THE CITY OF NEW YORK

OFFICE OF THE MAYOR

NEW YORK, NY 10007

Technical Memorandum for the Willets Point Development Plan FGEIS

CEQR Number 07DME014Q

TM004

Updated Plan

February 10, 2011

A. INTRODUCTION

On September 12, 2008, the Office of the Deputy Mayor for Economic Development issued a Notice of Completion for the Willets Point Development Plan Final Generic Environmental Impact Statement (FGEIS). The Willets Point Development Plan, with subsequent modifications as described below, was approved by the City Planning Commission and City Council on September 24, 2008 and November 13, 2008, respectively, and is referred to herein as "the Approved Plan". Under the Approved Plan, the approximately 61-acre Willets Point Development District (District) will be redeveloped with up to 8.94 million gross square feet of residential, retail, hotel, convention center, entertainment, commercial office, community facility, open space, and parking uses. The Approved Plan changed the underlying zoning of the District from an M3-1 district (and a small area zoned R3-2) to a C4-4 district, and created an Urban Renewal Plan (URP) and a zoning Special District (i.e., the Special Willets Point District). The Special Willets Point District includes urban design regulations, addressing such elements as the location of uses, building heights and setbacks, street hierarchies, streetscape design, and other site planning and design provisions.

As discussed below, this Technical Memorandum describes modifications to the Approved Plan, changes to the project's schedule, and changes in background conditions and analysis methodologies under the *City Environmental Quality Review (CEQR) Technical Manual* and

assesses whether the project as currently envisioned would result in any new or different significant adverse environmental impacts not previously identified and addressed in the FGEIS.

As described in the New York State Department of Environmental Conservation's (NYSDEC) SEQRA regulations, 6 NYCRR §§617.9(a)(7)(i)(a), (b), and (c), and the *2010 CEQR Technical Manual*, the lead agency may require the preparation of a supplemental EIS if there are significant adverse environmental impacts not addressed or inadequately addressed in the EIS that arise from changes proposed for the project; newly discovered information; or a change in circumstances related to the project. This Technical Memorandum describes the changes proposed for the project and assesses whether these changes would result in new or different significant adverse environmental impacts not previously identified and addressed in the FGEIS.

BACKGROUND

After the issuance of the FGEIS, the City Planning Commission proposed several modifications to the Special Willets Point District zoning regulations. These modifications were described, and their potential for significant adverse environmental impacts examined, in a technical memorandum dated September 23, 2008 (see Appendix A), which found that there were no additional impacts due to the modifications that had not been disclosed in the FGEIS. The City Planning Commission voted in favor of the Willets Point Development Plan with those modifications on September 24, 2008.

Following the City Planning Commission vote, new information became available related to: District business relocation; Phase II Environmental Site Investigations (ESIs) in the District; the amount of affordable housing to be provided in the District; and projected school and day care populations. This information was described, and its potential to result in significant adverse environmental impacts not previously identified examined, in a technical memorandum dated November 12, 2008 (see Appendix A). That technical memorandum concluded that none of the newly available information would lead to significant adverse environmental impacts that were not identified and addressed in the FGEIS. The City Council voted to approve the Willets Point Development Plan with the City Planning Commission modifications on November 13, 2008. As noted above, the Approved Plan changed the underlying zoning of the District from an M3-1 district (and a small area zoned R3-2) to a C4-4 district, and created a URP and the Special Willets Point District.

Subsequently, the City considered the effect of the economic downturn on the Willets Point project. The City anticipates that current economic conditions will make it challenging for developers to finance the acquisition and remediation of the entire Willets Point site at one time and prior to any development, as envisioned in the Approved Plan and described in the FGEIS. In a technical memorandum dated November 23, 2009 (see Appendix A), an Adjusted Plan for Willets Point was analyzed, in which remediation and development of an initial portion of the District would proceed first, followed by remediation and development of the remaining portion of the District.

The Adjusted Plan analyzed in that technical memorandum was similar to the Staged Acquisition Alternative analyzed in the FGEIS. The Staged Acquisition Alternative assumed that the District would be developed with the same gross floor area and mix of uses as the Approved Plan; however, this alternative assumed the western portion of the District would be developed by 2013, with the eastern portion of the site to be built out by 2017. The Adjusted Plan assumed the same overall development program at full build-out in 2017 as the Staged Acquisition Alternative (with revisions described in the prior technical memoranda), but anticipated a smaller

development footprint during the first years of development, with approximately 70 percent as much floor area in the initial phase compared to the Staged Acquisition Alternative.

The modifications to the Plan (after issuance of the FGEIS) did not affect the Special Willets Point District regulations governing future development in the District (i.e., location of uses, building heights and setbacks, street hierarchies, streetscape design, provision of open space, etc.)

PROJECT PURPOSE AND NEED

The Approved Plan and the Adjusted Plan were designed to further a number of redevelopment goals for the Willets Point area. The Approved Plan evolved from the Downtown Flushing Development Framework—a land use and economic planning strategy developed between 2002 and 2004 by the Downtown Flushing Task Force. The Task Force outlined several redevelopment goals for the Willets Point District that were adopted for the Approved Plan. In addition, the Approved Plan aimed to achieve the following goals, which are consistent with the vision of the Downtown Flushing Development Framework:

- Provide a substantial number of new housing units to help meet the growing demand for housing in Queens and the City as a whole;
- Ensure that District housing would be affordable to a mix of incomes;
- Provide a world-class example of superior urban design, with a focus on green building and sustainable design practices; and
- Strengthen the role of Flushing and Corona as commercial centers in northern Queens, while helping to meet the demand for office space in Queens and the City as a whole.

The modifications to the Approved Plan described in this technical memorandum are also intended to further these redevelopment goals. Like the Approved Plan and the Adjusted Plan, the modifications described in this technical memorandum represent a critical step in achieving these redevelopment goals for the Willets Point District.

PROJECT STATUS

Since final approval of the project in September 2008, the City has undertaken several measures that support the goals of the Willets Point Development Plan, including measures related to site acquisition, assistance for District workers, development of the connections to the Van Wyck Expressway, and ongoing infrastructure work, as described below.

The New York City Economic Development Corporation (NYCEDC), on behalf of the City, has executed agreements for a total of 65 percent of the property located in tax lots in the District. The City's Department of Housing Preservation and Development (HPD) is managing the City-owned properties within the District. Businesses on many of the acquired properties are continuing to operate either as direct tenants of the City or through leaseback arrangements with the former property owners.

The City's design work for off-site infrastructure began in 2009. Off-site infrastructure work will include critical water and sanitation infrastructure connections, and the New York City Department of Environmental Protection (DEP) is developing an appropriate infrastructure plan. As part of this work, the City has undertaken a series of off-site and on-site geotechnical and environmental soil borings.

As part of the ongoing infrastructure work in support of the project, planning has progressed to increase the capacity of the stormwater outfall at 126th Street. A Joint Application for Permits was submitted to NYSDEC and the United States Army Corps of Engineers (USACE) on November 4, 2010 for the proposed replacement of the 126th Street storm sewer outfall. The outfall is included in technical documentation (i.e., Amended Drainage Plan and the 126th Street sewer design documents) currently under review by DEP. The USACE issued authorization to NYCEDC for the replacement of the 126th Street outfall in December 2010. A NYSDEC permit for construction of the outfall improvements was issued on February 3, 2011.

To further the development of the new connections to the Van Wyck Expressway, a Draft Freeway Access Modification Report (AMR) was submitted to the Federal Highway Administration (FHWA) and the New York State Department of Transportation (NYSDOT) in August 2009. Subsequently, a draft environmental assessment (EA) analyzing the environmental impacts of the new Van Wyck connections was submitted in October 2010. In response to agency comments, a revised draft EA was submitted in December 2010 and is currently under review. The EA will be subject to public review and comment, including a public hearing, and will result in a determination by FHWA as to whether an EIS must be prepared pursuant to the National Environmental Policy Act (NEPA). Following completion of FHWA's NEPA review of the new connections, a Final AMR will be submitted to NYSDOT and FHWA for review and approval.

To assist District workers who would be displaced by the Approved Plan, the NYCEDC initiated an ongoing Worker Assistance Program (WAP) managed by industry professionals from LaGuardia Community College (LAGCC). The WAP has been in place since January 2008 and provides several educational opportunities including free English as a Second Language (ESL) classes, job training, and immigration services for District workers. The program has 505 enrollees, including 153 active participants in fall 2010 classes, and since inception at least 231 enrollees have completed at least one education or training course. Approximately 135 enrollees have attended a group immigration counseling session. The WAP offers expanded vocational training options and provides greater focus on employment placement for enrollees in 2011. Overall, the program has been successful at attracting workers, as the 505 enrollees represent nearly 30 percent of the employees in the District.

B. DESCRIPTION OF CHANGES AND MODIFICATIONS

As mentioned previously, the current economic conditions continue to make it challenging for developers to finance the acquisition and remediation of the entire 61-acre District at one time, as well as its full development by 2017, as envisioned in the Approved Plan described in the FGEIS. Accordingly, the City is considering an Updated Plan for Willets Point, which has the same overall development program as the Approved Plan at full build-out, but includes the acquisition, remediation and development of an initial portion of the District by 2016.

The Updated Plan is similar to the Staged Acquisition Alternative analyzed in the FGEIS and to the Adjusted Plan analyzed in the November 2009 Technical Memorandum. However, compared to both the Staged Acquisition Alternative and the Adjusted Plan, the Updated Plan anticipates a smaller development footprint and less overall development in the first phase. Specifically, the first phase of the Updated Plan would contain approximately 23 percent of the floor area as compared with the first phase of the Staged Acquisition Alternative, and approximately 33 percent of the floor area as compared with the first phase of the Adjusted Plan. Furthermore, the Updated Plan would not maximize the allowable floor area within the Phase 1 area, and thus the full build out of the project

could be approximately 15 percent smaller than the floor area described in the FGEIS, due to the unrealized floor area in the Phase 1 area.[1] The FGEIS assumed the maximum development allowed under zoning, for analysis purposes, this technical memorandum conservatively assumes that the full build out of the Updated Plan would result in the same floor area as the Approved Plan despite the unrealized floor area in Phase 1.

With the Updated Plan, it is anticipated that the first phase of development would be completed by 2016 and full build-out would occur by 2022. By comparison, the Staged Acquisition Alternative and Adjusted Plan anticipated that the first phase of development would be completed by 2013 and full build-out would occur by 2017. Furthermore, the Updated Plan conservatively assumes that the new connections to the Van Wyck Expressway in the northeast portion of the District would be completed after the initial phase of development is finished in 2016, rather than upon completion of the initial phase of development as assumed with the Staged Acquisition Alternative and with the Adjusted Plan. The Updated Plan envisions completion of the new connections to the Van Wyck Expressway by the end of 2017, before the first building to be constructed in Phase 2 is completed.[2] While the City remains committed to the new Van Wyck connections, Phase 1 would proceed regardless of their approval. Modifications being considered as part of the Updated Plan are discussed in greater detail below.

PROJECT MODIFICATIONS—UPDATED PLAN

At full build-out, the Updated Plan would develop the District with the same gross floor area and mix of uses as the Approved Plan (with subsequent revisions described in the prior technical memoranda) and would have the same controls on floor area ratios set forth in the provisions of the Special District zoning text that has been approved by the City Planning Commission and the City Council.

With the Updated Plan it is anticipated that approximately 1,345,000 gross square feet (gsf) of development would be completed in the first phase of development, by 2016 (see **Table 1**). This would consist of approximately 414,000 gsf of residential (400 units), 680,000 gsf of retail, and 251,000 gsf of hotel (387 rooms).[3] In addition, approximately 950 parking spaces (910 off-street and 40 on-street) and 2.08 acres of open space would be created by 2016. As shown in **Table 1**, this analysis assumes that at full build-out, by 2022, the full development program analyzed under the Approved Plan would be completed, including residential, retail, office, convention center, hotel, and community facility uses, as well as a new school, parking and publicly-accessible open space. As part of the Updated Plan, 35 percent of the residential units completed in both 2016 and 2022 would be affordable housing.[4]

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[1] The maximum allowable floor area on the sites that comprise Phase 1 is approximately 2.7 million square feet, approximately 1.35 million square feet more than the floor area of Phase 1 of the Updated Plan.

[2] The Willets Point Ramp Environmental Assessment (EA) assumes that the connections to the Van Wyck Expressway would be complete in 2013, which is different than what is assumed in this analysis. The completion year assumed in this analysis is more conservative because it assumes that the Van Wyck connections would not be in place for the first phase of development. The City remains committed to the ramps, but has considered impacts from the later completion date (2017) in order to assess the potential effects of proceeding with constructing the ramps as a part of Phase 2 in the Updated Plan.

[3] The Updated Plan would result in a smaller development program in the Phase 1 area than would be permitted by the Special Willets Point District or the Urban Renewal Plan. To provide a conservative analysis, the maximum permitted development envelopes were considered in technical areas that consider bulk, height, and massing, such as Shadows and Urban Design.

[4] While the development program analyzed in the FGEIS included 20 percent of residential units as affordable housing, this was later increased to 35 percent and analyzed in previous technical memoranda.

Table 1
Updated Plan—Program

Use	Approved Plan***	Updated Plan	
		2016	2022
Residential	5,500,000 gsf (*5,500 units*)	414,000 gsf *(400 units)*	5,500,000 gsf (*5,500 units*)
Retail	1,700,000 gsf	680,000	1,700,000 gsf
Office	500,000 gsf	0	500,000 gsf
Convention Center	400,000 gsf	0	400,000 gsf
Hotel	560,000 gsf (*700 rooms)*	251,000 *(387 rooms)*	560,000 gsf (*700 rooms*)
Community Facility	150,000 gsf	0	150,000 gsf
School (K-8)	230,000 gsf* (*Approx. 1,540 Seats)*	0	230,000 gsf* (*Approx. 1,540 Seats)*
Parking Spaces**	Approx. 6,700	Approx. 950	Approx. 6,700
Publicly Accessible Open Space	Minimum 8 Acres	2.08 Acres	Minimum 8 Acres
Total	8,940,000 gsf	1,345,000 gsf	8,940,000 gsf

Notes:

* The capacity of the proposed school would meet the project-generated shortfall in school seats. The Approved Plan program shown in this table (1,540 seats) is larger than the school analyzed in the FGEIS (850 seats) due to updated pupil generation rates issued by the New York City School Construction Authority (SCA) after issuance of the FGEIS. See technical memorandum dated 11/12/08 for detail. Although the size of the school increased from 130,000 to 230,000 gsf, the total floor area permitted in the District would remain 8.94 million gsf.

** The number of proposed parking spaces would be determined based on anticipated project-generated demand. Parking floor area is exempt from the gross floor area calculations, per the Special Willets Point zoning district. The total number of parking spaces includes approximately 40 on-street parking spaces that would be created by the end of the first development phase and additional on-street spaces would be completed upon full build-out.

*** With the Approved Plan it is also anticipated that additional development on Lots B and D would occur, as described and analyzed in the FGEIS. The anticipated development program for Lots B and D has not changed, and is anticipated to occur at full build-out. It is not included in the development program outlined above.

During the first phase of development new buildings would be constructed in the southernmost end of the District and then move north along 126th Street south of 35th Avenue. The construction of the first phase is expected to be completed by 2016. Figure 1 shows the tax lots to be developed first under the Updated Plan. Including all private sites acquired through negotiated acquisition, the City, through HPD, owns or is in contract to purchase approximately 85 percent of the property located in tax lots in the first phase area of the Updated Plan. In addition, the City owns land that is located under streets that have been demapped and will be used as part of the development sites, bringing the total city-owned portion to 88 percent of the first phase. It is anticipated that approximately 12.5 acres of the District would be fully developed by 2016, and approximately 7.5 additional acres would serve as a buffer area between the new development and the existing, primarily industrial uses that would continue to occupy the north and east portion of the District prior to full build-out. It is anticipated that the lots located in the buffer area would be cleared by 2016, with remediation, grading, and site preparation activities for redevelopment commencing thereafter. It is presently anticipated that the buffer area would be landscaped but would not be publicly accessible. As noted below, additional safeguards could be required to ensure that existing hazardous materials contamination in the buffer areas would not migrate to the southwestern portion of the District. Depending on the schedule that is ultimately implemented, some negotiated acquisition and infrastructure improvements might occur within the remainder of the District (northern and eastern portions) during the initial phase of development (by 2016). Furthermore, in 2016 there could be remediation, grading, and construction activity underway in segments of the Phase 2 area.

A substantial difference between the Approved Plan and the Updated Plan is the timing of property acquisition and construction phasing. Under the Approved Plan, the necessary remediation, grading, and infrastructure improvements would take place across the District at the

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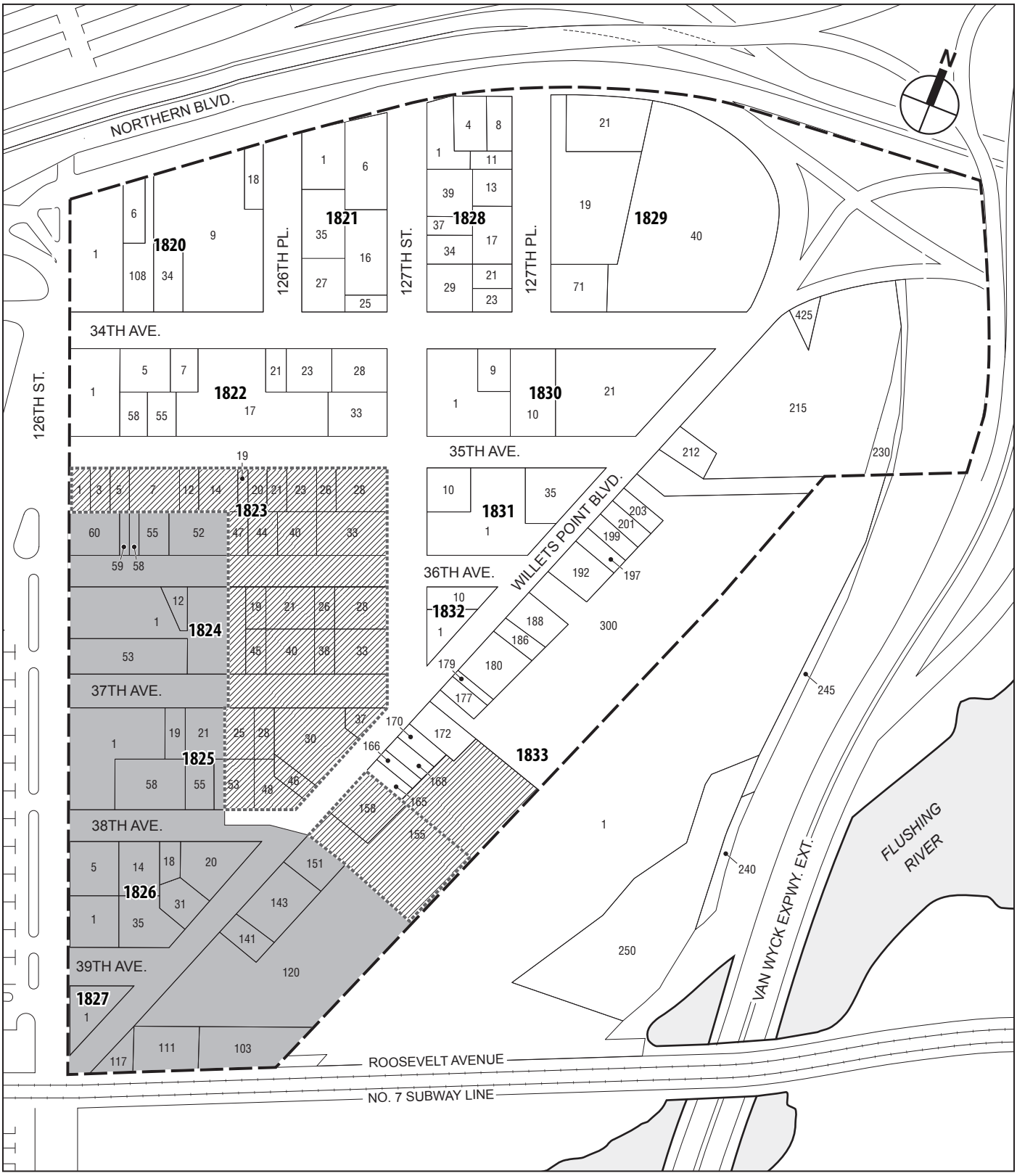

Willets Point Development District Boundary

1826 *Block Number*

14 *Lot Number*

Area Redeveloped by 2016

Property Acquired by 2016

Buffer Area

WILLETS POINT DEVELOPMENT PLAN

Figure 1

Updated Plan –
Areas Acquired and Redeveloped by 2016

beginning stages of construction. Construction activities associated with the individual buildings would then proceed from west to east across the District. With the Updated Plan (as with the Staged Acquisition Alternative and the Adjusted Plan), development activities would proceed incrementally, with the necessary remediation, grading, infrastructure improvements, and construction activities associated with the buildings in the southwestern portion of the District to occur first, and construction activities on the remainder of the District to follow. This could require additional safeguards to ensure that existing hazardous materials contamination in the northern and eastern portions of the District would not migrate to the southwestern portion of the District subsequent to the remediation of these properties. These safeguards could include installation of sheeting or low permeability barriers along the boundary between the remediated portions of the District and the buffer area. It could also require a more complex stormwater management plan, since new stormwater management systems put in place during the first phase of development would need to ensure adequate detention and discharge of stormwater in the southwestern portion of the District, and would later need to be integrated with new stormwater systems put in place on the northern and eastern portions of the site to ensure efficient District-wide stormwater management. Roadway access to the northern and eastern portions of the site would be maintained to serve the remaining existing businesses while the southwestern portion of the site is being developed, and until such time when the remaining properties are acquired and remediated for development under the full build-out. As described below, during the first phase of the development, certain streets in the southwestern portion of the District would be graded to slope down to the existing streets to the east to allow continued access to and from the District.

The design guidelines provided in the Special Willets Point District zoning text (previously approved) would provide the framework for the placement of land uses within the District, building heights and setbacks, street hierarchies, streetscape design, and basic site planning and design provisions. The placement of uses under the Updated Plan and Approved Plan would be substantially similar. Under the Approved Plan, the southernmost block, which would contain Buildings A1 and A2, would contain retail, hotel, office, residential, and parking uses. Under the Updated Plan, that block would contain retail, hotel, and parking uses. (See Figures 2 through 4.) Furthermore, under the Approved Plan the hotel in Phase 1 would be located in Building A2. With the Updated Plan, the hotel use in Phase 1 may be located in either Building A1 or A2. In addition, the distribution of the off-street parking would be different under the Updated Plan. With the Updated Plan, the off-street parking spaces would be provided in a single, consolidated garage in Building A1, while the Approved Plan would distribute the off-street parking among all buildings in Phase 1.

Like the Approved Plan, the Updated Plan would include new connections to the Van Wyck Expressway in the northeast portion of the District. With the Updated Plan these connections would be completed no later than after the end of the first phase of development and before the first building to be developed in the second phase of construction is completed, whereas the development scenarios analyzed in the FGEIS (Staged Acquisition Alternative) and previous technical memoranda (Adjusted Plan) assumed the connections to the Van Wyck Expressway would be constructed before the end of the first phase of development. Since the Updated Plan would not include the early acquisition of eastern properties in the District, as contemplated under the Approved Plan, it is anticipated that the configuration of the new ramps would conform to the existing street network. The potential configuration of the new ramps under the Updated Plan was one of the configurations considered in the FGEIS for the Approved Plan and is shown in Figure 2. The new connections to the Van Wyck Expressway require federal and

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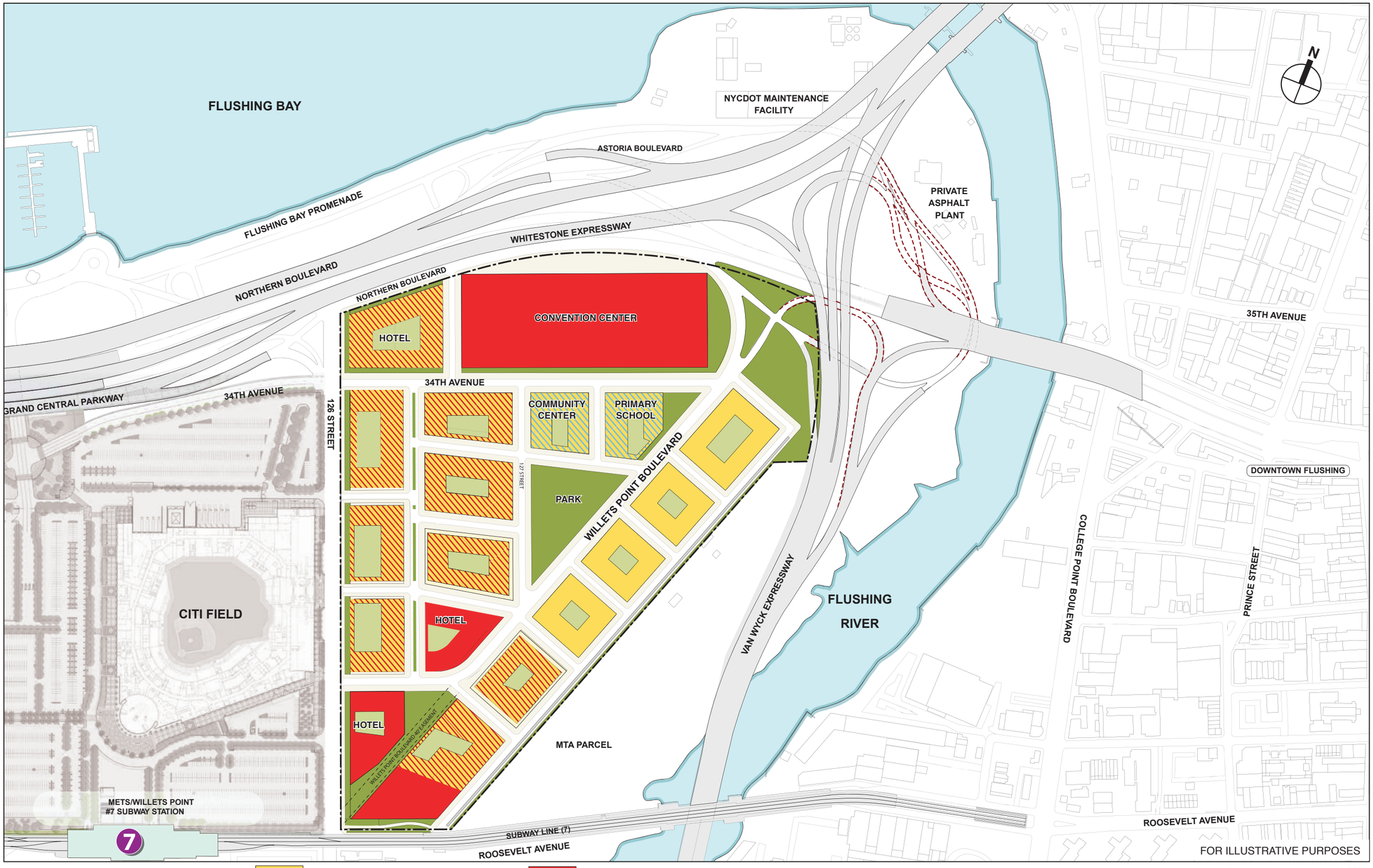

Willets Point Development District

Van Wyck Access Ramps

Residential

Residential with Commercial Below

Residential with Community Facility Below

Commercial

Rooftop Courtyard

Open Space

WILLETS POINT DEVELOPMENT PLAN

Figure 2
Approved Plan

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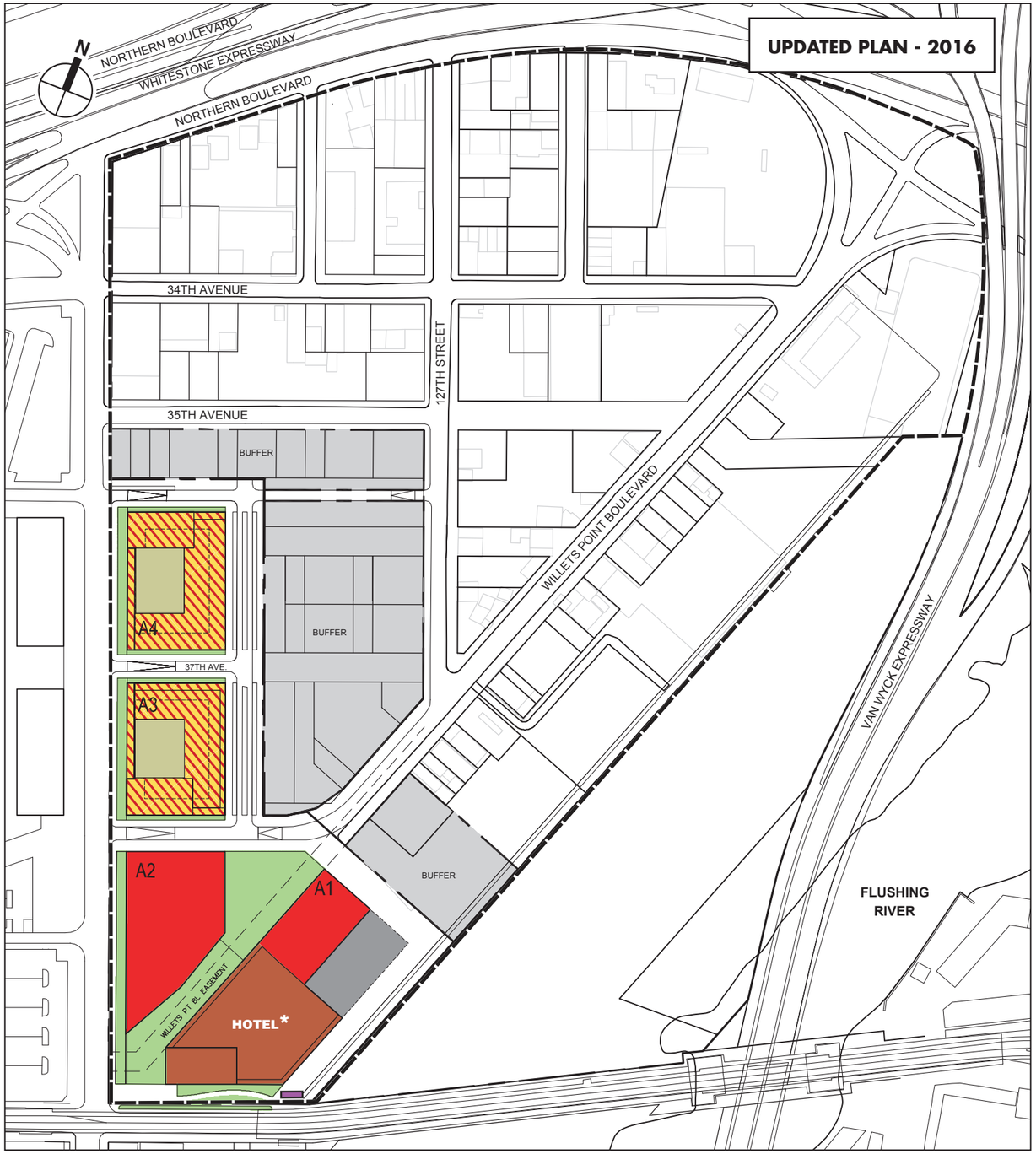


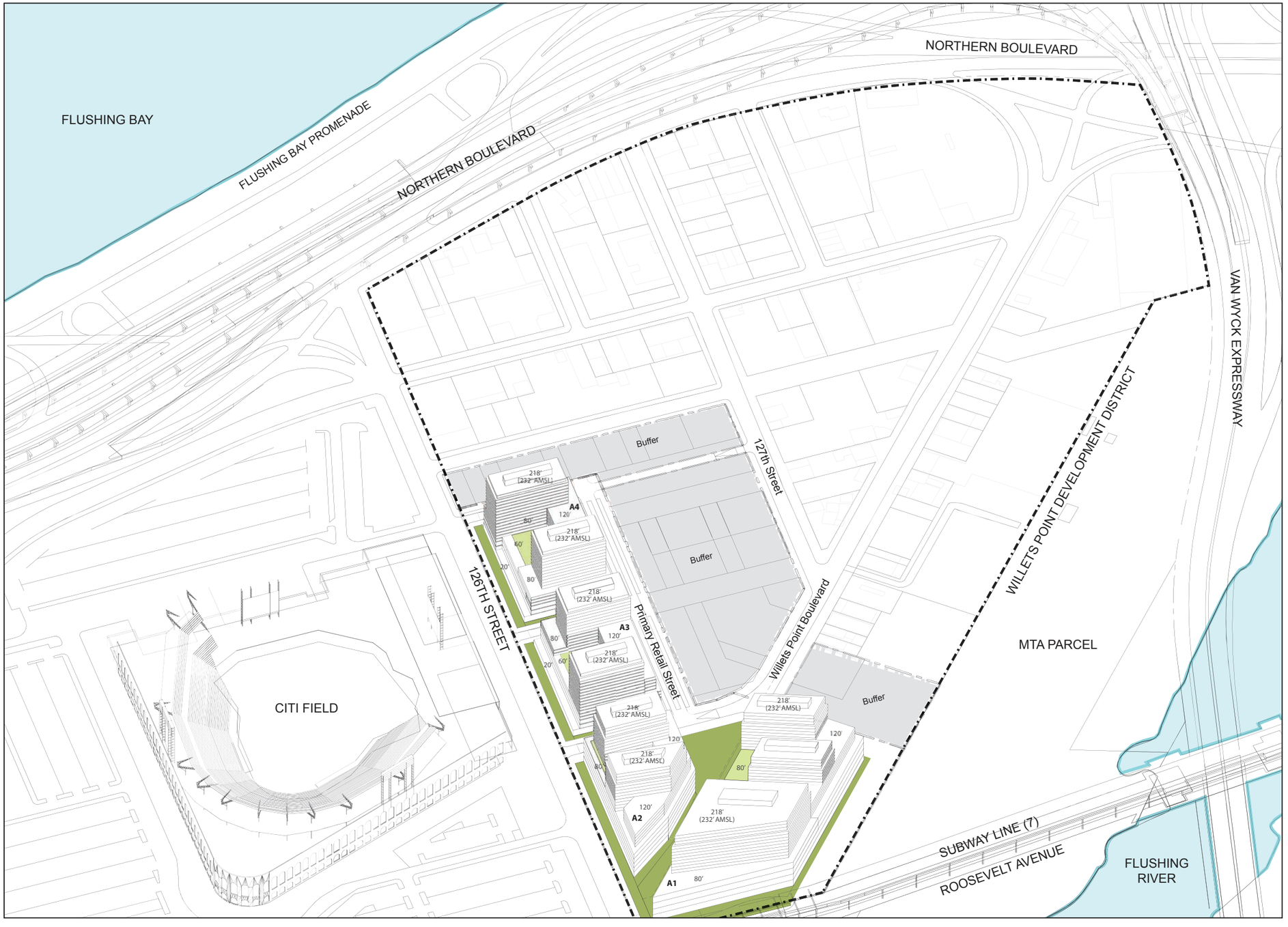
FOR ILLUSTRATIVE PURPOSES

Willets Point Development District
Residential
Residential with Commercial Below
Residential with Community Facility Below
Commercial
Rooftop Courtyard
Open Space
Hotel
Parking
Buffer
Roadway Closed

* *The hotel in Phase 1 may be located in either Building A1 or A2 under the updated plan*

WILLETS POINT DEVELOPMENT PLAN

Figure 3
Updated Plan - 2016 and 2022



Willets Point Development District

Publicly Accessible Open Space

Buffer

Residential Rooftop Courtyard

NOTE: The Updated Plan would result in a smaller development program that would not be capable of developing the maximum bulk or height of the massing envelopes shown.

Figure 4

Updated Plan 2016 - Illustrative Bulk Diagram

state approval of a Freeway Access Modification Report under both the Approved Plan and the Updated Plan.

The layout of the District's street grid, with the exception of the northeastern portion of the District near the new Van Wyck connections, would be the same under the Updated Plan and Approved Plan. With the Updated Plan, access would be provided to all areas within the District that would not be redeveloped during the initial phase of development. All main thoroughfares—including 126th Street, 127th Street, 34th Avenue, and Willets Point Boulevard—would remain open to allow continued access to and from all parts of the District. However, a portion of Willets Point Boulevard would be closed to traffic and reconfigured in the southwestern corner of the District to allow for the development of a plaza. An ancillary roadway connection to Willets Point Boulevard would be provided and would allow for continuous access to the District. Along the eastern boundary of the District, the proposed Eastern Perimeter Road would be completed but not connected to Roosevelt Avenue under Phase 1 of the Updated Plan. At full build out, Eastern Perimeter Road would be connected to Roosevelt Avenue and the street network under the Updated Plan would be the same as the Approved Plan.

By 2016, streets within the footprint of the first development phase would be elevated above the floodplain. Before complete acquisition of the northern and eastern portions of the District, two of the east-west streets would be graded to slope down to the existing streets in the eastern part of the District, allowing continued access to and from any remaining businesses in the District. As northern and eastern properties are acquired and remediated, streets in those areas would be raised above the floodplain. Streets in the redeveloped western portion of the District which were constructed to slope down to existing eastern streets would be re-graded to meet the new elevated streets to the east.

With the Updated Plan, provision of new school facilities in the District would differ from what was assumed in the FGEIS and in previous technical memoranda. With both the Staged Acquisition Alternative and the Adjusted Plan, it was assumed that an interim school—sized to meet the shortfall in school seats as generated by the residential program in the first phase of development—would be constructed in the western portion of the District and would be operational at completion of the first phase of development. During the later development phase, a larger school would be constructed in the eastern portion of the District and the interim school would be converted to retail use. As discussed in greater detail below, under "Community Facilities," with the Updated Plan, there is a limited residential program in the first phase of development. Based on CEQR guidance and consultation with the SCA, construction of an interim school facility is not warranted upon completion of the Updated Plan's initial development phase. As under the Approved Plan, the Updated Plan would include a new school facility at full build-out. The school facility would be developed in the eastern part of the District and would be sized to meet the project-generated shortfall in school seats. Based on the maximum development program permitted by the URP, the new school facility is assumed to be approximately 230,000 gsf and contain approximately 1,540 seats.

Modifications with respect to some of the proposed infrastructure elements are currently being considered in conjunction with the Updated Plan. The Approved Plan assumed that the existing 72-inch water main beneath Willets Point Boulevard would remain in place. With the Updated Plan the grade of Willets Point Boulevard would be raised to flood plain elevation, in conjunction with replacing portions of the 72-inch water main and repositioning it higher in the street bed as determined by DEP, the agency with oversight in this area.

As with the Approved Plan, the sanitary sewage from the Updated Plan could not be accepted by the existing 37th Avenue pump station because it currently operates at its capacity. Both the FGEIS and Adjusted Plan assumed construction of a new pump station (most likely within the

District) and a force main to connect the District to the combined sewer in 108th Street. As a result of discussions with the DEP, the Updated Plan would include use of a gravity flow system for sanitary sewage conveyance instead.

The Updated Plan would be implemented through the same discretionary actions that have already been granted under the Approved Plan, including: adoption of a URP (already completed); changes in the underlying zoning and creation of a zoning Special District (already completed); acquisition of property (approved and currently underway); and demapping of streets, disposition of property, and approval of business terms (not yet occurred). The new connection to the Van Wyck Expressway under the Approved Plan or this development scenario are subject to federal and state approval of the AMR. The AMR approval review process has been underway since August 2009.

The Updated Plan, like the Approved Plan, would utilize "E"-designations[5] and Restrictive Declarations to ensure that there would be no significant adverse impacts with respect to hazardous materials, noise attenuation, and air quality (associated with the heating, ventilation, and air conditioning systems for the proposed buildings). "E"-Designations for hazardous materials, noise and air quality have been placed on all privately owned properties in the District and as these properties are acquired by the City, the "E"-Designations will be replaced with Restrictive Declarations. "E"-Designations for northern and eastern properties may remain in place for a longer duration under the Adjusted Plan as compared with the Approved Plan, since they may be acquired later under this scenario.

Similar to the Approved Plan, the Updated Plan would include emissions and noise-reduction programs during construction, which would ensure that no significant impacts on air quality or noise impacts would occur during construction. The preparation and enforcement of a Health and Safety Plan (HASP) would prevent any significant adverse impacts from hazardous materials during construction.

TRAFFIC AND PEDESTRIAN PROJECT IMPROVEMENTS

The Updated Plan would also include a number of traffic improvements to nearby intersections and improvements to nearby pedestrian elements in order to improve local conditions.

Traffic Improvements

Three project-related traffic improvements would be included under the Phase 1 development of the Updated Plan. At the intersection of 34th Avenue and 114th Street, a minor re-timing of the traffic signal for weekday PM peak hour conditions would be implemented on both game days and non-game days, in order to better accommodate game day traffic arrivals (the signal timing change would, however, be in place on both game days and non-game days). One intersection in the Downtown Flushing area – Roosevelt Avenue and Union Street – would also have project-related traffic improvements under the Phase 1 development. These standard traffic improvement measures would include: 1) shifting the centerline along the westbound Roosevelt Avenue approach by two feet to the south; 2) restriping the eastbound approach to provide one 10-foot wide left turn lane and one 11-foot wide shared through-right turn lane; and 3) strictly enforcing existing "No Standing Anytime" regulations along both eastbound and westbound

[5] An "E"-designation is a zoning map designation that provides notice of the presence of an environmental requirement pertaining to potential hazardous materials contamination or noise or air quality impacts on a particular tax lot. Before any new construction or change in use on the property, the environmental requirements of the "E"-designation must be satisfied.

Roosevelt Avenue approaching the intersection. One additional improvement that is a minor modification to an existing practice would be implemented during the weekday pre-game arrival peak hour in order to help accommodate traffic exiting from the southbound Whitestone Expressway and the northbound VWE, and merging into westbound Northern Boulevard. During weekday pre-game periods, Traffic Enforcement Agents (TEAs) override the traffic signal at Northern Boulevard and 126th Street to direct traffic from northbound 126th Street to the two left-most lanes of westbound Northern Boulevard. During this phase, traffic from the right-most lane of westbound Northern Boulevard (which carries off-ramp traffic) would operate with free-flow conditions. TEAs periodically stop westbound off-ramp traffic approaching 126th Street to allow excess traffic from northbound 126th Street to use all three westbound lanes of Northern Boulevard. In order to improve local traffic operations, TEAs would reduce the stop time for the right-most lane of westbound Northern Boulevard approaching 126th Street in order to improve the flow of traffic exiting the southbound Whitestone Expressway and the northbound VWE off-ramp.

At full build-out of the Updated Plan, project-related traffic improvements would be incorporated at two intersections. At the intersection of Main Street and Kissena Boulevard near 41st Avenue, improvements would consist of the following: 1) shifting the Main Street centerline one foot to the west south of 41st Avenue, thus enabling the widening of the exclusive northbound Main Street left turn lane from its current 10-foot width to 11 feet – in order to better accommodate traffic flows; and 2) shifting the Main Street centerline one foot to the west north of 41st Avenue and re-striping the southbound Main Street approach to provide a 13-foot wide shared through-right turn lane and a 10.5-foot through lane. At the intersection of Union Street and Roosevelt Avenue, project improvements would consist of the following: 1) shifting the centerline along the westbound Roosevelt Avenue approach by two feet to the south; 2) restriping the eastbound approach to provide one 10-foot wide left turn lane and one 11-foot wide shared through-right turn lane; and 3) strictly enforcing existing "No Standing Anytime" regulations along both eastbound and westbound Roosevelt Avenue approaching the intersection

Pedestrian Improvements

The Updated Plan would incorporate the following project improvements to pedestrian elements surrounding the District:

- Along Roosevelt Avenue between the District and the Willets Point No. 7 subway station, both the Approved Plan and the Updated Plan would introduce substantial new pedestrian flow to and from future Willets Point uses. Because specific design information was not available during the preparation of the FGEIS, the project was assumed to incorporate adequate pedestrian space (a clear sidewalk width of 15.0 feet) on the north sidewalk along Roosevelt Avenue between 126th Street and the Willets Point No. 7 subway station to accommodate the predicted pedestrian flow at this location. As part of the Updated Plan, additional pedestrian space, resulting in a minimum clear sidewalk width of 20 feet, would be incorporated at this location in the full build of the project.
- The north crosswalk at 34th Avenue and 126th Street would be widened by 1.5 feet.
- The north crosswalk at Roosevelt Avenue and 126th Street would be widened a minimum of 2 feet to a full width of 19.0 feet.
- The east crosswalk at Roosevelt Avenue and 126th Street would be widened a minimum of 2.5 feet to a full width of 14.0 feet.

- The planned 24-foot north crosswalk at Roosevelt Avenue and Lot B Driveway under the Approved Plan would be widened a minimum of 1.5 feet to 25.5 feet.

As specified above, the above improvements would be incorporated into the Project's design.

Implementation

As discussed in the FGEIS, all components of the traffic program as well as its effects upon pedestrian movements would be subject to a monitoring program that would be reviewed by NYCDOT and would include, among other things, level of service analyses and signal progression analyses to verify the need for any of the mitigation measures or project related improvements identified in the FGEIS or subsequent Technical Memoranda or other measures implemented as part of the traffic monitoring plan.

SCHEDULE CHANGE

As described above, phased development in the District was analyzed in the Staged Acquisition Alternative in the FGEIS, and in the Adjusted Plan considered in a previous technical memorandum; both of these development scenarios contemplated completion of the initial phase of construction by 2013 and full build-out by 2017. With the Updated Plan, the anticipated year of completion for the first phase of development has been extended from 2013 to 2016 due to the change in economic conditions, as described above. The anticipated date of the full build-out of the project has been extended from 2017 to 2022 due to the change in economic conditions and the reasonable expectation that those conditions will rebound sufficiently in order to support partial and complete build-out by the above dates. The projected completion date of the various project components are noted below in **Table 2**. As shown below, the construction duration of each component would be longer under the Updated Plan. For instance, most buildings would take 24 to 30 months to construct, compared to 18 months as anticipated in the FGEIS. The longer construction duration of each component reflects the change in economic conditions and other market-related considerations with the potential to affect the schedule, such as market absorption rates. Site preparation would also take longer than anticipated in the FGEIS because it would occur during both phases of development rather than all at once, as described in the FGEIS for the Approved Plan.

Phase 1 would include approximately 2.08 acres of publicly accessible open space comprised of a large open space area between Buildings A1 and A2 and smaller pedestrian amenity areas and open landscaped areas (i.e., public access areas) that would be developed pursuant to the Special District regulations in conjunction with surrounding development. It is expected that the open spaces would be completed concurrently with the buildings in Phase 1; therefore, all of the Phase 1 open space would be completed by the second quarter of 2016. The remainder of the publicly accessible open space, approximately 6 acres, would be developed in Phase 2. Phase 2 open spaces would include an approximately two-acre park on site A16, open spaces on sites A20 to A23, and other public access areas developed pursuant to the Special District regulations.

Table 2
Approved Plan and Updated Plan Conceptual Construction Phasing

Project Component[1]	Approved Plan (FGEIS)			Updated Plan		
	Start Date	Finish Date	Months	Start Date	Finish Date	Months
Phase 1						
Site Preparation	3rd Q 2009	1st Q 2015	69	4th Q 2011	2nd Q 2016	57
Building A1 (Hotel/Retail)[2, 3]	1st Q 2011	4th Q 2012	24	1st Q 2014	2nd Q 2016	30
Building A2 (Retail)[2, 3]	1st Q 2011	2nd Q 2012	18	3rd Q 2014	2nd Q 2016	24
Building A3 (Residential/Retail)	3rd Q 2011	4th Q 2012	18	1st Q 2014	1st Q 2016	27
Building A4 (Residential/Retail)	1st Q 2012	2nd Q 2013	18	1st Q 2014	1st Q 2016	27
Phase 2						
Site Preparation	NA	NA	NA	2nd Q 2015	2nd Q 2020	63
Building A5 (Residential/Retail)	3rd Q 2012	4th Q 2013	18	1st Q 2016	3rd Q 2018	33
Building A6 (Hotel/Residential/Retail)	3rd Q 2012	4th Q 2013	18	3rd Q 2016	1st Q 2019	33
Building A7 (Residential/Retail)	3rd Q 2012	4th Q 2013	18	2nd Q 2018	2nd Q 2020	27
Building A8 (Residential/Retail)	3rd Q 2012	4th Q 2013	18	4th Q 2018	1st Q 2021	30
Building A9 (Residential/Retail)	1st Q 2012	2nd Q 2013	18	1st Q 2020	2nd Q 2022	30
Building A10 (Hotel/Retail)	3rd Q 2011	4th Q 2012	18	1st Q 2021	4th Q 2022	24
Building A11 (Residential/Retail)	1st Q 2014	2nd Q 2015	18	1st Q 2017	3rd Q 2019	33
Building A12 (Residential)	1st Q 2014	2nd Q 2015	18	3rd Q 2018	4th Q 2020	30
Building A13 (Residential)	3rd Q 2014	4th Q 2015	18	1st Q 2019	2nd Q 2021	30
Building A14 (Residential)	3rd Q 2014	4th Q 2015	18	3rd Q 2019	4th Q 2021	30
Building A15 (Residential)	3rd Q 2015	4th Q 2016	18	3rd Q 2020	4th Q 2022	30
A16 (Park)	1st Q 2014	3rd Q 2014	9	3rd Q 2017	1st Q 2018	9
Building A17 (Community/Residential)	1st Q 2015	4th Q 2016	24	4th Q 2020	4th Q 2022	27
Building A18 (School/Residential)	3rd Q 2015	4th Q 2016	18	1st Q 2018	1st Q 2020	27
Building A19 (Convention Center)	1st Q 2014	4th Q 2017	48	1st Q 2020	2nd Q 2022	30
A20 to A23 (Open Space)	2nd Q 2016	4th Q 2016	9	1st Q 2019	3rd Q 2019	9
Van Wyck Access	4th Q 2011	3rd Q 2013	24	3rd Q 2015	4th Q 2017	30

Notes: Start date is the first day of the quarter; finish date is last day of the quarter.
[1] The uses listed for each building are the uses under the Updated Plan. As noted above, the uses on Buildings A1 and A2 would be different under the Updated Plan compared to the Approved Plan.
[2] Under both the Approved Plan and the Updated Plan, the area between Buildings A1 and A2 would be publicly accessible open space (see Figures 2 and 3).
[3] With the Updated Plan, the hotel use in Phase 1 may be located in either Building A1 or A2.

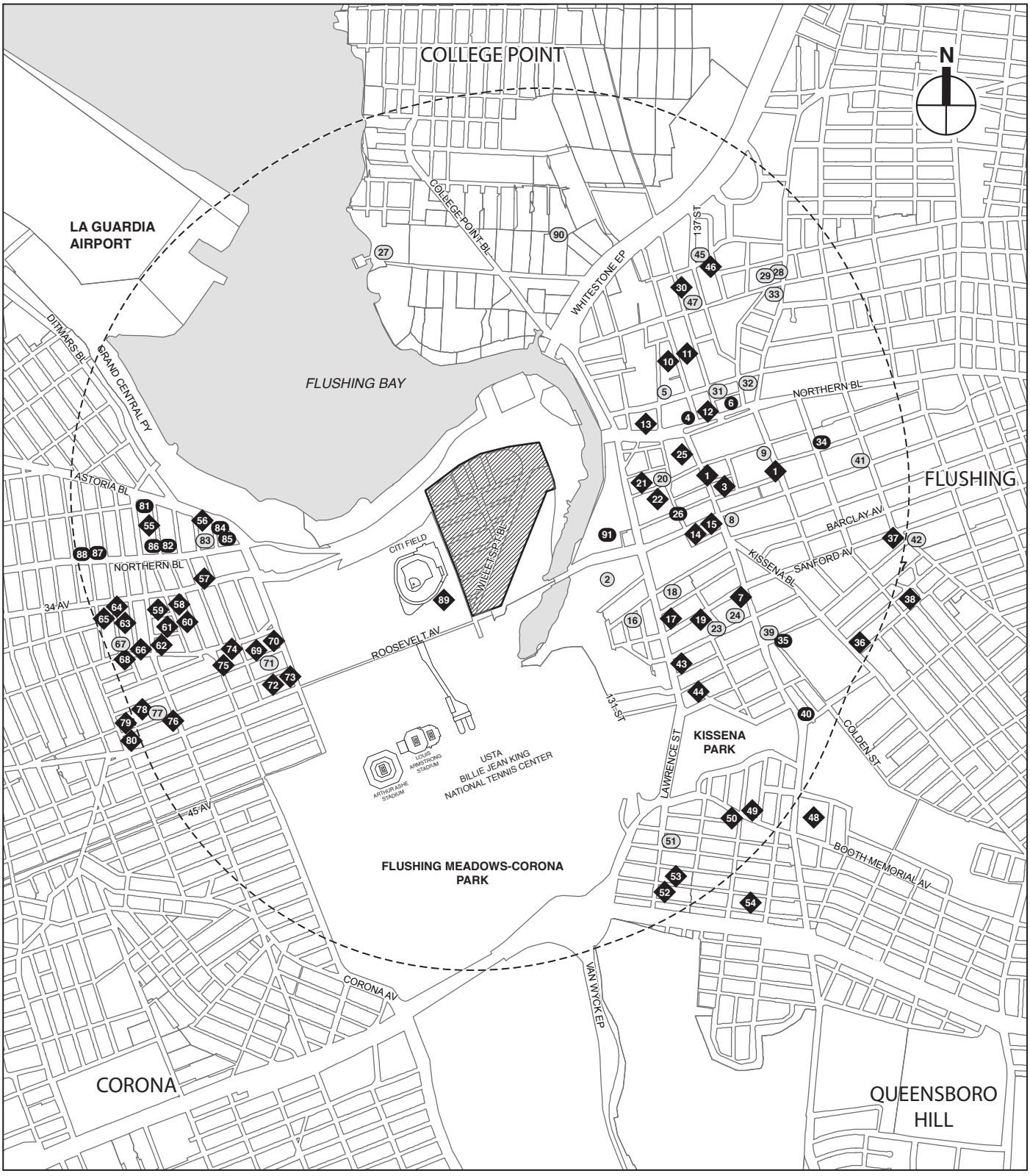
C. CHANGES IN METHODOLOGY AND BACKGROUND CONDITIONS

BACKGROUND CONDITIONS

In connection with the preparation of this technical memorandum, background conditions and the status of development projects anticipated for completion by the project build year (the no build list) have been updated for the FGEIS study area. Updates to the No Build list were made through field visits and review of project information kept by the New York City Department of City Planning (DCP) Queens office. The updated No Build list includes projects that were planned prior to the current economic slowdown. Since the FGEIS was completed in 2008, some development projects have been completed in the surrounding area and some are now on hold indefinitely, due to changes in economic conditions and financing availability. Others have had their development programs modified to reflect new economic conditions.

Table 3 presents the full no build list used for the 2022 analysis year (see Figure 5). This list contains the same projects that were in the FGEIS no build list, but they have been updated to reflect their current development program, to note projects that have already been completed, and to indicate which projects are expected to be complete by 2016 (the first phase of the

2.9.11



Willets Point Development District

1-Mile Perimeter

4 2022 No Build Project Location (See Table 3)

(2) 2016 No Build Project Location (See Table 4)

1 Completed No Build Project

0 2000 FEET

SCALE

Figure 5

No Build Project Locations

Updated Plan) or by 2022 (full build-out). The projects expected to be complete by 2016 are discussed in more detail below. Based on consultation with the DCP Queens office, this list includes all currently known projects expected to be complete by 2022.

The list of no build projects for the 2022 analysis year continues to include projects that have been completed or that are on hold indefinitely. Completed projects are included in the 2022 analysis year as a conservative measure to account for unanticipated development projects over the next 10 years. Projects that are on hold indefinitely have been included on the assumption that they or other similar projects will still move forward in the future when market conditions improve. Overall, since projects were not removed, this list is conservatively inclusive.

As shown in **Table 3**, many residential projects have been completed in the study area since completion of the FGEIS in 2008. Furthermore, several large development projects, such as River Park Place, New Millennium-Northern Boulevard, RKO Keith Theater, and development sites associated with the North Corona Rezoning, are assumed to not be complete until 2022 or later because they are currently on hold and, in some cases, require further environmental review and approval.

Only a few no build projects have altered their development programs and, in general, the changes are minimal and are to the type, not size, of development. Furthermore, the no build projects identified above include the same general mix of uses as the no build project analyzed in the FGEIS. The only instances of substantial new development in the no build list compared to the FGEIS are the Macedonia Plaza project and the expansion of the Flushing Commons project, both of which are expected to be complete by 2016.

Table 4 is a subset of **Table 3** identifying the no build projects evaluated in the 2016 analysis year. These projects were identified in consultation with the DCP Queens office and either have their approvals in place, are under construction, or are complete but still in sales or leasing. Projects that have been completed and their sale or leasing has concluded are not included in the 2016 analysis because their effects are already reflected in the background conditions, as updated for this Technical Memorandum. Based on consultation with the DCP Queens office, this list includes all currently known projects expected to be complete by 2016 in the surrounding area. Any unanticipated development projects completed by 2016 would likely represent a small amount of development relative to the overall level of no build development.

Table 3
2022 Updated Plan No-Build Projects

Map No.[1]	Project Name/Address	Development Proposal/Program	Study Area	Analysis Year
1	Downtown Flushing Modified Two-Way Configuration	Transportation project – Maintain existing configuration for Main and Union Streets, impose turn prohibitions and street direction reversal	primary/ secondary	Complete
2	Sky View Parc - College Point Blvd and 40th Road	750 residential units, 760,000 sf retail, 51,800 sf restaurant, 3,000 parking spaces (the residential component may be developed in phases)	primary	2016
3	Queens Crossing - Main Street and 39th Avenue	144,400 sf office, 110,000 sf retail, 29,600 sf community facility, 401 parking spaces	primary	Complete
4	RKO Keith Theater - Main Street and Northern Boulevard	200 residential units, 10,000 sf retail, 12,500 sf community facility, 229 parking spaces	primary	2022
5	New Millennium - 134-03 35th Avenue	84 residential units, 33,600 sf community facility, 3,600 sf retail, 222 parking spaces	primary	2016
6	New Millennium Northern Boulevard - 137-61 Northern Boulevard	91 residential units, 60 hotel rooms, 35,722 sf community facility, 17,167 sf retail, 223 parking spaces	secondary	2022
7	Victoria Tower - 41-60 Main Street	178 residential units	secondary	Complete
8	Caldor Site - 136-20 Roosevelt Avenue	155,000 sf retail	secondary	2016
9	Flushing Commons (Municipal Parking Lot 1) and Macedonia Plaza - 138th Street, 37th Avenue, 39th Avenue, and Union Street	Flushing Commons: 620 residential units; 275,000 sf of retail; 110,000 sf of office; 98,000 sf of community facility space; 1,600 parking spaces, including 700 accessory spaces; and either 250 hotel rooms or an additional 114,000 sf of office Macedonia Plaza: 142 affordable residential units; 10,000 sf community facility space; 25,000 sf retail space	secondary	2016
10	33-34 Farrington Street	20,469 sf storage facility	primary	Complete
11	33-53 Farrington Street	9,887 sf hotel	primary	Complete
12	137-07 Northern Boulevard	81 room hotel	primary	Complete
13	134-35 Northern Boulevard	12,212 sf expansion to existing office building	primary	Complete
14	135-11 40th Road	14 residential units, 55,170 sf office	primary	Complete
15	40-22 Main Street	17,015 sf retail	primary	Complete
16	41-18 Haight Street	6 residential units	primary	2016
17	41-55 College Point Boulevard	50 residential units	primary	Complete
18	132-27 to 132-61 41st Road	37 residential units	primary	2016 (UC)
19	5-10 Summit Court	18 residential units	secondary	Complete
20	133-53 37th Avenue	47 residential units	primary	2016
21	133-51 37th Avenue	9,050 sf office	primary	Complete
22	133-40 37th Avenue	12,742 sf office	primary	Complete
23	132-71 Maple Avenue	8 residential units	secondary	2016
24	134-43 Maple Avenue	23 residential units	secondary	2016 (UC)
25	36-36 Main Street	26,936 sf office	primary	Complete
26	133-47 39th Avenue	12,270 sf office, 11,420 sf retail, 9,755 sf medical office	primary	2016 (UC)
27	North Shore Marine Transfer Station - 31st Avenue & 122nd Street	Converted facility will receive and containerize DSNY-managed waste from Queens Community Districts 7 through 14	secondary	2016
28	31-18, 31-22 Union Street	30 residential units	secondary	2016
29	140-24 31st Drive	20 residential units	secondary	2016
30	31-33 Linden Place	8 residential units	primary	Complete
31	136-16 35th Avenue	28 residential units	secondary	2016 (UC)
32	138-06 35th Avenue	9 residential units	secondary	2016 (UC)
33	32-18 Union Street	8 residential units	secondary	2016 (UC)
34	143-21 38th Avenue	25 residential units	secondary	2016
35	P.S. 244 - 137-20 Franklin Avenue	425-seat primary school; enrollment of 218 students in 2009-2010, 207 students to be phased in by 2015	secondary	2016
36	140-22 Beech Avenue	42 residential units	secondary	Complete
37	143-51 Franklin Avenue	1 residential unit	secondary	Complete
38	143-22 Beech Avenue	2 residential units	secondary	Complete
39	42-33 Main Street	66 residential units	secondary	2016 (UC)
40	43-57 Main Street	2,085 sf office, retail	secondary	2022
41	38-30 Parsons Boulevard	40 residential units	secondary	2016
42	42-11 Parsons Boulevard	20 residential units	secondary	2016 (UC)
43	132-25 Pople Avenue	14 residential units	secondary	Complete
44	133-20 Avery Avenue	26 residential units	secondary	Complete
45	137-08 31st Road	34 residential units	secondary	2016
46	31-27 137th Street	9 residential units	secondary	Complete
47	31-38 137th Street	16 residential units	secondary	2016
48	New York Hospital Queens	Major modernization program – 190,000 sf new hospital addition with 80 beds and new treatment rooms	secondary	Complete
49	56-71 136th Street	2 residential units	secondary	Complete
50	135-02 Booth Memorial Avenue	3 residential units	secondary	Complete
51	57-35 Lawrence Street	5 residential units	secondary	2016
52	132-14 59th Avenue	2 residential units	secondary	Complete
53	132-11 59th Avenue	2 residential units	secondary	Complete

Table 3 (cont'd)
2022 Updated Plan No-Build Projects

Map No.[1]	Project Name/Address	Development Proposal/Program	Study Area	Analysis Year
54	136-20 59th Avenue	6 residential units	secondary	Complete
55	32-37 108th Street	2 residential units	secondary	Complete
56	32-10 112th Street	4 residential units	secondary	Complete
57	111-17 34th Avenue	2 residential units	secondary	Complete
58	109-18 34th Avenue	6 residential units	secondary	Complete
59	109-12 34th Avenue	3 residential units	secondary	Complete
60	34-30 110th Street	5 residential units	secondary	Complete
61	35-01 109th Street	12 residential units	secondary	Complete
62	108-18 35th Avenue	3 residential units	secondary	Complete
63	34-12 107th Street	3 residential units	secondary	Complete
64	106-08 34th Avenue	6 residential units	secondary	Complete
65	34-16 106th Street	3 residential units	secondary	Complete
66	106-07 37th Avenue	5 residential units	secondary	Complete
67	34-64 107th Street	3 residential units	secondary	Complete
68	34-59 106th Street	4 residential units	secondary	Complete
69	112-31 38th Avenue	18 residential units	secondary	Complete
70	112-37 38th Avenue	8 residential units	secondary	Complete
71	112-26 38th Avenue	18 residential units	secondary	2016 (UC)
72	112-34 39th Avenue	8 residential units	secondary	Complete
73	112-32 39th Avenue	8 residential units	secondary	Complete
74	111-03 38th Avenue	3 residential units	secondary	Complete
75	111-13 38th Avenue	8 residential units	secondary	Complete
76	39-06 108th Street	22 residential units	secondary	Complete
77	104-63 39th Avenue	4 residential units	secondary	2016 (UC)
78	104-46 – 104-54 38th Avenue	4 residential units	secondary	Complete
79	104-20 38th Avenue	8 residential units	secondary	Complete
80	104-24 39th Avenue	8 residential units	secondary	Complete
81	108-04, 14, 16 Astoria Blvd [2]	84 residential units, 34,965 sf community facility	secondary	2022
82	110-09 Northern Boulevard [2]	31 residential units, 15,500 sf of commercial use	secondary	2022
83	111-10, 12, 16 Northern Blvd; 32-20 112th Street; 32-19 111th Street [2]	78 residential units, 32,621 sf community facility, 51 parking spaces	secondary	2016 (UC)
84	112-12, 18, 24 Astoria Blvd [2]	38 residential units, 16,034 sf community facility	secondary	2022
85	Block bounded by Astoria Blvd, Northern Blvd, and 112th Place [2]	147 residential units, 73,329 sf of commercial use	secondary	2022
86	108-09 Northern Boulevard	18 residential units, 8,970 sf commercial	secondary	2022
87	106-15 Northern Boulevard	11 residential units, 5,502 sf commercial	secondary	2022
88	32-56 106th Street	14 residential units, 7,144 commercial	secondary	2022
89	Shea Stadium Redevelopment	New 44,100-seat stadium (to replace existing 56,000-seat stadium) and redistribution of 8,800 existing parking spaces	primary	Complete
90	College Point Police Academy - 129-05 31st Avenue	2.4 million sf program, including 450,000-square-foot physical training area, 250 beds for visiting law enforcement agencies, 250 classrooms, firing range and fields for emergency-vehicle and other training exercises, 2,000 parking spaces	secondary	2016 (UC)
91	River Park Place - 39-08 Janet Place	475 residential units, 10,200 sf retail, 1,500 sf community facility, 251,000 sf office, and either 175 hotel rooms or an additional 96,500 sf of office	primary	2022

Notes:
UC = Under Construction
[1] See Figure 5.
[2] Projects anticipated as a result of the North Corona Rezoning (CEQR No. 03DCP058Q). Subsequent to the FGEIS, three of these sites were down-zoned as part of the North Corona 2 Rezoning. The permitted community facility space has been reduced as a result.
Sources: AKRF, Inc., New York City Department of City Planning, New York City Department of Buildings, New York City Economic Development Corporation.

