

Long Island City Comprehensive Plan: Phase 1
Existing Conditions

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Executive Summary

Introduction and Purpose

This Existing Conditions report summarizes the neighborhood characteristics, provides community context, describes the current land use, and presents a market conditions analysis for the greater Long Island City (LIC) neighborhood, including the ‘core’ of LIC, Astoria, and parts of Sunnyside, in Queens County, New York. These neighborhoods constitute the Study Area (also the “Area”), and their boundaries are the basis of all information provided in this report. In order to prepare the analysis and findings, the Consultants relied on information gathered from discussions with the Long Island City Partnership (LICP), and a collection of data from both public and proprietary data sources such as the New York City Department of City Planning, New York City Department of Finance, New York City Department of Education, the American Community Survey (Census) and CoStar.

This report is part of a broader baseline set of analyses of current conditions that the LICP is spearheading for the Study Area, which includes a collection of primary data through a broad-based set of business surveys, stakeholder interviews and focus groups. The entire effort, Phase 1 of a land use and planning project, will result in the completion of a Comprehensive Plan for the Study Area. This gathering of current conditions research will provide context and identify key issue areas as policy considerations are developed in subsequent phases of the Comprehensive Plan.

In general, the key observation is that the Study Area is currently experiencing an unprecedented volume of residential construction that will further shift demographics and apply increasing pressure on infrastructure and services. Currently about 22,500 new dwelling units are either in construction or in the planning phases, and each month the number increases. These findings are belied in the demographic data, even the most recently available research, but are evident in the development activity taking place in the area. Further commentary regarding the explosive demand for housing in the area, as well as the impacts it is having on other forms of growth, is provided below in the “Key Takeaways” section of each major report category.

As the pace of residential growth in the Study Area continues to charge ahead, the demand for land development is putting extraordinary strain on the current unique diversity of uses. The greater Long Island City area has for decades been a manufacturing hub in New York City. The mix of residential, manufacturing and commercial activity is an essential element of what makes Long Island City an attractive neighborhood for investment and a desirable place to work, live, go to school, have fun, and engage in recreation activities. As many, particularly manufacturing and industrial uses, are being replaced with mostly residential and hotel development, implementing a variety of relational land use policies that maintain and promote a wide array of uses in the Study Area, will ensure that the character and key assets of the neighborhood are maintained and it continues to flourish into the future.

Study Area Characteristics

Neighborhood Sub-Areas

The Study Area is defined by the following seven ZIP codes in Queens County, NY: 11101, 11102, 11103, 11104, 11106, 11109, and 11120. These ZIP codes roughly comprise the historical boundaries of what was once the independent municipality of Long Island City and today are the catchment area for LIC Partnership's IBSP business services contract. Today, all of these ZIP codes are incorporated as part of Greater New York City and include what are generally understood to be the neighborhood boundaries for Long Island City 'core', Astoria, Ravenswood, Hunters Point and parts of Sunnyside. For the purposes of this study, the consultants have defined four Sub-Areas within the Study Area where land use and demographics may be distinct: Central District, Triborough-South, Ravenswood and Sunnyside West. Though data was not typically collected/gathered at this Sub-Area level, the report attempts to provide some analysis at this level of geography through the aggregation of smaller units of information or through the break-down of larger data pulls into these distinct areas.

Figure 1. Study Area

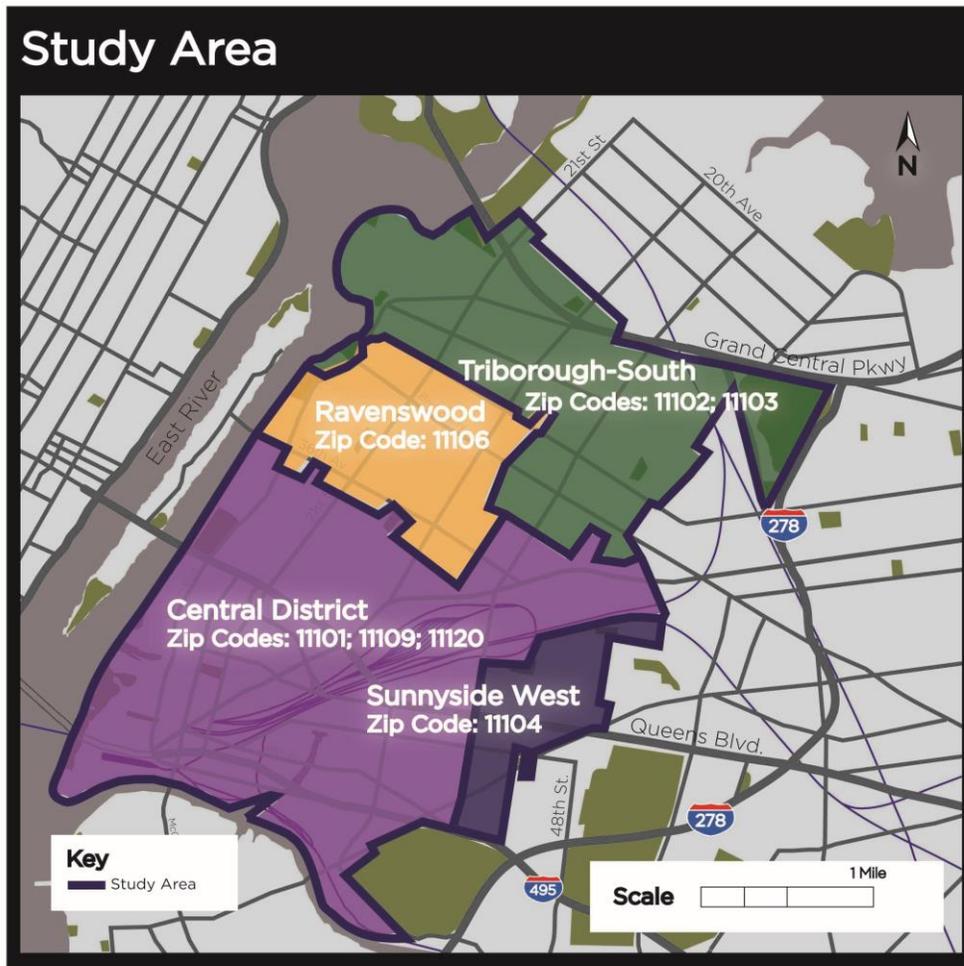
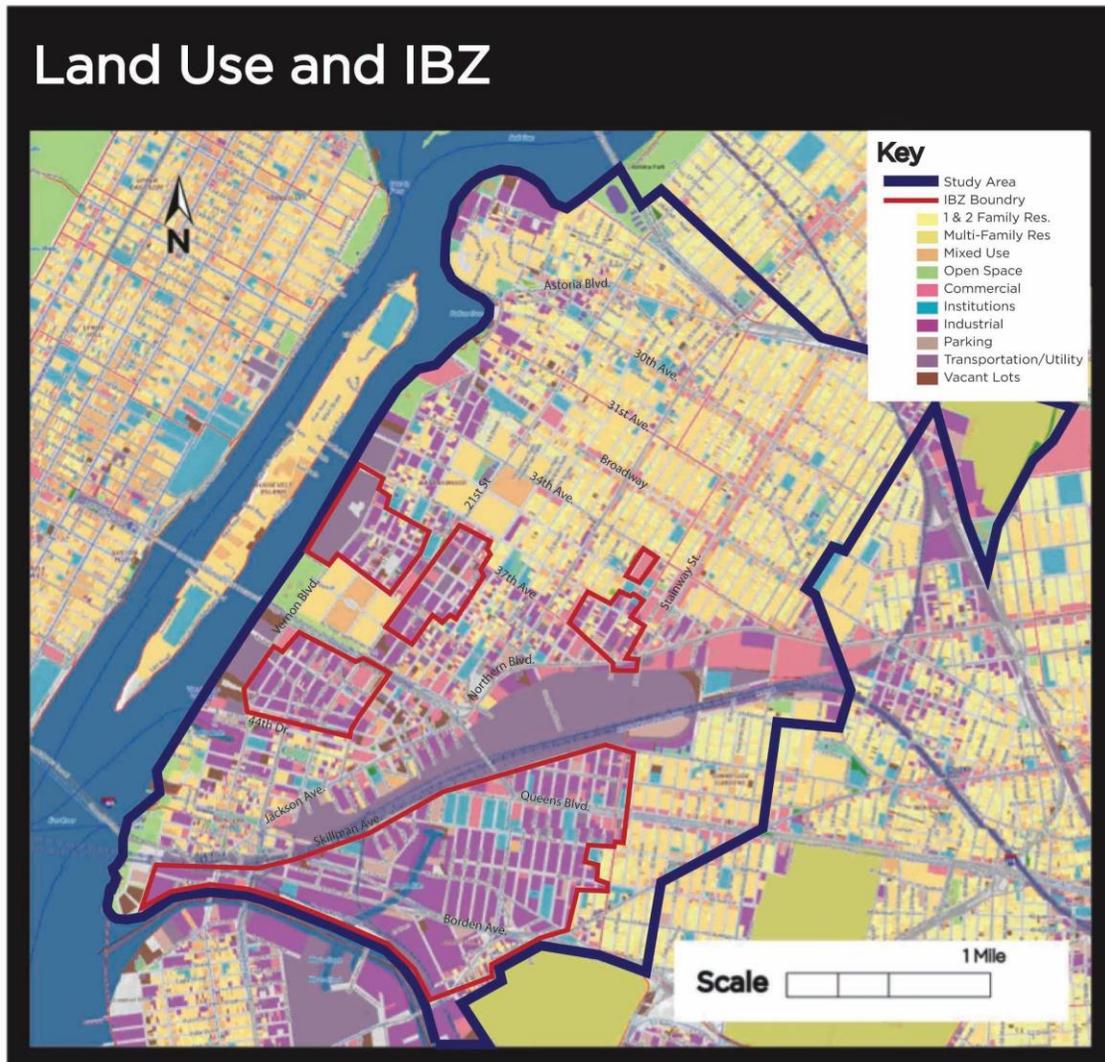


Figure 2. Land Use and IBZ boundary



Central District: Defined by ZIP codes 11101, 11109, and 11120, the Central District encompasses the core Long Island City neighborhood of the Study Area. The Central District contains the greatest share of residential, commercial and industrial development in the Study Area and is experiencing substantial residential and commercial growth. This Sub-Area encompasses much of the Study Area's industrial and commercial activity.

An extensive network of rail yards, known as the Sunnyside Yards, which bifurcate the Central District, also delineate areas of distinct land use and economic characteristics. The area within the Central District that lies directly to the east of the rail yards has a primarily industrial character, while the area west of the rail yards is home to the Central Business District, and the majority of new commercial and residential development currently taking place.

Triborough-South: Defined by ZIP codes 11102 and 11103, this Sub-Area encompasses the northern portion of the Astoria neighborhood, south of Astoria Boulevard and the Robert F. Kennedy Bridge. The neighborhood is more residential in character and encompasses the largest share of lower density residential development in the Study Area.

Ravenswood: Defined by ZIP code 11106, this Sub-Area encompasses the southern portion of the Astoria neighborhood and northern portion of Long Island City. The Sub-Area is residential in nature, however, it has more industrial uses than the other Sub-Areas outside of the Central District.

Sunnyside West: Defined by ZIP code 11104, this Sub-Area encompasses a portion of the Sunnyside neighborhood. The Sub-Area is the most residential of all of the Sub-Areas, with few industrial and commercial uses. The Sub-Area has a mix of lower and higher density residential developments.

Transportation Infrastructure and Usage

Public Transportation

The Study Area is particularly well connected to public transportation infrastructure. Seventeen MTA subway stations, seventeen bus lines, LIRR commuter rail connections, and ferry service all provide direct connections and access to Midtown Manhattan, Brooklyn, other parts of Queens (including LaGuardia Airport and Kennedy Airport), Roosevelt Island, the Bronx and Long Island. Construction of the MTA's East Side Access project is expected to be completed within several years at Dutch Kills, and an intermodal LIRR station over the Sunnyside Yards with a gatehouse within the Study Area is planned within the next ten years as part of the project.

Currently, the East River Ferry line connects Hunters Point South with stops in Brooklyn and Manhattan. With the announced implementation of the Citywide Ferry Service by Mayor de Blasio, two additional connections will be launched in the Study Area in 2017. The two new ferry stops will connect Long Island City and Astoria to another new stop at Roosevelt Island and to sites in Manhattan and Brooklyn.

In 2014, the New York City Department of City Planning completed the initial phase of the Western Queens Transportation Study, and developed a set of recommendations to address the changes in the area's transportation needs in light of the extensive land use and employment shifts under way. While the Western Queens Transportation Study did not include the entirety of the Study Area being considered in this report, the area that was studied is a reasonable proxy for this analysis. Much of the existing transportation network in the Study Area was designed to meet the needs of historical transportation patterns that prioritized movement to and from Manhattan. The sweeping changes in the area have given rise to new route patterns, including demand for additional options connecting locations within the Study Area, broader intra-borough connections, and north-south transportation to and from Brooklyn. Many of the initial recommendations that emerged from the Western Queens Transportation Study confirmed the need to address these emerging transportation needs.

The seventeen subway stations served by eight subway lines within the Study Area have noted a 10.1% growth in total ridership between 2009 and 2014. In 2014, a total of over 56.6 million travelers utilized the stations within the Study Area. The seventeen bus lines that service the Study Area collectively saw a 6.2% increase in ridership in the periods between 2009 and 2014. The Q60 bus line that travels from Jamaica Queens to Midtown Manhattan, making stops in Long Island City, is the sixth most utilized bus line in New York City, with almost 4.8 million annual commuters.¹

While there are several bus lines in the Study Area, many have relatively infrequent service. The Q103 line, which experienced a 133% increase in ridership between 2009 and 2014, arrives every 15 minutes in peak weekday periods and as infrequently as every hour at other times on weekends, where service was added in 2014.²

¹ MTA bus line data is based on entire route, including stops outside of Study Area.

² Source: http://web.mta.info/mta/news/books/docs/150518_SubwayPerformance.pdf

Additionally, the N, Q, R, 7, and E subway lines are all running at peak track and train capacity during heavy commuting periods, meaning there is no capacity to run additional trains on the lines, nor is there capacity for additional passengers on train cars that are running. Of these lines, the N and Q trains both experience their peak load points in the Study Area, both at the Queensboro Plaza station.¹ Major work over multiple years is taking place on the 7 line to add capacity, although in the immediate term this has caused service disruptions on weekends. Newly announced station upgrades on the N/Q will cause significant disruption over the next several years. Meanwhile, with the anticipated change in the route of the Q when the 2nd Avenue Subway line opens in 2016, the MTA has announced that it will revive the W line to continue two line service to Astoria-Ditmars.

Currently, the R, M, and F subway lines are running at peak track capacity, meaning that although no capacity to run more trains on the current track infrastructure exists, there is capacity for more passengers on trains at peak periods. Of these lines, the R subway line experiences its peak load point (highest number of passengers in a day) in the Study Area, at the Queens Plaza station.¹

In 2016, Mayor de Blasio announced a proposal to build a 16-mile above-ground streetcar that would connect Astoria to Sunset Park. The proposed route would run through the entire length of the Study Area, providing an additional transit link to Brooklyn.

Figures 4 and 6 below detail the ridership increases at subway stations and on bus lines in the Area.

Pedestrian Bridges and Connections

As mentioned, the Sunnyside Yards bifurcate the area, with connections for both vehicles and pedestrians at only ten locations. For pedestrians, these bridges are key connectors between subway and LIRR stations, and jobs in the industrial core, as well as for workers to access the retail and cultural amenities on the west and north side of the Yards. In particular, the 21st Street, Thomson, Honeywell, 39th Street, 49th Avenue, Borden Avenue (no pedestrian bridge but major truck route for crossing the Yards), other bridges/connections that go across the Sunnyside Yards and/or brings people across from Hunters Point/Court Square/Queens Plaza to South of the Yards. These bridges often lack pedestrian amenities and can be inconvenient to use, significantly undermining the circulation and neighborhood connection roles they are intended to fulfill.

¹ MTA bus line data is based on entire route, including stops outside of Study Area.

Figure 3. MTA Subway Stations

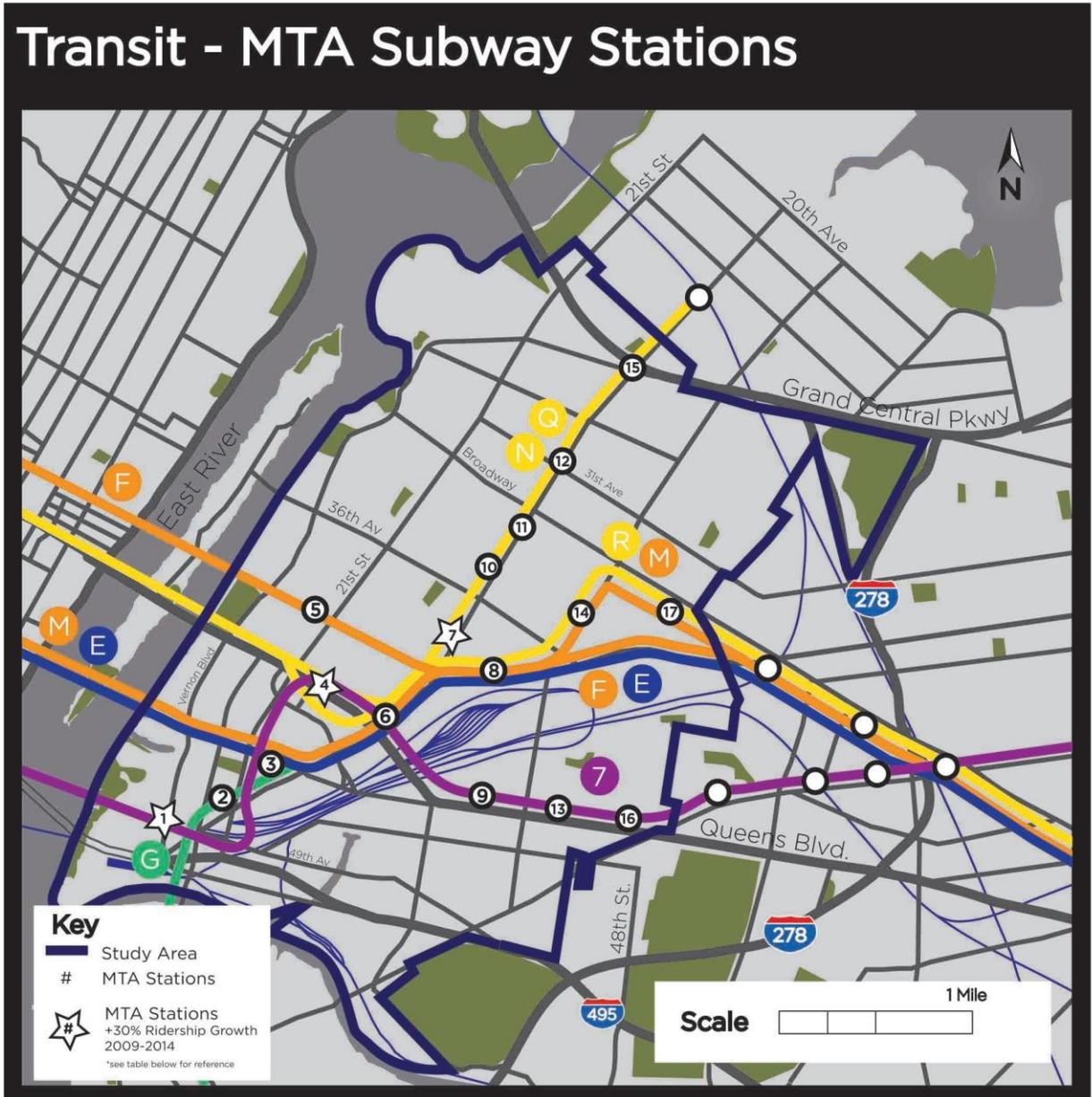


Figure 4. MTA Subway Station Reference and Ridership

			2009	2014	Change
1	Vernon Blvd-Jackson Av	7	2,939,995	4,169,876	41.80%
2	21 St	G	333,612	427,353	28.10%
3	Court Sq	E, G, M, 7	7,384,821	6,664,442	-9.80%
4	Queensboro Plaza	N, Q, 7	2,792,245	3,785,260	35.60%
5	21 St-Queensbridge	7	2,354,997	2,683,624	14.00%
6	Queens Plaza	E, M, R	2,421,042	3,005,223	24.10%
7	39 Ave	N, Q	789,295	1,104,375	39.90%
8	36 St	M,R	1,060,569	1,307,054	23.20%
9	33 St-Rawson St	7	3,649,228	3,892,589	6.70%
10	36 Av	N, Q	2,290,524	2,439,630	6.50%
11	Broadway	N, Q	4,012,746	4,407,347	9.80%
12	30 Ave	N, Q	4,311,747	4,808,350	11.50%
13	40 St-Lowery St	7	3,276,105	3,496,675	6.70%
14	Steinway St	M, R	4,547,327	4,807,448	5.70%
15	Astoria Blvd	N, Q	3,532,735	3,914,637	10.80%
16	46 St-Bliss St	7	4,643,082	4,695,672	1.10%
17	46 St	M,R	2,911,842	3,021,219	3.80%
	Total		53,251,912	58,630,774	10.10%

