 6: Proposed Zoning Map, Downtown Brooklyn

Reasonable Worst Case Development Scenario

A maximum of 6.7 million sf of new development was projected by 2013 (Table 2). The FEIS made a distinction between Projected and Potential Development sites. It identified 12 Projected Development sites in the RWCDs that would likely be developed by 2013 (Appendix B, Table 2). These included six primarily office buildings, five residential/retail mixed-use developments, and one library and theater mixed building (Figure 8).¹⁹ The FEIS also identified 18 Potential Development sites, but these were not expected to be developed by 2013. Therefore, these sites were only discussed qualitatively and were not included or evaluated under the RWCDs.²

¹⁹ Had the 19 potential development sites identified in the Downtown Brooklyn Rezoning FEIS been included in the RWCDs, an additional 6.9 million sf of development, including 2.5 million sf of residential space (2,535 dwelling units), two million sf of office space, and 1.3 million sf community facility space, would have been evaluated in the FEIS.

Table 2: Downtown Brooklyn Rezoning RWCDs

Use	Projected Development
Office	4,600,000 sf
Residential	979,000 sf (including 979 dwelling units)
Retail	844,000 sf
Total	6,700,000 sf

Source: Downtown Brooklyn Development FEIS

Projected Development Sites

The FEIS included various bulk configurations showing the location, form, and size of development on Projected Development sites. The largest ensemble, which bordered the proposed Willoughby Square Park, included Sites O, P, and Q. All three buildings were projected as commercial towers with over 2.7 million sf of new office space. Willoughby Square Park was planned as a 1.15-acre park between Albee Square West and Duffield Street. It was to include a below-grade, parking garage with about 700 spaces directly underneath the park. Willoughby Square Park was expected to be the centerpiece of the new commercial development and a necessary addition to the area, which lacked adequate public park space and public parking. However, as of October 2018, neither Willoughby Square Park nor the underground parking facility have been constructed.

No-Action Development Sites

The FEIS listed 32 No-Action development sites that would be developed by 2013, independent of the rezoning (Figure 7). Seven of these projects were within the Project Area, including a new courthouse at 330 Jay Street and a hotel expansion at 339 Adams Street. Another 17 No-Action projects were identified within the larger Study Area.

The FEIS identified the following adverse impacts:

- **Historic Resources** - Three significant sites were expected to be affected by the proposed development: The Jacobs Building at Polytechnic University, the Board of Education Building at 131 Livingston Street,



Figure 7: No-Action Development Sites, Downtown Brooklyn

and 233 Duffield Street. In addition, 31 lots, including 21 on projected development sites, were considered potentially sensitive for 19th century archaeological resources based on possible association with the Underground Railroad.

- **Transportation** - Significant adverse traffic impacts were expected at 29 signalized intersections in the Project Area, primarily along Atlantic Avenue and Flatbush Avenue.
- **Transit and Pedestrians** - Significant adverse transit impacts were expected at two stairways at the Jay Street-Borough Hall Station (now Jay Street/MetroTech). Capacity impacts were expected for the B25 bus route in the evening rush hour period in the eastbound direction. Adverse pedestrian impacts were identified at one crosswalk on Jay Street near Willoughby Street, and one crosswalk on Albee Square West/Gold Street at Willoughby Street.



Figure 8: Projected, Potential, and No-Action Sites, Downtown Brooklyn

- Noise - Significant adverse noise impacts were predicted at testing locations on Duffield Street between Willoughby and Fulton Streets. It was also expected that noise levels at the proposed Willoughby Square Park would exceed recommended guidelines for parks.

The FEIS identified the following mitigation measures:

- Traffic and Parking - The FEIS described how 18 of the 29 signalized intersections would be mitigated by various standard traffic control measures. However, unmitigated traffic impacts would remain at 11 intersections, primarily on Atlantic Avenue and Flatbush Avenue, during one or more peak periods.
- Archaeological Resources - The NYC Landmarks Preservation Commission required Individual Stage 1A Archaeological Assessments for City-owned properties or those slated to be acquired by the City to determine the presence of archaeological resources possibly associated with the Underground Railroad. No such mechanisms were identified for the remaining projected development sites. Consequently, impacts on archaeological resources on three projected/potential lots were considered unavoidable.

The FEIS evaluated the following four alternatives:

- No-Action Alternative - This alternative represented future conditions in the absence of the rezoning, including 10 No-Action developments. It was not advanced because it would fail to fulfill the goals of the rezoning.
- No Unmitigated Impacts Alternative - This alternative proposed a 95 percent reduction in the floor area of projected sites, resulting in 335,000 sf of new development. The low volume of new construction was deemed unacceptable because it would not meet the goals of economic growth in the area.²⁰
- Modified BCURP Alternative - This alternative considered omitting the proposed nine-block extension of the Brooklyn Center Urban Renewal Plan (BCURP) area, which would involve five development sites

and reduce overall development by 43 percent. The alternative was deemed infeasible because development would be hindered by floor plates that could not accommodate modern office needs, and because it precluded Willoughby Square Park.

- BQE Ramp Alternative - This alternative attempted to resolve unmitigated traffic impacts and involved the construction of a new exit ramp from the Brooklyn-Queens Expressway (BQE) to southbound Ashland Place. This alternative was deemed infeasible due to unmitigated adverse traffic impacts at nine intersections.

²⁰ See note 2.



// 44th Drive and Hunter Street, Long Island City



Basemap: 2002 MapPLUTO

Figure 9: Comparison of Projected and Actual Development Sites, Long Island City

Part II: Comparative Analysis of Projected and Actual Development

Introduction

This section presents a comparative analysis of the development projected under the Long Island City and Downtown Brooklyn rezonings with what was actually developed. The analysis also considers the extent and type of development that occurred in relation to the planned build years and beyond, exploring how the growth affected land use patterns and density. This section also discusses other factors not covered under CEQR that have affected development in these neighborhoods.

Comparative Analysis of the Long Island City Rezoning

The analysis examines three primary types of development sites in the Long Island City Rezoning Area: Projected Development Sites, Building Upgrade Sites, and unidentified development sites. Projected Development Sites are the specific sites anticipated for development under the rezoning that were included in the RWCDs. Building Upgrade Sites are locations where existing buildings were expected to be renovated but were not considered part of the RWCDs and were not evaluated. Unidentified development sites are lots in the Rezoning Area that have been developed or planned to be developed but were not addressed or referenced in the FEIS.²³ All developments are shown in Figure 9 with Projected Development Sites shaded in orange.

Actual Development on Projected Development Sites

Of the 12 Projected Development Sites, only three were developed by the 2010 build year.²¹ However, since 2011, 12 additional buildings have been completed on seven of the Projected Development Sites and four more developments are either under construction or planned for construction (Appendix B, Table 3).²⁴

Building Upgrade and Unidentified Sites

All Building Upgrade and unidentified development sites in the Long Island City Rezoning Area are shown in Appendix B, Table 4. Four new buildings have been completed on three of the seven Building Upgrade sites identified in the Rezoning Area. Three of these developments were constructed after 2010. Two future developments are planned on sites that were intended to be upgraded rather than demolished under the rezoning. These include the 63-story, 781,146-sf residential tower proposed by the Durst Organization at 29-55 Northern Boulevard, adjacent to the landmark Clock Tower building, and the 221,266-sf residential development at 42-26 28th Street.

Sixty-one unidentified development sites in the Rezoning Area have either been developed or are planned to be developed. Nine of these sites, including a mix of residential, office and other uses, were developed by 2010. Since 2011, an additional 27 unidentified sites have been developed. Several of these are quite large in scale, and include the 54-story, 710,860-sf residential development at 43-22 Queens Street.²²

As of 2018, 25 unidentified development sites are slated for, or are under, construction. These developments range in size from the 3,092-sf building at 43-16 24th Street, to the neighboring 934,864-sf, 66-story residential tower at 43-30 24th Street, which is currently under construction and will add almost 1,000 new residential units to the area.

Projected and Current Land Uses

Not surprisingly, land uses have changed dramatically since the Long Island City Rezoning. In 2002, the Rezoning Area was dominated by industrial/manufacturing and transportation/utility uses. The area is now dominated by various types of residential uses (Figure 10). What is more telling is the impact of the rezoning on use by floor area.

²³ These sites include Site 3, Office Site A, and the Jackson Avenue Institutional Use Site and include a total of 75,670 sf of development.

²² The development includes 790 residential units.

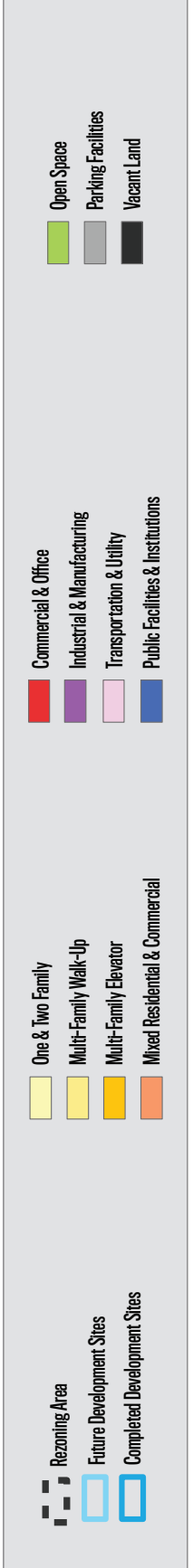


Figure 10: Land Use, Long Island City, 2002 and 2018

Previously, only two percent of the floor area in the Rezoning Area was residential. By 2010, residential floor area had increased to 13 percent. Following citywide trends, factory and industrial space declined precipitously over this time period. By 2018, new development pushed the residential floor area to 60 percent of all built space in the Rezoning Area (Figure 11).

Development in Rezoning Area over Time

As previously stated, the RWCDS was based on the completion of 12 Projected Development Sites, eight office upgrade projects, and one No-Action site by 2010 (Figure 12). The evaluation assumed that the rezoning would result in 5.7 million sf of new construction by that time. However, by 2010, only three Projected Development Sites had been developed. The largest of which was 42-01 28th Street, a 22-story, 543,946 sf office building occupied by the NYC Department of Health and Mental Hygiene.

After 2010, 12 new developments were constructed on six of the Projected Development Sites. These developments were a mix of residential and retail buildings, including the 1,870-unit, three-tower luxury complex at Jackson Park (28-16 Jackson Avenue), completed in 2018. In total, development on Projected Development Sites added 3.7 million sf of floor area to the neighborhood (Figure 13). The area also saw a dramatic decrease in commercial space, especially between 2001 and 2010. More than 600,000 sf of commercial space



Figure 12: Development Sites by Build Year, Long Island City

was demolished to make way for the residential development that would be constructed in the ensuing years.

In addition to changes on Projected Development sites shown in Figure 13, approximately 5.4 million sf of new development occurred on the four Upgrade Sites and the 36 unidentified

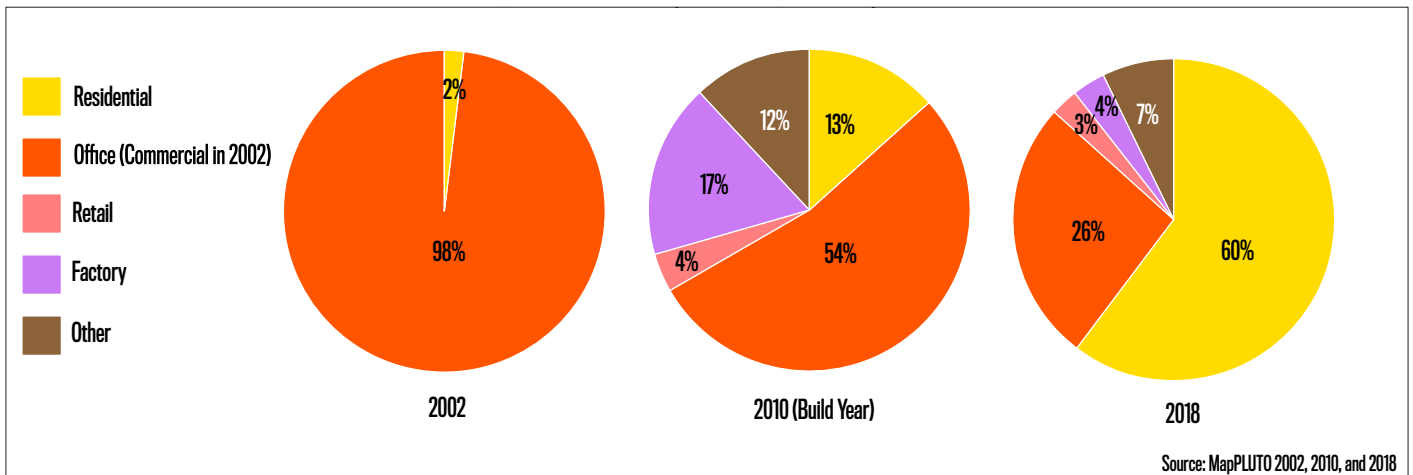


Figure 11: Floor Area by Use, Long Island City

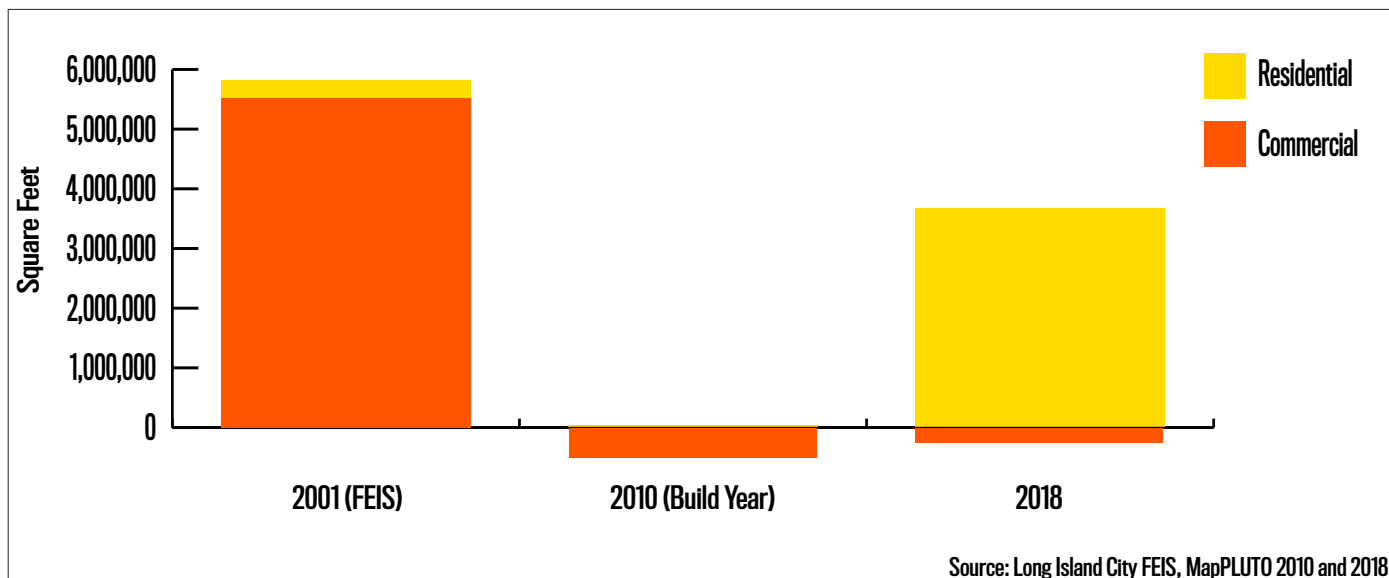


Figure 13: Projected vs Actual Development, Long Island City

development sites by 2018. Moreover, 5.7 million sf of development is planned throughout the Rezoning Area.

Comparative Analysis of the Downtown Brooklyn Rezoning

The analysis examines three types of development sites in the Downtown Brooklyn Rezoning Area: Projected Development Sites, Potential Development Sites, and unidentified development sites. Projected Development Sites are specific sites anticipated for development under the rezoning that were included in the RWCDs. Potential Development Sites were identified but were not considered for development by the 2013 build year. Projected and Potential Development Sites are shown in Figure 8. Unidentified development sites are lots in the Rezoning Area that have been developed but were not identified or evaluated in the FEIS.

Actual Development on Projected Development Sites

Five of the 12 Projected Development sites were either developed or partly developed by the 2013 build year (Appendix B, Table 5). This includes seven new buildings on five sites with a total area of over one million sf. By 2018, eight additional buildings, with a total area of over one million sf, had been constructed on the Projected Development

Sites. As of September 2018, four additional sites were under construction.

It was expected that approximately 6.5 million sf of development would occur on the 12 Projected Development by 2013. However, by that time, only seven buildings, totaling 600,000 sf, had been constructed on six of the sites. After 2013, eight additional new buildings, totaling 3.3 million sf, had been completed on seven Projected Development Sites (Figure 14). An additional four future developments, totaling 2.2 million sf, are currently planned. By 2013, more than 200,000 sf of commercial space had been demolished to make way for residential development.

Actual Development on Potential Development Sites

As mentioned previously, 18 Potential Development Sites were identified but not evaluated in the FEIS. These sites were estimated to result in a total of 6.9 million sf of development at some point after 2013. However, by that time, only three new buildings, amounting to more than one million sf, had been constructed. After 2013, six additional buildings totaling three million sf had been constructed. Three additional future developments, currently in the planning stage, will add another 1.5 million sf to the Rezoning Area (Appendix B, Table 6).²³

²³ This total includes the proposed 1.1 million sf mixed-use development at 80 Flatbush Avenue, which involved an additional rezoning and was approved

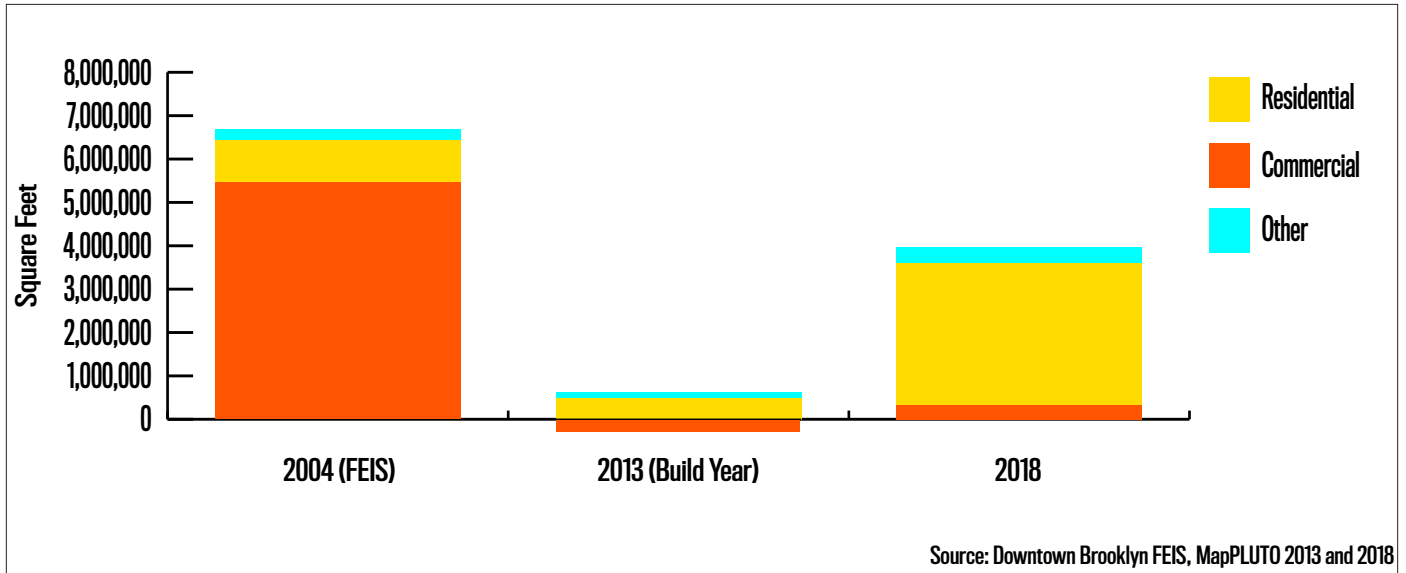


Figure 14: Projected vs Actual Development, Downtown Brooklyn

One potential development, 125 Flatbush Avenue Extension, was identified as a residential/retail building but was actually developed as a 13-story, 53,311-sf hotel and a 40-story residential tower. Figure 15 shows the completed and future development sites as of 2018.