Table 4
2016 Updated Plan No-Build Projects

Map No.[1]	Project Name/Address	Development Proposal/Program	Study Area	Analysis Year
2	Sky View Parc - College Point Blvd and 40th Road	750 residential units, 760,000 sf retail, 51,800 sf restaurant, 3,000 parking spaces (the residential component may be developed in phases)	primary	2016 (UC)
5	New Millennium - 134-03 35th Avenue	84 residential units, 33,600 sf community facility, 3,600 sf retail, 222 parking spaces	primary	2016
8	Caldor Site - 136-20 Roosevelt Avenue	155,000 sf retail	secondary	2016
9	Flushing Commons (Municipal Parking Lot 1) and Macedonia Plaza - 138th Street, 37th Avenue, 39th Avenue, and Union Street	Flushing Commons: 620 residential units; 275,000 sf of retail; 110,000 sf of office; 98,000 sf of community facility space; 1,600 parking spaces, including 700 accessory spaces; and either 250 hotel rooms or an additional 114,000 sf of office Macedonia Plaza: 142 affordable residential units; 10,000 sf community facility space; 25,000 sf retail space	secondary	2016
16	41-18 Haight Street	6 residential units	primary	2016
18	132-27 to 132-61 41st Road	37 residential units	primary	2016 (UC)
20	133-53 37th Avenue	47 residential units	primary	2016
23	132-71 Maple Avenue	8 residential units	secondary	2016
24	134-43 Maple Avenue	23 residential units	secondary	2016 (UC)
26	133-47 39th Avenue	12,270 sf office, 11,420 sf retail, 9,755 sf medical office	primary	2016 (UC)
27	North Shore Marine Transfer Station - 31st Avenue & 122nd Street	Converted facility will receive and containerize DSNY-managed waste from Queens Community Districts 7 through 14	secondary	2016
28	31-18, 31-22 Union Street	30 residential units	secondary	2016
29	140-24 31st Drive	20 residential units	secondary	2016
31	136-16 35th Avenue	28 residential units	secondary	2016 (UC)
32	138-06 35th Avenue	9 residential units	secondary	2016 (UC)
33	32-18 Union Street	8 residential units	secondary	2016 (UC)
34	143-21 38th Avenue	25 residential units	secondary	2016
35	P.S. 244 - 137-20 Franklin Avenue	425-seat primary school; enrollment of 218 students in 2009-2010, 207 students to be phased in by 2016	secondary	2016
39	42-33 Main Street	66 residential units	secondary	2016 (UC)
41	38-30 Parsons Boulevard	40 residential units	secondary	2016
42	42-11 Parsons Boulevard	20 residential units	secondary	2016 (UC)
45	137-08 31st Road	34 residential units	secondary	2016
47	31-38 137th Street	16 residential units	secondary	2016
51	57-35 Lawrence Street	5 residential units	secondary	2016
67	34-64 107th Street	3 residential units	secondary	2016 (UC)
71	112-26 38th Avenue	18 residential units	secondary	2016 (UC)
77	104-63 39th Avenue	4 residential units	secondary	2016 (UC)
83	111-10, 12, 16 Northern Blvd; 32-20 112th Street; 32-19 111th Street [2]	78 residential units, 32,621 sf community facility, 51 parking spaces	secondary	2016 (UC)
90	College Point Police Academy - 129-05 31st Avenue	2.4 million sf program, including 450,000-square-foot physical training area, 250 beds for visiting law enforcement agencies, 250 classrooms, firing range and fields for emergency-vehicle and other training exercises, 2,000 parking spaces	secondary	2016 (UC)

Notes:
UC = Under Construction
[1] See Figure 5.
[2] Projects anticipated as a result of the North Corona Rezoning (CEQR No. 03DCP058Q). Subsequent to the FGEIS, this site was down-zoned as part of the North Corona 2 Rezoning. The permitted community facility space has been reduced as a result.
Sources: AKRF, Inc., New York City Department of City Planning, New York City Department of Buildings, New York City Economic Development Corporation.

It should be noted that the Flushing-Willets Point-Corona Local Development Corporation is studying potential redevelopment opportunities under the New York State Department of State (NYSDOS) Brownfield Opportunity Area (BOA) program for an area east of the District bounded by the Flushing River, Northern Boulevard, Roosevelt Avenue, and Prince Street. The study is in early planning stages. The nature of any development that might result from this planning effort and its completion year are unknown. Furthermore, it is likely to require its own land use review and approvals, including an environmental assessment. Therefore, it is not included in the no build list above.

ANALYSIS METHODOLOGY

The FGEIS was prepared in accordance with the guidelines set forth in the 2001 *CEQR Technical Manual*. In May 2010, the City published an updated *CEQR Technical Manual*, which includes numerous revisions to the guidance for environmental review, including a new technical area to be analyzed (Greenhouse Gas Emissions) and changes to the methodologies for various technical analyses. This technical memorandum addresses the updated guidance and analysis methodologies provided in the 2010 *CEQR Technical Manual*. Where relevant, the updated analysis methodologies are noted in the sections below.

D. POTENTIAL IMPACTS OF CHANGES

LAND USE, ZONING, AND PUBLIC POLICY

PROJECT MODIFICATIONS

Like the Approved Plan, the Updated Plan is not expected to result in significant adverse land use, zoning or public policy impacts.

With the Updated Plan, development would be completed in the southernmost end of the District and along 126th Street south of 35th Avenue by 2016. New construction would consist of approximately 1,345,000 gsf of development, including approximately 414,000 gsf of residential (400 units), 680,000 gsf of retail, 251,000 gsf of hotel (387 rooms), approximately 950 parking spaces, and approximately 2.08 acres of publicly-accessible open space. For analysis purposes, it is assumed that at full build-out, by 2022, the full development program analyzed under the Approved Plan would be completed, including residential, retail, office, convention center, hotel, and community facility (including school) uses, as well as parking and publicly-accessible open space (see **Table 1**).

By 2016, a large area surrounding the new development footprint would be acquired by the City and would, for the most part, be cleared of development (the "buffer area"). The buffer area would extend approximately 100 feet north of the development to 35th Avenue, approximately 285 feet east of the development to 127th Street, and on the southernmost parcel would extend approximately 195 feet north and east of the development.[6] The remainder of the District would continue to contain industrial uses, although this would be an interim condition as acquisition of parcels in the northern and eastern portion of the District would be ongoing.

The placement of land uses under the Updated Plan and Approved Plan would be substantially similar. Under the Approved Plan, the southernmost block would contain retail, hotel, office, residential, and parking uses. Under the Updated Plan, that block would contain retail, hotel, and parking uses. In addition, under the Updated Plan the off-street parking spaces in Phase 1 would be consolidated in Building A1, while under the Approved Plan the spaces would be distributed among each building in Phase 1. Furthermore, the hotel use in Phase 1 of the Updated Plan may be located in Building A1 or A2.

With the Updated Plan, many of the improvements that would occur in the northern and eastern portions of the District both at full build-out in 2022 and under the Approved Plan would not be in place at the end of the first phase of development. Improvements to drainage and sanitary sewers, streets, and pedestrian amenities, remediation of hazardous materials conditions, and filling of the area to raise it above the floodplain would all be completed in the northern and

[6] Distances do not include the street widths between the development and the buffer areas.

eastern portions of the District after 2016. Because streets in the northern and eastern portions of the District would remain at their existing grade through 2016, during the first years of the development period streets in the southwestern portion of the District would be graded to slope down to the existing streets to the east to allow continued access to and from all areas of the District.

In terms of land use compatibility, the new residential and other uses in the southwestern part of the District would not be compatible with the automotive and industrial uses that would remain in the northern and eastern part of the District. However, as shown in Figures 3 and 4, these uses would not interfere with each other due to the large buffer area that would be in place by 2016, and no significant adverse impact with respect to land use would occur.

Like the Approved Plan, the Updated Plan would be consistent with and supportive of the goals of PlaNYC. The Updated Plan's consistency with PlaNYC is discussed in greater detail below.

In terms of zoning and public policy, all of the same actions needed for the Approved Plan would be necessary to implement the Updated Plan; therefore the Updated Plan, like the Approved Plan, would have no significant adverse zoning or public policy impacts.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

As described above, the City has executed agreements for a total of 65 percent of the property located in tax lots in the overall District and 85 percent of the property located in tax lots in the first phase of the Updated Plan. Businesses on many of the acquired properties are continuing to operate either as direct tenants of the City or through leaseback arrangements with the former property owners. Therefore, existing land uses within the District remain substantially the same as described in the FGEIS.

As discussed above and shown in **Tables 3** and **4**, an updated no build list has been prepared for this analysis. As in the FGEIS, the no build projects would introduce a mix of primarily residential, retail, and commercial office uses. Although some no build projects have had their development programs modified, such modifications would result in the same general mix of uses, and the study area would have the same land use characteristics as analyzed in the FGEIS. Since the FGEIS was completed in 2008, several development projects have been completed in the surrounding area. Of the two large projects near Willets Point, the new Citi Field stadium was completed and opened in 2009, and Sky View Parc, located on the east side of the Flushing River, is still under construction although a portion of the retail component has been completed and opened. Some development projects are now on hold, due to changes in economic conditions and financing availability. It is assumed that the projects that are now on hold will move forward in the future when economic conditions improve or that they will be replaced with similar development projects. As anticipated in the FGEIS, this development would create new activity within the study area and would complement the various uses and development proposed within the Special Willets Point District. Overall, the changed background conditions would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect land use, zoning and public policy.

The 2010 *CEQR Technical Manual* provides updated guidance on assessing a project's consistency with PlaNYC. The project is a large, publicly-sponsored project, and therefore an assessment of its consistency with PlaNYC was conducted. Overall, the Updated Plan would be consistent with the broad sustainability goals of PlaNYC. As with the Approved Plan, the City would require any future development in the District to achieve Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) certification. Furthermore,

the Updated Plan would require the developer(s) to consider the most up-to-date information on the effects of climate change in the City and implement adaptation strategies where appropriate and feasible.

The Updated Plan, like the Approved Plan, would also be consistent with and supportive of specific goals of PlaNYC, as follows:

- *Land Use Goals*: The Updated Plan would support PlaNYC's land use goals by creating new residential development, 35 percent of which would be reserved for affordable housing. The Updated Plan, like the Approved Plan, would result in a transit-oriented development and would redevelop an underutilized area. Furthermore, environmental remediation would take place across the District, albeit incrementally, as part of the Updated Plan.
- *Open Space Goals*: The Updated Plan would support PlaNYC's open space goals by creating a minimum of eight acres of publicly accessible open space at full build-out, including a park of at least two acres in size, which would be located within a 10-minute walk of anywhere in the District. Approximately two acres of publicly-accessible open space would be developed during the initial phase of development with the Updated Plan.
- *Remediation Goals*: Environmental remediation would take place across the District, albeit incrementally, as part of the Updated Plan. Therefore the Updated Plan would support PlaNYC's goal to clean up contaminated land in New York.
- *Water Quality Goals*: Like the Approved Plan, the Updated Plan would eliminate potentially polluting septic fields, and stormwater would be pre-treated prior to discharge. The Updated Plan is expected to result in improved stormwater quality and, consequently, improved water quality in Flushing Bay. Therefore, the Updated Plan would be consistent with PlaNYC's water quality goals.
- *Air Quality Goals*: Under the Updated Plan, like the Approved Plan, it is expected that all large construction equipment would use ultra-low sulfur diesel fuel (ULSD) and would utilize the best available technology (BAT) for reducing the emission of pollutants. Therefore, the Updated Plan would be consistent with the air quality goals of PlaNYC.
- *Transportation Goals*: The Updated Plan would support the transportation goals of PlaNYC by creating a transit-oriented development and providing facilities to promote cycling, such as bicycle parking and bicycle lanes connecting the District to the area-wide bicycle network.
- *Climate Change Goals*: Both the Approved Plan and Updated Plan would raise the grade above the floodplain prior to new development. Furthermore, the developer would be required to consider the most up-to-date information on the effects of climate change in the City and implement adaptation strategies where appropriate and feasible.

Based on the guidance and analysis methodologies contained in the 2010 *CEQR Technical Manual*, no further analysis is warranted with respect to land use, zoning, and public policy.

SCHEDULE CHANGE

The schedule change with the Updated Plan would not change the conclusion that the project would not result in significant adverse environmental impacts with respect to land use, zoning and public policy.

SOCIOECONOMIC CONDITIONS

PROJECT MODIFICATIONS

Although the Updated Plan's schedule change would delay the direct displacement of portions of the District, the potential for direct and indirect displacement and effects on specific industries at full build-out would remain the same as described in the FGEIS. Under the Updated Plan, as with the Adjusted Plan and the Staged Acquisition Alternative, streets within the footprint of the first phase of development would be elevated above the floodplain. As noted above, the elevated east-west streets would be graded to slope down to the existing streets in the eastern part of the District, allowing continued access to and from remaining businesses in the District. Because continued access would be provided, the first phase of the Updated Plan would not have the potential to adversely affect business conditions in the eastern portion of the District. Therefore, the Updated Plan would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to socioeconomic conditions.

Like the Approved Plan, development resulting from the Updated Plan would generate substantial economic benefits for New York City and New York State. Because the development program that is currently contemplated for the initial development phase under the Updated Plan is less than the maximum floor area permitted by the approved zoning and URP, it may result in approximately 15 percent less overall development floor area within the District. Thus, although still substantial, the overall economic benefits of the Project could be marginally less than the Approved Plan. . Nonetheless, the Updated Plan would still include 35 percent of residential units as affordable housing as well as publicly accessible open space and a public school. The first phase of the Updated Plan would introduce approximately 1,875 jobs to the District, and at full build out the Updated Plan would introduce approximately 7,000 jobs. Overall, the economic benefits of the Plan—although delayed—would still be realized incrementally under the first phase of development, and substantially realized at full build-out.

Furthermore, the Worker Assistance Program would continue under the Updated Plan. As described above, the program has been in place since January 2008 and provides several services including free English as a Second Language (ESL) classes, job training, and immigration services for District workers. The program has 505 enrollees (representing nearly 30 percent of the District employees), including 153 active participants in fall 2010 classes, and since inception at least 231 enrollees have completed at least one education or training course. In addition, the WAP offers expanded vocational training options and provides greater focus on employment placement for enrollees in 2011.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to socioeconomic conditions.

In general, the analyses presented in the FGEIS—preliminary assessments of direct residential displacement and indirect business displacement due to increased rents, as well as detailed assessments of direct business displacement, indirect business displacement due to competition, indirect residential displacement, and adverse effects on specific industries—are consistent with the requirements of the 2010 *CEQR Technical Manual*.

The 2010 *CEQR Technical Manual* includes updated thresholds for when a detailed analysis of indirect business displacement due to competition is necessary. According to the 2010 *CEQR*

Technical Manual, if the capture rate for a certain category of retail goods would exceed 100 percent, a detailed assessment of indirect business displacement due to competition may be warranted.[7] The FGEIS identified a capture rate for the building materials and garden supplies retail category exceeding 100 percent. However, the FGEIS included a detailed analysis of the potential for market saturation in this category and noted that high capture rates are typical for this category because the sales figures most likely include sales to small contractors as well as individual households. Furthermore, the retail program assessed in the FGEIS was designed to provide a conservative assessment of the Plan's potential socioeconomic impacts, and a home improvement store would not necessarily locate in the District. Therefore, use of the 2010 *CEQR Technical Manual* methodology would not change the FGEIS conclusion that the project would not result in significant adverse impacts with respect to indirect business displacement due to competition.

Based on the guidance and analysis methodologies contained in the 2010 *CEQR Technical Manual*, no further analysis is warranted with respect to socioeconomic conditions.

SCHEDULE CHANGE

At full build-out in 2022, the socioeconomic effects of the Updated Plan would be the same as those identified for the Approved Plan in the FGEIS. However, compared to the Approved Plan, the Updated Plan would afford additional time to find suitable relocation sites for the District's larger businesses, which are concentrated in the eastern portion of the District and have more specific relocation needs than the District's smaller businesses. Upon completion of the first phase of the Updated Plan in 2016, approximately 654 employees would be displaced from the western portion of the District including the buffer area, compared to an estimated 676 employees under the first phase of the Adjusted Plan and approximately 888 employees under the first phase of the Staged Acquisition Alternative. As described above, in 2016 there could be remediation, grading, and construction activity underway in segments of the District to be developed as part of Phase 2. Businesses currently located on these properties would also be displaced by 2016.

Upon full build-out of the Updated Plan in 2022, an estimated 1,711 employees would be displaced from the District, which would be the same number of employees as with the Approved Plan. Therefore, although the schedule change would delay the displacement of some employees from the District, it would not result in different socioeconomic effects at full build-out. Furthermore, the schedule change would not affect the NYCEDC commitment to the WAP. As described above, this program would continue under the Updated Plan. Overall, the schedule change to 2022 would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to socioeconomic conditions.

COMMUNITY FACILITIES AND SERVICES

PROJECT MODIFICATIONS

The project modifications described above would not result in any significant adverse impacts to community facilities that were not identified in the FGEIS. At full build-out, the Updated Plan would develop the District with the same gross floor area, mix of uses, and number of residential

[7] A capture rate is a measure that compares expected spending by consumers in a trade area (retail demand) to the volume of retail sales in the trade area. The closer the capture rate is to 100 percent, the more likely it is that area residents are spending a higher proportion of their available resources within the area. Capture rates over 100 percent indicate that stores attract sales dollars from outside the trade area.

units as the Approved Plan. Therefore, there would be no new demand for police protection, fire protection, emergency services, public schools, libraries, hospitals and health care facilities, or child care centers as a result of the project modifications.

Based on CEQR guidance and consultation with the SCA, construction of an interim school facility is not warranted as part of the Updated Plan's initial development phase as assumed in the FGEIS and in previous technical memoranda for initial phases of development. The residential program in the first phase of the Updated Plan would include only 400 of the total 5,500 planned residential units and, as discussed below, would not result in a temporary significant adverse impact without a school for the duration of the period between the completion of Phase 1 and the completion of the school in Phase 2.

Additional information on child care facilities, police, fire, and emergency services is also discussed below.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The updated information on background conditions would not change the FGEIS conclusion that the project would not result in significant adverse impact to public libraries. Changes in background conditions would not affect the project's population, which would remain the same as described in the FGEIS, and the 2010 *CEQR Technical Manual* does not include any changes to the methodology for analyzing potential impacts on libraries.

The 2010 *CEQR Technical Manual* includes updated methodologies for the analysis of public schools, publicly funded child care facilities, and police, fire, and health care/emergency services. Furthermore, the updated information on background conditions presented above could affect the analyses of public schools and publicly funded child care facilities. Therefore, this section presents updated analyses of public schools, publicly funded child care facilities, and police, fire, and health care/emergency services. As discussed below, the updated analyses find that, accounting for the changes to background conditions and methodology, the Updated Plan would not result in any significant adverse impacts to public schools, publicly funded child care facilities, or police, fire, and health care/emergency services that were not identified in the FGEIS.

Public Schools

The updated information on background conditions was reviewed to determine whether the project's potential effects on public schools would remain consistent with the conclusions in the FGEIS. The schools analysis was also updated to assess the potential for impacts upon completion of the first phase of development in 2016, to account for new information on current school enrollment and new enrollment projections, and to use updated CEQR guidance on school study areas and impact thresholds.

Current school enrollment data and enrollment projections for up to 10 years into the future are regularly updated by the SCA. This analysis uses the most recent data available, which includes school enrollment for the 2009-2010 school year and enrollment projections for the 2017-2018 school year (the FGEIS analysis used data on school enrollment for the 2005-2006 school year, and enrollment projections for the 2016-2017 school year). Future conditions at local schools were predicted based on the new school enrollment projections and estimated enrollment from the updated list of development projects in the study area.

The FGEIS analyzed potential impacts on public elementary and intermediate schools within three study areas: 1) a one-mile radius surrounding the Willets Point Development District; 2)

Sub-district 2 (referred to as Zone 2 in the FGEIS) of Community School District (CSD) 25; and 3) CSD 25 as a whole. The analysis of high schools considered the impact on the entire Borough of Queens. The FGEIS concluded that because the Approved Plan would provide a public school with sufficient capacity to offset the project-generated demand for school seats, the Approved Plan would not result in any significant adverse impacts to public schools in these study areas.

The 2010 *CEQR Technical Manual* no longer recommends an analysis of public schools at the CSD level. Therefore, this analysis does not update conditions or the FGEIS conclusions with respect to CSD 25 as a whole.[8] Under the 2010 *CEQR Technical Manual*, the study area used for the determination of impacts on elementary and intermediate schools is the sub-district of the school district in which the project is located, and potential impacts on high schools are analyzed at the borough level. Therefore, this analysis updates conditions and the FGEIS conclusions with respect to elementary and intermediate schools in Sub-district 2 of CSD 25 and high schools in Queens.

According to the updated guidance on impact thresholds in the 2010 *CEQR Technical Manual*, a significant adverse impact may occur if the Updated Plan would result in 1) a utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 105 percent in the future with the Updated Plan condition; and 2) an increase of five percent or more in the collective utilization rate between the future without and the future with the Updated Plan conditions.

The 2010 *CEQR Technical Manual* also recommends analysis of a local study area for elementary and intermediate schools, but this study is provided for informational purposes and does not typically factor into the determination of impacts. Therefore, this analysis presents updated conditions for the local study areas used in the FGEIS—a one-mile radius around the District—but does not consider the local study area in the determination of impacts.

As reflected in the technical analysis that follows, these changes would not result in any additional significant adverse impacts on public schools in either 2016 or 2022 that were not identified in the FGEIS.

Updated Existing Conditions

Table 5 below provides updated information on the elementary, intermediate, and high schools that serve the study areas and provides the most current enrollment and capacity data for these schools (see Figure 6 for school locations). Since the completion of the FGEIS, a new elementary school, P.S. 244, and a new intermediate and high school, the East-West School of International Studies, have opened in the study area. Compared to the data in the FGEIS, the updated data indicates higher elementary school capacity and lower intermediate school capacity in the study areas.

[8] Although an analysis of CSD 25 is not warranted, the Updated Plan, like the Approved Plan, would not result in a significant adverse impact on public schools in CSD 25 as a whole.

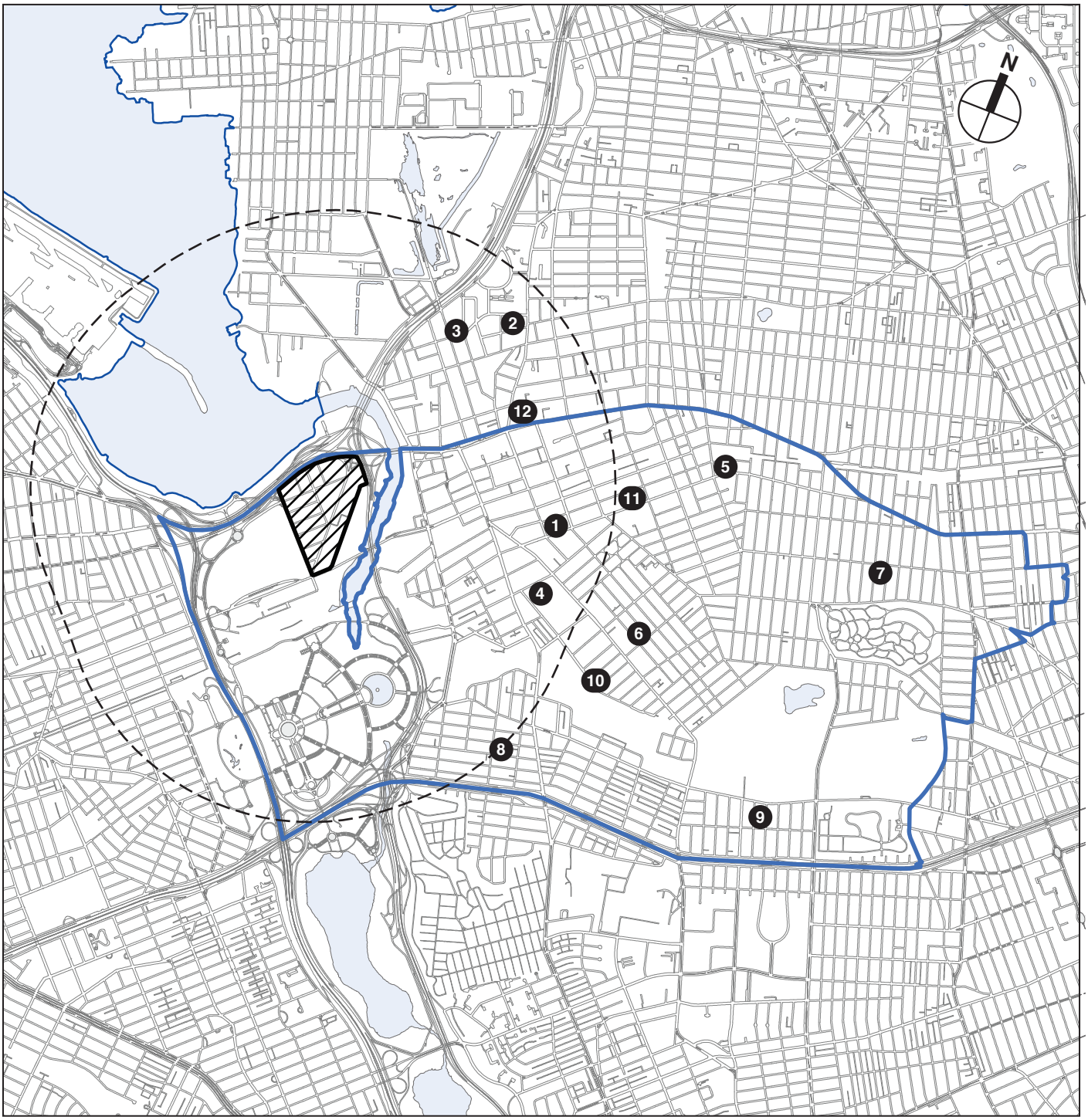


Figure 6
Public Schools Serving the Study Area

Table 5
Public Schools Serving the Approved Plan, Enrollment and Capacity Data, 2009-2010 School Year

Map No.	Name	Address	Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
1-Mile Study Area						
1	PS 20 John Bowne School	142-30 Barclay Ave	1,414	1,288	-126	110%
2	PS 214 Cadwallader Colden School*	31-15 140 St	434	512	78	85%
3	PS 242*	29-66 137 St	374	248	-126	151%
4	PS 244	137-20 Franklin Ave	218	348	130	63%
1-Mile Study Area Total			**2,440**	**2,396**	**-44**	**102%**
Sub-District 2 of CSD 25						
5	PS 22 Thomas Jefferson School	153-01 Sanford Ave	720	670	-50	107%
5	PS 22 Transportable	153-01 Sanford Ave	70	51	-19	137%
6	PS 24 Andrew Jackson School	141-11 Holly Ave	715	621	-94	115%
6	PS 24 Transportable	141-11 Holly Ave	101	72	-29	140%
7	PS 107 Thomas A Dooley	167-02 45 Ave	932	890	-42	105%
8	PS 120 Queens School	58-01 136 St	845	893	48	95%
9	PS 163 Flushing Heights School	159-01 59 Ave	447	476	29	94%
9	PS 163 Transportable	159-01 59 Ave	98	60	-38	163%
Sub-District 2 Total			**5,560**	**5,369**	**-191**	**104%**
Intermediate Schools						
1-Mile Study Area						
10	East-West School Of International Studies (IS Organization)	46-21 Colden St	225	229	4	98%
10	IS 237	46-21 Colden St	1160	1118	-42	104%
1-Mile Study Area Total			**1,385**	**1,347**	**-38**	**103%**
Sub-District 2 of CSD 25						
11	JHS 189 Daniel Carter Beard School	144-80 Barclay Ave	754	799	45	94%
Sub-District 2 Total			**2,139**	**2,146**	**7**	**100%**
High Schools						
1-Mile Study Area						
10	East-West School Of International Studies (HS Organization)	46-21 Colden St	322	329	7	98%
11	Flushing International High School	144-80 Barclay Ave	393	419	26	94%
12	Flushing High School	35-01 Union St	2,745	2,124	-621	129%
1-Mile Study Area Total			**3,460**	**2,872**	**-588**	**120%**
Queens Total			**78,090**	**69,041**	**-9,049**	**113%**

Notes:
See Figure 6.
* Denotes schools that are located within the 1-mile study area but not within Sub-district 2 of CSD 25. These schools are excluded from the sub-district totals.
Sources: SCA *Utilization Profiles: Enrollment/Capacity/Utilization, 2009-2010*.

Conditions in 2016

Table 6 below shows school enrollment, capacity and utilization based on the updated background conditions in the 2016 future without the Updated Plan and the 2016 future with the Updated Plan.

As discussed above, the Updated Plan would not include an interim school in the first phase of development. The completion of the first phase of the Updated Plan in 2016 would introduce 400 additional residential units, which could introduce approximately 112 elementary school students, 48 middle school students, and 56 high school students.[9] Because the first phase of the Updated Plan would introduce fewer than 150 high school students, according to the 2010 *CEQR Technical Manual* the Updated Plan in 2016 would not have the potential to result in significant adverse impacts to high schools, and no further analysis is necessary.

The analysis finds that the completion of the first phase of development of the Updated Plan in 2016 would not result in any significant adverse impacts to public schools. Although elementary and intermediate schools in Sub-district 2 would operate with seat shortfalls of 3,406 seats (165.68 percent utilization) and 380 seats (117.71 percent utilization), respectively, the project would not result in a significant adverse impact because the Updated Plan would increase the utilization rates by less than 5 percent compared to the future without the Updated Plan.

Elementary and intermediate schools in the 1-mile study area would also operate over capacity in the 2016 future with the Updated Plan. As noted above, this study area is for informational purposes only and is not considered in the determination of impacts. The Updated Plan would increase the elementary and intermediate school utilization rates by approximately 4.7 percent and 3.6 percent respectively.

Table 6
Analysis with Updated Background Conditions and Methodology:
Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization,
2016 Future Without and With the Updated Plan

	2016 Future Without the Updated Plan				2016 Future With the Updated Plan			
Study Area	**Total Enrollment[1]**	**Capacity[2]**	**Available Seats**	**Utilization**	**Total Enrollment**	**Capacity[2]**	**Available Seats**	**Utilization**
Elementary Schools								
1-Mile Study Area	4,135	2,396	-1,739	172.58%	4,247	2,396	-1,851	177.25%
Sub-district 2 of CSD 25	8,480	5,186	-3,294	163.52%	8,592	5,186	-3,406	165.68%
Intermediate Schools								
1-Mile Study Area	1,693	1,347	-346	125.69%	1,741	1,347	-394	129.25%
Sub-district 2 of CSD 25	2,478	2,146	-332	115.47%	2,526	2,146	-380	117.71%

Notes:
[1] To estimate enrollment for the elementary and intermediate school 1-mile and sub-district study areas in 2016, the total number of students enrolled in those schools Department of Education (DOE) Enrollment/Capacity/Utilization Report) in 2009-2010 was divided by the total number of students enrolled in CSD 25 schools in 2009-2010. The resulting percentages were applied to the CSD 25 elementary and intermediate school projected enrollments in 2016. CSD 25 is projected to have an enrollment of 21,925 elementary students and 7,477 intermediate students in 2016.
[2] The capacity column includes additional elementary, intermediate, and high school capacity identified as currently under construction in the DOE five-year capital plan. Any capacity not currently under construction was not included. The column also includes any capacity changes identified in the Panel for Education Policy's "Significant Changes in School Utilization." Capacity provided by temporary transportable units has been excluded from the analysis.
Sources: SCA *Enrollment Projections2009-2018* by the Grier Partnership; DOE, *Utilization Profiles: Enrollment/Capacity/Utilization, 2009-2010.* DOE *FY 2010-2014 Five-Year Capital Plan*, Proposed Amendment, November 2010.

[9] Based on 400 residential units and the student generation multipliers for Queens in Table 6-1a of the 2010 *CEQR Technical Manual*: 112 elementary students=(400x0.28); 48 intermediate students=(400x0.12); and 56 high school students=(400x0.14).

Furthermore, the most current capital plan (2010-2014 Five-Year Capital Plan–Proposed Amendment–November 2010) identifies an additional planned school in CSD 25 with approximately 444 additional seats that is expected to be complete by 2016. This school is not included in the quantitative analysis because it is not under construction yet and a location within CSD 25 has not been selected. However, should this planned school be located in either study area it would alleviate a portion of the expected seat shortfall. Future capital plans may include additional schools, if needed, to service the area.

Overall, the completion of the first phase of the Updated Plan in 2016 would not result in any significant adverse impacts to public schools.

Conditions in 2022

As discussed above, the full build-out of the Updated Plan would include the same number of residential units analyzed in the FGEIS and subsequent technical memoranda. Furthermore, like the Approved Plan, the Updated Plan would include a new school facility with approximately 1,540 seats.[10] The new school facility would be developed in the eastern part of the District and would be operational at full build-out.

Identical to the Approved Plan, the Updated Plan would result in the development of a total of 5,500 residential units, which could introduce approximately 1,540 elementary school students, 660 intermediate school students, and 770 high school students.[11]

Table 7 below shows school enrollment, capacity and utilization based on the updated background conditions in the 2022 future without the Updated Plan and the 2022 future with the Updated Plan.

The analysis finds that full development of the Updated Plan in 2022 would not result in any significant adverse impacts to public schools. Although elementary and intermediate schools in Sub-district 2 would operate with seat shortfalls of 4,911 seats (179.39 percent utilization) and 776 seats (128.89 percent utilization), respectively, the project would not result in a significant adverse impact because the Updated Plan, with the completion of a 1,540 seat elementary/intermediate school, would reduce the utilization rates in this study area compared to the future without the Updated Plan.

Elementary and intermediate schools in the 1-mile study area would also operate over capacity in the 2016 future with the Updated Plan. However, this study area is for informational purposes only and is not considered in the determination of impacts. Nonetheless, it should be noted that with the completion of a 1,540 seat elementary/intermediate school, the Updated Plan would reduce the utilization rate in this study area compared to the future without the Updated Plan.

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[10] The FGEIS and subsequent technical memoranda assumed that all 1,540 seats would be elementary seats, consistent with CEQR methodology at the time and based on the need for elementary seats identified in the analyses. Because this analysis identifies a need for both elementary and intermediate seats, it is assumed that the school would have seats at both levels. The SCA and Department of Education (DOE) will develop a program for the proposed school at the time of its design, and could include intermediate seats if there is a need. Based on a typical seat distribution for a K-8 school, this analysis assumes that approximately 1,000 seats would be elementary seats and 540 seats would be intermediate seats.

[11] Based on 5,500 residential units and the student generation multipliers for Queens in Table 6-1a of the 2010 *CEQR Technical Manual*: 1,540 elementary students=(5,500x0.28); 660 intermediate students=(5,500x0.12); and 770 high school students=(5,500x0.14).

Table 7
Analysis with Updated Background Conditions and Methodology: Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization, 2022 Future Without and With the Updated Plan

Study Area	2022 Future Without the Updated Plan				2022 Future With the Updated Plan			
	Total Enrollment[1]	Capacity[2]	Available Seats	Utilization	Total Enrollment	Capacity[2]	Available Seats	Utilization
Elementary Schools								
1-Mile Study Area	4,867	2,396	-2,471	203.13%	6,407	3,396	-3,011	188.66%
Sub-district 2 of CSD 25	9,557	5,186	-4,371	184.28%	11,097	6,186	-4,911	179.39%
Intermediate Schools								
1-Mile Study Area	1,988	1,347	-641	147.59%	2,648	1,887	-761	140.33%
Sub-district 2 of CSD 25	2,802	2,146	-656	130.57%	3,462	2,686	-776	128.89%
High Schools								
Queens	76,363	71,897	-4,466	106.21%	77,133	71,897	-5,236	107.28%

Notes:
[1] To estimate enrollment for the elementary and intermediate school 1-mile and sub-district study areas in 2016, the total number of students enrolled in those schools (DOE Enrollment/Capacity/Utilization Report) in 2009-2010 was divided by the total number of students enrolled in CSD 25 schools in 2009-2010. The resulting percentages were applied to the CSD 25 elementary and intermediate school projected enrollments in 2018 and were held constant to estimate total enrollment for the study area schools in 2022. CSD 25 is projected to have an enrollment of 24,220 elementary students and 8,207 intermediate students in 2018.
[2] The capacity column includes additional elementary, intermediate, and high school capacity identified as currently under construction in the DOE five-year capital plan. Any capacity not currently under construction was not included. The 1,540 school seats developed as part of the Updated Plan are included in the capacity in the 2022 future with the Updated Plan.
The column also includes any capacity changes identified in the Panel for Education Policy's "Significant Changes in School Utilization." Capacity provided by temporary transportable units has been excluded from the analysis.
Sources: SCA *Enrollment Projections 2009-2018* by the Grier Partnership; DOE, *Utilization Profiles: Enrollment/Capacity/Utilization, 2009-2010.* DOE *FY 2010-2014 Five-Year Capital Plan*, Proposed Amendment, November 2010.

The most current capital plan (2010-2014 Five-Year Capital Plan–Proposed Amendment–November 2010) identifies two planned schools in CSD 25 with approximately 1,201 seats that are expected to be complete by 2022. These schools are not included in the quantitative analysis because they are not under construction yet and a location within CSD 25 has not been selected. However, should these schools be located in either study area they would alleviate a portion of the expected seat shortfall. Future capital plans may include additional schools, if needed, to service the area.

High schools in Queens would operate at 107.28 percent utilization and the Updated Plan would increase the utilization rate by only 1.1 percent, and would therefore not result in a significant adverse impact.

Overall, accounting for the changes in background conditions and the updated methodology, the Updated Plan would not result in any significant adverse impacts on public schools not identified in the FGEIS.

Child Care Facilities

The updated information on background conditions was reviewed to determine whether the project's potential effects on publicly-funded child care facilities would remain consistent with the conclusions in the FGEIS. The FGEIS analysis concluded that the Approved Plan would result in a significant adverse impact to child care facilities in 2017. To mitigate the potential impact on child care facilities, the FGEIS specified that NYCEDC would require, as part of the developer's agreement, that a future developer consult with the Administration for Children's Services (ACS) to determine the appropriate way to meet demand for child care services generated by development in the District.

The child care analysis was also updated to account for current day care enrollment and capacity information and to use updated CEQR generation rates for child care-eligible children. Updated enrollment and capacity information was obtained from ACS for child care facilities and Head Start programs and is current as of October 2010. The updated CEQR generation rates for day care eligible children were released by the New York City Office of Environmental Coordination (OEC) in December 2009 and have since been incorporated into the 2010 *CEQR Technical Manual*. Consistent with the updated 2010 *CEQR Technical Manual* methodology for child care analyses, publicly funded child care facilities within 1.5 miles of the District were identified and examined; private day care facilities were not considered in the analysis (the FGEIS analyzed facilities within a 1 mile study area, consistent with CEQR methodology at the time). Impacts were considered significant if the project would result in 1) a collective utilization rate of child care facilities that is greater than 100 percent in the future with the Updated Plan, and 2) an increase of 5 percent or more in the collective utilization rate of child care facilities between the future without and the future with the Updated Plan.

The updated CEQR generation rates project 0.14 child care eligible children under age 6 per low-moderate income housing unit in Queens. This updated rate is lower than the generation rates used in the FGEIS and the generation rates analyzed in the technical memorandum dated November 12, 2008. Furthermore, the new rates do not estimate the number of child care eligible children between the ages of 6 and 12 because these children are expected to be in school for most of the day.

2016

The completion of the first phase of the Updated Plan in 2016 would result in 400 residential units, of which approximately 140 units (35 percent) would be affordable. Based on the updated CEQR generation rates, this number of affordable units could introduce approximately 20 children under the age of 6 eligible for publicly funded child care services.[12]

As shown in **Table 8**, if no additional child care facilities open in the vicinity of the project site, child care facilities in the area will operate at 97 percent of capacity in 2016 without the Updated Plan. With the 20 additional children from the first phase of the Updated Plan, child care facilities will operate at nearly 100 percent of capacity, with 2 available slots in the study area. Based on the criteria set forth in the *CEQR Technical Manual*, the completion of the first phase of the Updated Plan in 2016 would not result in a significant adverse impact to child care facilities.

Table 8
Analysis with Updated Background Conditions and Methodology:
Estimated Publicly-Funded Child Care Enrollment, Capacity, and Utilization
2016 Future Without and With the Updated Plan

Analysis	Enrollment	Capacity	Available Slots	Utilization
2016 Future Without the Updated Plan	688	710	22	97%
2016 Future With the Updated Plan	708	710	2	100%

Sources: ACS.

[12] Based on 140 affordable residential units and the child care multipliers for Queens in Table 6-1b of the 2010 *CEQR Technical Manual*: 20 eligible children=(140x0.140).

2022

In the technical memorandum dated November 12, 2008, it was assumed that 35 percent of the proposed units would be affordable, and that the Approved Plan would include 1,925 affordable units. Based on the child care generation rates in use at that time, it was estimated that the Approved Plan would generate approximately 751 children under the age of 6 who could be eligible for publicly funded child care.[13] Both the FGEIS and the technical memorandum dated November 12, 2008 concluded that the Approved Plan would result in a significant adverse impact to publicly funded child care facilities.

The Updated Plan would include the same number of affordable units, but based on the updated CEQR generation rates it is now anticipated that the Updated Plan at full build-out would introduce approximately 270 children under the age of 6 who could be eligible for publicly funded child care.[14]

As shown in **Table 9**, if no additional child care facilities open in the vicinity of the project site, child care facilities in the area will operate at 104 percent of capacity in the 2022 future without the Updated Plan. With the 270 additional children from the full build-out of the Updated Plan, child care facilities would operate at 142 percent of capacity, with a shortfall of 300 slots in the study area. This would represent an increase in the collective utilization rate of 38 percent compared to the 2022 future without the Updated Plan. Therefore, the Updated Plan, like the Approved Plan, would continue to have the potential to result in significant adverse impacts on publicly funded child care facilities. Thus, the updated CEQR generation rates and changes in background conditions would not result in any significant adverse impacts to child care facilities that were not disclosed in the FGEIS.

Table 9
Analysis with Updated Background Conditions and Methodology:
Estimated Publicly-Funded Child Care Enrollment, Capacity, and Utilization
2022 Future Without and With the Updated Plan

Analysis	Enrollment	Capacity	Available Slots	Utilization
2022 Future Without the Updated Plan	740	710	-30	104%
2022 Future With the Updated Plan	1,010	710	-300	142%

Sources: ACS.

Police, Fire, and Emergency Services

According to the 2010 *CEQR Technical Manual*, an assessment of police, fire, and emergency medical services (EMS) is warranted when a project would directly affect a police, fire, or emergency medical facility, or when the project would result in the introduction of a sizeable new neighborhood. The Updated Plan would not result in any direct effects to police, fire, or EMS facilities. However, both the Updated Plan and the approved Plan would essentially result in the creation of a new neighborhood with residential uses where the demand for police, fire, and emergency services could increase with the addition of approximately 14,795 new residents, as well as new workers and visitors. This section expands upon the discussion of police, fire, and

[13] It was also estimated that the Approved Plan would generate approximately 347 children aged 6 to 12 who could be eligible for publicly funded after school day care programs. As noted above, the new CEQR generation rates do not estimate the number of child care eligible children between the ages of 6 and 12.

[14] Based on 1,925 affordable residential units and the child care multipliers for Queens in Table 6-1b of the 2010 *CEQR Technical Manual*: 270 eligible children=(1,925x0.140).

emergency services in the FGEIS and discusses the Updated Plan's potential impacts on police, fire, and emergency medical services.

Police Protection

As shown in **Table 10** below and Figure 7, the Willets Point Development District is served by the 110th Precinct of the New York City Police Department (NYPD). The 110th Precinct is located at 94-41 43rd Avenue in Elmhurst. The District is also close to the 109th Precinct, located at 37-05 Union Street in Flushing. In addition, the NYPD maintains a sub-station at Citi Field.

Table 10
Police Protection Facilities

Map No.	Police Facility	Address	Facility Type	Staff[1]
P1	109th Precinct	37-05 Union Street, Flushing	Police Station	203
P2	110th Precinct	94-41 43rd Avenue, Elmhurst	Police Station	189
P3	Citi Field Sub-station	Citi Field	Police Sub-station	35

Notes: See Figure 7.
[1] Includes all uniformed police officers.
Sources: Selected Facilities and Program Sites, NYC Dept. of City Planning.

The 110th Precinct is located on 43rd Avenue in the Elmhurst neighborhood of Queens. The precinct serves an area bounded roughly by the Flushing River, the Long Island Expressway, 74th Street, and Roosevelt Avenue. As noted above, this precinct includes the District and also serves the communities of Corona and Elmhurst. Apart from the existing industrial uses in the District, the precinct is mainly a residential/commercial community consisting of multiple dwelling homes. Approximately 189 uniformed staff members are assigned to the precinct.

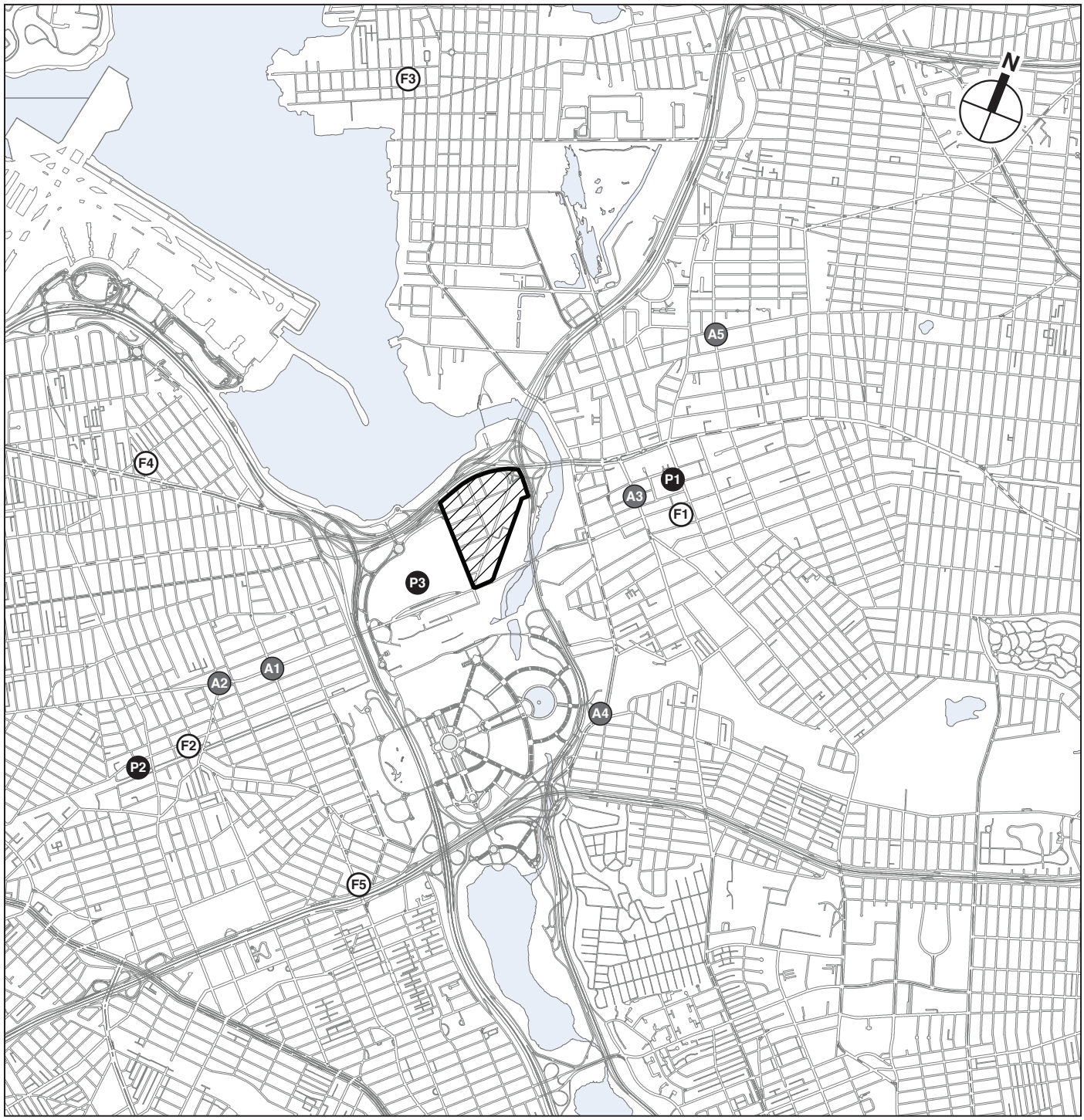
The 110th Precinct's response time to all crimes in progress was approximately 8.15 minutes, which was slightly longer than the citywide average of 7.5 minutes in FY 2010. Response time to critical crimes in progress in the 110th Precinct in FY 2010 was 4.6 minutes, which was comparable to the citywide average of 4.36 minutes. Response times from FY 2006 through 2008 were slightly shorter, ranging from 4 to 4.15 minutes.

The 109th Precinct is located on Union Street in downtown Flushing. The precinct service area is bounded roughly by the Long Island Sound, Flushing Meadows Park, the Long Island Expressway, and Utopia Parkway. The precinct serves the neighborhoods of Downtown Flushing, East Flushing, Queensboro Hill, College Point, Malba, Whitestone, Beechhurst and Bay Terrace. There are currently 203 uniformed officers assigned to the district.

The 109th Precinct's response time to all crimes in progress was approximately 8.5 minutes. This response time was one minute longer than the citywide average of 7.5 minutes in fiscal year (FY) 2010. For critical crimes in progress, the 109th Precinct's response time was 4.4 minutes in FY 2010.[15] This response time was comparable to the citywide average of 4.36 minutes but

[15] Critical crimes in progress include crimes such as shots fired, robbery, and assault with a weapon. All crimes in progress data also includes response times for serious (such as larceny from a person, assault not involving a weapon, larceny of an auto) and non-critical crimes (those crimes not involving an imminent threat of personal injury).

1.19.11



Willets Point Development District

F1 *Fire Protection Facility*

P1 *Police Protection Facility*

A1 *Ambulance Cross-Street Location*

Figure 7

Police, Fire, and EMS Facilities Serving the District

slightly higher than response times in the precinct from FY 2006 through 2008, which ranged from approximately 3.7 to 3.9 minutes.[16]

Although both precincts close to the District have experienced a small increase in response time to critical crimes in progress in FY 2010 compared to FY 2006 though 2008, the increase is consistent with the overall trend citywide. Citywide, the average response time to critical crimes in progress in 2010 was 4.36 minutes, compared to 4.2 to 4.3 minutes in FY 2006 though 2008.

The Citi Field sub-station has 35 uniformed officers. This staff is not assigned to baseball games year-round. During the off-season, this staff is deployed throughout Queens North to address various crime trends. Citi Field also has an emergency response plan and employs a private emergency response team.

To respond to various hazards that may occur in the Patrol Borough Queens North (which includes the District), the NYPD has prepared a comprehensive emergency response plan. This plan is prepared to supplement individual precinct plans and serves as a guide for all types of emergencies.

The Updated Plan would generate additional traffic on roads throughout the area, including the possible routes used by NYPD vehicles to access the project site. As noted in the "Traffic and Parking" section below and described in the FGEIS, depending on the peak hour, a portion of the significantly impacted locations could be fully or partially mitigated, and a portion of the impacted locations would be unmitigatable.

At locations where impacts would be unmitigated, travel time may increase substantially for the general public. Traffic congestion at certain intersections near the District may also result in slower access for NYPD vehicles. However, when responding to emergencies, NYPD vehicles are not bound by standard traffic controls or rules and are capable of adjusting to congestion encountered en route to their destinations and are therefore less affected than other vehicles by traffic congestion. In addition, NYPD vehicles have access to enhanced sirens and lights that enable them to safely navigate through congested areas. These vehicles would be able to access the District during peak hours as they do other areas throughout New York City, including the most congested areas of Downtown Flushing. Furthermore, outside of peak hours, traffic congestion would be reduced and NYPD access would be improved.

As described above, during the first phase of the development period streets in the southwestern portion of the District would be graded to allow continued access to and from the District. Therefore, NYPD vehicles would continue to have uninterrupted access to the entire District.

By 2022, the new residential, worker, and visitor population introduced by the Updated Plan could increase the demand for police protection services. According to a letter from the NYPD Office of Management Analysis and Planning dated January 3, 2011, NYPD would continue to evaluate its staffing and resource needs based on a variety of factors, including projected population increases and demographic shifts (see Appendix B, "NYPD and FDNY Correspondence"). Because the NYPD would continue to reevaluate its staffing and resource needs and would continue to have the ability to adjust to congestion en route to emergencies, response times are not expected to dramatically change in such a way as to result in a significant adverse impact. Therefore, the Updated Plan would not result in any significant adverse impacts to police protection in 2016 or 2022 that were not addressed in the FGEIS.

[16] My Neighborhood Statistics web page at NYC.gov (http://gis.nyc.gov/ops/mmr/address.jsp?app=MMR). Response time data for critical crimes in progress in FY 2009 is not available.

Fire Protection and Emergency Services

At structural fires citywide, New York City Fire Department (FDNY) engine companies perform fire suppression efforts, while ladder companies provide search, rescue, and building ventilation functions. Rescue and squad companies specifically respond to fires or emergencies in support of the other units and can perform any specialized tasks or functions as necessary. In addition, FDNY operates the City's EMS system.

Units responding to a fire are not limited to ones closest to it. Normally, a total of three engine companies and two ladder companies respond to each call. Each FDNY squad company is capable of operating as an engine, ladder, or technical rescue company, making them versatile for incident commanders. Each squad is also part of the FDNY HazMat Response Group and has HazMat Tech Unit capabilities. An FDNY battalion is the middle level of command, made up of a Battalion Chief and Battalion Firefighter. A normal administrative battalion ranges from five to nine companies (three to six engine companies and two to three ladder companies). There are four to seven battalions in an administrative division. FDNY can call on units in other parts of the City as needed, as it has 198 engine companies and 143 ladder companies citywide.

Approximately 20 to 25 personnel are staffed in each engine and ladder company. Therefore, if a firehouse contains one engine and one ladder company, a total of approximately 45 to 50 personnel are assigned to that facility. Typically, during one shift, each engine and ladder company is manned by four and five firefighters, respectively.

According to a letter from the FDNY dated January 13, 2011 (see Appendix B, "NYPD and FDNY Correspondence"), the District is well-served by FDNY resources. **Table 11** lists the fire companies that may be called on to respond to a fire or other emergency in the District (see Figure 7). According to the FDNY, Engine Company 273/Ladder Company 129 are the units designated as "first due" for the District. Engine Company 289/Ladder Company 138 are the designated "second due" companies. The other FDNY facilities listed are all in a position to respond promptly to the District and provide response capabilities from every direction. In the area surrounding the District, the FDNY is experienced with the logistical issues of providing support for single and simultaneous events occurring at Citi Field, Flushing-Meadows Corona Park, and the United States Tennis Association Billie Jean King National Tennis Center.

Table 11
Fire Protection Facilities

Map No.	Fire Facility	Address	Facility Type
F1	Engine 273 Ladder 129	40-18 Union Street	Fire House
F2	Engine 289 Ladder 138	97-28 43rd Avenue	Fire House
F3	Engine 297 Ladder 130	119-11 14th Road	Fire House
F4	Engine 316	27-12 Kearney Street	Fire House
F5	Engine 324 Satellite 4 Division	108-01 Horace Harding Expressway	Fire House

Notes: See Figure 7.
Sources: FDNY letter dated January 13, 2011.

As of February 1, 2011, Engine Companies 289 and 324 have had their staffing reduced to four firefighters per tour due to the expiration of a staffing agreement with the Uniformed Firefighters Association (UFA). Currently every Engine Company in the FDNY is now staffed with four firefighters and an officer.

In 2010, the average response time (for all fire companies, all types of responses) was 4 minutes 58 seconds in Queens, compared to 4 minutes 38 seconds citywide. These response times

represent an increase compared to 2009, when the average response times in Queens and citywide were 4 minutes 49 seconds and 4 minutes 31 seconds, respectively. For structural fires, the average FDNY response time within Queens in FY 2010 was 4 minutes and 20 seconds.[17] From FY 2006 through FY 2010, the FDNY response time to structural fires in Queens has decreased each year, from a high of 4 minute 59 seconds in FY 2006.

There are two types of ambulances in the City—911 providers and those providing inter-facility transport. Municipal FDNY and hospital-based ambulances are the sole providers of 911 services, and they operate that system under contract with FDNY. (Inter-facility transports are carried out by private contractors and do not participate in the 911 system.) All hospital-based ambulances which operate in the New York City 911 System do so by contractual agreement with FDNY's EMS Command. All ambulances in the 911 system are dispatched by FDNY under the same computer-based system, regardless of hospital affiliation. All EMS units are assigned a permanent cross-street location where they await a service call; units return to this location once service is complete. These locations are determined by FDNY and based on historical call volumes by location and time of day. In addition to FDNY ambulances, the District is served by ambulances operated by Flushing Hospital and NY Hospital of Queens.

Table 12
Ambulances Serving the District

Map No.	Unit	Type[1]	Cross-Street Location	Station	No. of Tours[2]
A1	46A	BLS	Roosevelt Ave at 103rd St	FDNY EMS Station 52	3
A2	46V	ALS	Roosevelt Ave at 108th St	NY Hospital of Queens	3
A3	52G	BLS	Main Street at 38th Ave	NY Hospital of Queens	3
A4	52V	ALS	College Point Blvd at Booth Memorial Dr	NY Hospital of Queens	3
A5	52X	ALS	Bayside Ave at Parsons Blvd	Flushing Hospital	3

Notes: See Figure 7.
[1] BLS = Basic Life Support; ALS = Advanced Life Support
[2] Each tour is 8 hours.
Sources: FDNY letter dated January 13, 2011.

There are currently five ambulances with a total of 15 tours per day with cross-street locations less than two miles from the District (see Figure 7). Two of these ambulances—Unit 46V and Unit 52G—are located less than one mile from the District.

Medical response times have improved from FY 2006 to FY 2010. The citywide response time to life-threatening medical emergencies by fire units has improved by 13 seconds, to an average of 4 minutes and 17 seconds, while the citywide response time to life-threatening medical emergencies by ambulance units has stayed about the same, at approximately 6 minutes 41 seconds with slight year-to-year variation.[18]

The new residential, worker, and visitor populations introduced by the Updated Plan could increase the demand for FDNY and EMS services. Fire protection throughout the city is normally provided by multiple fire companies and fire protection in the study area will continue to be provided as per established standard FDNY operating procedures. According to a letter

[17] NYC Mayor's Management Report.

[18] NYC Mayor's Management Report, p 142.

from FDNY dated January 13, 2011 (see Appendix B, "NYPD and FDNY Correspondence"), the District is well-served by FDNY resources.

As with the Approved Plan, the Updated Plan would meet all relevant New York City fire safety standards. In addition, the Updated Plan includes significant infrastructure improvements for the District, including road grading and paving, as well as improvements to City water service, including fire hydrants. As such, the Updated Plan would result in significant improvements to on-site infrastructure that would bolster FDNY's firefighting ability within the District.

The Updated Plan would generate additional traffic on roads throughout the area, including the possible routes used by FDNY and EMS vehicles to access the project site. As noted in the "Traffic and Parking" section below and in the FGEIS, depending on the peak hour, a portion of the significantly impacted locations would be fully or partially mitigated, and a portion of the impacted locations would be unmitigatable.

At locations where impacts would be unmitigated, travel time may increase substantially for the general public. Traffic congestion at certain intersections near the District may also result in slower access for FDNY and EMS vehicles. However, FDNY and EMS vehicles, when responding to emergencies, are not bound by standard traffic controls or rules and are capable of adjusting to congestion encountered en route to their destinations and are therefore less affected than other vehicles by traffic congestion. FDNY vehicles are also equipped with enhanced sirens and emergency lights that assist them in safely navigating through congested areas. These vehicles would be able to access the District during peak hours as they do other areas throughout New York City, including the most congested areas of Downtown Flushing. Furthermore, outside of peak hours, traffic congestion in and around the District would be reduced and FDNY/EMS access would be improved.

As noted above, EMS units are assigned a permanent cross-street location where they await a service call. If warranted by demand, the FDNY could assign an EMS unit within the District to provide services to the new population.

As described above, during the first phase of the development period streets in the southwestern portion of the District would be graded to allow uninterrupted access to and from all areas of the District. Therefore, the FDNY and EMS would be able to provide service to this area during the completion of the first phase of the Updated Plan.

Overall, the Updated Plan would not result in any significant adverse impacts to fire protection or emergency services in 2016 or 2022 that were not addressed in the FGEIS.

Consequently, for all the reasons stated above, the Updated Plan would not result in any significant adverse impacts to Community Facilities and Services that were not addressed in the FGEIS.

SCHEDULE CHANGE

The proposed schedule change would not result in any significant adverse impacts to community facilities that were not identified in the FGEIS. The effect of the schedule change on background conditions in public schools and publicly funded child care facilities is discussed above.

OPEN SPACE

PROJECT MODIFICATIONS

At full build-out, the project modifications described above would not result in any significant adverse open space impacts that were not identified in the FGEIS. The Updated Plan and the Approved Plan would generate the same number of new employees and residents and would create a minimum of eight acres of publicly accessible open space. Furthermore, under both the Updated Plan and the Approved Plan, the Special District regulations would require minimum-sized public access areas at various locations within the District, and ensure that public access areas are developed in conjunction with the surrounding development by stipulating the dimensions of public access areas that must be provided along with certain developments (e.g., with developments or enlargements at least 100,000 square feet in size and on zoning lots of at least 200,000 square feet).

The project modifications also include changes to the amount of development in the first phase of the Updated Plan. As described above, the first phase of the Updated Plan anticipates a smaller development footprint and less overall development. The first phase of the Updated Plan would also include 2.08 acres of open space, pursuant to the same minimum public access area dimensions prescribed by the Special District regulations described above.

As described in the FGEIS, open space ratios with the first phase of the Staged Acquisition Alternative would decline from background conditions in 2013, but all ratios would remain well above the recommended guidelines. The Updated Plan includes less development (and therefore smaller new worker and residential populations) and less new open space than the first phase of the Staged Acquisition Alternative or the Adjusted Plan. However, on a per capita basis the Updated Plan would introduce more open space than either the Staged Acquisition Alternative or the Adjusted Plan. As shown in **Table 13**, the first phase of the Updated Plan would introduce approximately 1,076 residents and 1,876 workers. With 2.08 acres of open space, the Updated Plan would provide approximately 1.93 acres of project open space per 1,000 project residents and 1.11 acres per 1,000 project workers. In comparison, both the Staged Acquisition Alternative and Adjusted Plan would provide less than 1 acre of project open space per 1,000 project-generated residents or workers. Thus, the development of the first phase of the Updated Plan would not result in any significant adverse open space impacts.

Table 13
Open Space Compared to Project Population:
First Phase of the Updated Plan, Staged Acquisition Alternative, and Adjusted Plan

	First Phase of Development		
	Updated Plan	**Staged Acquisition Alternative**	**Adjusted Plan**
Open Space Acreage	2.08 acres	3.6 acres	6.8 acres
Residents	1,076	8,500	5,649
Acres/1,000 Residents	1.93	0.42	0.64
Workers	1.876	6,076	4,815
Acres/1,000 Workers	1.11	0.59	0.75

Notes: Residential population assumes 2.69 persons per household. Worker population assumes 1 worker per: 25 residential units; 2.7 hotel rooms; 400 sf retail; 250 sf office; 1,000 sf community facilities; 50 parking spaces; 2,500 sf convention center; and 11 school seats.
Sources: FGEIS; Technical Memorandum dated November 23, 2009; AKRF.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not result in significant adverse open space impacts that were not identified in the FGEIS. As described above, some no build projects have been completed since the FGEIS, some have been delayed, and others have had their programs changed. Completed projects would be accounted for in the analysis whether they are complete, as in this analysis of the Updated Plan, or whether they are still in development, as was the case in the FGEIS analysis. The only difference is that the population of completed projects would now be accounted for in the updated existing conditions set forth in this technical memorandum, rather than in the future without the project. In either case, their populations would be accounted for in background conditions in the analysis of the future with the project. Therefore, these projects would have the same effects on open space conditions.