Source: <http://web.mta.info/>

Figure 5. MTA Bus Lines

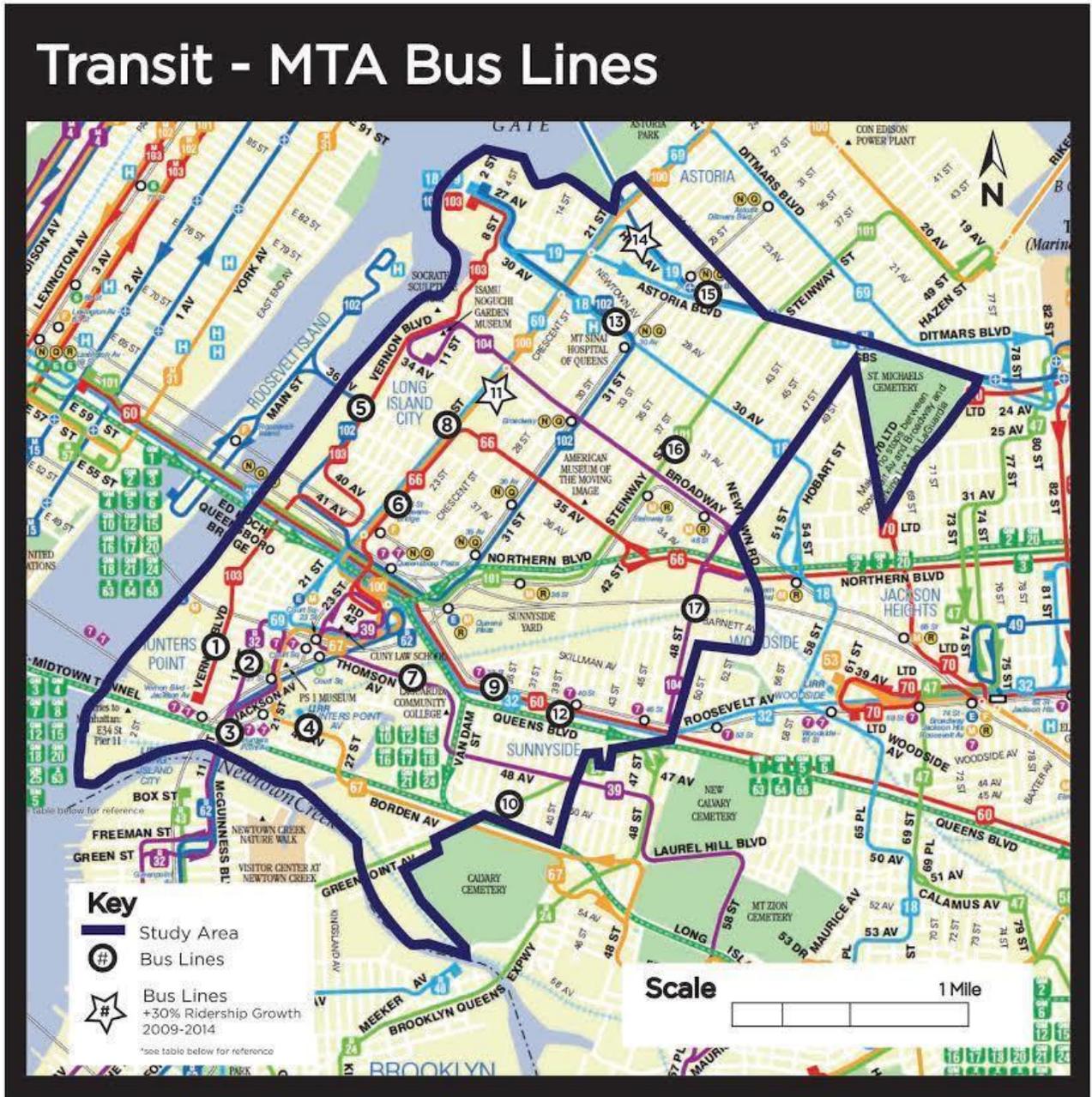


Figure 6. MTA Bus Line Reference and Ridership

		2009	2014	Change
1	Q103	115,042	268,077	133.00%
2	B32	NA	200,840	NA
3	B62	NA	3,070,439	NA
4	Q67	716,445	737,159	2.90%
5	Q102	846,757	819,260	-3.20%
6	Q66	4,423,962	4,534,619	2.50%
7	Q39	1,935,252	1,611,896	-16.70%
8	Q69	3,092,361	2,969,546	-4.00%
9	Q60	5,155,782	4,764,786	-7.60%
10	B24	982,052	804,432	-18.10%
11	Q100	1,094,062	1,442,203	31.80%
12	Q32	4,434,893	3,516,234	-20.70%
13	Q18	2,635,930	2,674,890	1.50%
14	Q19	724,003	941,567	30.10%
15	M60	5,371,161	5,412,070	0.80%
16	Q101	1,183,094	1,036,487	-12.40%
17	Q104	759,976	734,163	-3.40%
	Total	33,470,772	35,538,668	6.20%

Source: <http://web.mta.info/>

Private Shuttle Service

Where public transportation is inadequate, cultural institutions, private owners, hotels and residential developers have established private shuttle services to provide transportation for visitors, residents and workers. The prevalence of these services, most often privately funded, illustrates that gaps in service exist in the Study Area. These services connect specific points with MTA train stops, extending the reach and network of the public transportation system. These transportation options, with the exception of the LIC Art Bus that connects cultural institutions, are only available to residents and employees and are not accessible to the general public, nor are they available around the clock. In addition, because they are focused on point-to-point transportation, they skip over intermediate possible destinations, such as retail, further reducing connections between area workers and residents and neighborhood amenities. Figure 7 outlines the shuttle services currently operating in the Study Area.

Figure 7. Private Shuttle Services Operating in Study Area

Service	Stops	Cost	Frequency	Funding Source
LIC Art Bus	Socrates Sculpture Park; Noguchi Museum; SculptureCenter; MoMA PS1	Free	1:00PM-6:00PM (every 45 min) Saturday & Sunday May 9- September 14	Shelley and Donald Rubin; Queens Borough President, Melinda R. Katz
Falchi/The Factory Building	Falchi/The Factory Building; Court Square; Hunters Point	Free for Falchi and Factory tenants	N/A	Falchi; The Factory Building
Silvercup East	Silvercup East; MTA train stop as requested by employee	Free for employees	N/A	Silvercup East
TF Cornerstone	4540 Center Blvd; 4720 Center Blvd; 7 Line MTA at Jackson Ave.	Free for residents	15-minute intervals on weekdays during evening and morning rush hours; throughout the day on weekends	TF Cornerstone
The Atrium	Court Square MTA stops(7, G & E/M lines); 30-30 Thomson Avenue	Free for employees	7:20 AM to 7:15 PM on Weekdays, arriving every 15 min	The Atrium
Hotel Shuttles	MTA subway stops; local retail corridors	Free for hotel guests	N/A	A number of LIC hotels, including The Ravel Hotel and Z NYC Hotel

Highway, Bridge and Tunnel Infrastructure

The Study Area is well connected to Midtown Manhattan, Brooklyn, other parts of Queens, Roosevelt Island, the Bronx and Long Island via highway, tunnel and bridge infrastructure. The Study Area has connections to Manhattan via the Queensboro Bridge, the Robert F. Kennedy (Triborough) Bridge and the Queens-Midtown Tunnel. The Kosciuszko Bridge connects the Study Area by highway (Brooklyn-Queens Expressway) to Brooklyn. The Pulaski and Greenpoint Avenue Bridges provide connection to Brooklyn via arterial roads. The Roosevelt Island Bridge connects the Study Area to Roosevelt Island and is the only land connection to the Island.

Since 2004, daily traffic volumes on all key bridges and tunnels have decreased. The Queensboro Bridge is the most heavily used bridge spanning the East River in New York City, with a total (both directions) daily average traffic volume of 184,025 drivers. The New York State Department of Transportation has commenced the construction of a bridge that will replace the aging Kosciuszko Bridge in coming years, in order to expand capacity. A full traffic switchover to the new bridge is expected in Q1 2017.

Signifying the need to replace and invest in aging infrastructure, despite decreases in volume, the Triborough Bridge, Queensboro Bridge, Kosciuszko Bridge, and the

Queens-Midtown Tunnel are all currently classified as functionally obsolete¹, according to the New York State Department of Transportation. Additionally, the Kosciuszko Bridge has been deemed to be structurally deficient².

The Pulaski Bridge has been undergoing renovation to create a bike line which is expected to be completed in spring 2016. Meanwhile the street geometry on the LIC side of the bridge is being studied for ways to make it safe for all of the competing users and their destinations as part of the Long Island City/Hunters Point Area-wide Reconstruction

Figure 8. Total Average Daily Traffic Volumes for Bridge and Tunnel Infrastructure in the Study Area

	<u>2004</u>	<u>2010</u>	<u>2014</u>	<u>Change 2004-14</u>
Robert F. Kennedy (Triborough) Bridge	97,958	93,455	91,509	-6.60%
Queens-Midtown Tunnel	86,599	88,014	86,081	-0.60%
Ed Koch Queensboro Bridge	180,369	177,695	174,239	-3.40%
Kosciuszko Bridge	193,612	190,753	184,025	-5.00%
Roosevelt Island Bridge	9,100	9,800	8,212	-9.76%
Greenpoint Ave. Bridge	28,437	26,716	27,836	-2.11%
Pulaski Bridge	40,146	36,981	40,405	0.65%

Source: NYC DOT Report: 2014 New York City Bridge Traffic Volumes

Additionally, Interstate-278 and Interstate-495 provide highway connections to the Bronx via the Robert F. Kennedy (Triborough) Bridge, the Whitestone Bridge (6 miles away), and the Throgs Neck Bridge (7 miles away). Highway connections also make the Study Area accessible to other areas of Queens, Westchester County, Bergen County, and Long Island. The Area is approximately one mile from LaGuardia Airport and twelve miles from JFK International Airport.

With a combination of existing highway infrastructure and industrial land use patterns, there are a number of both local and through truck routes in the Study Area. The safe and efficient function of these transport routes is a key resource for manufacturing, wholesale transportation, warehousing and many other businesses that operate in the Study Area. Emerging and growing residential populations are more often causing a conflict of uses along these truck routes, potentially placing pedestrians and cyclists at

¹ Functionally Obsolete is a status used to describe a bridge that is no longer by design functionally adequate for its task. Source: <https://www.dot.ny.gov/main/bridgedata/repository/NewYorkBridgeData.pdf>

² Structurally Deficient is a status used to describe a bridge that has one or more structural defects that require attention. Source: <https://www.dot.ny.gov/main/bridgedata/repository/NewYorkBridgeData.pdf>

risk while encumbering manufacturing operations. For example, a new dedicated bicycle lane on Vernon Boulevard has been cited by firms along Vernon as causing circulation challenges when trucks are loading and unloading from their place of business.

Figure 9 shows the current location of both through and local truck routes in the Study Area.

Figure 9. Study Area Truck Routes



Source: NYC DOT

Bicycles

While, as mentioned above, there are challenges related to the placement of bike lanes, biking itself is a very popular mode of transit in the area, and the arrival of Citi Bike has been very successful and an important addition to the transportation system. In addition to the stations provided by the city, private property owners have funded additional station locations. Bike lanes across the Pulaski and Queensboro Bridges are popular for commuters as well as visitors, who also enjoy visiting Roosevelt Island via the 36th Avenue Bridge to access Four Freedoms Park. Figure 10 below shows City Bike station locations and current bicycle routes in the Study Area.

Figure 10. Citi Bike Stations and Bicycle Lanes in Study Area



Source: Citibikenyc.com, 2016

Commuting Patterns

As of 2013, the Study Area had a work force of 106,439 in various industries, with 8.2% of those workers also living in the Area, although many more live in the adjacent areas as indicated below. The share of workers who both lived and worked in the Study Area declined steadily from 2004 through 2010.

Figure 11. Employees Who Live and Work in Study Area

	2004	2007	2010	2013
Number of jobs in Study Area	91,422	92,511	88,895	106,439
Total workers living in Study Area	63,646	69,293	76,151	65,950
Living and employed in area	6,532	6,401	5,521	5,421
<i>% Living and employed in area</i>	10.3%	9.2%	7.3%	8.2%

Source: U.S. Census Bureau, *OnTheMap* Application, 2013

The vast majority of workers who live in the Study Area (56.6%) commute to Manhattan for work. The ZIP codes most traveled to are Midtown Manhattan, Chelsea and Tribeca. Most workers living in the Study Area tend to commute shorter distances than those coming to the Area for work, with 87% traveling less than 10 miles. Figure 12 below shows the work destinations of residents living in the Area.

Figure 12. Residents in Study Area: Work Commute Destination

	Count	Share
New York County, NY	37,349	56.6%
Queens County, NY	11,862	18.0%
Kings County, NY	6,335	9.6%
Nassau County, NY	2,216	3.4%
Bronx County, NY	1,675	2.5%
Hudson County, NJ	1,069	1.6%
Suffolk County, NY	1,015	1.5%
Westchester County, NY	980	1.5%
Bergen County, NJ	715	1.1%
Richmond County, NY	221	0.3%
All Other Locations	2,513	3.8%

Source: U.S. Census Bureau, *OnTheMap* Application, 2013

Nearly one-third (a plurality) of workers who are employed in the Study Area live in Queens County, while 19.5% of workers in the Study Area commute from Brooklyn. There is also a substantial proportion of the workforce commuting from suburban locations outside of New York City (11.5% from Long Island and 4.2% from Westchester and Bergen Counties, combined).

Figure 13. Workers in Study Area: Work Commute Origin

	Count	Share
Queens County, NY	33,340	31.30%
Kings County, NY	20,758	19.50%
New York County, NY	10,985	10.30%
Bronx County, NY	10,478	9.80%
Nassau County, NY	7,986	7.50%
Suffolk County, NY	4,266	4.00%
Hudson County, NJ	2,569	2.40%
Westchester County, NY	2,444	2.30%
Bergen County, NJ	2,071	1.90%
Richmond County, NY	1,842	1.70%
All Other Locations	9,700	9.10%

Source: U.S. Census Bureau, *OnTheMap* Application, 2013

Parking Infrastructure

With a growing resident and worker population, the Study Area is increasingly experiencing constrained parking supply, particularly in the central business districts. The construction of Two Gotham Center, an office tower, resulted in the demolition of the largest municipal parking garage in the Study Area, which had a 1,150 car capacity. Currently, five municipal parking garages and twenty-four privately operated off-street parking facilities provide 5,362 parking spaces throughout the Area. Figure 14 shows the locations and capacity of the off-street parking facilities in the Study Area.

In addition to heightened demand, supply of short-term on-street parking is further constrained by the predominance of taxi and livery services operating in the area. These business operations often occupy on-street space that would otherwise be utilized by the public. The lack of on-street parking can sometimes deter customers seeking to visit retail destination in the area. Finally, vehicles with placard parking privileges further constrain the parking supply in the central business district where city agencies occupy office space.

Figure 14. Off-street public parking facilities in study area

Owner	Address	Spaces
Municipal	40-40 Court Square	703
Municipal	Queens Boulevard/48th St.	494
Municipal	Broadway/31st St.	62
Municipal	Steinway St/31st Ave.	46
Municipal	30th Ave/38th St.	88
Lai Wen Associates	10-40 Borden Ave.	140
Prudent Parking	5008 Vernon Blvd.	40
SP Plus	2-59 51st Ave.	80
MPG MP Hunter	15 51st Ave.	267
Standard Parking	4-84 48th Ave.	527
Little MAN Queens	2 5th St.	828
Pearson	45-55 Pearson	65
MTP	64 Court Sq	200
SP Plus	28-11 47th Ave	225
SP Plus	47-08 30th St.	100
SP Plus	46-58 30th Pl.	212
MTP	47-20 30th Pl.	205
Van Dam Parking	47-14 32nd Pl	47
PV parking	80 Thomson Ave.	85
Everybody's Place LIC	32-32 Queens Blvd.	15
Quik Park	4327 24th St.	202
23rd Street parking	42-02 23rd St.	100
MTP- Queens Plaza	42-17 27th St.	30
Queens Plaza Parking Corp	42-09 27th St.	50
MTP-41st Ave	41-10 24th St.	80
Sifnos Realty Corp	40-08 Crescent	60
Brook Park Parking	30-30 Northern Blvd.	99
Alex Operating Corp	27-50 Jackson	150
ONE PARKING Gotham Center	42-09 28th St.	162
Total off-street		5,362

Source: NYC DOT, 2016; nyc.bestparking.com

Broadband Internet Infrastructure

High speed internet connectivity is crucial to both residents and firms. According to information in a study completed by the Queens Borough President and the Coalition for Queens, commercial fiber infrastructure, the kind that provides much needed high-speed internet access to firms, is incomplete in the Study Area, reaching only 23% of commercial and manufacturing spaces in Long Island City. In 2015, the New York City Economic Development Corporation launched the Connect IBZ program aiming to fund broadband expansion in IBZ zones across New York City. Long Island City is one of the target neighborhoods that is receiving funding to expand high-speed broadband access. Partnering with Xchange Telecom, the company contracted to implement the expansion, the program has already resulted in the completion of phase one of the infrastructure improvements, and aims to complete the remaining two phases by mid-2016. Xchange Telecom is deploying a fixed Ethernet based system that does not require laying cable in the street. Figure 15 shows the planned phases of broadband expansion in Long Island City IBZ areas.

In addition, Verizon continues to roll out its FiOS services in NYC, although challenges with gaining access to the large number of buildings in the area and the very large geography that needs to be covered in LIC mean that this is not a fast process. Verizon and the Connect IBZ infrastructure deployment initiatives are reported to eventually provide 1 gigabit speeds. Additionally, in order to gain approval for its pending merger, Time Warner Cable and Charter have agreed to increase broadband speeds in NYC. RCN is also very active in providing broadband service in the area.

Media reports have indicated that 5G wireless technology is no longer anticipated for 2020. Instead, Verizon has announced that they will be field testing the technology in 2016 aiming to have it commercially available in 2017. 5G technology has been tested at speeds 40 times faster than today's 4G technology, which will act as a catalyst to drive innovation.