Unidentified Development Sites

Approximately 1.5 million sf of development has occurred on unidentified development sites in the Rezoning Area. Of these, one building was constructed before 2013 and four after. One noteworthy development is at 111 Lawrence Street, known as The Brooklynier, which at 514 feet was Brooklyn’s tallest building from 2009 to 2013. Five buildings are currently slated for construction on these sites, including 9 Dekalb Avenue, which at a proposed height of 1,066 feet, is expected to be Brooklyn’s tallest building upon completion in 2020.

Projected and Current Land Uses

As was the case in Long Island City, the Downtown Brooklyn Rezoning dramatically changed land use in the neighborhood, but not in the way anticipated. Instead of the extensive expansion of office uses envisioned by the City, what occurred was an unprecedented surge in residential development.

A total of 4.6 million sf of office development, 844,000 sf of retail development, and 979,000 sf of residential development was projected by 2013. However, by that time, only 57,063 sf of office space and 488,654 sf of residential space had been constructed. At the same time, retail and commercial space had declined because most existing structures had been demolished to prepare sites for construction. By 2018, 3.3 million sf of residential development, 336,000 sf of retail use, and 11,800 sf of office space had been completed.

The rezoning brought about major land use changes. In 2004, the Downtown Brooklyn Rezoning Area was dominated by commercial and public facility/institutional uses. By 2018, many of the commercial uses have been replaced with multifamily and mixed residential. As shown, Commercial & Office Space have decreased precipitously (Figure 16).

As with Long Island City, a more telling result of the Downtown Brooklyn Rezoning is the change in floor area by land use (Figure 17). Before the rezoning, 45 percent of floor area was office space; 18 percent was retail space; and only 3 percent was residential space. After the rezoning, the balance shifted dramatically towards residential. By 2013, 25 percent of

by the New York City Council in September 2018.



Figure 15: Comparison of Projected and Actual Development Sites, Downtown Brooklyn



Figure 16: Land Use, Downtown Brooklyn, 2004 and 2018

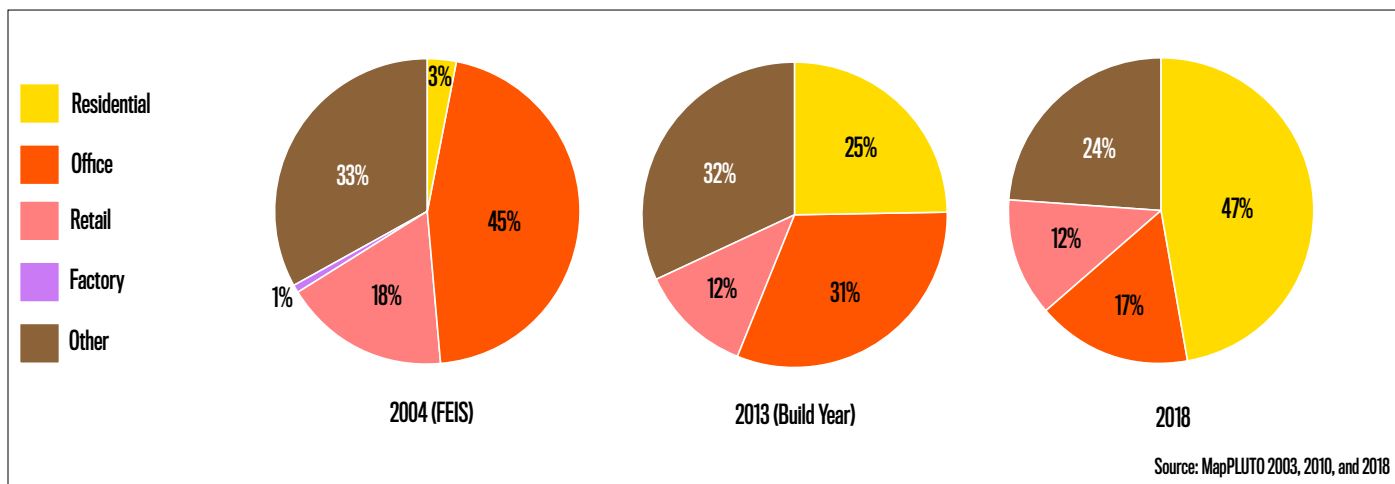


Figure 17: Floor Area by Use, Downtown Brooklyn

floor area was residential, 31 percent was office space, and 12 percent was retail. By 2018, 47 percent of floor area was residential, 17 percent was office space, and 12 percent was retail.

In 2018, retail and office uses now comprise 29 percent of the Rezoning Area. Only two new commercial and office buildings were completed after 2013, both of which are hotels. The area now has only one industrial/manufacturing site and three transportation/utility sites. There are currently 10 vacant sites, several of which are slated for future development.

Development in Rezoning Area over Time

The RWCDS for the Downtown Brooklyn Rezoning included 12 Projected Development Sites and seven No-Action sites to be completed by 2013. The FEIS also assumed that 6.6 million sf of new construction would occur on these sites during the build year timeframe (Figure 18). However, 15 new buildings (a total of 3.2 million sf) had been constructed on six of the Projected Development Sites by 2013.

Between 2014 and 2018, an additional 14 buildings with a total of 5.7 million sf had been constructed on the Projected Development Sites. DOB building permit applications have been filed for an additional 11 future buildings. Another two speculative projects are slated for development at some

point. When completed, these projects are expected to add more than 4.5 million sf of development.

As mentioned in Part I, one of the Projected Development Sites that has not been constructed is the proposed 1.15-acre Willoughby Square Park and associated below-grade, 700-car, automated public parking garage. These improvements were expected to be completed by 2013. Intended to be the centerpiece of the neighborhood, the status of the park and garage remain uncertain. The latest DOB application was disapproved in April 2018, and the developer has acknowledged that it has struggled to acquire funding.²⁴ The site is currently vacant after the former buildings, some of which included rent-stabilized apartments, were demolished beginning in 2009.

Factors That Affected Development

This section explores some of the factors that contributed to the extent and type of development that occurred in the Long Island City and Downtown Brooklyn Rezoning Areas.

Zoning Lot Mergers and Transfers of Development Rights

The transfer of development rights (TDR) is a mechanism commonly used by developers to increase building density and height. Typically accomplished through zoning lot mergers (ZLMs), these as-of-right actions do not require

²⁴ Zoe Rosenberg, "Long-awaited Downtown Brooklyn Park Faces Uncertain Fate," (March 27, 2018).



Figure 18: Development Sites by Build Year, Downtown Brooklyn

discretionary approvals and are therefore not subject to CEQR review. Through a ZLM, two or more independently owned adjacent lots can be merged into a single lot, and the unutilized floor area (known as development rights or air rights) from one parcel is then reallocated to the new parcel. This action allows for a larger building to be constructed than would be permitted prior to the merger.

ZLMs often have substantial effects on the location and scale of development. This is certainly the case with development in the aftermath of the Long Island City and Downtown Brooklyn rezonings.

Long Island City

Thirty-two completed or planned developments in the Long Island City Rezoning Area have used TDRs to facilitate additional development not included in the rezoning (Figure 19). The following developments are examples of how TDRs were applied to build larger, taller buildings than were projected:

- 42-12 28th Street - Development rights from two rezoned lots on Block 422 (bounded by 27th and 28th Streets, 42nd Road, and Queens Plaza South) were transferred to this site, despite neither lot having been identified as a Projected or Potential Development Site. The transfer facilitated the construction of the 58-story, 483,148-sf, 477-residential unit tower. This development was not evaluated in the project FEIS.
- 29-55 Northern Boulevard - The proposed development by the Durst Organization, which sits on the same block as the landmark Long Island City Clock Tower, will utilize a TDR to create a 710-foot-tall, 781,146-sf tower. The development rights will be transferred from nine rezoned lots, none of which were projected to be developed in the FEIS. Once constructed, this building will likely be the tallest in Queens.

Downtown Brooklyn

Twenty-one completed and planned development sites have utilized TDRs to facilitate development in the Downtown Brooklyn Rezoning Area (Figure 19).²⁵ The following developments are examples of how certain TDRs were applied:

- 343 Gold Street - This Potential Development Site was identified as a 255,000-sf, predominantly residential development. It was to include 230 dwelling units and 25,000 sf of retail space. However, through a ZLM combining parcels along Myrtle Avenue, the site was developed as a 42-story, 442,700-sf residential building with 631 dwelling units (Avalon Fort Greene).

²⁵ Seventy-six percent (80 out of the 105) of lots that were redeveloped or slated for future development in the Downtown Brooklyn Rezoning Area were 5,000 sf or smaller. Many of the redeveloped sites were facilitated by ZLMs. Nine of the buildings constructed by 2013 and five structures completed after 2013 involved the merger or reconfiguration of tax parcels. For example, the AVA DoBro building at 100 Willoughby Street, involved the merger of 11 lots. The FEIS recognized the feasibility and likelihood of zoning lot mergers and assemblages in the future development of the rezoning area. Six of the 12 Projected Development Sites used lot mergers to construct large-scale buildings. Similarly, 11 of the 18 Potential Development Sites used zoning lot mergers. In Long Island City 37 percent of the lots (80 out of 214) that were redeveloped or planned for development were smaller than 5,000 sf.



Completed Development Sites
Developments with Lot Mergers

Rezoning Area
Future Development Sites

Figure 19: Tax Lot Mergers, Long Island City and Downtown Brooklyn Rezoning

- 10 Nevins Street - The parcels along Nevins Street between Livingston and Fulton Street were rezoned but were not identified as Projected or Potential Development Sites. A ZLM linked four lots and allowed the development of a 27-story, 161,880-sf building with 184 luxury condominium units.
- 350 Livingston Street - The block bounded by Livingston Street, Schermerhorn Street, Nevins Street, and Flatbush Avenue contained seven parcels and was identified as a Potential Development Site. Five of the seven Projected Development Sites and two other tax lots were combined through a ZLM and allowed the construction of a 54-story, 662,532-sf residential building. In addition to being much larger than what was evaluated in the FEIS, the building fronts a low-density, residential side of the block, instead of the more appropriate, higher density Flatbush Avenue.

The additional development garnered through TDRs has had a major impact on the Long Island City and Downtown Brooklyn neighborhoods. A total of 63 developments will have used this mechanism to build larger and taller buildings than the zoning allowed.

Impact of the Great Recession

Because a majority of development facilitated by the rezonings occurred after the respective build years, this section examines whether the Great Recession of 2009-2012 affected the timing of development. As was the case throughout the United States, the Great Recession had a substantial impact on private development in New York City. The effects extended to the timing and scale of new construction.

Following a building boom between 2006 and 2008, tighter lending markets made it nearly impossible for developers to secure financing, bringing construction in the city to a near halt.²⁶ However, after a steep downswing in new construction

in 2009, the next three years saw a slow recovery that gradually led to renewed activity across the city by 2013, when the number of building permits issued picked up significantly (Figure 20).

Using residential building permits as an indicator, Brooklyn and Queens were the first to regain strength, beginning in 2010 (Figure 20). Neighborhood-level differences notwithstanding, Brooklyn has experienced the most marked recovery among the five boroughs since 2012.²⁷

The effects of the Great Recession on individual development sites in the Long Island City and Downtown Brooklyn Rezoning Areas are difficult to pinpoint because a site-by-site financing assessment would be required. However, it is possible to examine the volume of construction over the years before, during, and after the recession to see how development may have been affected.

In both Rezoning Areas, development had not increased prior to the Great Recession, and in fact only started as the recession began. In the Long Island City Rezoning Area, several developments were built in the late 2000s, including eight buildings constructed between 2007 and 2010. A similar level of construction occurred in the Downtown Brooklyn Rezoning Area, with five buildings constructed from 2007 to 2010. Development never ceased completely during the recession and only accelerated as its effects on lending markets waned. By 2014 and 2015, both Rezoning Areas were in the midst of the residential development wave that continues today.

Although development never completely halted during the Great Recession, some construction projects in both Rezoning Areas slowed or stopped. A notable indicator of the effects of the recession on development was the increase in the number of stalled construction sites. In 2009, the DOB began recording its *Stalled Construction Sites* database, providing a list of citywide records indicating where and when

²⁶Christine Haughney, "Downturn Ends Building Boom in New York" (December 26, 2008).

²⁷New York Building Congress, *February reports 2010-2016: Residential Building Permits*, (accessed October 19, 2018). (Accessed 10/1/2018).

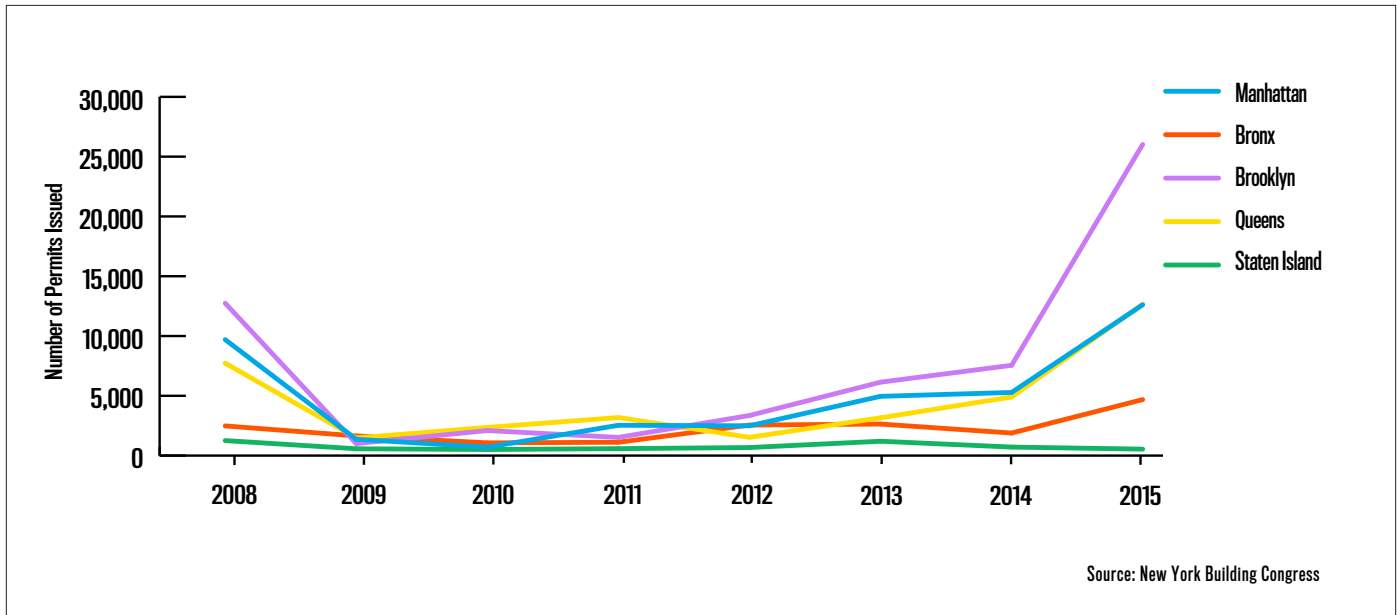


Figure 20: Residential Permits, Citywide

construction had come to a halt and the sites were inactive.²⁸

The stalled construction sites in the Long Island City and Downtown Brooklyn Rezoning Areas are shown in Table 3. Six construction sites were reported as stalled within the Long Island City Rezoning Area and two in Downtown Brooklyn. Of these sites, only one, Lot 7 on Block 431 in Long Island City, was identified as a Projected Development Site in the FEIS.²⁹

Of the eight sites in Long Island City and Downtown Brooklyn on the Stalled Sites List, three were eventually completed. Two more sites, on Blocks 403 and 422 in Long Island City, are either currently under construction or have construction planned (one includes the development at 29-55 Northern Boulevard).

As of September 2018, two sites in Long Island City (Blocks 239 and 431) remain on the list. Another, Block 167 in Downtown Brooklyn, has shown no signs of construction progress. Ultimately, development has picked up for at least

half of all of sites that previously faced financial troubles in both Rezoning Areas. The current pace of development in both neighborhoods suggests that these sites are less likely to be the product of restrictive lending markets and more likely due to other factors.

²⁸ NYC Department of Buildings, *DOB Stalled Construction Sites*, (accessed October 19, 2018).

²⁹ Descriptions are based on *MapPLUTO* data, DOB BISweb data, the DOB Stalled Construction Sites database, and deeds and documents available through ACRIS.

Table 3: Stalled Construction Sites, Long Island City and Downtown Brooklyn Rezoning Areas

Long Island City						
Block	Lot	App. Filed	On SS List	Off SS List	Time on List	Built
239	7	July 2006	June 2009	-	9 years, 3 months	-
268	1	April 2008	September 2009	October 2015	6 years, 1 month	2015
403	26	January 2008	October 2010	April 2013	2 years, 6 months	-
418	7	August 2007	December 2009	October 2014	4 years, 10 months	2015
422	31	September 2007	September 2009	October 2015	6 years, 1 month	-
431	7	November 2008	April 2009	-	9 years, 5 months	-
Downtown Brooklyn						
Block	Lot	App. Filed	On SS List	Off SS List	Time on List	Built
133	13	September 2008	November 2009	April 2013	3 years, 5 months	2014
167	2	2001	March 2011	February 2018	6 years, 11 months	-

Source: NYC Department of Buildings - Stalled Sites List, DOB Filings



// Duffield Street and Willoughby Street, Downtown Brooklyn

Part III: Consequences of Underestimating Development

Introduction

The substantial expansion of commercial office space envisioned by the City in the Long Island City and Downtown Brooklyn rezonings never materialized. Instead, both areas experienced unparalleled residential growth, a development scenario that was neither projected nor reviewed, and most certainly was not planned. Therefore, the mitigation measures that were proposed addressed adverse impacts from a development scenario that never happened, and the environmental impacts that did occur were never evaluated. This section looks at Long Island City and Downtown Brooklyn today to see some of the ways unforeseen residential development has affected these neighborhoods.

Changes in Population and Demographics in Rezoning Areas

Long Island City

Since 2000, the population in the Long Island City Rezoning Study Area has increased 23 percent to 3,444 residents.³⁰ Most of this growth occurred in Census Tract 19, which makes up most of the Rezoning Area. It also includes the adjacent Hunters Point Subdistrict (Figure 21).³¹ From 2000 to 2016, median household incomes in Census Tract 19 increased at a significantly higher rate than the rest of the census tracts in the area (Figure 22). The median household income is now almost double that of households just outside the Rezoning Area.