Projects that have been delayed would not affect open space conditions in 2016, but are still assumed to be complete by 2022. Therefore, background open space conditions would improve in 2016 without the additional population from delayed projects, and would be the same in 2022 when the projects are completed.

Only a few no build projects have had development programs altered and, in general, the changes are minimal and are generally changes in the type, not the size, of development. The only instances of substantial new development in the no build list compared to the FGEIS are the Macedonia Plaza project and the expansion of the Flushing Commons project, both of which are expected to be complete by 2016. Compared to the no-build development analyzed in the FGEIS, these projects would result in and additional 262 residential units, 100,000 sf of retail space, 10,000 sf of office space, and 8,000 sf of community facility space in the future without the project, which would introduce approximately 705 additional residents and 304 additional workers. These additional residents and workers would create new demands on the area's public open spaces in the future baseline condition. As noted in the FGEIS, the open space study area would be well-served by open space resources in the future without the project and all ratios would substantially exceed existing City open space guidelines. Relative to the size of the overall study area (more than 13,000 residents and 34,000 workers in the residential study area), these new residents and workers would not substantially change open space ratios in the future without the project, and the ratios would remain above the City's guideline ratios. Furthermore, the project's effect on open space relative to the baseline conditions would not change, as the project's publicly-accessible open space has not changed since the FGEIS and the demand generated by the project-generated population would remain the same. At full build-out, the effects of the Updated Plan on open space would be the same as described in the FGEIS for the Approved Plan.

Based on the guidance and analysis methodologies contained in the 2010 *CEQR Technical Manual*, no further analysis of open space is warranted.

Overall, accounting for the changes to background conditions and the updated methodology, the Updated Plan would not result in any significant adverse open space impacts not identified in the FGEIS.

SCHEDULE CHANGE

The FGEIS found that the full build-out of the Approved Plan would not result in any significant adverse open space impacts in 2017. Furthermore, the FGEIS found that the completion of the first phase of a Staged Acquisition Alternative in 2013 would not result in any significant adverse open space impacts. Shifting the completion of the first phase of the project to 2016

would not materially change open space conditions and, as discussed above, the modifications to the first phase would result in slightly higher open space ratios. Likewise, extending the anticipated date of the full build-out of the project from 2017 to 2022 would also not materially change open space conditions. In 2022, the effects of the Updated Plan on open space would be the same as described in the FGEIS for the Approved Plan. Therefore, the schedule change of the Updated Plan would not result in any significant adverse open space impacts not identified in the FGEIS.

SHADOWS

PROJECT MODIFICATIONS

Like the Approved Plan, the Updated Plan is not expected to result in significant adverse shadow impacts. The shadows analysis in the FGEIS conservatively modeled the footprint of the entire Willets Point Development District at the maximum height allowed under the Federal Aviation Authority (FAA) limits throughout the District. Maximum heights sloped upwards across the District from 94 feet above sea level along the northern edge nearest LaGuardia Airport to 175 feet above sea level in the southeastern portion of the district and 232 feet above sea level in the southwestern portion of the district. No specific building designs are available for the Updated Plan; however, the Updated Plan would result in a smaller development program that would not be capable of developing the maximum bulk or height of the massing envelopes. The FAA limits would continue to be applicable with the Updated Plan and this analysis conservatively assumes that the buildings would be built to the maximum allowed height and bulk. Therefore, no additional new shadows beyond those described in the FGEIS would occur. The project modifications would not result in any significant adverse impacts with respect to shadows not previously identified in the FGEIS.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The *2010 CEQR Technical Manual* indicates that a significant adverse shadow impact generally occurs when direct sunlight is eliminated completely from a sunlight-sensitive resource for longer than 10 minutes at any time of year. Like the Approved Plan, the Updated Plan could result in incremental shadows on portions of three sunlight-sensitive resources: the Flushing Bay Promenade, the waters of Flushing Bay, and Flushing River. Incremental shadow would not eliminate all direct sunlight from these any of these three resources at any time of year. Therefore, this change to shadows methodology would not alter the conclusions presented in the FGEIS. No other changes in methodology would substantively affect the analysis or conclusions presented in the shadows analysis of the FGEIS.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to shadows.

HISTORIC RESOURCES

PROJECT MODIFICATIONS

Archaeological Resources

The Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) have determined that the District does not have the potential for archaeological sensitivity. Therefore, like the Approved Plan, the Updated Plan would not have a significant adverse impact on archaeological resources.

Architectural Resources

Like the Approved Plan, it is anticipated that the Updated Plan at full build-out could potentially entail the demolition of the former Empire Millwork Corporation Building—found by OPRHP to be eligible for listing on the State and National Registers of Historic Places (S/NR). Demolition of this building under the Approved Plan or the Updated Plan would therefore constitute a significant adverse impact on architectural resources. As described in the FGEIS, NYCEDC would encourage future developers to retain part or all of the building as part of their formal request for proposals process. Furthermore, measures to mitigate this impact would be developed in consultation with OPRHP. These measures could include recording the building through a Historic American Buildings Survey (HABS)-level photographic documentation and accompanying narrative.

With the Updated Plan, the initial development phase would be limited to the southwestern portion of the District, and the former Empire Millwork Corporation Building located in the northeastern portion of the District would not need to be demolished before 2016 for purposes of the development project itself. Therefore, there may be no effect on this building during the first phase of development and mitigation measures may not be required at that time. The preferred alternative for the ramp configuration (as depicted in the Environmental Assessment for proposed highway access modifications, currently undergoing review by FHWA and NYSDOT) would not adversely impact the Empire Millwork Corporation Building. However, in the event that FHWA and NYSDOT ultimately select a ramp configuration other than the preferred alternative, demolition of the Empire Millwork Corporation Building may be required. While it is presently anticipated that the ramp would not be operational until after 2016, construction of the ramp would begin prior to 2016 and therefore the impact could potentially occur before completion of the first phase of development. In that situation, the mitigation measures identified above would be taken in consultation with OPRHP.

In sum, the Updated Plan would result in the same significant adverse impact on a historic resource as described in the FGEIS for the Approved Plan.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusions concerning the project's impacts with respect to historic resources.

The 2010 *CEQR Technical Manual* does not contain any changes in methodology that would substantively affect the analysis or conclusions presented in the analysis of historic resources in the FGEIS.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusions concerning the project's impacts with respect to historic resources.

URBAN DESIGN AND VISUAL RESOURCES

PROJECT MODIFICATIONS

Under the Updated Plan, at full build-out the Special Willets Point District would be developed with the same gross floor area and mix of uses as assumed for the Approved Plan (with subsequent revisions described in the prior technical memoranda) and would have the same controls on floor area ratios as set forth in the provisions of the special district zoning text that has been approved by the City Council. The District's regulations would continue to guide

design elements such as the placement of uses within the District, building heights and setbacks, street hierarchies, streetscape design, signage, maximum building dimensions, and basic site planning and design provisions. Regulations also would continue to mandate the development of a minimum of eight acres of publicly-accessible open space within the District. Furthermore, the City would continue to require any future development in the District to achieve LEED-ND certification.

The placement of land uses under the Updated Plan and Approved Plan would be substantially similar. Under the Approved Plan, the southernmost block would contain retail, hotel, office, residential, and parking uses. Under the Updated Plan, that block would contain retail, hotel, and parking uses (see Figures 2 and 3 above). In addition, under the Updated Plan the off-street parking spaces in Phase 1 would be consolidated in Building A1, while under the Approved Plan the spaces would be distributed among each building in Phase 1. Furthermore, the hotel use in Phase 1 of the Updated Plan may be located in Building A1 or A2.

As compared with the Staged Acquisition Alternative and the Adjusted Plan, the Updated Plan would include a smaller development footprint during the first years of development. New buildings would be constructed at the southernmost end of the District and along 126th Street south of 35th Avenue by 2016. The new development would include residential, retail, hotel, and parking uses, as well as approximately 2.08 acres of publicly-accessible open space. Some of the lots surrounding this area would be acquired and cleared by 2016, and thus would serve as a buffer between the new development and existing uses. Because streets in the northern and eastern portions of the District would remain at their existing grade through 2016, during the first years of the development period streets in the southwestern portion of the District would be graded to slope down to the existing streets to the east to allow continued access to and from all areas of the District.

As noted above, it is assumed that at full build-out the Updated Plan would have the same level of development as the Approved Plan. Specific plans for development have not yet been formulated for the Updated Plan; thus, like the Approved Plan, future development would be designed in accordance with the requirements of the Willets Point Urban Renewal Plan and the District's regulations. The illustrative diagrams provided in the FGEIS are still considered to represent the potential maximum development of the Updated Plan as well as the Approved Plan, and are the basis of this analysis (see Figure 4). However, as described above, the Updated Plan would result in a smaller development program in the first phase.

As with the Approved Plan, under the Updated Plan streets would be graded so as to be above the floodplain[19]. No changes to the proposed new street network or new block forms are proposed in the Updated Plan in comparison to the Approved Plan.

Neither the Updated Plan nor the Approved Plan would be anticipated to adversely affect any visual resources in the surrounding area. Both the Updated Plan and the Approved Plan would create structures that are taller than what currently exists within the District area; however, in neither scenario would views to surrounding visual resources be blocked by the new development, nor would the new structures be highly visible from these resources.

Like the Approved Plan, the Updated Plan would add new uses and vitality to the District and create new public open spaces. While the Updated Plan, like the Approved Plan, would significantly alter

[19] With the exception of Willets Point Boulevard, which may potentially be lower than the flood plain elevation after it is graded (see the discussion below in "Infrastructure.")

the urban design of the District, it would ultimately have a beneficial impact on the overall appearance and feel of the District. In sum, the Updated Plan would not result in any significant adverse environmental impacts to urban design and visual resources.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

Since the FGEIS was completed in 2008, some development projects have been completed in the surrounding area and some are now on hold. However, it is assumed that the projects that are now on hold will move forward in the future when market conditions improve. The no build projects described above would introduce a substantially similar mix of uses to those analyzed in the FGEIS. As anticipated in the FGEIS, this development would create new activity within the study area and would complement the various uses and development proposed within the Special Willets Point District. Despite the changes to background conditions, the Updated Plan, like the Approved Plan, would integrate the District into the surrounding area by creating a new pedestrian-scaled street network.

The updated methodologies of the 2010 *CEQR Technical Manual* provide for two levels of analysis of urban design and visual resources—preliminary and detailed analysis—depending on the characteristics of a proposed action. Under the guidance of the new Manual, detailed analyses are generally appropriate for area-wide rezonings that include an increase in permitted floor area or changes in height and setback requirements; general large scale developments; or projects that would result in substantial changes to the built environment of a historic district or components of an historic building that contribute to the resource's historic significance. Therefore, under the updated Manual, a detailed analysis would be warranted for either the Updated Plan or the Approved Plan. A detailed analysis of urban design and visual resources was prepared for the Approved Plan in the FGEIS. Under the new Manual, this analysis of urban design and visual resources might be presented in a somewhat different format than in the FGEIS, or with additional figures to illustrate elements of the Approved Plan; however, the FGEIS analysis is consistent with the requirement of the updated methodologies of the 2010 *CEQR Technical Manual*.

The new Manual requires some projects at locations that experience high wind conditions to prepare an analysis of pedestrian wind conditions. Locations that could experience high wind conditions include locations along the waterfront and other locations where winds from the waterfront are not attenuated by buildings or natural features. While the Special Willets Point District is located near the Flushing Bay waterfront, the buildings within this area would be limited in height by Federal Aviation Administration regulations, due to the proximity of LaGuardia Airport. Furthermore, the District is separated from the waterfront by the elevated Whitestone Expressway, which reduces local wind conditions. Therefore, an analysis of pedestrian wind conditions would not be necessary for either the Approved Plan or the Updated Plan.

In summary, the conclusions of the analysis would not change as a result of the updated methodologies of the 2010 *CEQR Technical Manual*. The Updated Plan would not require any additional changes to this analysis. Therefore, no changes have been made in response to the issuance of the revised Manual.

SCHEDULE CHANGE

With the Updated Plan, the anticipated year of completion for the first phase of development has been extended from 2013 to 2016, and the anticipated date of the full build-out of the project has been extended from 2017 to 2022. As noted above, the urban design and visual resources analysis

presented in the FGEIS considered the potential impacts of the full development program of the Approved Plan, rather than the potential impacts of both an interim and full Build condition. The change in the anticipated years of completion for the first phase and the full build-out of the project would not result in any new or different significant adverse environmental impacts to urban design and visual resources that were not previously identified in the FGEIS.

WATERFRONT REVITALIZATION PROGRAM

PROJECT MODIFICATIONS

Both the Approved Plan and the Updated Plan would be consistent with citywide policies for fostering residential and commercial development, creating public access in the coastal zone, and protecting sensitive natural and historic resources.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to revitalization program.

The 2010 *CEQR Technical Manual* does not contain any changes in methodology that would substantively affect the analysis or conclusions presented in the waterfront revitalization program assessment in the FGEIS.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to the waterfront revitalization program.

NATURAL RESOURCES

PROJECT MODIFICATIONS

Both the Approved Plan and the Updated Plan would be consistent with federal, state and citywide policies for the conservation and improvement of natural resources. Therefore, the Updated Plan would not result in any significant adverse impacts to natural resources not previously identified in the FGEIS.

As noted above, planning has progressed to increase the capacity of the stormwater outfall at 126th Street as part of the ongoing infrastructure work in support of the Updated Plan. The proposed 126th Street outfall would require limited excavation within the NYSDEC littoral zone tidal wetlands in Flushing Bay for the removal of the existing outfall structure and construction of the new outfall. Because the new outfall would be located landward of the existing outfall, it would result in a net reduction of fill within the littoral zone tidal wetlands, benefitting tidal wetland resources. During construction of the new outfall, the use of a coffer dam and turbidity curtain for the in-water activities and the implementation of soil erosion and control measures for the sewer upland of the esplanade (e.g., silt fence, hay bales and catch basin protection in accordance with NYSDEC best management practices) would minimize potential impacts to water quality and tidal wetlands of Flushing Bay. A NYSDEC permit for construction of the outfall improvements described above was issued on February 3, 2011.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions, described above, would not change the FGEIS conclusion that the project would not result in significant adverse impacts to natural resources.

The 2010 *CEQR Technical Manual* does not contain any changes in methodology that would substantively affect the analysis or conclusions presented in the natural resources assessment in the FGEIS.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusion that the project would not result in significant adverse impacts to natural resources.

HAZARDOUS MATERIALS

PROJECT MODIFICATIONS

As described in the FGEIS, soil and groundwater sampling from public streets within the District confirmed that contamination is present. Given the presence of groundwater contamination and the historic uses within the District, contamination is expected to be widespread on private properties. Like the Approved Plan, the Updated Plan would utilize "E"-Designations and Restrictive Declarations to ensure that there would be no significant adverse impacts with respect to hazardous materials. As discussed above, "E"-Designations have been placed on all privately owned properties in the District, and as they are acquired by the City, the "E"-Designations will be replaced with Restrictive Declarations. "E"-Designations for properties in the northern and eastern portions of the District and in the buffer area of the Updated Plan would remain in place for a longer duration under the Updated Plan as compared with the Approved Plan, since they would be developed later under this scenario. While it is not anticipated that private properties will be redeveloped on an individual basis, if such redevelopment were to occur, it would be subject to the "E"-Designations, which would ensure that remediation would take place under New York City Office of Environmental Remediation (OER) oversight. With these measures in place, as with the Approved Plan, there would be no significant adverse hazardous materials impacts.

As with the Staged Acquisition Alternative assessed in the FGEIS and the Adjusted Plan assessed in a previous technical memorandum, remediation activities would occur incrementally under the Updated Plan. Thus, certain safeguards may be required to ensure that existing hazardous materials contamination on the eastern and northern portions of the District and in the buffer area would not migrate to the southwestern portion of the District subsequent to the remediation of these properties. These safeguards could include installation of sheeting or low permeability barriers along the boundary between the remediated portions of the District and the buffer area.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to hazardous materials.

The 2010 *CEQR Technical Manual* does not contain any changes in methodology that would substantively affect the analysis or conclusions presented in the hazardous materials assessment in the FGEIS.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to hazardous materials.

INFRASTRUCTURE

PROJECT MODIFICATIONS

Water Supply

With the Approved Plan, it was assumed that the existing 72-inch water main beneath Willets Point Boulevard would remain in place, and the developer(s) would provide a permanent easement mapped on the City map, in order to provide acceptable access to the existing main. As a result of discussions with DEP, the Updated Plan contemplates replacing portions or all of the 72-inch water main. This plan was not previously considered in the FGEIS or previous technical memoranda. With this plan Willets Point Boulevard would be raised to flood plain elevation and the water main would be repositioned higher in the street bed. There would be no interruptions in service and no significant adverse impacts would result.

With both the Approved Plan and Updated Plan, new local water supply distribution lines would be provided by the designated developer to the blocks in the southwestern portion of the District, and uses in the eastern portion of the District would continue to be served by existing supply lines. Similar to the Approved Plan, the infrastructure would be built as private infrastructure, constructed to meet DEP standards.

Water demand would be less in 2016 under the Updated Plan compared to the Approved Plan since the amount of development anticipated would be less. Therefore, as with the Approved Plan, demand for water in 2016 would not overburden the City's water supply system or significantly affect the water supply infrastructure outside the District. By 2022, the effects of the Updated Plan on water supply would be the same as described in the FGEIS for the Approved Plan and there would be no significant adverse impact on the water supply system.

Sanitary Sewage

As described in the FGEIS, the District currently has no connection to the City's sanitary sewer system, and relies on individual septic systems. In order to implement the Updated Plan, some of the infrastructure required to support the development of the entire district would be needed in the first phase of development, including new sewers and new connections to the combined sewer in 108th Street, as described below.

As with the Approved Plan, the sanitary sewage from the Updated Plan could not be accepted by the existing 37th Avenue pump station, since it currently operates at its capacity. Whereas the development scenarios assessed in the FGEIS and in previous technical memoranda assumed construction of a new pump station (most likely within the District) and a force main to connect the District to the combined sewer in 108th Street, per DEP guidance, the Updated Plan would include the use of a gravity flow system instead. In either case, this infrastructure would need to be sized sufficiently to accommodate the sanitary flows of the entire District at full build-out. Because a gravity flow system would be sized to accommodate the expected sanitary flows, the use of such a system would not result in any significant adverse impacts not previously identified in the FGEIS.

In addition, as described in the FGEIS, the Special District text allows for the development of a water reclamation facility, provided it would primarily serve the District. If proposed by a future developer, a water reclamation facility would require a special permit by the Board of Standards and Appeals (BSA), and would be subject to separate environmental and public review processes. The water reclamation facility would treat the District's sanitary wastewater to applicable water quality and effluent standards, return a portion of the treated water for reuse in

the District (for toilets, cleaning, irrigation, air conditioning, etc.), and direct the remaining treated water to the stormwater system and existing outfall at 126th Street. The water reclamation facility would likely require a State Pollutant Discharge Elimination System (SPDES) permit, and would result in a modest increase in the amount of detention to be provided in the District. If a water reclamation facility were constructed, it would obviate the need for a new force main or gravity flow system. Local sanitary sewer infrastructure would be developed within the new private streets to support new development in the southwestern portion of the District.

Since the development within the District would provide separate storm sewers, stormwater runoff would not contribute to flow being directed to the Bowery Bay Water Pollution Control Plant (WPCP). The only project-related discharges to the Bowery Bay WPCP would be from sanitary sewers. Since the increase in sanitary flow could impact Combined Sewer Overflow (CSO) discharges, the effect of an increase in sanitary flow to the combined sewer/regulator system within the Bowery Bay WPCP service area as a result of the Approved Plan was investigated using Wallingford Software's InfoWorks model. As discussed in the FGEIS, model simulations indicate there would be no significant increase in the volume or frequency of CSO events as a result of the Approved Plan. Therefore, the development of a portion of the District by 2016 with the Updated Plan would not significantly increase the volume or frequency of CSO events. By 2022, the effects of the Updated Plan on sanitary sewage would be the same as described in the FGEIS for the Approved Plan; neither would have a significant adverse impact on the sanitary sewer system.

Stormwater

As indicated in the FGEIS, the current stormwater conveyance system is insufficiently sized, which results in uncontrolled and untreated runoff and street flooding. As with the Approved Plan, the Updated Plan would require construction of a new stormwater conveyance system within the District, including piping and sustainable design features, as well as upgrades to existing infrastructure and outfalls serving the District. It is assumed that stormwater from development of the Updated Plan in 2016 would be directed to the 126th Street outfall because it is more proximate than the outfall at 127th Street. As part of the ongoing infrastructure work in support of the Updated Plan, planning has progressed to increase the capacity of the stormwater outfall at 126th Street. The increased capacity would accommodate the stormwater that is beyond the discharge capacity of the two stormwater outfalls serving the District. In addition, the Updated Plan may include other stormwater management practices to regulate stormwater flows if necessary. Stormwater management practices may include a detention system or other sustainable design features, including but not limited to in-building water detention, graywater recycling, vegetated swales, green and/or blue roofs, and decorative wet ponds. With the Staged Acquisition Alternative, a detention system would require approximately 1.8 acre-feet of detention to regulate stormwater flows from the initial phase of development to the existing outfall on 126th Street. With the Updated Plan, the land area to be developed in the initial development phase is smaller and the amount of detention required by 2016 would be approximately 1.7 acre-feet.

Even with the stormwater management upgrades implemented in the southwestern portion of the District by 2016, flooding may continue in the remainder of the District until implementation of the District-wide stormwater management features that would be in place by 2022. Adverse flooding impacts would not occur in the remainder of the District as a result of the first phase of development or the buffer area because this area would be served by the new stormwater conveyance system, which would control runoff and street flooding. With both the Approved

Plan and the Updated Plan, the developer would be required to prepare a site stormwater management plan, to be reviewed and approved by DEP, that would specify Best Management Practices and sustainable design features that the project would include. However, as with the Staged Acquisition Alternative and the Adjusted Plan, with the Updated Plan the stormwater management plan would be implemented in stages. The stormwater management plan would be implemented in the southwestern portion of the District by 2016 and in the remainder of the District by 2022, and no significant adverse impacts would result.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to water supply, sanitary sewage, and stormwater.

The 2010 *CEQR Technical Manual* includes updated guidance for predicting a proposed project's water usage and sewage generation (i.e., the water usage and sewage generation rates provided in Table 13-2 of the 2010 *CEQR Technical Manual* replace the rates provided in Table 3L-2 of the 2001 *CEQR Technical Manual*.) Based on the updated CEQR water usage rates, the full build-out of the Updated Plan would consume approximately 3,475,000 gallons per day (gpd), of which approximately 1,938,000 gpd would be for domestic consumption and would become sanitary sewage, and the remainder would be for air conditioning (see **Table 14**). This would be less than the 4,357,430 gpd of water consumption estimated in the FGEIS. Therefore, the changes to CEQR methodology would not result in any significant adverse impacts not previously identified in the FGEIS.

Table 14
Projected Water Usage and Sewage Generation for the Updated Plan

Proposed Use	Flow Rate			Water Consumption (gpd)
	Type	Rate	Updated Plan	Willets Point
Residential	Domestic	100 gpd/person	14,795 residents	1,479,500
	Air Conditioning	0.17	5,500,000 sf	935,000
Retail	Domestic	0.10	1,700,000 sf	170,000
	Air Conditioning	0.17		289,000
Commercial/ Office	Domestic	0.10	500,000 sf	50,000
	Air Conditioning	0.17		85,000
Hotel[1]	Domestic	120 gpd/rm/occupant	700 rooms	168,000
	Air Conditioning	0.17	560,000 sf	95,200
Convention Center[2]	Domestic	0.10	400,000 sf	40,000
	Air Conditioning	0.17		68,000
School	Domestic	10 gpd/seat	1,540 seats	15,400
	Air Conditioning	0.17	230,000 sf	39,100
Community Facility[2]	Domestic	0.10	150,000 sf	15,000
	Air Conditioning	0.17		25,500
Updated Plan (sf)			**8,940,000 sf**	
Water Consumption Subtotals (gpd)			**Domestic**	**1,937,900**
			Air Conditioning	**1,536,800**
Total Water Consumption (gpd)				**3,474,700**

Notes:
Based on the updated water usage and sewage generation rates in Table 13-2 of the 2010 *CEQR Technical Manual.*
[1] It is assumed that all hotel rooms would have 2 occupants.
[2] The 2010 *CEQR Technical Manual* does not provide water usage rates for convention centers or community facility uses other than schools. Therefore, the commercial/office rate was used.

Based on the guidance and analysis methodologies contained in the 2010 *CEQR Technical Manual*, no further analysis is warranted with respect to water supply, sanitary sewage, and stormwater.

SCHEDULE CHANGE

Because the anticipated date of the full build-out of the Updated Plan has been extended from 2017 to 2022, DEP flow projections for 2022 were consulted to determine whether the Bowery Bay WPCP would have adequate capacity to accommodate the sanitary sewage flows from the Updated Plan. According to the DEP 2006 Interim Wastewater Flow Projections, the Bowery Bay WPCP would receive an average of approximately 123 million gallons per day (mgd) sewage flow in the year 2022, compared to a permitted capacity of 150 mgd, resulting in an available capacity of 27 mgd. As discussed above, the Updated Plan would result in a sanitary sewage flow of approximately 1,938,000 gpd, which would represent 7.2 percent of the Bowery Bay WPCP available capacity in 2022. Thus, the sanitary sewage flow expected from the Updated Plan would not cause the Bowery Bay WPCP to exceed its capacity or permit limit of 150 mgd.

The DEP flow projections for 2022 would also not affect the results of the CSO analysis. The 2022 flow projection is only slightly higher than the 2017 projection used in the FGEIS CSO analysis (approximately 123 mgd compared to 121 mgd). Furthermore, CSO events primarily relate to stormwater inputs, which greatly exceed sanitary flow rates during storm events. Stormwater inputs would not change as a result of the later build year, and therefore the schedule change with the Updated Plan would not result in any significant adverse impacts related to CSO events.

Overall, the schedule change with the Updated Plan would not change the conclusion that the project would not result in significant adverse environmental impacts with respect to water supply, sanitary sewage, and stormwater.

SOLID WASTE AND SANITATION SERVICES

PROJECT MODIFICATIONS

Like the Approved Plan, no significant adverse impacts on solid waste and sanitation services would result from the Updated Plan. The municipal solid waste and sanitation services that serve the District have adequate capacity to meet the projected increases in demand. In addition, local improvements in City services would be undertaken with either the Updated Plan or the Approved Plan to address the needs of the project.

The Approved Plan would displace two waste transfer businesses from the District—Crown Container and Tully Environmental—but this displacement would not have a significant adverse impact on the waste and sanitation services in Queens or in New York City. Under the Updated Plan, the same displacement would occur at full build-out, by 2022. Upon completion of the first phase of development, by 2016, it is assumed that Crown Container would continue to operate at its location in the northeast portion of the District; however, Tully Environmental's waste transfer operations located in the buffer area south and east of Willets Point Boulevard would be displaced by 2016. As indicated in the FGEIS, this would not result in a significant adverse impact. The North Shore Marine Transfer Station (MTS) to be located to the east of the District in the College Point section of Queens, will have the capacity to process the waste currently handled by Tully. As with the Approved Plan, if Tully were displaced from the District before the North Shore MTS became operational, DSNY waste currently processed by Tully would temporarily be transported to facilities in New Jersey in DSNY trucks.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to solid waste and sanitation services.

The 2010 *CEQR Technical Manual* requires that for projects resulting in the development of more than either 500 residential units or 100,000 square feet of commercial space, the proposed location and method of storage of refuse and recyclables prior to collection should be disclosed. In addition, if the use of compactors, dumpsters and/or "roll on/roll off" refuse containers are proposed, they should be discussed. Or, if it is anticipated that refuse and/or recyclables would be set out for collection (i.e., large piles of bags), the expected location, square footage, volume and duration of such piles should be discussed, along with their effects upon traffic, pedestrians, public health, and community character.

As a developer has not yet been selected, the specific location and method of storage of refuse and recyclables prior to collection is not available at this time. It is expected that the buildings would have interior areas for refuse collection with loading docks and compactors.

SCHEDULE CHANGE

For the reasons described above, the proposed schedule change with the Updated Plan would not result in any significant adverse environmental impacts with respect to solid waste and sanitation services.

ENERGY

PROJECT MODIFICATIONS

Like the Approved Plan, no significant adverse impacts to energy would result from the Updated Plan. Like the Approved Plan, the Updated Plan would increase demands on electricity and gas. However, relative to the capacity of these systems and the current levels of service within New York City, these increases in demand would be insignificant in both instances. Similar to the phased development analyzed under the Staged Acquisition Alternative and the Adjusted Plan, improvements would be made to the local electric and gas distribution grids that would ensure proper service, but would be less extensive in 2016 under the Updated Plan.

In any case, new demands for energy are not expected to result in a significant adverse impact on the supplies of electricity and gas in the region or the City as a whole, and with the future improvements to the distribution network, no significant adverse impact would occur locally with respect to electrical or gas utilities.

By 2022, the effects of the Updated Plan on energy would be the same as described in the FGEIS for the Approved Plan.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to energy.

The 2010 *CEQR Technical Manual* includes updated guidance for predicting a proposed project's energy usage (i.e., the energy consumption rates provided in Table 15-1 of the 2010 *CEQR Technical Manual* replace the rates provided in Table 3N-1 of the 2001 *CEQR Technical*

Manual).[20] Using the updated energy consumption rates, the annual energy demand for the full project would be approximately 1,576,095 million British Thermal Units (BTUs). In comparison, the FGEIS analysis estimated the annual energy demand of the project to be 1,176,686 million BTUs. Although the updated energy consumption rates predict a higher level of energy consumption, this increase would be insignificant relative to the capacity of the energy system and current levels of service within New York City. Furthermore, the Updated Plan, like the Approved Plan, may include a number of energy conservation measures, which would decrease overall energy demand in the District.

Based on the guidance and analysis methodologies contained in the 2010 *CEQR Technical Manual*, no further analysis is warranted with respect to energy.

SCHEDULE CHANGE

For the reasons described above, the proposed schedule change with the Updated Plan would not result in any significant adverse environmental impacts with respect to energy.

TRAFFIC AND PARKING

Analyses were performed to determine whether the Updated Plan would result in changes to the conclusions presented in the FGEIS regarding the potential for significant adverse traffic and parking impacts. The traffic analyses include an assessment of traffic conditions in 2022, at full build-out, and in 2016, when Phase 1 of the Updated Plan is complete. The scope and level of analysis performed for the Phase 1 (2016) and full build-out (2022) analyses differ, as discussed in greater detail below.

As the proposed development program at full build-out (2022) is the same as what was analyzed in the FGEIS, the full build-out (2022) traffic analysis focuses on changes in background conditions and methodology. The Updated Plan contains a smaller Phase 1 development program and footprint as compared to the Approved Plan and the Adjusted Plan analyzed in the 2009 technical memorandum, and does not assume that the new connections to the Van Wyck Expressway and the Eastern Perimeter Road would be completed in advance of completion of that phase, and incorporates certain traffic improvements; therefore, the Phase 1 (2016) traffic analysis focuses on the project modifications as well as changes in background conditions and methodology. The overall conclusion of the traffic analyses is that with both the Phase 1 (2016) development and the full build-out (2022) of the Updated Plan, traffic conditions would be similar to or better than what was projected for the full build-out of the Approved Plan in the FGEIS. There would be fewer significant adverse impacts, and similar or less intense mitigation measures would be needed for both the Phase 1 (2016) development and the full build-out (2022) of the Updated Plan as compared to the Approved Plan.

For a detailed discussion of the traffic analyses performed for the full build-out (2022) of the Updated Plan refer to Appendix C, *"Review and Validation of Traffic Analysis Findings in the Willets Point Development District FGEIS."* For a detailed discussion of the traffic analyses performed for the Phase 1 (2016) development of the Updated Plan refer to Appendix D, *"Traffic Assessment Of A Phase One Program Without New Van Wyck Expressway Ramps."*

[20] The updated CEQR energy consumption rates are based on source energy, which provides a more accurate estimate of energy use. Source energy accounts for energy consumed on-site in addition to energy consumed during the generation of energy supplied to the site.

PROJECT MODIFICATIONS

2016 Phase 1 Development

The Phase 1 development in the Updated Plan differs from the Phase 1 development considered in the Staged Acquisition Alternative within the FGEIS in the following ways: 1) the development programs are different; 2) the Phase 1 development in the Staged Acquisition Alternative would be in place by 2013, while the Phase 1 development with the Updated Plan would be in place by 2016; 3) the proposed connections to the Van Wyck Expressway assumed to be in place upon Phase 1 completion with the Staged Acquisition Alternative would not be in place upon Phase 1 completion with the Updated Plan; 4) the proposed Eastern Perimeter Road assumed to be in place upon Phase 1 completion with the Staged Acquisition Alternative would not be in place upon Phase 1 completion with the Updated Plan; 5) project parking would be consolidated within one parcel (A1) under Phase 1 (2016) of the Updated Plan as compared to being distributed among several parcels in Phase 1 of the Staged Acquisition Alternative; 6) project-related traffic improvements are proposed as part of the Phase 1 (2016) development that were not part of Phase 1of the Staged Acquisition Alternative.

With the Updated Plan, the Phase 1 development would generate 555 to 1,859 vehicle trips during peak hours. Although the Updated Plan's Phase 1 development is substantially smaller than the Phase 1 development in the Staged Acquisition Alternative in the FGEIS, a traffic analysis was performed due to the later Build Year and because the proposed connections to the Van Wyck Expressway would not be in place, which would result in the rerouting of some project-generated trips through the surrounding highway and local street network. A detailed analysis of expected traffic conditions under the Updated Plan's Phase 1 (2016) development was performed to identify the potential for new or different significant adverse traffic impacts due to these modifications. All 29 intersections and 19 highway locations analyzed for the full build-out of the Approved Plan within the FGEIS were analyzed for the Updated Plan's Phase 1 (2016) traffic analyses. The Updated Plan's Phase 1 analysis results were compared to those of the full build-out in the FGEIS to determine whether new or different significant adverse impacts would be expected, and the extent to which mitigation measures were needed and available. The analysis concludes that, overall, there would be fewer significantly impacted intersections and substantially fewer significantly impacted individual lane groups during all analyzed peak hours in Phase 1 as compared to the Approved Plan. Moreover, no new intersections or time periods would be significantly impacted where significant impacts were not disclosed in the FGEIS for the Approved Plan. At certain intersections, different individual lane groups would experience a significant impact other than what was predicted in the FEIS; however, at all of those intersections during those time periods, significant impacts were predicted in the FGEIS for some lane groups. Thus, with the Updated Plan's Phase 1 program in place there would not be any intersections with significant adverse impacts that were not identified for the Approved Plan in the FGEIS. Moreover, no highway segments that were not predicted to have significant impacts under the Approved Plan would have significant impacts under Phase 1 of the Updated Plan.

2022 Full Build-out

Project-generated traffic anticipated with the Updated Plan would be the same as the project-generated traffic anticipated with the Approved Plan. Both the Approved Plan and the Updated Plan would generate a total of 3,302, 4,905, 6,090, and 6,625 vehicle trips (auto, taxi, and delivery trips) during the weekday AM, midday, PM, and Saturday midday non-game day peak hours, respectively. On game days, the Updated Plan would generate an estimated 4,879 vehicle

trips during the weekday PM pre-game peak hour and 5,205 and 4,866 vehicle trips in the Saturday pre-game and post-game hours, respectively. Assignments of project-generated traffic would also remain the same as those assumed in the Approved Plan.

The only project modifications associated with the full build-out of the Updated Plan that would affect traffic conditions is the change in Build year from 2017 to 2022, However, with this change, traffic volumes would be lower than what was projected in the FGEIS for 2017 due to lower background growth rates presented in the 2010 *CEQR Technical Manual* (as described below). While the trip generation and assignment assumptions for the project would be the same in the Updated Plan as in the Approved Plan, and background traffic growth rates would be lower, a traffic analysis was performed for a 2022 full build-out of the Updated Plan due to changes to background conditions that could affect traffic conditions, as discussed in "Changes To Background Conditions and Methodology," below. These changes would be concentrated in the Downtown Flushing area, and those intersections expected to be affected by these changes were analyzed for the full build-out of the Updated Plan. Also, due to the changes in traffic pattern changes in Downtown Flushing, the full build-out (2022) contains new project-related traffic improvements not proposed in the FGEIS.

The traffic analysis for the full build-out (2022) of the Updated Plan shows that, overall, the number of significant adverse impacts and the mitigatability of those impacts are not materially different from the analyses in the FGEIS and, in fact, show better conditions than predicted for the Approved Plan in the FGEIS. No intersections that were not predicted to have significant impacts under the Approved Plan would have significant impacts under the full build-out of the Updated Plan.

Parking

Development under Phase 1 of the Updated Plan would generate a peak parking demand of approximately 731 spaces on weekdays and 1,175 spaces on Saturdays. The Updated Plan would provide a total of 950 parking spaces in Phase 1. This number of parking spaces would meet the expected peak weekday demand, but could result in parking shortfalls of up to 225 spaces during the Saturday afternoon period. However, the assessment of parking demand provides a conservative projection of future conditions, and the projected shortfall may or may not materialize. NYCEDC will monitor parking demand as Phase 1 is developed. If significant shortfalls occur and adequate parking for project-related vehicles is not available in the Phase 1 area during the weekend analysis peak demand hours when off street parking capacity is not available in the adjacent lots at Citi Field, the City will provide additional interim parking in portions of the buffer area. Upon full build out, the Updated Plan would include the same number of parking spaces as the Approved Plan (6,700 spaces), and would satisfy the projected parking demand of the project. Like the Approved Plan, the projected parking demand of the Updated Plan is anticipated to be satisfied entirely within the District and is not expected to affect other nearby Citi Field, commuter, municipal, and other public on-street or off-street parking areas. Therefore, the Updated Plan would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to parking.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

Several changes to background conditions have occurred since the publication of the FGEIS which would affect traffic. These include traffic pattern and intersection configuration changes, updates to the No Build background projects, and changes in significant impact criteria as per the new 2010 *CEQR Technical Manual*.

Traffic Pattern Changes

Recent traffic pattern changes have been implemented in Downtown Flushing in 2010 by the New York City Department of Transportation (NYCDOT) and Metropolitan Transportation Authority/New York City Transit as part of a pilot program in lieu of the proposed conversion of Main Street and Union Street into one-way streets with contraflow bus lanes, as was assumed in the No Build analyses of the FGEIS. Within the Downtown Flushing area, the following specific traffic flow changes implemented by NYCDOT since the completion of the FGEIS were incorporated in the traffic analyses for the Updated Plan:

- Prohibiting left turns from westbound Northern Boulevard onto southbound Main Street, except for buses.
- Prohibiting left turns from northbound and southbound Union Street onto westbound and eastbound Northern Boulevard, respectively.
- Prohibiting all turns from northbound and southbound Main Street onto Roosevelt Avenue.
- Re-routing Main Street buses onto 39th Avenue due to turn prohibitions at Roosevelt Avenue (additionally, some NYCT/MTA bus routes have changed within the Downtown Flushing area).
- Implementing lane striping modifications and signal timing changes at selected locations to improve overall traffic flow.

In addition, one traffic pattern change has also occurred in the Willets Point/Citi Field/North Corona subarea of the study area, where left turns have been prohibited on eastbound Astoria Boulevard at the intersection of 108th Street. Changes in signal timings have also occurred at several analysis locations since the FGEIS.

All of these background traffic pattern and configuration changes were incorporated into the future No Build traffic analyses for the Updated Plan.

No Build Background Project List Updates

As described previously in Section C, the No Build project list was updated to reflect the latest status of the 91 projects identified in the FGEIS. For the Phase 1 (2016) analysis, the 2016 No Build project list developed for the Updated Plan was used in the traffic analysis, which contains only the projects from the FGEIS No Build list that have not yet been built but are expected to be in place by 2016. For the full build-out (2022) analysis, the FGEIS No Build list was used, as it was determined to be conservatively inclusive. The traffic generation calculated for these No Build projects for the FGEIS was used in the full build-out (2022) analysis; however, the traffic assignments were modified to reflect the traffic pattern changes described above.

2010 CEQR Technical Manual Update

For the FGEIS, an annual background traffic growth rate of one percent per year was used as per the 2001 *CEQR Technical Manual* guideline for Queens. However, the 2010 *CEQR Technical Manual* stipulates that an annual background growth rate of 0.50 percent should be used for the first five years and that 0.25 percent per year should be used for each year thereafter. These new and lower annual growth rates were applied to both the full build-out (2022) and Phase 1 (2016) traffic analyses for the Updated Plan.

Highway Impact Criteria

NYCDOT has provided a clarification to the highway impact criteria described in the 2010 *CEQR Technical Manual*, which had been used for the Phase 1 (2016) highway analysis conducted for the Approved Plan within the FGEIS. The results of the Phase 1 highway analysis would be the same with either set of impact criteria.

SCHEDULE CHANGE

The effects of the proposed schedule change have been incorporated in the traffic analyses, along with other modifications, as discussed above. The proposed schedule change alone would not result in significant adverse traffic or parking impacts not identified in the FGEIS.

TRANSIT AND PEDESTRIANS

PROJECT MODIFICATIONS

As summarized in **Table 15**, with the Updated Plan the initial development phase would generate 760, 2,397, 2,153, 1,827, 2,760, 2,093, and 1,729 total pedestrian trips during the weekday AM, midday, PM, and pre-game, and Saturday midday, pre-game, and post-game analysis peak hours, respectively. Compared to the Staged Acquisition Alternative in 2013, the Updated Plan in 2016 would generate approximately 82, 64, 73, 71, 64, 66, and 70 percent fewer subway trips and 73, 54, 61, 58, 55, 55, and 56 percent fewer bus trips during the weekday AM, midday, PM, and pre-game, and Saturday midday, pre-game, and post-game peak hours. At the pedestrian locations analyzed in the FGEIS, the Updated Plan in 2016 would generate 80, 53, 64, 61, 57, 57, and 60 percent fewer pedestrian trips than the Staged Acquisition Alternative in 2013 during the weekday AM, midday, PM, and pre-game and Saturday midday, pre-game and post-game peak hours, respectively. By 2022, the Updated Plan would yield the same numbers of transit and pedestrian trips as the full build-out of the Plan in 2017 under the Approved Plan or the Staged Acquisition Alternative.

Because the Updated Plan in 2016 would generate fewer subway, bus, and pedestrian trips than the Staged Acquisition Alternative in 2013, it is expected that some impacts identified for the Staged Acquisition Alternative in 2013 would not occur with the Updated Plan in 2016, while other impacts would remain but would be less severe. Specifically, the impact identified in the FGEIS for the street-level stairway on the north side of Roosevelt Avenue at the Willets Point subway station under the Staged Acquisition Alternative in 2013 may not occur with the Updated Plan in 2016, or if it does occur would require lesser stairway widening to fully mitigate the impact; bus line haul impacts may require fewer additional buses; and crosswalk impacts may require less widening to mitigate. By 2022, the effects of the Updated Plan on transit and pedestrians are expected to be comparable to those described in the FGEIS for the full build-out of the project under the Staged Acquisition Alternative. Overall, there would be no new significant adverse impacts to transit and pedestrian conditions as a result of the modifications with the Updated Plan.

Table 15
Projected Transit and Pedestrian Trips under the Updated Plan in 2016

Peak Hour	Mode	In	Out	Total
Weekday AM	Subway	131	183	314
	Bus	131	107	238
	Walk	97	111	208
	Total Pedestrian Trips	**359**	**401**	**760**
Weekday Midday	Subway	378	318	696
	Bus	434	363	797
	Walk	464	440	904
	Total Pedestrian Trips	**1,276**	**1,121**	**2,397**
Weekday PM	Subway	397	380	777
	Bus	376	407	783
	Walk	299	294	593
	Total Pedestrian Trips	**1,072**	**1,081**	**2,153**
Weekday Pre-game	Subway	358	305	663
	Bus	345	334	679
	Walk	251	234	485
	Total Pedestrian Trips	**954**	**873**	**1,827**
Saturday Midday	Subway	459	427	886
	Bus	579	550	1,129
	Walk	399	346	745
	Total Pedestrian Trips	**1,437**	**1,323**	**2,760**
Saturday Pre-game	Subway	343	301	644
	Bus	432	373	805
	Walk	347	297	644
	Total Pedestrian Trips	**1,122**	**971**	**2,093**
Saturday Post-game	Subway	245	267	512
	Bus	295	327	622
	Walk	279	316	595
	Total Pedestrian Trips	**819**	**910**	**1,729**

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

As stated above under "Traffic and Parking," since the preparation of the FGEIS, the 2010 *CEQR Technical Manual* was published, providing updated guidance on analysis assumptions and procedures. The changes include a reduction in annual background growth rate, modified methodologies, analysis parameters, and impact thresholds for transit and pedestrian analyses, and less stringent requirements for mitigation thresholds. Although project completion years would shift to 2016 and 2022 under the Updated Plan, as compared to 2013 and 2017 with the Staged Acquisition Alternative, the cumulative background growth under the current guideline for the longer build-out of the proposed project would be less than previously assumed for the Approved Plan and Staged Acquisition Alternative. Increases in transit ridership and pedestrian activities due to No Build projects would also be comparable to those accounted for in the FGEIS and discussed above for the analysis of vehicular traffic. While the modified analysis methodologies would yield different detailed analytical results, they are independent of the project modifications and changes to project completion years.

A review of the FGEIS analysis results showed that there would not be material differences in the conclusions made for transit (subway and bus) line-haul capacities and station operations. As part of the City's continuing effort to improve pedestrian safety and operations, the CEQR thresholds for pedestrian impacts have become more stringent, although as stated above, the extent by which impacts need to be mitigated has become less stringent. The FGEIS analysis of pedestrian elements that are in the immediate vicinity of the Willets Point development district and which would experience the highest pedestrian trip generation from the development's

various uses concluded that there would be significant adverse impacts on several crosswalks along Roosevelt Avenue between the District and the Willets Point station on the No. 7 subway line. The analysis also identified significant adverse impacts on one crosswalk at Northern Boulevard and 126th Street during Saturday game-time peak periods. The measures to mitigate these significant adverse impacts were identified in the FGEIS, which also disclosed the fact that if some of the recommended crosswalk widenings via restriping cannot be achieved, the projected significant adverse impacts would remain unmitigated or be partially mitigated.

As discussed above, the Updated Plan would incorporate project improvements to pedestrian elements near the District in order to improve local conditions. These improvements would include:

- Widening of the Roosevelt Avenue north sidewalk between 126th Street and the Willets Pont No. 7 subway station.
- Widening of several crosswalks at the 34th Avenue and 126th Street, Roosevelt Avenue and 126th Street, and Roosevelt Avenue and Lot B Driveway intersections.

The above improvements would be incorporated into the Project's design.

As discussed in the FGEIS, all components of the traffic program as well as its effects upon pedestrian movements would be subject to a monitoring program that is reviewed by NYCDOT and would include, among other things, level of service analyses and signal progression analyses to verify the need for any of the mitigation measures identified in the FGEIS or subsequent Technical Memoranda or other measures implemented as part of the traffic monitoring plan.

The analysis shows that in light of the changes to background conditions and methodology, there would not be any significant adverse impacts related to transit and pedestrians that were not predicted in the FGEIS for the Approved Plan.

SCHEDULE CHANGE

For the reasons described above, the proposed schedule change with the Updated Plan would not result in any significant adverse environmental impacts that were not previously disclosed in the FGEIS or in previous technical memoranda.

AIR QUALITY

This section discusses the effects of the Updated Plan on the conclusions presented in the FGEIS regarding the potential for significant adverse impacts on air quality. The FGEIS considered mobile and stationary sources of air pollutant emissions, including emissions from vehicle trips generated by the Plan, the effect of vehicle travel along the elevated portion of Northern Boulevard adjacent to the District, emissions from vehicles using proposed parking facilities, emissions from fossil fuel use in District heating, ventilation, and air conditioning (HVAC) systems, and emissions from existing industrial sources. No potential for air quality impacts was identified with the restrictions on HVAC fuel type and stack placement that were recorded as "E" designations for the District, which would be superseded by a Restrictive Declaration as properties are acquired by the City.

As detailed in the following sections, the project modifications with the Updated Plan, changes to the development schedule, and changes to background conditions and analysis methodologies would not result in changes to the conclusions reached in the FGEIS. As a result of changes to the HVAC system screening methodology in the *2010 CEQR Technical Manual,* the HVAC system stack placement restrictions presented in the FGEIS would be revised. With the modified

HVAC "E" designations, the Updated Plan would not have the potential for significant adverse impacts on air quality.

PROJECT MODIFICATIONS

Mobile Sources

The analysis conducted for the FGEIS concluded that there would be no significant adverse air quality impacts from mobile sources. With the Updated Plan, the traffic volumes that would result from the initial development phase would be lower than the traffic volumes analyzed in the FGEIS. The locations where the greatest traffic volumes would be generated by the initial development phase were analyzed in the FGEIS. Therefore, like the Approved Plan, the Updated Plan would not result in any significant adverse impacts from mobile sources on air quality.

Analysis of the Elevated Northern Boulevard

The FGEIS included an assessment of the mobile source emissions along the elevated sections of Northern Boulevard on the District, because sensitive uses were proposed within 200 feet of the elevated roadway (the distance within which impacts from elevated roadways are considered per guidance in the *CEQR Technical Manual*). The analysis concluded that there would be no potential for significant adverse impacts on development in the District. With the Updated Plan, the buildings that would be developed in the initial phase would be more than 200 feet away of the elevated highway. The pollutant levels that would occur at the development with full build-out of the Updated Plan would be lower than the pollutant levels reported in the FGEIS because in the later build year, pollutant emissions from vehicles would decrease. Therefore, there would be no potential for significant adverse impacts on air quality from emissions along the elevated section of Northern Boulevard.

Parking Facilities

Based on the analysis of a conceptual garage for the convention center (in the northeastern portion of the District), which would have the highest parking usage rates within the District, the FGEIS concluded that none of the parking facilities in the District would have the potential for significant air quality impacts on surrounded uses. With the Updated Plan, the consolidated garage in the initial development phase and any parking facilities developed with the full build-out would be smaller than the conceptual garage analyzed in the FGEIS and would have a lower usage rate. The FGEIS analysis was based on fleet-wide vehicle emissions for 2017, as calculated using the U.S. Environmental Protection Agency approved Mobile6.2 model. Although the vehicle emissions calculated for 2016 are slightly higher, no parking facility developed as part of the initial development phase would result in concentrations greater than those presented for parking facilities in the FGEIS. In addition, the Updated Plan would not affect the results presented in the FGEIS for the anticipated parking on Lot D and existing parking on Lot C. Therefore, with the Updated Plan, the overall conclusions reached in the FGEIS regarding parking facilities would not change, and there would be no potential for significant adverse impact from parking facilities developed in the first phase of the Updated Plan.

Stationary Sources

HVAC Systems

The project modifications would not have an effect on the HVAC system analysis presented in the FGEIS and would therefore not have the potential for significant impact on air quality.

Industrial Sources

The analysis of industrial sources included in the FGEIS indicated no potential for significant adverse impact on air quality. With the Updated Plan, it is anticipated that one industrial emissions source may remain within 400 feet of the area that would be developed by 2016. The only remaining industrial use that may remain within 400 feet of the buildings to be developed by 2016 lies adjacent to the buffer area east of Willets Point Boulevard. The use was evaluated as part of the Staged Acquisition Alternative presented in the FGEIS, employing methodology that has not changed. No potential for significant adverse impacts on air quality was identified with the Staged Acquisitions Alternative. Therefore, as with the Staged Acquisition Alternative, there would be no potential for significant adverse impacts on air quality with the Updated Plan.

CHANGES IN BACKGROUND CONDITIONS AND METHODOLOGIES

Mobile Sources

Detailed mobile source modeling performed for the FGEIS is consistent with the methodologies described in the *2010 CEQR Technical Manual*. Therefore, the results of the mobile source analysis presented in the FGEIS do not need to be updated. There would be no potential for significant adverse impacts on air quality from mobile sources with the Updated Plan.

Analysis of the Elevated Northern Boulevard

The analysis conducted for the FGEIS to assess the potential for impact from the elevated section Northern Boulevard on the District is consistent with the *2010 CEQR Technical Manual Guidelines.* Therefore, as discussed in the FGEIS, there would be no potential for significant adverse impacts on air quality from the elevated sections of Northern Boulevard.

Parking Facilities

As discussed above, the FGEIS concluded that none of the parking facilities in the District would have the potential for significant air quality impact on surrounded uses. In addition, the FGEIS concluded there would be no potential for significant air quality impact onto the District from the anticipated parking on Lot D, and existing parking on Lot C. The CEQR methodology for analyzing parking facilities has not changed. Therefore, the parking facility analysis presented in the FGEIS is consistent with the *2010 CEQR Technical Manual,* and no updates to the FGEIS analysis are required.

Stationary Sources

HVAC Systems

The *2010 CEQR Technical Manual* includes changes to the HVAC screening methodology that was used in the FGEIS. Therefore, the screening analyses were updated to reflect the updated *Technical Manual* procedures. As disclosed in the FGEIS, restrictions on fuel use and HVAC stack placement would be imposed on the District via "E"-Designations to preclude the potential for significant adverse impact on air quality. With the revised *CEQR Technical Manual* methodology, the E-designation restrictions provided in the FGEIS would be revised with the Updated Plan.

As properties are acquired by the City, it is anticipated that a Restrictive Declaration would supersede the E-designation, but require implementation of the same measures regarding fuel use and the placement of HVAC exhaust stacks. The text of the "E"-Designations would be as follows:

- Any new development in the District must ensure that fossil-fueled HVAC systems utilize No. 2 fuel oil (except where prohibited) or natural gas, to avoid any potential significant air quality impacts.
- Any new development involving a building with a floor area up to 100,000 gross square feet (gsf) must ensure that the HVAC stack is located at least 110 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height when using No. 2 oil, or at least 80 feet when using natural gas.
- Any new development involving a building with a floor area greater than 100,000 gsf and up to 150,000 gsf must ensure that the HVAC stack is located at least 135 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height when using No. 2 oil, or at least 100 feet when using natural gas.
- Any new development involving a residential building with a floor area greater than 150,000 gsf and up to 200,000 gsf must use natural gas only and ensure that the HVAC stack is located at least 115 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height.
- Any new development involving a residential building with a floor area greater than 200,000 gsf and up to 250,000 gsf must use natural gas only and ensure that the HVAC stack is located at least 125 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height.
- Any new development involving a residential building with a floor area greater than 250,000 gsf and up to 300,000 gsf must use natural gas only and ensure that the HVAC stack is located at least 140 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height.
- Any new development involving a residential building with a floor area greater than 300,000 gsf and up to 350,000 gsf must use natural gas only and ensure that the HVAC stack is located at least 150 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height.
- Any new development involving a non-residential building with a floor area greater than 150,000 gsf and up to 350,000 gsf must ensure that the HVAC stack is located at least 145 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height when using No. 2 oil, or at least 130 feet when using natural gas.
- Any new development involving a building with a floor area greater than 350,000 gsf must use natural gas only and ensure that the HVAC stack is located at least 160 feet from operable windows, balconies, or air intakes of adjacent buildings of similar or greater height.

The "E"-Designations described in the FGEIS would be revised as described above. With these restrictions in place, no significant adverse air quality impacts are predicted from any developments in the District on one another. These restrictions would also ensure that there would be no potential for air quality impacts from the Updated Plan on the anticipated development on Lot B.

Based on the zoning Special District regulations the minimum stack-to-receptor distances could be met considering that:

- The zoning Special District regulations prescribe street widths that range from 62 to 80 feet.
- Building tower dimensions would be limited and a minimum tower-to-tower distance of 60 feet would be required by the zoning Special District regulations, effectively providing additional separation of potentially large and tall buildings.

The above stated circumstances would eliminate the potential for neighboring buildings within the District to result in a significant adverse air quality impact.

Moreover, when the actual building designs and the overall layout of the District are developed, the restrictions on stack placement could be relaxed upon further analysis for any particular building for which the current analysis assumptions are shown to be overly conservative. More detailed future analyses of the HVAC systems could account for the recent New York State amendments to the Environmental Conservation Law that limit the sulfur content of No. 2 heating oil to 15 ppm. The 2010 *CEQR Technical Manual* screening methodology, which was developed before the promulgation of the legislation limiting the sulfur content and used to develop the text for the E-Designations, currently does not include this emission reduction benefit.

Therefore, there would be no potential for air quality impacts from the proposed Plan's HVAC system emissions.

Industrial Sources

The changes to the *2010 CEQR Technical Manual* methodology for analyzing industrial sources would not affect the analyses conducted for the FGEIS and the conclusion that there would be no potential for significant impacts from industrial sources is consistent with the *2010 CEQR Technical Manual*.

In the FGEIS, the concentrations resulting from industrial sources at the District were compared with short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) recommended in the NYSDEC *DAR-1 SGC/AGC Tables.*[21] These tables were recently updated.[22] The predicted pollutant levels resulting from industrial sources would be below the recently updated guideline values. Therefore, since methodology changes would not affect the overall conclusions presented in the FGEIS, there would be no potential for significant adverse impacts on air quality with the Updated Plan.

SCHEDULE CHANGES

Mobile Sources

The FGEIS assessed the effects of traffic that would be generated in 2017 from full build-out of the District and determined that there would be no potential for significant adverse impacts on air quality from mobile sources. The traffic volumes generated by 2016 with the Updated Plan would be lower than what was analyzed in the FGEIS. Although vehicle emission rates in 2016 are predicted to be marginally higher in 2016 than in 2017, the effect of the slightly higher emissions on a per vehicle basis is not sufficient to offset the overall decrease in emissions that would result from lower traffic volumes generated by the significantly smaller development that would occur in the initial development phase by 2016. The per vehicle emissions in 2022 would be lower than the emissions analyzed in the FGEIS for the 2017 build year as a result of

[21] NYSDEC Division of Air Resources, September 10, 2007.

[22] NYSDEC Division of Air Resources, October 18, 2010.

anticipated improvements in vehicle technology, changes in permissible vehicle emissions under federal regulations, and vehicle turnover. Therefore, since the vehicle emissions would be lower and project-generated traffic volumes would be unchanged in the full build-out of the District under the Updated Plan, there would be no potential for significant adverse impacts on air quality with the schedule changes.

Analysis of the Elevated Northern Boulevard

As previously discussed, the initial development phase with the Updated Plan would not be within 200 feet of the elevated portion of Northern Boulevard. In 2022, the vehicle emissions would be lower than the 2017 emissions analyzed in the FGEIS. Therefore, the schedule changes would not result in a significant adverse impact from the elevated roadway on the District air quality.

Parking Facilities

As discussed above, the FGEIS concluded that there would be no potential for significant adverse impact from parking facilities. The parking analyses performed for the FGEIS assumed 2017 as the build year. By 2022, when the redevelopment of the District under the Updated Plan is expected, vehicle technology would improve, and with sufficient time for vehicle fleet turnover, overall vehicle emissions would decrease. Therefore, the concentrations resulting from the parking facilities in 2022 would be somewhat lower than the concentrations presented in the FGEIS. The vehicle emission factors would be slightly higher (less than 3 percent) when the initial development phase is completed in 2016 than the vehicle emission factors in 2017, the year analyzed in the FGEIS. This slight increase would not result in any significant adverse impacts on air quality as the pollutant concentrations and concentration increments reported in the FGEIS were well below the NAAQS or applicable impact criteria. Therefore the schedule changes would not affect the overall conclusions for parking facilities presented in the FGEIS.

Stationary Sources

HVAC Systems

The schedule changes do not have an effect on the demand inputs of the HVAC analyses presented in the FGEIS. Therefore, there would be no potential for significant adverse impacts on air quality with the changed schedule.

Industrial Sources

The schedule changes do not have an effect on the results of the HVAC analyses presented in the FGEIS. Therefore, there would be no potential for significant adverse impacts on air quality with the changed schedule.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

GREENHOUSE GAS EMISSIONS

Since the completion of the FGEIS, guidance for conducting a greenhouse gas (GHG) emissions analysis under CEQR has been developed and presented in Chapter 18 of the *2010 CEQR Technical Manual*. GHGs are those gaseous constituents of the atmosphere, from both natural and anthropogenic (i.e., resulting from the influence of human beings) emission sources, that absorb infrared radiation (heat) emitted from the earth's surface, the atmosphere, and clouds. This property causes the general warming of the earth's atmosphere, or the "greenhouse effect."

A detailed assessment of the potential for GHG emissions from the Updated Plan and the anticipated development on Lots B and D is provided in Appendix E, "Greenhouse Gas Emissions and Climate Change."[23] With the Updated Plan, the development that would occur in the first phase of development (by 2016) would result in lower GHG emissions than the full build-out. Therefore, the analysis presented in Appendix E is for the full build-out of the Updated Plan. As discussed in that analysis, specific measures to reduce GHG emissions are included as part of the Special District zoning regulations, or would be considered though the commitment to attain the LEED for neighborhood development (LEED-ND) rating. In summary, the site location, the dense, mixed-use design, the commitments to achieve energy efficiency, and other measures incorporated in the Plan would result in lower GHG emissions than would otherwise be achieved by similar residential and commercial uses, and would be consistent with the City's citywide GHG reduction goal.

CLIMATE CHANGE

Currently, an assessment of climate change is not routinely recommended by CEQR or the Mayor's Office of Environmental Coordination for projects in general. However, because of the unique characteristics of the District, including its location in a floodplain, a discussion of early integration of climate change consideration was included in the FGEIS and strategies to increase climate resilience and adaptive management were discussed. Since this discussion of climate change was included in the FGEIS, updated information relevant to that discussion is provided in Appendix E, "Greenhouse Gas Emissions and Climate Change" and summarized below.

As detailed local climate change projections become available and are adopted into the City's infrastructure design criteria, such criteria would be incorporated into the development program. The New York City Panel on Climate Change (NPCC) has recently prepared a set of climate change projections for the New York City region and has suggested approaches to create an effective adaptation program for critical infrastructure.[24] The climate change projections include a summary of previously published baseline and projected climate conditions throughout the 21st century including heat waves and cold events, intense precipitation and droughts, sea level rise, and coastal storm levels and frequency. The City's agreement with the developer would require the preparation of an engineering study prior to commencement of construction that would assess the feasibility of implementing adaptation strategies for climate change impacts into the design of the development program in light of the most current climate change projections. Based on that engineering study, the City would require the developer to implement the adaption strategies determined to be practicable.

Furthermore, under both the Approved Plan and the Updated Plan, the developer would be required to submit to the City, prior to the placement of fill, an assessment of the appropriate grade for the District in light of all available information concerning potential sea level rise and other changes due to climate change. If appropriate and if warranted by data available at that time, the City would have the authority to require an increase in the proposed grade of the District at that time or the use of other measures to protect infrastructure from potential sea level rise.

[23] Development on Lots B and D is included in the analysis of greenhouse gas emissions and climate change because this analysis was not included in the FGEIS.

[24] New York City Panel on Climate Change 2010 Report, *Climate Change Adaptation in New York City: Building a Risk Management Response*, Annals of the New York Academy of Sciences, May 2010.

NOISE

With the Updated Plan, the project-generated vehicle trips, parking facilities, and building program in 2022 would be similar to those under the Approved Plan in 2017. The analysis in Chapter 20 "Noise" of the FGEIS concluded that the traffic generated by the Approved Plan would be expected to result in a significant increase in noise levels only at the World's Fair Marina Park north of the District and only during the Saturday midday time period. In addition, to meet CEQR interior noise level requirements, the analysis prescribed between 30 and 37 dB of building attenuation for buildings within the District.

The noise analysis from the FGEIS has been updated to account for modifications to the project under the Updated Plan, schedule changes, and changes in background conditions and methodology prescribed by the 2010 *CEQR Technical Manual*.

PROJECT MODIFICATIONS

Under the Updated Plan, the project-generated vehicle trips, parking facilities, and building program in 2022 would be similar to those under the Approved Plan in 2017. Therefore, noise levels within and around the District in 2022 under the full build-out of the Updated Plan would be the same as for the full build-out of the Approved Plan in 2017. This would include the significant increase in noise levels predicted to occur at the World's Fair Marina Park north of the District during the Saturday midday time period. However, even with the elevated noise levels at the park, noise levels there would be comparable to other parks in New York City.

The first phase of the Updated Plan, which would be completed in 2016, would result in fewer project-generated vehicle trips than the full build-out of the Updated Plan in 2022; however, it would not include new ramp connections from the Van Wyck Expressway, which would be completed after 2016. In general, traffic at nearby noise sensitive receptors after the completion of the first phase of the Updated Plan would be comparable to the traffic under the Approved Plan. The only doubling of traffic volumes on a roadway adjacent to an existing noise sensitive receptor would occur at the World's Fair Marina Park north of the District during the Saturday midday time period. Based on CEQR noise analysis criteria, this doubling of traffic would constitute a significant increase in noise levels as a result of the Updated Plan in 2016. Under CEQR impact criteria, this increase would constitute a significant adverse impact in 2016.