Also, the technology ecosystem continues a major transformation throughout NYC. Recently, Cornell Tech and CUNY announced a partnership aimed at growing the number of women in technology careers. LaGuardia Community College plans to adopt the core computer science course that is central to the initiative into its curriculum in the coming academic year. The initiative is supported and funded by Verizon, Accenture, the Citi Foundation, IBM, Xerox, JPMorgan Chase, AppNexus and Grand Central Tech. The city's NYC Tech Talent Pipeline and the National Center for Women and Information Technology are also program partners.

With a rapidly growing tech sector in New York City, we have seen interesting partnerships emerge where underutilized space at Verizon central offices are being redesigned into co-work locations. This interesting partnership can create a new model for co-working space owners and management professionals. This may be a trend that can easily and efficiently reposition real estate assets into centers of innovation and collaboration.

Figure 15. Broadband Expansion in Long Island City



Source: Xchange Telecom, 2015

Key Takeaways: Transportation Infrastructure and Usage

- The Study Area is at the crossroads of excellent highway and public transit infrastructure, as well as proximate to Midtown Manhattan, Brooklyn, the Bronx, Long Island, LaGuardia Airport and JFK International Airport.
- Most subway and several bus lines have experienced heavy growth in ridership, stressing the importance of prioritizing the maintenance of public transit and the need to address capacity issues that have already begun to surface in the Area.
- Existing transit routes primarily serve historic transportation patterns, prioritizing transportation to and from Manhattan. New transit patterns, that include north-south connections within the Study Area and to Brooklyn, as well as broader intra-borough transportation, are increasing demand for a new routes and services.
- While commercial broadband infrastructure is currently incomplete, active investment will develop and expand the network in the near-term. The adequacy of the network should be reassessed when investments are complete, especially given that business needs are continually changing and growing.

Community Context

Hospitals & Educational Facilities

The Study Area includes portions of Community School Districts 24 and 30 with a total of 35 middle, elementary, and high schools. Over 27,000 children are enrolled in kindergarten through twelfth grade in schools located in the Study Area. LaGuardia Community College (CUNY) is located in the Area, with 49,946 enrolled students in 2015. CUNY Law School is also located in the Study Area, with 322 full-time law students, and CUNY Grad Center is building a dormitory in the Central District with 200+ units expected. Cornell Tech, the applied science campus of Cornell University, is being built on adjacent Roosevelt Island and will eventually add over 2,000 graduate students to the region.

There is one general hospital located in the Study Area: Mount Sinai Queens, with 235 beds, which is undergoing a multi-million dollar capital project, and one specialized hospital: the Floating Hospital, which specializes in providing healthcare to the homeless, domestic violence victims and community-based healthcare for public housing residents in the Study Area. Nearby general and specialized hospitals in Queens, Roosevelt Island and Manhattan include the Elmhurst Hospital Center in Queens; Coler Goldwater Specialty Hospital and Nursing Facility on Roosevelt Island; Weill Cornell Medical Center; Memorial Sloan-Kettering Cancer Center; Manhattan Eye and Throat Hospital; NYU Langone Medical Center; Lenox Hill Hospital. Additionally, NYU Langone Medical Center has announced plans to open a new multispecialty ambulatory care facility in Long Island City.

Cultural Institutions and Parks

The cultural and recreational institutions that have developed in the Study Area have contributed to improving the quality of life of residents, and serve as a catalyst for economic development. The area is known as a destination for significant and unique cultural offerings. Many of the museums, galleries, performing arts venues, arts schools and parks have received recognition and become anchor institutions driving tourism and recreation business in the Study Area. However, according to *Civic Action: A Vision for Long Island City*, a report published by The Isamu Noguchi Foundation and Garden Museum, in partnership with Socrates Sculpture Park, wayfinding and signage systems are needed throughout the area to help provide direction to cultural institutions.

While the Study Area is home to several parks and green spaces, only a few offer larger-scale green space for recreation. Of the parks in the Study Area that do offer a larger area, all are located on the waterfront. Additionally, there is a deficiency of active recreation space, as many existing parks in the Study Area offer only passive uses to residents. Figure 16 shows examples of both improved open space on the waterfront that includes active recreation uses and lower quality open space that does not offer any active recreational uses to residents.

The National Recreation and Park Association assert that mini-parks and neighborhood parks service about a quarter-to-half mile radius, or about a five-to-ten minute walk.

Figure 17 shows a quarter mile radius around existing open spaces in the Study Area. These open spaces include larger waterfront parks, small “mini-parks”, playgrounds, and dog runs. While many areas in the Study Area are well within a comfortable walking radius of an open space, particularly along the waterfront, gaps are apparent where no open space is available for recreation nearby. Additionally, the condition of some of these smaller parks is poor, often with little or no active green space or improved paving. According to the latest park inspection data from the New York City Parks Department, the overall condition and cleanliness is deemed to be “unacceptable” for several park spaces in the Study Area. These underserved areas are found not only in manufacturing districts east of the rail yards, where one might expect fewer recreational land uses, but also in residential and commercial areas along Northern Blvd., Steinway St., 31st St. and Broadway.

Figure 16. Examples of high quality improved and active open space and unimproved open space lacking active recreation use

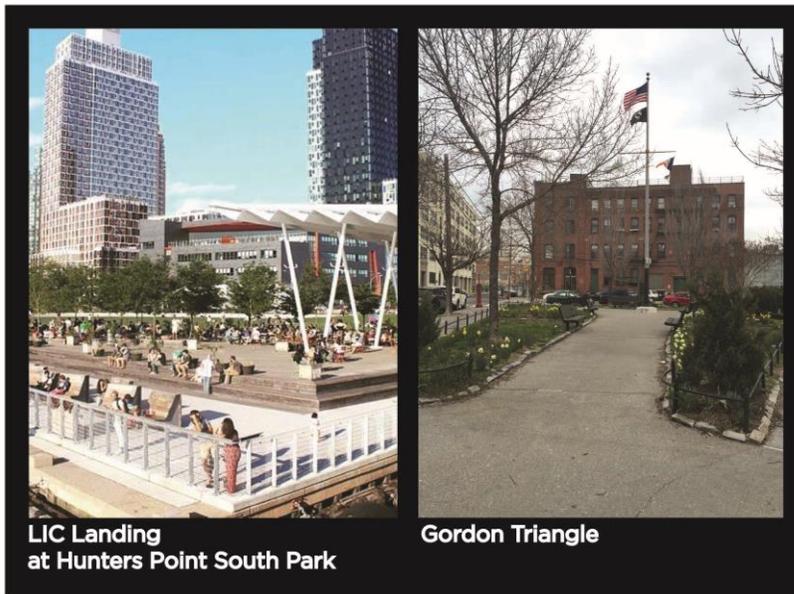


Figure 17. Open Space 1/4 Mile Radius

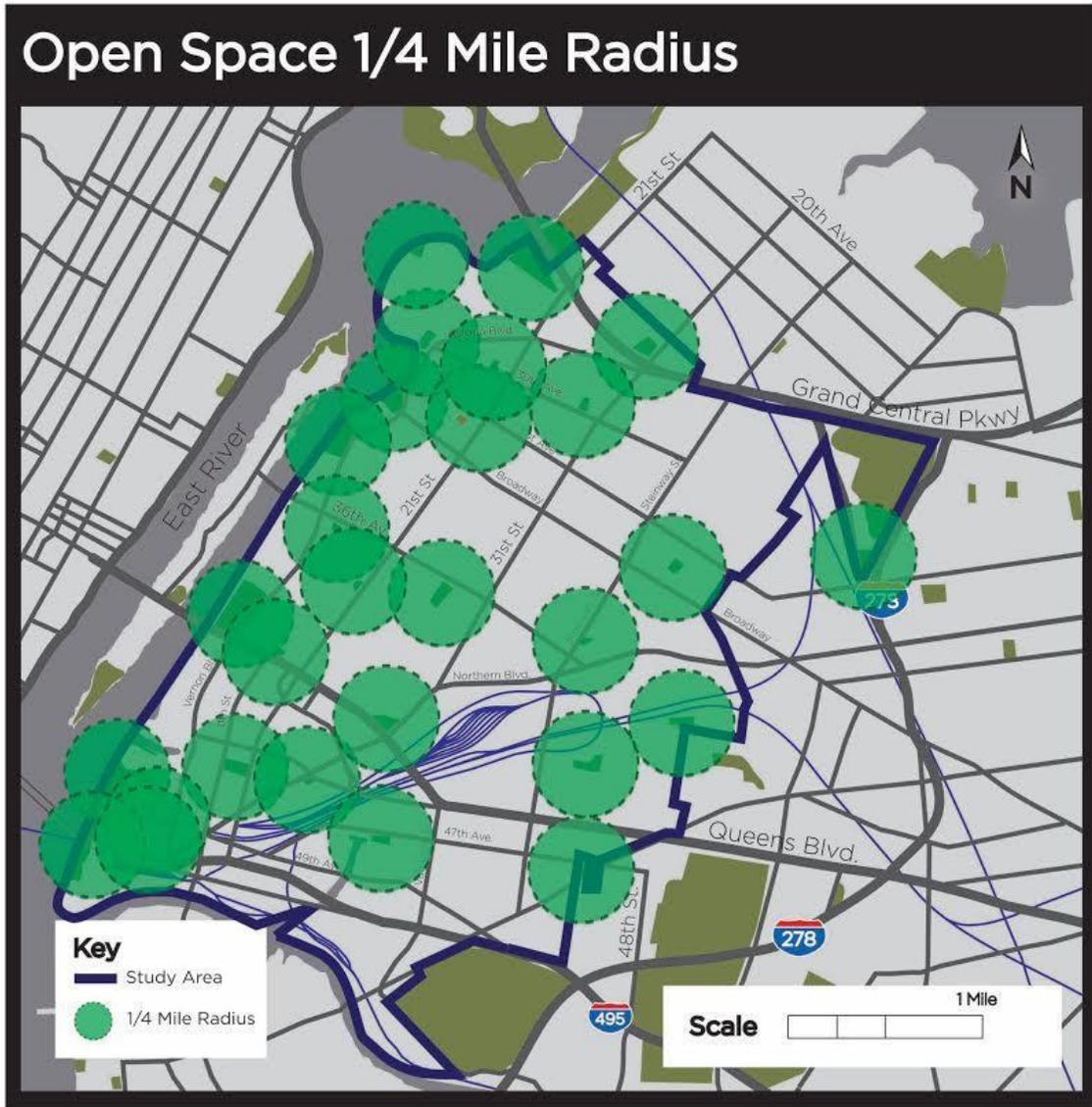


Figure 18. Cultural Institutions and Parks in Study Area

1	Apollo Gallery	33	Hoyt Playground
2	ArtistRun Gallery	34	Athens Square
3	Court Square Studios	35	Van Alst Playground
4	Dorsky Gallery	36	Dutch Kills Playground
5	Eduardo Anievas Studio	37	Queensbridge Baby Park
6	Local Project	38	Dutch Kills Green
7	New York MINDED Gallery & Studio	39	Lance Corporal Thomas P Noonan Jr. Playground
8	Radiator Gallery	40	Sunnyside Gardens Park
9	Reis Studios	41	Playground Thirty-Five
10	SculptureCenter	42	St. Michaels Playground
11	Wills Art Deco Studios	43	Sean's Place
12	The Space	44	LIC Roots Community Garden
Museums		Performing Arts	
13	Fisher Landau Center for Art	45	Astoria Performing Arts Center
14	Fragmental Museum	46	Astoria Symphony Orchestra
15	MoMAPS1	47	Green Space Dance Studio
16	Museum of the Moving Image	48	LaGuardia Performing Arts Center
17	Noguchi Museum	49	Laughing Devil Comedy Club
18	Folk Art Museum	50	Long Island City School of Ballet
19	Thalia Spanish Theatre	51	Martinez Dance Studios
Parks		52	Puerta Havana
20	Socrates Sculpture Park	53	Sage Music
21	Andrews Playground	54	Joffrey Ballet School (planned)
22	Court Square Park	55	The Chain Theater
23	Gantry Plaza State Park	56	The Chocolate Factory
24	Hunter's Point Park and Dog Run	57	The Creek and the Cave
25	John F. Murray Playground and Dog Run	58	The Secret Theatre
26	Queens Bridge Park	Other	
27	Rafferty Triangle	59	Brick House Ceramic Art Center
28	Hunters Point South Park	60	Flux Factory
29	Rainey Park	61	The Center for Holographic Arts
30	Goodwill Park	62	Uncanny Valley
31	Two Coves Community Garden	63	Kaufman Arts District

32 Hellgate Field**64** Frank Sinatra School

33 Astoria Park**65** Academy for Careers in Television & Film

Institutional Partners for Business and Industry

The Study Area has several Community and Business anchor institutions that contribute to and foster economic growth in the Study Area. The Long Island City Partnership (LICP) is the Local Development Corporation for the Long Island City area and manages the Long Island City Business Improvement District. Sunnyside Shines Business Improvement District, as well as the Steinway Business Improvement District are also within the Study Area. The Queens Business Outreach Center subcontracts to LICP to administer programs for the Long Island City Industrial Business Zone (LIC IBZ), and to offer direct assistance to businesses in the entire Study Area.

Other business assistance partners such as the LaGuardia Small Business Development Center, Queens Economic Development Corporation, and Urban Upbound, offer assistance to the business community in the Study Area.

These partners and their service missions are shown in Figure 19.

Figure 19. Institutional Partners for Business and Industry in Study Area

	Community Revitalization	Technical Assistance	Employee Search Assistance	Industrial Business Assistance	Financing Assistance	Business Incubator
Long Island City Partnership	x	x	x	x	x	
Long Island City BID	x	x	x	x	x	
Steinway Street BID	x	x	x	x	x	
Sunnyside Shines BID	x	x	x	x	x	
Queens Business Outreach Center	x	x	x	x	x	
Goldman Sachs 10,000 Small Businesses		x			x	
LaGuardia Small Business Development Center		x			x	
NYDesigns		x		x		x
Long Island City Workforce1 Career Center			x		x	
Entrepreneur Space (QEDC)		x				x
Urban Upbound	x		x		x	

In addition to organizations that provide workforce development and social services in the Study Area, other organizations such as the Fortune Society, Goodwill, Zone126, Sunnyside Community Services, Riis Settlement House, LIC YMCA, Outward Bound, and others, serve the Study Area’s vulnerable populations providing services for youth, immigrants, seniors, and formerly incarcerated individuals.

Key Takeaways: Community Context

- Cultural institutions with city-wide, national and international reach are a key asset and economic growth engine for the Study Area. The ability of these institutions to remain and thrive in the Study Area in the face of increased land development pressure and rising rents is vital to maintaining a tourism/visitor draw, economic diversity, as well as a source of good jobs in the area.
- Wayfinding remains an issue for visitors to the neighborhood's cultural and recreational amenities.
- While new open spaces for recreation have been developed in the Study Area, their reach is limited and several areas in the Study Area either lack open space for recreation or existing spaces are not adequate for active recreation.
- With the arrival of CUNY Law School and increasing enrollment at LaGuardia Community College, as well as the construction of Cornell Tech on Roosevelt Island, the population of students in and around the Study Area pursuing a post-secondary education is both large and expanding.

Zoning/Land Use

Current Zoning and Land Use

The Study Area maintains diverse land and building uses, with substantial commercial and industrial development. Residential lots offer a diverse array of housing options that include shares of one- and two-family buildings, multifamily walkup and elevator buildings, large-scale public housing projects, along with mixed residential-commercial buildings. Special Purpose Districts in the area provide zoning regulation intended to preserve and encourage mixed-use development and higher density near transit.

In 2015, the New York City Department of City Planning commenced the Long Island City Core Neighborhood Planning Study. The Study will specifically focus on the Queens Plaza and Court Square neighborhoods, the Queensbridge Houses campus, and the Jackson Avenue and Northern Boulevard corridors. The Study will identify neighborhood needs and opportunities for investment that will support long-term growth and the sustainability of the area.

Figure 20 shows the As-of-Right Zoning in the Study Area along with the boundaries of the special districts, meaning that development may happen without discretionary approvals pursuant to the zoning districts depicted by the smaller boundaries within the Area.

Approximately 20% of the lots in the Study Area are being used for industrial purposes. In the Central District the proportion of land being utilized for industrial and manufacturing purposes is approximately 34%. Within the Central District, the area east of the rail yards maintains predominantly industrial uses, while the area west of the rail yards is more mixed-use in character and is home to the majority of the residential and office uses in the District.

Industrial Business Zone (IBZ)

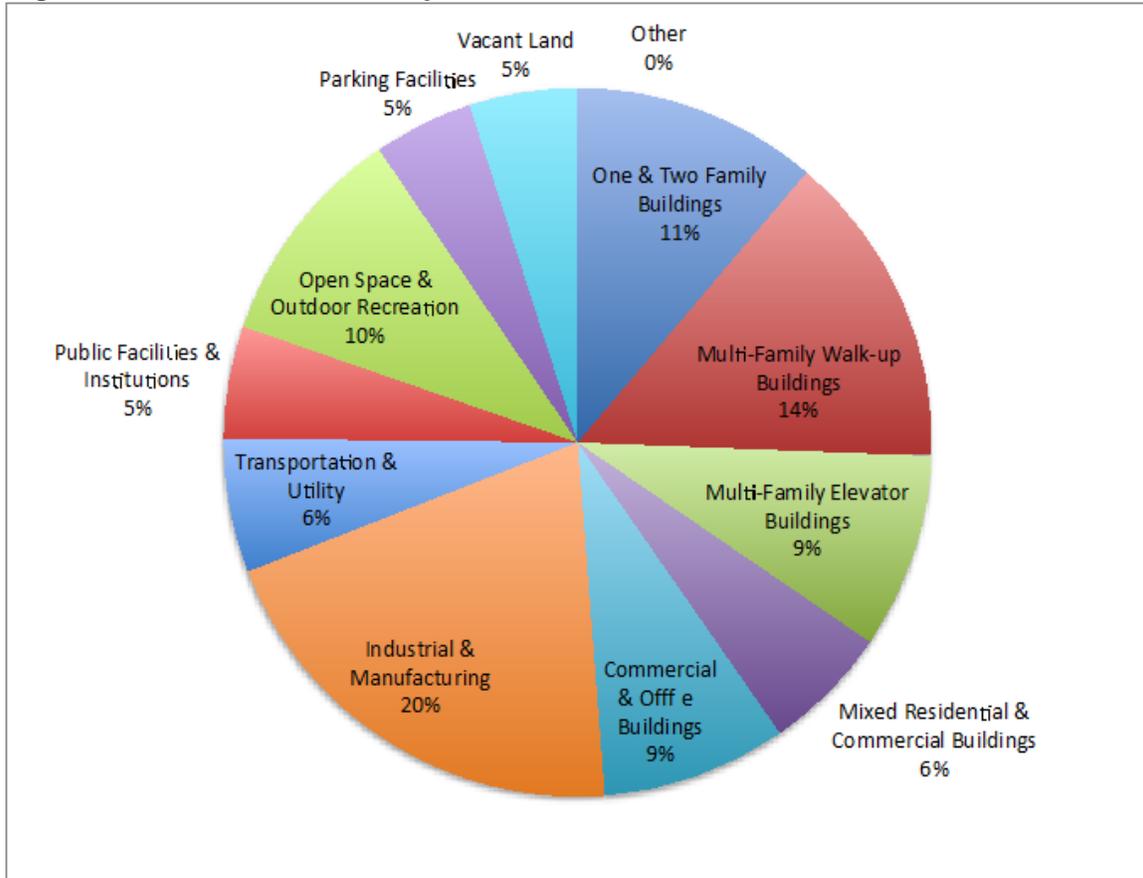
The Study Area is home to the LIC Industrial Business Zone (IBZ) (Figure 15) which is a non-contiguous district (comprised of five areas) preserved for manufacturing and industrial uses, and whose greatest area lay south and east of the Sunnyside Rail Yards. In addition to zoning preservation, the IBZ offers companies a supportive array of services to retain and grow their activities in the area. It should be noted that while the IBZ areas are zoned for manufacturing, "IBZ" is a programmatic area and not a zoning construct. In addition, not all lots zoned for manufacturing in the Study Area are in the IBZ. Areas outside of but adjacent to the IBZ also have pockets of concentrated industrial uses, such as the area between Ravenswood Houses and the waterfront.