Census Tract 19 also shows dramatic shifts in racial and ethnic composition of the area population since 2000 (Figure 23). The most striking change is the over twelve-fold increase in the population of Asian residents, from 47 to 581. Asian and White populations now comprise over 80 percent of the total population since the rezoning. The

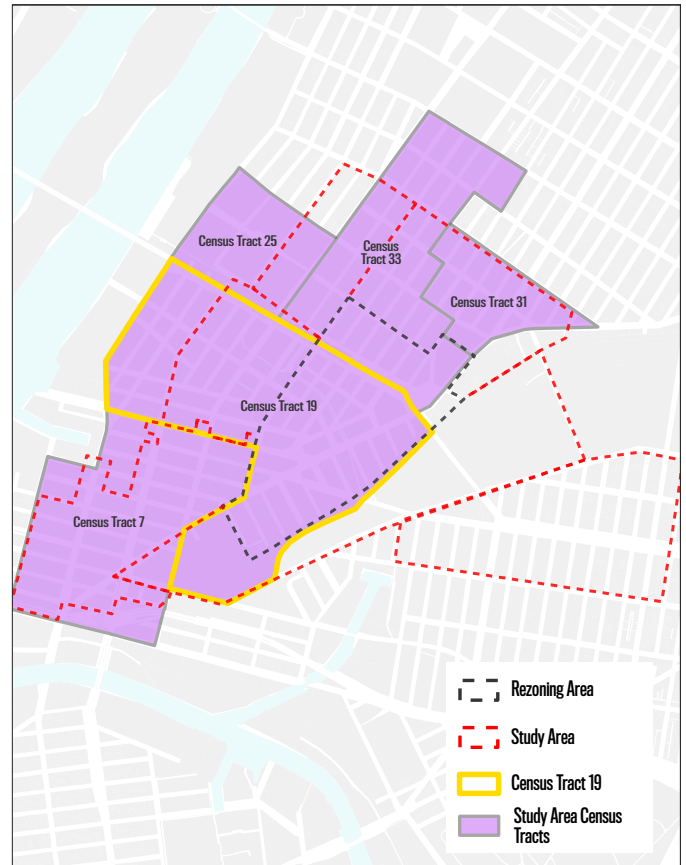


Figure 21: Census Tracts, Long Island City

Black or African American and Hispanic or Latino populations have grown at a much slower rate in comparison.

Downtown Brooklyn

Approximately 10,000 new residents have moved to the Downtown Brooklyn Study Area since 2000, an increase of 29 percent.³² Over one third of this growth took place in Census Tracts 11, 15 (Block Group 3 only), and 37, where the population grew by 3,404 residents (Figure 24).³³ Similar to Long Island City, the demographic changes led to significant increases in the median household income of residents in the Rezoning Area compared to those in the larger Study Area (Figure 25).

³⁰ This includes the LIC District (Rezoning Area) and the quarter-mile radius Study Area.

³¹ 2016 American Community Survey data from the U.S. Census Bureau using Queens County Census Tracts 7, 19, and 33.

³² This area includes the Downtown Brooklyn Development Rezoning Area and the quarter-mile Study Area.

³³ 2016 American Community Survey data from the U.S. Census Bureau using, Kings County Census Tracts 11, 37, and 15 (Census Block Group 3).

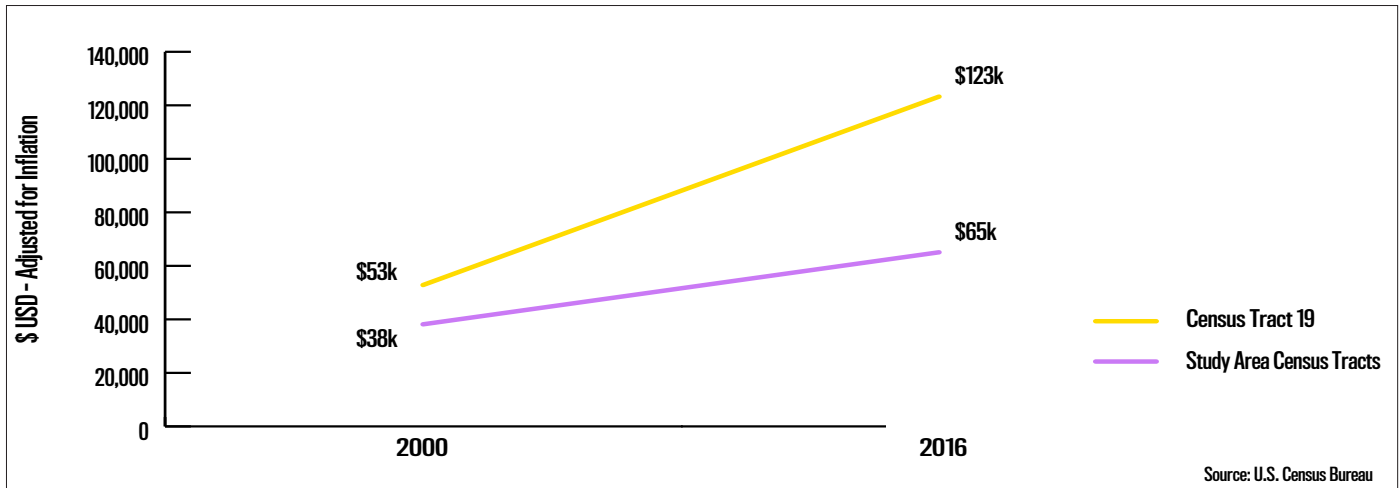


Figure 22: Median Household Income, Long Island City

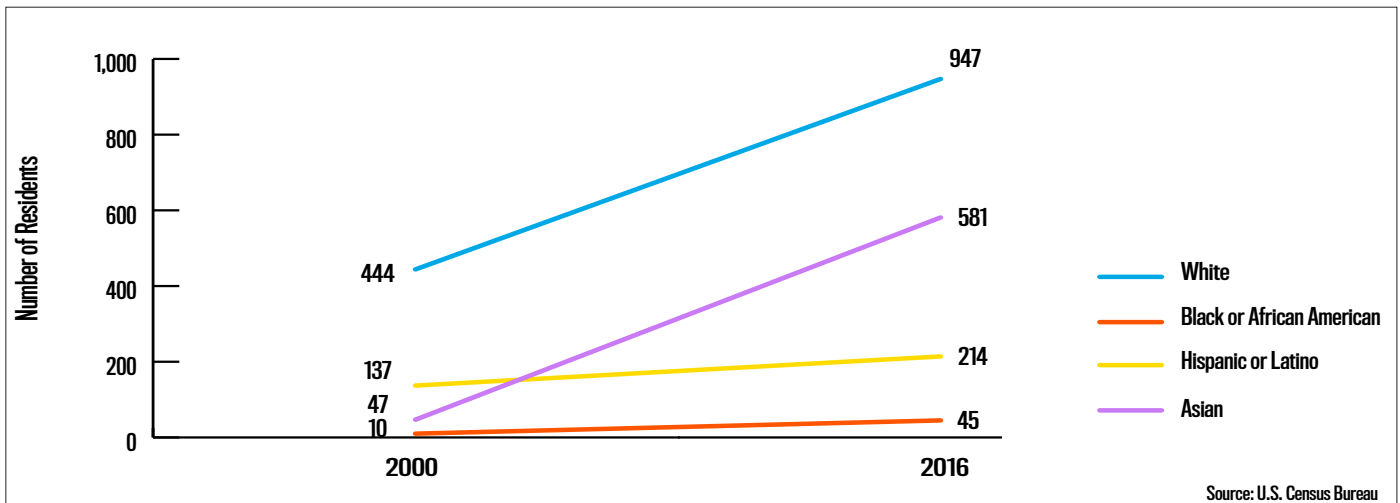


Figure 23: Racial and Ethnic Composition of Census Tract 19, Long Island City

Between 2000 and 2016, these census tracts showed dramatic demographic shifts (Figure 26). Proportionally, the White population saw the largest growth with an almost twelve-fold increase, from 202 residents in 2000 to 2,455 residents in 2016. The Asian population grew from only 70 residents in 2000 to 788 in 2016. In contrast, the Black or African American and Hispanic or Latino populations increased by less than 200 residents during the same time period.

Evaluation

There is little doubt that the residential growth fostered by the Long Island City and Downtown Brooklyn Rezoning dramatically transformed the demographics of the two neighborhoods. Long Island City and Downtown Brooklyn have become significantly more affluent, predominantly White and Asian communities.

Impacts on School Utilization

Long Island City

The gross underestimation of residential development has greatly exacerbated overcrowding in area public schools. The FEIS projected a public school population based on a mere 300 new dwelling units, which translated into an increase of only 99 total public school students by 2010. Based on this number, the FEIS concluded that no significant impacts on public school capacity were expected.

However, Queens Community School District (CSD) 30, which covers the Rezoning Area, was already well over 100 percent capacity in 2000 (Table 4). Elementary schools were operating at 109 percent capacity. The FEIS listed five

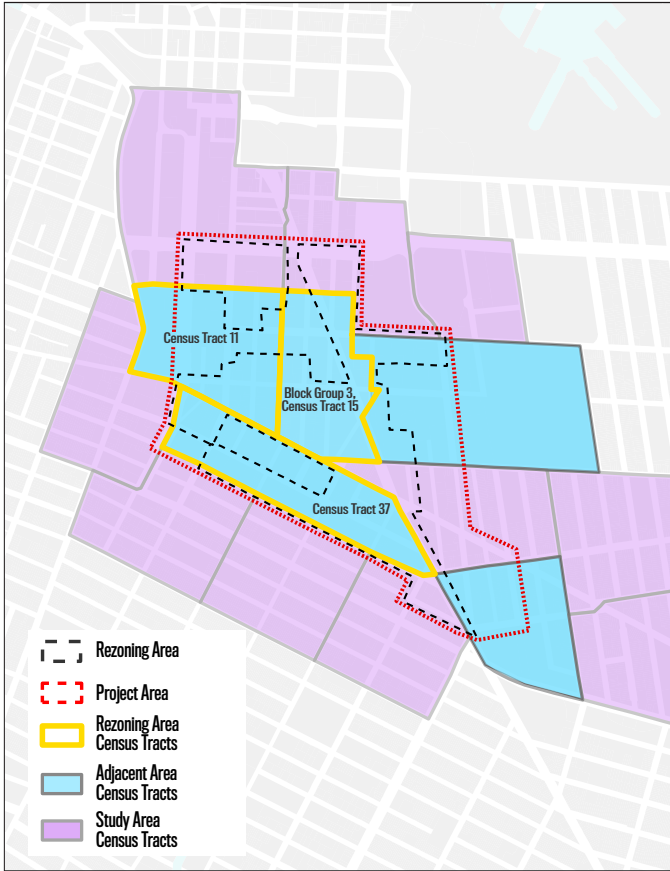


Figure 24: Census Tracts, Downtown Brooklyn

new elementary schools and one new middle school under construction. Assumed to be operational by 2010, these schools were expected to add 2,773 elementary and 753 middle school seats.³⁴

Table 4: School Utilization Rates in Long Island City Study Area and CSD 30

	2001 (FEIS)	2016-2017 (DOE)
Elementary (1/2 mile)	86	108
Elementary (CSD 30)	109	105
Middle (1/2 mile)	90	87
Middle (CSD 30)	105	90
HS (1/2 mile)	116	129
HS (CSD 30)	Not available	107

Sources: LIC FEIS, DOE – Enrollment, Capacity & Utilization Report Target Calculations, 2013-2014 School Year
DOE – Enrollment, Capacity & Utilization Report Target Calculations, 2016-2017 School Year.

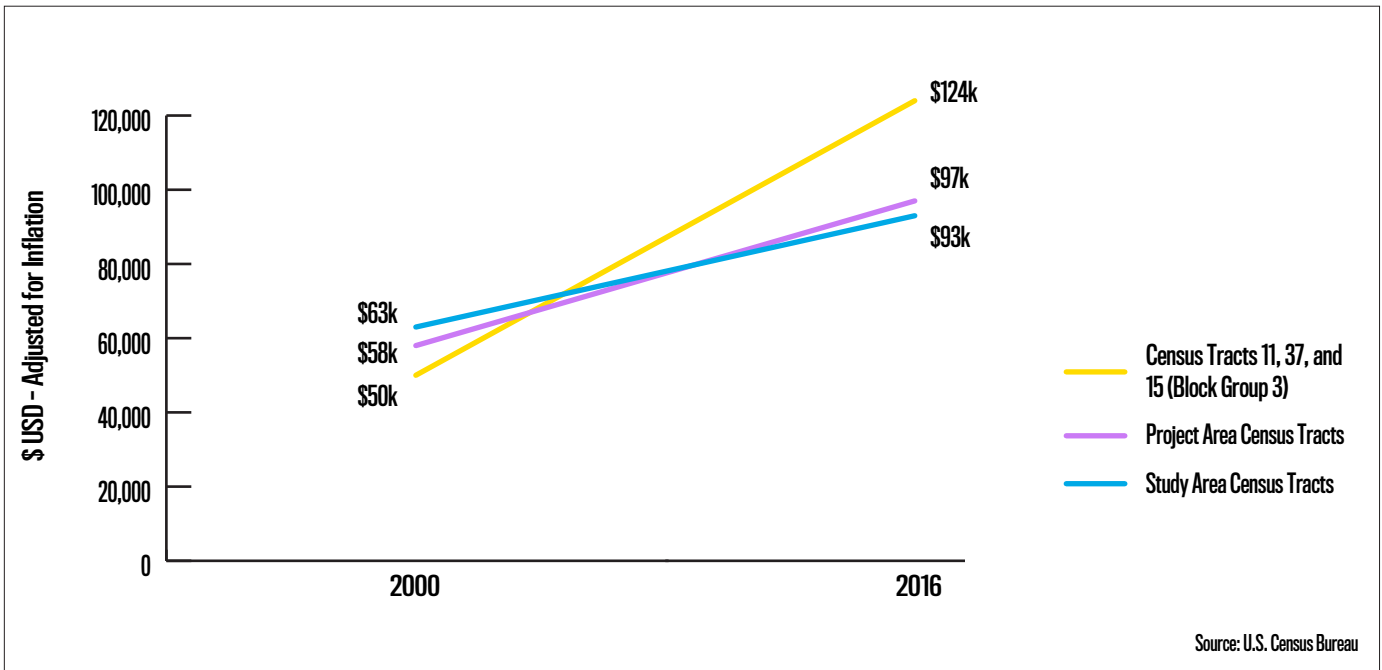


Figure 25: Median Household Income, Downtown Brooklyn

³⁴ CEQR analyses typically focus on impacts on public elementary and intermediate school capacity because these facilities serve a local population, whereas high schools have a borough-wide or citywide population base. However, overcrowding in high schools in the Long Island City Study Area is so widespread that it is addressed in detail in this analysis.

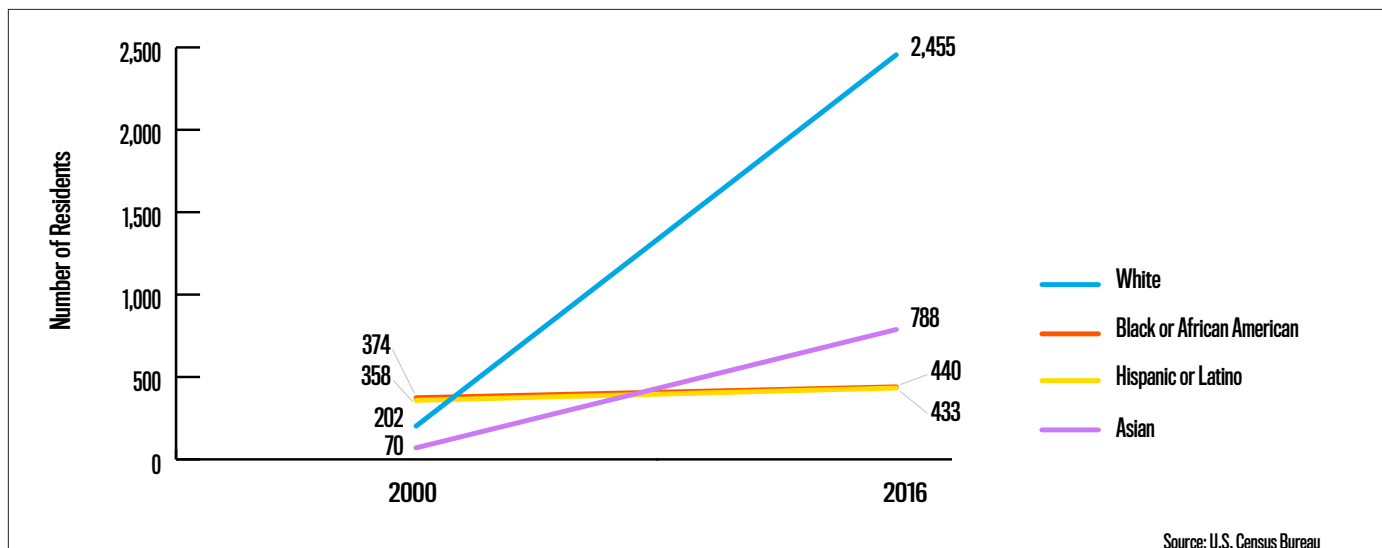


Figure 26: Racial and Ethnic Composition of Census Tracts 11, 37, and 15 (Block Group 3), Downtown Brooklyn

However, by 2010 school utilization rates had increased significantly, ranging from 105 percent to 160 percent. Moreover, six of the nine elementary schools identified in the FEIS were overcrowded, including all of the newly constructed schools.³⁵ By the same time, 801 new dwelling units had been constructed in the Project Area, 501 more than what was projected. Based on the actual number of dwelling units, student population projections would have generated 136 elementary, 72 intermediate, and 32 high school students (Figure 27).³⁶

By 2016-2017, seven out of nine elementary schools were significantly over capacity, including PS 222 and 228, which were 165 percent and 212 percent over-utilized, respectively (Table 5).³⁷ All high schools in the direct vicinity of the Rezoning Area were operating overcapacity. International Academy, in particular, was operating at 174 percent utilization (Table 6).

As of 2018, 10,736 residential dwelling units have been added. Accordingly, these would have generated 1,825

elementary school students, 966 middle school students, and 429 high school students. Including development that is either under construction or planned for construction, 4,234 additional residential dwelling units are expected, which would bring well over 2,000 new school age children to already severely overcrowded schools.³⁸

Table 5: 2016 Elementary School Utilization Rates, Long Island City Study Area

Public Elementary Schools within 1/2 mile of rezoning	Utilization Rate (2016)
PS 76	74%
PS 78	131%
PS 111	51%
PS 112	127%
PS 212	151%
PS 222	165%
PS 228	212%
PS 234	101%
Community School District 30	105%

Sources: DOE - Enrollment, Capacity & Utilization Report Target Calculations, 2016-2017 School Year.

³⁵ Make the Road New York, "Too Crowded to Learn" (May 2011).

³⁶ Student projections were made using 2001 CEQR Technical Manual methodology included in Table 3C-2 Projected Public School Pupil Ratios in New Housing Units of All Sizes, Queens Mod-High income level multipliers (0.17 for elementary school students, 0.09 for middle school students, and 0.04 for high school students).