However, the FGEIS also predicted a significant adverse noise impact at the World's Fair Marina Park during the Saturday midday time period. Therefore, the Updated Plan, like the Approved Plan, would have the potential to result in significant adverse noise impact at the World's Fair Marina Park north of the District during the Saturday midday time period. Thus, the project modifications would not result in any significant adverse noise impacts that were not disclosed in the FGEIS. Furthermore, even with the elevated noise levels at the park, noise levels there would be comparable to other parks in New York City.

The minimum required window/wall attenuation to meet CEQR interior noise level criteria for different locations within the District is shown in Table 20-11 in Chapter 20 of the FGEIS. Since noise levels at full build-out of the Updated Plan in 2022 are expected to be similar to those predicted for the future with the Approved Plan in 2017, these values would also be the minimum required window/wall attenuation to meet CEQR interior noise level criteria under the Updated Plan (except for changes due to the new 2010 CEQR attenuation requirements, discussed below). The buildings proposed to be built by 2016 under the first phase of the Updated Plan along the buffer zone would have a direct line of sight to the existing industrial uses remaining in the District between 2016 and 2022 and would require additional attenuation.

The specific requirements for window/wall attenuation are shown in Table F-1 of Appendix F. Based on the predicted exterior noise levels, these levels of attenuation are expected to be sufficient to ensure acceptable interior noise levels, based upon CEQR criteria.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The updated 2010 *CEQR Technical Manual* includes numerous revisions to the guidance for environmental review and changes to methodologies for various technical analyses. For noise, this includes revised requirements for window/wall attenuation based on exterior L_{10} noise levels. **Table 16** shows the new CEQR attenuation requirements, which replace the requirements shown in Table 20-6 of the FGEIS.

Table 16
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Acceptable				Clearly Unacceptable
Noise Level With Proposed Action	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$L_{10} < 80$
Attenuation*	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)^{B}$ dB(A)

Notes: [A] The above composite window-wall attenuation values are for noise-sensitive uses (e.g., residential or community facility). Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[B] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection

As a result of the updated requirements, the attenuation required based on the maximum predicted L_{10} values with the Updated Plan at each noise receptor site would be slightly different from those shown in Table 20-11 of the FGEIS. **Table 17** shows the updated requirements.

Table 17
Minimum Building Attenuation to Comply With CEQR Requirements

Site	Location	Maximum $L_{10(1)}$ (dBA)	2001 CEQR Required Building Attenuation (dBA)[1]	2010 CEQR Required Building Attenuation (dBA)[1]	Change in Attenuation Requirements (dBA)
4	Northern Boulevard between 127th Street and 127th Place	81.7	37	37	0
5	126th Street between 36th Avenue and 37th Avenue	79.7	37	35	-2
6	Willets Point Boulevard between 34th Avenue and Northern Boulevard	74.6[2]	30	31	1
7	126th Street between 39th Avenue and Roosevelt Avenue	80.7	37	36	-1

Notes:
[1] Because exact building locations and uses are not known at this time, attenuation figures conservatively assume future development to be residential at each Site. The required attenuation would be 5 dBA less for a commercial use.
[2] This figure includes noise generated by the proposed additional Van Wyck Expressway on and off ramps.

Based on the required attenuation values shown in Table 16, attenuation requirements for each block and lot of the District have been revised. These requirements are shown in Table F-1 of Appendix F, and take the new CEQR attenuation requirements into account as well as the temporary condition between 2016 and 2022 during which existing industrial land uses would

remain adjacent to new land uses as part of the Updated Plan. These attenuation requirements would be enforced by the existing "E"-Designations and/or subsequent Restrictive Declarations on the District. The updated E-designation text is included in Appendix F.

SCHEDULE CHANGE

The change in schedule is not expected to result in any appreciable differences in the results of the noise analysis between the Approved Plan and the Updated Plan.

PUBLIC HEALTH

PROJECT MODIFICATIONS

Like the Approved Plan, the Updated Plan is not expected to result in significant adverse impacts to public health. As described above, like the Approved Plan, the Updated Plan would utilize "E"-Designations and subsequent Restrictive Declarations on properties acquired by the City to ensure that there would be no significant adverse impacts with respect to hazardous materials, indoor noise, and air quality (specifically associated with the heating, ventilation, and air conditioning system). With the Updated Plan, "E"-Designations for properties in the northern and eastern portions of the District would remain in place for a longer duration as compared with the Approved Plan, since they would be acquired later. Furthermore, with the Updated Plan there would be a large buffer area in place between the new development in the southeastern part of the District and the industrial businesses which would continue to occupy the remainder of the District until the later development phase. This buffer area would ensure that the workers, residents, and visitors generated by the initial development phase would not be adversely affected by any of the industrial activities in the remainder of the District. The buffer area would also prevent workers in the remaining industrial area of the District from being adversely affected by development-related construction activities.

The preparation and enforcement of a HASP is expected to prevent any significant adverse impacts from hazardous materials. The installation of a vapor control systems would prevent vapors from any volatile organic compounds (VOCs) that may remain in the soil after remediation from entering the buildings and harming public health. Air emissions from construction equipment and trucks would be reduced to minimum levels by the enforcement of Local Law 77 of 2003, which requires measures to reduce emissions of diesel particulate matter (DPM) from construction activities associated with certain City projects, and which is applicable for this project. Overall, the project modifications included in the Updated Plan would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to public health.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to public health.

Based on the guidance and analysis methodologies contained in the 2010 *CEQR Technical Manual*, no further analysis is warranted with respect to public health.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to public health.

NEIGHBORHOOD CHARACTER

PROJECT MODIFICATIONS

Like the Approved Plan, the Updated Plan would dramatically change neighborhood character in the District by full build-out. The new, active mix of residential, retail/entertainment, office, open space, hotel and conference center, and community facility uses would represent an improvement to the character of the area. Development would be scaled to enhance pedestrian activity, with prescribed streetwall heights and locations, mandatory pedestrian circulation space, and other design elements to enhance building façades. The Special District would also mandate the provision of street trees, adequate sidewalks, and planted medians, and the development of a minimum of eight acres of publicly accessible open space. As with the Approved Plan, the Updated Plan would include environmental remediation, grading and elevating the District above the floodplain, the installation of new sanitary and storm sewer lines, and the creation of a new connection to the Van Wyck Expressway. The proposed residential, commercial office, retail, hotel, community facility, open space, and parking uses would be consistent with the uses and character in the surrounding area, particularly those within the dense commercial center of Downtown Flushing. As with the Approved Plan, traffic, transit, pedestrian and noise conditions would be adversely affected, but not (particularly with the mitigation measures proposed) to the degree that neighborhood character would experience significant adverse impacts.

With the Updated Plan, at the end of the first phase of development—by 2016—the southwestern portion of the District would contain new residential, retail, hotel, and open space uses, while existing industrial uses would remain in the northern and eastern parts of the District. As described in the FGEIS under the Staged Acquisition Alternative, with the Updated Plan the redeveloped portion of the District would contrast sharply with the remainder of the District, with new residential and commercial development juxtaposed with an automotive-oriented and industrial area. However, with the Updated Plan the new development would be surrounded by a large buffer area, which would be vacated and primarily cleared by 2016. The buffer area would be fenced, and all cleared lots would be planted with grass.

While conditions with respect to traffic and noise would be better than those with the full build-out, some of the neighborhood character benefits that would be realized with the Updated Plan in 2022 (or with the Approved Plan) would not exist at the end of the first phase of development, including District-wide infrastructure improvements, pedestrian amenities, streetscape amenities, and improved urban design.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

The changes in background conditions described above would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to neighborhood character.

The 2010 *CEQR Technical Manual* includes updated guidance with regard to whether a neighborhood character assessment is appropriate. The 2001 *CEQR Technical Manual* recommends an assessment when an action would have the potential to impact any of the following areas of technical analysis: land use, urban design and visual resources, historic resources, socioeconomic conditions, traffic and pedestrians, or noise. The 2010 *CEQR Technical Manual* recommends an assessment when an action would have the potential to result in open space or shadows impacts, in addition to the technical areas listed above.

As described above, neither the Approved Plan nor the Updated Plan would have the potential to result in any open space or shadows impacts. Thus, the project would not result in significant adverse environmental impacts with respect to neighborhood character, and no further analysis is warranted.

SCHEDULE CHANGE

The schedule change would not change the FGEIS conclusion that the project would not result in significant adverse environmental impacts with respect to neighborhood character.

CONSTRUCTION

PROJECT MODIFICATIONS

As with the Staged Acquisition Alternative analyzed in the FGEIS and the Adjusted Plan analyzed in the 2009 Technical Memorandum, the Updated Plan would be developed in two phases. However, with the Updated Plan the assumed completion date for Phase 1 would be changed from 2013 to 2016. Using a conceptual development plan, it is assumed for purposes of analysis that Phase 1 under the Updated Plan would encompass four buildings. This analysis also assumes that the proposed new connections to the Van Wyck Expressway would not be completed until the end of 2017, after the Phase 1 development is completed in 2016. Phase 1 would include approximately 2.08 acres of publicly accessible open space comprised of a large open space area between Buildings A1 and A2 and smaller pedestrian amenity areas and open landscaped areas (i.e., public access areas) that would be developed pursuant to the Special District regulations in conjunction with surrounding development. The remainder of the publicly accessible open space, approximately 6 acres, would be developed in Phase 2. Phase 2 open spaces would include an approximately two-acre park on site A16, open spaces on sites A20 to A23, and other public access areas developed pursuant to the Special District regulations.

The conceptual design and construction sequencing has been revised to reflect a more elongated period of site preparation. As previously described, modifications with the Updated Plan include: the creation of a larger buffer area in Phase 1, with most lots in this area acquired and cleared but not remediated by 2016; completion of infrastructure work within the buffer area in order to maintain continuous access to several existing businesses within the District; the replacement and relocation of a 72-inch water main beneath Willets Point Boulevard; and the use of a gravity line for sewer connection instead of using a pump station. Construction activities would continue with the Updated Plan after 2016, with full build-out by 2022.

Figure 8 and **Table 18** show the conceptual construction schedule for the Updated Plan. It is anticipated that site clearance and remediation for the Updated Plan would start in the fourth quarter of 2011 and would continue sequentially through the second quarter of 2020. At that time, the soils and groundwater would have been remediated to NYSDEC standards, and the grading and infrastructure would be completed. By the end of 2016, buildings and open space on sites A1 through A4 would be finished and occupied (see Figure 9 for site designations). Two other buildings (A5 and A6) would be under construction, but not completed. Construction is expected to continue through 2022 when the District would be fully built out.

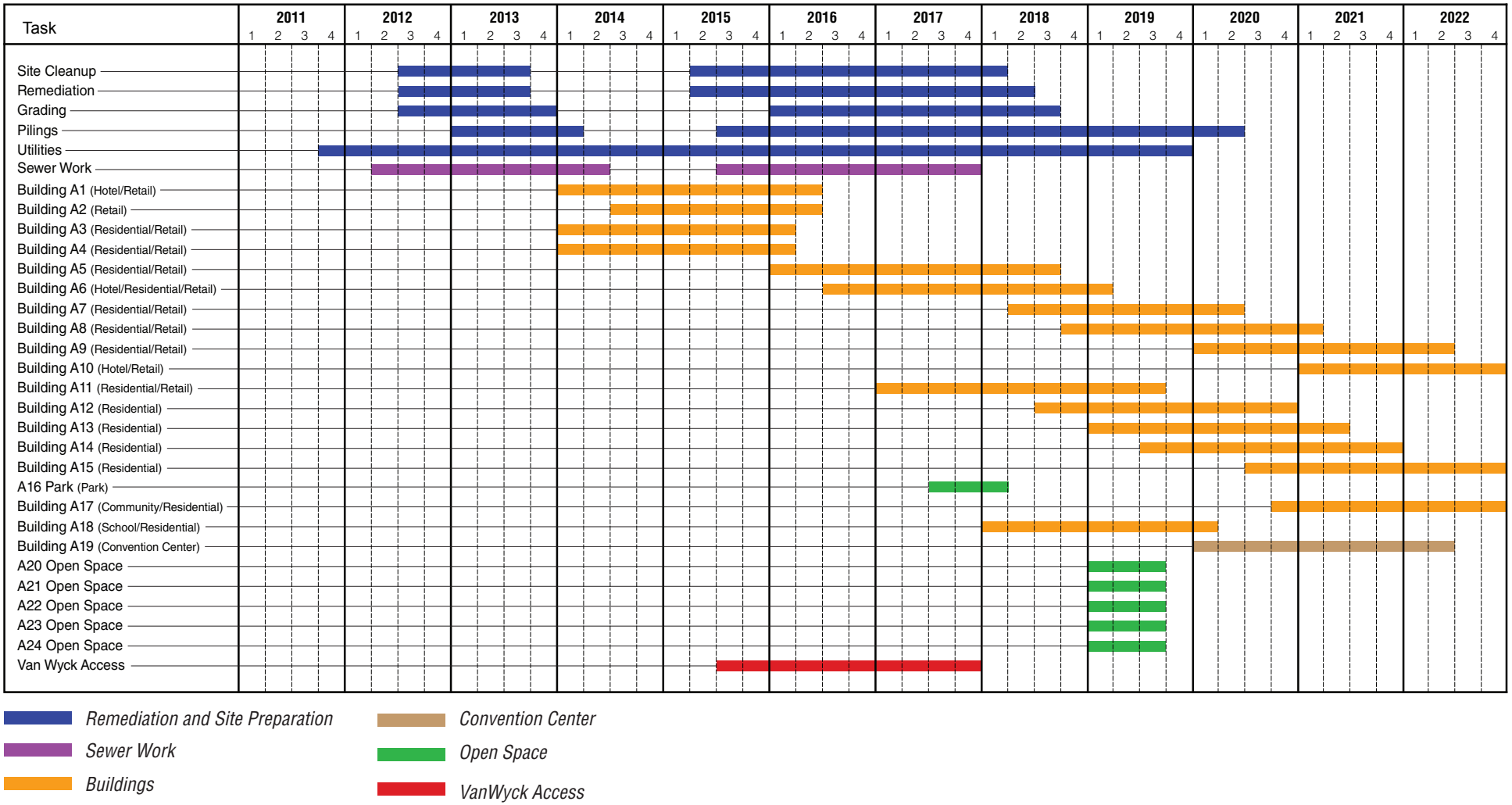


Figure 8

Updated Plan Conceptual Construction Schedule

1.19.11

Figure 9

Updated Plan Conceptual Construction Sequence

Table 18
Updated Plan Conceptual Construction Schedule

Task[1]	Start	Finish	Duration (Months)
Site Preparation	4th Q 2011	2nd Q 2020	105
Building A1 (Hotel/Retail)[2, 3]	1st Q 2014	2nd Q 2016	30
Building A2 (Retail)[2, 3]	3rd Q 2014	2nd Q 2016	24
Building A3 (Residential/Retail)	1st Q 2014	1st Q 2016	27
Building A4 (Residential/Retail)	1st Q 2014	1st Q 2016	27
Building A5 (Residential/Retail)	1st Q 2016	3rd Q 2018	33
Building A6 (Hotel/Residential/Retail)	3rd Q 2016	1st Q 2019	33
Building A7 (Residential/Retail)	2nd Q 2018	2nd Q 2020	27
Building A8 (Residential/Retail)	4th Q 2018	1st Q 2021	30
Building A9 (Residential/Retail)	1st Q 2020	2nd Q 2022	30
Building A10 (Hotel/Retail)	1st Q 2021	4th Q 2022	24
Building A11 (Residential/Retail)	1st Q 2017	3rd Q 2019	33
Building A12 (Residential)	3rd Q 2018	4th Q 2020	30
Building A13 (Residential)	1st Q 2019	2nd Q 2021	30
Building A14 (Residential)	3rd Q 2019	4th Q 2021	30
Building A15 (Residential)	3rd Q 2020	4th Q 2022	30
A16 (Park)	3rd Q 2017	1st Q 2018	9
Building A17 (Community/Residential)	4th Q 2020	4th Q 2022	27
Building A18 (School/Residential)	1st Q 2018	1st Q 2020	27
Building A19 (Convention Center)	1st Q 2020	2nd Q 2022	30
A20 to A23 (Open Space)	1st Q 2019	3rd Q 2019	9
Van Wyck Access	3rd Q 2015	4th Q 2017	30

Notes: Start date is the first day of the quarter; finish date is last day of the quarter.
[1] The uses listed for each building are the uses under the Updated Plan. As noted above, the uses on Buildings A1 and A2 would be different under the Updated Plan compared to the Approved Plan.
[2] Under both the Approved Plan and the Updated Plan, the area between Buildings A1 and A2 would be publicly accessible open space (see Figures 2 and 3).
[3] With the Updated Plan, the hotel use in Phase 1 may be located in either Building A1 or A2.

Using the same approach utilized in the FGEIS, the numbers of daily workers and truck deliveries were estimated (see **Table 19**). **Table 20** compares the peak period numbers of workers and truck deliveries for the Updated Plan and the Approved Plan or Staged Acquisition Alternative (analyzed in the FGEIS). As shown in the table, the peak numbers of workers and truck deliveries for the Updated Plan would be 648 and 352, respectively, fewer than those of the Approved Plan.

Table 19
Updated Plan: Projected Construction Workers and Trucks (per day)

Year	2011				2012				2013				2014				2015			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	-	-	-	75	75	125	215	215	240	275	275	210	413	518	537	612	787	1,042	1,108	1220
Trucks	-	-	-	3	3	8	56	56	56	64	64	64	109	149	154	169	219	254	244	234
Year	**2016**				**2017**				**2018**				**2019**				**2020**			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	909	893	495	876	734	1,220	1,428	1,548	1,699	1,921	1,710	1,652	1,547	1,748	1,772	1,815	1,899	1,636	1,765	1,531
Trucks	237	172	147	117	157	187	192	194	254	204	204	171	221	221	256	221	233	208	215	220
Year	**2021**				**2022**												**Project**			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th									**Peak**		**Average**	
Workers	1,749	1,977	1,900	1,751	1,300	997	889	527									**1,977**		**1,063**	
Trucks	240	230	200	215	190	185	125	120									**256**		**165**	

Note: The number of construction workers and delivery trucks represent the highest number over a one to two week period and may not reflect the absolute peak day.

Table 20
Comparison of Peak Construction Workers and Trucks

	Approved Plan		Updated Plan		
	Number	Quarter	Number	Quarter	Difference
Workers	2,625	4th Q 2012	1,977	2nd Q 2021	-648
Trucks	608	4th Q 2012	256	3rd Q 2019	-352

For the Approved Plan, the peak periods of activity would occur before the end of 2013, prior to the completion of the new Van Wyck connections. Under the Approved Plan, the peak period for workers and trucks would be the fourth quarter of 2012. Under the Updated Plan, the peak periods of construction activity would occur after the completion of the new Van Wyck connections in 2017—the peak period for workers would occur in the second quarter of 2021 and peak period for trucks would occur in the third quarter of 2019.

The FGEIS concluded that construction-generated peak hour traffic would be substantially lower than project-generated peak hour traffic from the full build-out of the Approved Plan. Hence, potential impacts and required mitigation measures from construction vehicles after the completion of the new Van Wyck connections were expected to be adequately addressed by those for the project's full build-out. Because the new Van Wyck connections would still be under construction during the Approved Plan's peak construction in the fourth quarter of 2012, the FGEIS provided a detailed traffic analysis of selected locations to address potential construction traffic impacts that would occur prior to the completion of the new Van Wyck connections. This analysis concluded that at most intersections, traffic from construction of the Approved Plan would be substantially less than traffic generated by the full operation of the Approved Plan, but that unmitigatable impacts would nonetheless occur at some of the same locations identified as having unmitigatable impacts during operation of the Approved Plan. With the Updated Plan, the projected numbers of construction workers and truck deliveries prior to the completion of the new Van Wyck connections would be no more than 55 percent of the peak construction workers and truck deliveries accounted for in the FGEIS construction traffic analysis. Nonetheless, it is anticipated that some or all of the significant adverse construction traffic impacts identified in the FGEIS would still occur and the same types of mitigation would apply.

Under the Approved Plan, peak construction activities after the completion of the new Van Wyck connections would occur in the second quarter of 2016, when Buildings A15, A17, A18, and A19 would be under construction. With the Updated Plan, peak construction activities after the completion of Van Wyck connections (Phase 2) would occur in the second quarter of 2021 when Sites A8, A9, A10, A13, A14, A15, A17, and A19 would be under construction. In comparison, the Updated Plan's peak Phase 2 construction would yield slightly higher total number of construction workers and truck deliveries than those under the Approved Plan, as summarized in **Table 21**. However, with many buildings still not yet completed and occupied by the second quarter of 2021, the overall traffic generated by the project during the peak construction period would remain less than those projected for its full build-out. Therefore, as noted above, potential impacts from construction vehicles and required mitigation measures during the later years of construction (after the completion of the new Van Wyck connections) are expected to be adequately addressed by the mitigation measures required for the project's full build-out.

Table 21
Comparison of Phase 2 Peak Construction Workers and Trucks

	Approved Plan		Updated Plan		
	Number	Quarter	Number	Quarter	Difference
Workers	1,850	2nd Q 2016	1,977	2nd Q 2021	+127
Trucks	298	2nd Q 2016	256	3rd Q 2019	-42

As noted in the FGEIS, the District is large, and much of it is well removed from any sensitive receptors. The Updated Plan would involve the same types of construction activities as described in the FGEIS, and would comply with the same laws, codes, and other rules and regulations as the Approved Plan, the Staged Acquisition Alternative, and the Adjusted Plan. The same measures to control air emissions and noise would be implemented. As described above, the longer construction period and longer cleanup and remediation schedule for the Updated Plan would also yield an overall lower intensity of construction activity. Therefore, any temporary air quality or noise effects from construction with the Updated Plan would be less than or the same as disclosed in the FGEIS, and the FGEIS conclusions regarding the effects of construction activities within the District would apply to the Updated Plan.

As with the Approved Plan, limited off-site utility work would be necessary to connect the new sanitary sewer system to the broader sewer network. With a gravity flow system instead of a pump station and force main, this work would be similar to that described in the FGEIS, and it would not result in any significant adverse impacts.

As part of the ongoing infrastructure work in support of the Updated Plan, planning has progressed to increase the capacity of the stormwater outfall at 126th Street. Construction of the outfall and associated storm sewer would result in construction within Flushing-Meadows Corona Park, and as the property owner the New York City Department of Parks and Recreation (NYCDPR) has signed the Joint Application. Specifically, construction of the outfall and sewer would result in the temporary closure, removal, and reconstruction of approximately 875 square feet of the esplanade along Flushing Bay and excavation within a portion of an existing NYCDPR parking lot. Construction activities would last for approximately 1 year, and would therefore be temporary. During construction of the outfall, it is expected that a temporary at-grade walkway could be provided upland of the construction area to maintain pedestrian access along the esplanade. Likewise, vehicular and pedestrian access could be maintained in the parking lot during storm sewer excavation and construction. Overall, construction of the outfall and sewer would affect only a small portion of the esplanade and would not impede the use and enjoyment of the remainder of the esplanade or Flushing-Meadows Corona Park. Therefore, construction of the outfall and storm sewer would not result in any significant adverse impacts.

Overall, no significant adverse impacts related to land use, socioeconomic conditions, neighborhood character, community facilities, natural resources, hazardous materials, transit and pedestrians, air quality, or noise are expected.

CHANGES TO BACKGROUND CONDITIONS AND METHODOLOGY

As described above under "Traffic and Parking," one of the relevant changes from the 2010 *CEQR Technical Manual* is the reduction in annual background growth rate. Although project completion years would be delayed to 2016 and 2022 under the Updated Plan, as compared to 2017 with the Approved Plan or 2013 and 2017 with the Staged Acquisition Alternative and the Adjusted Plan, the cumulative background growth under the current guideline for the longer build-out of the project would be less than previously assumed. Another change in background

conditions relates to the street network in downtown Flushing. Since the potential construction traffic impacts, as described above, would fall within the envelope of impacts and required mitigation measures identified for the full build-out of the project, the effects of the changes to the street network in downtown Flushing as related to construction activities have also been similarly addressed by the analyses presented in the "Traffic and Parking" section of this technical memorandum.

Since publication of the FGEIS, the EPA has revised the national ambient air quality standards (NAAQS) for sulfur dioxide (SO_2) and nitrogen dioxide (NO_2). These standards are used in the in determination of potential significant air quality impacts. Both pollutants are by products of diesel fuel combustion from typical construction equipment.

For SO_2, EPA established a new 1-hour average NAAQS of 0.075 ppm, replacing the 24-hour and annual primary standards, effective August 23, 2010. The Updated Plan, like the Approved Plan, would be committed to the exclusive use of ultra-low sulfur diesel (ULSD) fuel for on-site construction equipment, which would make SO_2 emissions from construction activities negligible. Therefore, there would be no significant adverse air quality impacts as a result of the new SO_2 standard.

For NO_2, EPA established a new 1-hour average NAAQS of 0.100 ppm, effective April 12, 2010, in addition to the annual standard. The Updated Plan, like the Approved Plan, would include a commitment to use late model (i.e., newer) equipment with best available technology (BAT) to significantly reduce NO_2 emissions from onsite nonroad diesel engines. Therefore, the new 1-hour NO_2 standard would not change the FGEIS conclusions regarding air quality impacts.

The changes in background conditions, described above, would not change the analysis of construction noise as presented in the FGEIS, and the 2010 *CEQR Technical Manual* does not contain any changes in methodology that would substantively affect the analysis or conclusions presented in the construction noise assessment in the FGEIS.

Overall, the changes in background conditions and methodology would not result in any significant adverse impacts due to construction activities.

SCHEDULE CHANGE

As with the Approved Plan, residents and workers in some of the buildings completed early in the Updated Plan would be located adjacent to construction sites during construction of the later buildings. In these cases, the primary concern is whether construction activities would produce noise levels or pollutant emissions that would significantly impact the residents of the completed buildings. Although the quantity of air pollutants emitted during the construction period and construction noise levels would likely vary over time, the demolition, site excavation, and foundations task would generally emit the highest level of pollutants and noise levels at site specific locations.

As compared with the Approved Plan presented in the FGEIS, the Updated Plan has a more extended timeframe (i.e., a less compressed construction schedule). As a result, it is expected that the overall intensity of the construction program and the highest level of activity for the Updated Plan (including the demolition, site excavation, and foundations tasks) would be lower than that of the Approved Plan presented in the FGEIS. The effect of this lower intensity level would be to decrease the site-wide peak level pollutant emissions and noise levels that are generated by construction activities because there would be fewer pieces of equipment operating

simultaneously on-site. Therefore, construction activities adjacent to completed buildings would be less intense and would result in lesser effects on completed buildings compared to the Approved Plan. In fact, approximately half of the proposed buildings constructed over the course of the development program would have no adjacent excavation/foundation activity occurring when the building is occupied upon completion. At buildings where adjacent excavation/foundation activity would occur, this activity would be less intense and would result in lesser effects on occupied buildings than under the Approved Plan, as noted above. Furthermore, the design of all project buildings would include double-glazed windows and alternate means of ventilation (i.e., air conditioners) that would provide sufficient attenuation to result in interior noise levels during most of the time that would meet the CEQR acceptable interior noise level criteria.

For the reasons described above, the proposed schedule change with the Updated Plan would not result in any significant adverse construction impacts that were not previously disclosed in the FGEIS or the 2009 Technical Memorandum.

February 10, 2011

Robert R. Kulikowski, Ph.D. Date

Assistant to the Mayor

APPENDIX A
PRIOR TECHNICAL MEMORANDA

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

Technical Memorandum for the Willets Point Development Plan FGEIS

CEQR Number 07DME014Q TM001

September 23, 2008

A. INTRODUCTION

The Office of the Deputy Mayor for Economic Development issued a Notice of Completion for the Willets Point Development Plan Final Generic Environmental Impact Statement (FGEIS) on September 12, 2008. Under the proposed Plan, the approximately 61-acre Willets Point Development District (District) would be redeveloped with up to 8.94 million gross square feet of residential, retail, hotel, convention center, entertainment, commercial office, community facility, open space, and parking uses. The Plan would result in a change to the underlying zoning of the District from an existing M3-1 district (and a small area zoned R3-2) to a C4-4 district, and would include the creation of an Urban Renewal Plan and a zoning Special District.

The City Planning Commission is currently considering several modifications to the Special Willets Point District zoning regulations. The purpose of this technical memorandum is to determine whether modifications to the Special Willets Point District zoning regulations would alter the conclusions presented in the FGEIS and would result in any significant adverse environmental impacts that were not previously identified.

As described in the New York State Department of Environmental Conservation's SEQRA regulations, 6 NYCRR §§617.9(a)(7)(i)(a), (b), and (c), and the 2001 *New York City Environmental Quality Review* (CEQR) *Manual*, the lead agency may require the preparation of a supplemental EIS if there are significant adverse environmental impacts not addressed or inadequately addressed in the EIS that arise from changes proposed for the project; newly discovered information; or a change in circumstances related to the project. As reflected in the technical analyses that follow, the modifications to the Special Willets Point District zoning regulations would not result in any significant adverse environmental impacts that were not identified in the FGEIS.

B. PROPOSED MODIFICATIONS

The Special Willets Point District zoning regulations are substantially the same as those analyzed in the FGEIS. The modifications are as follows:

1) Section 14-44 of the proposed zoning regulations would be modified to disallow enclosed sidewalk cafes within the District.

2) Section 124-51 of the proposed zoning regulations would be modified to further regulate the permitted operations of certified car-share operator/s providing car-share spaces within an accessory residential off-street parking area.

3) Section 124-51 of the proposed zoning regulations would be modified such that along 126th Street, only accessory business signs are allowed, and advertising signs are not allowed, and to clarify that no sign attached to a building or other structure shall extend above any parapet wall or roof of such building or other structure.

4) Section 124-22 of the proposed zoning regulations would be modified to disallow physical culture or health establishments in the portions of the buildings along 126th Street where a building setback is provided at a height of between 20 and 30 feet. The modified text would allow only eating and drinking establishments to occupy the second story terraces overlooking 126th Street. Physical culture or health establishments would continue to be allowed to occupy enclosed floor area on the second floor levels of such buildings.

5) Section 124-312 of the proposed zoning regulations would be modified to require that all sidewalks have a minimum dimension of 13 feet measured from the curb, even where changes in grade occur, and that continuous street tree planting is provided. Specifically, the modification requires that where a grade change has to be accommodated at the intersections of retail streets and connector streets, connector streets would require a combination of 15-foot sidewalks with a 9-foot amenity area to accommodate the grade change, and retail streets would require 13-foot sidewalks and a 10-foot amenity area to accommodate the grade change.

6) Section 124-22 of the proposed zoning regulations would be modified to require full articulation of the tops of residential buildings. The modification would require that for residential towers, the lot coverage of the highest three stories (or as many stories as are located entirely above a height of 120 feet, whichever is less) should be between 50 and 80 percent of the story immediately below. Such reduced lot coverage should be achieved by one or more setbacks on each face of the tower, where at least one setback on each tower face has a depth of at least four feet.

7) Section 124-42 of the proposed zoning regulations would be modified to require that:

   a) the two-acre central neighborhood park contain a minimum of 50 percent planted area (including accessible lawns and turf that may be used for playing fields), or, the planted area may be reduced to 40 percent if a playground acceptable to the Department of Parks and Recreation (DPR) is provided; and

   b) a minimum of one-half acre of public access area shall be designed for active recreational use; this may be located anywhere within the eight acres of publicly accessible open space required in the District.

C. UPDATED ENVIRONMENTAL CONDITIONS

As described below, the modifications to the Special Willets Point District zoning regulations would not alter the conclusions in the FGEIS.

Several of the modifications described above would not result in changes to any of the environmental analyses in the FGEIS. These include: the modification to disallow enclosed sidewalk cafes within the District; the modification to further regulate the permitted operations of certified car-share operator/s; the modification to signage regulations along 126th Street; the modification to disallow physical culture or health establishments in the second story terraces overlooking 126th Street; and the modification to require that all sidewalks have a minimum dimension of 13 feet measured from the curb, even where changes in grade occur.

The modification to require full articulation of the tops of residential buildings could result in minor changes to the illustrative site plan shown in the FGEIS. With this modification, the maximum permitted development envelope prescribed by the Urban Renewal Plan (8.94 million gross square feet) could continue to be accommodated within the District pursuant to the Special District regulations. However, if the maximum permitted development envelope were to proceed, there would be a slight decrease in the potential floor area of residential towers subject to this modification, which would result, under a development program providing the maximum permissible square footage, in a slight increase in floor area of some buildings in the District that do not contain residential towers. Thus, buildings shown on the illustrative site plan as C-shaped would instead be Donut-shaped. This modification would not result in changes to the following environmental analysis areas examined in the FGEIS: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Community Facilities; Historic Resources; Neighborhood Character; Natural Resources; Hazardous Materials; Waterfront Revitalization Program; Infrastructure; Solid Waste and Sanitation; Energy; Traffic and Parking; Transit and Pedestrians; Noise; Construction; Public Health; Mitigation; or Alternatives. However, further discussion is provided below with respect to the following environmental areas: Shadows, Urban Design and Visual Resources; and Air Quality (Stationary Source Analysis). As discussed below, this modification would not result in any significant adverse environmental impacts that were not identified in the FGEIS.

The modifications with respect to open space provisions in the special district text would not result in changes to any of the environmental analysis areas examined in the FGEIS, aside from the Open Space analysis. Further discussion is provided below regarding the potential effect of these modifications on the Open Space analysis. As discussed below, this modification would not result in any significant adverse environmental impacts that were not identified in the FGEIS.

OPEN SPACE

The modifications with respect to open space provisions in the special district text are consistent with the assumptions regarding the proposed open spaces in the District and with the open space analysis presented in the FGEIS.

In the Future With the Proposed Plan, the FGEIS assumed that approximately 20 percent of the new open space in the District (1.6 acres) would be for active uses and the remaining 80 percent (6.4 acres) would be programmed for passive use. The FGEIS anticipated that the two-acre central park would be primarily developed with active recreational uses. One of the modifications with respect to open space provisions requires that a minimum of one-half acre of public access area shall be designed for active recreational use. This may be located anywhere within the eight acres of publicly accessible open space required in the District. While this modification would mandate a minimum acreage of active recreation, it does not affect the expectation that approximately 1.6 acres of active recreational open space would be provided in the District. The other modification with respect to open space provisions requires that the two-acre central park contain a minimum of 50 percent planted area, or 40 percent if a playground acceptable to DPR is provided. This may include trees and landscaping, as well as accessible lawns and turf that may be used for playing fields. It is expected that this provision would not preclude the two-acre central park from being primarily developed with active recreational uses, as the required planted area could include areas appropriate for such uses, and a playground, if provided, would be used for active recreation. Furthermore, as mentioned above, other open spaces within the District may contain active recreational uses; therefore, this modification would not affect the provision of approximately 1.6 acres of active recreational use within the District. Therefore, the modifications with respect to open space provisions are consistent with the open space analysis presented in the FGEIS, which concluded that the Plan would not have any significant adverse impact on open space resources.

SHADOWS

The modification to require full articulation of the tops of residential buildings does not affect the assumptions used in the Shadows analysis, or the conclusions presented in the FGEIS.

As described above, this modification could potentially result in minor changes to the illustrative site plan shown in the FGEIS. Specifically, it could result in a slight decrease in the floor area of residential towers subject to this modification, and a slight increase in the floor area of some buildings in the District that do not contain residential towers. However, as the site plan provided in the FGEIS is illustrative, the shadows study conservatively analyzed the maximum permitted building heights throughout the District, as established by the Federal Aviation Administration and the Port Authority of New York and New Jersey, due to the proximity of LaGuardia Airport. Therefore, the modification to require full articulation of the tops of residential buildings does not affect the Shadows analysis, or the conclusions presented in the FGEIS that the Plan would not have any significant adverse impacts related to shadows.

URBAN DESIGN AND VISUAL RESOURCES

The modifications to the proposed zoning regulations, as described above, do not affect the analysis of the proposed Plan's effect on urban design or visual resources, or the conclusions presented in the FGEIS.

The modifications reflect minor changes or clarifications to some of the design elements prescribed in the District. With the proposed modifications, the proposed Plan would continue to significantly alter the urban design of the District and would ultimately have a beneficial impact on the overall appearance and feel of the District. The modification to require full articulation of the tops of residential buildings is expected to better articulate the tops of towers and form a more varied skyline within the District. Overall, these modifications would not result in any changes to the assessments regarding street pattern and hierarchy, block shapes, building uses, bulk, and type, building arrangements, streetscape, topography and natural features, or to visual resources. Therefore, the Plan with the modifications would not have significant adverse impacts on the urban design and visual resources of the District and the surrounding study area.

AIR QUALITY

The modification to require full articulation of the tops of residential buildings does not affect the assumptions used in the Stationary Source Analysis, or the conclusions presented in the FGEIS.

As described above, this modification could potentially result in a slight decrease in the floor area of residential towers subject to this modification, and as a result, a slight increase in the floor area of some buildings in the District that do not contain residential towers. However, this change does not affect the assumptions used in the analysis of heating, ventilation, and air conditioning (HVAC) presented in the FGEIS. As the site plan provided in the FGEIS is illustrative, very conservative assumptions were made regarding the gross square foot area and stack heights analyzed to account for a range of possible development sizes and locations. The HVAC analysis assumed the maximum permitted development envelope and maximum permitted height for all buildings in the District. Based on the results of the conservative HVAC screening analysis, E-designations would be placed on all privately-owned lots within the District regarding fuel use and the placement of HVAC exhaust stacks, and these requirements would be incorporated in a restrictive declaration as property is disposed of to the developer of the Plan, subject to modification based on further analysis of a specific development program. Therefore, the modification to require full articulation of the tops of residential buildings does not affect the text of the E-designations or the conclusions presented in the FGEIS that with the specified controls, the Plan would not have any significant adverse air quality impacts related to stationary sources.

CONCLUSIONS

The proposed modifications to the Special Willets Point District zoning regulations would not result in any significant adverse environmental impacts that were not identified in the FGEIS. Five of the seven modifications do not have the potential to affect any of the environmental analyses in the FGEIS. The modification to require full articulation of the tops of residential buildings could result in minor changes to the illustrative site plan shown in the FGEIS but would have no substantive impact on the environmental analysis areas examined in the FGEIS, including Shadows, Urban Design and Visual

Resources, and Air Quality, which are generally the environmental areas most likely to be affected by changes to building height and form. The modifications regarding open space provisions are consistent with the open space analysis presented in the FGEIS, which concluded that the Plan would not have any significant adverse impact on open space resources. None of the special district text modifications would result in significant adverse environmental impacts that were not identified in the FGEIS.

Robert R. Kulikowski, Ph.D.

Assistant to the Mayor

September 23, 2008

Date:

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

Technical Memorandum for the Willets Point Development Plan FGEIS

CEQR Number 07DME014Q TM002

Updated Projected Public School Pupil and Day Care Ratios, New Phase II Environmental Site Investigation (ESI) Information, and New Business Relocation Plans

November 13, 2008

A. INTRODUCTION

The Office of the Deputy Mayor for Economic Development issued a Notice of Completion for the Willets Point Development Plan Final Generic Environmental Impact Statement (FGEIS) on September 12, 2008. Under the proposed Plan, the approximately 61-acre Willets Point Development District (District) would be redeveloped with up to 8.94 million gross square feet of residential, retail, hotel, convention center, entertainment, commercial office, community facility, open space, and parking uses. The Plan would result in a change to the underlying zoning of the District from an existing M3-1 district (and a small area zoned R3-2) to a C4-4 district, and would include the creation of an Urban Renewal Plan and a zoning Special District.

Subsequent to the issuance of the FGEIS, the City Planning Commission proposed several modifications to the Special Willets Point District zoning regulations. These modifications were described, and their potential for significant adverse environmental impacts examined, in a technical memorandum dated September 23, 2008. The City Planning Commission voted in favor of the proposed Plan with those modifications on September 24, 2008.

Since the City Planning Commission vote, new information related to projected school and day care populations has become available. Specifically, the New York City School Construction Authority (SCA) has updated the pupil generation rates for the projection of school children, which affect the projected enrollment in public schools in the Community School District serving the Willets Point Development District. These updated pupil generation rates replace the rates in the *2001 New York City Environmental Quality Review (CEQR) Technical Manual* (Table 3C-2). In addition, New York City Department of City Planning (DCP) has released updated generation rates for the projection of children eligible for publicly funded day care facilities.

There is also new information with respect to the amount of affordable housing to be provided in the District. In the FGEIS, it was assumed that 20 percent of the proposed units would be reserved for households earning between 60 percent and 130 percent of the U.S. Department of Housing and Urban Development (HUD) Income Limit for New York City. It is now anticipated that 35 percent of the

proposed units would be affordable. Of the affordable units, 60 percent would be reserved for households earning at or below 60 percent of the HUD Income Limit for New York City, and 40 percent would be reserved for households earning up to 130 percent of the HUD Income Limit for New York City.

In addition, there is new information related to environmental conditions on one of the properties located within the District. A Phase II environmental site investigation (ESI) was conducted in November, 2008 for Block 1822, Lot 17.

Finally, the City recently has reached individual agreements to purchase several properties in Willets Point from their owners. As part of its ongoing relocation planning effort, the City has identified viable relocation sites for five of these businesses. It is currently anticipated that three of these five businesses would be accommodated on a new relocation site in College Point, which was not previously analyzed as part of FGEIS Chapter 28, "Potential Effects of Acquisition and Relocation," and that two would be accommodated on a site in College Point which was analyzed as part of the FGEIS, but would undergo modifications to accommodate these additional businesses.

As described in the New York State Department of Environmental Conservation's SEQRA regulations, 6 NYCRR §§617.9(a)(7)(i)(a), (b), and (c), and the *2001 CEQR Technical Manual*, the lead agency may require the preparation of a supplemental EIS if there are significant adverse environmental impacts not addressed or inadequately addressed in the EIS that arise from changes proposed for the project; newly discovered information; or a change in circumstances related to the project. This Technical Memorandum evaluates the effects of the changes in SCA's pupil generation rates and DCP's day care eligible children generation rate, assesses the additional demand for school seats and day care slots that would be introduced by the proposed Plan using the new generation rates, and assesses whether these changes would result in new or different significant adverse environmental impacts not previously identified in the FGEIS. The Technical Memorandum also summarizes findings from the recent Phase II ESI and gauges the consistency of these findings with those described in the FGEIS, and assesses whether the new business relocation plans would have the potential to result in significant adverse environmental impacts.

The analysis concludes that neither the new business relocation plans, additional environmental information, nor the newly available updated generation rates would result in significant adverse environmental impacts that were not identified in the FGEIS.

B. SCHOOL ENROLLMENT AND CAPACITY PROJECTIONS

In November 2008, the SCA released updated public school generation rates for the projection of school children, in conjunction with the release of its new Five-Year (2010-2014) Capital Plan. The capital plan is based on student generation rates (i.e., number of school-age children per household) that differ from those used by SCA in the past, and those used in the FEIS based on *2001 CEQR Technical Manual* guidelines.

Using the latest SCA school children generation rates, this Technical Memorandum revisits the FGEIS analysis of the proposed Plan's potential impacts on public schools. In this analysis, enrollment projections were updated by applying the new SCA student generation rates to known No Build projects as well as to the residential units proposed under the proposed Plan and in the No Convention Center Scenario to determine how many additional school children would be introduced.

As reflected in the technical analysis that follows, with the provision of additional school seats as part of the proposed Plan, this change in generation rates would not result in any significant adverse environmental impacts that were not identified in the FGEIS.

UPDATED ENVIRONMENTAL CONDITIONS

PROPOSED PLAN

In the FGEIS, the analysis of the proposed project's effect on public schools relies on student generation rates provided in Table 3C-2 of the *2001 CEQR Technical Manual*. These rates are used to estimate the

number of school age children generated per household given the location (by borough) and affordability level of new residential development. The updated SCA student generation rates account for differences by borough but do not differentiate by income mix. [1]

As shown in Table 1, based on the student generation rates presented in Table 3C-2 of the *2001 CEQR Technical Manual*, the proposed Plan would generate 858 elementary school students, 418 intermediate school students, and 187 high school students. Based on the updated SCA student generation rates, the proposed plan would generate 1,540 elementary school students, 660 intermediate school students, and 770 high school students. This is an additional 682, 242, and 583 elementary, intermediate, and high school students, respectively, than disclosed in the FGEIS.

Table 1
Estimated Number of Students Generated in Study Area
Future with the Proposed Plan

School	FEIS Student Generation[1]	Updated SCA Student Generation[2]	Difference
PS	858	1,540	682
IS	418	660	242
HS	187	770	583
Totals	1,463	2,970	1,507

Notes:

1. Based on student generation rates provided in the *2001 CEQR Technical Manual* (0.15 elementary students, 0.07 intermediate students, and 0.03 high school students per high-income household; 0.18 elementary students, 0.10 intermediate students, and 0.05 high school students per low-moderate income household).
2. Based on updated SCA student generation rates for Queens (0.28 elementary students, 0.12 intermediate students, and 0.14 high school students per household).

As described in the FGEIS, the Willets Point Development Plan includes provision of a new school that would be designed to alleviate the shortfall for seats projected to be generated by the proposed Plan within Zone 2 of Community School District 25. The FGEIS analysis concluded that an 850-seat elementary school would be provided to accommodate the project-generated shortfall, and that the proposed Plan would not result in any significant adverse impacts on public elementary schools.

Using the updated SCA student generation rates, there would be additional demand introduced by the proposed plan. As a result, the proposed elementary school would need to be sized with greater capacity in order to accommodate the project-generated shortfall. In order to meet the project-generated shortfall in elementary school seats within Zone 2 of Community School District 25, the proposed Plan would need to provide 1,540 elementary seats, rather than the 850 seats analyzed in the FGEIS.

With respect to intermediate schools, the FGEIS analysis showed that in the future with the proposed Plan, intermediate schools in the one-mile study area were operating above capacity (with a shortfall of 26 seats), but intermediate schools within Zone 2 of CSD 25 and CSD 25 were operating below capacity with 466 and 3,162 available seats, respectively. The FGEIS analysis concluded that the shortfall of 26 seats could be easily be accommodated by the significant surplus of school seats available in both Zone 2 and throughout CSD 25. Therefore, the proposed Plan would not result in any significant adverse impacts on public intermediate schools.

The increased student population resulting from the updated SCA student generation rates would increase the deficiency of intermediate seats within the one-mile area but would not result in a shortfall of seats in

[1] Although the anticipated percentage of affordable units has increased since the FGEIS was issued, this change does not affect the anticipated number of students generated by the proposed Plan or No Convention Center Scenario, as the updated SCA student generation rates do not differentiate by income mix.

Zone 2 or CSD 25. The proposed Plan would generate 660 intermediate students. There is one intermediate school in the one-mile study area (I.S. 237), which is also located with Zone 2. If all the students generated by the proposed Plan were to attend this school, the one-mile study area would have a shortfall of 396 seats and operate at 127 percent of capacity. However, intermediate students would be able to attend other schools located within the zone. In the future with the proposed Plan, intermediate schools within Zone 2 would have available capacity to accommodate all of the additional students. In Zone 2, all 660 students generated by the proposed Plan could be accommodated by the 780 available seats, with 120 available seats remaining. Thus, in the future with the proposed Plan, intermediate schools in Zone 2 of CSD 25 would operate at 95 percent of capacity. In CSD 25, intermediate schools in the future with the proposed Plan would have 2,791 available seats and would operate at 64 percent of capacity. Therefore, with the increased student population resulting from the updated SCA student generation rates, the proposed Plan would not result in any significant adverse impacts on public intermediate schools.

With respect to high schools, the FGEIS analysis showed that in the future with the proposed Plan, high schools borough-wide would operate below capacity (with 4,523 available seats). The FGEIS analysis concluded that the increased high school enrollment attributable to the proposed Plan would not result in significant adverse impacts on high schools. The updated SCA student generation rates would result in 770 high school students, compared to 187 high school students analyzed in the FGEIS. Even with this increased student population high schools would continue to operate below capacity (with 3,940 available seats). Therefore, with the increased student population resulting from the updated SCA student generation rates, the proposed Plan would not result in any significant adverse impacts on public high schools.

NO CONVENTION CENTER SCENARIO

The FGEIS analysis showed that in the future with the proposed action, the No Convention Center Scenario would generate 913 elementary school students, 445 intermediate school students, and 199 high school students. As shown in Table 2, with the updated SCA student generation rates, the No Convention Center Scenario would generate 1,638 elementary school students, 702 intermediate school students, and 819 high school students. This is an additional 725, 257, and 620 elementary, intermediate, and high school students, respectively, than disclosed in the FGEIS.

As described in the FGEIS, the proposed Plan includes provision of a new school that would be designed to alleviate the shortfall in seats projected to be generated by the No Convention Center Scenario within Zone 2 of Community School District 25. The FGEIS analysis showed that a 900-seat school would need to be provided to accommodate the project-generated shortfall, and that the No Convention Center Scenario would not result in any significant adverse impacts on public elementary schools.

Using the updated SCA student generation rates, there would be additional demand introduced by the No Convention Center Scenario. As a result, the proposed elementary school would need to be sized with greater capacity in order to accommodate the project-generated shortfall. In order to meet the project-generated shortfall in elementary school seats within Zone 2 of Community School District 25, the No Convention Center Scenario would need to provide 1,640 elementary seats, rather than the 900 seats analyzed in the FGEIS.

Table 2
Estimated Number of Students Generated in Study Area
Future with the No Convention Center Scenario

School	FEIS Student Generation[1]	Updated SCA Student Generation[2]	Difference
PS	913	1,638	725
IS	445	702	257
HS	199	819	620
Total	1,557	3,159	1,602

Notes:

1. Based on student generation rates provided in the *2001 CEQR Technical Manual* (0.15 elementary students, 0.07 intermediate students, and 0.03 high school students per high-income household; 0.18 elementary students, 0.10 intermediate students, and 0.05 high school students per low-moderate income household).

2. Based on updated SCA student generation rates for Queens (0.28 elementary students, 0.12 intermediate students, and 0.14 high school students per household).

With respect to intermediate schools, in the future with the No Convention Center Scenario, the FGEIS analysis showed that intermediate schools in the one-mile study area would operate above capacity (with a shortfall of 53 seats), but the intermediate schools within Zone 2 of CSD 25 and CSD 25 would operate below capacity with 439 and 3,135 available seats, respectively. The FGEIS analysis concluded that the shortfall of 53 seats could be easily be accommodated by the significant surplus of school seats available in both Zone 2 and throughout CSD 25. Therefore, the No Convention Center Scenario would not result in any significant adverse impacts on public intermediate schools.

The increased student population resulting from the updated SCA student generation rates would increase the deficiency of intermediate seats within the one-mile area but would not result in a shortfall of seats in Zone 2 or CSD 25. The No Convention Center Scenario would generate 702 intermediate students. If all the students generated by the No Convention Center Scenario were to attend I.S. 237 (the only intermediate school in the one-mile study area), the one-mile study area would have a shortfall of 438 seats and operate at 130 percent of capacity. However, as stated above, intermediate students would be able to attend other schools located within the zone. In the future with the No Convention Center Scenario, intermediate schools within Zone 2 would have available capacity to accommodate all of the additional students. In Zone 2, all 702 intermediate students generated by the No Convention Center Scenario could be accommodated by the 780 available seats, with 78 available seats remaining. Thus, with the No Convention Center Scenario, intermediate schools in Zone 2 would operate at 97 percent of capacity. In CSD 25, intermediate schools would have 2,749 available seats and operate at 65 percent of capacity. Therefore, with the increased student population resulting from the updated SCA student generation rates, the No Convention Center Scenario would not result in any significant adverse impacts on public intermediate schools.

With respect to high schools, the FGEIS analysis showed that in the future with the No Convention Center Scenario, high schools borough-wide would operate below capacity (with 4,511 available seats). The FGEIS analysis concluded that the increased high school enrollment attributable to the No Convention Scenario would not result in significant adverse impacts on high schools. The updated SCA student generation rates would result in 819 high school students rather 199. Even with this increased student population high schools would continue to operate below capacity (with 3,891 available seats). Therefore, with the increased student population resulting from the updated SCA student generation rates, the No Convention Center Scenario would not result in any significant adverse impacts on public high schools.

CONCLUSION

As described above, the updated SCA student generation rates are substantially higher than the generation rates used in the FGEIS, which were based on *2001 CEQR Technical Manual* guidelines and are consistent with the figures previously used by SCA. As a result, the estimated number of students introduced to the three school study areas in the future without and the future with the proposed Plan are higher than presented in the FGEIS. In order to meet the project-generated shortfall in elementary school seats, the proposed Plan and No Convention Center Scenario would need to include 1,540 and 1,640 seats, respectively, as compared to the 850 and 900 seats described in the FGEIS. With respect to intermediate seats, there is sufficient available capacity within Zone 2 to accommodate all of the students generated by the proposed Plan and No Convention Center Scenario. No additional high schools seats would be needed as there are a sufficient number of high school seats available in Queens to accommodate the project-generated demand.

With the provision of these school seats, neither the proposed Plan nor the No Convention Center Scenario would result in significant adverse public school impacts. Should the proposed Plan be approved, the City would ensure that the elementary and intermediate seats required to alleviate the project-generated shortfall would be constructed within the District, either by requiring a future developer to construct the necessary school or schools as part of the developer's agreement, or by including the necessary funds in the SCA's Five-Year Capital Plan.

C. DAY CARE ENROLLMENT AND CAPACITY PROJECTIONS

In November 2008, DCP released updated generation rates for the projection of children eligible for publicly funded day care facilities. The new generation rates differentiate between the projected number of children under age 6 that are eligible for publicly funded day care programs, and the projected number of children, aged 6 to 12, that are eligible for publicly funded after school day care programs.

Using the latest DCP day care generation rates, this Technical Memorandum revisits the FGEIS analysis of the proposed Plan's potential impacts on day care facilities. In this analysis, the new DCP day care generation rates were applied to the residential units proposed under the proposed Plan and in the No Convention Center Scenario to determine how many more day care eligible children would be introduced. As discussed in the FGEIS, there are a substantial number of new developments expected to be complete by 2017 independent of the proposed Plan; many of these projects will contain residential uses and may include affordable housing. Therefore, using the updated DCP day care generation rates, there may be a greater demand for day care slots in the future without the proposed Plan and a corresponding higher utilization of day care resources.

As stated in the FGEIS, both the proposed Plan and the No Convention Center Scenario could result in significant adverse impacts on publicly funded day care centers in the study area. To mitigate this potential impact, NYCEDC would require as part of the developer's agreement that a future developer consult with the Administration for Children's Services (ACS) to determine the appropriate way to meet demand for day care services generated by development in the District. Appropriate measures may include adding capacity at existing facilities or the development of a new day care facility within or near the area surrounding the District. As reflected in the technical analysis that follows, with this requirement, the change in generation rates would not result in any significant adverse environmental impacts that were not disclosed in the FGEIS.

UPDATED ENVIRONMENTAL CONDITIONS

PROPOSED PLAN

In the FGEIS, the analysis of the proposed project's effect on day care facilities relies on generation rates provided in Table 3C-4 of the *2001 CEQR Technical Manual*. These rates are used to estimate the number of children eligible for public day care facilities per household given the location (by borough) and the

number of low- income and low- to moderate-income units within a residential development (providing different generation rates for these two housing categories). The updated DCP generation rates differentiate by borough and apply to the total number of low-income and low- to moderate-income units within a residential development, but they do not provide different generation rates for these two affordability levels. In addition, the new generation rates differentiate between the projected number of children under age 6 that are eligible for publicly funded day care programs, and the projected number of children, aged 6 to 12, that are eligible for publicly funded after school day care programs.

In the FGEIS, it was assumed that 20 percent of the proposed units would be affordable, and that the proposed Plan would include approximately 1,100 affordable housing units. Based on the generation rates presented in Table 3C-4 of the *2001 CEQR Technical Manual*, the proposed Plan would generate approximately 198 children under the age of 12 who could be eligible for publicly funded day care.[2]

It is now anticipated that 35 percent of the proposed units would be affordable, and that the proposed Plan would include 1,925 affordable units. Based on the updated information on affordability and the new DCP generation rates, the proposed Plan would generate approximately 751 children under the age of 6 who could be eligible for publicly funded day care, and approximately 347 children aged 6 to 12 who could be eligible for publicly funded after school day care programs.[3]

The 751 children under the age of 6 who would be eligible for publicly funded day care programs would represent an increase of 553 children over the number of public day care eligible children presented in the FGEIS. The proposed project could also generate 347 children, aged 6 to 12, who would also be eligible for publicly funded day care services. Because these children are expected to be attending school during most of the day, their need would be for after school care. Eligible children who qualify for ACS vouchers or other programming for after school care could be served by Family Child Care Networks or school-age slots in ACS contracted day care facilities, New York City Department of Youth and Community Development's Out of School Time programs, and/or DOE approved after school programs.

NO CONVENTION CENTER SCENARIO

In the FGEIS, it was assumed that 20 percent of the proposed units would be affordable, and that the No Convention Center Scenario would include approximately 1,170 affordable housing units. Based on the generation rates presented in Table 3C-4 of the *2001 CEQR Technical Manual*, the No Convention Center Scenario would generate approximately 211 children under the age of 12 who could be eligible for publicly funded day care.[4]

It is now anticipated that 35 percent of the proposed units would be affordable, and that the No Convention Center Scenario would include 2,048 affordable units. Based on the new DCP generation rates, the No Convention Center Scenario would generate approximately 799 children under the age of 6 who could be eligible for publicly funded day care, and approximately 369 children aged 6 to 12 who could be eligible for publicly funded after school day care programs.[5]

The 799 children under the age of 6 who would be eligible for publicly funded day care programs would represent an increase of 588 children over the number of public day care eligible children presented in the

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[2] Based on the CEQR generation rates for Queens (0.20 children per low-income household and 0.18 children per low- to moderate-income per household).

[3] Based on updated DCP day care generation rates for Queens (0.39 children under age 6 per low- or low-moderate income household and 0.18 children aged 6 to 12 per low- or low-moderate income household).

[4] Based on the CEQR generation rates for Queens (0.20 children per low-income household and 0.18 children per low- to moderate-income per household).

[5] Based on updated DCP day care generation rates for Queens (0.39 children under age 6 per low- or low-moderate income household and 0.18 children aged 6 to 12 per low- or low-moderate income household).

FGEIS. The proposed project could also generate 369 children, aged 6 to 12, who would be eligible for publicly funded after school day care services. However, as described above, eligible children who qualify for ACS vouchers or other programming for after school care could be served by a number of available programs, including Family Child Care Networks, school-age slots in ACS contracted day care facilities, New York City Department of Youth and Community Development's Out of School Time programs, and/or DOE approved after school programs.

CONCLUSION

As described above, the updated DCP generation rates for public day care eligible children are substantially higher than the generation rates used in the FGEIS, which were those in Table 3C-4 of the *2001 CEQR Technical Manual*. As a result of the updated DCP generation rates, the estimated number of children eligible for publicly funded day care programs introduced to the study area in the future without and the future with the proposed Plan is considerably higher than presented in the FGEIS, and additional day care capacity would be needed.

The FGEIS concluded that both the proposed Plan and the No Convention Center Scenario could result in significant adverse impacts on publicly funded day care facilities. Utilizing the DCP's updated generation rates, both the proposed Plan and the No Convention Center Scenario would continue to have the potential to result in significant adverse impacts on publicly funded day care facilities. Thus, the change in generation rates would not result in any significant adverse environmental impacts that were not disclosed in the FGEIS.

As described in the FGEIS, possible mitigation measures include adding capacity to existing facilities or providing a new day care facility within or near the area surrounding the District. To mitigate the potential impact on day care facilities, NYCEDC would require as part of the developer's agreement that a future developer consult with ACS to determine the appropriate way to meet demand for day care services generated by development in the District.

D. HAZARDOUS MATERIALS

A subsurface investigation of Block 1822, Lot 17 was recently conducted by HDR, P.C. (Limited Phase II Site Investigation Report, DRAFT November 2008). The investigation consisted of a geophysical study aimed at identifying buried tanks or structures (though this effort was greatly limited by surface storage) and installation of six borings from which six soil and five groundwater samples were collected and laboratory analyzed.

The borings were generally advanced to a depth of 15 feet and the water table was encountered at approximately five to seven feet below the surface. Asphalt, where present, was generally degraded. Historic fill materials (such as wood, brick, and ceramic) were present, but petroleum odors were found in only one boring (near the location of the former underground fuel tanks). A slight sheen was noticed in the groundwater from this and one other location. The samples collected near the former tanks location showed evidence of gasoline contamination in both the soil and the groundwater. The sampling results at other locations were generally consistent with those found sampling historical fill material, though one other location (near the only identified anomaly from the geophysical study) showed evidence of lower levels of gasoline and polychlorinated biphenyls (PCBs).

The findings from this Phase II ESI are consistent with the FGEIS, which anticipated that petroleum contamination and historical fill are likely to be widespread across the District. The FGEIS outlined measures to avoid the potential for significant adverse impacts from hazardous materials, including institutional controls that would require future construction to take place in accordance with NYC Department of Environmental Protection (DEP)-approved work plans addressing both known and unexpectedly encountered contamination, and appropriate design measures such as site capping and

importation of fill. The Phase II ESI findings for Lot 17 confirm the appropriateness of these measures described in the FGEIS.

E. BUSINESS RELOCATION PLANS

Since issuance of the FGEIS, the City has reached several individual agreements to purchase properties in Willets Point from their owners. As part of its ongoing relocation planning effort, to date the City has identified viable relocation sites for five businesses. These are discussed and evaluated in this analysis.[6]

Since the FGEIS, the City has identified one new relocation site and proposes modifications to a relocation site that was assessed in the FGEIS, in Chapter 28, "Potential Effects of Acquisition and Relocation." As currently proposed, these two potential relocation sites would accommodate five relocated businesses. The relocation properties consist primarily of City-owned land, but would also require acquisition of one privately owned property. Table 3 and Figure 1 show the two potential sites for business relocation. Site 1 would house two relocated businesses and Site 2 would house three relocated businesses.

Table 3
Relocation Sites and Potential Uses

Relocation Site	Location	Existing Use	Potential Use
1	29th Avenue and 122nd Street College Point, Queens Block 4317, Lots 1, 20, and 60	Asphalt manufacturing plant	Two construction contracting businesses in northern portion of site
			Asphalt manufacturing plant relocated to southern portion of site
2	College Point Boulevard and 31st Avenue, College Point, Queens Block 4356, part of Lot 30; Block 4357, part of Lot 1; Block 4358, part of Lot 1; and Block 4359, part of Lot 1	New York Police Department (tow pound)	Wholesale dealer in used auto parts
			Iron fabricator
			Plumbing supply distributor

POTENTIAL RELOCATION SITE—QUEENS BLOCK 4317, LOTS 1, 20, AND 60

Modifications are proposed to one of the potential relocation sites described in Chapter 28 of the FGEIS. This potential relocation site, referred to as Site 2 in the FGEIS, is located at 122nd Street and 29th Avenue in College Point, Queens. Previously, it was expected that the site would consist of Block 4317, Lots 1 and 20, with a lot area of approximately 45,750 square feet. As described in the FGEIS, it was expected that an approximately 8,000-square-foot, one-story building would be constructed to accommodate the relocated businesses, including a wholesaler and dealer in used auto parts. The 8,000-square-foot building would house office space and another structure would be built for parts storage. Access to the site would likely be provided from 29th Avenue. It was expected that the existing asphalt manufacturing plant on the site would move and consolidate with the rest of that company's operations on a neighboring property.

Since the FGEIS was published, this relocation site and its potential future uses have been modified. The site now consists of Block 4317, Lot 60, in addition to Lots 1 and 20. The total lot area is 78,800 square feet. Lot 60 is currently privately-owned, and would require acquisition by the City to facilitate the

[6] Since the FGEIS, the City has entered into contracts to purchase the following Willets Point properties: Parts Authority (Block 1820, Lot 1); WP Property LLC (Block 1824, Lots 21, 28, and 40); House of Spices (Block 1833, Lot 300). No relocation packages have been determined for the businesses currently operating on these properties.

business relocation. The existing asphalt manufacturing plant would remain on the site, but would be relocated and would occupy an approximately 38,800-square-foot area on the southern portion of the site. Although plans are not yet final, it is currently anticipated that the northern portion of the site would be divided into two, 20,000-square-foot parcels, and would be occupied by two construction contracting operations. Both businesses would contain small administration buildings and both enclosed and open storage for construction equipment. One of the businesses would occupy a one-story, 5,000-sf building in the center of the site and may contain a one-story, 9,400-sf enclosed storage structure. The second business would occupy two one-story buildings on the northern portion of the site, containing approximately 4,600 sf and 2,930 sf, and a one-story, 5,500-sf enclosed storage structure. New curb cuts would be required on 28th Avenue and 122nd Street to provide access to these businesses. It is assumed that if this site is not used to house two relocated businesses, the asphalt plant would be relocated to the southern portion of the site and the northern portion of the site would be redeveloped and occupied by other light manufacturing uses.