Hotels and self-storage are both as of right uses within most of the IBZ, and in the areas other than the large IBZ area south and east of the yards, significant hotel development has occurred in recent years, as well as self-storage.

Within the Central District, a sub-area of the IBZ south of Queensboro Bridge had been rezoned in 1995 from M1-3 (at max FAR of 5) and M3-1 to M1-4 (at max FAR of 2). As such, there are a few manufacturing buildings that had been built pre-rezoning that are at higher FARs.

Areas outside of the Central District are more residential in character, with more than 90% of the over 9,000 single and two-family homes in the Study Area being located there. Within the Central District, over 95% of the residential units are either in multifamily walkup, elevator, or mixed-use buildings. While over 11% of building use in the Study Area is dedicated to commercial office use, the majority of this type of building use is in the Central District, where over 20% of the building square footage is being used for office space. Figure 21 shows the breakdown of land uses, by major category, in the Area.

Figure 21. Land Use in Study Area – 2015

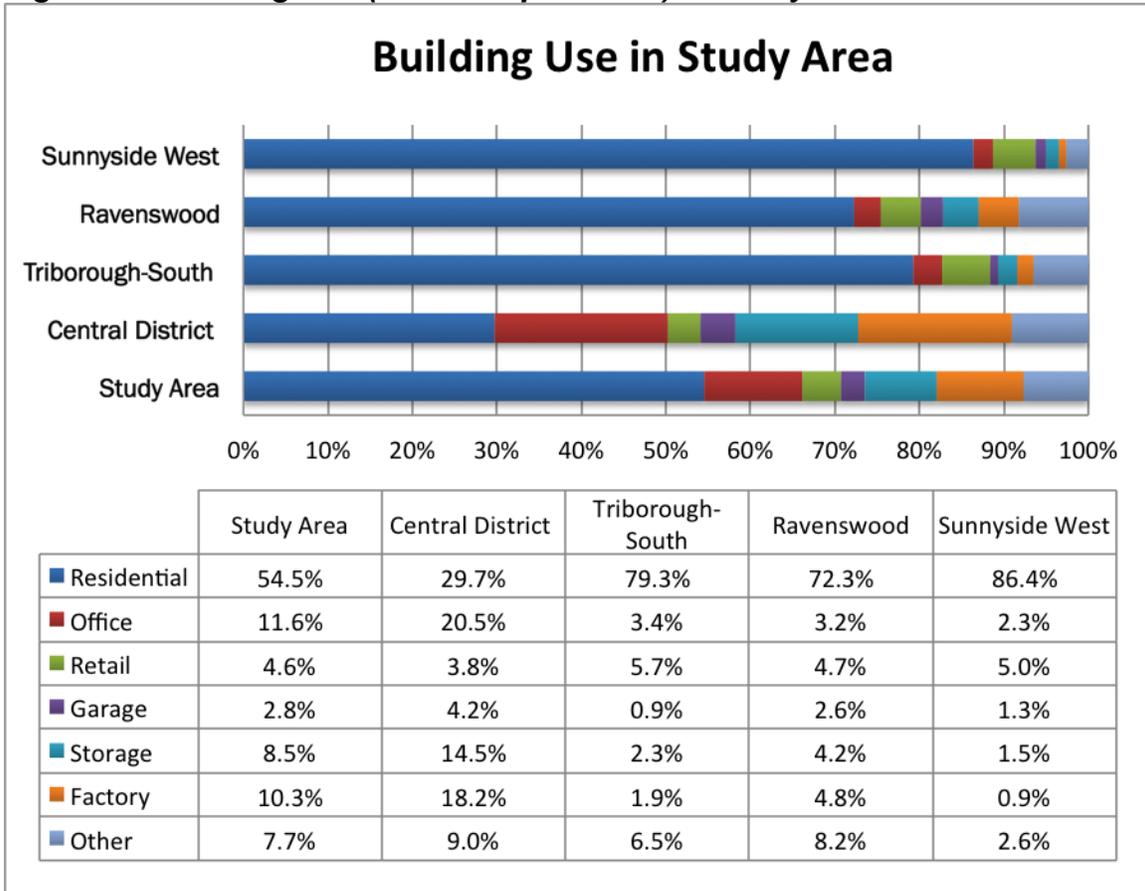


Source: NYC PLUTO 15v1 2015

Separate and apart from land use, the building or facility usage (measured in total square feet) in the Area reflects the diversity of the micro-economy, particularly in the Central District where only 29.7% of the total building use is strictly residential. As indicated with land use, sub-areas outside of the Central District are more predominantly residential in built square footage, while still maintaining some office and factory uses. The breakdown of building use in the Study Area has remained relatively unchanged outside of the Central District in the last ten years. In the Central District, residential and office uses have grown, while factory and storage uses have declined. Additionally, there are approximately 22,500 residential units currently in planning and construction in the Study Area.¹ Figure 22 shows the breakdown of building usage by major category and by geographic sub-area and Figure 23 shows this same use in 2005.

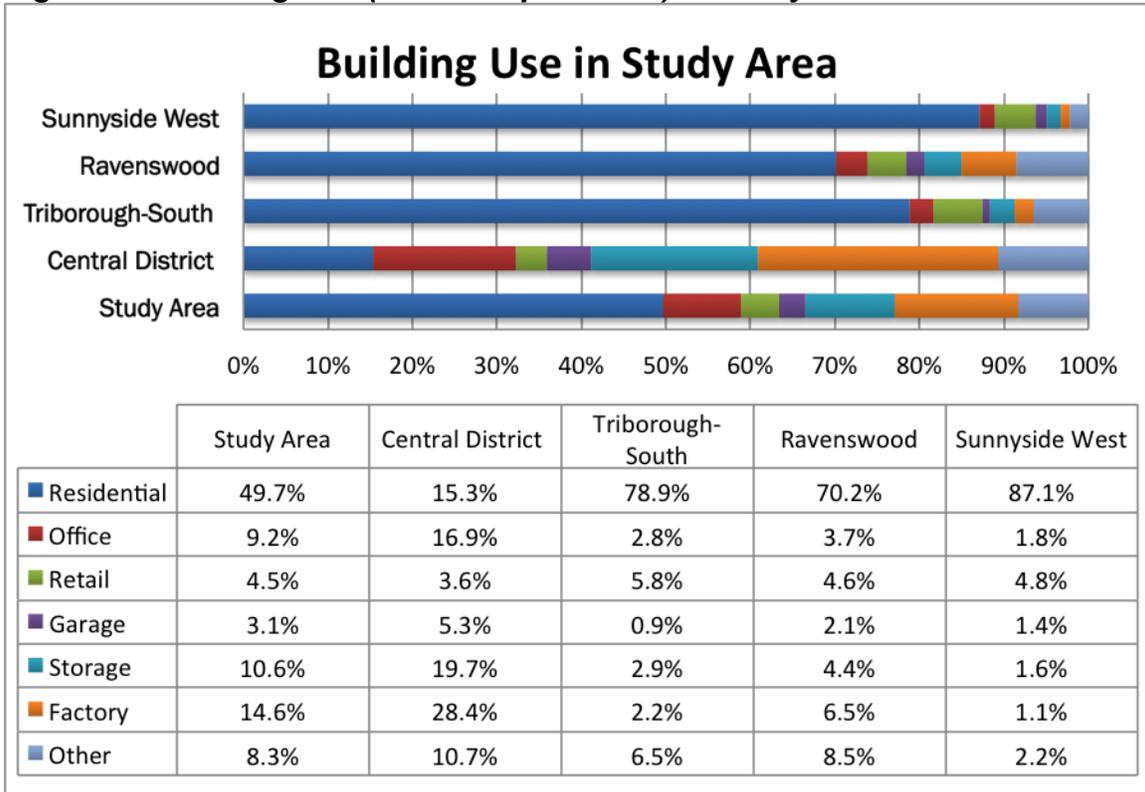
¹ Source: Long Island City Partnership; estimate based on publically available data, including building construction and permit filings – totals subject to change as more information becomes available.

Figure 22. Building Use (of total square feet) in Study Area – 2015



Source: NYC PLUTO 15v1, 2015

Figure 23. Building Use (of total square feet) in Study Area – 2005



Source: NYC PLUTO 05v1, 2016

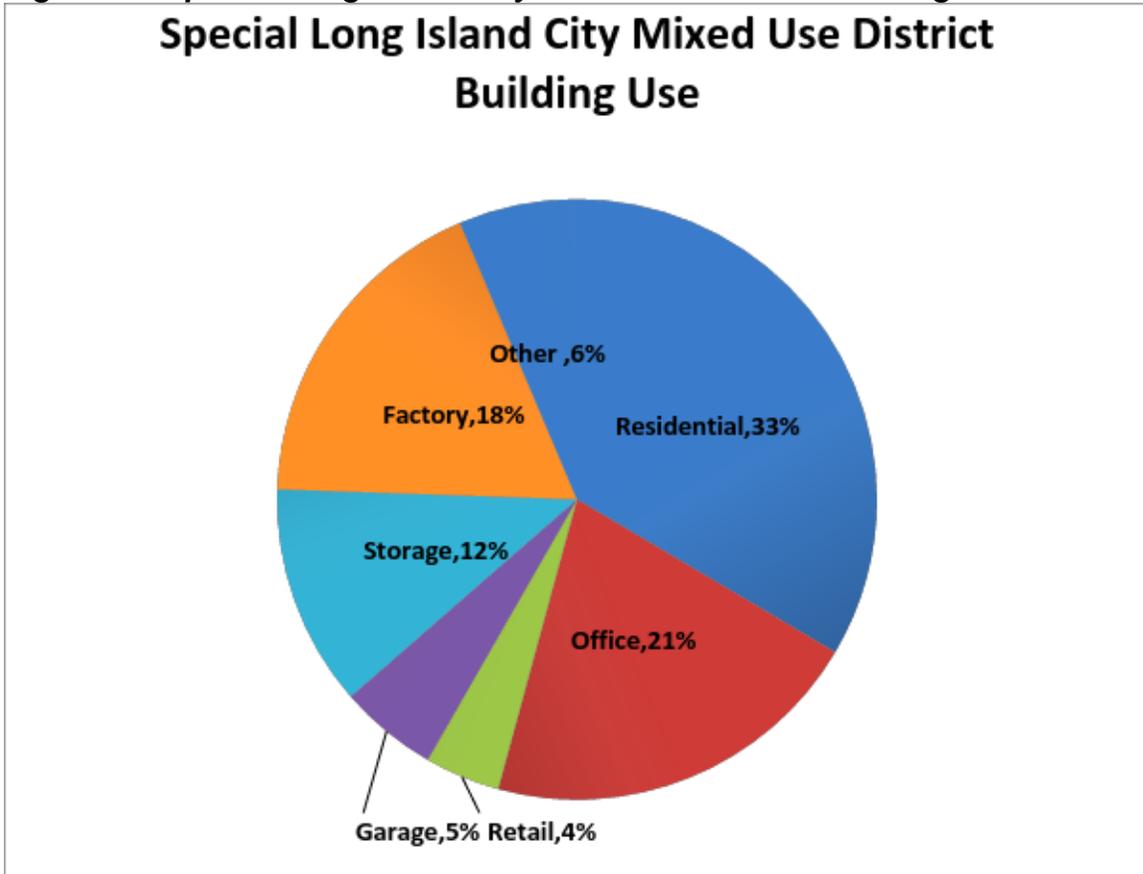
Special Zoning Districts

Approximately 20% of the Study Area's land is overlaid with Special Purpose District zoning regulations, designed to encourage particular land use objectives such as: promoting mixed-use development; retaining and growing industrial uses; promoting higher density close to transit; preserving neighborhood character; and expanding the availability of affordable housing. The Study Area contains four distinct Special Purpose zoning districts: 1) Special Long Island City Mixed Use District 2) Special Mixed Use District 3) Special Southern Hunters Point District 4) Special Planned Community Preservation District.

The largest Special Zoning District in the Study Area is the Special Long Island City Mixed Use District (LIC District). This district covers over 18 million square feet of the over 105 million square feet of land in the Study Area. The zoning is flexible and allows for industrial, commercial or residential development. The zoning allows for highest density closer to transit stops. Currently about 33% of developed building square footage in the LIC District is occupied by residential development and 21% by office use. About 18% of building use in this district has remained developed for factory use. Given that much of this district is located in central areas of the Study Area where residential demand is high, it's expected that the share of residential square feet will increase in coming years, further reshaping the composition of land use in the Special Zoning District.

Contained within the LIC District is the Dutch Kills Sub-District that removed restrictions on residential development and conversions, while continuing to allow light manufacturing and commercial businesses within the 40-block area that it encompasses. While the intent of this Special Zoning District was to encourage new mixed-use development that included commercial and industrial use, the area has mostly seen new residential development in recent years, driven by strong market incentives for residential development. Figure 26 shows the breakdown of current building use in the LIC District.

Figure 26. Special Long Island City Mixed Use District Building Use – 2015



Source: NYC PLUTO 15v1 2015

The Special Mixed Use District in northern Hunters Point is designed to encourage development that can accommodate residential, commercial and light industrial uses side-by-side. Currently about 87% of the building area of the district is being used for residential uses, while 2.6% is being used for industrial/factory uses. While the zoning district has not yet enticed mixed-use development as perhaps intended, new development that would shift land use in any way is limited due to the relatively small area that this zone encompasses.

The Special Southern Hunters Point District was created to foster the development of the Hunters Point waterfront, allowing for access to parks, public space, and encouraging affordable housing development. While 925 permanently affordable housing units have already been constructed in the District, a total of 5,000 units will be completed in the area, with over half of them set aside to be affordable units. The district is primarily focused on encouraging dense residential development, and as such, 87% of the district currently consists of residential uses.

Additionally, Sunnyside Gardens is protected by a Special Planned Community Preservation District. The district is designed to preserve the unique character of the area. No demolition, new development, enlargement or alteration of landscaping or

topography is permitted within the district except by special permit of the City Planning Commission.

In addition to Special Zoning Districts, the Study Area has also prompted some landowners to seek zoning changes and special permits for individual sites. Notably the owner of a 128,332 square foot site at 44-02 Vernon Boulevard, a site locally referred to as “Lake Vernon,” is applying for a zoning action in order to develop at least one million square feet of space. The proposed development at 44-02 Vernon Boulevard could include residential towers, a hotel, a school, open space, affordable housing and possibly a footbridge to Roosevelt Island. Additionally, special permits have been approved by the community board and are awaiting approval from City Planning for the proposed Silvercup West development at 42-22 22nd Street. The proposed plans would see the development of several sound stages, an office tower, about 1,000 residential units, a parking garage, along with retail and cultural space on the site.

In addition to Special Zoning Districts, within the Study Area there are several landowners who have in the past received or are in the process of applying for zoning changes and special permits with the intent to build large scale mixed-use projects. NYCEDC also recently issued an RFP for several city-owned sites on the waterfront for mixed-use development to include light industrial space.

Key Takeaways: Land Use and Zoning

- The zoning in the Area is diverse, with a strong land use framework supporting industrial and manufacturing based activities. Preserving viable and necessary traditional industrial uses, along with redefining and supporting new production-based sectors for industrial districts could prove to be an economic driver for the area, providing both growth and stability.
- Land use is shifting away from industrial uses, as a higher percentage of land in the Study Area is developed for residential, hotel, and commercial office use. A potential area for further study is whether, where appropriate, increasing the allowable floor area ratios (FAR) in industrial or commercial zones could allow for the retention and/or development of affordable space for business activity in the Area.
- Special Purpose Districts in the Study Area are in place to promote mixed-use development and preserve industrial uses; however at this time, market conditions favor residential and hotel development over other uses.

Market Conditions

The following demographic and real estate analysis identifies market opportunities and challenges for the Study Area. The demographic analysis provides context to the broader residential and labor market trends occurring in the Study Area, focusing on population and household changes, along with educational attainment, and employment shifts. The real estate analysis focuses primarily on the following four use categories: 1) residential (ownership units as well as affordable, senior and market rate rental units), 2) commercial office, 3) industrial and 4) retail.

The main data sources for this analysis include the American Communities Survey (ACS), the Economic Census, County Business Patterns, U.S. Bureau of Labor Statistics, New York City Departments of Finance and Buildings, and CoStar.

Demographic Trends

Population and Household Trends

The population in the Study Area has experienced an overall decline since 2000, with 163,933 residents living in the Area as of 2013. The Study Area lost nearly 15,000 residents in the period from 2000 to 2013, an 8.3% decline. The most pronounced decline is noted in the Sub-Area of Ravenswood. Although an overall decline in population was observed in the Study Area, the population of the Central District increased in the period, growing by 13.5%. In the same period, the population of the city as a whole increased 4.9%. With about 22,500 new units either in construction or planning stages in the Study Area, significant population increases are expected in coming years.

Figure 27. Population Change 2000-2013

	2000	2010	2013	2000-13
Study Area	178,843	168,027	163,933	-8.3%
Central District	25,595	29,007	29,061	13.5%
Triborough-South	80,612	72,913	72,274	-10.3%
Ravenswood	43,130	38,875	36,869	-14.5%
Sunnyside West	29,506	27,232	25,729	-12.8%

Source: American Communities Survey, 5-Year Averages, 2009-2013

Despite overall population decline, the number of households in the Study Area has increased marginally in the period from 2000 to 2013. These seemingly contradictory trends are observed due to the decrease in household size over the period. The average household size fell from 2.49 in 2000 to 2.28 in 2013. The Table below provides an overview of the decline in the context of other information including total number of households as well as total number of family households (those with children).

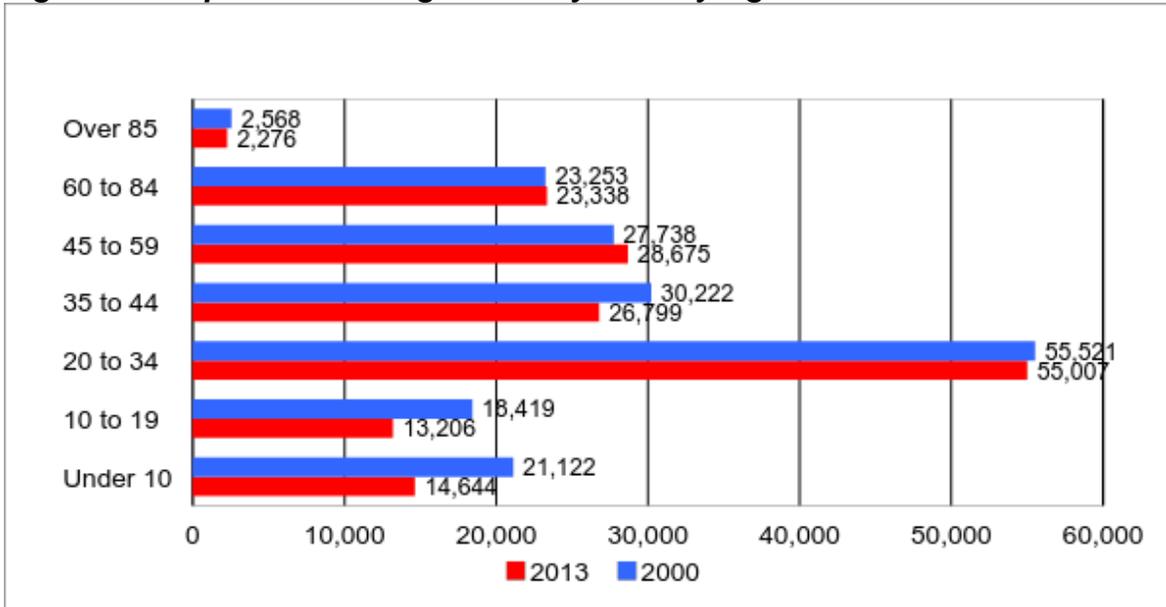
Figure 28. Study Area Households 2000-2013

	2000	2010	2013	2000-13
Total Households	71,011	72,309	71,437	0.6%
Family Household	56.4%	49.1%	48.6%	-7.8 ppt
Average Household Size	2.49	2.31	2.28	-0.22
Mean Household Income	\$48,926	n/a	\$99,726	\$50,800
Housing Tenure				
Owner Occupied	16.2%	15.8%	15.8%	-4 ppt
Renter-Occupied	83.8%	84.2%	84.2%	.4 ppt

Source: American Communities Survey, 5-Year Averages, 2009-2013

While population declines were observed across several age categories in the Study Area between 2000 and 2013, the greatest percentage loss in population was noted for children under the age of ten with a 30.7% decline. The second largest loss of population was observed in the 10-19 age group, which experienced a 28.3% decline. This trend, in conjunction with the declining household size indicates that fewer families with children are now living in the Study Area. Due to the pipeline of new residential construction in the Study Area, and the more recently noted increase in school enrollment and overcrowding, it is expected that this trend has and will continue to soften into the future. The bar graph below shows the breakdown in population by age groupings between the two measured periods.