³⁷ The latest available school year school capacity numbers and utilization rates

³⁸ 2001 CEQR Technical Manual multipliers for estimating public school students in the Moderate-High Income Band were utilized for all development until 2018; All future development was assessed using 2014 CEQR multipliers

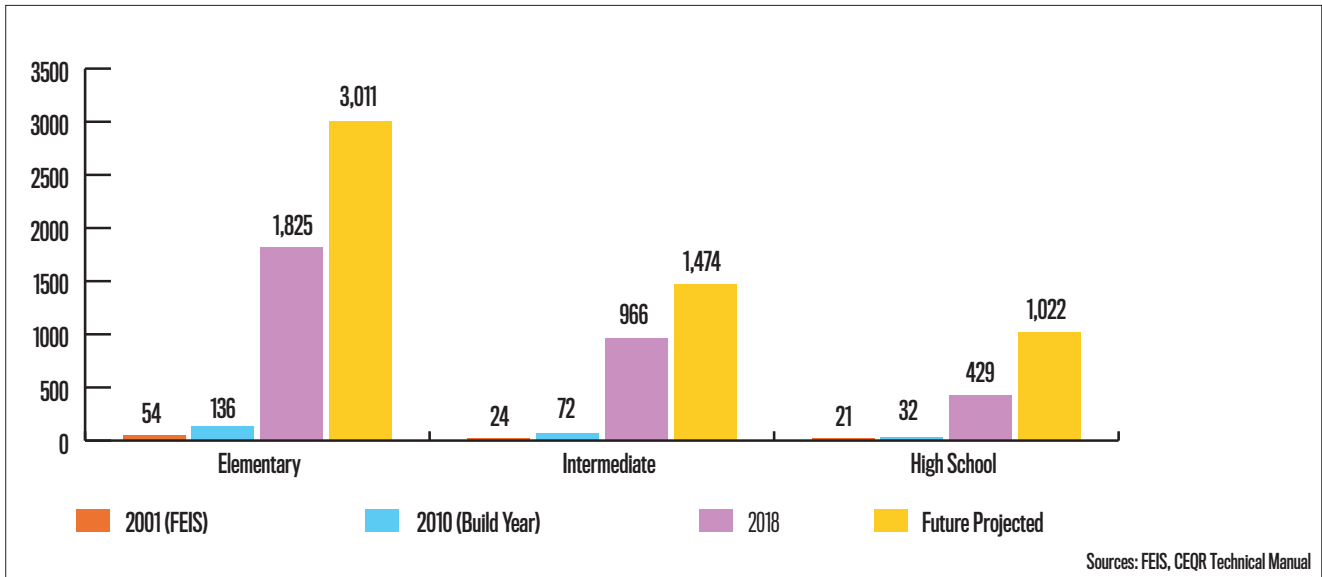


Figure 27: School Seats Generated by Development, Long Island City

Table 6 2016 High School Utilization Rates, Long Island City Study Area

High Schools Identified in FEIS	Utilization Rate (2016)
Newcomers High School	127%
Queens Vocational High School	125%
Aviation High School	136%
Robert F Wagner Institute: Arts & Technology	101%
International High School	174%

Sources: DOE – Enrollment, Capacity & Utilization Report Target Calculations, 2016-2017 School Year

Downtown Brooklyn

The Downtown Brooklyn FEIS estimated that new development would generate 278 elementary school students and 103 intermediate school students. High school projections were excluded because it was assumed that they would be able to choose other schools in the city. In the FEIS, the utilization rate for all public elementary

schools within the half-mile Study Area was estimated to be 95 percent by 2013, based on 979 dwelling units. Accordingly, no significant adverse school impacts were identified. However, in reality, a total of 3,001 dwelling units had been constructed on rezoned sites by 2013.

Based on applicable CEQR guidelines, these new units would have generated 930 elementary school students, 390 intermediate school students, and 240 high school students (Figure 28).³⁹ Since the rezoning, 8,457 additional residential units have been constructed on rezoned lots, resulting in the addition of 2,621 elementary school students, 1,099 intermediate school students, and 676 high school students.⁴⁰

Enrollment data reflect a significant increase in school populations in Downtown Brooklyn.⁴¹ Although the 2013 utilization rate for the 13 elementary schools considered in the FEIS Study Area was 96 percent, seven of these schools were substantially overcapacity, three of which were over-utilized by at least 50 seats (Table 7).^{42,43}

³⁹ NYC Department of City Planning, *Pluto and MapPLUTO*

⁴⁰ 2001 *CEQR Technical Manual* multipliers for estimating public school students in the Moderate-High Income Band (0.31 for elementary schools, 0.13 for middle school, and 0.08 for high school) were utilized for all development until 2018; All future development was assessed using 2014 CEQR multipliers for Brooklyn (0.29 for elementary schools, 0.12 for middle schools, and 0.14 for high schools).

⁴¹ Enrollment data provided by the New York Department of Education (DOE)

⁴² Of the 15 elementary schools, 10 are within School District 13 and three within School District 15.

⁴³ Enrollment, Capacity & Utilization Report, Book One (Target Calculations), 2013-2014 school year, NYC DOE.

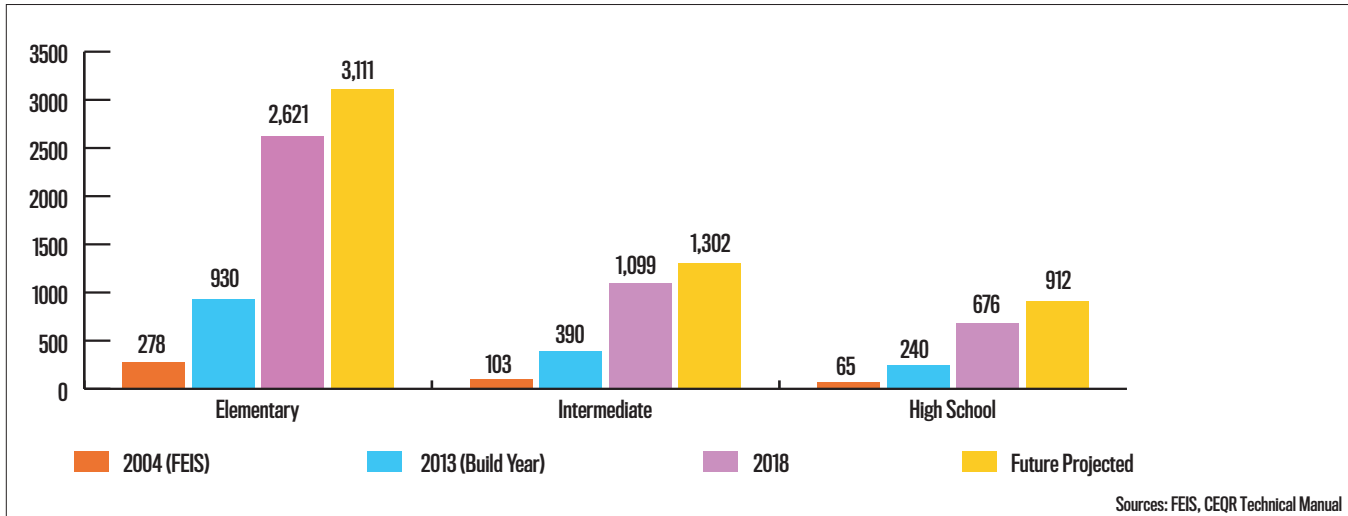


Figure 28: School Seats Generated by Development, Downtown Brooklyn

Table 7: School Utilization Rates, Downtown Brooklyn Study Area

	2004 (FEIS)	2013-2014 (DOE)	2016-2017 (DOE)
Elementary (1/2 mile)	85	96	101
Middle (1/2 mile)	77	64	46

Sources: *Downtown Brooklyn Development FEIS*, DOE – Enrollment, Capacity & Utilization Report Target Calculations, 2013-2014 School Year, DOE – Enrollment, Capacity & Utilization Report Target Calculations, 2016-2017 School Year.

For the 2016-2017 school year, the 13 public elementary schools in the half-mile Study Area reported a utilization rate of 101 percent (Table 8). Over half of the schools were overcapacity, four of which were overutilized by at least 120 and up to 229 seats. With the development that is either under construction or planned for construction, almost 1,000 new school-age children will be expected in Downtown Brooklyn.

Table 8: Elementary School Utilization Rates, Downtown Brooklyn Study Area, 2016

Public Elementary Schools within 1/2 mile of rezoning	Utilization Rate (2016)
PS 8	126%
PS 9	136%
PS 11	116%
PS 20	122%
PS 46	82%
PS 67	90%
PS 133	92%
PS 282	104%
PS 287	55%
PS 307	55%
PS 29	129%
PS 38	83%
PS 261	103%
1/2-Mile Study Area Combined	101%

Sources: DOE – Enrollment, Capacity & Utilization Report Target Calculations, 2016-2017 School Year.

Impacts on Open Space

The influx of new residents in Long Island City and Downtown Brooklyn has strained the limited open space in these neighborhoods. Although both rezonings came with the promise of additional open space, the vast majority of it has not materialized. Furthermore, because the rezonings were intended to be commercial office space expansions, the FEISs did not identify any adverse open space impacts for residents.

Long Island City

Since 2001, the open space ratio in the Rezoning Area has decreased by 15 percent. With 0.33 acres of open space per 1,000 residents, the Rezoning Area now has 22 percent of the City median of 1.5 acres per 1,000 residents. As mentioned previously, the proposal by the Queens Borough President's Office to acquire a plot of land for a new park never materialized.⁴⁴ Today the area remains an assortment of low-rise, early 20th century buildings, and a construction site for a future 18-story, mixed-use development.

After the 2010 build year, two new open spaces were added to the Long Island City Rezoning Study Area: Dutch Kills Green, a 1.5-acre park with benches and median landscaping, and LIC Dog Park on Vernon Boulevard. These two resources, not including the landscaped medians separating the Ed Koch Queensboro Bridge Lower Roadways, introduced approximately 1.38 acres of new, publicly accessible open space to the area.⁴⁵ Shadow impacts on Dutch Kill Green from projected and actual development are discussed in this section under "Shadow Impacts."

Downtown Brooklyn

Because the development identified in the FEIS was heavily commercial, the open space evaluation is largely irrelevant. However, the FEIS did state that the rezoning would result in a shortage of passive open space for combined worker and residential populations. Despite the shortfall, the FEIS concluded that no significant adverse impact would result.

Two open spaces, Willoughby Square Park and Jay Street Plaza, were planned as part of the rezoning. The 1.15-acre Willoughby Square Park, described as the centerpiece of the proposed commercial development along Albee Square West and Duffield Street, was contingent upon private sector funding. The park was also intended to offset potential open space impacts. However, after numerous failed attempts to secure financing for the underground garage below the park, Willoughby Square Park remains unbuilt. Jay Street Plaza was proposed as a public space on Potential Development Site L, but was never built.

Evaluation

The underestimation of residential development under the Long Island City and Downtown Brooklyn rezonings has placed tremendous demand on the limited open space in these neighborhoods. Because both proposals were intended to expand commercial office use, the respective open space evaluations are virtually meaningless. To make matters worse, the open space that was planned either never materialized or was inadequate in serving the needs of the growing population.

⁴⁴ The plot is on Block 434

⁴⁵ The Special Permit for Block 72/86 described in the Queens Plaza Subdistrict Zoning Alternative was not granted by CPC until August 2013. The development process was mired in controversy as it would have required the demolition of 5 Pointz, a former factory that was repurposed as artist studios in the 1990s. The building became a neighborhood attraction as its exterior was covered by colorful graffiti murals. Despite outcry and legal action from the artist community, 5 Pointz was demolished and construction of 22-44 Jackson Avenue began in 2015. The developers, G&M Realty, applied for a Certificate of Occupancy in May 2018. At the time of publication, the building is nearing completion. The bulk and use is much different than what was projected in the FEIS. The development consists of two residential towers (43 and 48 stories) linked by 40,000 square feet of ground-floor retail, 20 artist studios, and a 250-spot parking garage. This development adds 1,115 new dwelling units totaling 977,000 sf of residential use. The site satisfies the Special Permit's open space stipulation by adding approximately 0.74 acres of publicly accessible open space, the majority of which is sited in the southern-most end of the block abutting Sunnyside Yards.

The development that occurred in the two Rezoning Areas was not only significantly different in terms of use, but also considerably taller and denser than what was evaluated. This has led to other impacts that were not evaluated in the CEQR processes.

Shadow Impacts

Long Island City

The FEIS evaluated shadow impacts of six projected commercial office sites on three open space resources in the Project Area: Murray Playground, Citibank Plaza, and Court Square Park.⁴⁶ The office buildings evaluated were assumed to range in height from 132 feet to a maximum of 468 feet. The evaluation concluded that no adverse shadow impacts would occur on these three sites.⁴⁷

By 2010, 14 new buildings had been constructed in the Rezoning Area. The tallest of these was the New York City Department of Health and Mental Hygiene office building at 42-01 28th Street, at 325 feet. Five new residential buildings in the Rezoning Area had exceeded the assumed 80 foot height standard mentioned in the FEIS. The tallest of these is the building at 41-23 Crescent Street, at 218 feet.

Fifty-seven new buildings had been constructed in the Rezoning Area by 2018. These included seven residential towers that exceed the tallest office building evaluated in the FEIS. The tallest of these is the approximately 600-foot-tall residential tower at 42-12 28th Street. In addition, many of these towers are located on sites that were not Projected Development Sites. Accordingly, shadow impacts from these towers were not evaluated in the FEIS.

3D modeling was used to demonstrate how shadows from two Projected Development sites, the Municipal Garage Site

(Site A) and the QP MarketPlace (Site B) would affect Dutch Kills Green.⁴⁸ Under the rezoning, both Site A and Site B were to be redeveloped with 1.5 million sf of office buildings. However, Site A was redeveloped as the NYC Department of Health and Mental Hygiene office building, and Site B was redeveloped as the 1.6 million-sf Jackson Park complex. These development scenarios have distinctly different shadow impacts on Dutch Kills Green. Figure 29 shows that incremental shadows from the proposed developments would not reach Dutch Kills Green during the September 21 analysis period. However, as shown in Figure 30, significant portions of Dutch Kills Green are now covered in shadows from the actual development.

Downtown Brooklyn

The Downtown Brooklyn FEIS evaluated incremental shadow impacts of development on four open spaces and the planned Willoughby Square Park. These include 111 Livingston Street, Borough Hall Park, the RV Ingersoll Housing Project, and Long Island University Plaza (LIU Plaza). Incremental shadows from Development Sites O, P, and Q were expected on all of the open spaces. As shown in the 3D model of building massings in Figure 31, Development Sites O and P were expected to cause incremental shadows on Willoughby Square Park during the May 6 evaluation period.

By 2013, only Development Site Q had been constructed, though only partially. However, there were another ten developments that had been completed in the Rezoning Area, eight of which exceeded 250 feet in height. The most notable is the 514-foot-tall Brooklyn Building at 111 Lawrence Street, which would cast shadows on MetroTech Plaza during the spring and fall. MetroTech Plaza was one of the open spaces considered but not evaluated in the FEIS.

By 2018, 29 new buildings had been constructed in the Rezoning Area, 18 of which were more than 250 feet tall.

⁴⁶These sites are listed in Table 6-1 in the *Long Island City Rezoning FEIS*.

⁴⁷The highest impact occurred in the December 21st evaluation period, which shows an incremental shadow for an hour and ten minutes. However, CEQR guidelines do not find that shadows during the December 21 evaluation period are adverse because it is not during the growing season and public use of open space is relatively low.

⁴⁸Dutch Kills Green was opened in 2012. It was not planned at the time of the 2001 FEIS. It is presented here to demonstrate how shadows from projected development in the rezoning compares with shadows from actual development.



Figure 29: Shadows on September 21 at 1:30 pm, Projected Development Sites A and B, Long Island City



Figure 30: Shadows on September 21 at 1:30 pm, Development Facilitated by the Rezoning, Long Island City

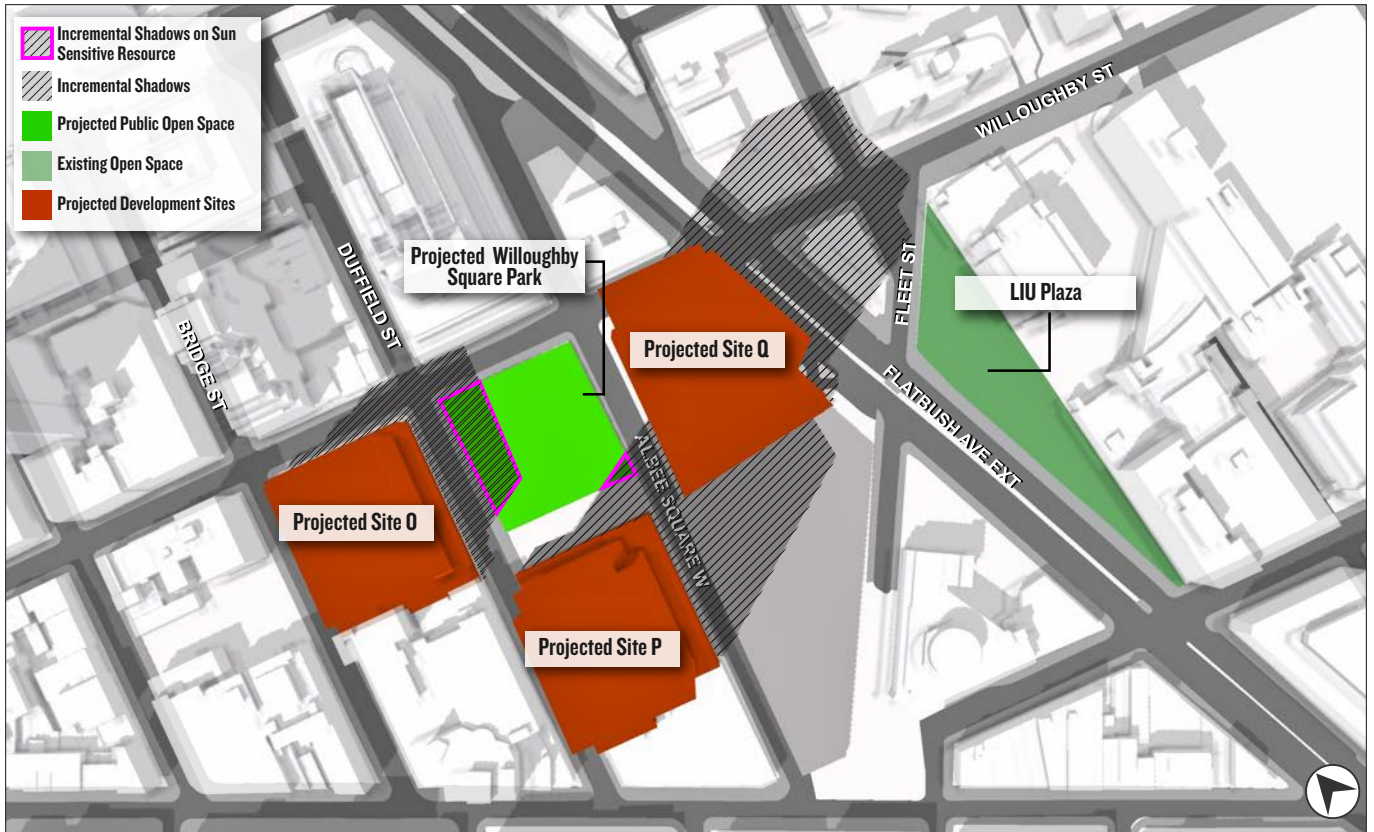


Figure 31: Shadows on May 6 at 2pm, Projected Development Sites O, P, and Q, Downtown Brooklyn