CHANGES TO POTENTIAL EFFECTS

LAND USE, ZONING, AND PUBLIC POLICY

The site is zoned M1-1, and there are a number of storage, distribution, and other light industrial uses in the area. There are also residential uses to the north of the site, directly across 28th Avenue and approximately 250 feet to the west, on the west side of 120th Street. As shown in Figure 1, the area surrounding the site is zoned primarily M1-1, M3-1, R4 and R5-B. This relocation site is located within the boundaries of the College Point II Urban Renewal Plan (URP) and within the College Point Corporate Park.

The use of the relocation site for two construction contracting businesses would be in keeping with the mix of existing land uses found in the area and would be consistent with the current regulations that apply in the M1-1 zoning district, as well as in the College Point II URP. Although the URP will expire in April 2009, it is anticipated that most of the use, bulk, parking and loading, and other regulations currently mandated by the URP will be continued through a new Special Purpose Zoning District. This proposed Special District will require discretionary approval and will undergo a separate public review and approval process. However, the anticipated uses on this relocation site would be consistent with these regulations, including required front yard and landscaping and planting requirements. Overall, the relocation of these businesses to the site would not be expected to result in significant adverse impacts to land use, zoning, or public policy.

SOCIOECONOMIC CONDITIONS

As described above, according to the *2001 CEQR Technical Manual*, a socioeconomic assessment should be conducted if a proposed project may reasonably be expected to create substantial socioeconomic changes. With the proposed relocation of two construction contracting businesses to the site, there would be no displacement of any residential populations, businesses, or employees, and the businesses would include less than 200,000 square feet of space. There would not be a substantial change in the surrounding neighborhood's overall character, and no change in market-rate rents in the surrounding neighborhood. Overall, there would not be a significant adverse impact on the socioeconomic character of the community surrounding the site.

COMMUNITY FACILITIES AND SERVICES

The potential relocation of two businesses to the site would not involve the development of any residential units. As such, no further analysis is required and the proposed action would not result in any significant adverse impacts to community facilities and services.

OPEN SPACE

The *2001 CEQR Technical Manual*'s threshold for a detailed analysis of open space is an expected population increase of 200 or more residents or 500 or more employees. The relocation of two construction contracting businesses would not result in any residential development and would result in far less than 500 employees. Therefore, there would not be a significant adverse impact to open space and no further analysis is necessary.

SHADOWS

As described above, one-story office and storage buildings would be constructed to accommodate the relocated businesses. None of these buildings is expected to be 50 feet or greater in height and would not be immediately adjacent to a park, historic resource or important natural feature. Therefore, according to the guidelines of the *2001 CEQR Technical Manual,* a detailed analysis is not required and there would not be a significant adverse shadow impact.

HISTORIC RESOURCES

LPC has determined that the relocation site is not sensitive for potential archaeological resources. Therefore, any work on the site would not have any effect on archaeology and there would not be a significant adverse impact.

Study areas for architectural resources are determined based on the area of potential effects for construction-period impacts, such as ground-borne vibrations, and on the area of potential effects for visual or contextual effects. There are no architectural resources on the site or in a 400-foot radius from the site. As there are no architectural resources on the site or in the surrounding area, the proposed relocation of the two businesses to the site would have no adverse direct or indirect impacts on architectural resources.

URBAN DESIGN AND VISUAL RESOURCES

The site is located in a mixed-use context within the College Point Corporate Park that includes distribution, manufacturing, residential, and other uses. There are no visual resources on the site or in the surrounding area. There would be no significant impacts to the urban design of the site itself or the surrounding area. The proposed uses would generally be in keeping with the surrounding area, and significant adverse impacts on urban design or visual resources are not anticipated.

NEIGHBORHOOD CHARACTER

The proposed use would be consistent with the existing neighborhood character, where industrial buildings, storage facilities, residences, and other uses are all found. The proposed use would be consistent with those permitted under zoning and in keeping with the mixed-use character of the area. The proposed relocation of two construction contracting businesses would not result in any significant adverse impacts to land use, traffic, noise, air quality, or any of the other elements that contribute to neighborhood character. Therefore, there would not be a significant adverse impact to neighborhood character.

NATURAL RESOURCES

As described above, a natural resources assessment is conducted when a natural resource is present on or near a site and when a proposed project involves the disturbance of that resource. The relocation site is located in a well-developed light industrial and residential part of Queens, and there are no natural resources on or adjacent to the site. Therefore, the proposed action would not result in significant adverse impacts to natural resources, and no further analysis is required.

HAZARDOUS MATERIALS

A Phase I Environmental Site Assessment (ESA) was performed by TRC Environmental Corporation (TRC), dated June 2008, for Lots 1 and 20 of the relocation site. Previous reports addressing Lot 60,

including an Investigation Summary report dated January 2005, were also reviewed and included in the 2008 ESA prepared by TRC.

The ESA identified that a spill was reported (Spill No. 98-11754) to the New York State Department of Environmental Conservation (NYSDEC) in 1998 related to the removal of petroleum-contaminated soil associated with the closure of six underground storage tanks on Lot 60. Since concentrations of petroleum-related compounds above regulatory criteria and separate phase product (i.e., petroleum floating on the water table) remained in the groundwater in the area of the former tanks, a Remedial Action Plan (RAP) and an Operation, Maintenance and Monitoring Plan were prepared by Enviro-Sciences Inc. (ESI) in February 2007. The remediation technology consisted of a dual phase (separate phase product and groundwater with dissolved contamination) high vacuum extraction system of recovery wells. Tri-annual Groundwater Monitoring Reports have been prepared and the January 2008 report indicated that the extent of separate phase product (at the northwest end of Lot 60, beneath the warehouse building and extending beneath the sidewalk of 28th Avenue) has remained generally the same since 2004.

A Methane Investigation of the relocation site (ESI, August 2007) identified levels of methane exceeding 5 percent (the "lower explosive limit" or "LEL" for methane—the lowest percentage of methane in air where combustion can occur) at two locations, including the south sidewalk of 28th Avenue and the north sidewalk of 29th Avenue. The methane may be attributable to the historical marshlands or the on-site septic system and cesspool.

To avoid the potential for any significant adverse impacts from hazardous materials, the City will use institutional controls (e.g., measures such as restrictive declarations or requirements in a future contract to sell the properties) requiring that future construction be in accordance with a RAP approved by the New York City Department of Environmental Protection (DEP) and, if applicable, NYSDEC. The RAP would include a Health and Safety Plan (HASP), which would detail measures to reduce the potential for exposure (e.g., dust control). The RAP would also include procedures to identify and manage known contamination (i.e., petroleum contamination and methane) unexpectedly encountered contamination, including testing, stockpiling, transporting and disposing of any contaminated soil, as well as managing groundwater and/or dewatering. In addition, the RAP would include appropriate design measures such as site capping and importation of fill, as well as measures for quality assurance /quality control. With these controls in place, it is expected that there would not be any significant adverse impacts from hazardous materials.

WATERFRONT REVITALIZATION PROGRAM

The relocation site is located within the coastal zone. The City's policy is to review a project's consistency with the WRP policies if a proposed project is located within a coastal zone area. A Coastal Assessment Form has been prepared that evaluates consistency with New York City Coastal Zone policies and, accounting for the modifications to this relocation site, it has been determined that the anticipated uses on the relocation site would generally be consistent with the WRP. The Coastal Assessment Form is attached.

INFRASTRUCTURE

The use of the relocation site by two construction contracting businesses would not result in an exceptionally large demand for water, nor would it generate unusually large sanitary or stormwater flows. Therefore, it would not result in any significant adverse impacts to infrastructure, and no further analysis is necessary.

SOLID WASTE AND SANITATION SERVICES

In accordance with the *2001 CEQR Technical Manual*, which states that actions involving construction of housing or other development generally do not require evaluation of solid waste and sanitation impacts unless they are unusually large, a detailed assessment of solid waste and sanitation services is not

warranted. The businesses proposed for relocation are fairly modest in size and will not use public solid waste and sanitation services. Any solid waste generated would be handled by commercial haulers. Overall, no significant adverse solid waste and sanitation services impacts are anticipated.

ENERGY

The proposed relocation of two construction contracting businesses would not result in a substantial demand for energy. According to the *2001 CEQR Technical Manual*, detailed assessments of energy impacts are limited to those actions that would significantly affect the transmission or generation of energy or that generate substantial indirect consumption of energy. The amount of energy that would be consumed would not be significant and would not place excessive burdens on the infrastructure used in the provision of energy. A detailed assessment of energy is not warranted, and there would not be any significant adverse impacts related to energy.

TRAFFIC AND PARKING

The *2001 CEQR Technical Manual* specifies that if a proposed action would generate fewer than 50 peak hour vehicle trips, it is unlikely to result in significant adverse traffic and parking impacts, and detailed quantified analyses are not warranted. Since the two relocated contracting businesses are conforming uses that could otherwise occupy the relocation site as-of-right, in accordance with CEQR guidelines, their trip generation would not be considered incremental trips to the surrounding traffic network. Therefore, there would not be a potential for any significant adverse traffic impacts. In addition, since all or most of the site vehicle activities would be accommodated on site, there would not be a demand for the area's parking resources or a potential for any significant parking impacts.

TRANSIT AND PEDESTRIANS

Transit and pedestrian analyses determine whether a proposed action can be expected to have a significant impact on public transportation facilities and services and on pedestrian flows. Most or all access to the site is expected to be in private vehicles and trucks. Thus, the occupation of the relocation site by two construction contracting businesses would not meet or exceed the thresholds established in the *2001 CEQR Technical Manual*. Therefore, there would not be any significant adverse impacts to transit or pedestrian conditions.

AIR QUALITY

The proposed reuse of the site is not expected to notably alter traffic conditions. The maximum hourly incremental traffic would not exceed the *2001 CEQR Technical Manual* air quality screening threshold of 100 peak hour vehicle trips. Since the businesses proposed for relocation would result in fewer than 100 new peak hour vehicle trips at nearby intersections in the study area, a quantified assessment of on-street mobile source emissions is not warranted. The primary source of on-site emissions would likely be from fossil fuel-fired heating and hot water systems.

The primary pollutant of concern when burning natural gas is nitrogen dioxide, and when burning oil, sulfur dioxide. Section 3Q of the *2001 CEQR Technical Manual* provides a screening methodology to determine the need for detailed analysis of the effects of a project's heating, ventilation, and air conditioning (HVAC) system on other buildings nearby. The nearest distance to a building of a similar or greater height with elevated receptors associated with a sensitive use was determined to be more than 50 feet from the proposed buildings on the relocation site. The FGEIS presented the results of an HVAC system analysis for 8,000 square feet of development. The updated HVAC system analysis conservatively considered the total development area on the site that would be heated (approximately 12,522 square feet in three separate buildings). As in the analysis presented in the FGEIS, it was assumed that the storage areas for the two businesses proposed for relocation would not require heating. Burning either fuel would not result in any significant stationary source air quality impact, since the proposed development on this site is below the maximum permitted size shown in Figure 3Q-3 in the *2001 CEQR Technical Manual*.

Therefore, the proposed reuse of the site would not result in any potential significant adverse air quality impacts.

NOISE

A noise analysis is appropriate if a project would generate any mobile or stationary sources of noise or would occur in an area with high ambient noise levels. According to the *2001 CEQR Technical Manual*, a doubling of traffic volumes over existing levels (in terms of passenger car equivalents, or PCEs) is the increase that would result in a perceptible change to mobile-source noise levels. Since there would not be a doubling of PCEs, there would not be a noticeable change in noise levels due to project-generated traffic. The proposed operations are not expected to result in unusually high operating noise levels and would not result in sensitive uses in an area with existing high noise levels. Overall, there would not be a significant adverse noise impact, and no further analysis is necessary.

CONSTRUCTION IMPACTS

As described above, work will be needed on the site in order to accommodate the business proposed for relocation. This is expected to include construction of one-story offices and storage structures. Construction would result in temporary disruptions to the surrounding community, such as occasional noise and dust. These effects would be short-term and would not be considered significant. The project would be required to comply with applicable control measures for construction noise. Construction noise is regulated by the New York City Noise Control Code and by noise emission standards for construction equipment issued by the U.S. Environmental Protection Agency. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction material be handled and transported in such a manner as to not create unnecessary noise. Hazardous materials, if any, will be handled and disposed of in accordance with all applicable regulations and in accordance with a Construction Health and Safety Plan.

PUBLIC HEALTH

As described above, the proposed relocation of two construction contracting businesses would not result in significant adverse impacts to air quality or noise. The proposed plan would not involve solid waste management practices that would attract vermin or pest populations. If it is determined upon further investigation that any hazardous materials conditions are present on the site, measures will be established to ensure that no hazardous materials impacts—including potential effects on public health—would occur.

POTENTIAL RELOCATION SITE—QUEENS BLOCKS 4356, 4357, 4358, AND 4359

Since the FGEIS, a potential relocation site has been identified at College Point Boulevard and 31st Avenue in College Point, Queens. The site is approximately 239,500 square feet (5.5 acres) and consists of Block 4356, part of Lot 30; Block 4357, part of Lot 1; Block 4358, part of Lot 1; and Block 4359, part of Lot 1. This site is entirely City-owned and the majority of the site is currently occupied by part of a New York Police Department (NYPD) tow pound, which extends north of the site to 28th Avenue. A two-story, approximately 17,000-square-foot building associated with the NYPD tow pound is located on the southeastern portion of the site. The strip of land on the western portion of the site, along College Point Boulevard, is currently vacant.

In the future, it is expected that this site would accommodate three relocated businesses, including an auto parts distributor, an iron fabricator, and a plumbing supply distributor. Although plans are not yet final, it is currently anticipated that the site would be divided into three parcels, each with separate entrances. On the eastern parcel, a one-story, 17,000-sf building, and a one-story, 23,000-sf enclosed storage structure would be constructed in the rear. Vehicular access to this parcel would be on 31st Avenue. On the southwestern parcel—at the corner of College Point Boulevard and 31st Avenue—two one-story buildings would be constructed, including a 10,000-sf building and 45,600-sf enclosed storage structure.

Vehicular access to this parcel would be located on College Point Boulevard and 31st Avenue. On the northwestern parcel, an approximately 60,000-sf building would be constructed. It is anticipated that the vehicular access to this parcel may consist of an entrance on College Point Boulevard and exit on 31st Avenue. Immediately adjacent to the site to the east is a stream that extends to the north and east of the site, and to the south of the site is diverted through covered (subsurface) channels connecting to Flushing Bay.

The City has proposed a plan to develop a new NYPD police academy in the area to the north of this potential relocation site, which is currently occupied by the NYPD tow pound. The new police academy, which is planned to be constructed by 2012, will include a 30-acre campus with 250 classrooms, 250 beds for visiting law enforcement agencies, firing ranges, indoor and outdoor tracks, and areas for simulated training activities. Given that the tow pound would relocate regardless of the proposed relocation of three Willets Point businesses to the site, it is assumed that if this site is not used to house three relocated businesses it would be redeveloped and occupied by other light manufacturing uses.

CHANGES TO POTENTIAL EFFECTS

LAND USE, ZONING, AND PUBLIC POLICY

The site is zoned M3-1, and the surrounding area primarily consists of light manufacturing uses and parking and vehicle storage. Approximately 240 feet to the east of the site there is a large institutional use—the Korea World Mission Center, which also houses the Full Gospel Christian School. The building is up to nine stories in height and contains approximately 132,500 sf. The area to the south is occupied by Crystal Window and Door Systems, a window and door manufacturer which occupied a three-story, 188,500-sf building. The parcel to the west of the site contains a ConEdison facility. The parcel to the southwest is expected to be developed with two printing facilities within the next two years, including Ares Printing and Packaging and the Graphic Communication Center. There are a mix of uses to the north of the site, along College Point Boulevard, including a hotel, Corona Auto, and United Rentals, which leases tools. As shown in Figure 1, the area surrounding the site is zoned primarily M3-1 and M1-1. This relocation site is located within the boundaries of the College Point II URP and within the College Point Corporate Park. As mentioned above, the City proposes to develop a new NYPD police academy by 2012 in the area immediately north of this potential relocation site, which is currently occupied by the tow pound. The new police academy will include classrooms, accommodations for visiting law enforcement agencies, firing ranges, indoor and outdoor tracks, and areas for simulated training activities.

The use of the relocation site for an auto parts distributor, an iron fabricator, and a plumbing supply distributor would be compatible with the mix of existing and planned land uses found in the area and would be consistent with the current regulations that apply in the existing zoning district, as well as in the College Point II URP. As described above, the URP will expire in April 2009, but it is anticipated that most of the use, bulk, parking and loading, and other regulations currently mandated by the URP will be continued through a new Special Purpose Zoning District. The anticipated uses on this relocation site would be consistent with these regulations, including required front yard and landscaping and planting requirements. In addition, the relocated businesses would be required to meet M1 performance standards, pursuant to the requirements of the URP and the proposed Special Purpose Zoning District. With these additional measures in place, the proposed use of this site for these three relocated businesses would be compatible with the existing institutional use to the east. Overall, the relocation of these businesses to the site would not be expected to result in significant adverse impacts to land use, zoning, or public policy.

SOCIOECONOMIC CONDITIONS

As described above, a socioeconomic assessment should be conducted if a proposed project may reasonably be expected to create substantial socioeconomic changes. Given that the tow pound would relocate regardless of the proposed relocation of three Willets Point businesses to the site, there would be no displacement of any residential populations, businesses, or employees. The proposed relocation of an auto parts distributor, an iron fabricator, and a plumbing supply distributor to the site would introduce less

than 200,000 square feet of space. There would not be a substantial change in the surrounding neighborhood's overall character, and no change in market-rate rents in the surrounding neighborhood. Overall, there would not be a significant adverse impact on the socioeconomic character of the community surrounding the site.

COMMUNITY FACILITIES AND SERVICES

The potential relocation of businesses to the site would not involve the development of any residential units. As such, no further analysis is required and the proposed action would not result in any significant adverse impacts to community facilities and services.

OPEN SPACE

The *2001 CEQR Technical Manual*'s threshold for a detailed analysis of open space is an expected population increase of 200 or more residents or 500 or more employees. The relocation of an auto parts distributor, an iron fabricator, and a plumbing supply distributor would not result in any residential development and would result in far less than 500 employees (based on the businesses' current operations, there are expected to be approximately 70 full-time employees). Therefore, there would not be a significant adverse impact to open space and no further analysis is necessary.

SHADOWS

As described above, one-story buildings would be constructed to accommodate the relocated businesses. These buildings are not expected to be 50 feet or greater in height and would not be immediately adjacent to a park, historic resource or important natural feature. Therefore, according to the guidelines of the *2001 CEQR Technical Manual,* a detailed analysis is not required and there would not be a significant adverse shadow impact.

HISTORIC RESOURCES

LPC has determined that the relocation site is not sensitive for potential archaeological resources. Therefore, any work on the site would not have any effect on archaeology and there would not be a significant adverse impact.

Study areas for architectural resources are determined based on the area of potential effects for construction-period impacts, such as ground-borne vibrations, and on the area of potential effects for visual or contextual effects. There are no architectural resources on the site or in a 400-foot radius from the site. As there are no architectural resources on the site or in the surrounding area, the proposed relocation of the business to the site would have no adverse direct or indirect impacts on architectural resources.

URBAN DESIGN AND VISUAL RESOURCES

The site is located in an area within College Point Corporate Park that includes warehouses, manufacturing, institutional, and other uses. There are no visual resources on the site or in the surrounding area. There would be no significant impacts to the urban design of the site itself or the surrounding area. The proposed use would generally be in keeping with the surrounding area, and significant adverse impacts on urban design or visual resources are not anticipated.

NEIGHBORHOOD CHARACTER

The proposed use would be consistent with the existing neighborhood character, where industrial buildings, storage facilities, institutional, and other uses are all found. The proposed use and development would be consistent with those permitted under zoning and the College Point II URP and in keeping with the primarily light industrial character of the area. The proposed relocation of an auto parts distributor, an iron fabricator, and a plumbing supply distributor would not result in any significant adverse impacts to land use, traffic, noise, air quality, or any of the other elements that contribute to neighborhood character. Therefore, there would not be a significant adverse impact to neighborhood character.

NATURAL RESOURCES

As described above, a natural resources assessment is conducted when a natural resource is present on or near a site and when a proposed project involves the disturbance of that resource. The relocation site is located in a well-developed light industrial part of Queens and primarily contains paved parking areas. A portion of the site was mapped in 1980 as freshwater Palustrine Emergent wetlands on the United States Department of Interior (USDOI) National Wetlands Inventory (NWI) map; however, wetlands are no longer present on the site. The relocation site is adjacent to a linear watercourse (i.e., a stream, also known as "Mill Creek") which flows through covered (subsurface) channels southwards to Flushing Bay. Despite the tidal influences on this stream, it is not a mapped NYSDEC tidal wetland. The stream adjacent to the site is also hydrologically connected to the former Flushing Airport site, located approximately ¼-mile to the northeast of the site, which contains NYSDEC and USDOI-mapped wetlands. The stream is currently separated from the site by fencing, which would remain in place with the proposed redevelopment of the site, and the stream would not be disturbed either during or after construction is complete.

Therefore, as regulated waters or wetlands are not present on the site and the proposed activity would not disturb the stream adjacent to the site, no significant adverse impacts to natural resources would result from the redevelopment of this site.

HAZARDOUS MATERIALS

Although construction plans for the relocation site are not yet finalized, it is anticipated that the existing building would be renovated and two additional buildings would be constructed, requiring subsurface disturbance. AKRF performed a Phase I Environmental Site Assessment (ESA) of the site in October, 2008 in accordance with ASTM Standard E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice*. The ESA included: a visual inspection of the site and surrounding area; a review of previous environmental reports regarding the site; a review of historical land-use maps for the site and adjacent properties; and a review of regulatory databases relating to use, generation, storage, treatment and/or disposal of hazardous materials.

The relocation site is mostly paved and used for storage of impounded vehicles, as part of a NYPD tow pound. A two-story concrete and brick building (constructed in 1992) is located on the southeast corner of the site, and used by the NYPD for administrative purposes, storage (including five 55-gallon drums of lubricant oils, other automotive and cleaning fluids, small containers of flammable liquids), and as a garage with two above-ground hydraulic lifts. An emergency generator with an integral diesel day tank is located outside of the northeastern portion of the building.

A Phase I ESA prepared by LiRo Engineers, Inc. (2007) for a larger site that included the relocation site identified several Recognized Environmental Conditions (RECs) associated with current and historic uses on the relocation site and adjacent areas. Prior testing of the parcel between the tow pound lot and College Point Boulevard revealed low levels of a variety of contaminants in soil and groundwater, with higher levels in the vicinity of College Point Boulevard that were likely migrating in a south to southeasterly direction on the site, and an additional 'contaminant plume' near 31st Avenue and College Point Boulevard, also reported to be migrating in a south to southeasterly direction.

In 2007, LiRo conducted a subsurface investigation that included collection of seven soil, two groundwater and seven methane samples from the relocation site. Soil sample results were consistent with historic fill materials. Groundwater sample results were consistent with gasoline as well as other compounds likely related to historic fill materials. Methane levels exceeding 5 percent (the "lower explosive limit" or "LEL" for methane—the lowest percentage of methane in air where combustion can occur) were detected in two of the seven samples.

Proposed construction on the relocation site could increase pathways for human exposure during demolition of existing structures (although given the structures were constructed in 1992, asbestos, lead

paint and PCBs are not anticipated), as well as during any excavation activities, should any subsurface contaminants (e.g., related to petroleum or historic fill materials) be encountered. To avoid the potential for any significant adverse impacts from hazardous materials, the City will use institutional controls (e.g., measures such as restrictive declarations or requirements in a future contract to sell the properties) requiring that future construction be in accordance with a RAP approved by DEP and, if applicable, NYSDEC. The RAP would include a HASP, which would detail measures to reduce the potential for exposure (e.g., dust control). The RAP would also include procedures to identify and manage known contamination (i.e., petroleum contamination and methane) unexpectedly encountered contamination, including testing, stockpiling, transporting and disposing of any contaminated soil, as well as managing groundwater and/or dewatering. In addition, the RAP would include appropriate design measures such as site capping and importation of fill, as well as measures for quality assurance /quality control. With these controls in place, it is expected that there would not be any significant adverse impacts from hazardous materials.

WATERFRONT REVITALIZATION PROGRAM

The relocation site is located within the coastal zone. The City's policy is to review a project's consistency with the WRP policies if a proposed project is located within a coastal zone area. A Coastal Assessment Form has been prepared that evaluates consistency with New York City Coastal Zone policies and it has been determined that the anticipated uses on the relocation site would generally be consistent with the WRP. The Coastal Assessment Form is attached.

INFRASTRUCTURE

The use of the relocation site by an auto parts distributor, an iron fabricator, and a plumbing supply distributor would not result in an exceptionally large demand for water, nor would it generate unusually large sanitary or stormwater flows. Therefore, it would not result in any significant adverse impacts to infrastructure, and no further analysis is necessary.

SOLID WASTE AND SANITATION SERVICES

In accordance with the *2001 CEQR Technical Manual*, which states that actions involving construction of housing or other development generally do not require evaluation of solid waste and sanitation impacts unless they are unusually large, a detailed assessment of solid waste and sanitation services is not warranted. The businesses proposed for relocation are fairly modest in size and will not use on public solid waste and sanitation services. Any solid waste generated would be handled by commercial haulers. Overall, no significant adverse solid waste and sanitation services impacts are anticipated.

ENERGY

The proposed relocation of an auto parts distributor, an iron fabricator, and a plumbing supply distributor would not result in a substantial demand for energy. According to the *2001 CEQR Technical Manual*, detailed assessments of energy impacts are limited to those actions that would significantly affect the transmission or generation of energy or that generate substantial indirect consumption of energy. The amount of energy that would be consumed would not be significant and would not place excessive burdens on the infrastructure used in the provision of energy. A detailed assessment of energy is not warranted, and there would not be any significant adverse impacts related to energy.

TRAFFIC AND PARKING

The *2001 CEQR Technical Manual* specifies that if a proposed action would generate fewer than 50 peak hour vehicle trips, it is unlikely to result in significant adverse traffic and parking impacts, and detailed quantified analyses are not warranted. As described above, the relocation site would otherwise be redeveloped and occupied by other light manufacturing uses if it is not used to accommodate the three relocated businesses. Since these businesses, including an auto parts distributor, an iron fabricator, and a plumbing supply distributor are conforming light manufacturing uses, in accordance with CEQR

guidelines, their trip generation would not be considered incremental trips to the surrounding traffic network. Therefore, there would not be a potential for any significant adverse traffic impacts. In addition, since all or most of the site vehicle activities would be accommodated on site, there would not be a demand for the area's parking resources or a potential for any significant adverse parking impacts.

TRANSIT AND PEDESTRIANS

Transit and pedestrian analyses determine whether a proposed action can be expected to have a significant impact on public transportation facilities and services and on pedestrian flows. Most or all access to the site is expected to be in private vehicles and trucks. Thus, the occupation of the relocation site by an auto parts distributor, an iron fabricator, and a plumbing supply distributor would not meet or exceed the thresholds established in the *2001 CEQR Technical Manual*. Therefore, there would not be any significant adverse impacts to transit or pedestrian conditions.

AIR QUALITY

The proposed reuse of the site is not expected to notably alter traffic conditions. The maximum hourly incremental traffic would not exceed the *2001 CEQR Technical Manual* air quality screening threshold of 100 peak hour vehicle trips. Since the proposed business would result in fewer than 100 new peak hour vehicle trips at nearby intersections in the study area, a quantified assessment of on-street mobile source emissions is not warranted. The primary source of on-site emissions would likely be from fossil fuel-fired heating and hot water systems.

The primary pollutant of concern when burning natural gas is nitrogen dioxide, and when burning oil, sulfur dioxide. Section 3Q of the *2001 CEQR Technical Manual* provides a screening methodology to determine the need for detailed analysis of the effects of a project's heating, ventilation, and air conditioning (HVAC) system on other buildings nearby. The nearest distance to a building of a similar or greater height with elevated receptors associated with a sensitive use was determined to be approximately 240 feet. The HVAC system analysis for this relocation site conservatively considered the total development area on the site that would be heated (approximately 87,000 square feet in three separate buildings). The storage areas for the businesses proposed for relocation would not require heating. Burning either fuel would not result in any significant stationary source air quality impact, since the proposed development on this site is below the maximum permitted size shown in Figure 3Q-3 in the *2001 CEQR Technical Manual*. Therefore, the proposed reuse of the site would not result in any potential significant adverse air quality impacts.

NOISE

A noise analysis is appropriate if a project would generate any mobile or stationary sources of noise or would occur in an area with high ambient noise levels. According to the *2001 CEQR Technical Manual*, a doubling of traffic volumes over existing levels (in terms of passenger car equivalents, or PCEs) is the increase that would result in a perceptible change to mobile-source noise levels. Since there would not be a doubling of PCEs, there would not be a noticeable change in noise levels due to project-generated traffic. The proposed operations are not expected to result in unusually high operating noise levels and would not result in sensitive uses in an area with existing high noise levels. Overall, there would not be a significant adverse noise impact, and no further analysis is necessary.

CONSTRUCTION IMPACTS

As described above, work will be needed on the site in order to accommodate the businesses proposed for relocation. This is expected to include construction of one-story buildings and storage structures. Construction would result in temporary disruptions to the surrounding community, such as occasional noise and dust. These effects would be short-term and would not be considered significant. The project would be required to comply with applicable control measures for construction noise. Construction noise is regulated by the New York City Noise Control Code and by noise emission standards for construction equipment issued by the U.S. Environmental Protection Agency. These local and federal requirements

mandate that certain classifications of construction equipment and motor vehicles meet specified noise standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction material be handled and transported in such a manner as to not create unnecessary noise. Hazardous materials, if any, will be handled and disposed of in accordance with all applicable regulations and in accordance with a Construction Health and Safety Plan.

PUBLIC HEALTH

As described above, the proposed relocation of an auto parts distributor, an iron fabricator, and a plumbing supply distributor would not result in significant adverse impacts to air quality or noise. The proposed relocation does not involve solid waste management practices that would attract vermin or pest populations. If it is determined upon further investigation that any hazardous materials conditions are present on the site, measures will be established to ensure that no hazardous materials impacts—including potential effects on public health—would occur.

F. CONCLUSIONS

As described in the analysis above, none of the changes that have occurred since the FGEIS was issued—including an increase in the percent of affordable units to be provided in the District, new business relocation plans, new Phase II ESI findings, or the newly available updated pupil or day care eligible children generation rates—would result in significant adverse environmental impacts that were not identified in the FGEIS.

Robert R. Kulikowski, Ph.D.

Assistant to the Mayor

November 13, 2008

Date:

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

Technical Memorandum for the Willets Point Development Plan FGEIS

CEQR Number 07DME014Q TM003

Adjusted Plan

November 23, 2009

A. INTRODUCTION

The Office of the Deputy Mayor for Economic Development issued a Notice of Completion for the Willets Point Development Plan Final Generic Environmental Impact Statement (FGEIS) on September 12, 2008. Under the proposed Plan, the approximately 61-acre Willets Point Development District (District) would be redeveloped with up to 8.94 million gross square feet of residential, retail, hotel, convention center, entertainment, commercial office, community facility, open space, and parking uses. The proposed Plan would result in a change to the underlying zoning of the District from an existing M3-1 district (and a small area zoned R3-2) to a C4-4 district, and would include the creation of an Urban Renewal Plan and a zoning Special District.

Subsequent to the issuance of the FGEIS, the City Planning Commission proposed several modifications to the Special Willets Point District zoning regulations. These modifications were described, and their potential for significant adverse environmental impacts examined, in a technical memorandum dated September 23, 2008 (see Appendix A), which found that there were no additional impacts due to the modifications that had not been disclosed in the FGEIS. The City Planning Commission voted in favor of the proposed Plan with those modifications on September 24, 2008.

After the City Planning Commission vote, new information became available related to: District business relocation; Phase II Environmental Site Investigations (ESIs) in the District; the amount of affordable housing to be provided in the District; and projected school and day care populations. This information was described, and its potential to result in significant adverse environmental impacts not previously identified examined, in a technical memorandum dated November 12, 2008 (see Appendix B). That technical memorandum concluded that none of the newly available information would lead to significant adverse environmental impacts that were not identified in the FGEIS.

The proposed Plan involves a number of discretionary actions, several of which have already been completed. These include: adoption of a Willets Point Urban Renewal Plan (URP); change to the underlying zoning of the District from M3-1 and R3-2 districts[1] to a C4-4 district; creation of a zoning Special District; and demapping of streets within the District. As part of the zoning map changes, E-designations for hazardous materials, noise and air quality were placed on all privately owned properties in the District. As the City acquires property, these E-designations will be replaced with Restrictive Declarations.

Over the past year, economic conditions across the nation and New York City have declined dramatically. The City has analyzed the effect of these changed conditions on the Willets Point project, and is considering the adjustment of the remediation and development plan as conceived in the FGEIS for Willets Point to better ensure that full district development is achieved despite the economic downturn.

It is anticipated that current economic conditions will make it challenging for developers to finance the acquisition and remediation of the entire Willets Point site at one time and prior to any development, as envisioned in the proposed Plan described in the FGEIS. Accordingly, the City plans to pursue an Adjusted Plan for Willets Point, which is similar to the Staged Acquisition Alternative analyzed in the FGEIS. The Adjusted Plan has the same overall development program as the proposed Plan, but includes the acquisition, remediation and development of an initial portion of the District, followed sequentially by additional sections, concluding with full District development by 2017 as described in the FGEIS.

At full build-out, this Adjusted Plan would develop the District with the same gross floor area and mix of uses as the proposed Plan (with subsequent revisions described in the prior technical memorandums) and would have the same controls on floor area ratios set forth in the provisions of the Special District zoning text that has been approved by the City Council.

As described in the New York State Department of Environmental Conservation's SEQRA regulations, 6 NYCRR §§617.9(a)(7)(i)(a), (b), and (c), and the *2001 CEQR Technical Manual*, the lead agency may require the preparation of a supplemental EIS if there are significant adverse environmental impacts not addressed or inadequately addressed in the EIS that arise from changes proposed for the project; newly discovered information; or a change in circumstances related to the project. This Technical Memorandum describes the changes proposed for the project and assesses whether these changes would result in new or different significant adverse environmental impacts not previously identified in the FGEIS.

The analysis concludes that the proposed changes would not result in significant adverse environmental impacts that were not identified in the FGEIS.

B. PROPOSED PROJECT CHANGES – ADJUSTED PLAN

The Adjusted Plan has the same overall development program as the proposed Plan described in the FGEIS and subsequent November 12, 2008 technical memorandum, which identified the need for a larger school than what was anticipated in the FGEIS. However, due to current economic conditions described above, the Adjusted Plan, compared to the Staged Acquisition Alternative, includes approximately 70 percent of development and a smaller development footprint during the first years

[1] A small area within the Willets Point Development District was included within an R3-2 district. The portion of the District that was zoned R3-2 district contains roadway connections to Northern Boulevard.

of development. As with the proposed Plan, full buildout of the Adjusted Plan is anticipated to be complete in 2017.

Figure 1 shows the area to be developed first under the Adjusted Plan. It is anticipated that lots shown in gray would be fully developed by 2013 while lots shown as striped would be remediated and graded, and would serve as temporary open space in 2013. Depending on the construction schedule that is ultimately implemented, certain segments of the District outside of the 2013 footprint would also be undergoing remediation, grading, and construction in 2013 but buildings in these sections would not be complete until after 2013. NYCEDC would require through the developer's agreement that an open space area of at least 15-feet in width be provided along the northern and eastern boundaries of the area to be developed by 2013.

Similar to the proposed Plan described in the FGEIS, at full build-out the Adjusted Plan would include residential, retail, office, convention center, hotel, and community facility uses, as well as parking, publicly-accessible open space, a new street grid, new connections to the Van Wyck Expressway, and new public utilities within the District. Like the proposed Plan, this scenario would include 35 percent of residential units as affordable housing in both 2013 and 2017.[2] By 2013, under the Adjusted Plan it is anticipated that the District would contain approximately 4.02 million square feet of development, including 2,100 residential units, 980,000 square feet of retail, 430 hotel rooms, 500,000 square feet of office space, 50,000 square feet of community facility space, approximately 2.6 acres of permanent publicly-accessible open space (with an additional 4.2 acres of temporary open space), 3,400 parking spaces, and a 590-seat school (see **Table 1**). It is anticipated that a larger school would be constructed in the eastern portion of the District after 2013, which would replace the smaller interim school that would serve the District until 2013. The interim school space would subsequently be redeveloped as additional retail space.

Like the proposed Plan, the Adjusted Plan would include new connections to the Van Wyck Expressway in the northeast portion of the District. Because this development scenario would not include the early acquisition of all northern and eastern properties in the District, it is anticipated that the configuration of the new ramps would conform to the existing street network. Figures 2 and 3 show the potential configuration of the new ramps under the Adjusted Plan. The new connection to the Van Wyck Expressway would require federal (FHWA) and state (NYSDOT) approval of a Freeway Access Modification Report under both the proposed Plan and the Adjusted Plan.[3]

The layout of the District's street grid, with the exception of the northeastern portion of the District near the new Van Wyck connection, would be the same under the Adjusted Plan and proposed Plan. Before complete acquisition of the northern and eastern portions of the District, east-west streets would be elevated above the floodplain in the western portion of the District south of 35th Avenue,

[2] The FGEIS assumed that 20 percent of the proposed units would be affordable. This assumption was changed to 35 percent in the technical memorandum dated November 12, 2008 (see Appendix B).

[3] In August 2009, NYCEDC submitted the Draft Access Modification Report (AMR) to the Federal Highway Administration, NY Division Office (FHWA, NY Division) and NYSDOT for review and comment. Comments on the Draft AMR were provided by FHWA, NY Division and NYSDOT in September and October 2009. NYCEDC, NYSDOT and FHWA, NY Division have conferred on the responses to comments received. The Draft AMR is currently being updated to incorporate the responses to all comments. It is anticipated that the Final AMR will be submitted to SDOT and FHWA, NY Division in December 2009 for approval.

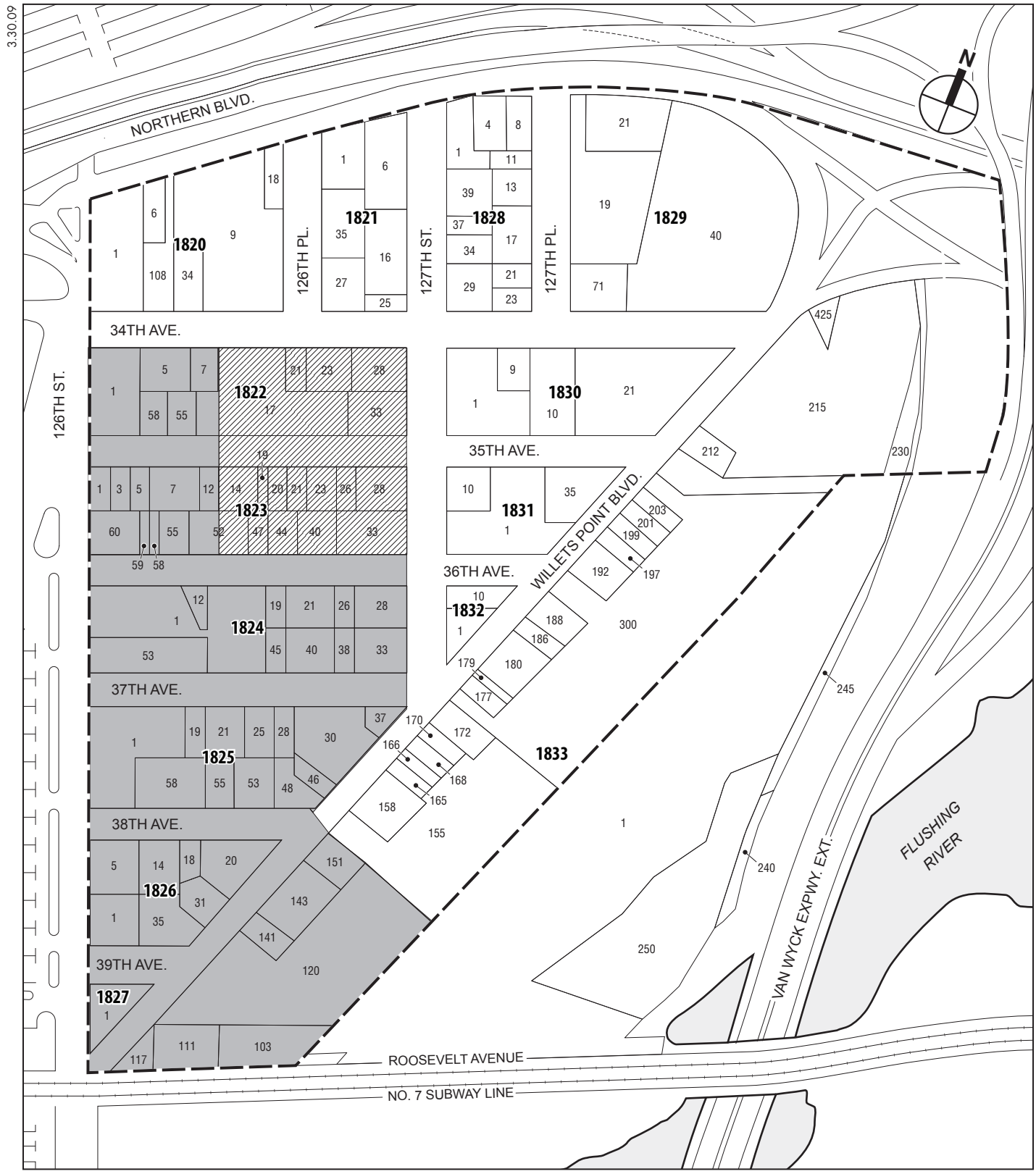

Figure 1

Adjusted Plan - Area Remediated or Redeveloped by 2013

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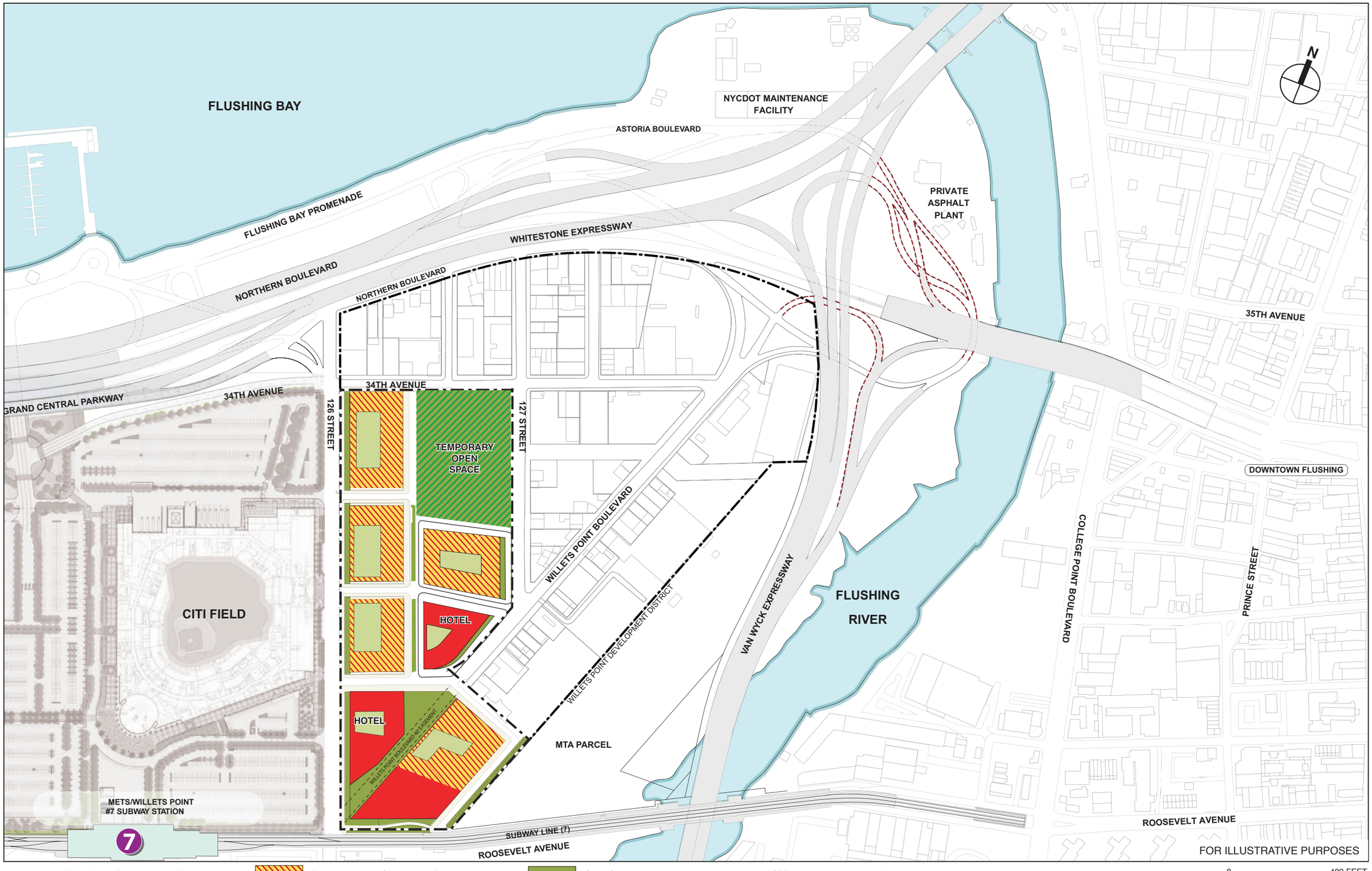

Willets Point Development District

Van Wyck Access Ramps

Residential with Commercial Below

Commercial

Rooftop Courtyard

Open Space

Temporary Open Space

NOTE: Interim school would be located in the base of one of the buildings shown as residential with commercial below

0 400 FEET

SCALE

WILLETS POINT DEVELOPMENT PLAN

Figure 2

Adjusted Plan - 2013

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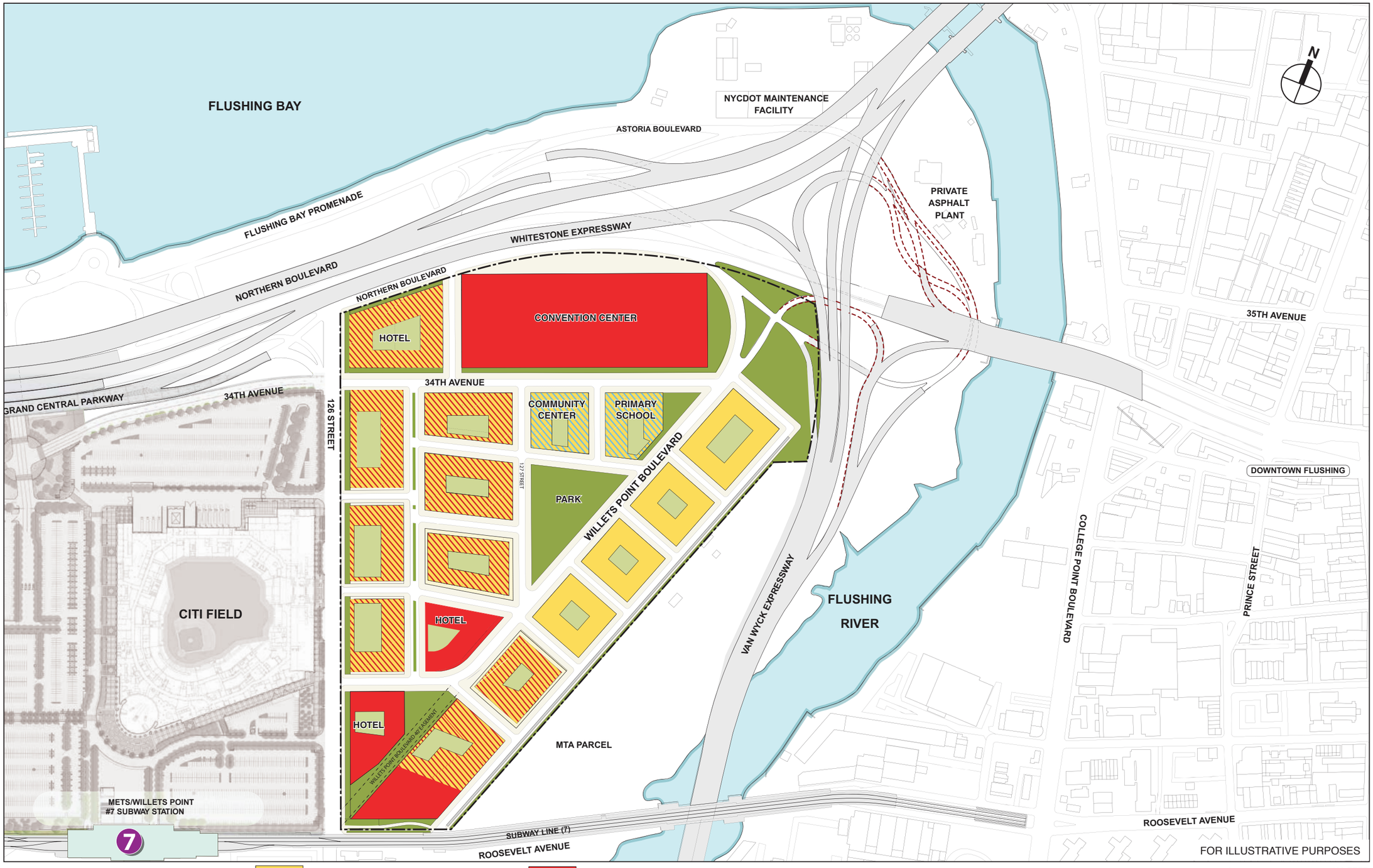

Willets Point Development District

Van Wyck Access Ramps

Residential

Residential with Commercial Below

Residential with Community Facility Below

Commercial

Rooftop Courtyard

Open Space

0 400 FEET

SCALE

WILLETS POINT DEVELOPMENT PLAN

Figure 3

Adjusted Plan - 2017

would be elevated above the floodplain in the western portion of the District south of 35th Avenue, and would be graded to slope down to the existing streets to the east, allowing continued access to and from any remaining businesses in the District. As northern and eastern properties are acquired and remediated, streets in those areas would be raised above the floodplain. Streets in the redeveloped western portion of the District which were constructed to slope down to existing eastern streets would be re-graded to meet the new elevated streets to the east.

Table 1
Adjusted Plan—Program

Use	Proposed Plan*	Adjusted Plan	
		2013	2017
Residential	5,500,000 gsf (*5,500 units*)	2,100,000 gsf *(2,100 units)*	5,500,000 gsf (*5,500 units*)
Retail	1,700,000	980,000	1,700,000
Office	500,000	500,000	500,000
Convention Center	400,000	0	400,000
Hotel	560,000 (*700 rooms)*	300,000 *(430 rooms)*	560,000 (*700 rooms*)
Community Facility	150,000 gsf	50,000	150,000 gsf
School (K-8)*	230,000 gsf (*Approx. 1,540 Seats)*	90,000 gsf *(Approx. 590 Seats)*	230,000 gsf (*Approx. 1,540 Seats)*
Parking Spaces**	Approx. 6,700	Approx. 3,400	Approx. 6,700
Publicly Accessible Open Space***	Minimum 8 Acres	2.6 Acres permanent; 4.2 Acres temporary	Minimum 8 Acres

Notes:
* The capacity of the proposed school would meet the project-generated shortfall in school seats. Proposed Plan program shown in this table (1,540 seats) is larger than the school analyzed in the FGEIS (850 seats) due to updated pupil generation rates issued by the New York City School Construction Authority (SCA) after issuance of the FGEIS. See technical memorandum dated 11/12/08 for detail.
** The number of proposed parking spaces would be determined based on anticipated project-generated demand. Parking floor area is exempt from the gross floor area calculations, per the Special Willets Point zoning district.
*** Approximately 4.2 acres of land would be remediated and graded but not yet redeveloped by 2013. This area would serve as temporary publicly accessible open space in 2013.

The placement of uses under the Adjusted Plan and proposed Plan would be virtually identical, with only two blocks differing in their mix of uses. The block located west of the convention center would be occupied by a mix of residential, retail, and hotel uses under the Adjusted Plan but would be all commercial under the proposed Plan. In addition, the roughly triangular block located in the southwestern portion of the District would be occupied by a hotel and retail uses under the Adjusted Plan, but would be occupied by residential and retail uses under the proposed Plan. Aside from these differences, the siting of uses is expected to be the same under the Adjusted Plan and proposed Plan.

Implementation of the Adjusted Plan would require the same discretionary actions that have already been granted under the proposed Plan, including: adoption of a URP, changes in the underlying zoning, and creation of a zoning Special District (already completed); acquisition of property (currently underway); and demapping of streets, disposition of property, and approval of business terms (not yet occurred). The new connection to the Van Wyck Expressway under the proposed Plan or this development scenario would require federal and state approval of a Freeway Access Modification Report.

The Adjusted Plan, like the proposed Plan, would utilize E-designations and Restrictive Declarations to ensure that there would be no significant adverse impacts with respect to hazardous materials, noise attenuation, and air quality (associated with the heating, ventilation, and air conditioning systems for the proposed buildings). E-designations for hazardous materials, noise and air quality have been placed on all privately owned properties in the District and as these properties are acquired by the City, the E-designations will be replaced with Restrictive Declarations. E-designations for northern and eastern properties may remain in place for a longer duration under the Adjusted Plan as compared with the proposed Plan, since they may be acquired later under the scenario.

Similar to the proposed Plan, the Adjusted Plan would include emissions and noise-reduction programs during construction, which would ensure that no significant impacts on air quality or long-term noise impacts would occur during construction. The preparation and enforcement of a Health and Safety Plan (HASP) would prevent any significant adverse impacts from hazardous materials during construction.

In general, the most substantial differences between the Adjusted Plan and the proposed Plan are the approach to property acquisition and construction. While the necessary remediation, grading, and infrastructure improvements would take place across the District at the beginning stages of construction for the proposed Plan, they would occur more gradually under this scenario. This could require additional safeguards to ensure that existing hazardous materials contamination in the northern and eastern portions of the District would not migrate to the southwestern portion of the District subsequent to the remediation of these properties. It could also require a more complex stormwater management plan, since new storm systems put in place prior to 2013 would need to ensure adequate detention and discharge of stormwater in the southwestern portion of the District, and after 2013 would need to be integrated with new stormwater systems put in place on the northern and eastern portions of the site to ensure efficient District-wide stormwater management. Roadway access to the northern and eastern portions of the site would need to be maintained while the southwestern portion of the site is being developed, and until such time when the remaining properties are acquired and remediated for development under the full build-out.

C. ANALYSIS FRAMEWORK

The Willets Point Development Plan FGEIS analyzed a Staged Acquisition Alternative, which was similar to the Adjusted Plan. Like the Adjusted Plan, the Staged Acquisition Alternative has the same overall development program as the proposed Plan, but properties would be acquired and developed over time. The primary differences between the Staged Acquisition Alternative analyzed in the FGEIS and the Adjusted Plan are the 2013 development footprint and the amount of development to take place by 2013. As shown in Figure 4, while the Staged Acquisition Alternative would have developed the entire area roughly west of 127th Street by 2013, the Adjusted Plan proposes developing only a portion of the land west of 127th Street by 2013. In terms of development program, the Adjusted Plan proposes about 70 percent of the square footage analyzed under the Staged Acquisition Alternative—4.02 million square feet of development by 2013 for the Adjusted Plan, compared to 5.77 million square feet for the Staged Acquisition Alternative (see **Table 2**).

Because the Adjusted Plan and Staged Acquisition Alternative are similar in terms of development approach (both propose more gradual acquisition and remediation of sites and both begin development in the western portion of the District) and analysis framework (both analyze

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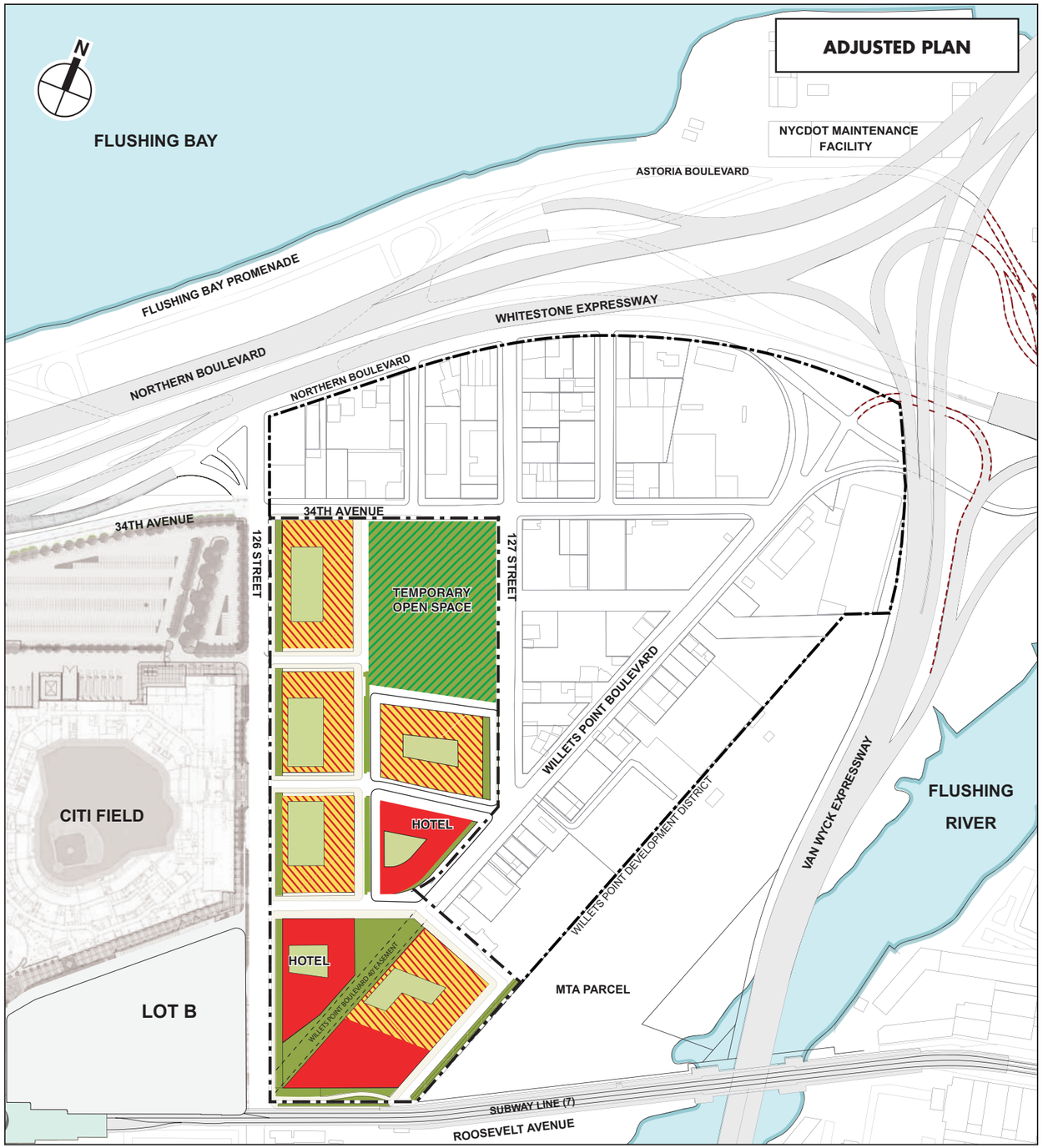
ADJUSTED PLAN



STAGED ACQUISITION ALTERNATIVE

Willets Point Development District
Residential with Commercial Below
Commercial
Rooftop Courtyard
Open Space
Temporary Open Space

NOTE: Interim school would be located in the base of one of the buildings shown as residential with commercial below

FOR ILLUSTRATIVE PURPOSES

Figure 4
Adjusted Plan vs. Staged Acquisition Alternative - 2013

2013 as a mid-point in the proposed development timeline) their anticipated impacts would be similar. Although it was the proposed Plan, not the Staged Acquisition Alternative, that was approved by the City Planning Commission in September, 2008, the Staged Acquisition Alternative is an appropriate comparison point for the Adjusted Plan because the Staged Acquisition Alternative examines conditions under partial completion of the full-build project and the FGEIS concluded that the Staged Acquisition Alternative would not result in any significant adverse impacts that were not identified for the proposed Plan. Therefore, this technical memorandum uses the Staged Acquisition Alternative as the primary point of comparison for the Adjusted Plan.

Table 2
Development to be Completed by 2013:
Adjusted Plan versus FGEIS Staged Acquisition Alternative

Use	Adjusted Plan	Staged Acquisition Alternative
Residential	2,100,000 gsf *(2,100 units)*	3,160,000 gsf *(3,160 units)*
Retail	980,000	1,475,000
Office	500,000	500,000
Convention Center	0	0
Hotel	300,000 *(430 rooms)*	560,000 *(700 rooms)*
Community Facility	50,000	0
School (K-8)*	90,000 gsf *(Approx. 590 Seats)*	75,000 gsf *(Approx. 500 seats)*
Parking Spaces**	Approx. 3,400	Approx. 4,200
Publicly Accessible Open Space***	2.6 Acres permanent; 4.2 Acres temporary	3.6 Acres
Total	4,020,000	5,770,000

Notes:
* The capacity of the proposed school would meet the project-generated shortfall in school seats. Proposed Plan program shown in this table (1,540 seats) is larger than the school analyzed in the FGEIS (850 seats) due to updated pupil generation rates issued by the New York City School Construction Authority (SCA) after issuance of the FGEIS. See technical memorandum dated 11/12/08 for detail.
** The number of proposed parking spaces would be determined based on anticipated project-generated demand. Parking floor area is exempt from the gross floor area calculations, per the Special Willets Point zoning district.
*** Approximately 4.2 acres of land would be remediated and graded but not yet redeveloped by 2013. This area would serve as temporary publicly accessible open space in 2013.

The FGEIS concluded that at full buildout (2017) the environmental impacts of the Staged Acquisition Alternative and proposed Plan would be the same. Since the Adjusted Plan and Staged Acquisition Alternative would be identical in terms of build program and substantially the same in terms of site layout (see Figure 5), the operational characteristics of both developments, including activities and demand for resources, would be comparable and it can be concluded that the Adjusted Plan at full buildout would not have significant environmental impacts that were not previously disclosed in the FGEIS, and no further analysis is required.

The FGEIS concluded that impacts associated with the Staged Acquisition Alternative in 2013 would be the same or less than those described for full buildout of the proposed Plan. The primary objective of this Technical Memorandum is to describe changes between conditions in 2013 under the Adjusted Plan and the previously analyzed Staged Acquisition Alternative and to determine whether the Adjusted Plan could result in any significant adverse environmental impacts in 2013 that were not disclosed in the FGEIS.