Figure 29. Population Change in Study Area by Age 2000-2013



Source: American Communities Survey, 5-Year Averages, 2009-2013

The median household income in all ZIP codes in the Study Area increased substantially in the period from 2000 to 2013. The median household income in ZIP code 11101, which encompasses the majority of the Central District, jumped 63.3% during the observed period. All other ZIP codes in the Study Area with reportable data saw median household incomes grow by over 40%. While incomes have risen substantially across the Study Area, persistent and substantial pockets of poverty are present throughout all of the ZIP codes in the Study Area. As of 2013, 22,976 residents, or 14% of the population in the Study Area, were living below the poverty line. The census tracts that include the Ravenswood Houses public housing campus, Census Tracts 43 and 47, have some of the highest levels of poverty in the Study Area, with 43.4% and 33.5% of the population, respectively, living below the poverty line. Similarly, Census Tract 87, where the Astoria Houses public housing campus is located, has 34.5% of the population living below the poverty line. In the census tracts where Queensbridge Houses North and Queensbridge Houses South are located, collectively the largest public housing campus in the country, 33% of the population is living below the poverty line. In Census Tract 39, located around the intersection of Vernon Boulevard and 35th Street, where no public housing developments exist within the census tract, 39.8% of the population is living below the poverty line.

Figure 30. Median Household Income by ZIP code 2000-2013

Zip Code	Sub-Area	2000	2013	Change 2000-13
11101	Central District	\$28,872	\$47,142	63.30%
11109	Central District	NA	\$125,871	NA
11102	Triborough-South	\$35,078	\$49,924	42.30%
11103	Triborough-South	\$38,482	\$55,129	43.30%
11106	Ravenswood	34,651	48,720	40.60%
11104	Sunnyside West	37,962	56,059	47.70%

Source: American Community Survey, 5-Year Averages, 2009-2013

Race, Ethnicity and Citizenship

The Study Area is exceptionally diverse, with 44.5% of the population in 2013 having been born in another country. In 2000 the proportion of foreign-born residents in the Study Area was 52.1%. The decline in immigrant populations accounts for much of the overall population loss in the Study Area, as the number of native-born residents actually increased in the same period. Between 2000 and 2012, the number of foreign-born residents declined by 21.4%, while the native-born population increased by 6.5%. The paired figures, 31 and 32, exhibit these countervailing trends.

Figure 31. Change in Foreign Born Population 2000-2013

	Total Pop.		Foreign Born		Naturalized Citizen	
Study Area	(14,363)	-8.1%	(19,936)	-21.4%	1,011	2.8%
Central District	3,442	13.4%	1,348	13.5%	1,573	49.1%
Triborough-South	(7,644)	-9.6%	(10,633)	-24.6%	(74)	-0.4%
Ravenswood	(6,411)	-14.8%	(6,266)	-28.7%	(880)	-9.6%
Sunnyside West	(3,750)	-12.7%	(4,385)	-24.5%	392	6.0%

Source: American Communities Survey, 5-Year Averages, 2009-2013

Figure 32. Change in Native Born Population 2000-2013

	2000	2013	Change 2000-13
Study Area	85,337	90,910	6.50%
Central District	15,661	17,755	13.40%
Triborough-South	36,689	39,678	8.10%
Ravenswood	21,419	21,274	-0.70%
Sunnyside West	11,568	12,203	5.50%

Source: American Community Survey, 5-Year Averages, 2009-2013

In tandem with the overall decline of foreign-born populations and increase in native-born residents in the Study Area, shifts in the racial and ethnic makeup of the Study

Area have also occurred during the period from 2000 to 2013. The Study Area has seen a decline in the proportion of residents who identify as some other race alone, two or more races, black/African American, Hispanic or Latino, or Filipino. In the same period the Study area has noted increases in the proportion of residents who identify as white, other Asian, Chinese, or Korean.

Figure 33. Change in Race/Ethnicity in Study Area 2000-2013

	2013	Change 2000-13
Total population	163,933	(14,910)
Hispanic or Latino (any race)	28.6%	-1.4 ppt
Not Hispanic or Latino	71.4%	+1.4 ppt
Race of Not Hispanic or Latino		
White	45.0%	+5.6 ppt
Black/African American	6.4%	-1.7 ppt
Asian Indian	3.0%	-1.3 ppt
Chinese	3.8%	+1ppt
Filipino	1.8%	-.02 ppt
Korean	2.5%	+5 ppt
Other Asian	5.3%	+1.3 ppt
Some other race alone	0.4%	-12.8 ppt
Two or more races	1.7%	-6.5 ppt

Source: American Community Survey, 5-Year Averages, 2009-2013

Educational Attainment and School Enrollment

Overall educational attainment of residents living in the Study Area has increased significantly in the period between 2000 and 2013. Of all residents over 25 years old, 25.2% earned a bachelor’s degree or higher in 2000, while 41.2% of residents earned this level of education in 2013. Likewise, the proportion of residents over the age of 25 that had graduated from high school also increased from 70.6% in 2000, to 82.8% in 2013.

Educational attainment, however, is low when compared to the overall Study Area in census tracts where the percentage of population living below the poverty line is highest. Figure 34 illustrates the disparity in education attainment in these census tracts, relative to the overall Study Area.

Figure 34. Educational Attainment in Census Tracts with highest % of Population Living Below the Poverty Line 2013.

Census Tract	% living below poverty line	% high school graduate or higher	% bachelor's degree or higher	Public housing in tract
43	43.4%	72.1%	10.2%	Ravenswood Houses
47	33.5%	68.9%	26.2%	Ravenswood Houses
87	34.5%	66.9%	10.9%	Astoria Houses
25	33.0%	60.7%	8.3%	Queensbridge Houses N&S
39	39.8%	69.4%	22.5%	None
Study Area	14.0%	82.8%	41.2%	

Source: American Community Survey, 5-Year Averages, 2009-2013

Figure 35. Educational Attainment for Population 25y and older in Study Area 2000-2013

	High School Graduate or Higher		
	2000	2013	Change 2000-13
Study Area	70.6%	82.8%	+12.2 ppt
Central District	62.5%	82.3%	+19.8 ppt
Triborough South	70.5%	82.3%	+11.8 ppt
Ravenswood	71.8%	80.8%	+9 ppt
Sunnyside West	75.5%	87.6%	+12.1 ppt

	Bachelor's Degree or Higher		
	2000	2013	Change 2000-13
Study Area	25.2%	41.2%	+16 ppt
Central District	20.6%	43.4%	+22.8 ppt
Triborough South	24.8%	41.5%	+16.7 ppt
Ravenswood	26.0%	39.1%	+13.1 ppt
Sunnyside West	28.6%	41.0%	+12.4 ppt

Source: American Community Survey, 5-Year Averages, 2009-2013

Over 26,000 children are enrolled in kindergarten through twelfth grade in schools located in the Study Area. The enrollment at 19 of 35 schools in the Study Area is greater than the target enrollment and more than 43 percent of students in the Study Area attend schools that are over-enrolled. Given that there are more families with children in the Study Area than anticipated based on the existing housing stock, assumptions made for enrollment projections and school creation are worth reconsidering.

The most severely overcrowded schools are specialized High Schools, such as

International High School at LaGuardia Community College, Middle College High School at LaGuardia Community College or the Aviation Career & Technical Education High School. Figure 36 below displays the public schools in the Area along with their enrollment, target enrollment, and utilization, which indicates whether the school is above or below capacity (over 100% being above capacity).

Figure 36. Enrollment, Capacity and Utilization in Public Schools 2014-2015 School Year

	Rolled Up Enrollment (2014-15)	Rolled Up Target Capacity (2014-15)	Rolled Up Target Utilization (2013-14)
P.S./I.S. 78q	475	861	55%
Long Island City High School	2,123	2,293	93%
I.S. 204 Oliver W. Holmes	590	1158	51%
P.S. 234	624	585	107%
The Riverview School	99	144	69%
I.S. 010 Horace Greeley	862	1,047	82%
P.S. 017 Henry David Thoreau	531	517	103%
P.S. 070 Queens	1,029	1,312	78%
P.S. 111 Jacob Blackwell	332	558	59%
P.S. 112 Dutch Kills	538	403	133%
Albert Shanker School For Visual And Performing Arts	565	1,035	55%
P.S. 150 Queens	1,219	1,174	104%
P.S. 166 Henry Gradstein	1,255	1,041	121%
P.S. 171 Peter G. Van Alst	558	677	82%
Academy For New Americans	150	199	75%
Energy Tech High School	227	393	58%
Young Women's Leadership School, Astoria	557	488	114%
Hunters Point Community Middle School	227	393	58%
The 30th Avenue School	117	85	138%
Academy For Careers In Television And Film	515	551	93%
William Cullen Bryant High School	2,496	2,574	97%
Frank Sinatra School of the Arts High School	808	748	108%
Baccalaureate School for Global Education	478	394	121%
Information Technology High School	970	714	136%

Academy Of American Studies	874	551	159%
Bard High School Early College Queens	623	594	105%
High School Of Applied Communication	421	326	129%
Academy of Finance and Enterprise	478	346	138%
Robert F. Wagner, Jr. Secondary School for Arts and Technology	610	631	97%
Middle College High School at LaGuardia Community College	514	357	144%
International High School at LaGuardia Community College	509	304	167%
P.S. 199 Maurice A. Fitzgerald	1,068	1,169	91%
The Children's Lab School	135	131	103%
Queens Vocational and Technical High School	1,553	1,197	130%
Aviation Career & Technical Education High School	2,168	1,548	140%

Source: New York City Department of Education, Enrollment, Capacity, and Utilization Report, 2014-2015

The Study Area is also home to or proximate to three major institutions of higher education. LaGuardia Community College (CUNY), a community college located in Long Island City, had a total enrollment of 49,946 in 2013, 19,770 of whom were working towards a degree. CUNY School of Law, located in the Central District, moved to Long Island City in 2012. LaGuardia Community College and CUNY Law combined total approximately 55,000 students. In addition, Cornell University is on track to complete the first phase of the Cornell Tech campus on Roosevelt Island by 2017. The campus promises to serve as an innovation hub for the city and drive economic activity in the area, including Long Island City.

Employment

Between 2004 and 2013, the Study Area added over 15,000 jobs to the employment base. Over 70% of the jobs (74,709 jobs) in the Study Area are in the Central District.

Figure 37. Number of Jobs 2004-2013

	2004	2013	Change 2000-13	% Change 2000-13
Study Area	91,422	106,439	15,017	16.4%
Central District	61,501	74,709	13,208	21.5%
Triborough-South	16,255	14,912	-1,343	-8.3%
Ravenswood	9,889	11,166	1,277	12.9%
Sunnyside West	3,794	5,637	1,843	48.6%

Source: U.S. Census Bureau, OnTheMap Application, 2013

Between 2004 and 2013, a marked shift in the mix of employment in the Study Area took place. Most notably, the number of jobs in the fields of Manufacturing; Management of Companies and Enterprises; Construction; and Wholesale Trade declined, while all other job categories grew. Between 2004 and 2013, the greatest number of jobs in the Study Area were added in the areas of Administration and Support/Waste Management and Remediation (+2,957 jobs); Accommodation and Food Services (+2,916 jobs); Health Care and Social Assistance (+2,392 jobs); and Professional, Scientific and Technical Services (+1,177 jobs). There were also notable gains in the areas of Transportation and Warehousing, along with Public Administration Jobs. Figure 38 shows the employment sector and its change between 2004 and 2013.

Figure 38. Local Jobs by Industry in Study Area 2004-2013

	Count	Share-2013	Change 2004-13
Construction	13,900	13.1%	-8.5%
Transportation and Warehousing	13,227	12.4%	200.5%
Administration & Support, Waste Management and Remediation	12,503	11.7%	64.6%
Health Care and Social Assistance	11,424	10.7%	9.1%
Manufacturing	8,680	8.2%	-44.9%
Retail Trade	8,200	7.7%	2.9%
Finance and Insurance	8,114	7.6%	24.0%
Wholesale Trade	7,443	7.0%	-6.5%
Accommodation and Food Services	6,045	5.7%	93.2%
Professional, Scientific, and Technical Services	3,947	3.7%	55.6%
Other Services (excluding Public Administration)	3,685	3.5%	26.2%
Real Estate and Rental and Leasing	2,615	2.5%	49.6%
Educational Services	2,239	2.1%	10.2%

Information	1,881	1.8%	28.3%
Public Administration	1,118	1.1%	78.0%
Arts, Entertainment, and Recreation	800	0.8%	85.6%
Management of Companies and Enterprises	395	0.4%	-35.5%
Utilities	208	0.2%	890.5%
Mining, Quarrying, and Oil and Gas Extraction	12	0.0%	140.0%
Agriculture, Forestry, Fishing and Hunting	3	0.0%	0.0%

Source: U.S. Census Bureau, OnTheMap Application, 2013

In the period between 2004 and 2013, the number of persons employed in the Arts, Entertainment, and Recreation industry sector nearly doubled in the Study Area. In addition, Long Island City now has about 27 hotels (with over 30 more in some phase of development), catering to both tourists and business travelers. An even greater pace of growth was observed in the Accommodation and Food Services sector. Figure 39 below shows the actual jobs increases in these sectors over time.

Figure 39. Selected Sector Jobs in Study Area

	2004	2007	2010	2013	Change 2004-13
Arts, Entertainment, and Recreation	431	464	606	800	85.6%
Accommodation and Food Services	3,129	3,071	3,710	6,045	93.2%

Source: U.S. Census Bureau, OnTheMap Application, 2013

Of the top five employment industries in the Study Area, that account for 56.1% of total employment, all but one pay an average wage that is higher than \$38,246, a threshold for “middle class”¹ income in New York State. Figure 40 shows the annualized average wages by industry in Queens County.

Figure 40. Wages by Industry: Queens County, 2015 Q2

Industry	Annual Wages*	% vs. all industries
Total, All Industries	\$47,044	
Construction	\$69,432	48%
Transportation and Warehousing	\$56,032	19%
Administrative and Support and Waste Management and Remediation Services	\$36,692	-22%
Health Care and Social Assistance	\$39,404	-16%
Manufacturing	\$46,664	-1%
Retail Trade	\$29,740	-37%
Finance and Insurance	\$89,192	90%
Wholesale Trade	\$56,580	20%

¹ Pew Charitable Trust definition of “middle class: 67% to 200% of overall median household income
<http://www.pewsocialtrends.org/2015/12/09/the-american-middle-class-is-losing-ground/>

Accommodation and Food Services	\$22,280	-53%
Professional, Scientific, and Technical Services	\$49,440	5%
Other Services (except Public Administration)	\$28,276	-40%
Real Estate and Rental and Leasing	\$44,684	-5%
Educational Services	\$38,296	-19%
Information	\$61,188	30%
Public Administration	\$60,532	29%
Arts, Entertainment, and Recreation	\$52,924	12%
Management of Companies and Enterprises	\$94,424	101%
Utilities	N/A	
Mining, Quarrying and Oil and Gas Extraction	N/A	
Agriculture, Forestry, Fishing and Hunting	\$9,764	-79%

Source: New York State Department Of Labor, Q2 2015

*Annualized based on 2015 Q2 wages

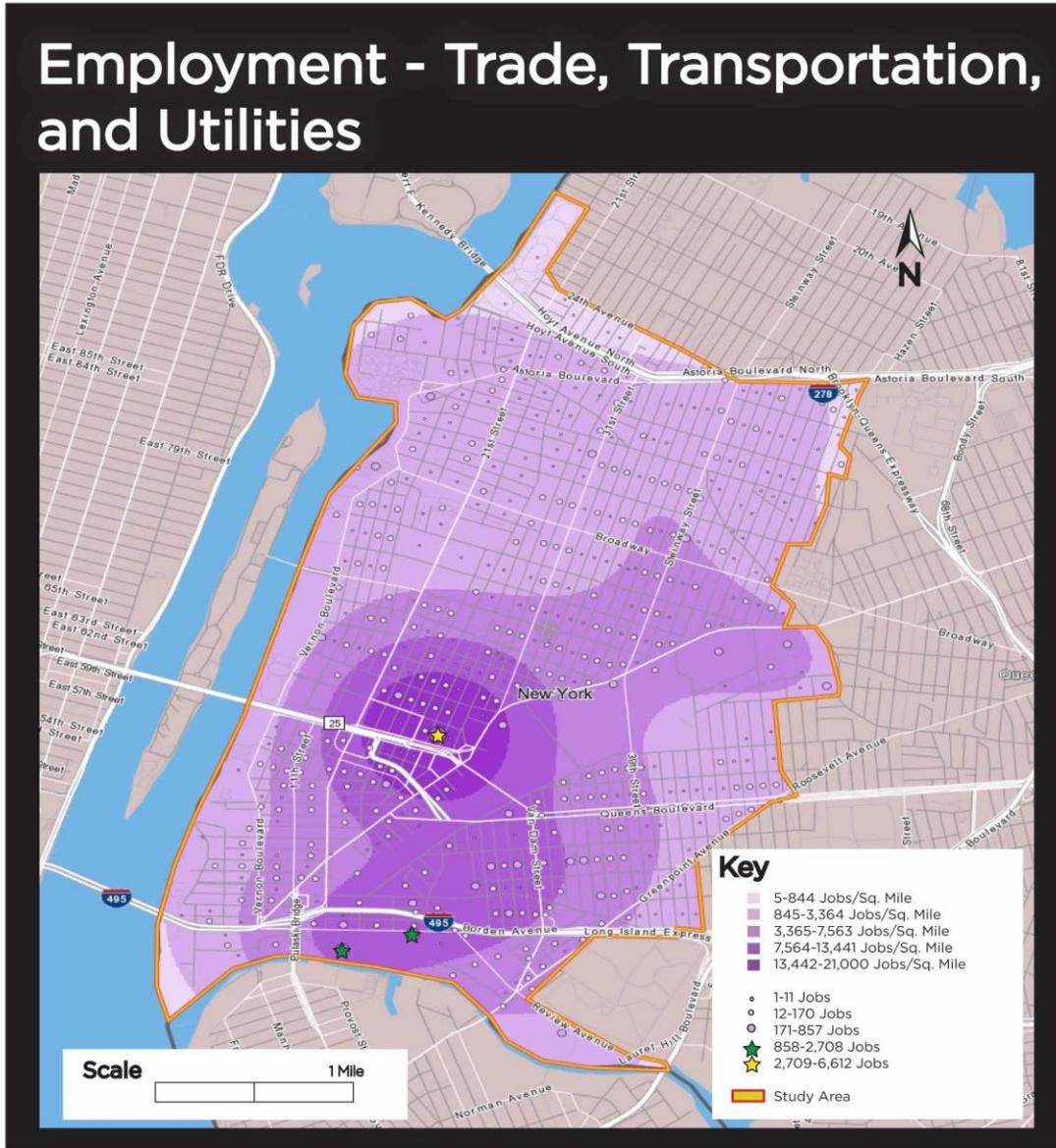
Employment density is highest in the Central District, however, areas east of the rail yards, where industrial land use is predominant, has a relatively high density of manufacturing, construction, wholesale trade, transportation and warehousing, and utilities jobs. Figures 41, 42 and 43 show the densities for three employment groups in the Study Area: 1) All Jobs 2) Trade, Transportation & Utilities; and 3) Goods Producing.