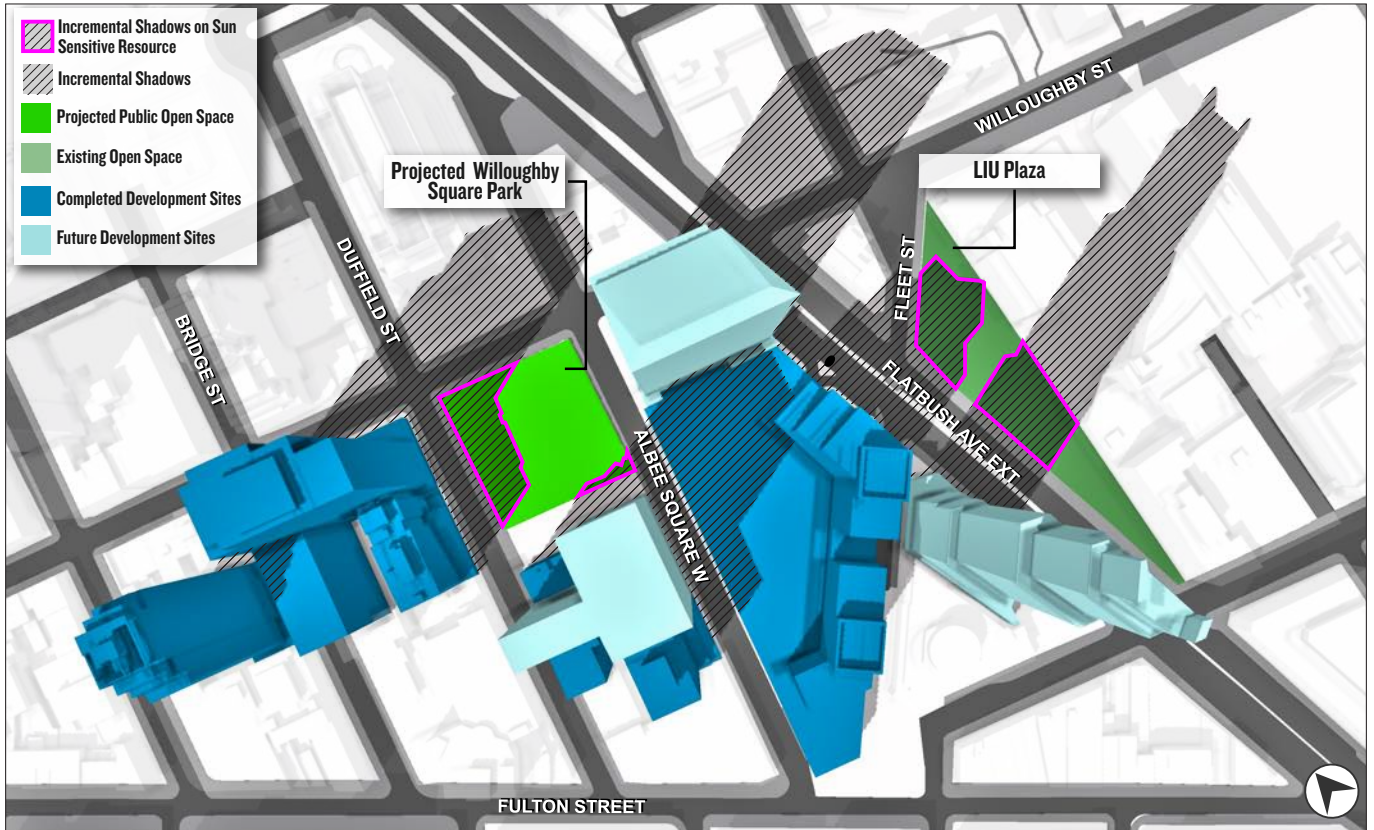


Figure 32: Shadows on May 6 at 2pm, Development Facilitated by the Rezoning, Downtown Brooklyn

These include Site Q, which is now a 30-story, 320-foot mixed-use building, significantly shorter than the 615-foot structure evaluated in the FEIS. Sites O and P remain only partially developed.

The massings and shadow impacts of all completed (dark blue) and future developments (light blue) on Site O, P and Q, are shown in Figure 32. The buildings for which construction has been completed on sites O and P range from 25 stories to 57 stories and show significant shadow impacts on the Willoughby Square Park site during the May 6 evaluation period. Taking into account all completed and future development sites, significant incremental shadows will fall on the Willoughby Square Park site and the LIU Plaza to the east. Despite the smaller size, the development on Site Q casts significant shadows on LIU Plaza, an impact that was not identified in the FEIS.⁴⁹ The proposed tower at 9 DeKalb Avenue will also result in significant shadow impacts on LIU Plaza.

Changes in Urban Design

The development that was constructed in the Long Island City Rezoning Area differs substantially in terms of urban design from what was projected. As an example, Figures 33 and 35 use 3D modeling to show east and west views of the projected development on the Municipal Garage (Projected Site A) and the QP MarketPlace (Projected Site B) sites. As shown, the City-owned, 1,175-parking space garage on Block 420 was to be demolished and replaced with a 1.5 million-sf office building. The QP MarketPlace site, on Blocks 263 and 264, was to be developed with a 20-story, 1.5 million-sf office building. Figures 34 and 36 show the same views of the development today. As mentioned, Site A is now the NYC Department of Health and Mental Hygiene office building. The site will also include an additional 1.45 million-sf office building, which is currently under construction. Site B is the site of the 1.6 million-sf Jackson Park complex, which includes three towers of 42, 44, and 53 stories. Similar to

Long Island City, the development that actually occurred in the Downtown Brooklyn Rezoning Area differs substantially from what was projected. 3D models of the southwest and northwest views of the proposed office buildings identified for Sites Q, P, and O in the Downtown Brooklyn FEIS are shown in Figures 37 and 39. As mentioned previously, all three sites were expected to be high-density office buildings that would surround Willoughby Square Park. The tallest of which was the 46-story, 615-foot-tall building on Project Site Q. Projected Site O was expected to be a 20-story, 600,000 sf development on Block 145. However, as shown in Figure 38 and 40, as of 2018, three residential buildings comprising a total of 1.1 million sf have been constructed on Site O (shown in dark blue), including a 30-story tower at 100 Willoughby Street. Site P has only been partially constructed (229 Duffield Street), and Willoughby Square Park has yet to be built.

⁴⁹ LIU Plaza is a 1.16-acre privately-owned public space with seating, green space, and other passive open space.



Figure 33: East View, Projected Development Sites A and B, Long Island City

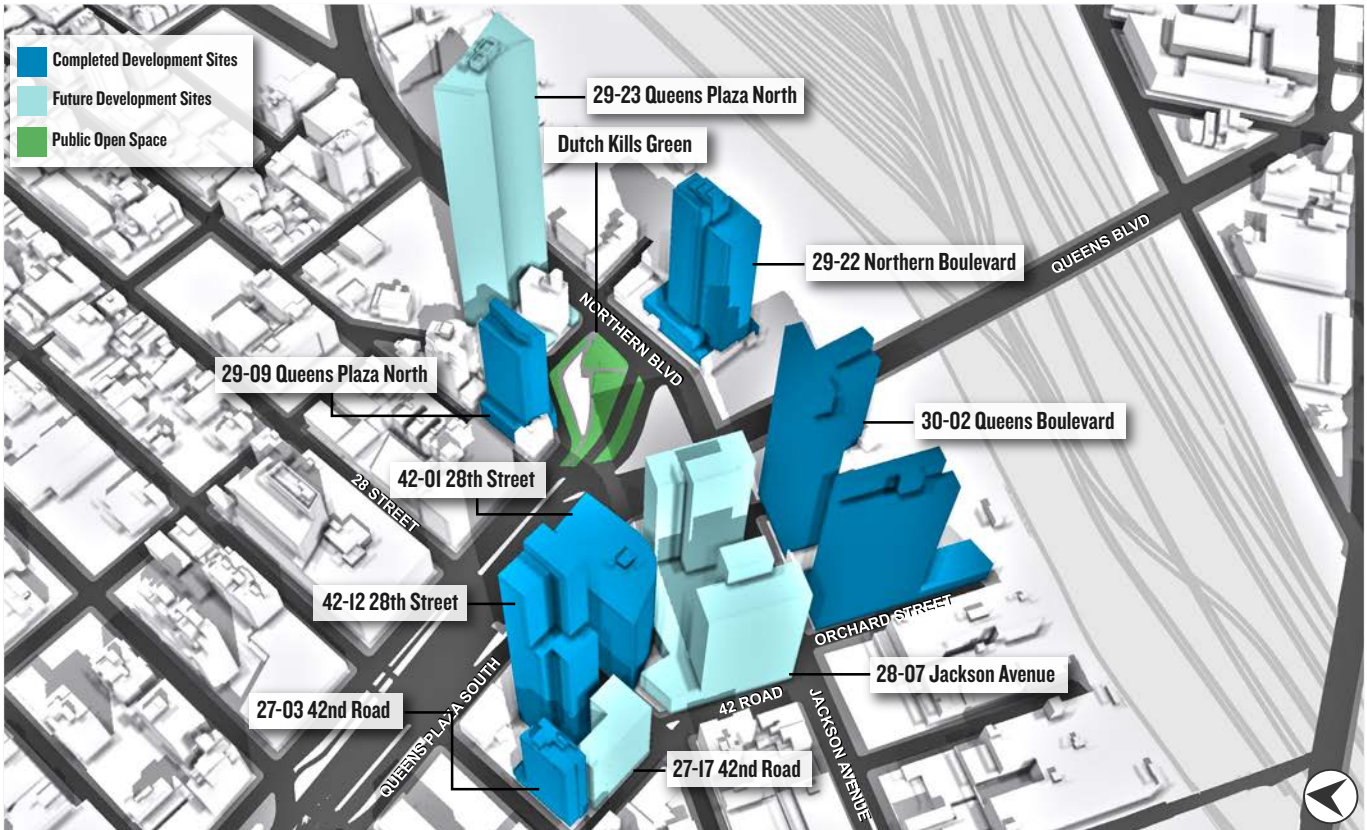


Figure 34: East View, Development Sites Facilitated by the Rezoning, Long Island City



Figure 35: West View, Projected Development Sites A and B, Long Island City

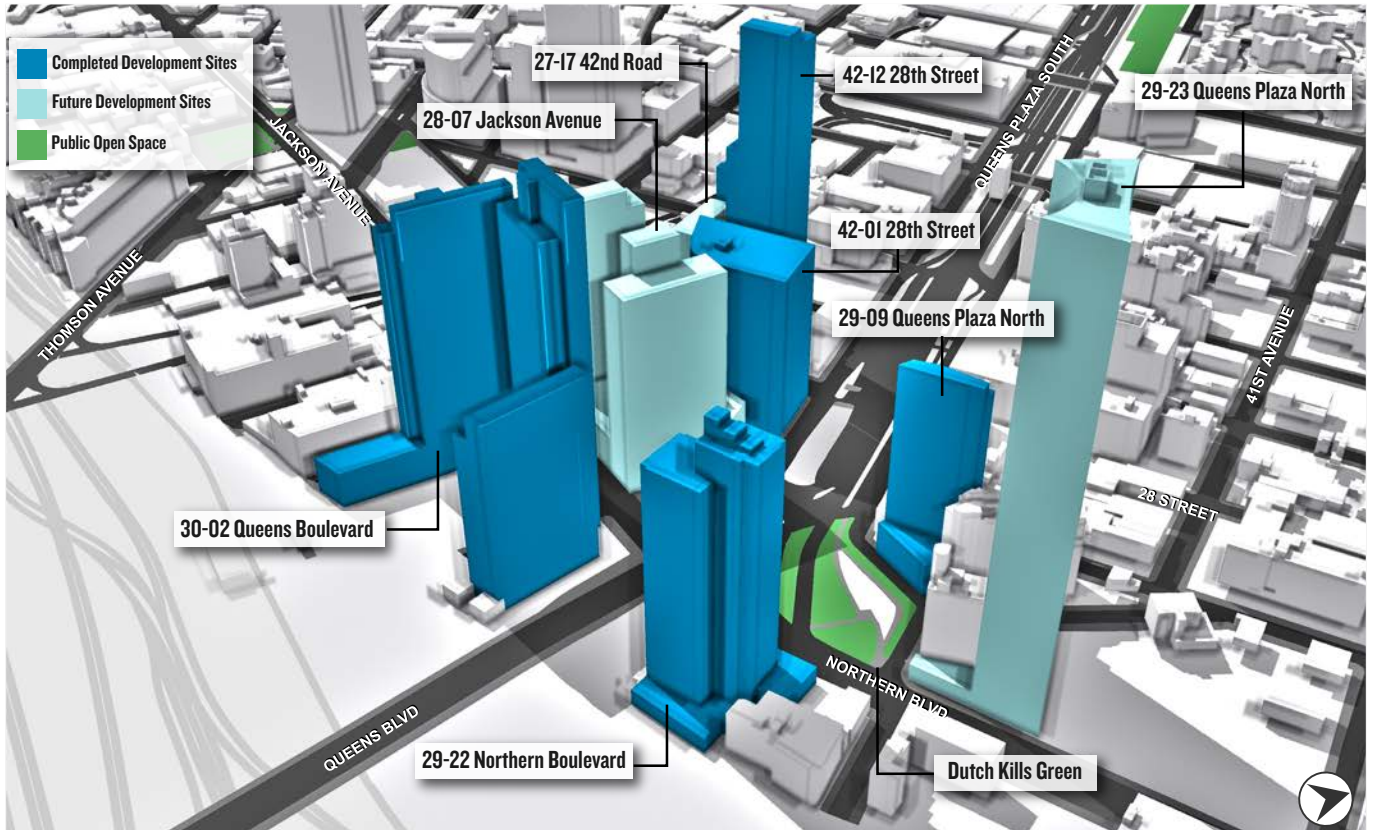


Figure 36: West View, Development Sites Facilitated by the Rezoning, Long Island City

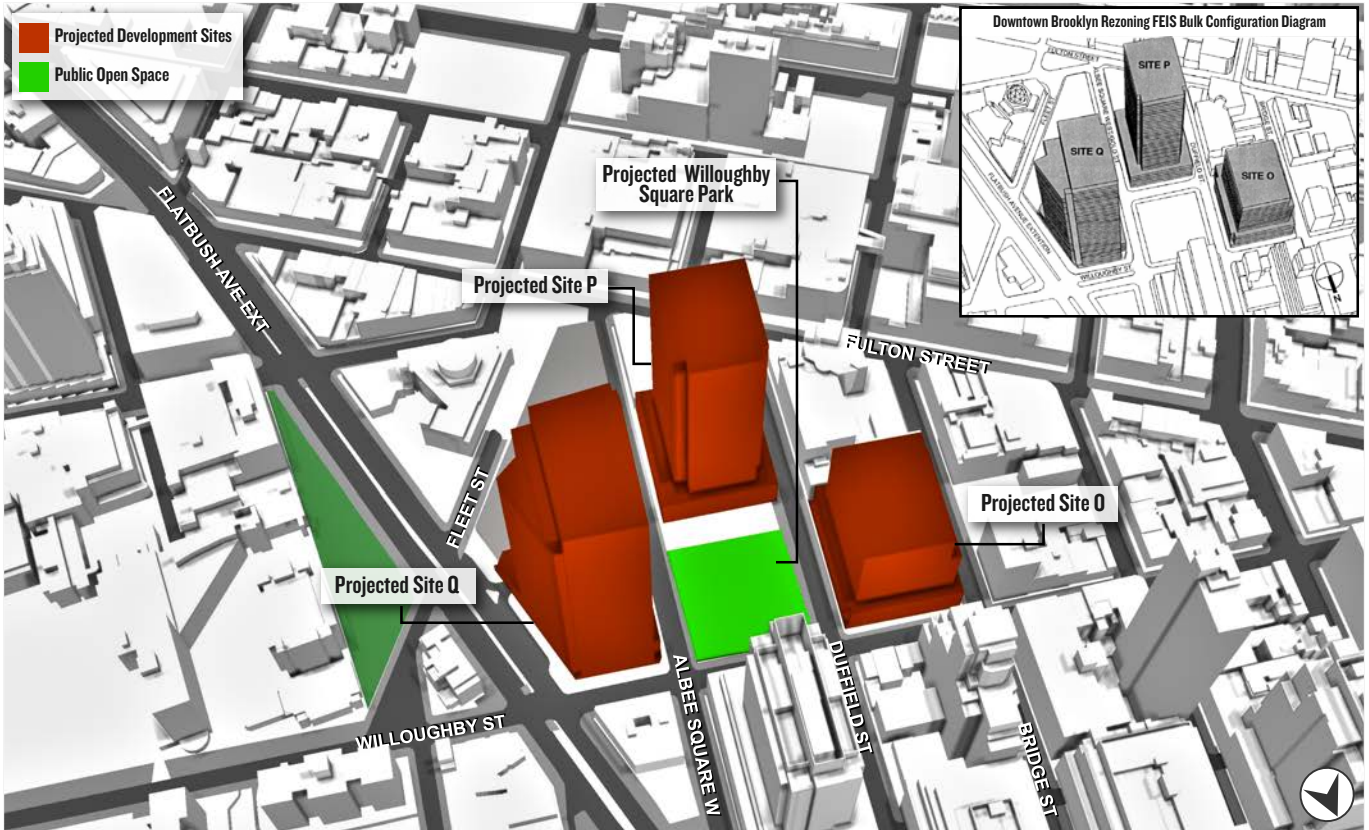


Figure 37: Southeast View, Projected Development Sites O, P, and Q, Downtown Brooklyn



Figure 38: Southeast View, Development Facilitated by the Rezoning, Downtown Brooklyn