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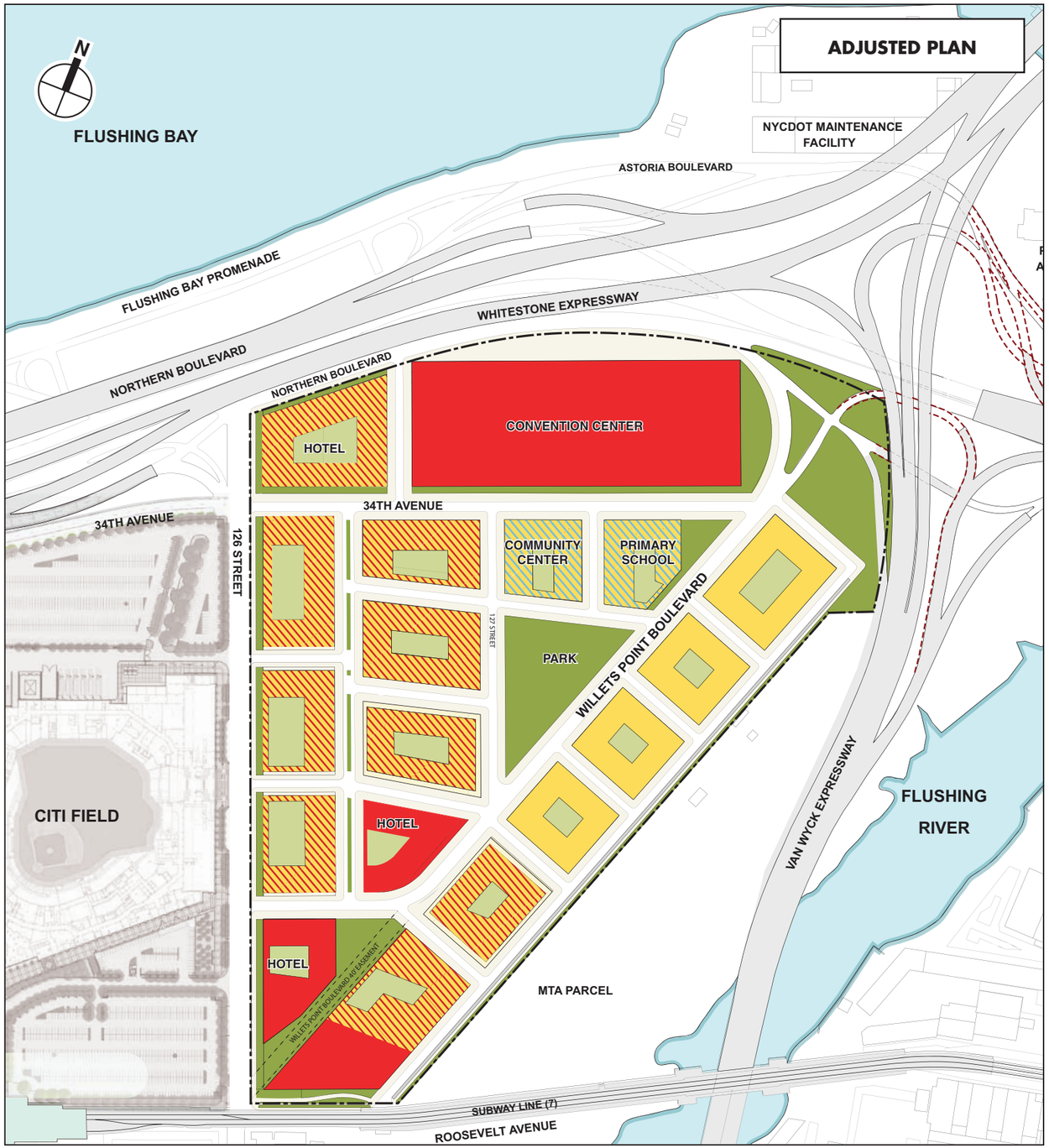


FOR ILLUSTRATIVE PURPOSES

Willets Point Development District
Residential
Residential with Commercial Below
Residential with Community Facility Below
Commercial
Rooftop Courtyard
Open Space
Temporary Open Space

NOTE: Interim school would be located in the base of one of the buildings shown as residential with commercial below

Figure 5
Adjusted Plan vs. Staged Acquisition Alternative - 2017

D. ADJUSTED PLAN COMPARED WITH THE STAGED ACQUISITION ALTERNATIVE

The modifications described above would not result in any changes to certain technical areas, including: historic resources, neighborhood character, natural resources, and waterfront revitalization. For these technical areas, conditions in 2013 would be the same under the Adjusted Plan and Staged Acquisition Alternative. Therefore, no further discussion of these areas is required. All other technical areas are listed below, with a comparison of 2013 conditions under the Adjusted Plan versus the Staged Acquisition Alternative.

LAND USE

Like the Staged Acquisition Alternative, the Adjusted Plan is not expected to result in significant adverse land use, zoning or public policy impacts.

As described above, by 2013 the Adjusted Plan would result in less redevelopment than the Staged Acquisition Alternative, in terms of both program and land area. Thus, land uses in the western portion of the District would be less intensively developed with the Adjusted Plan compared with the Staged Acquisition Alternative. New construction would include 4.02 million square feet of development by 2013 for the Adjusted Plan, compared to 5.77 million square feet for the Staged Acquisition Alternative. Of the 4.02 million square feet to be developed under the Adjusted Plan, there would be 2.1 million square feet of residential use, 980,000 square feet of retail, 500,000 square feet of office space, 300,000 square feet of hotel space, 50,000 square feet of community facility space, and a 90,000 square foot school, which would be provided in the base of one of the buildings shown on Figure 2 as "residential with commercial below." There would also be enough parking to meet project-generated demand for the Adjusted Plan (approximately 3,400 spaces), and approximately 2.6 acres of permanent publicly-accessible open space. Overall, these uses are consistent with those analyzed for the Staged Acquisition Alternative.

As with the Staged Acquisition Alternative, some portions of the District would continue to contain industrial uses in 2013, but this would be an interim condition. Similarly, certain improvements would be postponed until after 2013 in the northern and eastern portions of the District. Improvements to drainage and sanitary sewers, streets, and pedestrian amenities, remediation of hazardous materials conditions, and filling of the area to raise it above the floodplain would all be completed in the northern and eastern portions of the District after 2013. Because streets in the northern and eastern portions of the District would remain at their existing grade through 2013, during the first years of the development period streets in the western portion of the District would be graded to slope down to the existing streets to the east to allow continued access to and from all areas of the District.

In terms of land use compatibility, as with the Staged Acquisition Alternative, the new residential and other uses would not be compatible with any auto or industrial uses that may remain in other parts of the District. However, as shown in Figure 4, the redeveloped area would be buffered from any remaining businesses in the rest of the District by streets and passive open space areas. Compared with the Staged Acquisition Alternative, the Adjusted Plan in 2013 would provide a wider open space buffer between portions of the redeveloped area and remainder of the District.

For zoning and public policy, all of the same actions needed for the Staged Acquisition Alternative would be necessary to implement the Adjusted Plan; therefore the Adjusted Plan,

like the Staged Acquisition Alternative, would have no significant adverse zoning or public policy impacts.

The effects of the Adjusted Plan on land use, zoning, and public policy in 2017 would be the same as described in the FGEIS for the Staged Acquisition Alternative in 2017.

SOCIOECONOMIC CONDITIONS

Like the Staged Acquisition Alternative, the Adjusted Plan would not result in any significant adverse socioeconomic impacts. The socioeconomic effects of the Adjusted Plan would be the same as those identified for the Staged Acquisition Alternative, except that the number of businesses and employees displaced from portions of the District that are fully redeveloped or remediated by 2013 would be less under the Adjusted Plan, due to the smaller 2013 development footprint. By 2013, an estimated 676 employees would be displaced from the southwestern portion of the District, compared with the 888 employees that would be displaced by 2013 under the Staged Acquisition Alternative. As described above, in 2013 there would be remediation, grading, and construction activity underway in segments of the District outside of the area to be redeveloped by 2013. Businesses currently located on these properties would also be displaced by 2013. By 2017, the effects of the Adjusted Plan on socioeconomic conditions would be the same as described in the FGEIS for the Staged Acquisition Alternative.

COMMUNITY FACILITIES

The FGEIS analysis of the Staged Acquisition Alternative concluded that a 75,000 square foot (500-seat) interim school would be constructed by 2013 to address the demand that would result from 3,160 units of housing. Based on the updated pupil generation rates issued by the New York City School Construction Authority (SCA) after issuance of the FGEIS, is anticipated that the Adjusted Plan would introduce approximately 590 elementary and approximately 250 middle school students to the District by 2013.[4] Intermediate schools within the one-mile study area and CSD 25 would have excess capacity to accommodate the intermediate school students introduced by the Adjusted Plan. However, elementary schools in the one-mile study area would be operating at 117 percent capacity in 2013 without the Adjusted Plan. Therefore, a 590-seat (approximately 90,000 gsf) interim school would be provided within the District to accommodate the project-generated shortfall in 2013. This school would be located in the base of one of the five buildings shown as residential with commercial below on Figure 2. Similar to the Staged Acquisition Alternative, under the Adjusted Plan, a larger 1,540-seat school or schools (approximately 230,000 gsf) would replace the interim school by 2017 and the interim school would be redeveloped with retail uses.

Like the Staged Acquisition Alternative, the Adjusted Plan could result in a significant adverse impact on day care facilities in 2013. The low- to moderate-income housing units anticipated could increase a net shortage of publicly funded child care slots beyond the *CEQR Technical Manual* threshold for an adverse impact. Therefore, should this occur, the Adjusted Plan would require as part of the developer's agreement that a future developer consult with the New York City Administration for Children's Services (ACS) to determine the most appropriate way to meet demand for day care services generated by development in the District.

[4] Based on updated pupil generation rates issued by the New York City School Construction Authority (SCA) after issuance of the FGEIS. See technical memorandum dated November 12, 2008 for detail (see Appendix B).

By 2017, the effects of the Adjusted Plan on community facilities would be the same as described in the FGEIS for the Staged Acquisition Alternative.

OPEN SPACE

The Special District regulations would require for the Adjusted Plan, as for the Staged Acquisition Alternative, minimum-sized public access areas at various locations within the District, and ensure that public access areas are developed in conjunction with the surrounding development by stipulating the dimensions of public access areas that must be provided along with certain developments (e.g., with developments or enlargements at least 100,000 square feet in size and on zoning lots of at least 200,000 square feet). The Adjusted Plan would meet these requirements by providing approximately 6.8 acres of open space by 2013, 4.2 acres of which would be temporary open space situated on land that would be remediated but not yet redeveloped by 2013. This temporary open space would remain in place until the permanent park west of Willets Point Boulevard has been completed.

As described in the FGEIS, open space ratios with the Staged Acquisition Alternative in 2013 would decline from background conditions in 2013, but all ratios would remain well above the recommended guidelines. The Adjusted Plan includes less development (therefore smaller new worker and residential populations) and more open space than the Staged Acquisition Alternative in 2013. Therefore, open space ratios in 2013 with the Adjusted Plan would be higher than those described in the FGEIS for the Staged Acquisition Alternative and there would be no potential for significant adverse impact.

By 2017, the effects of the Adjusted Plan on open space would be the same as described in the FGEIS for the Staged Acquisition Alternative.

SHADOWS

Similar to the Staged Acquisition Alternative, the Adjusted Plan would be subject to the bulk regulations set forth in the URP and Special District text, and height limits across most of the District would be determined by the distance from LaGuardia Airport. Buildings constructed would range in maximum height from approximately 60 feet to 218 feet above ground level. Under the Adjusted Plan, there would be fewer buildings constructed by 2013 compared to the Staged Acquisition Alternative. Therefore, incremental shadows with the Adjusted Plan would be substantially the same or less than those with the Staged Acquisition Alternative, and while some incremental shadow may be cast onto Flushing Bay, the Flushing Bay Promenade, and the Flushing River in some seasons, there would not be a significant adverse shadow impact. Therefore, as with the Staged Acquisition Alternative, the Adjusted Plan would not have significant adverse shadow impacts in 2013. By 2017, the effects of the Adjusted Plan on shadows would be the same as described in the FGEIS for the Staged Acquisition Alternative.

URBAN DESIGN

Like the Staged Acquisition Alternative, the Adjusted Plan would partially improve the urban design and general appearance of the District. Some of the primarily automotive and industrial buildings would be replaced by new mixed-use buildings of various heights, and the Adjusted Plan would introduce active uses that would increase the vitality of the District and increase pedestrian traffic. There would also be new streets and streetscape elements, open space, and pedestrian elements. However, these would be reduced with the Adjusted Plan since the area that would be redeveloped or fully remediated by 2013 would be smaller than under the Staged Acquisition Alternative. Similarly, beneficial changes in land use would be somewhat less than

under the Staged Acquisition Alternative in 2013, since the Adjusted Plan would have fewer buildings and less intensive redevelopment. There would be a noticeable contrast between the redeveloped portion of the District and any areas where industrial uses remain. Nonetheless, there would still be substantial improvements compared to future conditions without the Adjusted Plan, and there would not be any significant adverse impacts.

As described above, the Adjusted Plan would include new connections to the Van Wyck Expressway in the northeastern portion of the District. Neither the Adjusted Plan nor the Staged Acquisition Alternative would include the early acquisition of eastern properties in the District. Therefore, under either scenario, it is anticipated that the configuration of the new ramps would conform to the existing street network. Like the Staged Acquisition Alternative, the Adjusted Plan would create a new street pattern and new block forms in the area to be redeveloped by 2013. As shown in Figure 4, the street pattern and block forms in the area to be developed by 2013 under the Adjusted Plan would be the same as under the Staged Acquisition Alternative, with the exception of the area occupied by temporary open space in the Adjusted Plan. Under the Staged Acquisition Alternative, this block would be divided into two by 2013 and occupied by mixed use buildings. Under the Adjusted Plan, the block would be divided into two and built out after 2013, with the same block form and street configuration as shown for the Staged Acquisition Alternative.

As described above, like the Staged Acquisition Alternative, buildings in the Adjusted Plan would be subject to the URP, Special District text, and height limits due to the District's proximity to LaGuardia Airport.

Neither the Adjusted Plan nor the Staged Acquisition Alternative would have a significant adverse impact on visual resources. Neither would adversely affect views to or from Flushing Bay, the Flushing Bay Promenade, or views to the 1964 World's Fair structures in Flushing Meadows-Corona Park.

By 2017, the effects of the Adjusted Plan on urban design would be the same as described in the FGEIS for the Staged Acquisition Alternative.

HAZARDOUS MATERIALS

Groundwater sampling from public streets within the District confirmed that contamination is present. Given the presence of this groundwater contamination and the historic uses within the District, contamination is expected to be widespread on private properties. Like the Staged Acquisition Alternative, the Adjusted Plan would utilize E-designations and Restrictive Declarations to ensure that there would be no significant adverse impacts with respect to hazardous materials. As described earlier, E-designations have been placed on all privately owned properties in the District, and as they are acquired by the City, the E-designations will be replaced with Restrictive Declarations. E-designations for eastern and northern properties would remain in place for a longer duration under the Adjusted Plan as compared with the proposed Plan, since they would be acquired later under this scenario. While it is not anticipated that private properties will be redeveloped on an individual basis, if such redevelopment were to occur, it would be subject to the E-designations, which would ensure that remediation would take place under New York City Department of Environmental Protection (DEP) oversight. With these measures in place, as with the Staged Acquisition Alternative, there would be no significant adverse hazardous materials impacts.

Similar to the Staged Acquisition Alternative, since remediation activities would occur incrementally under the Adjusted Plan, certain safeguards may be required to ensure that

existing hazardous materials contamination on the eastern and northern portions of the District would not migrate to the southwestern portion of the District subsequent to the remediation of these properties. These safeguards could include installation of sheeting or low permeability barriers along portions of the boundary between the remediated and unremediated portions of the District.

INFRASTRUCTURE

WATER SUPPLY

Like the Staged Acquisition Alternative, under the Adjusted Plan in 2013, new local water supply distribution lines would be provided to the blocks in the southwestern portion of the District, and uses in the northern and eastern portions of the District would continue to be served by existing supply lines. As with the Staged Acquisition Alternative, the existing 72-inch PRCP water main within Willets Point Boulevard would remain in place and the developer would provide a permanent easement mapped on the City map, in order to provide acceptable access to the existing main.

Water demand would be less in 2013 under the Adjusted Plan compared to the Staged Acquisition Alternative since the amount of development anticipated would be less. Therefore, like the Staged Acquisition Alternative, demand for water in 2013 would not overburden the City's water supply system or significantly affect the water supply infrastructure outside the District. By 2017, the effects of the Adjusted Plan on water supply would be the same as described in the FGEIS for the Staged Acquisition Alternative and there would be no significant adverse impact on the water supply system.

SANITARY SEWAGE

The analysis of 2013 conditions under the Staged Acquisition Alternative concluded that sanitary sewage from the 2013 development could not be accepted by the existing 37th Avenue pump station, which currently operates at its capacity. Therefore, a new pump station would need to be constructed (most likely within the District), along with a force main to connect the District to the combined sewer in 108th Street. This new force main route would cross beneath 126th Street and the Grand Central Parkway. Although the amount of sanitary sewage generated by the Adjusted Plan would be less in 2013 than the amount generated by the Staged Acquisition Alternative, the new pump station and force main would still need to be constructed, and this infrastructure would need to be sized sufficiently to accommodate the sanitary flows of the entire redeveloped District.

The FGEIS concludes that the frequency of Combined Sewer Overflow (CSO) events would not increase in either 2013 or full buildout with the Staged Acquisition Alternative. Therefore, the smaller amount of development and additional acres of open space proposed by 2013 under the Adjusted Plan would also not increase the frequency of CSO events.

By 2017, the effects of the Adjusted Plan on sanitary sewage would be the same as described in the FGEIS for the Staged Acquisition Alternative; neither would have a significant adverse impact on the sanitary sewer system.

STORMWATER

As with the Staged Acquisition Alternative, with the Adjusted Plan, the developer would be required to prepare and implement a site stormwater management plan, to be reviewed and approved by DEP prior to commencement of construction. The stormwater management plan

would be implemented in stages, with implementation in the southwestern portion of the District by 2013 and implementation in the remainder of the District by 2017. This plan would specify Best Management Practices and sustainable design features to be incorporated in the project, such as graywater recycling for individual building sites, green roofs, blue roofs, decorative wet ponds, detention dry ponds, vegetated swales, and other measures. Such measures would help limit and contain stormwater flow.

The current stormwater conveyance system is insufficiently sized, which results in uncontrolled and untreated runoff and street flooding. As with the Staged Acquisition Alternative, the Adjusted Plan would require construction of a new stormwater conveyance system, including piping, sustainable design features, and an adequately-sized detention tank or equivalent means to accommodate the stormwater that is beyond the discharge capacity of the two storm water outfalls serving the District. The analysis of 2013 conditions under the Staged Acquisition Alternative concludes that approximately 1.8 acre-feet of detention would be required to regulate stormwater flows from the western portion of the District to the existing outfall on 126th Street. Because the land area to be developed by 2013 would be smaller under the Adjusted Plan compared to the Staged Acquisition Alternative, the amount of detention required by 2013 would be less than 1.8 acre-feet. Similar to the Staged Acquisition Alternative, flooding may continue in the undeveloped portions of the District until implementation of the District-wide stormwater management features that would be in place by 2017. By 2017, the effects of the Adjusted Plan on stormwater would be the same as described in the FGEIS for the Staged Acquisition Alternative, and no significant adverse impacts due to stormwater would occur.

SOLID WASTE

The municipal solid waste and sanitation services that serve the District would have adequate capacity to meet the projected increases in demand from the Staged Acquisition Alternative in 2013 and therefore would also have capacity to meet the increases in demand from the smaller Adjusted Plan in 2013.

Like the Staged Acquisition Alternative, the Adjusted Plan in 2013 would directly displace Crown Container, a waste transfer facility located in the northwestern portion of the District. As described in the FGEIS, this displacement would not have a significant adverse impact on the waste and sanitation services in Queens or New York City because the permitted capacity of Crown Container is small, approximately 3 percent of the City construction and demolition capacity[5], and the waste generated at that facility could be absorbed at other facilities.

The FGEIS indicates that Tully Environmental, a second waste transfer business located in the eastern portion of the District, would not be displaced in 2013 under the Staged Acquisition Alternative. Under the Adjusted Plan, Tully Environmental may be displaced by 2013. Depending on the construction schedule that is ultimately formulated for buildout of the eastern portion of the District, the lots on which Tully Environmental currently operate may be under remediation or construction in 2013. However, regardless of the timing of this displacement, it would not result in a significant adverse impact. As indicated in the FGEIS, the North Shore Marine Transfer Station (MTS) to be located to the east of the District in the College Point section of Queens, will have the capacity to process the waste currently handled by Tully. If Tully were displaced from the District before the North Shore MTS became operational, DSNY

[5] http://www.nylpi.org/pub/Distribution___Capacities_of_Solid_Waste_Trasfer_Stations.pdf (November 2007).

waste currently processed by Tully would temporarily be transported to facilities in New Jersey in DSNY trucks.

ENERGY

Like the Staged Acquisition Alternative, the Adjusted Plan would increase demands on electricity and gas. However, relative to the capacity of these systems and the current levels of service within New York City, these increases in demand would be insignificant in both instances. Similar to the Staged Acquisition Alternative, improvements would be made to the local electric and gas distribution grids that would ensure proper service, but would be less extensive in 2013 under the Adjusted Plan.

In any case, new demands for energy are not expected to result in a significant adverse impact on the supplies of electricity and gas in the region or the City as a whole, and with the future improvements to the distribution network, no significant adverse impact would occur locally with respect to electrical or gas utilities.

By 2017, the effects of the Adjusted Plan on energy would be the same as described in the FGEIS for the Staged Acquisition Alternative.

TRAFFIC AND PARKING

The volume of vehicle trips expected to be generated by the Adjusted Plan in 2013 was developed using the same trip generation and modal split factors assumed for the proposed Plan and the Staged Acquisition Alternative. A summary of the projected vehicle trips for the Adjusted Plan in 2013 is provided in **Table 3**.

Table 3
Projected Vehicle Trips under the Adjusted Plan in 2013

Peak Hour	Mode	In	Out	Total
Weekday AM	Auto	928	591	1,519
	Taxi	45	45	90
	Delivery	52	52	104
	Total Vehicle Trips	**1,025**	**688**	**1,713**
Weekday Midday	Auto	1,209	1,024	2,233
	Taxi	84	84	168
	Delivery	61	61	122
	Total Vehicle Trips	**1,354**	**1,169**	**2,523**
Weekday PM	Auto	1,199	1,631	2,830
	Taxi	110	110	220
	Delivery	7	7	14
	Total Vehicle Trips	**1,316**	**1,748**	**3,064**
Weekday Pre-game	Auto	1,111	966	2,077
	Taxi	97	97	194
	Delivery	6	6	12
	Total Vehicle Trips	**1,214**	**1,069**	**2,283**
Saturday Midday	Auto	1,503	1,321	2,824
	Taxi	169	169	338
	Delivery	7	7	14
	Total Vehicle Trips	**1,679**	**1,497**	**3,176**
Saturday Pre-game	Auto	1,155	1,033	2,188
	Taxi	131	131	262
	Delivery	7	7	14
	Total Vehicle Trips	**1,293**	**1,171**	**2,464**
Saturday Post-game	Auto	939	1,041	1,980
	Taxi	128	128	256
	Delivery	0	0	0
	Total Vehicle Trips	**1,067**	**1,169**	**2,236**

In 2013, the numbers of vehicle trips generated as a result of the Adjusted Plan would be fewer than those projected for the Staged Acquisition Alternative because the Adjusted Plan would include fewer square feet of traffic-generating uses. The Adjusted Plan would generate 1,713, 2,523, 3,064, 2,283, 3,176, 2,464, and 2,236 total vehicle trips during the weekday AM, midday, PM, and pre-game, and Saturday midday, pre-game, and post-game analysis peak hours, respectively.

Compared to the Staged Acquisition Alternative in 2013, the Adjusted Plan in 2013 would generate 23, 30, 28, 32, 33, 32, and 30 percent fewer vehicle trips during the weekday AM, midday, PM, and pre-game, and Saturday midday, pre-game, and post-game analysis peak hours, respectively.

Because the Adjusted Plan would generate fewer vehicle trips than the Staged Acquisition Alternative in 2013, it is expected that impacts associated with the Staged Acquisition Alternative in 2013 would either be eliminated or would remain but would be less severe. No new traffic impacts are expected as a result of the Adjusted Plan. By 2017, the effects of the Adjusted Plan on traffic and parking would be the same as described in the FGEIS for the Staged Acquisition Alternative.

As with the Staged Acquisition Alternative, the traffic mitigation measures for 2013 with the Adjusted Plan would be similar to those identified in the FGEIS for the full buildout. In order to verify the need and effectiveness of the mitigation measures proposed in the FGEIS, the lead agency would develop and conduct a detailed traffic monitoring plan for the Adjusted Plan in both 2013 and 2017. The traffic monitoring plan would determine whether actual future Build conditions resulted in significant traffic impacts and verify the need for mitigation measures identified in the FGEIS or similar measures recommended in the traffic monitoring plan. The lead agency would submit for a scope of work to New York City Department of Transportation (NYCDOT) for their review and approval; the scope of work would include all locations where significant traffic impacts have been identified in the FGEIS and any locations analyzed in the FGEIS where NYCDOT believes improvement measures may be warranted. Data collection conducted for the monitoring plan would include 24-hour Automatic Traffic Recorder machine counts, manual turning movement counts, vehicle classification counts, pedestrian counts, intersection geometry and field information, signal timing and signal progression and any relevant information necessary for conducting the traffic monitoring plan. In the areas where parking prohibitions would be needed to mitigate significant impacts, such as Downtown Flushing and Corona, curbside utilization surveys would be conducted to determine the number of vehicles that would be displaced and where the displaced vehicles would be accommodated. Additionally, the traffic monitoring program would include an origin-destination survey performed for the destination retail component of the project. The traffic monitoring program would also include intersection capacity, level of service analyses and signal progression analyses.

The lead agency would submit to NYCDOT design drawings for any mitigation measures as per American Association of State Highway and Transportation Officials and NYCDOT specifications. NYCDOT would participate in the review process relating to all future modifications to geometric alignment, striping and signage during the preliminary and final design phases. In addition, the lead agency or future developer would be responsible for any cost associated with the monitoring effort as well as the design and construction of any or all improvement measures identified in the FGEIS or through the traffic monitoring plan as warranted due to project-generated traffic.

TRANSIT

As summarized in **Table 4**, the Adjusted Plan would generate 3,349, 4,834, 4,931, 3,717, 5,005, 4,009, and 3,720 total pedestrian trips during the weekday AM, midday, PM, and pre-game, and Saturday midday, pre-game, and post-game analysis peak hours, respectively. Compared to the Staged Acquisition Alternative in 2013, the Adjusted Plan in 2013 would generate approximately 18, 19, 25, 27, 30, 27, and 23 percent fewer total person trips during the weekday AM, midday, PM, and pre-game and Saturday midday, pre-game, and post-game peak hours, respectively. Specifically, it would generate 24, 29, 29, 30, 31, 28, and 25 percent fewer subway trips and 21, 27, 29, 31, 33, 31, and 29 percent fewer bus trips than would the Staged Acquisition Alternative in 2013 during the weekday AM, midday, PM, and pre-game, and Saturday midday, pre-game, and post-game peak hours. At the pedestrian locations analyzed in the FGEIS, the Adjusted Plan in 2013 would generate 11, 5, 19, 21, 23, 18, and 14 percent fewer pedestrian trips than the Staged Acquisition Alternative during the weekday AM, midday, PM, and pre-game and Saturday midday, pre-game and post-game peak hours, respectively.

Table 4
Projected Transit and Pedestrian Trips under the Adjusted Plan in 2013

Peak Hour	Mode	In	Out	Total
Weekday AM	Subway	585	751	1,336
	Bus	405	285	690
	Walk	736	587	1,323
	Total Pedestrian Trips	**1,726**	**1,623**	**3,349**
Weekday Midday	Subway	744	651	1,395
	Bus	677	579	1256
	Walk	1,091	1,092	2,183
	Total Pedestrian Trips	**2,512**	**2,322**	**4,834**
Weekday PM	Subway	1,039	1,010	2,049
	Bus	640	798	1438
	Walk	644	800	1,444
	Total Pedestrian Trips	**2,323**	**2,608**	**4,931**
Weekday Pre-game	Subway	940	674	1,614
	Bus	586	535	1121
	Walk	525	457	982
	Total Pedestrian Trips	**2,051**	**1,666**	**3,717**
Saturday Midday	Subway	928	805	1,733
	Bus	864	802	1666
	Walk	876	730	1,606
	Total Pedestrian Trips	**2,668**	**2,337**	**5,005**
Saturday Pre-game	Subway	721	642	1,363
	Bus	653	567	1220
	Walk	748	678	1,426
	Total Pedestrian Trips	**2,122**	**1,887**	**4,009**
Saturday Post-game	Subway	599	685	1,284
	Bus	473	539	1012
	Walk	666	758	1,424
	Total Pedestrian Trips	**1,738**	**1,982**	**3,720**

Because the Adjusted Plan would generate fewer subway, bus, and pedestrian trips than the Staged Acquisition Alternative in 2013, it is expected that some impacts associated with the Staged Acquisition Alternative in 2013 would be eliminated while other impacts would remain but would be less severe. For example, bus line haul impacts would require fewer additional buses to mitigate and crosswalk impacts would require less widening to mitigate.

By 2017, the effects of the Adjusted Plan on transit and pedestrians would be the same as described in the FGEIS for the Staged Acquisition Alternative.

AIR QUALITY

MOBILE SOURCES

The analysis of 2013 conditions under the Staged Acquisition Alternative concludes that there would be no significant adverse air quality impacts from mobile sources, as traffic generated in 2013 would be less than at full build-out and no significant adverse air quality impacts were anticipated at full build-out. Since traffic generated in 2013 by the Adjusted Plan would be less than anticipated for the Staged Acquisition Alternative, there would be no potential for significant adverse air quality impacts due to mobile sources. By 2017, the effects of the Adjusted Plan on air quality due to mobile sources would be the same as described in the FGEIS for the Staged Acquisition Alternative.

PARKING FACILITIES

Similar to the Staged Acquisition Alternative, parking facilities developed under the Adjusted Plan by 2013 would be smaller than the conceptual convention center garage discussed in Chapter 19, "Air Quality" of the FGEIS. The FGEIS analysis concluded that the conceptual convention center garage would have no significant air quality impact. Therefore, the smaller garages introduced by 2013 under the Adjusted Plan also would not result in any adverse significant air quality impacts. By 2017, the effects of the Adjusted Plan on air quality due to parking facilities would be the same as described in the FGEIS for the Staged Acquisition Alternative.

HVAC SYSTEMS

Due to the smaller development program, fewer HVAC sources would be in operation in 2013 under the Adjusted Plan compared to the Staged Acquisition Alternative. At the same time, restrictions on HVAC fuel use and exhaust stack placement would be the same, and the E-designations and/or restrictive declarations placed on the District properties would preclude the potential for significant adverse impacts to air quality under both the Adjusted Plan and Staged Acquisition Alternative. By 2017, the effects of the Adjusted Plan on air quality due to HVAC systems would be the same as described in the FGEIS for the Staged Acquisition Alternative.

INDUSTRIAL SOURCES

The analysis of 2013 conditions under the Staged Acquisition Alternative concludes that there would be no significant adverse air quality impacts from existing industrial and auto businesses that could continue to operate on the eastern portion of the site. Therefore, under the Adjusted Plan the businesses analyzed under the Staged Acquisition Alternative would not result in significant adverse air quality impacts. Under the Adjusted Plan, on the western portion of the site that would be developed or remediated by 2013 no existing businesses would remain. In addition, the area that would be remediated by 2013 would serve as a buffer zone, separating new development from any industrial and auto business emission sources that may remain in the District in 2013. There would be no business with a DEP air emission permit located within 400 feet of the area to be redeveloped by 2013. Crown Container, a construction and demolition waste processing facility, is currently permitted by DSNY to operate on a lot that would be vacated and remediated by 2013. Although Crown container has an office located within 400 feet north of the area that would be redeveloped by 2013, waste processing operations are not permitted on that site.

Therefore, like the Staged Acquisition Alternative, the Adjusted Plan would not be expected to result in any significant adverse air quality impacts from industrial sources. By 2017, the effects of the Adjusted Plan on air quality due to industrial sources would be the same as described in the FGEIS for the Staged Acquisition Alternative.

NOISE

MOBILE SOURCES

No significant adverse noise impacts were identified for the Staged Acquisition Alternative in 2013. Traffic generated by the Adjusted Plan in 2013 would be less than that anticipated for the Staged Acquisition Alternative. Therefore, the magnitude of noise increases due to mobile sources would be expected to be less as well. Any change in mobile source noise conditions associated with the Adjusted Plan would be barely perceptible and insignificant according to CEQR criteria, and the Adjusted Plan would not have significant adverse mobile source noise impacts. By 2017, the effects of the Adjusted Plan on noise due to mobile sources would be the same as described in the FGEIS for the Staged Acquisition Alternative.

MECHANICAL EQUIPMENT

As with the Staged Acquisition Alternative, building mechanical systems for the Adjusted Plan (e.g., heating, ventilation, and air conditioning systems) would be designed to satisfy Building Code regulations for isolation of mechanical noise from residences, and the mechanical equipment would be designed so as not to result in a significant impact on nearby residences. By 2017, the effects of the Adjusted Plan on noise due to mechanical equipment would be the same as described in the FGEIS for the Staged Acquisition Alternative.

ATTENUATION REQUIREMENTS

Under both the proposed Plan and Staged Acquisition Alternative, buildings proposed to be constructed along the western side of 127th Street (the eastern boundary of the area to be constructed by 2013 under the Staged Acquisition Alternative) would require 37 dBA of window/wall attenuation for residential uses or 35 dBA for commercial uses. The FGEIS analysis concluded that these high levels of attenuation would likely be sufficient to ensure acceptable interior noise levels even during the temporary condition between 2013 and 2017 when those buildings may be located adjacent to existing industrial uses. Under the Adjusted Plan, the northern boundary of the area to be redeveloped by 2013 shifts south of 34th Avenue. However, as shown in Figures 6 and 7 (described below under Construction) it is likely that by 2013, remediation and possibly construction will have commenced on properties north of 34th Avenue. Therefore, new buildings located along the northern Adjusted Plan development boundary would face noise from construction activity but no additional noise from industrial uses, as compared to what was analyzed in the FGEIS. Because the construction noise would be limited in duration, the building attenuation levels specified in Table G-4 of Appendix G of the FGEIS would remain sufficient to avoid significant adverse noise impacts.

CONSTRUCTION

Figure 6 and **Table 5** show the conceptual construction schedule for the Adjusted Plan. It is anticipated that site clearance and remediation for the Adjusted Plan would start in the second quarter of 2010 and would continue sequentially through the end of 2015. At that time the soils and groundwater would be remediated to NYSDEC standards, and the grading and infrastructure would be completed. By the end of 2013, buildings on sites A1 through A5 and sites A9 and

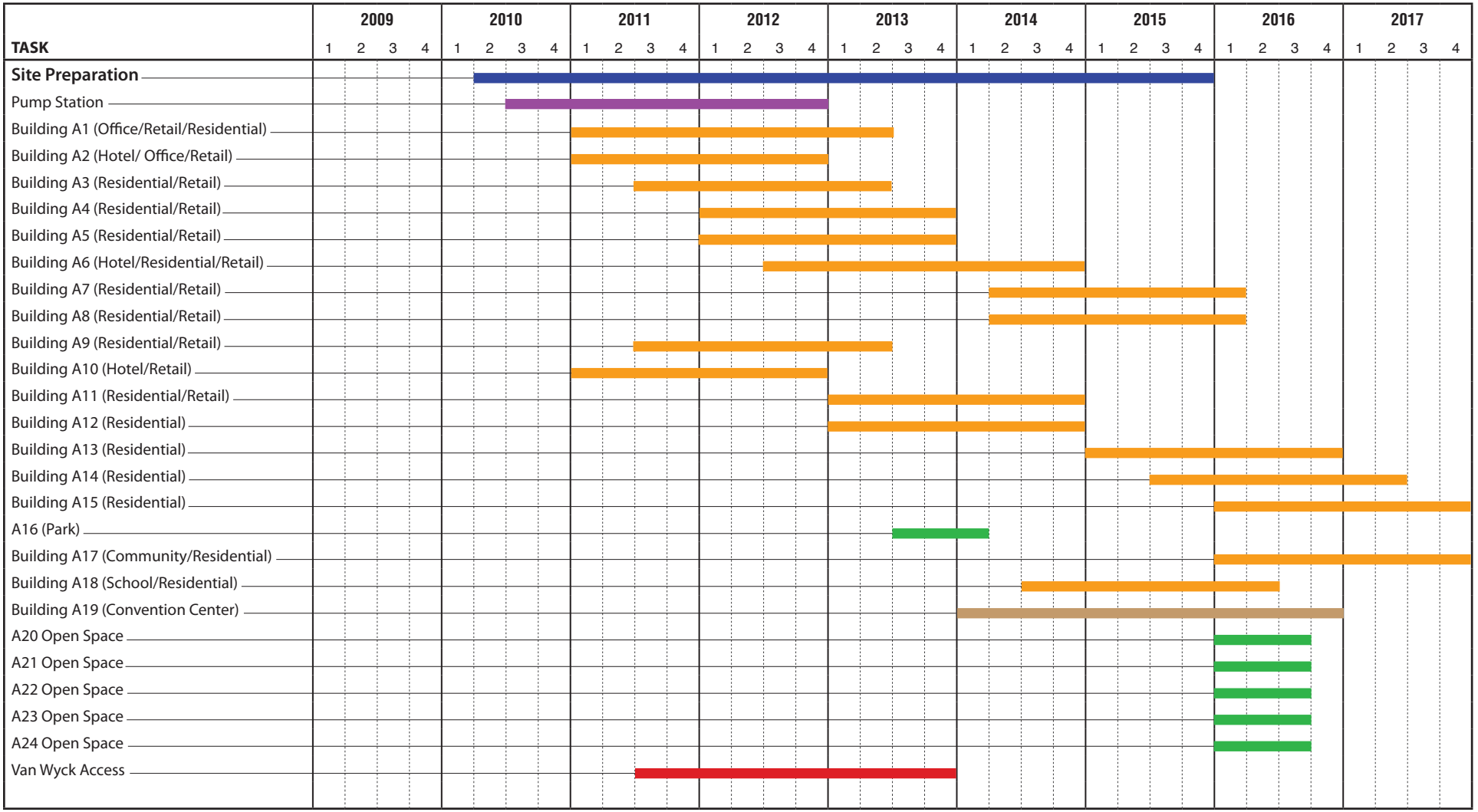
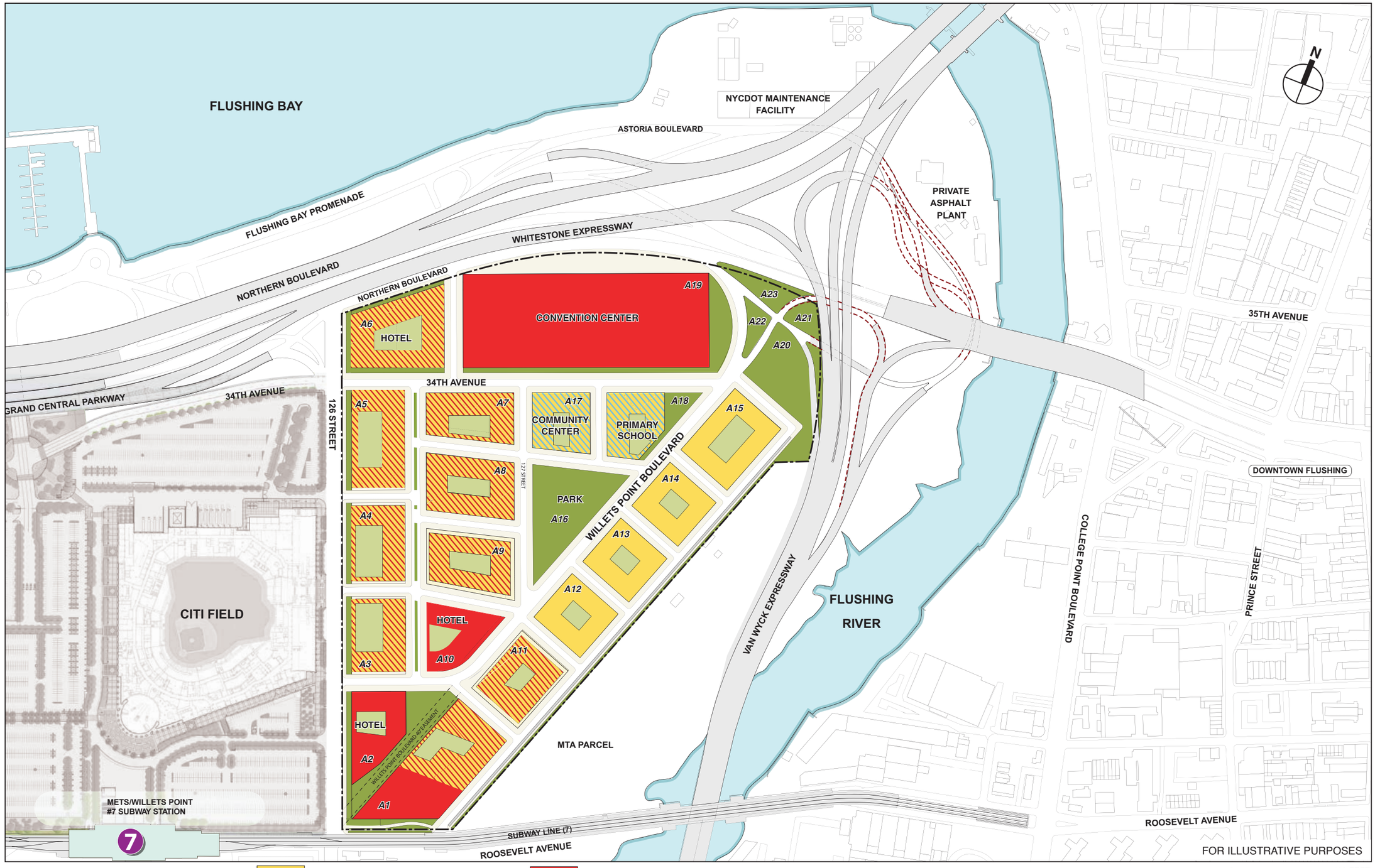


Figure 6

Conceptual Construction Schedule

4.21.09



Willets Point Development District

Van Wyck Access Ramps

Residential

Residential with Commercial Below

Residential with Community Facility Below

Commercial

Rooftop Courtyard

Open Space

Figure 7

Conceptual Construction Sequence

A10 would be finished and occupied (see Figure 7 for site designations). Three other buildings (A6, A11, and A12) would be under construction, but not completed. Construction is expected to continue through 2017 when the District would be fully built out.

Table 5
Adjusted Plan Conceptual Construction Schedule

Task	Start	Finish	Duration (Months)
Site Preparation	2nd Q 2010	4th Q 2015	69
Building A1 (Office/Retail/Residential)	1st Q 2011	2nd Q 2013	30
Building A2 (Hotel/Office/Retail)	1st Q 2011	4th Q 2012	24
Building A3 (Residential/Retail)	3rd Q 2011	2nd Q 2013	24
Building A4 (Residential/Retail)	1st Q 2012	4th Q 2013	24
Building A5 (Residential/Retail)	1st Q 2012	4th Q 2013	24
Building A6 (Hotel/Residential/Retail)	3rd Q 2012	4th Q 2014	30
Building A7 (Residential/Retail)	2nd Q 2014	1st Q 2016	24
Building A8 (Residential/Retail)	2nd Q 2014	1st Q 2016	24
Building A9 (Residential/Retail)	3rd Q 2011	2nd Q 2013	24
Building A10 (Hotel/Retail)	1st Q 2011	4th Q 2012	24
Building A11 (Residential/Retail)	1st Q 2013	4th Q 2014	24
Building A12 (Residential)	1st Q 2013	4th Q 2014	24
Building A13 (Residential)	1st Q 2015	4th Q 2016	24
Building A14 (Residential)	3rd Q 2015	2nd Q 2017	24
Building A15 (Residential)	1st Q 2016	4th Q 2017	24
A16 (Park)	3rd Q 2013	1st Q 2014	9
Building A17 (Community/Residential)	1st Q 2016	4th Q 2017	24
Building A18 (School/Residential)	3rd Q 2014	2nd Q 2016	24
Building A19 (Convention Center)	1st Q 2014	4th Q 2016	36
A20 to A23 (Open Space)	1st Q 2016	3rd Q 2016	9
Van Wyck Access	3rd Q 2011	4th Q 2013	30
Notes: Start date is the first day of the quarter; finish date is last day of the quarter.			

Using the same approach utilized in the FGEIS, the number of daily workers and truck trips were estimated (see **Table 6**). **Table 7** compares the peak period number of workers and truck trips for the Adjusted Plan and proposed Plan. As shown in the table, the peak number of workers for the Adjusted Plan would be 435 less compared to the peak for the proposed Plan, and the peak number of truck trips for the Adjusted Plan would be 166 less compared to the peak for the proposed Plan.

Table 6
Number of Construction Workers and Delivery Trucks (per day)

YEAR	2009				2010				2011				2012			
QUARTER			3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH
WORKERS			0	0	0	50	165	240	415	690	915	1,190	1,590	2,015	2,115	2,190
TRUCKS			0	0	0	10	22	22	84	169	214	284	307	397	387	377
YEAR	**2013**				**2014**				**2015**				**2016**			
QUARTER	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH
WORKERS	1,715	1,965	1,265	1,315	1,315	1,465	1,515	1,490	1,025	1,425	1,650	1,550	1,650	1,475	1,325	1,225
TRUCKS	322	442	262	264	221	261	335	345	250	295	295	290	325	310	255	225
YEAR	**2017**				**PROJECT**											
QUARTER	1ST	2ND	3RD	4TH	PEAK	AVERAGE										
WORKERS	800	850	500	400	2,115	1,361										
TRUCKS	130	130	80	80	442	224										
Note: The number of construction workers and delivery trucks represent the highest number over a one to two week period and may not reflect the absolute peak day.																

Table 7
Comparison of Peak Construction Workers and Trucks

	FGEIS		Adjusted Plan		Difference
	Number	Quarter	Number	Quarter	Number
Workers	2,625	4th Q 2012	2,190	4th Q 2012	435
Trucks	608	4th Q 2012	442	2nd Q 2013	166

For both the Adjusted Plan and the proposed Plan, the peak periods of activity would occur before the end of 2013. Under the Adjusted Plan, the peak period for workers (fourth quarter 2012) would be the same as under the proposed Plan, while the peak period for trucks would be the second quarter of 2013, two quarters later than under the proposed Plan. Because of the uncertainties in scheduling, this shift in peak quarter for trucks deliveries is considered to be minor.

The average number of workers and truck deliveries would be approximately 15 percent higher under the Adjusted Plan compared to the proposed Plan. There are two reasons for this change. First, while both plans involve the same amount and type of construction work, the construction period for the Adjusted Plan is nine months shorter than for the proposed Plan due to a later start date. Second, while site cleanup and remediation for the proposed Plan would be completed early in the construction period, over the course of two years, these activities would take place sequentially under the Adjusted Plan, over the course of 4.5 years. Although the same amount of cleanup and remediation would be required under either plan, the extended schedule under the Adjusted Plan would increase the overall number of workers and truck deliveries required.

Although average numbers of workers and truck trips are useful indicators of construction activity, the peak levels are more pertinent as they represent the reasonable worst case scenario for traffic during construction. The FGEIS concluded that at most intersections, traffic from construction of the proposed Plan would be substantially less than traffic generated by the full operation of the proposed Plan, but that unmitigatable impacts would nonetheless occur at some of the same locations identified as having unmitigatable impacts during operation of the proposed Plan. Although the traffic volumes associated with the construction peak for the Adjusted Plan would be lower than under the proposed Plan, it is anticipated that significant adverse traffic impacts would still occur and the same types of mitigation would apply.

The Adjusted Plan would involve the same types of construction activities as described in the FGEIS, and would comply with the same laws, codes, and other rules and regulations as the proposed Plan or Staged Acquisition Alternative. The same measures to control air emissions and noise would be implemented. As described above, the shorter construction period and longer cleanup and remediation schedule for the Adjusted Plan may lead to periods of time between 2014 and 2017 where the intensity of construction activity would be slightly higher than under the proposed Plan. However, any noise or air quality effects from construction would be temporary. Overall, the impacts with the Adjusted Plan would be the same as disclosed in the FGEIS, and the FGEIS conclusions regarding the effects of construction activities within the District would apply to the Adjusted Plan. No long-term significant adverse impacts related to land use, socioeconomic conditions, neighborhood character, community facilities, natural resources, hazardous materials, transit and pedestrians, noise, or air quality are expected.

PUBLIC HEALTH

The FGEIS concludes that the Staged Acquisition Alternative would include the same restrictions and safeguards specified for the proposed Plan (including: use of E-designations and Restrictive Declarations to ensure no significant adverse impacts with respect to hazardous materials, noise attenuation, and air quality; preparation and enforcement of a construction Health and Safety Plan; and enforcement of Local Law 77 during construction) and that neither the proposed Plan or Staged Acquisition Alternative would result in any significant adverse impacts to public health. The Adjusted Plan would include the same restrictions and safeguards described in the FGEIS and would have no potential for significant adverse public health impacts.

E. CONCLUSIONS

As described in the analysis above, none of the changes proposed by the Adjusted Plan would result in significant adverse environmental impacts that were not identified in the FGEIS.

Robert R. Kulikowski, Ph.D.
Assistant to the Mayor

November 23, 2009
Date

APPENDIX B
NYPD AND FDNY CORRESPONDENCE

The City of New York

FIRE DEPARTMENT
9 METROTECH CENTER BROOKLYN, N.Y. 11201-3857

ROBERT F. SWEENEY Room 7W-4
Chief of Operations
Bureau of Operations

January 13, 2011

Robert Holbrook
Senior Planner
New York City Economic Development
Corporation
110 William Street
New York, NY 10038

Dear Mr. Holbrook:

This letter is in response to your inquiry regarding the Fire Department's emergency response capabilities to the proposed Willets Point Development Project.

Fire companies are dispatched to emergencies based on series of complex dispatch protocols. Each company is designated as the "first due" and "second due" engine or ladder company for a particular geographic area. In addition, there are dispatch protocols to send other companies as the designated companies may be engaged in other response activities or otherwise unavailable at the time an alarm is received. Therefore other companies may respond in those instances. Also, depending on the severity of the alarm, additional resources may be sent from other areas including specialized units.

The Willets Point area of Queens lies within the Department's 14th Division and 52nd Battalion and is well-served by Fire Department resources. There are nearby companies which can respond to this area from every direction. Engine Company 273/Ladder Company 129, located at 40-18 Union Street in downtown Flushing is to the east of planned development area. These units are designated as the first due companies to the proposed development area. Engine Company 289/Ladder 138, located at 97-28 43rd Avenue in Corona, are the second due companies. Additional firehouses in the area include Engine Company 297/Ladder Company 130 in College Point, Engine Company 316 located in East Elmhurst and Engine Company 324 in Corona. In addition, Engine Company 274, Engine Company 295, Ladder Company 144, Engine Company 299 and Ladder Company 152 are also in a position to promptly respond to a fire or other emergency in the project area. (See attached map.)

To date, there are no budget cuts which would affect staffing levels at the above-mentioned firehouses.

Additionally the project area lies within the Fire Department's 4th Division of its Emergency Medical Service ("EMS") Command. EMS Station 52, located at 135-16 35th Avenue in Flushing is the closest EMS station to the project area. However, EMS ambulances are deployed to street corner locations for dispatch to medical emergencies which serve to reduce response times.

In addition to the Fire Department's ambulances, the Willets Point area is served by ambulances operated by New York Hospital of Queens and Flushing Hospital, which participates as an ambulance provider in the NYC 911 System and are dispatched by the Fire Department in response to 911 calls for emergency medical assistance.

Presently, there are five ambulances (totaling fifteen tours per day) with cross-street locations less than two miles from the project site. Two ambulances, an Advanced Life Support ("ALS") unit staffed by paramedics (Unit 46V), and a Basic Life Support ("BLS") unit staffed by emergency medical technicians (Unit 52G), are assigned to cross-street locations less than one mile from the project site.

The following is a chart of the five ambulances and their cross-street locations:

Unit	*Type*	*Cross Street Location*	*Station*	*# of Tours*
46A	BLS	Roosevelt Avenue and 103rd Street	EMS Station 52	Three
46V	ALS	Roosevelt Avenue and 108th Street	NY Hospital of Queens	Three
52G	BLS	Main Street and 38th Avenue	NY Hospital of Queens	Three
52V	ALS	College Point Blvd. and Booth Memorial Dr.	NY Hospital of Queens	Three
52X	ALS	Bayside Avenue and Parsons Boulevard	Flushing Hospital	Three

The Fire Department continuously monitors response time and maintains detailed response time statistics, both Citywide and by fire company. These response times are measured from the time that the alarm is received by our Communications Office to the time the first piece of apparatus arrives at the location.

In 2009, the average Citywide response time (for all fire companies, all types of responses) was 4 minutes, 31 seconds. The average response time in the Borough of Queens during the same year was 4 minutes, 49 seconds. In 2010, the average Citywide response time was 4 minutes, 38 seconds. The average response time in the Borough of Queens during that same year was 4 minutes, 58 seconds.

The Fire Department utilizes Automatic Vehicle Locator ("AVL") technology to track its ambulances. This technology is not currently available for voluntary hospital 911 System ambulances. AVL enables the Fire Department's computerized dispatch system and dispatchers to more accurately locate 911 System ambulances for dispatch purposes, but is not relevant to an evaluation of emergency response capabilities in a particular geographic area.

If you require additional information, please contact David Harney, Chief of Staff, Technology and Support Services at 718-999-2346.

Yours truly,

Robert F. Sweeney
Chief of Operations

Att.

RFS:ld

FDNY Response to EDC Re: Willets Point (Draft 1.12.11)

The City of New York

POLICE DEPARTMENT
Office of Management Analysis and Planning
1 Police Plaza, Room 1403
New York, NY 10038

January 3, 2010

Robert Holbrook
New York City Economic Development Corporation
110 William Street
New York, NY 10038

Dear Mr. Holbrook,

This letter is in response to your request for information regarding the New York City Police Department (NYPD) facilities that serve the neighborhood of Willets Point.

The 109th Precinct, located at 37-05 Union Street, currently provides police services for the Willets Point neighborhood. The 109th Precinct has 203 sworn uniformed members of the service assigned (as of November 30, 2010). The 109th Precinct's average response time for crimes in progress is approximately eight minutes and twenty-nine seconds.

The 110th Precinct is also located in the northern part of Queens at 94-41 43rd Avenue and provides police services to the communities of Corona and Elmhurst. The 110th Precinct has 189 sworn uniformed members of the service assigned (as of November 30, 2010). The 110th Precinct's average response time for crimes in progress is approximately eight minutes and nine seconds.

The NYPD maintains a sub-station at Citi Field (the baseball park of the New York Mets). The Citi Field station has 35 sworn uniformed members of the service assigned (as of December 15, 2010). This staff is not assigned to baseball games year-round. Consequently, during the baseball off-season Citi Field/Boro Conditions Staff is deployed throughout Queens North to address various crime trends. Citi Field also has an emergency response plan and employs a private emergency response team.

This Department will use its own procedures to assign staff and equipment to make traffic control modifications in the vicinity of Citi Field on as needed basis as development occurs in the future.

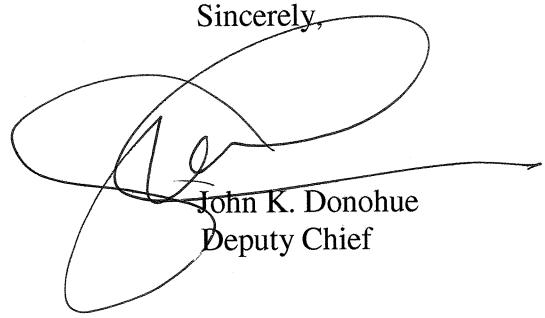
The NYPD uses a quantitative method for deploying the uniformed personnel. It is not a predictive formula, and is constrained by existing resources. When development at Willets Point occurs in the future, however, police services will need to be evaluated in light of any projected population increases and possible demographic shifts. As such, we request that the NYPD continue to be provided information as the project proceeds. Accurate projection and up-to-date data will assist the NYPD in determining future staffing and resources needs for

the area concerned, allowing this department to continue to serve the area in question with its needs.

The NYPD has also prepared a comprehensive emergency response plan to respond to various hazards that may occur in the Patrol Borough Queens North. The plan is written on a Patrol Borough-wide level, with information provided based on Patrol Borough-wide priorities. The Patrol Borough Queens North Unusual Disorder Plan is prepared to supplement individual precinct disorder plans. This plan serves as a guide for all types of emergencies.

Thank you for keeping the New York City Police Department informed about the planning process of the Willets Point neighborhood.

Sincerely,



John K. Donohue
Deputy Chief

APPENDIX C

REVIEW AND VALIDATION OF TRAFFIC ANALYSIS FINDINGS IN THE WILLETS POINT DEVELOPMENT DISTRICT FGEIS

FULL-BUILD TRAFFIC ANALYSIS

REVIEW AND VALIDATION OF TRAFFIC ANALYSIS FINDINGS IN THE WILLETS POINT DEVELOPMENT DISTRICT FGEIS

PURPOSE OF TECHNICAL MEMORANDUM

The purpose of this Technical Memorandum is to review the overall traffic analysis findings of the FGEIS in light of several changes since the FGEIS work was conducted: 1) it has been four years since traffic counts were conducted for the FGEIS, and *CEQR Technical Manual* guidelines indicate that traffic counts should typically not be more than three years old; 2) the anticipated date of completion of the full buildout of the proposed development program has shifted outward from the FGEIS-assumed Build year of 2017, to 2022; 3) the current *2010 CEQR Technical Manual* suggests use of a lower annual background traffic growth rate than the rate recommended by the prior 2001 *Manual* that was used for the FGEIS; 4) the current list of proposed No Build development projects may have changed from those incorporated within the FGEIS, and there may be fewer projects and a lower volume of No Build project-generated traffic; 5) background traffic patterns along Main Street and Union Street in Downtown Flushing have changed from those assumed for future conditions in the FGEIS; and 6) *CEQR Technical Manual* criteria for significant traffic impacts have also changed slightly from those used in the FGEIS.

The proposed Willets Point Development District development program remains the same as proposed and analyzed in the FGEIS. However, due to background traffic pattern changes in Downtown Flushing, two new traffic-related project improvements are being proposed as part of the Proposed Action that were not proposed under the Approved Plan within the FGEIS. The major overall traffic analysis findings of the FGEIS were that the vast majority of intersections analyzed would be significantly impacted and that many, but not all, could be mitigated with standard traffic capacity improvements; many impacted intersections would remain unmitigated or be only partially mitigated. The purpose of this Technical Memorandum is, therefore, to determine whether the FGEIS' findings have materially changed or remain substantially the same.

The traffic analysis prepared for this Technical Memorandum focuses on four peak traffic analysis hours out of the seven analyzed in the FGEIS, and on a representative set of traffic analysis locations in order to determine whether the overall conclusions of the FGEIS remain valid in light of the changes described above. Ten intersections out of the 29 intersections analyzed in the FGEIS (15 in Downtown Flushing and 14 in the Citi Field/Willets Point/North Corona area) are analyzed in this Technical Memorandum – all ten intersections are located within the Downtown Flushing area because that is the area in which traffic patterns have changed from those assumed in the FGEIS. There have been no materially changed conditions in the Citi Field/Willets Point/North Corona area or along the Van Wyck Expressway or Grand Central Parkway.

The four peak traffic analysis hours selected include the weekday AM and PM peak commuter hours that are traditionally analyzed for potential impacts, the Saturday midday peak hour during which project-generated vehicle trips are the highest of all the peak hours addressed in the FGEIS, and the weekday night pregame arrival peak hour which had the highest number of significantly impacted intersections (25 out of the 29 intersections in the FGEIS' traffic study area) and unmitigated impact locations (14 intersections in the FGEIS). The analysis of weekday AM and PM peak hour conditions reflect peak weekday mitigation needs since the weekday midday peak hour was projected in the FGEIS to have fewer project-generated trips, fewer significantly impacted locations, and fewer unmitigated impact locations. For the game day conditions addressed in the FGEIS, the weekday evening pre-game peak hour represents the extent of impacts expected and mitigation needed, recognizing as well that game day

mitigation is often under the purview of the New York City Police Department whose enforcement agents also react to prevailing conditions; the mitigation analyses contained in the FGEIS and within this Technical Memorandum typically represent the starting point for game day planning.

The analysis locations addressed in this Technical Memorandum include the key intersections in Downtown Flushing at which the findings of the FGEIS could change due to the continuation of two-way traffic flow along Main Street and Union Street, as opposed to the one-way with contraflow bus lane configuration assumed in the FGEIS. An inventory of intersection geometries within the Citi Field/Willets Point/North Corona part of the overall traffic study area did not indicate that there have been significant changes that could materially affect the overall findings of the FGEIS, so additional analyses were not conducted there.

PRINCIPAL CONCLUSIONS

The principal conclusion of the new analyses contained in this Technical Memorandum is that even with changed conditions, new assumptions and new guidance from the 2010 *CEQR Technical Manual*, the overall findings of the FGEIS with regards to significant adverse impacts and mitigation needs remain substantially the same. At the ten intersections re-analyzed in the Downtown Flushing area, with the incorporation of the project-related traffic improvements, the number of intersections that would be significantly impacted is lower under the new conditions, and the number of individual traffic movements that would be significantly impacted at those ten intersections is also lower. At the ten intersections analyzed, the traffic capacity improvements needed to mitigate significant adverse impacts would be very similar to those identified in the FGEIS and there would be fewer unmitigatable intersections under the current analyses. The FGEIS disclosed significant impacts for some intersections at certain peak periods where significant impacts are again identified, though in different lane groups. Overall, however, the number of significant adverse impacts and the mitigatability of those impacts are not materially different and, in fact, show better conditions than predicted in the FGEIS. Overall conditions at each intersection in the Updated Plan are better than or equal to those predicted in the FGEIS for the Approved Plan. The Updated Plan would not result in any new significant adverse impacts because there are no new intersections or peak hours, only lane groups, with significant impacts that were not identified in the FGEIS.

In the weekday AM peak hour on non-game days, the FGEIS predicted that eight of the ten intersections analyzed here would experience significant adverse impacts. At these eight intersections, impacts could be fully mitigated at two of the intersections, and impacts at the other six intersections were unmitigatable. At the same ten intersections analyzed in this Technical Memorandum, seven of the intersections were predicted to be significantly impacted. At these seven intersections, impacts could be fully mitigated at two of the intersections, partially mitigated at one of the intersections, and impacts at four intersections were found to be unmitigatable. This is a net decrease of one significantly impacted intersection and a net decrease of two unmitigatable intersections.

In the weekday PM peak hour on non-game days, the FGEIS predicted that nine of the ten intersections would experience significant adverse impacts. At these nine intersections, impacts could be fully mitigated at two of the intersections, and impacts at the other seven intersections were unmitigatable. At the same ten intersections analyzed in this Technical Memorandum, seven of the intersections were predicted to be significantly impacted. At these seven intersections, impacts could be fully mitigated at one of the intersections, impacts could be partially mitigated at one of the intersections, and impacts at five intersections were found to be unmitigatable. This is a net decrease of two significantly impacted intersections and a net decrease of two unmitigatable intersections.

In the Saturday midday peak hour on non-game days, the FGEIS predicted that nine of the ten intersections would experience significant adverse impacts. At these nine intersections, impacts were fully mitigated at two of the intersections, and impacts at the other seven intersections were unmitigatable. At the same ten intersections analyzed in this Technical Memorandum, eight of the intersections were significantly impacted. At these eight intersections, impacts can be fully mitigated at one of the intersections, and impacts at seven intersections were found to be unmitigatable. This is a net decrease of one significantly impacted intersection and the same number of unmitigatable intersections as in the FGEIS.

In the weekday pre-game peak hour, the FGEIS predicted that nine of the ten intersections would have significant adverse impacts. At these nine intersections, impacts were fully mitigated at two of the intersections, and impacts at the other seven intersections were unmitigatable. At the same ten intersections analyzed in this Technical Memorandum, six of the intersections were significantly impacted. At these six intersections, impacts could be fully mitigated at one of the intersections, partially mitigated at one of the intersections, and impacts at the other four intersections were found to be unmitigatable. This is a net decrease of three significantly impacted intersections and a net decrease of three unmitigatable intersections.

Details of the analysis findings appear later in this Technical Memorandum.

VALIDATION OF EXISTING CONDITIONS

New traffic counts were conducted in September 2010 throughout the FGEIS' traffic study area in order to determine whether current traffic volumes are significantly different from volumes collected for the FGEIS. These traffic counts included 24-hour Automatic Traffic Recorder (ATR) machine counts conducted at the same 40 locations as in the FGEIS.

A comparison of the 2010 ATR counts with the FGEIS' 2006 ATR counts was completed for the four key time periods discussed earlier under "Purpose of Technical Memorandum": weekday AM (7:45-8:45 AM) and PM (5:15-6:15 PM) peak hours and the Saturday midday peak hour (1-2 PM) on days with no Mets game at Shea Stadium/Citi Field (i.e., non-game day) and the weekday pre-game peak hour (6-7 PM) on an evening with a Mets game (i.e., game day). The comparison showed that traffic volumes are lower today than in 2006:

- In the weekday non-game day AM peak hour, current volumes are about 8.6 percent lower than those in 2006.

- In the weekday non-game day PM peak hour, current volumes are about 9.5 percent lower than those in 2006.

- In the Saturday non-game day midday peak hour, current volumes are about 5.2 percent lower than those in 2006.

- In the weekday pre-game peak hour, current volumes are about 17.4 percent lower than those 2006 (partially due to Mets game attendance being significantly lower on the count day in 2010 than on the count day in 2006).

Although it would be possible to re-analyze existing traffic conditions (i.e., traffic levels of service) and show that existing conditions are better today and use improved baseline conditions as the starting point for future projections, the original baseline was retained for purposes of this analysis. Traffic volumes are lower today than they were in the area in 2006 as a result of the current economic downturn, but could

revert back to 2006 volume levels when the economy recovers. Therefore, the 2006 "existing" volumes were retained so that the traffic analyses conducted for this Technical Memorandum would be conservative.

Changes in the street network – primarily changes at several intersections in the Downtown Flushing area – were incorporated in the future No Build analyses that follow. It is the future No Build condition that serves as the baseline against which Build impacts are measured. So, any changes to intersection geometries in Downtown Flushing – e.g., turn prohibitions, sidewalk/corner extensions – and to signal timings, were incorporated into the No Build analyses. Additionally, traffic pattern changes such as bus re-routings and diversions of newly-prohibited turns to other nearby intersections were incorporated into the No Build traffic volume networks. The changes implemented in Downtown Flushing in 2010 by the New York City Department of Transportation (NYCDOT) and Metropolitan Transportation Authority/New York City Transit (NYCT) were implemented as part of a pilot program in lieu of the proposed conversion of Main Street and Union Street into one-way streets with contraflow bus lanes, as was assumed in the FGEIS' No Build analyses. Therefore, this key change in traffic assumptions – not assuming a one-way pair – was applied to the No Build conditions in this Technical Memorandum.