Figure 41. Employment Density 2013 – All Jobs
Includes all NAICS Industry Codes



Source: U.S. Census Bureau, OnTheMap Application, 2013

Figure 42. Employment Density 2013 – Trade, Transportation, and Utilities
 Includes: Transportation and Warehousing, Wholesale Trade, Retail trade, and Utilities NAICS Industry Codes



Source: U.S. Census Bureau, OnTheMap Application, 2013

Figure 43. Employment Density 2013 – Goods Producing
Includes: Manufacturing and Construction NAICS Industry Codes



Source: U.S. Census Bureau, OnTheMap Application, 2013

Key Takeaways: Demographics and Workforce

- Although the Study Area as a whole experienced a population decline of 14,363 people between 2000 and 2013, the Central District gained 1,348 residents in the same period, and recent housing demand and existing residential construction indicate significant growth of new LIC core and waterfront neighborhoods.
- Fewer families with children are now living in the Study Area as a whole, although, as noted above, certain areas are seeing high growth in families. It is important to note that the pipeline of upcoming residential construction, along with the units that have been delivered since 2013, offer higher-end rental and condominium options with in-building amenities. This type of housing product often attracts families with children; this may either soften or reverse the trend toward small family size in the Study Area
- Many schools are currently at or over capacity, particularly at the elementary level and at specialized schools and in areas with growing family populations, indicating a need to increase funding and infrastructure for public education in the face of increased housing demand.
- The level of educational attainment in the Study Area is rising, presenting an opportunity for local companies seeking a proximate and educated workforce.
- The Study Area added over 15,000 new jobs between 2004 and 2013. The greatest gains in employment were seen in the Health Care and Social Assistance; Professional, Scientific and Technical Services; and Support/Waste Management and Remediation sectors.
- The Study Area is home to many cultural and arts organizations and employment in these sectors has more than doubled between 2004 and 2013.
- After a prior period of loss, the share of workers who both live and work in the Study Area is increasing, signaling that the Study Area could develop into a stronger live-work neighborhood

Housing Market Analysis

The housing market in the Study Area is dynamic, with consistent growth in sales price and rents, signaling strong demand. With active residential development in the last several years, a large and growing pipeline will substantially increase the new supply delivered to the market. LICP projects that over 24,500 housing units are either in development or in the planning stages. The housing market supply will have a particularly meaningful influence on the accelerating demographic shifts and increasing pressure on neighborhood infrastructure and services in the Study Area.

A significant offering of affordable housing units exists in Hunter's Point South, with additional units in construction and planned. The Hunters Point South development has already delivered 925 new permanently affordable housing units in two buildings. Once complete, the Hunters Point South development will total 5,000 apartments, over half of which will be set aside for affordable housing. In addition to privately owned affordable housing, the Area is home to a significant number of public housing units along the geography's western edges. The largest public housing development in the country—the New York City Housing Authority's Queensbridge Houses—is in the Study Area, as well as the Astoria Houses and Ravenswood Houses.

Market Rate Housing Supply

There were 88,699 residential units in the Study Area as of June 2015. Given that the building stock in the Study Area is relatively dense and urban in nature, housing units in the one and two-family building category account for only a small percentage of residential units (10.2%). Multi-family walk-up and elevator buildings are common, along with mixed-use buildings that offer commercial space in the same building.

The mix of residential unit types in the Central District mostly located west of the rail yards, stands in contrast to the rest of the Study Area, with 81.1% of housing units being in either multi-family elevator buildings or mixed residential & commercial buildings. Only 3.6% of the housing units in the Central District are found in one and two family buildings.

Figure 44. Number of Residential Units by Building Type - 2015

	All Residential Units	One & Two Family Building	Multi-Family Walk-Up Building	Multi-Family Elevator Building	Mixed Residential & Commercial Buildings
Study Area	88,699	10.2%	37.7%	31.7%	20.1%
Central District	23,262	3.6%	15.1%	40.5%	40.6%
Triborough-South	32,858	14.3%	55.1%	16.6%	13.7%
Ravenswood	19,755	10.4%	40.4%	37.2%	11.7%
Sunnyside West	12,824	11.8%	29.9%	46.3%	12.0%

Source: NYC PLUTO 15v1 2015

The vast majority of the units in the Study Area are occupied by renters, not homeowners. The proportion of units being occupied by renters has remained relatively flat in the period between 2000 and 2013. The Figure below displays the percentage of renter occupied units for each major Sub-Area.

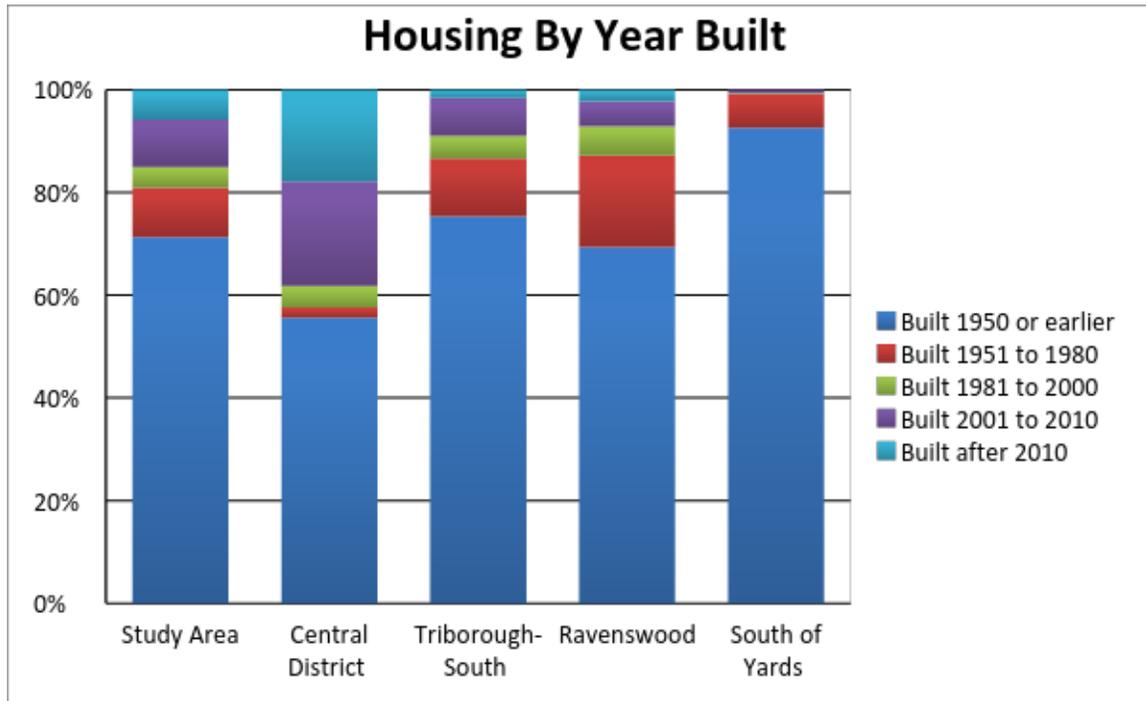
Figure 45. Renter Occupied Units 2000-2013

	2000	2010	2013
Study Area	83.8%	84.2%	84.2%
Central District	86.8%	84.1%	83.8%
Triborough-South	82.8%	85.2%	85.2%
Ravenswood	83.8%	82.5%	83.1%
Sunnyside West	86.0%	83.1%	85.1%

Source: 2013 American Communities Survey, 5 Year Averages 2009-2013; 2000 and 2010 US Census

The majority of the housing stock in the Study Area is older, with about 84% of all units in the Study Area having been constructed before 1980. Although the housing stock in the Study Area as a whole was mostly built pre-1980, the Central District, which has seen considerable residential development in the last decade, is home to a far greater share of newer housing. The Central District currently has 9,835 residential units that were built after the year 2000, over 40% of all available housing units there. The bar graph below depicts the breakdown of units by age and by Sub-Area.

Figure 46. Housing Units by Year Built – 2015



Source: NYC PLUTO 15v1 2015

The residential supply in the Study Area, particularly in the Central District west of the rail yards is expected to continue to grow in the near future. As mentioned previously, approximately 7,000 residential units are currently under construction and about 17,500 are in the planning stages of development. The addition of approximately 24,500 units to the Study Area over coming years will grow the supply of housing by more than 25%. The majority of this housing, over 90%, is expected to be rental housing. In 2015 alone, the Department of Buildings noted 153 new building permits applications submitted in Queens Community Boards 1 and 2.

Affordable Housing Supply

There are 3,139 affordable housing units in the Study Area that utilize either Low Income Housing Tax Credits, Section 202, Section 8, Mitchell-Lama, J-51, or other programs administered by the New York City Housing Development Corporation, United States Department of Housing and Urban Development (HUD), and other public agencies. In 2016, the 421-a tax abatement program that encouraged mixed-income development in New York City expired. It’s expected that without the program, the number of affordable units delivered in the Study Area may be lower that if the program benefits had been extended. Figure 47 below displays the breakout of affordable housing units by development and the affordable housing program used.

Figure 47. Affordable Housing Buildings in Study Area – 2015

Name	Address	Program	Units
River View Gardens	2-04 49 Avenue	Section 202/811	80
Hour Apartments	35-54 11 Street	LIHTC 9%	8
Catherine Sheridan Houses	31-31 23 Street	Section 8/Other	241
SPITI Housing for the Elderly	32-02 Broadway	Section 8	100
Goodwill Terrace	1-04 27 Avenue	Mitchell-Lama	207
Bridgeview 2	26-45 9 Street	Section 8	108
Bridgeview 3	4-08 27 Avenue	Mitchell-Lama	171
Halletts Cove Apartments	14-02 27 Avenue	LIHTC 9%	60
Long Island City Senior Housing	25-55 22 Street	Section 8/LIHTC 4%	73
Hanac Senior Housing	25-40 Hoyt Avenue	LIHTC 4%	184
Big Six Towers	46-10 61 Street	Mitchell-Lama	982
Astoria Senior Residence	21-02 30 Road	LIHTC 9%	98
Hunter's Point South Crossing	1-55 Borden Avenue	LIHTC	306
Hunter's Point South Commons	1-50 50th Ave	LIHTC	619
Total			3,139

Sources: NYU Furman Center; US Department of Housing and Urban Development

Additionally, there are currently 2,205 buildings in the Study Area where some or all of the units are subject to rent stabilization regulation, representing approximately 28% of total buildings.

Figure 48. Rent Subsidized Buildings in Study Area – 2013

Study Area	2,205
Central District	273
Triborough-South	1,098
Ravenswood	508
Sunnyside West	326

Source: 2013 Building Registrations filed with the New York State Division of Housing and Community Renewal (DHCR)

The Study Area is home to the largest public housing development in the United States, Queensbridge Houses. Ravenswood Houses and Astoria Houses are also within the Study Area's boundaries. In total, 14,686 residents in the Study Area live in affordable public housing.

Figure 49. NYCHA/Public Housing in Study Area - 2015

Name	# of units	# of residents
Ravenswood	2,167	4,541
Astoria	1,102	3,135
Queensbridge North	1,517	3,432
Queensbridge South	1,584	3,578
Total	6,370	14,686

Source: <http://www.nyc.gov/html/nycha>

Long Island City is also home to the Sunnyside Yards, a 200+ acre area where potential development is being explored for the longer range future. The Sunnyside Yards initiative is an early feasibility phase, currently contemplating the decking over of the active rail yards in the Study Area in order to make the construction of 11,250 new affordable apartment units and other uses possible in the future.

Senior Housing Supply

There are currently 758 available units in the Study Area that are specifically designated for the elderly. These units include Mitchell-Lama units, Section 202 supportive housing, Section 8, public housing, and other special units specifically designated for seniors. Phase II of the Hunters Point South development will also include 100 units designated for seniors.

Figure 50. Senior Housing in Study Area – 2015

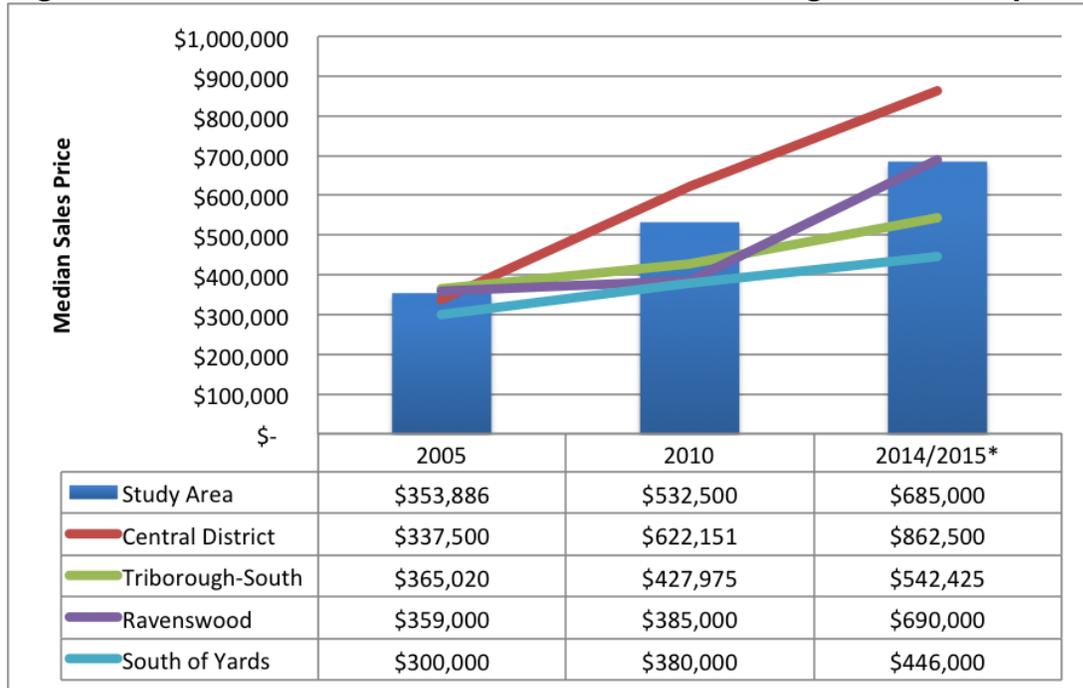
Name	Address	Type	# of Units
River View Gardens NY	4-12 49 Ave. LIC	Section 202	79
Monsignor Thomas Campbell Apartments	25-63 22 St. Astoria	Section 202	72
SPITI Housing for the Elderly	32-06 21 St. Astoria	Section 202	99
George T. Douris Senior Housing	2740 Hoyt Avenue South Astoria	Other	183
Hallets Cove	14-20 27 Avenue Astoria	Other	55
Long Island City Senior Housing	25-55 22nd Street	Section 8	72
Astoria Senior Residence	21-02 30 Road	Other	98
Hanac Senior Housing	25-40 Hoyt Avenue	Other	100
Total			758

Source: New York City Department for the Aging

Housing Sales Demand

Between October 2014 and September 2015, there were 363 single-unit residential sales in the Study Area. The median sale price - excluding co-op sales - was \$685,000, or \$646.76 per square foot. About thirteen percent of sales were co-ops with a median sales price of \$442,000.

Figure 51. Median Sales Prices Full-Year 2005- Rolling Oct 2014/Sep 2015

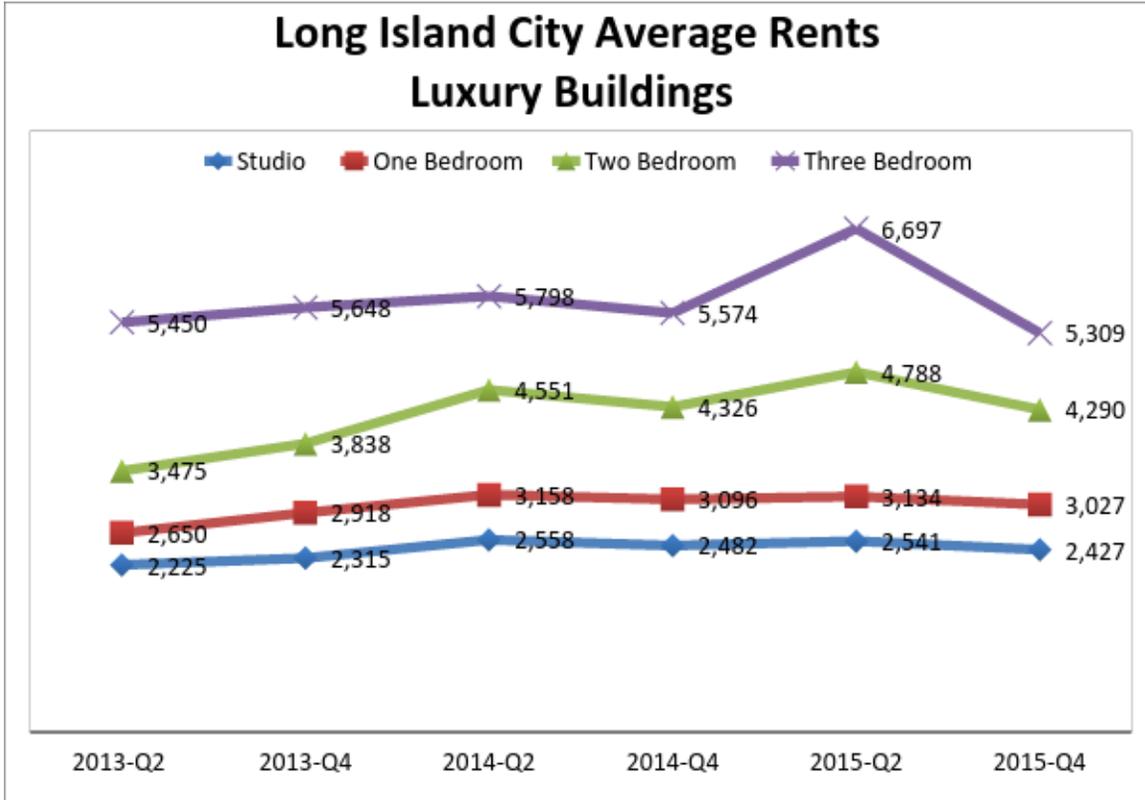


Source: New York City Department of Finance, Rolling Sales December 2013 – November 2014, Zillow County Sales Data.