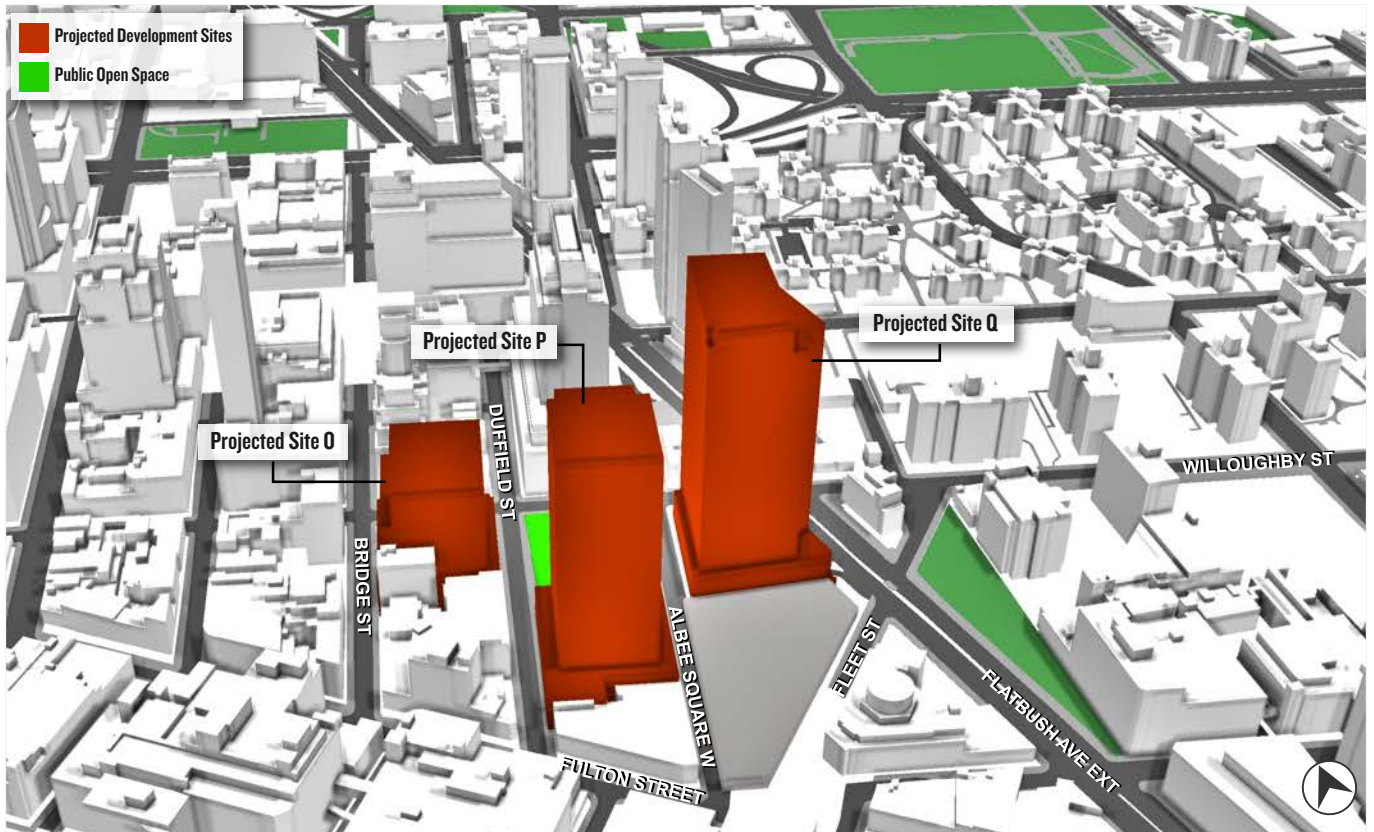


Figure 39: Northwest View, Projected Development Sites O, P, and Q, Downtown Brooklyn

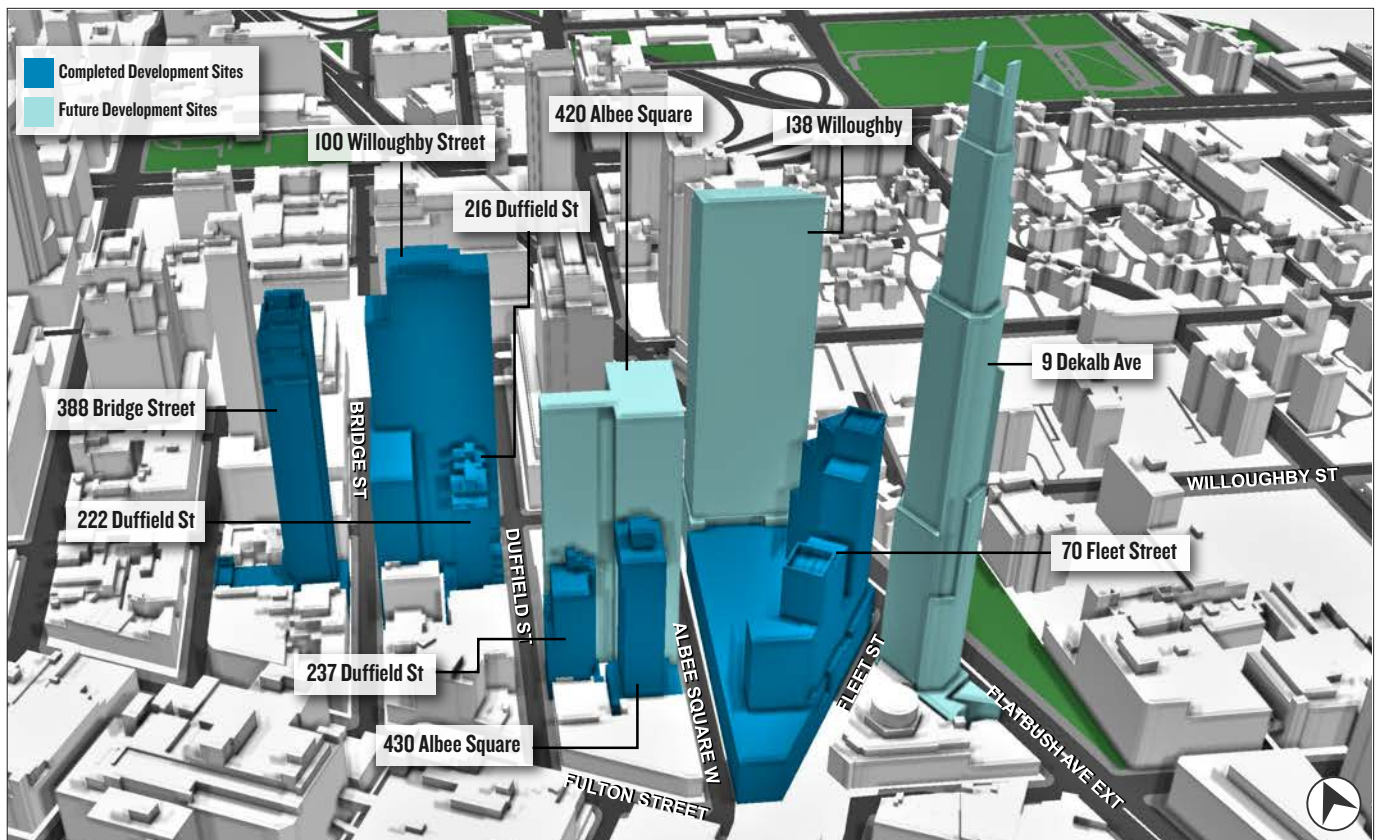


Figure 40: Northwest View, Development Facilitated by the Rezoning, Downtown Brooklyn

Changes in Transit Ridership

Long Island City

Between the two neighborhoods, Long Island City showed the most significant increases in subway use. Average weekly ridership has increased by 24 percent at the Court Square, Queensboro Plaza, and Queens Plaza stations in the past six years (Figure 41). Court Square weekday ridership increased by 27 percent and Queensboro Plaza increased by 26 percent. During the same time period, ridership at subway stations in the borough of Queens increased by only 0.88 percent, and ridership in the city as whole increased by 3.7 percent. Accordingly, weekday ridership at the Court Square and Queensboro Plaza stations has increased over seven times the citywide rate.^{50, 51}

Downtown Brooklyn

Changes in subway use in Downtown Brooklyn were not as significant (Figure 42). Average weekday ridership at the six stations in the vicinity (Jay Street–Metrotech, Borough Hall, DeKalb Avenue, Hoyt Street, Hoyt-Schermerhorn Street, and Nevins Street) increased by 5.5 percent in the past six years, which is consistent with the overall increase of Brooklyn subway stations during the same time period (5.4

percent). Hoyt Street Station had the highest increase in ridership at 13 percent. DeKalb and Borough Hall stations actually experienced a decrease in ridership.

Impacts on Other CEQR Categories and Beyond

A full understanding of the magnitude of environmental impacts resulting from the underestimation of residential development requires exploration beyond the scope this report. For example, an accurate assessment of traffic impacts, noise, and mobile source air quality was not conducted. Because Long Island City and Downtown Brooklyn are identified as air quality Areas of Concern in the *CEQR Technical Manual*, traffic is evaluated using stricter impact thresholds than in the majority of the city. Other environmental areas for additional study include parking, water, and sewer infrastructure, solid waste and sanitation, greenhouse gas emissions, energy, and construction impacts.

A major consideration going forward is the increased cumulative impacts as these neighborhoods continue to grow. In Long Island City alone, there are several substantial developments planned that will add thousands of new

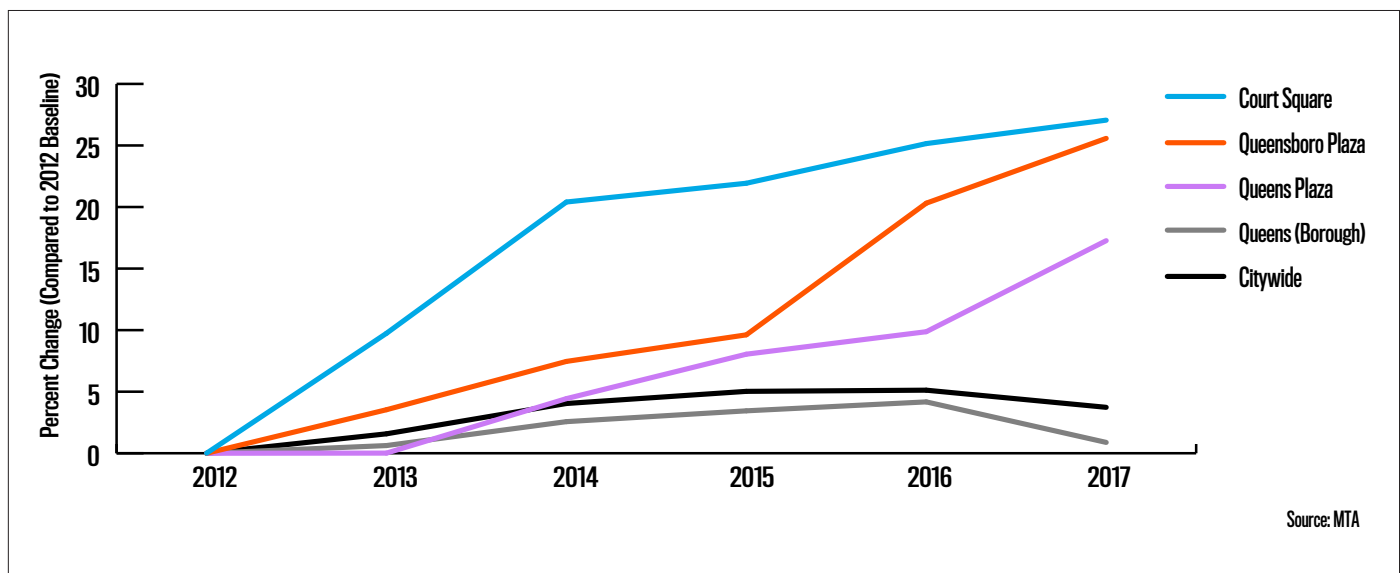


Figure 41: Percent Change in Average Weekday Ridership, Long Island City Subway Stations, 2012 to 2017

⁵⁰ Metropolitan Transportation Authority, “Average Weekday Subway Ridership” (accessed October 19, 2018).

⁵¹ Data is only available from 2012 through 2017, and only captures the number of passengers entering stations during the work week.

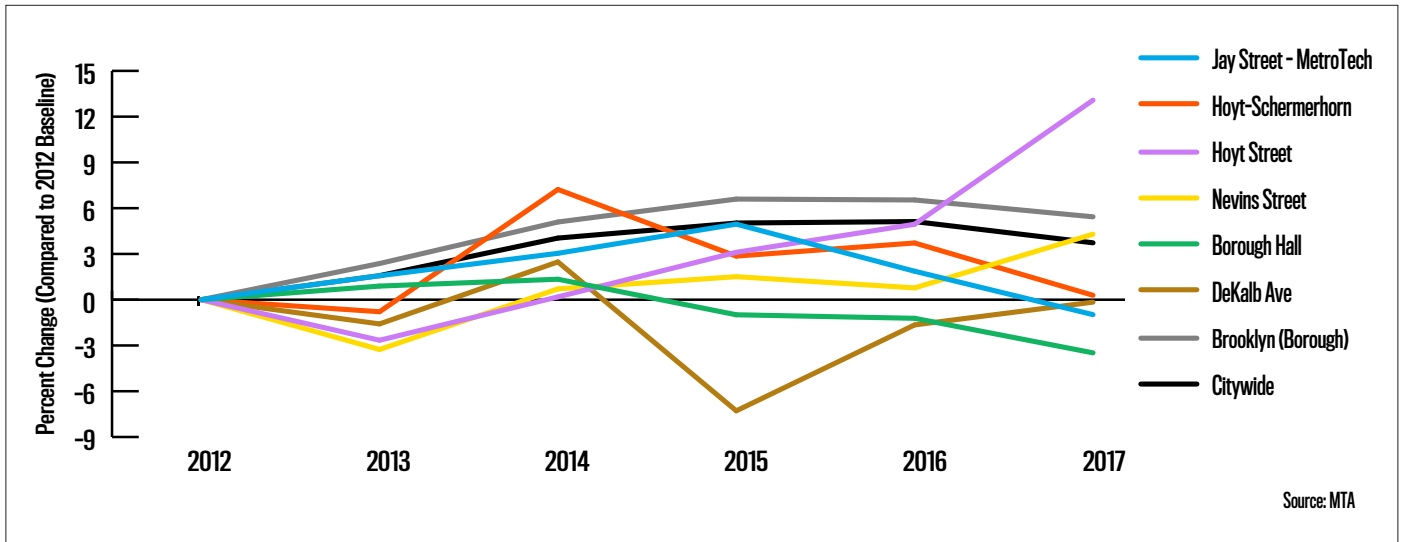


Figure 42: Percent Change in Average Weekday Ridership, Downtown Brooklyn Subway Stations, 2012 to 2017

residents to an already overburdened neighborhood. These include the 1.75 million-sf Long Island City Innovation Center (LICIC) proposed by TF Cornerstone Inc., in partnership with EDC, on two City-owned sites that will add 1,146 dwelling units and almost 3,000 new residents to the area. Directly south of the site, the Anable Basin Rezoning, proposed by Plaxall Realty, will facilitate 5.8 million sf of mixed-use development on 15 acres, adding almost 5,000 dwelling units and 13,487 residents. The City is also exploring the feasibility of developing 180 acres over Sunnyside Yards, which has the potential for up to 29.8 million sf of mixed-use development, including as many as 24,000 new dwelling units.

The TF Cornerstone and Anable Basin developments, which share the same project area, are currently being reviewed as separate projects under CEQR. This calls into question the evaluation of cumulative impacts and whether the environmental review processes are being segmented to avoid a more impactful development scenario.

Meanwhile, in Downtown Brooklyn, many proponents of the 1.1 million-sf mixed-use development proposed at 80 Flatbush Avenue, cite the project's offerings to the community, including much-needed schools and affordable housing. Ironically, the need for these benefits was largely generated by the lack of comprehensive planning during the Downtown Brooklyn Rezoning.

Part IV: Recommendations

Large-scale neighborhood rezonings have the power to permanently change the shape of communities. The CEQR process can and should do more than disclose limited (and sometimes imaginary) outcomes from these actions. The following recommendations would deliver a more accurate, predictable, and accessible environmental review process, one that decision makers need and New Yorkers deserve.

Strengthen RWCDs and Soft Site Analysis Methodology

Update the *CEQR Technical Manual* criteria for establishing an analysis framework to:

- Use a long-term build year that includes all development sites under a rezoning, rather than only those likely to be developed in a shorter period of time.
- Include lots smaller than 5,000 sf as well as those containing rent-stabilized units in soft site evaluations.
- Require explanatory details for lots identified as soft sites, and include the criteria used to determine their status.

Increase Range and Scope of Alternatives

Update CEQR regulations to include the following alternatives for large-scale rezonings:

- Development Right Transfer Alternatives: identify additional development that could reasonably be expected through the transfer of available development rights and zoning lot mergers.⁵²
- Optimal Sustainable Development Scenario: evaluate a development scenario that applies sustainable practices for construction and operation that reduce water and energy use, greenhouse gas emissions, urban heat-island effect, shadows, and other key sustainability metrics.
- Community-Based Plan Alternative: evaluate a

development scenario that conforms with any existing community-based plan, 197a or otherwise.⁵³

- Reversed Proposed Land Use Alternative: analyze a development scenario showing different primary land uses that would also be permitted by the new zoning (e.g., a development scenario that fosters residential growth rather than commercial).

Require Generic EISs for Area-wide Rezonings

Revise the *CEQR Technical Manual* methodology to:

- Establish specific development or area thresholds for determining when Generic Environmental Impacts Statements (GEIS) should be used.
- GEISs should be used for larger-scale neighborhood rezonings and other broad-based actions because they are more effective at identifying cumulative impacts. GEISs also foster the consideration of mitigation and alternatives early in the planning process, when there is more room for flexibility. GEISs allow the consideration of hypothetical development scenarios that could occur (i.e., residential development instead of commercial development in a district that allows both uses).⁵⁴

Improve Accuracy in Project Purpose and Need

Amend the Rules of the City of New York (Chapter 5) to require:

- A clear and accurate explanation of how proposed actions balance project goals with environmental concerns.
- Stated objectives that specifically correspond to how City-sponsored projects would meet public needs and respond to applicable policies.
- Statements and claims to be made in the EIS Purpose and Need section to accurately reflect the intent of a project

⁵² Although the transfer of development rights is an as-of-right action and therefore not subject to CEQR, the transfer of development rights has a significant impact on redevelopment in a large-scale rezoning. The *CEQR Technical Manual* methodology should be revised to include the potential for the use of development rights, zoning lot mergers, and/or ZLDAs. All of the factors discussed in soft site analysis also must be considered in conjunction with the transfer of development rights that compound the market pressures and probabilities of site redevelopment.

⁵³ City of New York, Rules of the City of New York.

⁵⁴ With regard to projects that involve several actions for which a GEIS may be better suited than a project-based EIS. *The Special Long Island City Mixed Use District* has been subject to three separate actions, including the Long Island City Rezoning of 2001 and the subsequent rezonings of the Hunters Point Subdistrict in 2004 and the Dutch Kills Subdistrict in 2008. Two years after the approval of the Downtown Brooklyn Development, New York State Empire State Development issued the FEIS for the nearby Atlantic Yards Area and Redevelopment Project.

by requiring quantitative evaluations which demonstrate how goals will be achieved (e.g., if the project proposes to add new affordable housing units, the EIS must evaluate the impacts of various income levels under the Mandatory Inclusionary Housing program).

(e.g., traffic signal changes at particular intersections), a schedule detailing when the measures would be implemented, and the specific procedures by which the mitigation would be monitored, and if applicable, tested for effectiveness.⁵⁶

Reinforce Mitigation Measures and Procedures

Amend the Rules of the City of New York (Chapter 5) to require:

- Draft EISs to include details of specific mitigation measures approved by the City agency responsible for implementing them. Doing so would give the public the opportunity to review and comment before an FEIS is issued.
- Post Approval Impact Analysis to be prepared by an independent body of practitioners acting in coordination with MOEC with expertise in various CEQR-related evaluations (e.g., environmental planners, traffic engineers, architects, sustainable design experts). Further, the Post Approval Impact Analysis must be available through MOEC's CEQR Access Portal.
- Phased follow-up technical memoranda by Lead agencies at designated times during project construction and operation to evaluate the efficacy of identified mitigation measures.⁵⁵
- Fulfillment of mitigation commitments for projected and potential development as a condition for granting certificates of occupancy, if they are to be performed by the time of occupancy.
- Consideration of unmitigated or unfulfilled mitigation measures from previous rezonings within a project's quarter-mile study area.