NO BUILD CONDITIONS

Four major changes have been considered within the Technical Memorandum's No Build analysis: 1) changes in the No Build/Build analysis year; 2) changes in the annual background traffic growth rate; 3) changes in the No Build development project list; and 4) changes in traffic conditions resulting from retention of two-way traffic flow plus interim improvements implemented by NYCDOT on Main Street and Union Street.

Evaluation of Changed No Build Assumptions

The change in the expected full buildout year for the Willets Point Development District program, from the FGEIS' 2017 to the current 2022 projection, means that five years of additional background traffic were incorporated into the No Build analysis. However, the current *CEQR Technical Manual* recommends annual background traffic growth rates for this area that are lower than those contained in the prior 2001 Manual. The annual background traffic growth rate used in the FGEIS based on the 2001 Manual was one percent per year; the current 2010 Manual stipulates that an annual background growth rate of 0.50 percent should be used for the first five years and that 0.25 percent per year should be used for each year thereafter. Based on the 2010 Manual's guidance, 2006 "existing" volumes were thus increased by approximately 5.4 percent to the 2022 No Build/Build traffic analysis year.

The FGEIS' No Build analyses also included projected trip generation estimates for 91 potential No Build development projects, one of the largest numbers of "soft sites" ever included in any EIS in New York City. That No Build list was reviewed to determine if some projects have been built, if others have been deferred to a later date or canceled, if others have changed in their proposed size and composition, and if any others have been newly proposed. An assessment included in this Technical Memorandum has concluded that the list and its traffic generating potential are conservatively large because, even considering this Technical Memorandum's focus on an analysis year that is five years later than the FGEIS' 2017 analysis year, a number of the projects assumed in the FGEIS are no longer being pursued and, thus, it is conservative to include them in the analysis. Although it might be reasonable to shorten the No Build project list and accordingly reduce the volume of traffic to be incorporated within this Technical Memorandum's No Build analysis, such an approach is not being taken. Rather, the same trip generation has been re-used and, as a result, the No Build analyses can be deemed to be further conservative. However, the traffic assignment of these No Build development-generated trips was redone in order to

account for, and be consistent with, the two-way operation of Main Street and Union Street discussed earlier.

Lastly, intersection regulations and signal timings within Downtown Flushing were inventoried concurrent with the September 2010 traffic counts, and new intersection geometries, lane widths, turning restrictions, signal timings, etc. were incorporated within the No Build analyses, along with changes in bus routes and general traffic diversions.

Evaluation of Changed No Build Traffic Volumes and Levels of Service

Three traffic study "subareas" were considered for detailed traffic analysis: 1) intersections within Downtown Flushing; 2) intersections within the Willets Point/Citi Field/North Corona area; and 3) the Van Wyck Expressway (VWE) and Grand Central Parkway (GCP) abutting the Willets Point Development District. Each of these subareas was studied in the FGEIS, but not all are affected by changes in conditions since the FGEIS was completed.

Clearly, there have been changes in conditions and assumptions in Downtown Flushing, as noted above. Changed traffic patterns there will result in changes in both No Build and Build conditions as there have been some shifts in volumes and changes in intersection geometries along Main Street and Union Street from those assumed in the FGEIS. Ten of the 15 intersections analyzed in Downtown Flushing within the FGEIS have been re-analyzed within this Technical Memorandum for non-game day weekday AM and PM peak hours and the Saturday midday peak hour, and for the game day weekday pre-game peak hour:

- Union Street and Northern Boulevard
- Union Street and Roosevelt Avenue
- Union Street and Sanford Avenue
- Main Street and Northern Boulevard
- Main Street and Roosevelt Avenue
- Main Street and Kissena Boulevard
- College Point Boulevard and Northern Boulevard westbound service road
- College Point Boulevard and Roosevelt Avenue
- Prince Street and Northern Boulevard
- Prince Street and Roosevelt Avenue

These are the intersections at which changed conditions may be most pronounced. The other five intersections included in the FGEIS but not analyzed within this Technical Memorandum include three intersection along Parsons Boulevard and two along College Point Boulevard (one at Sanford Avenue and one at 32nd Avenue) that are not as affected by the changes implemented by NYCDOT as the ten intersections that are being analyzed.

For the other two subareas, it is unlikely that future conditions projected in the FGEIS would be adversely changed in a material manner. For both the Willets Point/Citi Field/North Corona intersections and VWE and GCP segments, weave, or merge/diverge areas analyzed in the FGEIS, existing volumes were higher in the FGEIS, predicted annual background traffic growth (using the current *CEQR Technical Manual* guidelines) is lower than what was assumed in the FGEIS, future No Build volumes are the same or lower than what was assumed in the FGEIS, and projected Build traffic assignments would remain the same.

The change in conditions due to retention of two-way traffic flow along Main Street and Union Street within the heart of Downtown Flushing, while affecting traffic levels of service along those two corridors, are not expected to materially change conditions in the Willets Point/Citi Field/North Corona. Since

traffic flow changes would be confined to the local northbound-southbound corridors of Main and Union Streets between Northern Boulevard and Roosevelt Avenue, the effects of this change would not extend beyond the Downtown Flushing area. In fact, conditions at intersections in the Willets Point/Citi Field/North Corona subarea and along the GCP and VWE adjacent to it would likely be better due to lower existing and future baseline volumes. Additionally, recent field visits in the Willets Point/ Citi Field area confirmed that traffic conditions are generally better than during the period in which field observations were made for the FGEIS. This is primarily due to recent physical improvements that include the following: 1) the development of a new pedestrian bridge connecting the Willets Point-Citi Field Stadium subway station and the northern sidewalk on Roosevelt Avenue; 2) widening of westbound 34th Avenue at the intersection of 126th Street; 3) construction of pedestrian circulation areas that front the new Citi Field on the west side of 126th Street between Roosevelt Avenue and Northern Boulevard; and 4) replacing a roundabout with a four-legged signalized intersection at Stadium Road and the northern entrance to the Citi Field main parking lot. However, for the purpose of this analysis, traffic conditions in the Willets Point/Citi Field/North Corona subarea were conservatively assumed to be the same. Since traffic conditions in these two subareas are not anticipated to be affected by traffic pattern changes in the Downtown Flushing area, they were not re-analyzed for this Technical Memorandum.

Within the Downtown Flushing area, the following specific traffic flow changes implemented by NYCDOT since the completion of the FGEIS were incorporated in this Technical Memorandum:

- Prohibiting left turns from westbound Northern Boulevard onto southbound Main Street, except for buses.

- Prohibiting left turns from northbound and southbound Union Street onto westbound and eastbound Northern Boulevard, respectively.

- Prohibiting all turns from northbound and southbound Main Street onto Roosevelt Avenue.

- Re-routing Main Street buses onto 39th Avenue due to turn prohibitions at Roosevelt Avenue (additionally, some NYCT/MTA bus routes have changed within the Downtown Flushing area since 2006).

- Implementing lane striping modifications and signal timing changes at selected locations to improve overall traffic flow.

NYCDOT is also considering the implementation of the following bicycle facilities in Downtown Flushing within the next 10 years: 1) Class II buffered bicycle lanes in each direction along College Point Boulevard between Sanford and 32nd Avenues; 2) Class II bicycle lanes adjacent to the parking lane in each direction along Roosevelt Avenue between 114th Street and Parsons Boulevard; 3) existing Class II buffered bicycle lanes along Sanford Avenue between Kissena and Parsons Boulevards could potentially be converted to Class III shared bicycle routes in both directions. These are potential future projects that are not currently scheduled for implementation and, as directed by NYCDOT, have not been incorporated into the analysis.

The effects of these modifications were applied to the 2006 FGEIS' existing volume networks and capacity analysis files. The 2010 *CEQR Technical Manual's* suggested annual background growth rates were then applied, and the vehicle traffic generated by the 91 proposed development projects were added as well, to create year 2022 No Build traffic volume networks (2022 No Build traffic network maps are provided in the Appendix). *Highway Capacity Manual* software was then used to determine projected future 2022 No Build traffic conditions at the ten intersections – volume-to-capacity (v/c) ratios, average

vehicle delays, and levels of service. Detailed levels of service by lane group and for the overall intersections are provided in the Appendix, and are summarized in Table 1 below.

Table 1
SUMMARY OF NO BUILD INTERSECTION AND LANE GROUP LEVELS OF SERVICE

	Weekday AM Non-Game Day	Weekday PM Non-Game Day	Saturday Midday Non-Game Day	Weekday Pre-Game Game Day
Overall Intersection LOS A/B/C	1	1	1	1
Overall Intersection LOS D	6	2	2	1
Overall Intersection LOS E	3	2	0	4
Overall Intersection LOS F	0	5	7	4
No. of Lane Groups at LOS A/B/C	21	17	12	14
No. of Lane Groups at LOS D	11	11	11	11
No. of Lane Groups at LOS E	8	2	5	8
No. of Lane Groups at LOS F	12	21	24	19

The new analyses conducted for this Technical Memorandum for 2022 No Build conditions indicate that:

- In the weekday AM peak hour on non-game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, six would operate at overall intersection LOS D, three would operate at overall intersection LOS E, and none would operate at overall intersection LOS F.

- In the weekday PM peak hour on non-game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, two would operate at overall intersection LOS D, two would operate at overall intersection LOS E, and five would operate at overall intersection LOS F.

- In the Saturday midday peak hour on non-game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, two would operate at overall intersection LOS D, none would operate at overall intersection LOS E, and seven would operate at overall intersection LOS F.

- In the weekday pre-game arrival peak hour on game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, one would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and four would operate at overall intersection LOS F.

BUILD CONDITIONS

This analysis conservatively assumes that the Willets Point development program remains, at full buildout, the same as was analyzed and documented in the FGEIS even though the Phase 1 analysis does

not assume the maximum development allowed by zoning. There are no changes in trip generation or access routes to and from the Development District, so all traffic assignments contained in the FGEIS remain "as is", except as affected by changes in No Build conditions as described above. Project-related traffic improvements were also incorporated at two intersections. At the intersection of Main Street and Kissena Boulevard near 41st Avenue, improvements would consist of the following: 1) shifting the Main Street centerline one foot to the west south of 41st Avenue, thus enabling the widening of the exclusive northbound Main Street left turn lane from its current 10-foot width to 11 feet – in order to better accommodate traffic flows; and 2) shifting the Main Street centerline one foot to the west north of 41st Avenue and re-striping the southbound Main Street approach to provide a 13-foot wide shared through-right turn lane and a 10.5-foot through lane. At the intersection of Union Street and Roosevelt Avenue, project improvements would consist of the following: 1) shifting the centerline along the westbound Roosevelt Avenue approach by two feet to the south; 2) restriping the eastbound approach to provide one 10-foot wide left turn lane and one 11-foot wide shared through-right turn lane; and 3) strictly enforcing existing "No Standing Anytime" regulations along both eastbound and westbound Roosevelt Avenue approaching the intersection[1].

Build condition traffic volume network maps are provided in the Appendix.

Table 2 below presents a summary comparison of levels of service and significant adverse impacts between the No Build and Build conditions, as analyzed for this Technical Memorandum. The number of intersections that would be significantly impacted is lower under the new analysis than what was documented in the FGEIS for all analysis time periods. There are three intersections that would not be significantly impacted during at least one peak hour in which they were significantly impacted in the FGEIS. Several lane groups that would be significantly impacted according to the FGEIS were not predicted to be significantly impacted in this analysis. While some lane groups that would be significantly impacted according to this analysis were not predicted to be significantly impacted according to the FGEIS analysis, they occur at intersections where significant impacts were identified for the same peak periods in the FGEIS. The differences are due to variations in traffic flow patterns in Downtown Flushing primarily reflecting retention of two-way traffic flow along Main Street and Union Street in lieu of the one-way pairing with bus contraflow lanes that was assumed in the FGEIS. However, overall, the number of significantly impacted lane groups and intersections projected in this analysis is lower than the number predicted in the FGEIS for all analysis periods.

[1] As discussed in the FGEIS, all components of the traffic program as well as its effects upon pedestrian movements would be subject to a monitoring program that would be reviewed by NYCDOT in order to verify the need for any of the mitigation measures identified in the FGEIS or subsequent Technical Memoranda or other project improvements. Improvements proposed and mitigation identified for both the Phase 1 and full build-out programs would be reviewed at the close of construction for each phase.

Table 2
SUMMARY COMPARISON OF INTERSECTION AND LANE GROUP LEVELS OF SERVICE FOR NO BUILD AND BUILD CONDITIONS AND SIGNIFICANT TRAFFIC IMPACTS

	No Build Condition				Build Condition			
	Weekday AM Non-Game Day	Weekday PM Non-Game Day	Saturday Midday Non-Game Day	Weekday Pre-Game Game Day	Weekday AM Non-Game Day	Weekday PM Non-Game Day	Saturday Midday Non-Game Day	Weekday Pre-Game Game Day
Overall Intersection LOS A/B/C	1	1	1	1	1	1	1	1
Overall Intersection LOS D	6	2	2	1	4	1	1	1
Overall Intersection LOS E	3	2	0	4	4	1	1	2
Overall Intersection LOS F	0	5	7	4	1	7	7	6
No. of Lane Groups at LOS A/B/C	21	17	12	14	19	15	8	12
No. of Lane Groups at LOS D	11	11	11	11	15	13	12	12
No. of Lane Groups at LOS E	8	2	5	8	6	3	6	7
No. of Lane Groups at LOS F	12	21	24	19	14	22	28	22
No. of Intersections With Significant Adverse Impacts (out of 10)	--	--	--	--	7	7	8	6

The new analyses conducted for this Technical Memorandum for 2022 Build conditions indicate that:

- In the weekday AM peak hour on non-game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, four would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and one would operate at overall intersection LOS F. Seven of the ten intersections would be significantly impacted; under the analyses conducted for the FGEIS, eight intersections were significantly impacted.

- In the weekday PM peak hour on non-game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, one would operate at overall intersection LOS D, one would operate at overall intersection LOS E, and seven would operate at overall intersection LOS F. Seven of the ten intersections would be significantly impacted; under the analyses conducted for the FGEIS, nine intersections were significantly impacted.

- In the Saturday midday peak hour on non-game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, one would operate at overall intersection LOS D, one would operate at overall intersection LOS E, and seven would operate at overall intersection LOS F. Eight of the ten intersections would be significantly impacted; under the analyses conducted for the FGEIS, nine intersections were significantly impacted.

- In the weekday pre-game peak hour on game days, one of the ten intersections re-analyzed in Downtown Flushing would operate at overall intersection LOS A, B, or C, one would operate at overall intersection LOS D, two would operate at overall intersection LOS E, and six would

operate at overall intersection LOS F. Six of the ten intersections would be significantly impacted; under the analyses conducted for the FGEIS, nine intersections were significantly impacted.

The specific lane groups that were identified as significantly impacted in the FGEIS and this Technical Memorandum occur during the same peak periods. They are not always the same lane groups, since traffic patterns resulting from the retention of two-way flow on Main Street and Union Street in these new analyses have created different underlying conditions between the two sets of analyses. Overall, conditions predicted here are similar or better than what was predicted in the FGEIS. Accordingly, at full build out, the Updated Plan would not result in any new significant adverse impacts because there are no new intersections or peak hours, only lane groups, with impacts that were not identified in the FGEIS. Detailed Build condition level of service tables and No Build vs. Build condition level of service comparison tables are provided in the Appendix.

MITIGATION

Traffic capacity improvements that would be needed to mitigate significant adverse impacts identified by the new traffic analyses contained in this Technical Memorandum were then investigated. The principal conclusions of these mitigation analyses are: 1) the same types of improvements described and evaluated in the FGEIS, and which are typically implemented by NYCDOT, would be appropriate to the Downtown Flushing area intersections studied; and 2) these measures would be similarly or more successful in mitigating significant adverse impacts, with several intersection impacts remaining unmitigatable, as was predicted in the FGEIS.

In the weekday AM peak hour on non-game days, the FGEIS found that two of the eight significantly impacted intersections (out of the ten intersections analyzed here) could be fully mitigated and that six could not be mitigated. The new analyses conducted for this Technical Memorandum found that two of the seven significantly impacted intersections could be fully mitigated, one other could be partially mitigated, and four others could not be mitigated. Each intersection that could not be mitigated in these analyses was also found to be unmitigated in the FGEIS.

In the weekday PM peak hour on non-game days, the FGEIS found that two of the nine significantly impacted intersections (out of the ten intersections analyzed here) could be fully mitigated and that seven could not be mitigated. The new analyses conducted for this Technical Memorandum found that one of the seven significantly impacted intersections could be fully mitigated, one other could be partially mitigated, and five others could not be mitigated. Each intersection that could not be mitigated in these analyses was also found to be unmitigated in the FGEIS.

In the Saturday midday peak hour on non-game days, the FGEIS found that two of the nine significantly impacted intersections (out of the ten intersections analyzed here) could be fully mitigated and that seven could not be mitigated. The new analyses conducted for this Technical Memorandum found that one of the eight significantly impacted intersections could be fully mitigated, and seven others could not be mitigated. Each intersection that could not be mitigated in these analyses was also found to be unmitigated in the FGEIS.

In the weekday pre-game peak hour on game days, the FGEIS found that two of the nine significantly impacted intersections (out of the ten intersections analyzed here) could be fully mitigated and that seven could not be mitigated. The new analyses conducted for this Technical Memorandum found that one of the six significantly impacted intersections could be fully mitigated, one could be partially mitigated, and four others could not be mitigated. Each intersection that could not be mitigated in these analyses was also found to be unmitigated in the FGEIS.

The specific mitigation measures vary from those contained in the FGEIS primarily due to retention of two-way flow along Main Street and Union Street and due to measures already implemented by NYCDOT in support of the new two-way plan. Intersection-by-intersection details of the mitigation measures that emerge from this Technical Memorandum's analyses follow below (detailed levels of service for each lane group are provided in the Appendix):

Union Street and Northern Boulevard: Signal timing shifts of one to two seconds could partially mitigate significant adverse impacts in the weekday AM and PM peak hours on non-game days and during the weekday pre-game peak hour. Significant adverse impacts in the Saturday midday peak hour on non-game days would be unmitigated. This intersection had unmitigatable impacts during all four of these traffic analysis hours in the FGEIS.

Union Street and Roosevelt Avenue: Significant adverse impacts during the Saturday midday peak hour would be unmitigatable. However, in the FGEIS, significant adverse impacts in this peak hour and in two other peak hours – the weekday PM peak hour on non-game days and the weekday pre-game peak hour on game days – were also predicted to be unmitigatable.

Union Street and Sanford Avenue: Significant adverse impacts would be incurred in only one of the four peak hours analyzed (Saturday midday on non-game days) and could be fully mitigated by implementing "No Parking" regulations along the north side of the westbound Sanford Avenue approach to the intersection in order to reduce frictions from parking on that approach. The other three peak hours analyzed would not be significantly impacted. For the FGEIS' analyses, all four peak hours were significantly impacted and all were fully mitigatable using a similar "No Parking" mitigation measure.

Main Street and Northern Boulevard: Significant adverse impacts during the three non-game day peak hours analyzed would be unmitigatable, while there would be no significant adverse impacts during the weekday pre-game peak hour. All four peak hours were found to have unmitigatable significant adverse impacts within the FGEIS.

Main Street and Roosevelt Avenue: Significant adverse impacts during the weekday AM peak hour on non-game days could be mitigated via signal timing modifications; significant adverse impacts during the other three peak hours analyzed would be unmitigatable. Within the FGEIS, all four peak hours were found to have unmitigatable significant adverse impacts.

Main Street and Kissena Boulevard: Similar to the findings of the FGEIS, all four peak hours were found to have no significant adverse impacts.

College Point Boulevard and Roosevelt Avenue: Significant adverse impacts during all four peak hours would be unmitigatable, as was also concluded in the FGEIS.

Prince Street and Northern Boulevard: Significant adverse impacts during all four peak hours would be unmitigatable, as was also concluded in the FGEIS.

College Point Boulevard and Northern Boulevard Service Road: During the weekday AM peak hour on non-game days, significant adverse impacts could be fully mitigated via a one second shift in signal timing. During the weekday PM peak hour on non-game days, significant adverse impacts could be fully mitigated by implementing "No Standing 4-7 PM Monday to Friday" regulations along the west side of the southbound College Point Boulevard approach to the intersection. During the weekday pre-game peak hour on game days, both of these measures would be needed to fully mitigate significant adverse impacts. There would be no significant adverse impacts during the Saturday midday peak hour on non-game days.

Significant adverse impacts were identified in the FGEIS for all four peak hours and were fully mitigated by signal timing changes alone (generally a one second timing change, but five seconds were needed for the weeknight pre-game peak hour on game days).

Prince Street and Roosevelt Avenue: Significant adverse impacts during all four peak hours would be unmitigatable, as was also concluded in the FGEIS.

A summary comparison table of the mitigatability of significant adverse impacts from the FGEIS, and for the new analyses conducted for this Technical Memorandum, is presented in Table 3.

As discussed in the FGEIS, all components of the traffic program as well as its effects upon pedestrian movements would be subject to a monitoring program that is subject to NYCDOT review and would include, among other things, level of service analyses and signal progression analyses to verify the need for any of the mitigation measures or project improvements identified in the FGEIS or subsequent Technical Memoranda.

Table 3
SUMMARY OF MITIGATION FINDINGS

Intersection	Weekday AM Non-Game Day Peak Hour		Weekday PM Non-Game Day Peak Hour		Saturday Midday Non-Game Day Peak Hour		Weekday Pre-Game Peak Hour	
	FGEIS	Tech Memo	FGEIS	Tech Memo	FGEIS	Tech Memo	FGEIS	Tech Memo
Union Street / Northern Boulevard	Unmitigatable Impact	Partially Mitigated	Unmitigatable Impact	Partially Mitigated	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Partially Mitigated
Union Street / Roosevelt Avenue	No Impacts	No Impacts	Unmitigatable Impact	No Impacts	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	No Impacts
Union Street / Sanford Avenue	Mitigated Impact	No Impacts	Mitigated Impact	No Impacts	Mitigated Impact	Mitigated Impact	Mitigated Impact	No Impacts
Main Street/ Northern Boulevard	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	No Impacts
Main Street / Roosevelt Avenue	Unmitigatable Impact	Mitigated Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact
Main Street / Kissena Boulevard	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts
College Point Boulevard / Roosevelt Avenue	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact
Prince Street / Northern Boulevard	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact
College Point Boulevard / Northern Boulevard Service Road	Mitigated Impact	Mitigated Impact	Mitigated Impact	Mitigated Impact	Mitigated Impact	No Impacts	Mitigated Impact	Mitigated Impact
Prince Street / Roosevelt Avenue	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact	Unmitigatable Impact

APPENDIX D

TRAFFIC ASSESSMENT OF A PHASE ONE PROGRAM WITHOUT NEW VAN WYCK EXPRESSWAY RAMPS

PHASE ONE TRAFFIC ANALYSIS

TRAFFIC ASSESSMENT OF A PHASE ONE PROGRAM WITHOUT NEW VAN WYCK EXPRESSWAY RAMPS

PURPOSE OF TECHNICAL MEMORANDUM

The purpose of this Technical Memorandum is to evaluate traffic conditions and potential traffic impacts within the Willets Point Development District's traffic study area for a new Phase One Development Program. That program would consist of a partial buildout of the Approved Plan that could be in place by 2016 prior to completion of new highway ramps connecting the Van Wyck Expressway (VWE) and the adjacent street network. The *Willets Point Development Plan FGEIS*, completed in 2008, assessed traffic conditions for a 2013 Stage One program with the VWE ramps in place within the Staged Acquisition Alternative. While the proposed VWE ramps are currently under review by and awaiting approval from the New York State Department of Transportation (NYSDOT) and the Federal Highway Administration, this Technical Memorandum assesses conditions should the new Phase One program be completed by 2016 without the ramps in place.

The Phase One Program being evaluated in this Technical Memorandum includes the following: 650,000 square feet of destination retail space; 29,705 square feet of local retail space; 400 residential units[1]; a 387-room hotel; and 90,539 square feet of open space. It also includes additional project improvements designed to further improve traffic conditions in the area.

The traffic analyses conducted for this Technical Memorandum are more expansive than the Staged Acquisition Alternative analyses conducted for the FGEIS. The Stage One analyses conducted within the FGEIS, which assumed that the proposed VWE ramps would be operational, relied on the same traffic assignment routings as for the full buildout program. However, the Staged Acquisition Alternative in the FGEIS assumed lower generated volumes and a lesser level of significant adverse impacts compared to the full buildout because the FGEIS' Stage One program would have generated only 60 to 70 percent of the traffic that would be generated by the full buildout program. Without the presence of the proposed VWE ramps in the future, traffic access and egress from the Development District and through the adjacent street network would be somewhat different. Additionally, changes to the proposed internal street network would result in a slightly different traffic circulation pattern under the proposed Phase One development, but only within the development District. There are also traffic-related project improvements that would be implemented under the Phase One development that were not included in the Approved Plan within the FGEIS.

The overall purpose of the analyses documented in this Technical Memorandum is to identify the significant traffic impacts that would be expected to be generated by the Phase One program without the VWE ramps and the traffic mitigation measures needed to address such impacts, and to determine whether these impacts and mitigation measures would be new or different from those identified in the FGEIS for the Approved Plan. Implementation of identified mitigation measures could be carried out by the New York City Department of Transportation (NYCDOT) one year earlier than 2017, which was the estimated year of completion for the Approved Plan analyzed in the FGEIS. The traffic monitoring program committed to by the City of New York would verify the need for the traffic mitigation measures prior to their implementation.

[1] The traffic analysis assumed a program that included 421 residential units. The program was subsequently reduced to 400 units; however the analysis was not modified and thus slightly overestimates potential impacts because it assumes a slightly higher number of residential units than the proposed Phase One program.

PRINCIPAL CONCLUSIONS

The proposed new 2016 Phase One development program of the Willets Point Development Plan would generate 555 to 1,859 vehicle trips during each of the five key peak hours analyzed for the Approved Plan in the FGEIS. The expected project-generated traffic increase under the Phase One development is 70 to 83 percent lower than what was projected for the Approved Plan.

A traffic analysis of future conditions with the proposed Phase One development in place by 2016 – based on a new No Build condition that reflects a 2016 Build year, an updated *CEQR Technical Manual* background growth rate, updated information on background projects, and changes to traffic patterns in Downtown Flushing – indicates that 9 of the 30 intersections analyzed would be significantly impacted during the weekday AM peak hour during non-game days, 13 intersections would be significantly impacted during the weekday midday peak hour during non-game days, 14 intersections would be significantly impacted during the weekday PM peak hour during non-game days, 17 intersections would be significantly impacted during the Saturday midday non-game day peak hour, and 17 intersections would be significantly impacted during the weekday pre-game peak hour during game days. Overall, there would be fewer significantly impacted intersections and substantially fewer significantly impacted individual lane groups during all analyzed peak hours in Phase One as compared to the Approved Plan.

The majority of significantly impacted intersections could be fully or partially mitigated under the proposed Phase One development using similar mitigation measures (and less intense measures in some cases) to those identified in the FGEIS. Overall, there would be considerably fewer unmitigatable impacts under the Phase One development as compared to the Approved Plan even without the VWE ramps in place -- 11 fewer intersections in the weekday AM peak hour, 3 fewer in the weekday midday peak hour, 9 fewer in the weekday PM peak hour, 7 fewer in the Saturday midday peak hour on non-game days, and 10 fewer in the weekday pre-game peak hour on game days. Also, all significantly impacted intersections found to be unmitigatable in these analyses were also unmitigatable in the FGEIS, and all partially mitigated intersections in these analyses were either partially mitigated or unmitigatable in the FGEIS. The technical analysis shows that no new intersections or time periods would be significantly impacted where significant impacts were not predicted in the FGEIS for the Approved Plan. At certain intersections where significant impacts were identified in the FGEIS for the Approved Plan for individual lane groups, significant impacts were again identified in the same peak periods as disclosed in the FGEIS for the Approved Plan but in different individual lane groups. While different, impacts at these intersections were predicted in the FGEIS. Moreover, the total number of lane group impacts system wide were fewer than the number of lane group impacts predicted in the FGEIS and, with the implementation of mitigation measures similar to those identified in the FGEIS, overall conditions are equal to or improved from those under the Approved Plan. Thus, the Phase One development would not cause any new intersections to experience significant adverse impacts not identified in the FGEIS for the Approved Plan.

Of the 19 highway mainline and ramp locations analyzed for the Phase One development, considerably fewer locations would be impacted as compared to the FGEIS. Overall, the highway network would operate at considerably better levels of service under the Phase One development and the overall extent of significant adverse traffic impacts would decrease in comparison to the Build conditions projected in the FGEIS.

TRAFFIC ANALYSIS SCOPE AND PROCEDURES

The scope of the traffic studies and traffic analysis procedures are essentially the same as those conducted for the FGEIS' assessment of the Approved Plan. All traffic locations studied for the Approved Plan in the FGEIS were studied in this analysis. Additionally, new guidelines published in the *2010 CEQR Technical Manual* have also been incorporated into this analysis.

The traffic study area encompasses a total of 29 intersections (15 in the Downtown Flushing area and 14 in the Willets Point/CitiField/North Corona area) for No Build conditions, and 30 intersections under the Build condition. The number of analysis locations is similar to the FGEIS except that this analysis includes one more Build intersection than the FGEIS analyzed. This is because the intersection of Willets Point Boulevard and Northern Boulevard, which was assumed to be demapped in the FGEIS to accommodate the proposed new Van Wyck Expressway (VWE) ramps, would remain operational under the Phase One program prior to approval and completion of the proposed ramps. The traffic study area also includes – as in the FGEIS - adjacent segments of the VWE and the Grand Central Parkway (GCP). The analyses in this Technical Memorandum address five of the seven peak traffic analysis hours analyzed for the Approved Plan in the FGEIS. These five traffic analysis hours include the weekday AM (7:45-8:45 AM), midday (1-2 PM), and PM (5:15-6:15 PM) peak hours and the Saturday midday peak hour (1-2 PM) for non-game day conditions, and the weekday pregame arrival peak hour (6-7 PM) for game day conditions. These five traffic analysis hours represent a range of conditions – peak commuter hours, midday hours, peak Saturday conditions, and a peak game day condition – covering all four non-game peak hours analyzed within the FGEIS and the most critical game day peak hour, the weekday pre-game. Of the three game day conditions addressed in the FGEIS, the weekday pre-game peak hour was analyzed in this Technical Memorandum since it had the highest number of significantly impacted intersections and unmitigatable impacts in the FGEIS, and there are no significantly impacted intersections during the other two game day peak hours that the FGEIS did not predict would be impacted during this hour. Therefore, the weekday pre-game peak hour represents the extent of impacts expected and mitigation needed for a game-day scenario.

The same traffic analysis procedures used in the FGEIS were applied here – i.e. *Highway Capacity Manual* (HCM) procedures for intersections and CORSIM procedures for Van Wyck Expressway and Grand Central Parkway conditions.

EXISTING CONDITIONS

New traffic counts were conducted throughout the traffic study area in September 2010 and indicated that traffic volumes are lower today than those observed in 2006 and analyzed in the FGEIS. A comparison of the 2010 ATR counts with the FGEIS' 2006 ATR counts indicates that:

- In the weekday non-game day AM peak hour, current volumes are about 8.6 percent lower than those in 2006.
- In the weekday non-game day midday peak hour, current volumes are about 2.7 percent lower than those in 2006.
- In the weekday non-game day PM peak hour, current volumes are about 9.5 percent lower than those in 2006.
- In the Saturday non-game day midday peak hour, current volumes are about 5.2 percent lower than those in 2006.

- In the weekday pre-game peak hour, current volumes are about 17.4 percent lower than those in 2006 (partially due to Met game day attendance being significantly lower on the count day in 2010 than on the count day in 2006).

As described and documented in a parallel Technical Memorandum, "*Review and Validation of Traffic Analysis Findings in the Willets Point Development District FGEIS*", the definition of existing traffic volumes and the determination of existing traffic levels of service have been retained "as is" from the FGEIS. Although it would be possible to re-analyze existing conditions and the "better" levels of service as the starting point for future projections, the FGEIS' existing conditions analyzed were retained in order to provide a conservative assessment of potential traffic impacts. Changes in intersection geometries that were implemented by NYCDOT in 2009 have been incorporated in the No Build analyses that follow.

THE FUTURE WITHOUT THE PROPOSED PHASE ONE DEVELOPMENT

Future conditions without the Phase One buildout of the Willets Point Development Plan (the No Build conditions) were established in order to provide the baseline against which the impacts of the Phase One buildout by 2016 can be compared, and to account for changes in traffic conditions between existing conditions and the future analysis year. Future No Build traffic volumes were developed by applying a background traffic growth rate of 0.5 percent per year for the first five years and 0.25 percent per year for each year thereafter, as recommended in the 2010 *CEQR Technical Manual* (constituting a 3.8 percent growth overall), and by adding trips expected to be generated by development projects that are anticipated to be operational by 2016. This is lower than the background growth rate of one percent per year used in the FGEIS as recommended in the 2001 edition of the *CEQR Technical Manual*.

NO BUILD BACKGROUND PROJECTS

A list of No Build background projects expected to be in place by the 2016 Build year was developed based on the 91 projects originally identified for the 2017 analysis year used in the FGEIS. All projects from this list that have not yet been completed (as of late 2010) but are expected to be in place by 2016 were included as No Build projects for this analysis, while projects not expected to be completed by 2016 have been removed from the 2016 No Build project list. Projects that have already been completed as of September 2010 were also removed as No Build projects since the new 2010 traffic counts indicated similar or lower traffic volumes as compared to those collected in 2006 (before these projects were completed). Projects that have been partially completed (e.g. the retail component of the development is operational while the residential component is not) are conservatively considered as non-completed and are therefore included as 2016 No Build projects. Programmatic changes (such as size/units and land use) have also been updated where necessary to reflect the latest plans. Updated information regarding the status of the 91 FGEIS No Build project sites, including whether or not they are included as 2016 No Build projects, is provided in Figure 1 and Table 1. As shown in Figure 1 and Table 1, approximately 30 No Build projects - or one third of the FGEIS' list - are included as 2016 No Build projects.

Table 1
BACKGROUND PROJECT UPDATE

Map No.[1]	Project Name/Address	Development Proposal/Program	Analysis Year
1	Downtown Flushing **Modified Two-Way Configuration** [*One-Way Pair*]	Transportation project – **Maintain existing configuration for Main and Union Streets, impose turn prohibitions and street direction reversal** [*Main Street to become one-way northbound; Union Street to become one-way southbound*]	**Complete** [*2010*]
2	Sky View Parc - College Point Blvd and 40th Road	750 residential units, 760,000 sf retail, 51,800 sf restaurant, 3,000 parking spaces (the residential component may be developed in phases)	**2015** [*2008 (UC)*]
3	Queens Crossing - Main Street and 39th Avenue	144,400 sf office, 110,000 sf retail, 29,600 sf community facility, **401** [*400*] parking spaces	**Complete** [*2007 (UC)*]
4	RKO Keith Theater - Main Street and Northern Boulevard	200 residential units, 10,000 sf retail, 12,500 sf community facility, 229 parking spaces	**2022** [*TBD*]
5	New Millennium - 134-03 35th Avenue	84 residential units, 33,600 sf community facility, 3,600 sf retail, 222 parking spaces	**2015** [*2008*]
6	New Millennium Northern Boulevard - 137-61 Northern Boulevard	91 residential units, 60 hotel rooms, 35,722 sf community facility, 17,167 sf retail, 223 parking spaces	**2022** [*2008*]
7	Victoria Tower - 41-60 Main Street	178 residential units	**Complete** [*2007-8 (UC)*]
8	Caldor Site - 136-20 Roosevelt Avenue	155,000 sf retail	**2015** [*TBD*]
9	Flushing Commons (Municipal Parking Lot 1) **and Macedonia Plaza** - 138th Street, 37th Avenue, 39th Avenue, and Union Street	**Flushing Commons: 620 [500] residential units; 275,000 [200,000] sf of retail; 110,000 [100,000] sf of office; 98,000 [100,000] sf of community facility space; 1,600 parking spaces, including 700 [760] accessory spaces; and either 250 hotel rooms or an additional 114,000 [120,000] sf of office. Macedonia Plaza: 142 affordable residential units; 10,000 sf community facility space; 25,000 sf retail space**	**2015** [*2011*]
10	33-34 Farrington Street	20,469 sf storage facility	**Complete** [*2007 (UC)*]
11	**33-53** [*33-35*] Farrington Street	9,887 sf hotel	**Complete** [*2007 (UC)*]
12	137-07 Northern Boulevard	**81 room hotel** [*38 residential units*]	**Complete** [*2007 (UC)*]
13	**134-35** [*134-39*] Northern Boulevard	12,212 sf expansion to existing office building	**Complete**[*2007 (UC)*]
14	135-11 40th Road	14 residential units, 55,170 sf office	**Complete** [*2007 (UC)*]
15	40-22 Main Street	17,015 sf retail	**Complete** [*2007 (UC)*]
16	41-18 Haight Street	6 residential units	**2015**
17	41-55 College Point Boulevard	50 residential units	**Complete** [*2007 (UC)*]
18	132-27 to 132-61 41st Road	**37** [*43*] residential units	**2015 (UC)** [*2007 (UC)*]
19	5-10 Summit Court	18 residential units	**Complete** [*2007 (UC)*]
20	133-53 37th Avenue	47 residential units	**2015** [*2007 (UC)*]
21	133-51 37th Avenue	9,050 sf office	**Complete** [*2007 (UC)*]
22	133-40 37th Avenue	12,742 sf office	**Complete** [*2007 (UC)*]
23	**132-71** [*132-73*] Maple Avenue	8 residential units	**2015** [*2007 (UC)*]
24	134-43 Maple Avenue	23 residential units	**2015** (UC) [*2007 (UC)*]
25	36-36 Main Street	26,936 sf office	**Complete** [*2007 (UC)*]
26	133-47 39th Avenue	12,270 sf office, 11,420 sf retail, 9,755 sf medical office	**2015 (UC)** [*2008*]
27	North Shore Marine Transfer Station - 31st Avenue & 122nd Street	Converted facility will receive and containerize DSNY-managed waste from Queens Community Districts 7 through 14	**2015** [*2011*]
28	**31-18** [*31-38*], 31-22 Union Street	30 residential units	**2015** [*2007 (UC)*]
29	140-24 31st Drive	20 residential units	**2015** [*2007 (UC)*]
30	31-33 Linden Place	8 residential units	**Complete** [*2007 (UC)*]
31	136-16 35th Avenue	28 residential units	**2015 (UC)** [*2007 (UC)*]
32	138-06 35th Avenue	9 residential units	**2015 (UC)** [*2007 (UC)*]
33	32-18 Union Street	8 residential units	**2015 (UC)** [*2007 (UC)*]
34	143-21 38th Avenue	25 residential units	**2015** [*2007 (UC)*]
35	P.S. 244 - 137-20 Franklin Avenue	**425-seat** [*441-seat*] primary school; enrollment of 218 students in 2009-2010, 207 students to be phased in by 2015	**2015** [*2007 (UC)*]
36	140-22 Beech Avenue	42 residential units	**Complete** [*2007 (UC)*]
37	143-51 Franklin Avenue	1 residential unit	**Complete** [*2007 (UC)*]
38	143-22 Beech Avenue	2 residential units	**Complete** [*2007 (UC)*]
39	42-33 Main Street	66 residential units	**2015 (UC)** [*2007-8*]
40	43-57 Main Street	2,085 sf office, retail	**2022** [*2007 (UC)*]
41	**38-30** [*38-34*] Parsons Boulevard	40 residential units	**2015** [*2007 (UC)*]
42	42-11 Parsons Boulevard	20 residential units	**2015 (UC)** [*2007 (UC)*]
43	132-25 Pople Avenue	14 residential units	**Complete** [*2007 (UC)*]
44	133-20 Avery Avenue	26 residential units	**Complete** [*2007 (UC)*]
45	**137-08** [*137-04*] 31st Road	**34** [*3*] residential units	**2015** [*2007 (UC)*]
46	31-27 137th Street	9 residential units	**Complete** [*2007 (UC)*]

NOTE:
1) (UC) = Under construction
2) Superseded information in italics and brackets
3) Updated information in **bold**.
4) Projects not included in the 2016 No Build analysis are shaded.

Table 1
BACKGROUND PROJECT UPDATE

Map No.[1]	Project Name/Address	Development Proposal/Program	Analysis Year
47	31-38 137th Street	16 residential units	**2015** [*2007 (UC)*]
48	New York Hospital Queens	Major modernization program – **190,000 sf** new hospital addition with 80 beds **and new treatment rooms**	**Complete** [*2007 (UC)*]
49	56-71 136th Street	2 residential units	**Complete** [*2007 (UC)*]
50	135-02 Booth Memorial Avenue	3 residential units	**Complete** [*2007 (UC)*]
51	57-35 Lawrence Street	5 residential units	**2015** [*2007 (UC)*]
52	132-14 59th Avenue	2 residential units	**Complete** [*2007 (UC)*]
53	**132-11** [*132-35*] 59th Avenue	2 residential units	**Complete** [*2007 (UC)*]
54	136-20 59th Avenue	**6** [*3*] residential units	**Complete** [*2007 (UC)*]
55	32-37 108th Street	2 residential units	**Complete** [*2007 (UC)*]
56	32-10 112th Street	4 residential units	**Complete** [*2007 (UC)*]
57	111-17 34th Avenue	2 residential units	**Complete** [*2007 (UC)*]
58	109-18 34th Avenue	6 residential units	**Complete** [*2007 (UC)*]
59	109-12 34th Avenue	3 residential units	**Complete** [*2007 (UC)*]
60	34-30 110th Street	5 residential units	**Complete** [*2007 (UC)*]
61	35-01 109th Street	**12** [*3*] residential units	**Complete** [*2007 (UC)*]
62	108-18 35th Avenue	3 residential units	**Complete** [*2007 (UC)*]
63	34-12 107th Street	3 residential units	**Complete** [*2007 (UC)*]
64	106-08 34th Avenue	6 residential units	**Complete** [*2007 (UC)*]
65	34-16 106th Street	3 residential units	**Complete** [*2007 (UC)*]
66	106-07 37th Avenue	5 residential units	**Complete** [*2007 (UC)*]
67	34-64 107th Street	3 residential units	**2015** (UC) [*2007 (UC)*]
68	34-59 106th Street	4 residential units	**Complete** [*2007 (UC)*]
69	112-31 38th Avenue	18 residential units	**Complete** [*2007 (UC)*]
70	112-37 38th Avenue	8 residential units	**Complete** [*2007 (UC)*]
71	112-26 38th Avenue	18 residential units	**2015** (UC) [*2007 (UC)*]
72	112-34 39th Avenue	8 residential units	**Complete** [*2007 (UC)*]
73	112-32 39th Avenue	8 residential units	**Complete** [*2007 (UC)*]
74	111-03 38th Avenue	3 residential units	**Complete** [*2007 (UC)*]
75	111-13 38th Avenue	8 residential units	**Complete** [*2007 (UC)*]
76	39-06 108th Street	22 residential units	**Complete** [*2007 (UC)*]
77	104-63 39th Avenue	4 residential units	**2015 (UC)** [*2007 (UC)*]
78	**104-46 – 104-54** [*104-52*] 38th Avenue	4 residential units	**Complete** [*2007 (UC)*]
79	104-20 38th Avenue	8 residential units	**Complete** [*2007 (UC)*]
80	104-24 39th Avenue	8 residential units	**Complete** [*2007 (UC)*]
81	108-04, 14, 16 Astoria Blvd [2]	84 residential units, **34,965** [*69,930*] sf community facility	**2022** [*2013*]
82	110-09 Northern Boulevard [2]	31 residential units, 15,500 sf of commercial use	**2022** [*2013*]
83	111-10, 12, 16 **Northern** [*Astoria*] Blvd; 32-20 112th Street; 32-19 111th Street [2]	78 residential units, **32,621** [*65,242*] sf community facility, 51 parking spaces	**2015 (UC)** [*2013*]
84	112-12, 18, 24 Astoria Blvd [2]	38 residential units, **16,034** [*32,068*] sf community facility	**2022** [*2013*]
85	Block bounded by Astoria Blvd, Northern Blvd, and 112th Place [2]	147 residential units, 73,329 sf of commercial use	**2022** [*2013*]
86	108-09 Northern Boulevard	18 residential units, 8,970 sf commercial	**2022** [*2007 (UC)*]
87	106-15 Northern Boulevard	11 residential units, 5,502 sf commercial	**2022** [*2007 (UC)*]
88	32-56 106th Street	14 residential units, 7,144 commercial	**2022** [*2007 (UC)*]
89	Shea Stadium Redevelopment	New 44,100-seat stadium (to replace existing 56,000-seat stadium) and redistribution of 8,800 existing parking spaces	**Complete** [*2009*]
90	College Point Police Academy - 129-05 31st Avenue	**2.4 million sf program, including** 450,000sf physical training area, 250 beds for visiting law enforcement agencies, 250 classrooms, firing range and fields for emergency-vehicle and other training exercises, 2,000 parking spaces	**2015 (UC)** [*2012*]
91	River Park Place - 39-08 Janet Place	475 residential units, 10,200 sf retail, 1,500 sf community facility, 251,000 sf office, and either 175 hotel rooms or an additional 96,500 sf of office	**2022** [*2011*]

NOTE:
1) (UC) = Under construction
2) Superseded information in italics and brackets
3) Updated information in **bold**.
4) Projects not included in the 2016 No Build analysis are shaded.

Trip generation and traffic assignment assumptions used in this Technical Memorandum were the same for the FGEIS with the exception of re-routing changes that were needed in order to reflect changes to traffic patterns in Downtown Flushing as discussed in the next section. As shown in Table 2, the number of total vehicle trips generated by No Build background projects is 1,080 to 2,859 during non-game peak hours and 1,966 during the weekday pre-game peak hour. These projections

are 25 to 37 percent lower than those in the FGEIS (1,702 to 3,812 vehicle trips during non-game peak hours and 2,721 during the PM pre-game peak hour).

Table 2
VEHICLE TRIPS GENERATED BY BACKGROUND DEVELOPMENT PROJECTS

	Non-Game Day								Game Day	
	Weekday AM		Weekday Midday		Weekday PM		Saturday Midday		Weekday Pre-Game	
Project	In	Out	In	Out	In	Out	In	Out	In	Out
Sky View Parc (College Point Blvd and 40th Road)	156	182	525	448	449	446	651	602	381	379
New Millennium (134-03 35th Avenue)	10	15	15	15	14	12	7	7	12	10
Caldor Site (136-20 Roosevelt Avenue)	49	30	163	131	141	161	277	259	120	137
Flushing Commons/ Macedonia Plaza	257	173	498	449	419	546	498	449	356	464
41-18 Haight Street	0	1	0	0	1	0	0	0	1	0
132-27 to 132-61 41st Road	1	4	1	1	4	2	2	2	3	2
133-53 37th Avenue	1	5	1	1	4	2	2	2	3	2
132-71 Maple Avenue	0	1	0	0	1	0	0	0	0	2
134-43 Maple Avenue	0	2	1	1	2	1	1	1	1	1
133-47 39th Avenue	12	3	17	18	7	18	13	10	6	15
North Shore Marine Transfer Station (31st Avenue & 122nd Street)	47	42	11	12	6	6	9	10	6	5
31-18 , 31-22 Union Street	1	3	1	1	3	1	1	1	3	1
140-24 31st Drive	0	2	1	1	1	2	1	1	2	1
136-16 35th Avenue	1	3	1	1	3	1	1	1	3	1
138-06 35th Avenue	2	1	1	0	1	1	1	0	1	0
32-18 Union Street	0	1	0	0	1	0	0	0	1	0
143-21 38th Avenue	0	3	1	1	2	1	1	1	2	1
P.S. 244 - 137-20 Franklin Avenue	16	3	0	0	0	2	0	0	0	2
42-33 Main Street	1	7	2	2	6	3	3	3	5	2
38-30 Parsons Boulevard	1	4	1	1	4	2	2	2	3	1
42-11 Parsons Boulevard	0	2	1	1	2	1	1	1	2	1
137-08 31st Road	1	3	1	1	3	2	2	2	3	1
31-38 137th Street	0	2	0	0	2	1	1	1	1	1
57-35 Lawrence Street	0	1	0	0	1	1	1	1	0	0
32-10 112th Street	0	1	0	0	0	0	0	0	0	0
34-64 107th Street	0	0	0	0	0	0	0	0	0	0
112-26 38th Avenue	0	2	1	1	2	1	2	1	0	0
104-63 39th Avenue	0	0	0	0	0	0	0	0	0	0
111-10, 12, 16 Northern Blvd; 32-20 112th Street; 32-19 111th Street	16	12	10	11	15	14	14	11	13	9
College Point Police Academy (129-05 31st Avenue)	0	0	0	0	0	0	0	0	0	0
Total	**572**	**508**	**1,253**	**1,097**	**1,094**	**1,227**	**1,491**	**1,368**	**928**	**1,038**

TRAFFIC PATTERN CHANGES

Changes in the street network since the FGEIS – primarily changes at select intersections in the Downtown Flushing area – were incorporated in the future No Build analyses. Since the future No Build condition serves as the baseline against which Build impacts are measured, any changes to intersection geometries in Downtown Flushing – e.g., turn prohibitions, sidewalk/corner extensions – and to signal timings, were incorporated into the No Build analyses. Additionally, traffic pattern changes such as bus re-routings and diversions of newly-prohibited turns to other nearby intersections were also incorporated in the No Build traffic volume networks.

Changes were implemented in Downtown Flushing in 2010 by NYCDOT and the Metropolitan Transportation Authority/New York City Transit (NYCT) as part of a pilot program in lieu of the proposed conversion of Main Street and Union Street into one-way streets with contraflow bus lanes,

as was assumed in the FGEIS' No Build analyses. Therefore, this change in traffic assumptions – not assuming a one-way pair – was applied to the No Build conditions in this analysis. Additionally, intersection regulations and signal timings within Downtown Flushing were inventoried concurrent with the September 2010 traffic counts, and new intersection geometries, lane widths, turning restrictions, signal timings, etc. were incorporated within the No Build analyses, along with changes in bus routes and general traffic diversions.

Changed traffic patterns in Downtown Flushing will result in modifications to both No Build and Build conditions as there have been some shifts in volumes and changes in intersection geometries at several Downtown Flushing intersections. Traffic assignments for background No Build projects were also modified to reflect these changes.

Within the Downtown Flushing area, the following specific traffic flow changes implemented by NYCDOT since the completion of the FGEIS were incorporated in this Technical Memorandum:

- Prohibiting left turns from westbound Northern Boulevard onto southbound Main Street, except for buses.

- Prohibiting left turns from northbound and southbound Union Street onto westbound and eastbound Northern Boulevard, respectively.

- Prohibiting all turns from northbound and southbound Main Street onto Roosevelt Avenue.

- Re-routing Main Street buses onto 39th Avenue due to turn prohibitions at Roosevelt Avenue (Additionally, some NYCT bus routes have changed within the Downtown Flushing area since 2006).

- Implementing lane striping modifications and signal timing changes at selected locations to improve overall traffic flow.

Outside of the Downtown Flushing area, one notable traffic pattern change was identified. At the intersection of Astoria Boulevard and 108th Street, eastbound left turns are no longer permitted. This change was incorporated in the No Build and Build analyses. Existing eastbound left turns were assigned to the nearest intersection that crosses Astoria Boulevard (105th Street at Astoria Boulevard).

Similar to the FGEIS, due to access and egress changes between the transition from Shea Stadium to Citi Field, a game day-only change in the circulation of some stadium traffic in the vicinity of West Park Loop/Stadium Road, 126th Street, and Boat Basin Road is included in the No Build condition. Under the 2016 No Build condition, the primary entrance/exit for the main Citi Field lot is located at the intersection (traffic circle) of Stadium Road and Boat Basin Road, instead of at the intersection of Stadium Road, 34th Avenue, and 126th Street, as was the case for Shea Stadium under existing conditions. For arriving game traffic during the weekday pregame peak, ramp traffic from eastbound Astoria Boulevard and the Grand Central Parkway that entered the main Shea Stadium lot through the entrance at the intersection of 126th Street and 34th Avenue would shift to the Citi Field entrance on Stadium Road at Boat Basin Road.

NYCDOT is also considering the implementation of several bicycle facilities within the next 10 years: 1) Class II buffered bicycle lanes in each direction along College Point Boulevard between Sanford and 32nd Avenues; 2) Class II bicycle lanes adjacent to the parking lane in each direction along Roosevelt Avenue between 114th Street and Parsons Boulevard; 3) existing Class II buffered

bicycle lanes along Sanford Avenue between Kissena and Parsons Boulevards could potentially be converted to Class III shared bicycle routes in both directions; 4) Class III shared bicycle route along 108th Street between 34th and Ditmas Avenues. These are potential future projects that are not currently scheduled for implementation and, as directed by NYCDOT, have not been incorporated into the analysis.

NO BUILD TRAFFIC CONDITIONS

Traffic volume increases on the study area's roadway network due to the cumulative effect of background projects are quantified and discussed below. The peak hour volumes reported below include the Table 2 traffic volumes assigned to the study area's networks, but do not include the general annual growth rate that has been separately applied to existing traffic volumes, which would add about 3.8 percent more traffic to all streets. However, the annual background increase, as well as the re-routing previously discussed, is included in the 2016 No Build totals. Because of background growth and No Build developments, substantial increases in traffic volumes can be expected under the 2016 No Build condition as were also projected in the FGEIS, independent from those that the Willets Point Development Plan's Phase One program would add (discussed later in "Probable Impacts of the Proposed Phase One Development"); however, they are considerably lower than the No Build traffic increases projected for 2017 in the FGEIS.

The more substantial traffic increases between existing and No Build conditions would occur along the primary streets in the study area network, including Northern Boulevard, Roosevelt Avenue, Union Street, Main Street, and College Point Boulevard.

Northern Boulevard volumes through Downtown Flushing between Parsons Boulevard and Union Street can be expected to increase by about 25 to 70 vehicles per hour (vph) in the eastbound direction and 70 to 190 vph in the westbound direction during the five peak hours. Westbound Northern Boulevard volumes between Main Street and Union Street would increase by about 20 to 30 vph, while eastbound Northern Boulevard volumes along the same section would increase by about 50 to 160 vph during peak hours. At Prince Street and farther west, adjacent to the Willets Point Development District and Citi Field, Northern Boulevard volumes can be expected to increase by approximately 40 to 200 vph per direction during peak hours. Northern Boulevard volumes in the vicinity of 108th to 114th Streets can be expected to increase by about 35 to 175 vph per direction during peak hours.

Roosevelt Avenue volumes can be expected to increase by about 35 to 80 vph per direction in the weekday AM non-game peak hour, and by about 90 to 350 vph per direction in the weekday midday, weekday PM, and Saturday midday non-game peak hours, and in the weekday pre-game peak hour through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the Willets Point Development District and Citi Field, Roosevelt Avenue volumes can be expected to increase by approximately 50 to 85 vph per direction in the weekday AM peak hour, and by approximately 130 to 320 vph per direction during the other four peak hours. Roosevelt Avenue volumes in the vicinity of 108th, 111th, and 114th Streets can be expected to increase by about 30 to 160 vph per direction during all of the peak hours.

Kissena Boulevard volumes near the intersection with Main Street can be expected to increase by approximately 10 to 60 vph per direction during all of the peak hours.

Sanford Avenue volumes through Downtown Flushing between Parsons Boulevard and College Point Boulevard can be expected to increase by about 5 to 50 vph per direction during peak hours.

Astoria Boulevard volumes in the vicinity of 108th and 114th Streets can be expected to increase by about 10 to 20 vph per direction during peak hours.

College Point Boulevard volumes between Sanford Avenue and Roosevelt Avenue can be expected to increase by about 50 to 225 vph per direction during all of the peak hours.

Northbound Main Street volumes from Kissena Boulevard to Northern Boulevard can be expected to increase by approximately 60 to 280 vph during peak hours. Southbound Main Street volumes would increase by about 25 to 150 vph during peak hours.

Southbound Union Street volumes can be expected to increase by approximately 30 to 290 vph during peak hours. Northbound Union Street volumes between Roosevelt Avenue and Northern Boulevard would increase by about 20 to 80 vph during all of the peak hours.

Parsons Boulevard volumes between Northern Boulevard and Sanford Avenue can be expected to increase by up to 10 vph per direction during peak hours.

Volumes along 108th, 111th and 114th Streets in the vicinity of Astoria Boulevard and Northern Boulevard and at Roosevelt Avenue can be expected to increase by up to 5 vph per direction during the peak hours.

Prince Street volumes at Northern Boulevard and Roosevelt Avenue can be expected to increase by approximately 5 to 40 vph per direction during peak hours.

No Build project volume increment maps and total No Build volume maps are provided in the Appendix.

Based on these projected traffic volume changes, 2016 No Build traffic levels of service were determined for the 29 No Build analysis locations within the study area. Table 3 shows comparisons of overall intersection and individual lane group levels of service for 2016 No Build conditions. Figures 2 through 6 present an illustrative overview of overall intersection traffic levels of service throughout the study area. These conditions serve as the baseline for assessing potential impacts of the proposed new Phase One development program.

Table 3
SUMMARY OF NO BUILD INTERSECTION AND LANE GROUP LEVELS OF SERVICE

Intersections	Non-Game Day Peak Hours				Game Day Peak Hour
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday Pre-game
Overall Intersection LOS A/B/C	13	15	11	12	9
Overall Intersection LOS D	12	7	8	2	6
Overall Intersection LOS E	4	2	6	4	8
Overall Intersection LOS F	0	5	4	11	6
No. of Lane Groups at LOS A/B/C	65	79	59	54	47
No. of Lane Groups at LOS D	34	22	34	29	37
No. of Lane Groups at LOS E	18	15	14	10	15
No. of Lane Groups at LOS F	14	17	26	42	37

Notes:
Under No Build conditions, four intersections are unsignalized. All unsignalized intersections would operate at LOS A, B, or C during all peak hours.

The new analyses conducted for 2016 No Build conditions indicate that:

- In the weekday AM peak hour on non-game days, thirteen of the twenty-nine intersections analyzed would operate at overall intersection LOS A, B, or C, twelve would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and none would operate at overall intersection LOS F (as compared to eleven, three, four, and eleven, respectively, in the FGEIS). The number of individual lane groups that would operate at LOS E or F is 32 (as compared to 49 in the FGEIS).

- In the weekday midday peak hour on non-game days, fifteen of the twenty-nine intersections analyzed would operate at overall intersection LOS A, B, or C, seven would operate at overall intersection LOS D, two would operate at overall intersection LOS E, and five would operate at overall intersection LOS F (as compared to twelve, five, five, and seven, respectively, in the FGEIS). The number of individual lane groups that would operate at LOS E or F is 32 (as compared to 39 in the FGEIS).

- In the weekday PM peak hour on non-game days, eleven of the twenty-nine intersections analyzed would operate at overall intersection LOS A, B, or C, eight would operate at overall intersection LOS D, six would operate at overall intersection LOS E, and four would operate at overall intersection LOS F (as compared to ten, two, seven, and ten, respectively, in the FGEIS). The number of individual lane groups that would operate at LOS E or F is 40 (as compared to 52 in the FGEIS).

- In the Saturday midday peak hour on non-game days, twelve of the twenty-nine intersections analyzed would operate at overall intersection LOS A, B, or C, two would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and eleven would

operate at overall intersection LOS F (as compared to ten, none, three, and sixteen, respectively, in the FGEIS). The number of individual lane groups that would operate at LOS E or F is 52 (as compared to 60 in the FGEIS).

- In the weekday pre-game arrival peak hour on game days, nine of the twenty-nine intersections analyzed would operate at overall intersection LOS A, B, or C, six would operate at overall intersection LOS D, eight would operate at overall intersection LOS E, and six would operate at overall intersection LOS F (as compared to three, three, three, and sixteen, respectively, in the FGEIS). The number of individual lane groups that would operate at LOS E or F is 52 (as compared to 73 in the FGEIS).

- Overall, fewer intersections and individual lane groups would operate at unacceptable levels of service (LOS E or F) under the 2016 No Build condition than in the FGEIS' 2017 No Build during all five peak hours analyzed.

Detailed No Build level of service tables are provided in the Appendix.

PROBABLE IMPACTS OF THE PROPOSED PHASE ONE DEVELOPMENT

The proposed new Phase One Development Program would consist of a partial buildout of the Approved Plan that would be in place by 2016 without the construction of new highway ramps connecting the Van Wyck Expressway (VWE) and the adjacent street network. The development program would consist of 650,000 square feet of destination retail space, 29,705 square feet of local retail space, 400 residential units, a 378-room hotel, and 90,539 square feet of open space. It would also include certain project improvements described further below.

Similar to the Approved Plan, there would be several likely changes to the roadway network within the Willets Point Development District under the new Phase One Development including the following:

- The existing Willets Point Boulevard and 34th Avenue within the boundaries of the District would be demapped, in whole or in part, and two connector streets would be built, one beginning at the intersection of 126th Street and 34th Avenue, continuing 34th Avenue into the District, and the other at the intersection of 126th Street and the continuation of Citi Field's southern edge, continuing that line into the District. Both streets would join with each other.

- Two new east-west retail streets would continue into the District from the intersection of 126th Street and the Citi Field entrance centerline, and from the intersection of 126th Street and the continuation of Citi Field's northern edge. A third retail street, extending north-south, would intersect those retail streets and both connector streets.

- Service streets may be located as one of the streets bounding the two blocks located at the intersection of 126th Street and Northern Boulevard, and the intersection of 126th Street and Roosevelt Avenue.

However, the Willets Point Development District street network under the new Phase One Development plan would differ from that of the Approved Plan in a few ways. Most notably, the new Van Wyck Expressway access ramps contemplated in the FGEIS would not yet be complete, and the intersection of Northern Boulevard and Willets Point Boulevard, which was to be demapped to

accommodate the proposed ramps, would remain operational. Secondly, the proposed new perimeter street that would follow the border between the District and the abutting MTA lot and intersect Roosevelt Avenue east of 126th Street would not be in place under the Phase One development. Finally, all project parking would be concentrated on Parcel A1 under the Phase One development as opposed to being distributed to various parcels under the FGEIS. The Lot D parking garage contemplated in the FGEIS analysis would also not be in place under the Phase One development. As in the FGEIS, two new signalized intersections would be created: 126th Street and New Willets Point Boulevard; and Roosevelt Avenue and Citi Field/Lot B Internal Street. Three additional project-related traffic improvements would be included under the Phase One development. At the intersection of 34th Avenue and 114th Street, a minor re-timing of the traffic signal for weekday PM peak hour conditions would be implemented on both game days and non-game days, in order to better accommodate game day traffic arrivals (the signal timing change would, however, be in place on both game days and non-game days). One intersection in the Downtown Flushing area – Roosevelt Avenue and Union Street – would also have project-related traffic improvements under the Phase One development. These standard traffic improvement measures would include: 1) shifting the centerline along the westbound Roosevelt Avenue approach by two feet to the south; 2) restriping the eastbound approach to provide one 10-foot wide left turn lane and one 11-foot wide shared through-right turn lane; and 3) strictly enforcing existing "No Standing Anytime" regulations along both eastbound and westbound Roosevelt Avenue approaching the intersection. One additional improvement that is a minor modification to an existing practice would be implemented during the weekday pre-game arrival peak hour in order to help accommodate traffic exiting from the southbound Whitestone Expressway and the northbound VWE, and merging into westbound Northern Boulevard. During weekday pre-game periods, Traffic Enforcement Agents (TEAs) override the traffic signal at Northern Boulevard and 126th Street to direct traffic from northbound 126th Street to the two left-most lanes of westbound Northern Boulevard. During this phase, traffic from the right-most lane of westbound Northern Boulevard (which carries off-ramp traffic) would operate with free-flow conditions. TEAs periodically stop westbound off-ramp traffic approaching 126th Street to allow excess traffic from northbound 126th Street to use all three westbound lanes of Northern Boulevard. In order to improve local traffic operations, TEAs would reduce the stop time for the right-most lane of westbound Northern Boulevard approaching 126th Street in order to improve the flow of traffic exiting the southbound Whitestone Expressway and the northbound VWE off-ramp.

As discussed in the FGEIS, all components of the traffic program as well as its effects upon pedestrian movements would be subject to a monitoring program that is subject to NYCDOT review in order to verify the need for any of the mitigation measures or project improvements identified in the FGEIS or subsequent Technical Memoranda or other measures implemented as part of the traffic monitoring plan.

This section provides a determination of the volume of vehicle trips generated under the 2016 Phase One development condition, projections of their distribution within the study area roadway network, an analysis of future traffic levels of service, and identification of significant adverse impacts in accordance with *CEQR Technical Manual* guidelines. This section also provides a general comparison of 2016 Phase One Development Build condition levels of service and significant adverse impacts to those projected for the Approved Plan in the FGEIS.