Housing Rental Market Demand

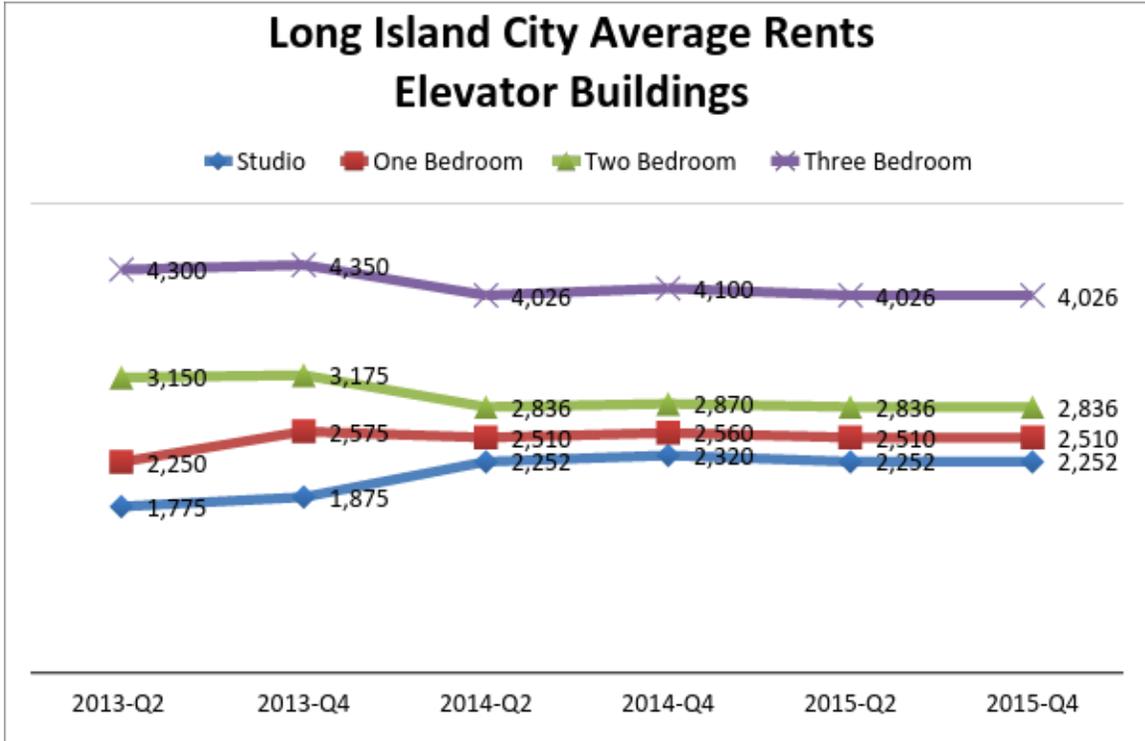
As of September 2015, Long Island City had the highest average rents in Queens County. Overall rents rose in both Long Island City and Astoria in the period between Q2 2013 and Q4 2015, signaling strong demand for rental housing. The rental price for a studio apartment in a luxury building in Long Island City, defined as ZIP codes 11101, 11109 and 11120, increased 9.1% in the period, reaching an average price of \$2,427. Prices for studio apartments in elevator and walkup buildings rose at an even higher level, increasing 26.9% and 15.6%, respectively. Prices for units with more bedrooms remained more steady in the period, with three bedroom apartment prices in luxury buildings, along with two and three bedroom prices in elevator buildings, marginally declining in that period.

Figure 52. Average Rents Long Island City, Luxury Buildings, Q2 2013-Q4 2015



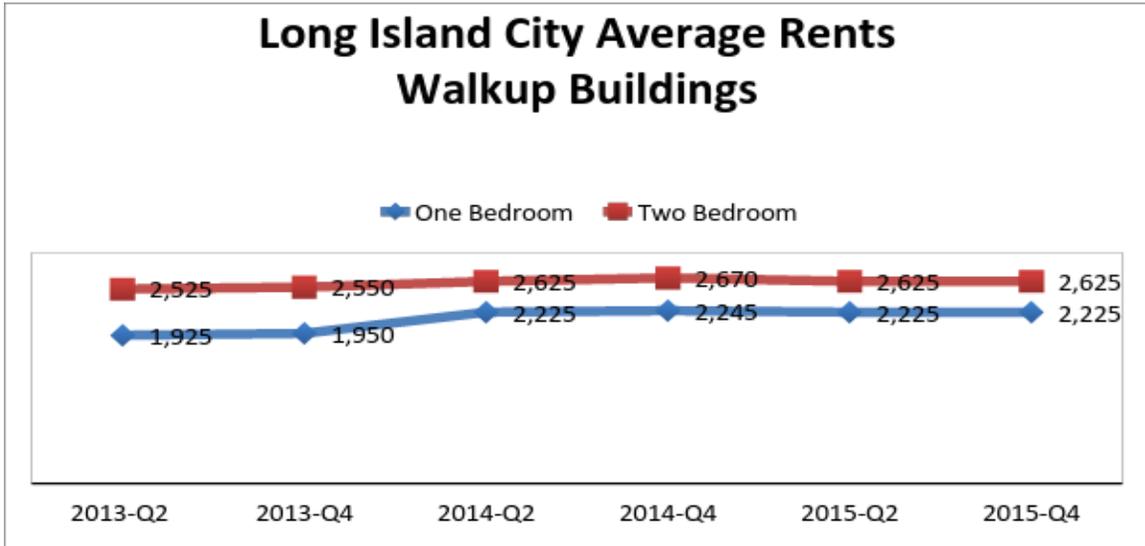
Source: Modern Spaces: The Orange Report 2013; 2014; 2015

Figure 53. Average Rents Long Island City, Elevator Buildings, Q2 2013-Q4 2015



Source: Modern Spaces: The Orange Report 2013; 2014; 2015

Figure 54. Average Rents Long Island City, Walkup Buildings, Q2 2013-Q4 2015



Source: Modern Spaces: The Orange Report 2013; 2014; 2015

Key Takeaways: Housing Market

- Excellent access to public transportation and strong connections to Manhattan from the Study Area will likely further increase demand for housing, putting pressure on rents and sales prices, making affordability a challenge.
- The majority of the new housing stock and housing units planned or in-construction is rental units. While this will provide new housing supply for some, there is a lack of new ownership opportunities, particularly affordable ownership, being offered in the market. Hunters Point South will mitigate some affordable housing need, providing a substantial number of affordable and senior units in the Study Area.

Office Market Analysis

The Study Area's office market is significant in size, with about 12.5 million square feet of rentable building area available on the market, and has shown strong demand for the last several years, with relatively low vacancy rates and growing rents for the past ten years. While new office development in the Study Area has been limited, due to both developers' and lenders' preferences towards residential development with higher investment yields, projects delivered saw quick absorption rates.

The Study Area's proximity to Manhattan's business districts, access to highways, bridges, tunnels, airports and public transportation make it a particularly attractive location for office use.

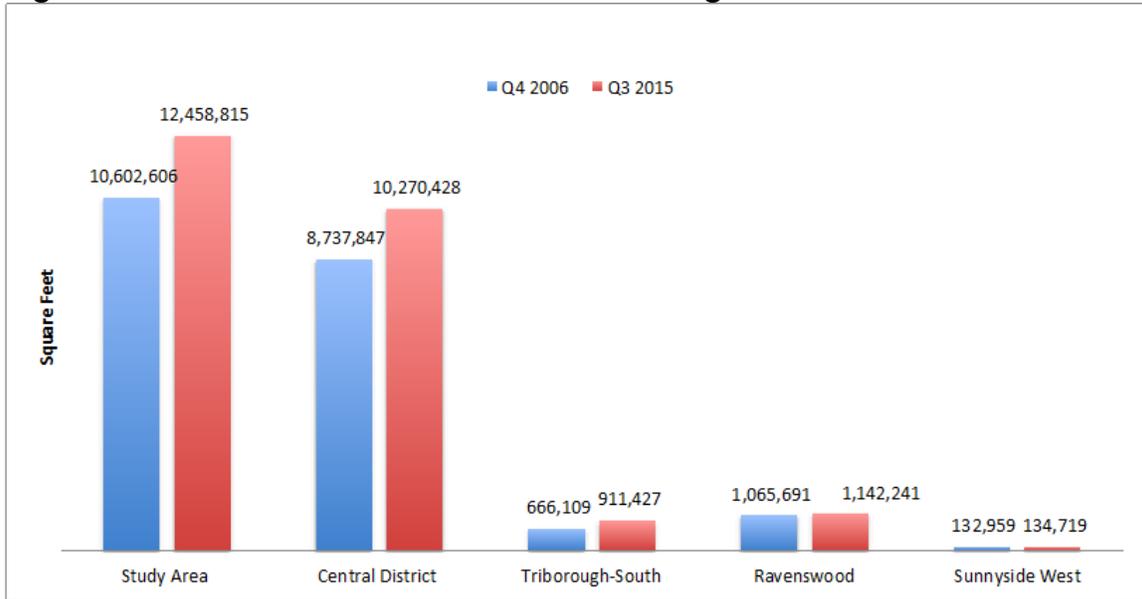
Commercial Office Market Supply Analysis

With about 11.6% of available building stock dedicated to commercial office use, the Study Area has a considerable office market. This is particularly true in the Central District, where 20.5% of building square footage is dedicated to commercial office use. The majority of this commercial space is found west of the rail yards in the Central District. There are over 300 commercial office properties in the Study Area that offer approximately 12.5 million square feet of usable office space. Although there have been few new construction projects since 2006, 1.9 million square feet of office space has been delivered in the Study Area, in large part due to the conversion of industrial properties. Additionally, commercial office owners have been undertaking renovations and upgrades of current properties. Over 1.4 million square feet of office space is contained in a single office tower in the Study Area: One Court Square, also known as the Citigroup Building.

The Central District contains over 80% of the total available commercial office space available in the Study Area. Additionally, over 80% of the office space that has been delivered in the Study Area since 2006 has been in the Central District.

Figure 55 shows the total commercial office rentable building area in the Study Area.

Figure 55. Commercial Office Rentable Building Area Q4 2006 – Q3 2015



Source: CoStar

Of the over 1.5 million square feet of commercial office space that has been added to the Central District since 2006, roughly 1.1 million square feet was delivered through just two developments: Two Court Square (488,453 sq. ft.) completed in 2007, and occupied by Citigroup and CUNY Law School, and 2 Gotham Center (662,000 sq. ft.) completed in 2011, and entirely occupied by the NYC Department of Health. NYC EDC along with Tishman Speyer is in the process of planning an additional tower (1 Gotham Center); original plans indicate this as part of the commercial office complex, adding approximately 900,000 square feet of commercial office space in coming years, although the final plans have not yet been announced. Additionally, several mixed-use development projects are being proposed which would potentially add a significant amount of commercial office space on the waterfront in the Study Area.

Commercial Office Market Demand Analysis

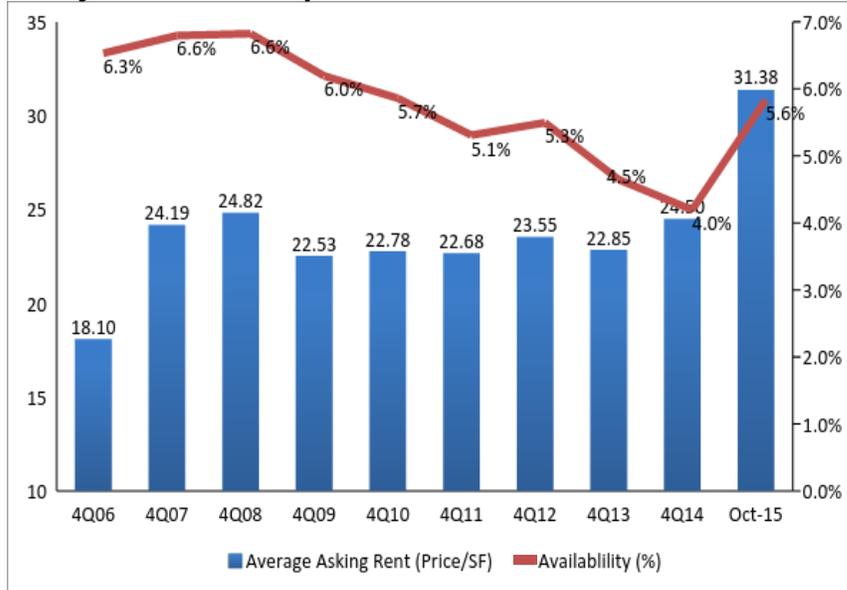
According to projections by the New York City Economic Development Corporation, there will be demand for 60 million square feet of new commercial office space by 2025 across New York City. It is projected that much of that demand will likely be outside of Manhattan.¹

While commercial office rents in the Study Area did mark a decline in the aftermath of the financial crisis, prices have since recovered and as of the latest available data for 2015, have hit a record high for the measured period. As of October 2015, commercial office rents in the Study Area reached \$31.38 per square foot, a price that is over 73% higher than in Q4 of 2006. Vacancy rates in the Study Area have steadily declined since 2008 in most periods, except for a recent increase in vacant and available space due to future availability added to inventory at buildings which have or are undergoing

¹ Source: <http://www.nycedc.com/economic-data/november-2015-economic-snapshot>

significant renovation to prepare for tenants seeking commercial space. Figure 56 shows the average commercial asking rents and availability in the Study Area.

Figure 56. Average Commercial Office Asking Rent and Availability in Study Area 2006-Sep 2015

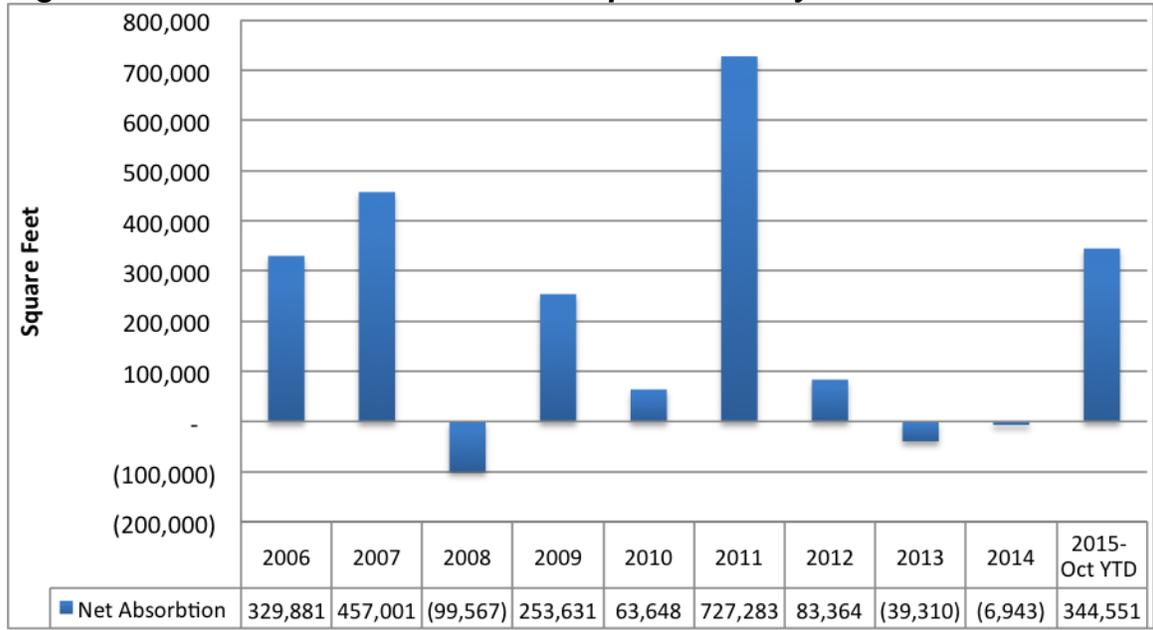


Source: CoStar

Absorption of new office space in the Study Area has been swift when inventory has been added to the market, with consistently low and shrinking vacancy rates. Market indicators signal strong current demand, with rising rents further incentivizing owners to make more commercial property available in the market. However, while commercial office rents have been rising, they remain below the level required to attract development and investor interest. New commercial office investment is not financially feasible, though conversion of industrial property to commercial office use often offers owners an increasingly higher return. This trend of converting prior manufacturing or traditional industrial space to office use has had the unwanted effect of limiting the supply of affordably priced industrial space in New York City.

One of the only major new commercial office developments in the Study Area in recent years was the Gotham 2 office tower, completed in 2011. The Gotham 2 office tower was entirely leased by the New York City Department of Health. Figure 57 shows the commercial office net absorption in the Study Area.

Figure 57. Commercial Office Net Absorption – Study Area



Source: CoStar

Key Takeaways: Office Market

- The rising commercial office rents in the Central District signify strong demand. Although rents are increasing, new construction is still not economically viable at current or future projected rent levels.
- The total rentable building area in the commercial office market is expanding, signaling that developers have grown supply in the market; however, this new supply is primarily the result of the repurposing of space previously used for light industrial operations, as opposed to new commercial office construction. The strength of the market interest in commercial office space indicates that further expanding incentives for new commercial office development would likely be met with interest from the market.
- The highest and best use for development is still residential given greater per square foot income versus commercial uses, presenting a challenge in building a live-work community and a vibrant 24-7 business core. Additionally, financing requirements for commercial properties (e.g. the requirement that an anchor “credit” tenant be made available for lenders to underwrite) may make capital more difficult to secure for commercial office development.
- Despite the growing interest from commercial firms in locating in the area, new construction of large-scale commercial office space has not thus far proven feasible without government support.

Industrial Market Analysis

Industrial Market Supply Analysis

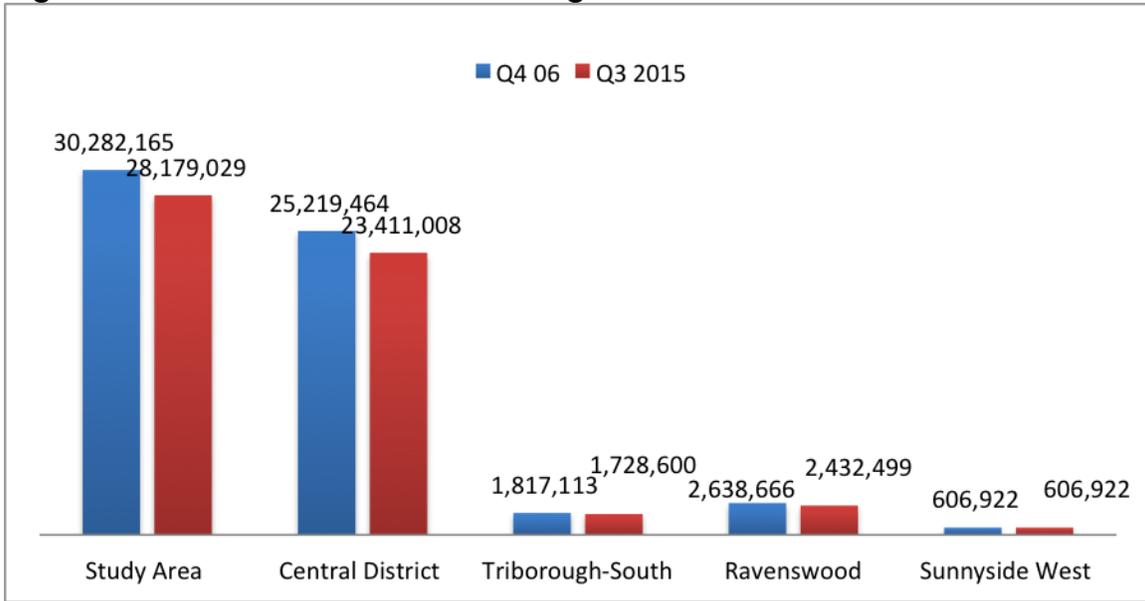
Industrial uses constitute a substantial share of total building square footage in the Study Area, with roughly 20% of available square footage dedicated to industrial use. There are 1,198 industrial properties in the Study Area that offer approximately 30.3 million square feet of usable floor space. Since 2006, over 285k square feet of industrial space has been delivered in the Study Area.

Although additional space was delivered, there was a net loss of 2.1 million square feet of rentable building area in the Study Area due to conversion and other repurposing. Notably, many hotel and self-storage buildings have either been constructed as-of-right, or derived to the market by way of building conversion in IBZ areas. There are currently twenty seven hotels in the Study Area, with nine hotels within the IBZ boundaries. There are over thirty hotels either in construction or planned in the Study Area, twenty three of which will be built within IBZ boundaries. Similarly there are fifteen self-storage buildings in the Study Area, eight of which are within IBZ boundaries.