Track Mitigation Measures

Amend Local Law 175 to require:

- Written commitments for mitigation measures identified in EISs, with the type and location of the specific measures

Improve Transparency and Accountability in the CEQR Process

Through active coordination with DCP, CPC, and MOEC:

- Require post-implementation review as part of the City's contract with the preparer of an EIS. Ideally such reviews would be conducted every few years.
- Require a commitment to perform post-implementation review as a condition of EIS acceptance, when an EIS is prepared by a consulting firm retained by a private applicant.
- Upgrade the CEQR Access website to include all CEQR EISs and Environmental Assessment Statements in the search function. The database should be integrated with the New York State Department of Environmental Conservation and include applicable SEQRA environmental review documents linked to a GIS mapping feature that shows the locations of all CEQR/SEQRA actions within the city. The CEQR Access database should also include all CEQR findings statements, with the mitigation commitments readily identifiable, and integrated into the GIS feature. This will make it much easier to track implementation of mitigation commitments.

Improve EIS Quality

Through active coordination with MOEC, DCP, Borough Presidents' Offices, and Community Boards:

- Improve the standards for form, content, and consistency to make EISs more readable.
- Create a short form to supplement an EIS which highlights the primary findings and conclusions in plain language.

⁵⁵ NYS Department of Environmental Conservation, SEQRA Handbook.

⁵⁶ See note 55.

Appendix A: Environmental Review Overview

Environmental Review Legislative Background and Overview

This section provides an overview of the federal, state, and city legislative actions that led to the establishment of CEQR, the intent of environmental review, and the methodology and evaluation criteria used in CEQR evaluations.

Legislative Background

National Environmental Policy Act of 1969

Responding to the demands of the growing environmental movement in the 1960s, President Richard M. Nixon passed the National Environmental Policy Act of 1969 (NEPA), the country's most far reaching federal environmental legislation. NEPA requires that federal agencies consider and evaluate the environmental consequences of actions they fund or sponsor, as well as examine viable alternatives that reduce potential environmental impacts. NEPA also allows other municipalities to adopt their own environmental quality policy, as long as it was no less restrictive than NEPA.

Through this provision, the New York State Legislature passed the State Environmental Quality Review Act (SEQRA) in 1975 which requires all State and local government agencies to assess the environmental effects of discretionary actions before they could be approved.

City Environmental Quality Review

In 1977, local governments in New York State were granted the option to create their own environmental review procedures provided that they are at least as protective as those under SEQRA. Under this provision, New York City Mayor Abraham Beame signed Executive Order No. 91 in 1977, which established the City Environmental Quality Review (CEQR) process to address the specific needs of the city. Although a City process, CEQR must also satisfy the statutory requirements of the State.

CEQR was significantly overhauled in 1991 to include a number of changes. One substantial update was the assignment of a project lead agency, which is the entity responsible for facilitating the environmental review process. Before this change, the Department of City Planning (DCP) and the Department of Environmental Protection (DEP) served as co-leads for actions subject to CEQR. However, the 1991 overhaul established that the most appropriate City agency would be designated as the lead agency for each project under review.

Purpose of Environmental Review

As defined by SEQRA, environmental review is designed to create a process for systematically considering environmental factors early in the planning process. It also allows for projects to be modified as needed to avoid adverse environmental impacts. Environmental review is intended to improve the decision-making process of governmental entities by balancing social, economic, and environmental factors.

CEQR carries a higher standard of evaluation to meet the unique environmental needs of the city and is required by State law to provide an analysis at least as rigorous as SEQRA. Over the years, the definition of environment has been broadened under CEQR to include "existing patterns of population concentration, distribution, or growth and existing community or neighborhood character."⁵⁷ Also, an analysis of potential impacts on socioeconomic conditions as a necessary component to environmental review has been added.

CEQR Methodology and Evaluation Criteria

CEQR Technical Manual

Another change in the CEQR process from 1991 was the codification and standardization of requirements for review and Environmental Impact Statements (EISs). The EIS is the primary document used in the CEQR process to identify and

⁵⁷ Kevin Healy, Environmental Review Process

describe the effects of a particular action on the environment. An EIS must include sufficient information to allow reviewers and decision-makers to evaluate the potential impacts of an action on a wide array of environmental categories and weigh the merits of identified alternatives. The first *CEQR Technical Manual*, which laid out the environmental topics areas to be evaluated, methodologies for the various analyses, and other pertinent project information required for an EIS, was released in 1993. It has been updated several times, most recently in 2014.

Analysis Framework

The analytic framework for a CEQR evaluation is the incremental difference between the predicted future in the absence of a particular action (No-Action) and the predicted future with the proposed action (With Action). The Reasonable Worst Case Development Scenario (RWCDs), as the standard analytical framework for CEQR evaluations, was not formally established until the 2010 update of the *CEQR Technical Manual*.

The RWCDs considers the future scenario with the highest level of development anticipated by the proposed action being evaluated and the worst environmental consequences from a range of reasonable and likely development possibilities. Theoretically, the RWCDs is designed to ensure that regardless of which future development scenario actually occurs, the impacts of a particular project would be no worse than those already evaluated during the environmental review process. The final step in a CEQR evaluation is identifying and evaluating the impacts of development under the RWCDs on the following 19 environmental categories.

- Land Use, Zoning and Public Policy
- Socioeconomic Conditions
- Community Facilities and Services
- Open Space
- Shadows
- Historic and Cultural Resources

- Urban Design and Visual Resources
- Natural Resources
- Hazardous Materials
- Water and Sewer Infrastructure
- Solid Waste and Sanitation Services
- Energy
- Transportation
- Air Quality
- Greenhouse Gas Emissions and Climate Change
- Noise
- Public Health
- Neighborhood Character
- Construction

Soft Site Analysis

Soft sites are locations within a Project Area where specific development is not currently proposed or planned, but could be developed by the projected build year of a project being reviewed under CEQR. The importance of soft sites is that in some cases, such as large-scale rezonings, a CEQR analysis takes into consideration development that would occur on these sites under existing zoning in the future No-Action condition.

Soft sites can be one lot or collections of lots within a Project Area. The *CEQR Technical Manual* provides general guidance on soft site evaluation criteria, for example, sites that contain buildings built to substantially less than the maximum allowable Floor Area Ratio (FAR), as these sites could provide an incentive to be developed in the future.⁵⁸ Soft sites also must be large enough to be developed. Lots under 5,000 square feet are not considered soft sites. Previous versions of the *CEQR Technical Manual* generally considered soft sites to be lots on which less than 50 percent of permitted floor area was built.

Determining soft sites also requires considering many location-specific variables. For example, underbuilt sites considered ripe for conversions (i.e., manufacturing to residential) are regarded as likely soft sites while rent stabilized units are not because they “are difficult to legally demolish due to tenant

⁵⁸ Floor Area Ratio is the relationship between the total amount of usable floor area a building is permitted to have under zoning and the total area of the lot on which the building stands.

relocation requirements” and protections under the Rent Stabilization Law.⁵⁹ The *CEQR Technical Manual* refers to current and historic market conditions in examining potential soft sites, but does not specify how or to what extent those conditions should be considered.

Determining Build Year for Projects

The *CEQR Technical Manual* provides guidance on determining the time during which development and the associated environmental impacts of an action can be expected to be completed. Previous versions of the *CEQR Technical Manual* stated that an EIS should analyze the impacts of an action up until the “build year,” defined as “the year when the action would be substantially operational.” Accordingly, the build year is when the effects of an action would be felt and when mitigation measures to address adverse impacts would need to be in place.

The 2010 update of the *CEQR Technical Manual* set a maximum 10-year time frame for most actions that do not cover a significant area and removed the requirement for mitigation measures where adverse impacts are projected. The rationale for the 10-year time frame was that it would allow the analysis to capture a typical cycle in the real estate market as well as the longest timeframe within which predictions of the future could be made without speculation. Many large-scale neighborhood rezonings that occurred after 2010 analyzed project build years between nine and 15 years.

The RWCDs would theoretically represent the highest impact development over the shortest period of time. However, a prolonged period of development could also pose its own series of challenges, such as changing market conditions, emerging technologies and other unknown factors not evaluated in an EIS.

Alternatives

Starting with NEPA, one of the primary requirements of environmental review is the analysis and comparison of alternatives to a proposed project. However, there is a fair amount of variation on how alternative analyses are conducted

and what can be expected as an alternative analysis for a particular action. Under SEQRA, an EIS must “analyze the significant adverse impacts and evaluate all reasonable alternatives.” SEQRA rules clarify that such alternatives must be feasible and described with sufficient detail as to allow a comparative assessment against the action.

The State’s rules provide a list of seven potential variables that can be adjusted in order to generate alternatives that merit consideration: “sites; technology; scale or magnitude; design; timing; use; and types of action.” At a minimum, the no-action alternative, the evaluation of the development that would occur in the absence of the proposed action, must be included in the range of alternatives.

The *CEQR Technical Manual’s* guidance on alternative analysis parallels SEQRA’s rules on the need for various types of alternative scenarios to be evaluated. However, CEQR regulations do not require that *all* reasonable alternative scenarios be evaluated, only that an appropriate range of alternatives must be considered.

Mitigation of Adverse Impacts

CEQR requires that mitigation measures are put in place to minimize or avoid significant adverse effects identified in an EIS. SEQRA regulations only require that mitigation measures are described and evaluated for expected adequacy in reducing significant adverse impacts. The *SEQR Handbook* is more specific: “The findings must incorporate conditions requiring practicable mitigation measures to ensure that the adverse environmental impacts of the least damaging alternative will be avoided or minimized.” In contrast, the *CEQR Technical Manual* states “in the absence of a commitment to mitigation or when no feasible mitigation measures can be identified” all that is required is a reasoned explanation as to why a mitigation measure is not practicable, and a disclosure of the potential for unmitigated significant adverse impacts.

⁵⁹ NYC Planning, Reasonable Worst Case Development Scenario Form, Section 7 – Development Site Assumptions.

Appendix B: Summary Tables

Appendix B, Table 1: Projected Development Sites, Long Island City

Site Description	Block(s)	Lot(s)	Total Lot Area	Use (2002)	Built GSF	Projected Use	Projected GSF
413 (23 rd to 24 th Streets) Projected Residential	413	16, 22, 27, 32, 37	37,000	Light Industrial	27,509	Residential	181,000
Sites 1 & 2 (24 th to Crescent Streets)	414	17, 23, 35	50,000	Office, Parking lot	20,070	Residential	287,000
415 (Crescent to 27 th Streets) Projected Residential	415	24, 26, 28	15,000	Light Industrial	25,400	Residential	75,000
Site 3 (27 th to 28 th Streets)	416	28, 32	15,000	Institutional, Retail	9,410	Residential	75,000
417 (28 th to 29 th Streets) Projected Residential	417	14, 20	10,000	Light Industrial	14,000	Residential	50,000
Office Site A	420	1	126,130	Parking Garage, Retail	557,000	Office	1,513,000
431 (west side of Hunter Street) Projected Residential	431	7, 8, 17, 27	13,000	Light Industrial, Residential	9,809	Residential	64,000
432 (Jackson Ave. Institutional Use Site)	432	8, 38, 47	37,500	Light Industrial	93,425	Residential, Institutional	254,000
Office Site D	428	1	37,000	Parking Lot	9,730	Office	296,000
Office Site B (QP Marketplace)	263; 264	263: 1, 9; 264: 1, 14, 17	125,200	Light Industrial, Office	139,630	Office	1,500,000
Office Site C	435	13, 28, 29,	49,333	Parking Lot, Light Industrial, Residential	15,976	Office	592,000
Site E (Special Permit Site)	72; 86	72: 80; 86: 1, 6, 7, 8, 22	127,150	Light Industrial, Residential, Retail	208,925	Office	1,025,016

Sources: Long Island City Zoning Changes and Related Actions FEIS, 2002, MapPluto Data

Appendix B, Table 2: Projected Development Sites, Downtown Brooklyn

Site Label	Block(s)	Lot(s)	Total Lot Area	Use (2004)	Built GSF	Maximum ZFA	Projected Uses	Projected GSF
C	142	1	73,335	Community Facility	72,000	310,000	Office; Community Facility	800,000
G	2049	8	10,000	Industrial, Residential	60,000	10,000	Residential, Retail	81,000
I(A)	2060; 2061; 2062	2060: 22-27, 32, 122; 2061: 1; 2062: 6	64,000	Retail, Community Facility	41,000	156,000	Residential, Retail, Public Parking	360,000
J	2061	1	86,000	Retail	38,000	209,000	Residential, Retail	345,000
M	153; 154	153: 3, 14, 15; 154: 1, 5, 11, 12, 36-40	71,000	Residential, Retail, Office	235,000	707,000	Office, Retail	848,000
O	145	8, 10, 13-16, 18-22, 26, 32	49,000	Residential, Retail, Parking	85,000	297,000	Office, Retail	594,000
P	146	2, 7, 11-18, 23, 29, 34-37, 41-43, 46-52	87,000	Residential, Retail, Parking	158,000	524,000	Office, Retail, Public Space, Public Parking	1,047,000
Q	149	1, 49	137,000	Retail, Parking	373,000	824,000	Office, Retail	1,648,000
S	2093	1	51,000	Office, Retail	376,000	304,000	Office, Retail	388,000*
AA	165	17-19, 58	18,000	Parking	1,000	109,000	Residential, Retail	181,000
BB	165	29	21,000	Retail; Office	25,000	124,000	Residential, Retail	207,000
EE	2110	3	58,000	Parking	2,000	12,000	Community Facility, Cultural	195,000

Sources: Downtown Brooklyn Rezoning FEIS

*Projected 12,000 square feet of infill only

Appendix B, Table 3: Projected Development Sites, Long Island City, 2018

Site	Block	New Buildings	Future Buildings	Year Redeveloped	Lot Area	Building GSF	Residential GSF	Res. Units	Office GSF	Retail GSF	Other GSF	Main Uses
Projected Residential	413	3	-	2013 - 2018	40,761	297,225	248,472	261	0	23,600	25,153	Residential
Sites 1 & 2	414	3	1	2011 - 2017*	59,959	207,089	203,794	253	0	3,295	0	Residential
Projected Residential	415	1	1	2017*	15,046	49,083	25,523	32	5,000	2,160	11,400	Residential, Other
Site 3	416	1	-	2007	15,000	28,662	19,768	26	5,760	2,270	864	Residential, Office
Projected Residential	417	-	-	Not Developed	10,000	14,000	0	0	4,000	800	9,200	Other, Office
Office Site A	420	1	1	2009*	116,518	543,946	0	0	543,946	0	0	Office
Projected Residential	431	-	-	Not Developed	13,045	9,914	1,180	2	0	1,367	7,367	Factory
Jackson Ave. Institutional Use Site	432	1	-	2007	35,681	125,948	29,899	24	65,750	10,049	20,250	Office, Residential, Retail
Office Site D	428	-	1	Not Developed*	33,950	9,730	0	0	0	0	9,730	Parking Lot
Office Site B (QP Marketplace)	263; 264	3	-	2017 - 2018	119,080	1,577,380	1,540,137	1,891	0	10,766	26,477	Residential, Retail
Office Site C	435	1	-	2013	48,550	731,391	660,607	709	0	21,942	48,842	Residential, Retail
Special Permit Site	72; 86	1	-	2018	128,150	1,093,567	974,506	1,115	0	39,929	79,132	Residential, Retail

Sources: 2018 MapPluto Data, NYC DoITT, Google Maps
 *Additional Future Development Proposed or Under Construction

Appendix B, Table 4: Actual Development on Upgrade and Unidentified Development Sites, Long Island City

Address	Block	Lot	Year Developed	Lot Area	Building GSF	Residential GSF	Res. Units	Office GSF	Retail GSF	Other GSF	Main Uses
Completed Developments on Upgrade Sites											
41-21 27th St.	416	21	2002	199,995	251,812	0	-	246,646	-	5,166	Office
45-50 Pearson St.	85	41	2014	28,617	142,398	142,398	197	-	-	-	Residential
29-11 Queens Plz. N.	418	7501	2016	14,931	126,485	108,075	132	-	3,170	15,240	Hotel
29-21 41st Ave.	418	24	2015	6,724	85,140	-	-	-	-	85,140	Hotel
Completed Developments on Unidentified Development Sites											
43-22 Queens St.	266	3	2018	66,000	710,860	694,828	790	-	16,032	-	Residential, Retail
43-25 Hunter St.	433	7501	2017	49,393	681,188	642,383	974	-	17,726	21,079	Residential, Retail
42-12 28th St.	422	7	2017	17,500	483,148	477,270	477	-	5,878	-	Residential, Retail
23-21 44th Dr.*	437	7501	2006	41,021	441,484	-	-	441,484	0	0	Office, Education
41-42 24th St.	413	2	2015	41,628	395,000	364,740	421	-	10,000	20,260	Residential, Retail
23-01 42nd Rd.	425	1	2016	14,920	390,824	376,824	391	-	-	14,000	Residential
29-22 Northern Bl.	239	1001	2018	33,412	380,692	369,320	467	-	-	11,372	Residential
24-01 44th Rd.	435	1	2006	20,100	274,433	-	-	274,433	-	-	Office
44-30 Purves St.	268	1	2017	27,249	267,655	266,032	272	-	1,623	-	Residential, Retail
44-35 Purves St.	267	9	2016	25,600	259,805	259,805	284	-	-	-	Residential
41-21 28th St.	417	3	2018	19,432	152,840	139,670	199	-	675	12,495	Residential
27-19 44th Dr.	268	8	2017	7,980	142,849	140,042	168	-	2,807	-	Residential, Retail
42-25 27th St.	422	1	2013	9,500	137,771	129,371	142	-	-	8,400	Residential
41-34 Crescent St.	414	41	2008	16,536	124,500	121,500	143	-	3,000	-	Residential, Retail
41-23 Crescent St.	415	7502	2009	25,363	123,626	113,240	121	-	5,949	4,437	Residential, Retail
27-21 44th Dr.	268	7501	2017	14,741	109,115	98,667	120	-	5,870	4,578	Residential, Retail
26-14 Jackson Ave.	268	15	2014	10,000	79,897	75,062	98	-	4,835	-	Residential, Retail
41-26 27th St.	415	7501	2006	12,524	74,003	67,443	66	2,896	-	3,664	Residential
27-45 Jackson Ave.	432	5	2016	9,478	73,643	-	-	-	-	73,643	Hotel
25-19 43rd Ave.	430	7501	2018	14,985	67,888	65,220	86	-	-	2,668	Residential
44-27 Purves St.	267	7501	2007	64,957	63,519	59,319	64	-	-	4,200	Residential
27-03 43rd Ave.	432	25	2017	9,995	55,988	-	-	-	-	55,988	Hotel
42-60 Crescent St.	429	7501	2017	10,166	54,974	49,611	37	-	-	5,363	Residential
42-14 Crescent St.	424	25	2016	5,000	42,301	39,061	48	-	3,240	-	Residential, Retail
41-07 Crescent St.	415	20	2016	4,750	42,092	38,572	48	-	3,520	-	Residential, Retail