Additionally, future supply may be further compressed as rising property values in the Study Area prompt industrial property owners to not renew existing tenants' leases, hold space vacant in anticipation of a speculative land sale, and sell industrial properties to developers with property conversion investment plans.

The Central District, largely east of the rail yards, hosts over 80% of the total available industrial space in the Study Area. There are other pockets of industrial use as well, including just west of the core LIC and north of the Queensboro Bridge. Figure 58 shows the total industrial rentable building area by Sub-Area.

Figure 58. Industrial Rentable Building Area Q4 2006 – Q3 2015

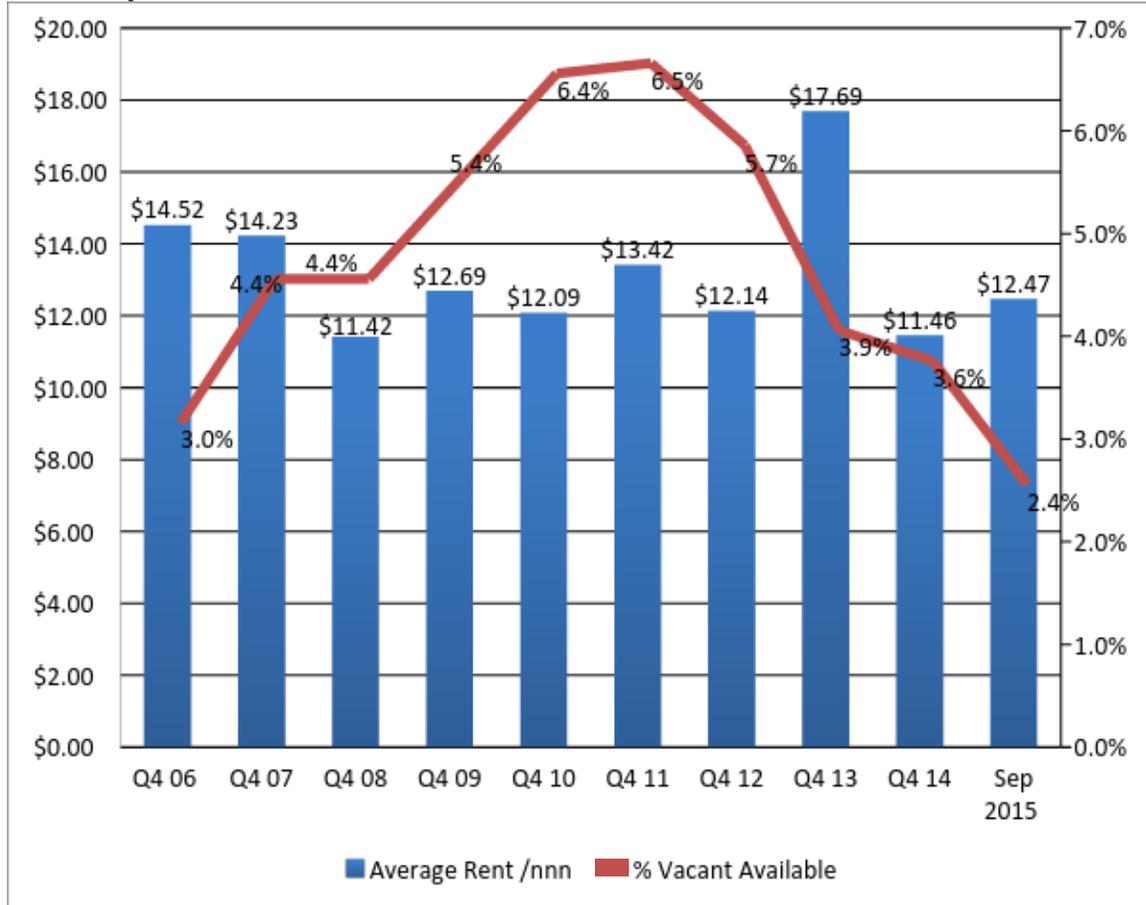


Source: CoStar

Industrial Market Demand Analysis

Industrial rents have remained relatively stable since 2006, despite a very low vacancy rate. This stable price likely indicates the high elasticity of demand for industrial property. Industrial tenants are not willing/not able to pay a higher price for industrial real estate. The very low vacancy rate of 2.4% constitutes 690,260 square feet of total available space. Figure 59 shows the average asking industrial rent and availability in the Study Area.

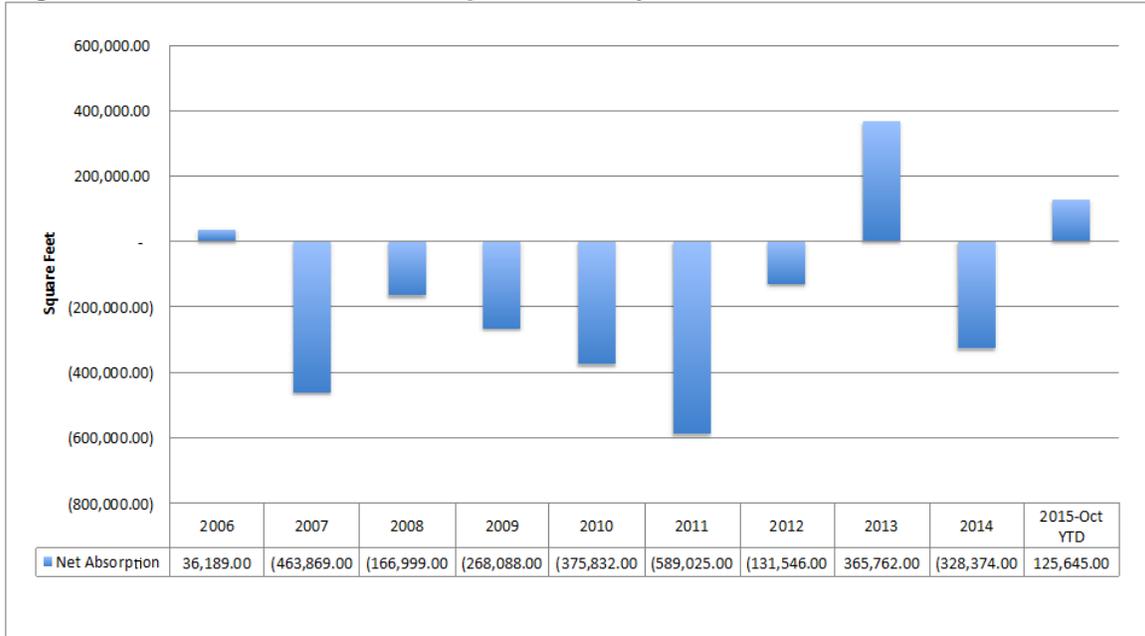
Figure 59. Average Asking Industrial Rent and Availability in Study Area 2006-Sep 2015



Source: CoStar

The absorption rates for available industrial properties in the Study Area have been consistently strong since 2006, driving vacancies further down. Historical and recent absorption rates suggest that demand for industrial properties at current prices is strong, however no new floor area has been delivered to the markets since Q1 of 2013. Figure 60 shows the industrial net absorption in the Study Area.

Figure 60. Industrial Net Absorption: Study Area



Source: CoStar

Key Takeaways: Industrial Market

- Low vacancy signals that there is strong demand for industrial space in the Study Area.
- While vacancy is negligible, lower returns on investment for industrial property in general and compared to residential in particular where allowed, or to hotel where residential is not allowed, limit the amount of additional industrial space to be delivered to the market in the Study Area. Additionally, creating more space in current buildings is often cost prohibitive for property owners, since such investment often necessitates the construction of large-scale freight elevators, additional amenities, upgrading facilities to meet current building code requirements, and disrupting or vacating current tenants to accommodate construction.
- Despite strong demand for industrial space, some inventory is being lost due to owners' decisions to shift space to commercial office uses and hotel development where higher returns may be realized.
- Industrial areas protected by IBZ regulations have limited FAR allotments under existing zoning, which also limits the profitability of expanding available industrial space on current parcels.
- Although many new tenants seeking industrial space are smaller-scale manufacturers and artisans, scaled manufacturing on large floor plates is still prevalent in the Study Area.
- Identifying policy levers to stabilize and increase supply of industrial space and allows for both commercial office growth and retention of industrial use, namely through financial or zoning-based incentives offered to property owners, could provide a platform for a diverse and multi-faceted production economy in the Study Area.

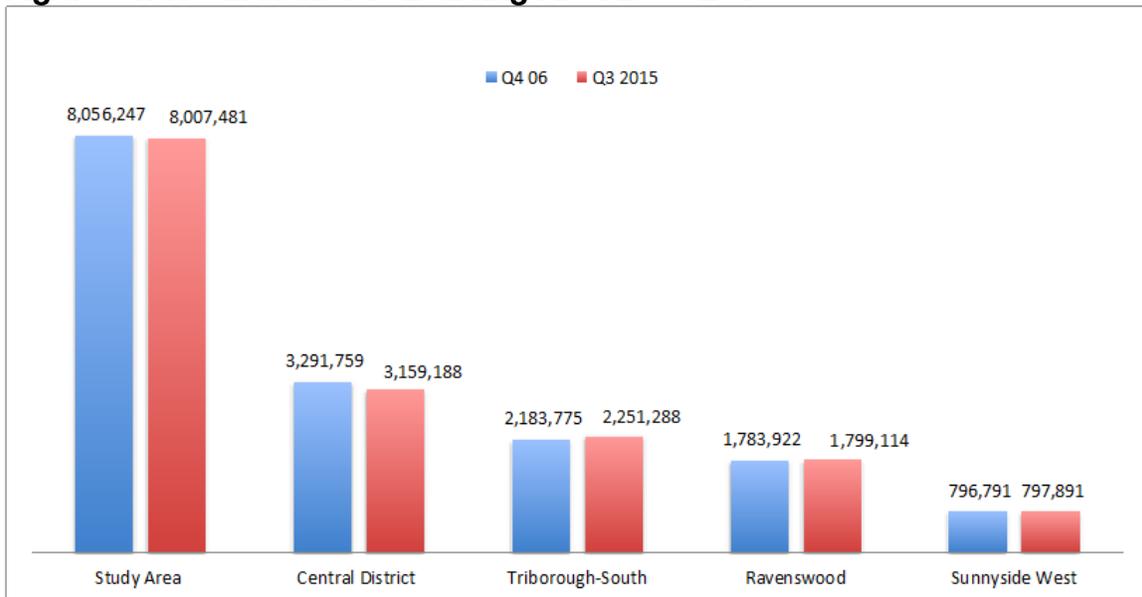
Retail Market Analysis

Retail Market Supply Analysis

The Study Area has over 8 million square feet of retail rentable building area. While many retail properties are a part of a mixed-use building with ground-floor retail, properties where retail is the only use are also common, comprising 55% of available retail square footage in the Study Area.

Since Q1 of 2006, over 285,000 square feet of retail space has been delivered, however, the net amount of available rentable building area has decreased 48,800 square feet since 2006. Although new retail-only developments are unlikely due to the high price and demand for land in the Study Area, ground-floor retail in mixed-use buildings can provide new inventory to the market. Currently there is about 300,000 square feet of commercial retail space either in construction or planning in the Study Area. Figure 61 shows the retail rentable building area in the Study Area.

Figure 61. Retail Rentable Building Area 2006-2015

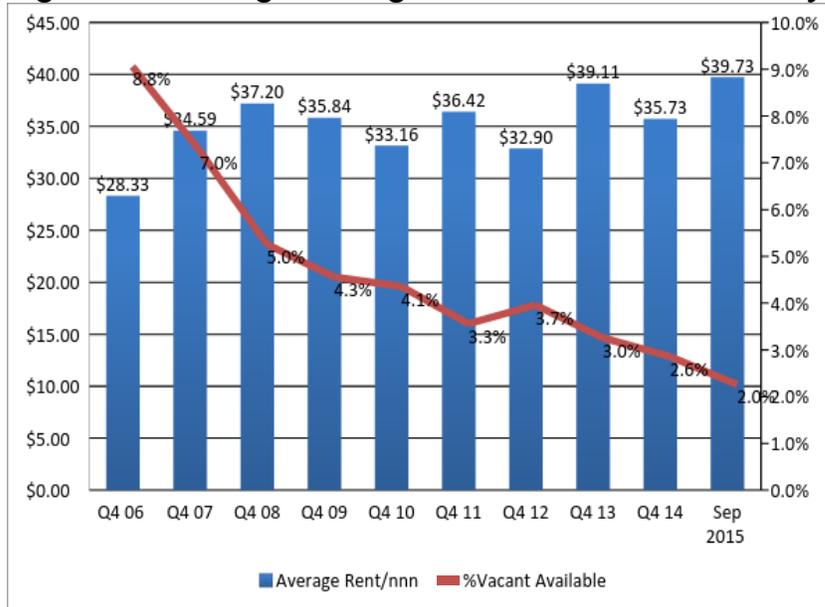


Source: CoStar

Retail Market Demand Analysis

Market demand for retail space in the Study Area is strong, with the proportion of vacant available space steadily declining in the period between 2006 and September of 2015. The latest data available shows a vacancy rate of just 2% in the area. Additionally, average retail space rents have been steadily rising, signaling strong demand. Retail rents in the Study Area range from around \$15-\$20 per square foot in areas with lighter foot traffic, to as high as \$50-\$60 per square foot for higher quality space in pedestrian heavy commercial corridors, such as Steinway Street. Figure 62 shows the average asking retail rent and availability in the Study Area.

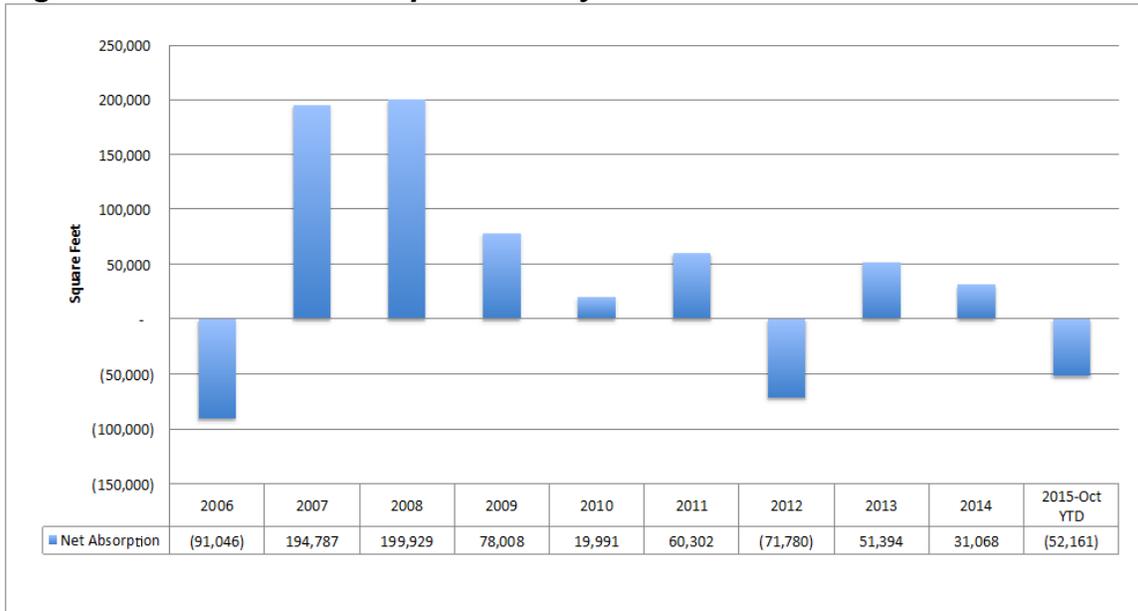
Figure 62. Average Asking Retail Rent and Availability 2006-2015



Source: CoStar

The limited amount of new retail space being delivered in the market is putting further upward pressure on retail rents. It can be expected that retail rent prices will continue to rise in the near terms due to both strong demand and limited supply. As of September, over 54,000 square feet of retail space had been absorbed in the Study Area, leaving only about 162,000 square feet remaining on the market. Figure 63 shows the retail net absorption in the study area.

Figure 63. Retail Net Absorption: Study Area



Source: CoStar

Key Takeaways: Retail Market

- While the more residential areas of the Study Area that have older building stock have a strong retail offering, the areas where most of the new construction is occurring have a much more limited amount and diversity of retail. Many of the new developments currently under construction do have ground floor retail opportunities. Rising rents will likely make ground-floor retail uses more attractive to future developers, particularly in locations with high foot traffic.
- There is a notable lack of retail diversity and quantity in the central business district of LIC, with many existing spaces occupied by food related uses.
- High land demand in the Study Area limits the ability to lease retail space that does not include a demolition clause, further hindering retail tenants from signing leases in many cases.
- Retail space in new developments has limited foot traffic due to high volumes of construction hindering pedestrian usage, limiting the attractiveness of those spaces to potential tenants in the short-term.
- Total retail rentable building area has declined since 2006, despite new inventory being delivered to the market. The greatest opportunity for additional inventory is ground-floor retail in new residential and commercial office developments in the Study Area.
- While retail-only buildings are not uncommon in the Study Area, it is unlikely that future development of this prototype will be pursued by developers mainly because as-of-right zoning allows for more intense land uses and therefore high-rise construction with either residential or commercial office above the standard for retail development (no more than two or three floors).

Conclusion

The Study Area has experienced multilateral shifts in population characteristics, employment, and land use patterns in recent years. Trends indicate that many of these changes are likely to continue in the future, bringing further transformation and growth to the neighborhoods contained in the Study Area. Differences between sub-areas, particularly the notable growth in population and employment seen in the Central District, stand in contrast to demographic changes noted in surrounding sub-areas where population has declined in the same period. Furthermore, the very diversity of economic activity within the Central District, where areas west of the rail yards are experiencing a residential construction boom and areas east of the yards are dominated by industrial uses and experiencing rising rents and a shortage of industrial space, illustrates the complexity of growth-related challenges facing the Study Area.

The extensive public transportation networks have contributed greatly to positioning the portions of the Central District that are west of the rail yards as an attractive mixed-use, residential and commercial neighborhood in recent years. As the growing population in the Central District continues to place significant pressure on an already capacity-strained transportation network, accommodating growth with infrastructure investment and upgrades will become vital. Additionally, new travel patterns that include both intra and inter borough commuting patterns need to be addressed with appropriate investment that meets the evolving needs.

While the economy remains particularly diverse, with indication that there is strong demand and rising prices for both commercial and industrial floor space, new supply of such space remains limited due to market forces. While a limited amount of office space has been delivered in recent years, with new buildings in the pipeline, much of the recently available commercial square footage was delivered via the conversion of industrial buildings. Simultaneously, very little new industrial space has been delivered to the market, nor is there a notable amount of such development planned. Furthermore, cultural institutions that are also competing for these spaces, are finding it difficult to maintain operations and grow in the current market. Accommodating balanced growth across all sectors of development and land use is needed to maintain the mixed-used character and diversified economy of the Study Area.

Along with real estate development, and the associated growth, the Study Area's educational attainment levels and median income have risen. Despite the economic growth, persistent pockets of poverty exist in the Study Area further emphasizing the need for affordable housing options and social service support for existing residents. Growth and the arrival of new residents will also likely put further strain on an already overcrowded public school system in the Study Area.

The current pace of growth and change in the Study Area is not only the result of macroeconomic trends in the City of New York, but also the product of the Area's distinctive characteristics. The unique mix of cultural, infrastructure, social and other civic assets present has positioned the Study Area to attract development and economic success. In order to ensure that this growth is sustainable, planning and investment

must align with the continued development of a diversified and resilient economy while improving quality of life for existing residents and workers and visitors.