Address	Block	Lot	Year Developed	Lot Area	Building GSF	Residential GSF	Res. Units	Office GSF	Retail GSF	Other GSF	Main Uses
24-12 42nd Rd.	429	21	2018	6,750	40,643	35,834	36	-	4,809	-	Residential, Retail
26-26 Jackson Ave.	267	7502	2009	5,000	37,616	32,057	43	-	5,559	-	Residential, Retail
44-15 Purves St.	267	7503	2013	5,000	36,876	34,542	48	-	-	2,334	Residential
42-24 Crescent St.	424	29	2003	4,500	31,500	-	-	-	-	31,500	Hotel
42-48 27th St.	430	20	2018	5,000	29,602	29,602	32	-	-	-	Residential
42-37 27th St.	431	7501	2014	4,500	20,672	16,006	28	-	4,146	520	Residential, Retail
42-77 Hunter St.	432	35	2015	2,494	14,503	14,016	14	-	487	-	Residential, Retail
42-83 Hunter St.	432	32	2018	2,494	13,775	13,775	15	-	-	-	Residential
42-61 Hunter St.	432	41	2010	2,499	13,200	11,000	8	-	2,200	-	Residential, Retail
41-18 27th St.	415	7503	2015	2,504	10,516	10,275	14	-	-	241	Residential
42-43 27th St.	431	12	2017	1,865	7,181	5,807	8	-	1,374	-	Residential, Retail
Proposed Future Developments on Upgrade Sites											
29-55 Northern Blvd.	403	6	Future	75,509	781,146	764,932	958	-	16,214	-	Residential, Retail
42-26 28th St.	422	31	Future	13,500	221,266	-	184	-	-	-	Residential
Proposed Future Developments on Unidentified Development Sites											
43-30 24th St.	436	1	Future	56,459	934,864	825,211	923	-	17,453	-	Residential
23-15 44th Dr.*	437	5	Future	79,026	780,677	765,940	802	-	14,737	-	Residential, Retail
24-09 Jackson Ave.	80	4	Future	17,820	260,857	-	-	-	-	260,857	Hotel
42-22 27th St.	423	29	Future	24,150	140,130	108,860	195	-	20,304	-	Residential, Retail
45-57 Davis St.	85	30	Future	11,600	106,839	106,547	158	-	292	-	Residential, Retail
43-14 Hunter St.	434	16	Future	1,875	90,485	86,478	123	-	18,491	-	Residential
24-16 Queens Plz. So.	424	19	Future	11,385	90,365	86,529	117	-	3,836	-	Residential
42-10 27th St.	423	25	Future	11,274	90,153	82,122	110	-	8,031	-	Residential
27-01 Jackson Ave.	432	21	Future	9,195	73,192	67,068	91	-	6,124	-	Residential
41-05 29th St.	418	19	Future	2,250	68,984	66,934	84	-	2,050	-	Residential, Retail
29-00 Queens Plz. E.	239	7	Future	6,200	65,707	55,589	82	-	10,117	-	Residential, Retail

Address	Block	Lot	Year Developed	Lot Area	Building GSF	Residential GSF	Res. Units	Office GSF	Retail GSF	Other GSF	Main Uses
5 Court Sq.	81	9	Future	7,750	62,908	57,905	58	8,387	-	-	Residential
44-46 Purves St.	268	31	Future	4,566	36,487	-	-	-	-	36,487	Hotel
41-32 27th St.	415	36	Future	4,278	33,924	33,924	46	-	-	-	Residential
27-51 Jackson Ave.	432	3	Future	3,998	31,612	29,873	43	1,739	-	-	Residential
41-21 23rd St.	413	15	Future	2,475	24,675	23,119	29	1,483	-	-	Residential, Retail
42-22 Crescent St.	424	27	Future	4,500	22,148	20,784	31	1,364	-	-	Residential, Retail
25-01 43rd Ave.	430	37	Future	4,370	22,080	-	-	22,080	-	-	Hotel
41-41 24th St.	414	12	Future	2,504	20,020	20,020	24	-	-	-	Residential
45-34 Pearson St.	85	50	Future	2,500	12,499	12,493	16	-	-	-	Residential
42-44 Crescent St.	429	26	Future	2,500	12,495	10,202	12	2,291	-	-	Residential, Retail
43-16 24th St.	436	10	Future	1,257	3,092	-	-	3,092	-	-	Office
23-10 Queens Plz. So.	425	5	Future	27,200	Speculative - No DOB Data as October 2018						
26-32 Jackson Ave.	267	1	Future	10,000	Speculative - No DOB Data as October 2018						
43-15 Queens St.	265	6	Future	17,500	Speculative - No DOB Data as October 2018						

Sources: 2018 MapPluto data, NYC DOB Zoning Diagram Filings

* Lots were identified as "No Action" development sites in the FEIS, but little details were provided in the document

Appendix B, Table 5: Projected Development Sites, Downtown Brooklyn in 2018

Site Label	New Buildings	Future Buildings	Year Redeveloped	Lot Area	Building GSF	Residential GSF	Res. Units	Office GSF	Retail GSF	Other GSF	Main Uses
C	-	-	Not Developed	73,335	420,000	0	0	0	0	420,000	Community Facilities
G	-	-	Not Developed	10,392	44,740	0	0	41,000	3,015	725	Office
I(A)	2	-	2009 - 2017	36,652	772,802	627,174	679	57,259	27,310	61,059	Residential, Office
J	3	-	2010 - 2016	88,181	615,475	467,123	528	0	43,527	104,825	Residential, Retail
M	1	1	2017*	63,603	336,628	115,616	108	155,768	62,539	2,705	Office, Residential, Retail
O	3	-	2010 - 2015	49,539	1,136,486	823,985	826	0	15,114	297,387	Residential, Hotel
P	3	2	2011 - 2018*	103,025	333,731	215,927	258	0	54,280	63,524	Residential, Retail
Q	1	1	2015*	134,676	1,148,280	636,950	690	0	480,875	30,455	Retail, Residential
S	-	-	Not Developed	50,618	376,071	0	0	298,381	47,000	30,690	Office
AA	1	-	2011	18,145	228,246	200,380	303	0	27,866	0	Residential
BB	-	-	Not Developed	20,670	23,885	3,563	2	0	20,322	0	Retail
EE	1	-	2016	49,830	394,777	280,779	376	0	22,173	91,825	Residential, Retail

Sources: 2018 MapPluto data, NYC DoITT, Google Maps

*Additional Future Development Expected

Appendix B, Table 6: Actual Development on Potential and Unidentified Development Sites, Downtown Brooklyn

Address	Block	Lot	Year Developed	Lot Area	Building GSF	Residential GSF	Res. Units	Office GSF	Retail GSF	Other GSF	Main Uses
Completed Potential Sites											
350 Livingston St.	167	13	2017	52,705	662,532	592,195	750	-	34,823	35,514	Residential
285 Jay St.	131	1	2018	139,810	614,739	-	-	-	-	614,739	Academic
343 Gold St.	2049	2	2009	42,942	442,714	413,714	631	-	1,800	27,200	Residential
388 Bridge St.	152	7501	2014	20,103	405,981	317,831	371	-	43,384	44,766	Residential
306 Gold St.	133	7501	2008	11,832	304,647	271,856	302	-	4,053	28,738	Residential
309 Gold St.	134	1	2014	17,000	235,382	197,322	256	-	2,600	35,460	Residential
189 Schermerhorn St.	164	7502	2010	21,438	231,289	184,874	245	-	14,685	31,730	Residential
156 Tillary St.	133	15	2017	5,860	58,600	-	-	-	-	58,600	Hotel
125 Flatbush Ave. Ext.	133	13	2014	4,700	53,311	-	-	-	3,800	49,511	Hotel
Completed Unidentified Development Sites											
33 Bond St*	166	7502	2017	49,942	612,049	503,889	714	-	68,031	40,129	Residential
1.1.1 Lawrence St.	148	1	2009	15,534	456,082	421,000	492	-	8,750	26,332	Residential, Retail
45 Hoyt St.	165	1	2018	25,112	352,170	303,813	368	-	15,784	32,573	Residential
40 Nevins St.	166	40	2016	7,470	85,347	-	-	-	3,200	82,147	Hotel
319 Schermerhorn St.	167	7501	2017	5,543	60,576	55,905	73	-	4,671	-	Residential
Proposed Future Developments on Potential Sites											
532 Fulton St.	161	18	Future	16,458	333,461	236,869	327	96,592	-	-	Residential
167 Willoughby St.	2062	23	Future	2,425	24,250	24,250	28	-	-	-	Residential
80 Flatbush Ave.	174	-	Future	60,302		Under CEQR Review as of October 2018					Mixed-Use
Future Red Sky Bldg.	149	-	Future	47,341		Speculative - No DOB Data as of October 2018					Residential
Proposed Future Developments on Unidentified Development Sites											
9 DeKalb Ave.	149	100	Future	46,367	556,164	463,470	417	92,694	-	-	Residential
8 Nevins St.	161	47	Future	13,519	161,879	159,215	184	2,664	-	-	Residential
285 Schermerhorn St.	166	7501	Future	11,108	92,553	78,869	105	13,684	-	-	Residential
215 Schermerhorn St.	165	60	Future	7,556	74,115	67,807	48	6,308	-	-	Residential
291 Livingston St.	161	61	Future	3,400	40,721	-	-	-	-	40,721	Hotel

Sources: 2018 MapPluto data, NYC DOB Zoning Diagram Filings

* Lot was identified as a "No Action" site in the EIS, but the resulting structure is vastly different from what was outlined in the document

Appendix B, Table 7: Comparison of Projections and Actual Development, Long Island City

Site Label	Projected Residential GSF+	Built Residential GSF	Difference Residential	Projected Office GSF	Built Office GSF	Difference Office	Projected Retail	Built Retail GSF	Difference Retail	Projected Total GSF	Total Built GSF	Difference Total
413 (23 rd to 24 th Streets) Projected Residential	181,000	248,472	67,472	0	0	0	0	23,600	23,600	181,000	297,225	116,225
Sites 1 & 2 (24 th to Crescent Streets)	287,000	203,794	-83,206	0	0	0	0	3,295	3,295	287,000	207,089*	-79,911
415 (Crescent to 27 th Streets) Projected Residential	75,000	25,523	-49,477	0	5,000	5,000	0	2,160	2,160	75,000	49,083*	-25,917
Site 3 (27 th to 28 th Streets)	75,000	19,768	-55,232	0	5,760	5,760	0	2,270	2,270	75,000	28,662	-46,338
417 (28 th to 29 th Streets) Projected Residential	50,000	0	-50,000	0	4,000	4,000	0	800	800	50,000	14,000	-36,000
Office Site A	0	0	0	1,488,000	543,946	-944,054	25,000	0	-25,000	1,513,000	543,946*	-969,054
431 (west side of Hunter Street) Projected Residential	64,000	1,180	-62,820	0	0	0	0	1,367	1,367	64,000	9,914	-54,086
432 (Jackson Ave. Institutional Use Site)†	74,000	29,899	-44,101	0	65,750	65,750	0	10,049	10,049	254,000	1,25948	-1,28,052
Office Site D	0	0	0	286,000	0	-286,000	10,000	0	-10,000	296,000	9,730*	-286,270
Office Site B (QP Marketplace)	0	1,540,137	1,540,137	1,475,000	0	-1,475,000	25,000	10,766	-14,234	1,500,000	1,577,380	77,380
Office Site C	0	660,607	660,607	577,000	0	-577,000	15,000	21,942	6,942	592,000	731,391	139,391
Site E (Special Permit Site)	0	974,506	974,506	1,000,016	0	-1,000,016	25,000	39,929	14,929	1,025,016	1,093,567	68,551
Total	806,000	3,703,886	2,897,886	4,826,016	585,926	-4,240,090	200,000§	116,178	-83,822	5,912,016	4,687,935	-1,224,081

Sources: Long Island City FEIS, MapPluto 2018 data

*Additional Future Development Expected

† Residential Floor Area Estimates are based on the Maximum Potential New Units table in the FEIS. These totals do not correspond to the total of 300,000 SF of residential development stated in the RW/CDS

‡ This site also projected to include 180,000 SF of Institutional Use (CUNY Law School)

§ The FEIS estimates that an additional 100,000 SF of retail space will be added to the ground floor of one of the projected office buildings

Appendix B, Table 8: Comparison of Projections and Actual Development, Downtown Brooklyn

Site Label	Projected Residential GSF	Built Residential GSF	Difference Residential	Projected Office GSF	Office Built GSF	Difference Office	Projected Retail GSF	Retail Built GSF	Difference Retail	Projected Total GSF	Total Built GSF	Difference Total
C	0	0	0	720,000	0	-720,000	0	0	0	800,000	420,000	-380,000
G	71,000	0	-71,000	0	41,000	41,000	10,000	3,015	-6,985	81,000	44,740	-36,260
I(A)	300,000	627,174	327,174	0	57,259	57,259	60,000	27,310	-32,690	360,000	772,802	412,082
J	259,000	467,123	208,123	0	0	0	86,000	43,527	-42,473	345,000	615,475	270,475
M	0	115,616	115,616	778,000	155,768	-622,232	70,000	62,539	-7,461	848,000	336,628*	-511,372
O	0	823,985	823,985	544,000	0	-544,000	50,000	15,114	-34,886	594,000	1,136,486	542,486
P	0	215,927	215,927	999,000	0	-999,000	48,000	54,280	6,280	1,047,000	333,731*	-713,269
Q	0	636,950	636,950	1,233,000	0	-1,233,000	415,000	480,875	65,875	1,648,000	1,148,280*	-499,720
S	0	0	0	337,000	298,381	-38,619	51,000	47,000	-4,000	388,000	376,071	-11,929
AA	163,000	200,380	37,380	0	0	0	18,000	27,866	9,866	181,000	228,246	47,246
BB	186,000	3,563	-182,437	0	0	0	21,000	20,322	-678	207,000	23,885	-183,115
EE	0	280,779	280,779	0	0	0	15,000	22,173	7,173	195,000	394,777	199,777
Total	979,000	3,371,497	2,392,497	4,611,000	552,408	-4,058,592	844,000	804,021	-39,979	6,694,000	5,831,121	-862,879

Sources: Downtown Brooklyn FEIS, MapPluto 2018 data

*Additional Future Development Expected

Appendix B, Table 9: Net Changes in Development, Long Island City

Long Island City		Residential GSF	Residential Units	Commercial GSF*	Total GSF
2001 FEIS Projections	Projected Development Sites	300,000	300	5,525,016	5,825,016
	Upgrade Sites	40,000	40	‡	40,000
	Projected and Upgrade Sites	340,000	340	5,525,016	5,865,016
<hr/>					
Net Change since 2001	Projected Sites - Build Year (2010)	43,023	33	-569,934	-526,911
	Upgrade and Unidentified Development Sites - Build Year (2010)†	798,875	768	362,561	1,161,436
	All Lots - Build Year (2010)	841,898	801	-207,373	634,525
<hr/>					
Net Change since 2001	Projected Sites - Current (2018)	3,672,987	4,273	-106,459	3,566,528
	Upgrade and Unidentified Development Sites - Current (2018)†	5,643,928	6,463	-289,854	5,354,074
	All Lots - Current (2018)	9,316,915	10,736	-396,313	8,920,602
<hr/>					
Future Development	Proposed Future Development		4,234		5,672,052
	Total: Current and Future Developments		14,970		14,592,654
<hr/>					
Accuracy of FEIS projections	Difference in Build Year (2010) Development - Projected Sites	-256,977	-267	-6,094,950	-6,351,927
	Difference in Build Year (2010) Development- All Lots	501,898	461	-5,732,389	-5,230,491
<hr/>					
Accuracy of FEIS projections	Difference in 2018 Development - Projected Sites	3,372,987	3,973	-5,631,475	-2,258,488
	Difference in 2018 Development - All Lots	8,976,915	10,396	-5,921,329	3,055,586
<hr/>					
Accuracy of FEIS projections	Difference in Proposed Future - Total		14,630		8,727,638

Sources: Long Island City FEIS, MapPLUTO 2002, 2010, and 2018 data

*2002 MapPLUTO data does not disaggregate Commercial area and therefore all non-residential development is subsumed into Commercial for this table

†Includes upgrade and no-action development sites

‡ FEIS also projects 250,000 SF of upgraded office space – this figure is not reflected in the chart since office upgrades do not add additional SF

Appendix B, Table 10: Net Changes in Development, Downtown Brooklyn

Downtown Brooklyn		Residential GSF	Residential Units	Office GSF	Retail GSF	Other GSF	Total GSF
2004 FEIS Projections	Projected Development Sites	979,000	979	4,611,000	844,000	260,000	6,694,000
	Potential Development Sites	2,535,000	2,535	2,047,000	533,000	1,783,000	6,898,000
	Projected and Potential Development Sites	3,514,000	3,514	6,658,000	1,377,000	2,043,000	13,592,000
Net Change since 2004	Projected Sites - Build Year (2013)	488,654	615	57,063	-161,977	123,446	507,186
	Potential and Unidentified Development Sites - Build Year (2013)†	1,951,272	2,386	-465,933	-33,098	498,318	1,950,559
	All Lots - Build Year (2013)	2,439,926	3,001	-408,870	-195,075	621,764	2,457,745
Net Change since 2004	Projected Sites - Current (2018)	3,275,496	3,643	-11,782	335,935	368,866	3,968,515
	Potential + Unidentified Development Sites - Current (2018)†	3,857,117	4,814	-1,228,382	138,958	498,516	3,266,209
	All Lots - Current (2018)	7,132,613	8,457	-1,240,164	474,893	867,382	7,234,724
Future Development	Future Proposed Development		1,689				3,464,121
	Total: Current and Future Developments		10,146				10,698,845
Accuracy of FEIS projections	Difference in Build Year (2013) Development - Projected Sites	-490,346	-364	-4,553,937	-1,005,977	-136,554	-6,186,814
	Difference in Build Year (2013) Development - All Lots	-1,074,074	-513	-7,066,870	-1,572,075	-1,421,236	-11,134,255
Accuracy of FEIS projections	Difference in 2018 Development - Projected Sites	2,296,496	2,664	-4,622,782	-508,065	108,866	-2,725,485
	Difference in 2018 Development - All Lots	3,618,613	4,943	-7,898,164	-902,107	-1,175,618	-6,357,276
Accuracy of FEIS projections	Difference in Proposed Future - Total		6,632				-2,893,155

Sources: Downtown Brooklyn FEIS, MapPLUTO 2004, 2013, and 2018 data

†Includes potential and no-action development sites

Appendix C: Methodology

A Tale of Two Rezoning: Taking A Closer Look at CEQR uses information from the latest version of the City's *MapPLUTO* dataset which merges DCP's PLUTO tax lot data with tax lot features from the Department of Finance's Digital Tax Map. *MapPLUTO* provides comprehensive land use and geographic data for each tax lot in the city and was utilized to determine current development on the projected development sites in the Rezoning Areas.

Development was also verified by reviewing building permit information provided by the Department of Buildings for identified development sites. Current development was further corroborated by field studies conducted by MAS staff in August 2018.

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Special Thanks

The Municipal Art Society of New York would like to extend a special thank you to Marcel Negret whose efforts were instrumental to this report. We would also like to thank MAS interns Veerle Arts and Tim O'Grady for the countless hours they spent working on this project, as well as committee members Richard Bass and George Janes for their contributions.




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