TRIP GENERATION AND MODAL SPLIT

Trip generation estimates were developed for all proposed land uses based on the travel demand assumptions used in the FGEIS. These assumptions are described in detail in Section F, "Probable Impacts of the Proposed Action," within the Traffic and Parking chapter of FGEIS. The volume of

vehicle trips expected to be generated by the proposed new Phase One program would be substantial yet considerably lower than for the full buildout condition analyzed in the FGEIS. As shown in Table 4, the new Phase One program would generate 555 to 1,859 vehicle trips (auto, taxi, and delivery) during the analyzed peak hours. In comparison to the Approved Plan, which would generate 3,302 to 6,625 vehicle trips during those same peak hours, the proposed new Phase One program would generate 70 to 83 percent fewer vehicle trips.

Table 4
NEW PHASE ONE PROGRAM VEHICLE TRIPS BY TYPE

	Auto		Taxi		Delivery		Total		
Use	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**Total**
WEEKDAY AM PEAK PERIOD (NON-GAME)									
Residential	15	60			2	2	20	65	85
Destination Retail	182	116			18	18	211	145	356
Local Retail	6	6			1	1	7	7	14
Hotel	27	39			6	6	44	56	100
Total	**230**	**221**	**25**	**25**	**27**	**27**	**282**	**273**	**555**
WEEKDAY MIDDAY PEAK HOUR (NON-GAME)									
Residential	20	19			1	1	22	21	43
Destination Retail	595	487			25	25	659	551	1,210
Local Retail	37	37			1	1	38	38	76
Hotel	56	26			4	4	74	44	118
Total	**708**	**569**	**54**	**54**	**31**	**31**	**793**	**654**	**1,447**
WEEKDAY PM PEAK HOUR (NON-GAME)									
Residential	58	31			0	0	60	33	93
Destination Retail	520	586			2	2	564	630	1,194
Local Retail	19	19			0	0	19	19	38
Hotel	44	31			0	0	58	45	103
Total	**641**	**667**	**58**	**58**	**2**	**2**	**701**	**727**	**1,428**
SATURDAY MIDDAY PEAK HOUR (NON-GAME)									
Residential	56	42			0	0	58	44	102
Destination Retail	710	682			1	1	798	770	1,568
Local Retail	21	17			0	0	21	17	38
Hotel	61	48			1	1	82	69	151
Total	**848**	**789**	**109**	**109**	**2**	**2**	**959**	**900**	**1,859**
WEEKDAY PRE-GAME PEAK HOUR (GAME DAY)									
Residential	48	20			0	0	50	22	72
Destination Retail	485	485			2	2	524	524	1,048
Local Retail	15	15			0	0	15	15	30
Hotel	39	26			0	0	50	37	87
Total	**587**	**546**	**50**	**50**	**2**	**2**	**639**	**598**	**1,237**

Note: This table presents inbound and outbound taxi trips for the District rather than by a particular land use. Taxi trips are not assigned to a particular land use because taxi trips are assumed to be shared among all the land uses in the District. Taxi trips are balanced to account for some arriving empty and leaving full, some arriving full and leaving empty, and some arriving and leaving full.

Project generated trips were assigned to the local roadway and highway network leading to/from the District to determine traffic volume changes through study area intersections. These assignments were applied based on the same assumptions used in the FGEIS with the exception of those assignment routes affected by changes in No Build conditions, as described above, and the absence in the new Phase One program of the proposed VWE access ramps. Without these ramps in place, all VWE traffic was rerouted through the existing highway and street network. Additionally, Long Island Expressway trips to/from the west which were assigned to the site via the VWE in the FGEIS were

shifted to the Grand Central Parkway (GCP). Without the access ramps, the VWE becomes less direct than the GCP for these trips. Also, a small percentage of project generated trips that would access the District using the proposed Eastern Perimeter Road (via Roosevelt Avenue) under the Approved Plan were reassigned to the District using 126th Street to New Willets Point Boulevard. The consolidation of all project off-street parking to Parcel A1 proposed under the Phase One development would not affect trip assignment assumptions since this modification would only affect internal site circulation. All project-related parking trips would use the same routes to access the District.

GENERATED TRAFFIC VOLUMES

The above trip generation-modal split-trip distribution process produced specific roadway-by-roadway and intersection-by-intersection traffic volume projections within the study area, an overview of which is provided below. Specific movement-by-movement generated volume projections are provided in detail in the Appendix.

Northern Boulevard volumes could be expected to increase by about 15 to 55 vehicles per hour (vph) per direction during the five peak hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard (versus 90 to 230 vph in the FGEIS). Adjacent to the Willets Point Development District and Citi Field, Northern Boulevard volumes could be expected to increase by approximately 5 to 80 vph in the eastbound direction and 55 to 320 vph per hour in the westbound direction during all of the peak hours (as compared to 110 to 475 vph in westbound direction in the FGEIS), with the increase in westbound traffic along this section of the roadway primarily due to traffic from the ramp from the southbound Whitestone Expressway onto westbound Northern Boulevard. Northern Boulevard volumes in the vicinity of 108th and 114th Streets could be expected to increase by about 20 to 60 vph per direction during peak hours (versus 130 to 270 vph per direction in the FGEIS).

Roosevelt Avenue volumes could be expected to increase by about 5 to 25 vph per direction (versus 25 to 85 vph per direction in the FGEIS) during the non-game and game peak hours through Downtown Flushing between Parsons Boulevard and College Point Boulevard. Adjacent to the Willets Point Development District, Roosevelt Avenue hourly volumes could be expected to increase by approximately 10 to 60 vph in the eastbound direction and 20 to 180 vph in the westbound direction (as compared to 40 to 630 vph per direction in the FGEIS) during peak hours. Roosevelt Avenue volumes in the vicinity of 108th, 111th, and 114th Streets could be expected to increase by about 10 to 40 vph per direction (versus 60 to 475 vph per direction in the FGEIS) during peak hours.

Astoria Boulevard volumes in the vicinity of 108th and 114th Streets could be expected to increase by about 15 to 50 vph per direction during peak hours (versus 60 to 165 vph per direction in the FGEIS).

Sanford Avenue volumes through Downtown Flushing between Parsons Boulevard and College Point Boulevard could be expected to increase by 10 vph or less per direction (as compared to 15 to 65 vph per direction in the FGEIS) during all of the peak hours.

Volumes on 34th Avenue from the Willets Point Development District at the intersection with 126th Street could be expected to increase by about 150 to 550 vph per direction (as compared to 290 to 625 vph per direction in the FGEIS) during peak hours. Furthermore, volumes along West Park Loop/Stadium Road at the intersection with 126th Street can be expected to increase by approximately 120 to 360 vph during non-game peak hours (versus 420 to 605 vph per direction in the FGEIS), and 200 to 240 vph during the weekday pre-game peak hour (as compared to 145 to 180 vph per direction during game-day peak hours in the FGEIS). These volume increases would be

higher at times than those projected in the FGEIS due to the rerouting of VWE trips without the proposed new access ramps.

Volumes along 126th Street in the vicinity of 34th Avenue could be expected to increase by approximately 50 to 330 vph per direction (as compared to 120 to 840 vph per direction in the FGEIS) during peak hours. In the vicinity of the intersections with Roosevelt Avenue and the new Willets Point Boulevard, 126th Street volumes can be expected to increase by about 30 to 130 vph in the northbound direction and 70 to 220 vph in the southbound direction (versus 90 to 595 vph per direction in the FGEIS) during peak hours.

College Point Boulevard volumes can be expected to increase by about 5 to 75 vph per direction (as compared to 5 to 360 vph per direction in the FGEIS) during the peak hours.

Volumes along northbound 114th Street in the vicinity of Roosevelt Avenue can be expected to increase by approximately 50 to 145 vph (as compared to 5 to 345 vph in the FGEIS) during peak hours. Increments along this road would be higher at times under the new Phase One development than under the Approved Plan because a higher proportion of project trips would use this route to access the Long Island Expressway (via the Grand Central Parkway) in lieu of the proposed Van Wyck Expressway access ramps.

Projected volume increments on the other north-south streets, including 108th Street, Main Street, Union Street, and Parsons Boulevard can be expected to range up to 10 vph per direction (as compared to about 5 to 35 vph per direction in the FGEIS) during all of the peak hours.

GAME DAY CIRCULATION CHANGES

As in the FGEIS, some project-generated trips would make route modifications during game-day peak hours along certain routes to avoid game-related traffic issues. Specifically, a portion (about 50 percent) of the trips along the southbound Whitestone Expressway, which on typical non-game days would exit onto westbound Northern Boulevard at 126th and circle back to the District along World's Fair Marina/Boat Basin Road and Stadium Road, would instead exit toward College Point Boulevard and travel south to Roosevelt Avenue and west to the District (some outbound trips would follow the reverse path). The other route modification would be for trips traveling westbound along Northern Boulevard, which on typical non-game days are expected to use two routes to the District. On game days, it is expected that they would predominantly use the route that includes the Northern Boulevard service road to College Point Boulevard, to Roosevelt Avenue and west to the District.

In the FGEIS analysis for game days, some stadium-generated traffic was re-routed through the new Van Wyck Expressway ramps (20 to 25 percent of inbound stadium trips). This re-routing was not applied in the new Phase One analysis since it assumes that the proposed ramps would not be in place.

TRAFFIC LEVELS OF SERVICE AND IMPACTS

The assessment of potential significant traffic impacts of the proposed project is based on significant adverse impact criteria defined in the 2010 *CEQR Technical Manual*. No Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, E, or F in the future Build conditions are considered a significant adverse traffic impact.

For future No Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, mitigation to mid-LOS D (45.0 seconds of delay for signalized intersections and 30.0 seconds of delay for unsignalized intersections) needs to be achieved to fully mitigate the impact.

For a No Build LOS D, an increase of delay by five or more seconds in the Build condition is considered a significant adverse impact if the Build delay meets or exceeds 45.0 seconds. For a No Build LOS E, the threshold is a four-second increase in Build delay; for a No Build LOS F, a three-second increase in delay in the Build condition is significant. For unsignalized intersections, for the minor street to generate a significant adverse impact, 90 passenger car equivalents (PCEs) must be identified in the Build condition in any peak hour.

The remainder of this section provides an overview of significant traffic impacts that would be generated under the Build conditions, primarily through the use of figures indicating overall levels of service intersection-by-intersection and significantly impacted locations. Detailed volume-to-capacity (v/c) ratios, average vehicle delay, and levels of service movement-by-movement at each intersection under the 2016 Build condition, along with generated-traffic volume increment maps and total Build volume maps, are provided within the Appendix.

Using the previously discussed projected volume increases, levels of service for the 2016 Build condition were determined for all 30 intersections. This includes 28 of the 29 intersections (both signalized and unsignalized) analyzed under the No Build condition, and two new signalized intersections (126th Street and New Willets Point Boulevard, and Citi Field/Lot B and Roosevelt Avenue) that would be constructed as part of the proposed Phase One plan. One unsignalized intersection, Willets Point Boulevard at 126th Street, analyzed under the No Build condition, would be eliminated due to street demapping in the proposed Plan. Under the Approved Plan, the intersection of Willets Point Boulevard at Northern Boulevard would also be demapped under the Build condition to accommodate construction of the proposed new Van Wyck Expressway access ramps, but it is assumed to remain operational in this analysis since the proposed new ramps would not be in place under the Phase One plan analyzed here. Future traffic levels of service under the Phase One Build condition are shown in Figures 7 through 11 and in Table 5.

Table 5
Overall Intersection Level of Service Summary Comparison
2016 No Build vs. 2016 Phase One Build Conditions

	2016 No Build					2016 Build				
	Non-Game Day				Game Day	Non-Game Day				Game Day
Intersections	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday Pre-Game	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday Pre-Game
Overall LOS A/B/C	13	15	11	12	9	15	15	12	12	8
Overall LOS D	12	7	8	2	6	10	4	6	1	7
Overall LOS E	4	2	6	4	8	4	4	3	4	7
Overall LOS F	0	5	4	11	6	1	7	9	13	8
Number of intersections with significant adverse impacts	-	-	-	-	-	9	13	14	17	17
Number of lane groups with significant adverse impacts	-	-	-	-	-	14	22	23	36	29

Notes:

- The 2016 No Build Condition would have 29 intersections (25 signalized and 4 unsignalized). All four unsignalized intersections would operate at LOS A/B/C during all peak hours.
- The 2016 Build Condition would have 30 intersections (27 signalized and 3 unsignalized). All three unsignalized intersections would operate at LOS A/B/C during all peak hours with the exception of Boat Basin Road and Worlds Fair Marina, which would operate at LOS E during the weekday and Saturday midday non-game peak hours, and the weekday pre-game peak hour.
- Under the 2016 Build Condition, one unsignalized intersection (Willets Point Boulevard at 126th Street) would be demapped and removed, and two signalized intersections (126th Street at New Willets Point Boulevard, and Citi Field/Lot B Internal Street at Roosevelt Avenue) would be added.

The analyses conducted for the 2016 Stage One Build conditions indicate that:

- In the weekday AM peak hour on non-game days, fifteen of the thirty intersections analyzed for the Phase One Build condition would operate at overall intersection LOS A, B, or C, ten would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and one would operate at overall intersection LOS F. Nine of the thirty intersections analyzed would be significantly impacted under the Build condition; under the analyses conducted for the Approved Plan within the FGEIS, 21 of 29 intersections were significantly impacted. Additionally, 14 of approximately 138 lane groups would be significantly impacted under the Phase One Build condition; 42 such lane groups were significantly impacted in the FGEIS.

- In the weekday midday peak hour on non-game days, fifteen of the thirty intersections analyzed for the Phase One Build condition would operate at overall intersection LOS A, B, or C, four would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and seven would operate at overall intersection LOS F. Overall, 13 of the 30 intersections analyzed would be significantly impacted under the Phase One Build condition; under the analyses conducted for the Approved Plan within the FGEIS, 17 of 29 intersections were significantly impacted. Additionally, 22 of approximately 138 lane groups would be significantly impacted under the Phase One Build condition; 42 such lane groups were significantly impacted in the FGEIS.

- In the weekday PM peak hour on non-game days, twelve of the thirty intersections analyzed for the Phase One Build condition would operate at overall intersection LOS A, B, or C, six would operate at overall intersection LOS D, four would operate at overall intersection LOS

E, and eight would operate at overall intersection LOS F. Overall, 14 of the 30 intersections analyzed would be significantly impacted under the Phase One Build condition; under the analyses conducted for the Approved Plan within the FGEIS, 21 of 29 intersections were significantly impacted. Additionally, 23 of approximately 138 lane groups would be significantly impacted under the Phase One Build condition; 58 such lane groups were significantly impacted in the FGEIS.

- In the Saturday midday peak hour on non-game days, twelve of the thirty intersections analyzed for the Phase One Build condition would operate at overall intersection LOS A, B, or C, one would operate at overall intersection LOS D, four would operate at overall intersection LOS E, and thirteen would operate at overall intersection LOS F. Overall, 17 of the 30 analyzed intersections would be significantly impacted under the Phase One Build condition; under the analyses conducted for the Approved Plan within the FGEIS, 23 of 29 intersections were significantly impacted. Additionally, 36 of approximately 138 lane groups would be significantly impacted under the Phase One Build condition; 56 such lane groups were significantly impacted in the FGEIS.

- In the weekday pre-game peak hour on game days, eight of the thirty intersections analyzed for the Phase One Build condition would operate at overall intersection LOS A, B, or C, seven would operate at overall intersection LOS D, seven would operate at overall intersection LOS E, and eight would operate at overall intersection LOS F. Overall, 17 of the 30 analyzed intersections would be significantly impacted under the Phase One Build condition; under the analyses conducted for the Approved Plan within the FGEIS, 23 of 29 intersections were significantly impacted. Additionally, 29 of approximately 138 lane groups would be significantly impacted under the Phase One Build condition; 56 such lane groups were significantly impacted in the FGEIS.

Detailed Build condition level of service tables and No Build vs. Build condition level of service comparison tables are provided in the Appendix.

As noted previously, fewer total intersections and lane groups would be significantly impacted in each analyzed peak hour as compared to the Approved Plan in the FGEIS. In this analysis, no intersections would be significantly impacted that were not previously identified in the FGEIS. Moreover, for intersections that would experience significant adverse impacts in both the Approved Plan and Phase 1 of the Updated Plan, impacts predicted for Phase 1 occur only in peak hours that were identified in the FGEIS as experiencing significant adverse impacts. Of the 30 intersections analyzed, six intersections that experienced significant adverse impacts in the FGEIS would experience an adverse impact during the same peak hour but in at least one different lane group than what was identified in the FGEIS. These intersections are Northern Boulevard at Prince Street, at 114th Street and at Union Street, and Roosevelt Avenue at Prince Street, at 114th Street and at 126th Street. The Phase 1 program would not result in any new significant adverse impacts because there are no new intersections or peak hours, only lane groups, with impacts that were not identified in the FGEIS,.

Some of the intersections with significant adverse impacts in the FGEIS that would have significant adverse impacts for different lane groups as compared to the FGEIS during certain hours are located in Downtown Flushing. The different significant adverse impacts at these locations are due to changed traffic patterns, No Build improvements associated with the previously considered one-way pair, and/or lane configurations in the future No Build and Build conditions (as mentioned earlier) different than what was assumed in the FGEIS.

Project-related traffic improvements would be provided at Roosevelt Avenue at Union Street. In the FGEIS, this location was significantly impacted in three of the five hours analyzed here and the impacts were unmitigatable in all three hours. The project–related traffic improvements would include shifting the centerline of Roosevelt Avenue by two feet, re-striping the eastbound approach, and strictly enforcing No Standing Anytime parking regulations on the eastbound and westbound approaches. These improvements would improve overall traffic operations at this location as compared to those predicted in the FGEIS.

In addition, project-related traffic improvements would be provided at 34th Avenue and 114th Street. In the FGEIS, there were no significant impacts at this location. Project–related traffic improvements would provide a one second signal timing change during the weekday PM peak hour on both game days and non-game days. This improvement would improve overall traffic operations at this intersection as compared to those predicted in the FGEIS.

The other locations that are predicted to have different lane groups with significant adverse impacts during the same peak hours are attributable to trip rerouting that would occur in the absence of the proposed VWE access ramps. Without these ramps in place, as was assumed in the FGEIS analysis, some intersections along alternate VWE routes would have a net increase in project-generated trips as compared to the FGEIS. These intersections include 34th Avenue at its intersection with 126th Street, and Boat Basin Road at World's Fair Marina. These intersections were also predicted to have significant adverse impacts in the FGEIS.

MITIGATION

As discussed above, the proposed Phase One development would result in significant adverse traffic impacts at a number of locations within the study area, where significant impacts were predicted for the Approved Plan and disclosed in the FGEIS analysis. This section identifies the mitigation needed at each location to fully or partially mitigate significant adverse traffic impacts, while Figures 12 through 16 present graphic overviews of the ability of traffic engineering and operational improvements to mitigate significant traffic impacts. Table 6 presents a summary of significant adverse traffic impacts and their ability to be mitigated. Details of the intersection capacity results and specific traffic mitigation measures are provided in the Appendix.

Table 6
TRAFFIC IMPACT MITIGATION SUMMARY FOR 2016 PHASE ONE DEVELOPMENT

	Non-Game Day Peak Hours				Game Day Peak Hour
Study Intersections	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday	Weekday Pre-game
No Significant adverse impact	21	17	16	13	13
Fully Mitigated Impact	8	7	8	10	10
Partially Mitigated Impact	0	1	1	1	3
Unmitigatable Impact	1	5	5	6	4

The overall finding of the traffic analysis is that, as for the Approved Plan analyzed in the FGEIS, the majority of locations analyzed here would be significantly impacted during at least one peak hour analyzed. However, unlike the conclusions reached in the FGEIS, this analysis found that most of the significantly impacted locations for the Phase One development could be fully or partially mitigated with a range of traffic engineering improvements typically implemented by NYCDOT throughout New York City such as lane restriping, signal phasing and/or timing changes, the signalization of an

unsignalized intersection, and limited parking prohibitions. These routine measures are the same types of measures identified in the FGEIS. However, as previously disclosed in the FGEIS, a few intersections per peak hour would remain unmitigatable.

A comparison with the Approved Plan conditions analyzed in the FGEIS is presented in Table 7. As mentioned in the previous section, the overall number of significant adverse impacts would be lower under the Phase One development. Additionally, as compared to the FGEIS, more intersections could be fully or partially mitigated under the Phase One development using similar mitigation measures (and less intense measures at several locations) to those identified in the FGEIS. Overall, there would be considerably fewer unmitigatable impacts under the Phase One development as compared to the Approved Plan analyzed in the FGEIS. Also, all unmitigatable intersections were also unmitigatable in the FGEIS, and all partially mitigated intersections were either partially mitigated or unmitigatable in the FGEIS. No intersection with a significant impact that was partially or fully mitigated in the FGEIS would have an impact that is unmitigated in this Phase One Analysis.

Table 7
COMPARISON OF SIGNIFICANT ADVERSE IMPACTS AND MITIGATION
2016 PHASE ONE DEVELOPMENT VS. 2017 FGEIS (FULL BUILDOUT)

Peak Hours		Significantly Impacted Intersections		Fully Mitigated Intersections		Partially Mitigated Intersections		Unmitigatable Intersections	
		Phase One	FGEIS	Phase One	FGEIS	Phase One	FGEIS	Phase One	FGEIS
Non-Game Day	Weekday AM	9	22	8	7	0	3	1	12
	Weekday Midday	13	18	7	8	1	2	5	8
	Weekday PM	14	24	8	7	1	3	5	14
	Saturday Midday	17	22	10	6	1	3	6	13
Game Day	Weekday Pre-Game	17	25	10	9	3	2	4	14

Notes:
1. Includes signalized and unsignalized intersections.
2. 30 intersections were analyzed for the future Build conditions in the Phase One Development, while 29 intersections were analyzed for the FGEIS (due to the proposed demapping of Willets Point Boulevard at Northern Boulevard).

There are six intersections that were significantly impacted in the FGEIS that would experience an adverse impact in at least one different lane group in this analysis; however, each of these intersections can be mitigated to the same extent or better as compared to the FGEIS so that overall traffic conditions at those intersections with the Phase One development would be the same or better than what was predicted in the FGEIS.

With the implementation of the range of standard measures noted above and detailed in the Appendix, significant adverse impacts occurring in one or more of the analysis peak hours could be fully mitigated at the following traffic study area locations:

- Northern Boulevard at 108th Street
- Northern Boulevard at 114th Street
- Northern Boulevard service road at College Point Boulevard
- Northern Boulevard at Union Street
- Northern Boulevard at Parsons Boulevard
- Roosevelt Avenue at 108th Street
- Roosevelt Avenue at 111th Street
- Roosevelt Avenue at Parsons Boulevard

- Sanford Avenue at College Point Boulevard
- Sanford Avenue at Parsons Boulevard
- Boat Basin Road at World's Fair Marina

The following intersections could only be partially mitigated or would remain unmitigated during the following time periods:

- In the weekday AM peak hour on non-game days, there would be no partially mitigated intersections and only one unmitigatable intersection, Roosevelt Avenue at 114th Street.

- In the weekday midday peak hour on non-game days, Roosevelt Avenue at 114th Street would be partially mitigated, and five intersections could not be mitigated, including Northern Boulevard at 126th Street, 34th Avenue at 126th Street, and Roosevelt Avenue at Prince Street, at Main Street, and at 126th Street.

- In the weekday PM peak hour on non-game days, Roosevelt Avenue intersection at 114th Street would be partially mitigated, and five intersections could not be mitigated, including Northern Boulevard at its intersections with 126th Street and Prince Street, 34th Avenue at 126th Street, and Roosevelt Avenue at Main Street, and at 126th Street.

- In the Saturday midday peak hour on non-game days, the intersection of 34th Avenue at 126th Street would be partially mitigated, and six intersections could not be mitigated, including: Northern Boulevard at its intersections with 126th Street and Prince Street, and at Roosevelt Avenue at its intersections with 114th, 126th, Prince, and Main Streets.

- In the weekday pre-game peak hour, three intersections could only be partially mitigated, including Roosevelt Avenue at its intersections with 114th Street, College Point Boulevard, and Prince Street, and four intersections could not be mitigated, including Northern Boulevard at 126th Street and at Prince Street, and Roosevelt Avenue at 126th Street and at Main Street.

A summary of the traffic mitigation findings for each analysis location, including the proposed mitigation measures, is provided below.

NORTHERN BOULEVARD

Two of the seven intersections analyzed along Northern Boulevard would be significantly impacted during the weekday AM non-game peak hour, three would be significantly impacted during the weekday midday non-game peak hour, four would be significantly impacted during the PM non-game peak hour, and five would be significantly impacted during the Saturday midday non-game and weekday pre-game peak hours.

NORTHERN BOULEVARD AT 108TH STREET

This intersection would have significant adverse impacts only during the Saturday midday non-game peak hour and could be mitigated with signal timing modifications.

NORTHERN BOULEVARD AT 114TH STREET

Mitigation would not be necessary during any of the peak hours on non-game days, and significant adverse impacts during the weekday pre-game peak hour could be mitigated by: 1) restriping the southbound approach of 114th Street from one 28-foot lane with parking to one 18-foot shared left-through lane with parking and one 10-foot through-right turn lane; 2) restriping the southbound receiving side of 114th Street from one 44-foot lane with parking to two 22-foot lanes with parking; and 3) signal timing modifications.

NORTHERN BOULEVARD AT 126TH STREET

Significant adverse impacts would be expected during four of the five analysis peak hours (the AM non-game peak hour would not be significantly impacted), and could not be mitigated. Because this intersection is the convergence point of Northern Boulevard, 126th Street, and two highway exit ramps, it would carry significant project-generated traffic volumes in addition to substantial No Build traffic. The geometric characteristics of the intersection, with significant adverse impacts occurring on all approaches, eliminate the possibility of full or partial mitigation.

NORTHERN BOULEVARD AT PRINCE STREET

This intersection would be significantly impacted during the weekday PM non-game, Saturday midday non-game, and weekday pre-game peak hours. None of the significant adverse impacts expected during these three analysis peak hours could be mitigated. With impacts occurring on the Northern Boulevard approaches, the geometric complexity and signal timing characteristics of this intersection, and cross-street congestion, there is limited opportunity for mitigation.

NORTHERN BOULEVARD AT UNION STREET

Signal timing modifications could mitigate significant adverse impacts during all five peak hours.

NORTHERN BOULEVARD AT PARSONS BOULEVARD

Signal timing modifications could mitigate significant adverse impacts during all five peak hours.

34TH AVENUE

One of the two study locations along 34th Avenue -- the intersection at 126th Street (and the Grand Central Parkway and eastbound Northern Boulevard ramps) -- would be significantly impacted during all five peak hours, since the intersection would be a key gateway to the District.

34TH AVENUE AT 126th STREET

Significant adverse impacts would be expected during all five analysis peak hours and could be fully mitigated during the weekday AM non-game and weekday pre-game peak hours. The intersection could only be partially mitigated during the Saturday midday non-game peak hour, and could not be mitigated during the weekday midday and PM non-game peak hours. As a key entrance point to the District, this intersection would carry significant volumes of project-generated traffic. Its geometric complexity, with approaches from two exit ramps, in addition to the 126th Street northbound and 34th Avenue eastbound and westbound approaches, limits capacity improvement options. However,

installation of a computerized signal controller would improve conditions at this intersection during the weekday AM non-game, Saturday midday non-game, and weekday pre-game peak hours.

ROOSEVELT AVENUE

Five of the ten intersections analyzed along Roosevelt Avenue would be significantly impacted during the weekday AM non-game peak hour, eight would be significantly impacted during the weekday midday non-game, weekday PM non-game, Saturday midday non-game, and weekday pre-game peak hours. Five of the ten intersections analyzed could be either partially mitigated or would be unmitigatable during at least one peak hour. Although the number of project-generated trips expected along Roosevelt Avenue through these intersections would not be particularly large, there are very limited mitigation options for this roadway in Downtown Flushing, due in part to narrow space for travel lanes and critical curbside activities, including bus stops, bus layover, and truck loading/unloading activities.

ROOSEVELT AVENUE AT 108TH STREET

Significant adverse impacts would occur in all five peak hours and could be fully mitigated by: 1) providing "No Standing Anytime" parking regulations within 100 feet of the intersection on the north side and south side along the westbound and eastbound Roosevelt Avenue approaches, to allow for two moving lanes on each approach; 2) shifting the Q48 bus stop on the far side of the eastbound approach 25 feet farther downstream (to the east) to allow a transition back to one moving lane in the eastbound direction; 3) providing "No Standing Anytime" regulations between the intersection and the relocated bus stop, and along the length of the bus stop; 4) and prohibiting parking for 50 feet on the far side of the westbound approach to allow a transition back to one moving lane in the westbound direction. In addition, signal timing modifications would be required during the weekday and Saturday midday non-game peak hours to achieve full mitigation.

ROOSEVELT AVENUE AT 111TH STREET

Similar to the intersection at 108th Street, significant adverse impacts would occur in all peak hours and could be fully mitigated by: 1) providing "No Standing Anytime" parking regulations within 100 feet of the intersection on the north side and south side along the westbound and eastbound approaches, to allow for a transition to two moving lanes at each approach; 2) shifting the Q48 bus stop on the far side of the westbound approach and the eastbound approach 25 feet farther downstream to allow a transition back to one moving lane in each direction; 3) and providing "No Standing Anytime" regulations between the intersection and each relocated bus stop, and along the length of each bus stop.

ROOSEVELT AVENUE AT 114TH STREET

None of the significant adverse impacts expected during all five analysis peak hours could be fully mitigated. The combination of significant additional project-generated traffic volumes and limited capacity improvement options—due primarily to geometric constraints—at this intersection eliminates the ability for full mitigation. However, the intersection could be partially mitigated during the weekday midday and PM non-game peak hours by shifting the centerline along the eastbound approach one foot to the north to widen the eastbound approach from 21 to 22 feet.

ROOSEVELT AVENUE AT 126TH STREET

This intersection is also limited by geometric constraints and would experience project-generated traffic volume increases at the southern end of the District. Signal timing modifications could mitigate significant adverse impacts during the weekday AM. However, the intersection would be unmitigatable during the weekday midday, weekday PM, and Saturday midday non-game peak hours, and during the weekday pre-game peak hour.

ROOSEVELT AVENUE AT COLLEGE POINT BOULEVARD

This intersection would be significantly impacted during all five peak hours analyzed. Significant adverse impacts could be fully mitigated by signal timing modifications during the weekday AM, midday, and PM peak hours, and the Saturday midday peak hour during non-game days, and could be partially mitigated during the weekday pre-game peak hour.

ROOSEVELT AVENUE AT PRINCE STREET

Significant adverse impacts would occur at this intersection during all peak hours except for the weekday AM non-game peak hour. These impacts could be fully mitigated by signal timing modifications during the weekday PM non-game peak hour, and could be partially mitigated during the weekday pre-game peak hour. However, significant adverse impacts during the weekday and Saturday midday non-game peak hours could not be mitigated.

ROOSEVELT AVENUE AT MAIN STREET

This intersection would be significantly impacted during all peak hours except for the weekday AM non-game peak hour. None of the significant adverse impacts expected during the other four analysis peak hours could be mitigated.

ROOSEVELT AVENUE AT PARSONS BOULEVARD

Significant adverse impacts would occur at this intersection during all peak hours except for the weekday AM non-game peak hour. Impacts at this intersection could be fully mitigated during all four significantly impacted peak hours with the following measures: 1) restriping the northbound approach to provide one 11-foot wide shared left-through lane and one 10-foot wide right turn lane; 2) restriping the southbound approach to provide one 11-foot wide shared left-through lane and one 10-foot wide right turn lane; 3) implementing “No Standing 7 AM – 7 PM, Except Sunday” regulations along the west side of southbound Parsons Boulevard (north of Roosevelt Avenue) for approximately 120 feet; 4) modifying current “No Standing 7 AM – 7 PM, Mon-Fri” regulations along the east side of northbound Parson Boulevard (south of Roosevelt Avenue) to “No Standing 7 AM – 7 PM, Except Sunday”.

SANFORD AVENUE

Two of the three intersections analyzed along Sanford Avenue would be significantly impacted during at least one peak hour. None of the analyzed Sanford Avenue intersections would be significantly impacted during the weekday AM, midday, and PM non-game peak hours, two intersections would be significantly impacted during the Saturday midday non-game peak hour, and one intersection would be significantly impacted during the weekday pre-game peak hour.

SANFORD AVENUE AT COLLEGE POINT BOULEVARD

Significant adverse impacts are expected in two out of the five peak hours including the Saturday midday non-game and weekday pre-game peak hours. Impacts at this intersection could be fully mitigated during the significantly impacted peak hours with signal timing modifications.

SANFORD AVENUE AT PARSONS BOULEVARD

Significant adverse impacts would occur at this intersection during only one of the five analyzed peak hours, Saturday midday non-game. The significant adverse impacts during this peak hour could be fully mitigated with signal timing modifications.

OTHER STUDY AREA LOCATIONS

WORLD'S FAIR MARINA AT BOAT BASIN ROAD

This intersection would be significantly impacted during all five peak hours analyzed. Significant adverse impacts at this currently unsignalized intersection could be fully mitigated with the installation of a traffic signal, operating with a 90-second cycle, to provide sufficient gaps for northbound Boat Basin Road left-turn traffic toward the entrance ramp to the westbound Grand Central Parkway. During game day conditions, the New York City Police Department (NYPD) could optimize traffic signal operations (as recommended in the FGEIS).

NORTHERN BOULEVARD SERVICE ROAD AT COLLEGE POINT BOULEVARD

Mitigation would only be needed during the weekday pre-game peak hour at this intersection; significant adverse impacts would be fully mitigated with signal timing modifications.

IMPLEMENTATION

Each of the traffic capacity improvements described above would require approval by NYCDOT, and NYPD traffic signal optimizations on game days would require NYPD approval. Overall, these traffic improvements—including signal phasing and timing changes, traffic signal installations, lane restriping, parking prohibitions, and others — fall within the range of typical measures employed by NYCDOT in improving traffic conditions in New York City and are similar to the improvements identified in the FGEIS. As mentioned in the FGEIS, New York City Transit (NYCT) would need to agree to the proposed movement of the Q48 bus stops on Roosevelt Avenue near 108th and 111th Streets.

With the implementation of the traffic mitigation measures described above and the project-related traffic improvements described earlier, new parking prohibitions would result in the removal of approximately 25 to 30 parking or "standing" spaces during various times of the day and days of the week, including approximately 20 parking meters. Roosevelt Avenue would lose about 20 to 25 spaces (including about 20 meters) in the vicinity of 108th and 111th Streets, and near Union Street; Parsons Boulevard would lose approximately 3 spaces (including three meters) near Roosevelt Avenue. No designated truck loading/unloading or commercial vehicle zones or bus layover space would be affected by the parking modifications proposed for mitigation. The expected loss of parking or "standing" space is less overall than that projected in the FGEIS (40 to 50 spaces), but is slightly higher in its loss of metered spaces (approximately 17 metered spaces).

Of the traffic mitigation measures discussed above, one new traffic signal is proposed at a currently unsignalized intersection, Boat Basin Road at World's Fair Marina (as in the FGEIS). Also, as mentioned in the FGEIS, it is expected that the intersections of College Point Boulevard at 32nd Avenue and 126th Street at 34th Avenue would require traffic signal equipment upgrades from the current mechanical systems to computerized systems in order to accommodate variable signal phase green times among the five analysis time periods. This signal improvement would be similar to NYCDOT's planned upgrade program for various signalized intersections throughout the City.

As discussed in the FGEIS, all components of the traffic program as well as its effects upon pedestrian movements would be subject to a monitoring program that is subject to NYCDOT review and would include, among other things, level of service analyses and signal progression analyses to verify the need for any of the mitigation measures or project improvements identified in the FGEIS or subsequent Technical Memoranda or other measures implemented as part of the traffic monitoring plan.

These mitigation measures can be implemented to accommodate development of the Phase One program in 2016 prior to completion of the Van Wyck Expressway ramps that have been proposed to accommodate the full development.

HIGHWAY NETWORK ANALYSIS

Due to the proximity of the Willets Point Development District to the regional highway network through north-central Queens, analyses were performed to assess the potential for significant adverse impacts on the Grand Central Parkway (GCP), the Van Wyck Expressway (VWE)/Whitestone Expressway (WSE), and the ramps connecting the highways to each other and to the local street network.

METHODOLOGY

The same traffic modeling program and study locations were used for the highway analysis as were used in the FGEIS. The CORSIM traffic modeling program was used to assess highway conditions. As described in detail in the FGEIS, level of service thresholds based on density in passenger car miles per mile per lane (pc/mi/ln) have been applied to the results of the CORSIM model.

As directed by NYCDOT, the following impact criteria were used for this analysis:

For determining impacts for highway mainline analyses:

- If the level of service under the No Build condition is within LOS A, B or C, then a deterioration under the Build condition to worse than mid-LOS D (density greater than 30 passenger cars/mile/lane [pc/mi/ln]) is considered a significant impact. If the level of service under the Build condition is within LOS A, B or C, or marginally acceptable LOS D (density 30 pc/mi/ln or less), the impact is not considered significant.

- If the level of service under the No Build condition is LOS D, then a significant impact occurs if, under the Build condition, the increase in density is 5 pc/mi/ln or greater.

- If the level of service under the No Build condition is LOS E, then a significant impact occurs if, under the Build condition, the increase in density is 4 pc/mi/ln or greater.

- If the level of service under the No Build condition is LOS F, then a significant impact occurs if, under the Build condition, the increase in density is 3 pc/mi/ln or greater.

For determining impacts for ramp junction analyses:

- If the level of service under the No Build condition is within LOS A, B or C, then a deterioration under the Build condition to worse than mid-LOS D (density greater than 31 passenger cars/mile/lane [pc/mi/ln]) is considered a significant impact. If the level of service under the Build condition is within LOS A, B or C, or marginally acceptable LOS D (density 31 pc/mi/ln or less), the impact is not considered significant.

- If the level of service under the No Build condition is LOS D, then a significant impact occurs if, under the Build condition, the increase in density is 4 pc/mi/ln or greater.

- If the level of service under the No Build condition is LOS E, then a significant impact occurs if, under the Build condition, the increase in density is 3 pc/mi/ln or greater.

- If the level of service under the No Build condition is LOS F, then a significant impact occurs if, under the Build condition, the increase in density is 2 pc/mi/ln or greater.

These criteria provide a clarification of the criteria contained in the *CEQR Technical Manual* and differ only slightly from what was used in the FGEIS, the results of the Phase One highway impact analysis would be the same using either set of impact criteria.

EXISTING CONDITIONS

The existing conditions described in the FGEIS have been kept "as is", just as was done for the intersection analyses, since overall traffic volumes are similar or lower today than in the FGEIS' 2006 existing conditions. The focus of this new study is on future No Build and Build changes.

FUTURE WITHOUT THE PROPOSED PHASE ONE PLAN

Consistent with *CEQR Technical Manual* guidance, traffic volumes on the analyzed sections of the highway network are assumed to increase by a background traffic growth rate of 0.5 percent per year for the first five years and 0.25 percent per year for each year thereafter (constituting a 3.8 percent growth overall) plus traffic expected to be generated by other projected No Build development projects as described earlier for the intersection analyses. In the No Build condition, traffic volumes along the GCP eastbound mainline would increase by about 30 to 90 vph as compared to existing conditions. In the westbound direction along the GCP, and on the VWE and Whitestone Expressway in both directions, volumes would increase by up to approximately 25 vph. These projected increases are lower than what was determined in the FGEIS 2017 No Build analysis due to the smaller number of background projects now expected to be operational in 2016.

Table 8 presents the projected No Build levels of service, speeds, and densities for the 19 sections of the highway network analyzed during all five peak hours. As indicated in the table, the highway mainline locations are generally expected to operate at varying levels of service; however, most mainline locations would operate at marginally acceptable/unacceptable levels of service (LOS D) or unacceptable levels of service (LOS E or F) during at least one of the weekday commuting peak hours (weekday AM or PM on non-game days) or the weekday PM pre-game peak hour. Most highway ramp locations would operate at acceptable levels of service during all peak hours. Three of the

twelve analyzed ramp locations would operate at unacceptable LOS E or F during at least one peak hour.

The No Build highway conditions represent a general degradation from the existing levels of service reported in the FGEIS as would be expected; however, these No Build conditions operate at similar or better levels of service at all locations for all time periods as compared to the FGEIS' 2017 No Build conditions.

Table 8
No Build Highway Levels of Service Summary

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday			Weekday PM Pre-game		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	48.1	28.0	D	49.0	24.9	C	40.5	43.7	E	45.8	31.6	D	42.7	35.6	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	51.0	20.3	C	49.5	15.0	B	50.0	20.2	C	48.5	19.9	B	48.6	23.7	C
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	33.4	54.8	F	45.7	27.8	C	49.5	27.3	C	45.0	35.0	D	41.9	39.3	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	40.0	35.3	E	36.4	27.2	C	39.7	30.8	D	40.8	27.5	C	38.8	30.8	D
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	40.7	29.0	D	39.2	26.5	C	41.1	36.3	E	46.2	27.5	C	45.9	32.4	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	47.5	24.6	C	46.4	18.8	B	36.6	35.9	E	44.0	23.8	C	43.8	31.0	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	28.9	47.2	F	36.9	22.6	C	39.6	28.5	D	38.2	26.3	C	16.1	70.3	F
Ramps															
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	36.6	16.1	B	36.7	13.6	B	36.7	13.5	B	36.9	14.7	B	36.8	11.5	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	24.1	27.5	C	23.7	28.9	D	23.8	30.7	D	23.7	28.2	D	23.7	32.1	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	22.5	31.4	D	23.6	18.3	B	26.1	16.0	B	25.4	11.3	B	23.5	21.5	C
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.8	17.0	B	33.8	18.1	B	32.6	26.5	C	33.8	15.8	B	32.6	26.2	C
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.9	22.3	C	29.2	21.3	C	29.0	21.6	C	28.8	26.4	C	29.1	20.5	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	40.9	10.6	B	41.1	8.3	A	39.8	19.4	B	41.9	10.0	A	39.0	21.7	C
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	44.0	24.1	C	43.9	20.0	C	43.8	17.3	B	43.9	19.8	B	43.6	16.6	B
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	41.3	10.9	B	39.2	5.4	A	39.6	8.2	A	38.2	5.8	A	34.7	8.8	A
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	26.6	37.7	E	29.5	11.0	B	40.0	10.5	B	23.5	12.9	B	30.7	13.5	B
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	37.1	19.9	B	39.7	17.4	B	40.4	22.2	C	41.7	17.7	B	13.0	95.5	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	46.3	6.9	A	43.3	6.1	A	46.2	6.9	A	45.1	7.6	A	40.0	16.8	B
Ramp from Whitestone Expressway SB to Northern Boulevard WB	27.0	25.2	C	28.3	24.3	C	28.6	27.3	C	28.4	26.8	C	7.7	157.6	F

PROBABLE IMPACTS OF THE PROPOSED PHASE ONE DEVELOPMENT

As a result of the proposed Phase One development, volumes on the eastbound mainline of the GCP would increase by approximately 40 to 150 vph over No Build levels (as compared to 300 to 600 vph in the FGEIS), and the east side of the westbound GCP split would increase by 55 to 195 vph (as compared to 310 to 500 vph in the FGEIS). The Whitestone Expressway would experience volume increases of approximately 30 to 100 vph in the northbound direction (as compared to 140 to 480 vph in the FGEIS) and 35 to 120 vph in the southbound direction (as compared to 130 to 390 vph in the FGEIS). The VWE volumes would increase by about 80 to 255 vph in the northbound direction and by 70 to 245 vph in the southbound (as compared to 710 to 1,360 vph and 570 to 1,370 vph, respectively in the FGEIS). Overall the volume increases expected to be generated by the Phase One Development, would be considerably lower (by approximately 60 to 90 percent) than those generated by the Approved Plan.

Aside from different project-generated volume increases, there is one additional non-project-related difference in highway traffic patterns for game days between the Phase One development and the Approved Plan. In the FGEIS on game days, some stadium traffic was assumed to use the proposed new VWE access ramps. In the Phase One development under the Approved Plan, which assumes that no new access ramps have been constructed, Citi Field-generated highway traffic would continue to use the same routes used under No Build conditions. The highway analysis also incorporates one game day operational improvement to help accommodate traffic exiting from the southbound Whitestone Expressway and the northbound VWE that merge into Northern Boulevard, as described earlier.

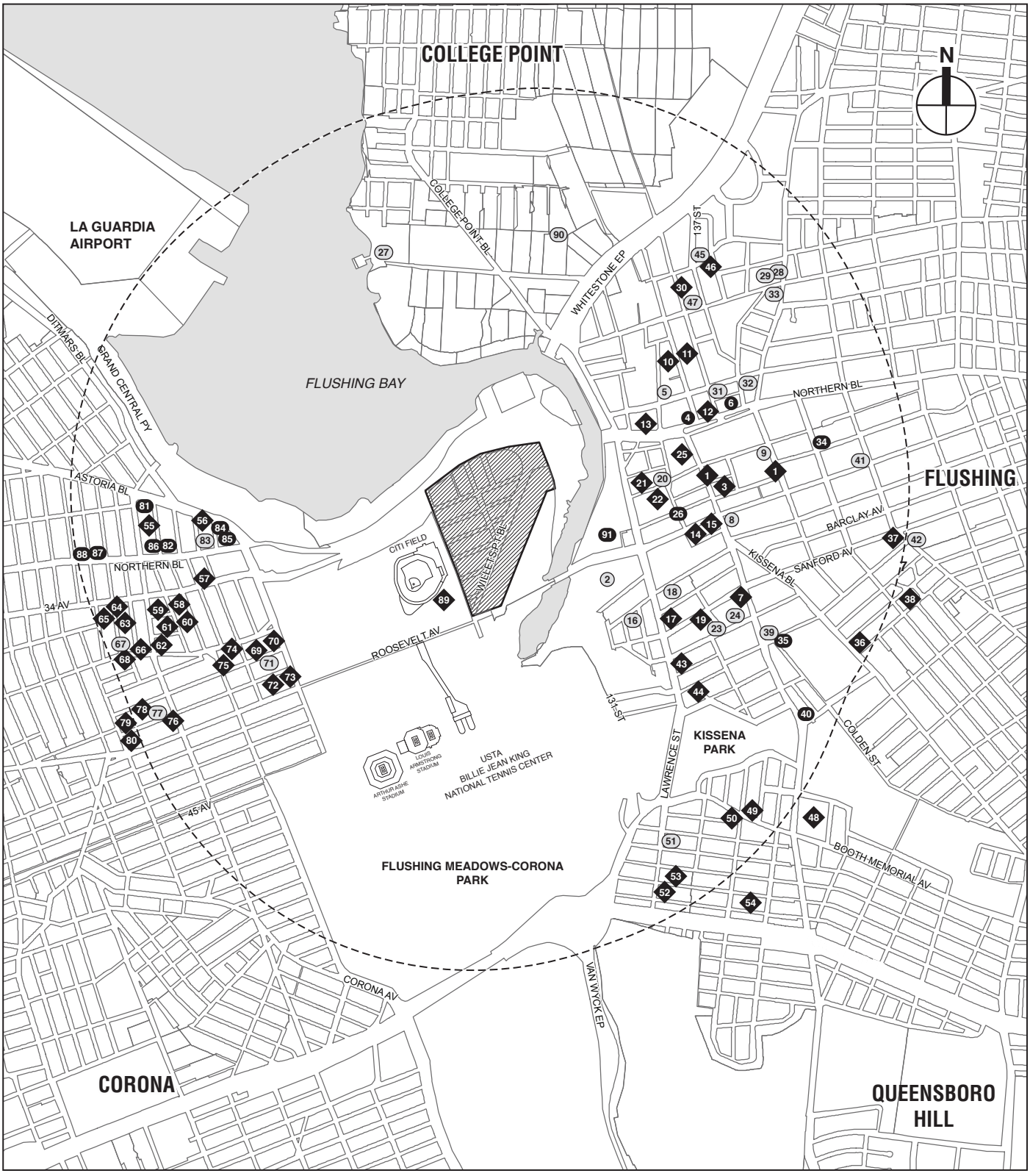
As shown in Table 9, two of the seven highway mainline locations, and four of the twelve highway ramp locations would be significantly impacted during at least one peak hour under the Phase One development. This is considerably lower than the number of significantly impacted highway locations identified in the FGEIS where five of the seven highway mainline locations and seven of the twelve ramp locations would be significantly impacted. All of the mainline and ramp locations would operate at similar or better levels of service under the Phase One development. There would not be any new significant adverse impacts that were not identified in the FGEIS.

Table 9
Build Highway Levels of Service Summary

Mainlines	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday			Weekday PM Pre-game		
	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS	Speed (mph)	Density (pc/mi/ln)	LOS
Grand Central Parkway EB Mainline (between Roosevelt Ave & Long Island Expwy)	47.1	28.7	D	49.0	25.1	C	40.5	43.9	E	45.8	32.2	D	42.6	36.3	E
Grand Central Parkway WB Mainline (east side) (between Roosevelt Ave & Long Island Expwy)	51.0	20.6	C	49.0	16.4	B	49.8	21.5	C	48.2	21.5	C	48.5	24.4	C
Grand Central Parkway WB Mainline (west side) (between Roosevelt Ave & Long Island Expwy)	27.8	65.6	F	45.8	27.5	C	49.5	27.4	C	45.0	35.2	E	41.9	39.7	E
Van Wyck Expressway NB Mainline (between Roosevelt Ave & Long Island Expwy)	39.6	36.4	E	36.2	29.2	D	39.4	32.5	D	40.6	29.5	D	38.6	32.3	D
Van Wyck Expressway SB Mainline (between Roosevelt Ave & Long Island Expwy)	40.6	29.4	D	39.0	28.2	D	40.9	38.2	E	46.1	29.1	D	45.1	34.8	D
Whitestone Expressway NB Mainline (between Northern Boulevard and Linden Place)	47.4	24.8	C	46.4	19.1	B	36.5	36.3	E	44.0	24.5	C	43.7	32.6	D
Whitestone Expressway SB Mainline (between Northern Boulevard and Linden Place)	28.7	47.8	F	36.8	23.1	C	39.6	28.9	D	38.2	27.0	C	14.9	75.8	F
Ramps															
Ramp from World's Fair Marina / Boat Basin Road to Grand Central Parkway WB	36.7	16.8	B	36.7	14.7	B	36.6	14.8	B	36.3	15.7	B	36.8	11.2	B
Ramp from Van Wyck Expressway NB to Northern Boulevard EB	24.2	27.2	C	23.9	27.8	C	24.0	29.8	D	23.8	28.2	D	23.7	31.2	D
Ramp from Van Wyck Expressway NB to Northern Boulevard WB	22.3	36.5	E	23.4	27.2	C	25.8	23.7	C	25.1	21.1	C	23.3	28.8	D
Ramp from Whitestone Expressway NB to Van Wyck Expressway SB	33.6	18.8	B	33.1	24.2	C	32.0	33.7	D	33.2	22.5	C	31.9	33.7	D
Ramp from Northern Boulevard WB to Van Wyck Expressway SB	28.9	22.4	C	29.2	21.3	C	29.0	21.7	C	28.9	26.6	C	29.1	20.4	C
Ramp from Astoria Boulevard EB & Northern Boulevard EB to Whitestone Expressway NB	41.0	10.5	B	41.1	8.5	A	39.8	19.2	B	42.1	9.9	A	39.5	21.3	C
Ramp from Whitestone Expressway SB to Grand Central Parkway WB	43.6	23.9	C	43.8	19.5	B	44.2	18.0	B	44.4	20.0	C	43.7	15.9	B
Ramp from Whitestone Expressway SB to Grand Central Parkway EB	41.1	10.9	B	39.1	6.0	A	39.6	8.7	A	38.2	6.4	A	34.8	9.4	A
Ramp from Northern Boulevard WB and Whitestone Expressway SB to Astoria Boulevard WB	26.5	38.4	E	29.6	11.0	B	39.9	10.6	B	23.4	13.8	B	30.6	14.0	B
Ramp from Astoria Blvd EB & Grand Central Pkwy to Whitestone Expwy NB / Northern Blvd EB	36.8	21.4	C	25.9	36.8	E	39.4	25.7	C	19.7	54.7	F	10.8	119.0	F
Ramp from Grand Central Parkway WB toward Stadium Road and Whitestone Expressway NB	46.6	7.7	A	44.0	8.5	A	46.7	9.2	A	45.4	10.6	B	41.1	18.3	B
Ramp from Whitestone Expressway SB to Northern Boulevard WB	26.3	27.1	C	13.1	74.3	F	12.0	79.2	F	10.6	89.8	F	8.0	155.5	F

Notes:
Shading denotes a significant adverse impact.

12.14.10



Willets Point Development District

1-Mile Perimeter

(2) *2016 No Build Project Location*

◆4 *No Build Project to be completed after 2016 (Not Included in Phase 1 No Build Analysis)*

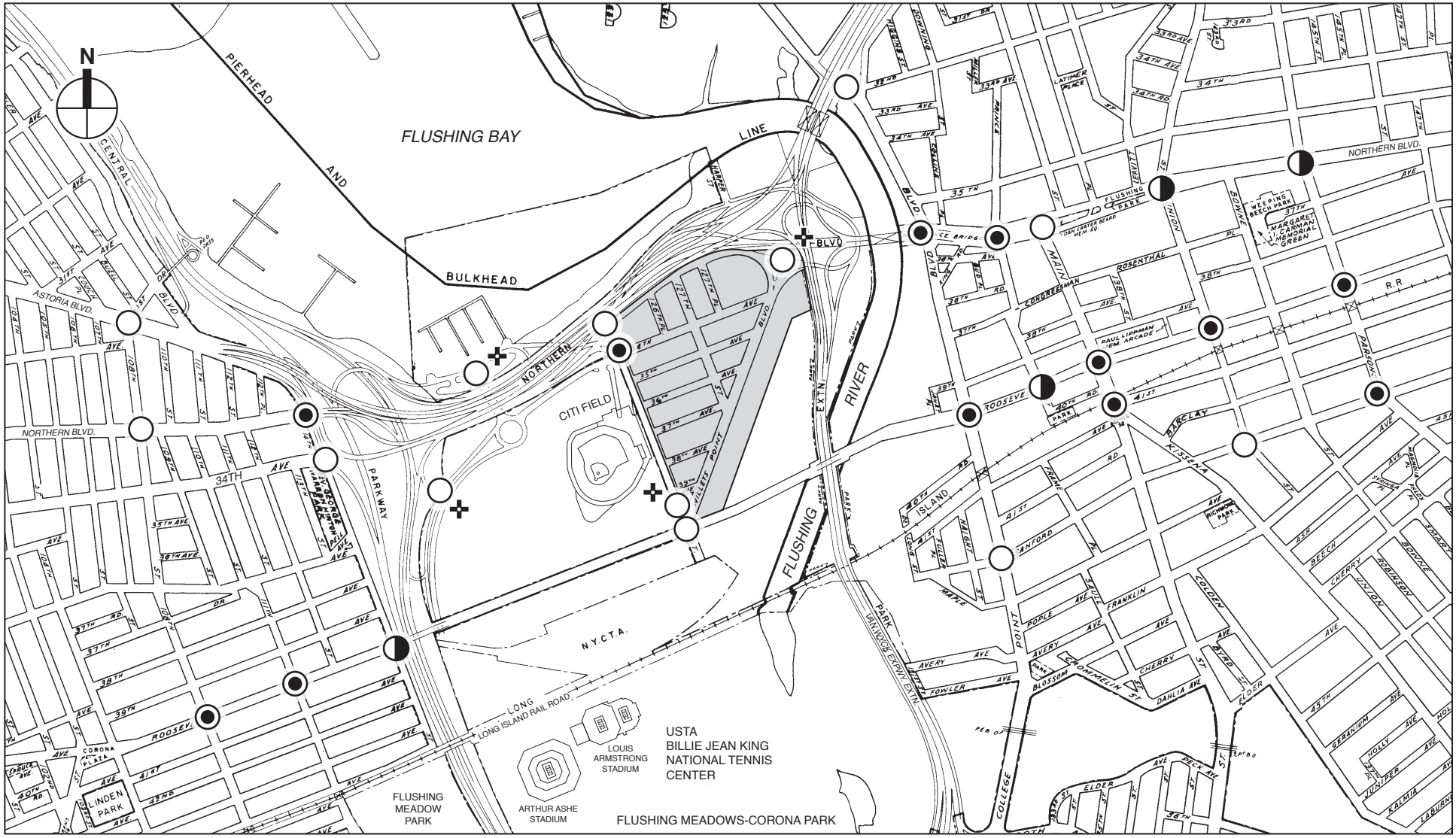
◆1 *Completed No Build Project (Not Included in Phase 1 No Build Analysis)*

0 2000 FEET

SCALE

Figure 1

2016 No Build Project Locations



Willets Point Development District

Unsignalized Intersection

LOS A, B, or C

LOS D

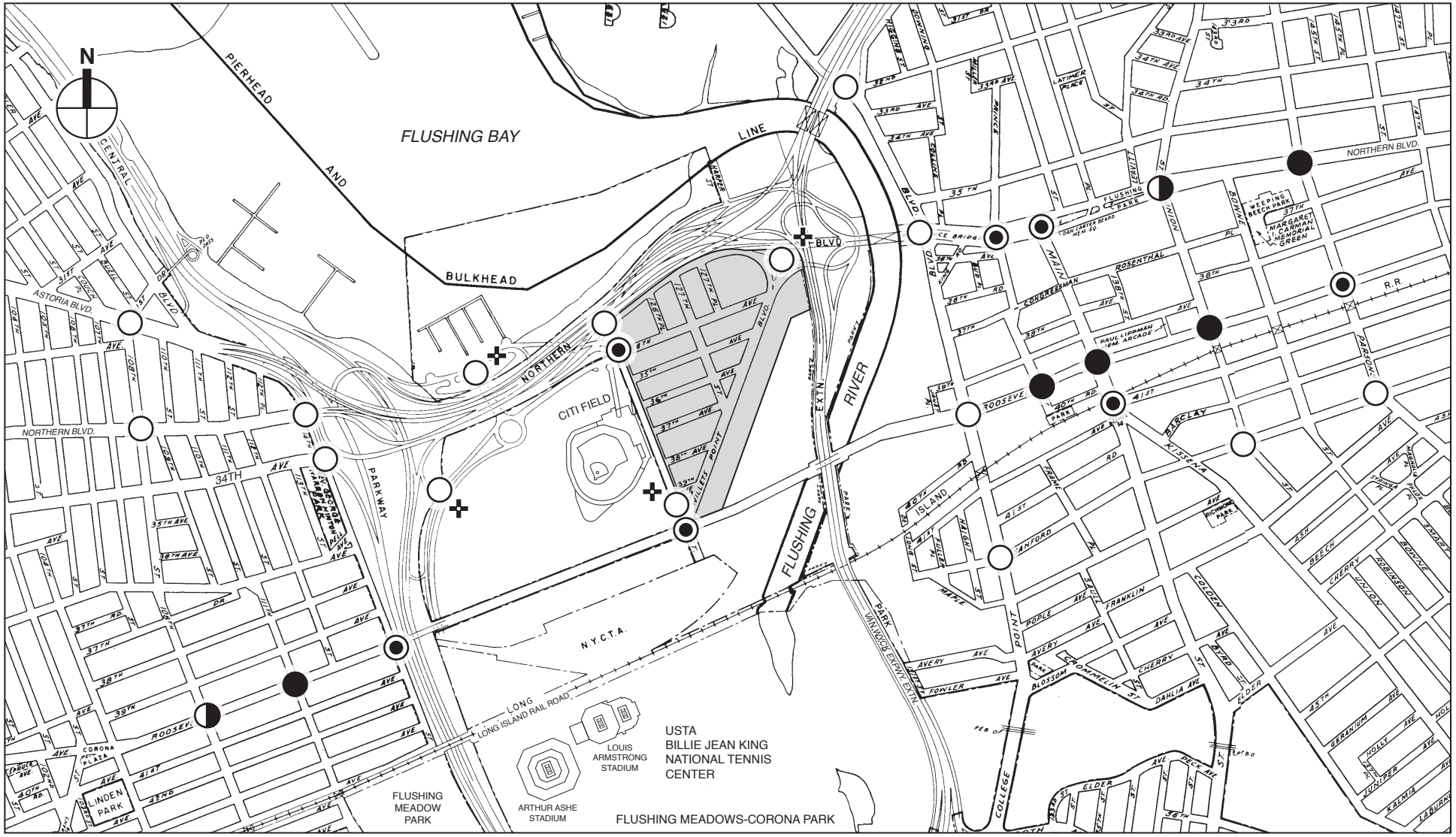
LOS E

LOS F

NOTE: *Overall intersection LOS is shown*

Figure 2

2016 No Build Traffic Levels of Service
Weekday Non-Game AM Peak Hour



Willets Point Development District

Unsignalized Intersection

LOS A, B, or C

LOS D

LOS E

LOS F

NOTE: *Overall intersection LOS is shown*

0 1000 2000 FEET

SCALE

Figure 3

2016 No Build Traffic Levels of Service Weekday Non-Game Midday Peak Hour

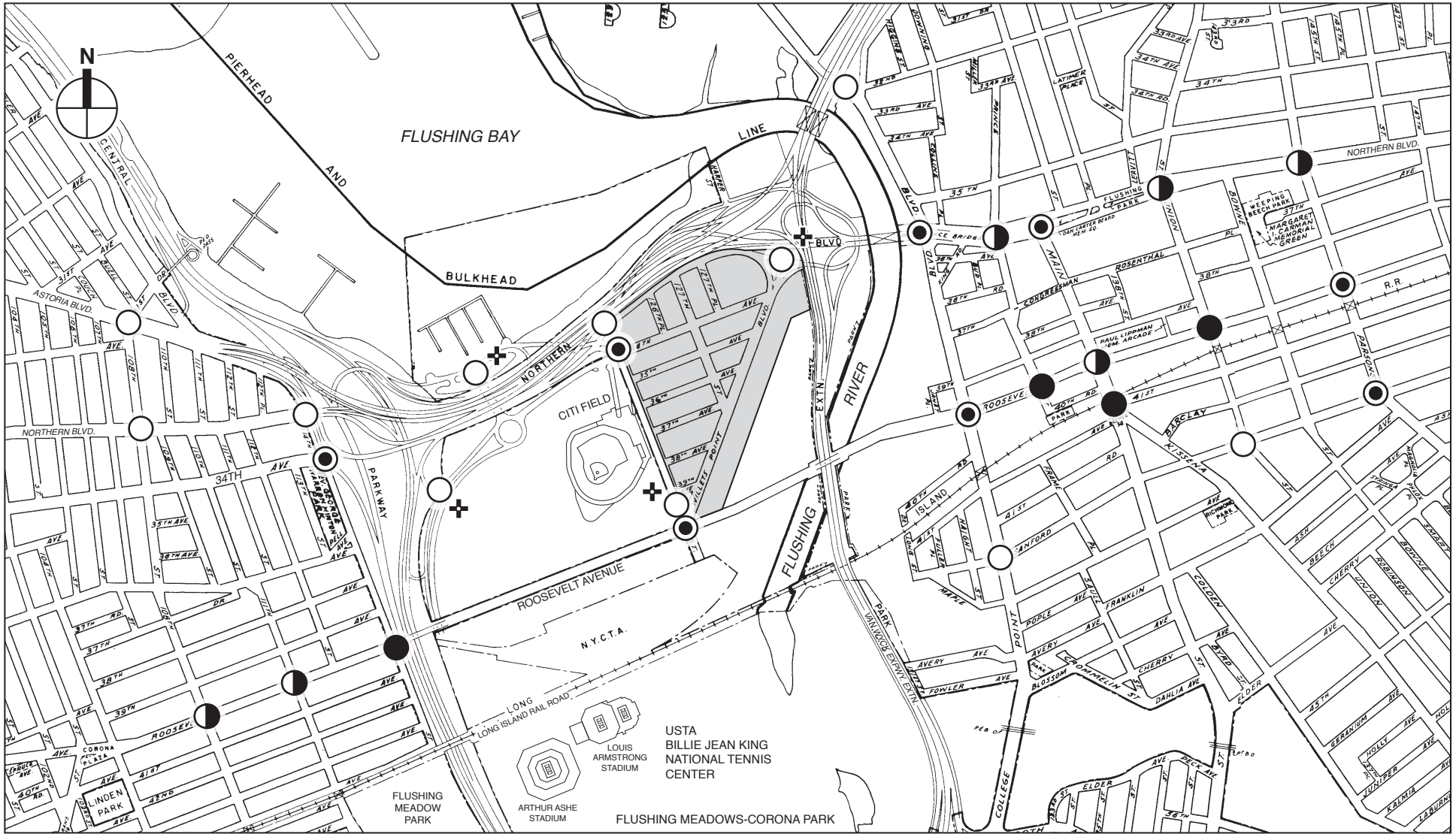
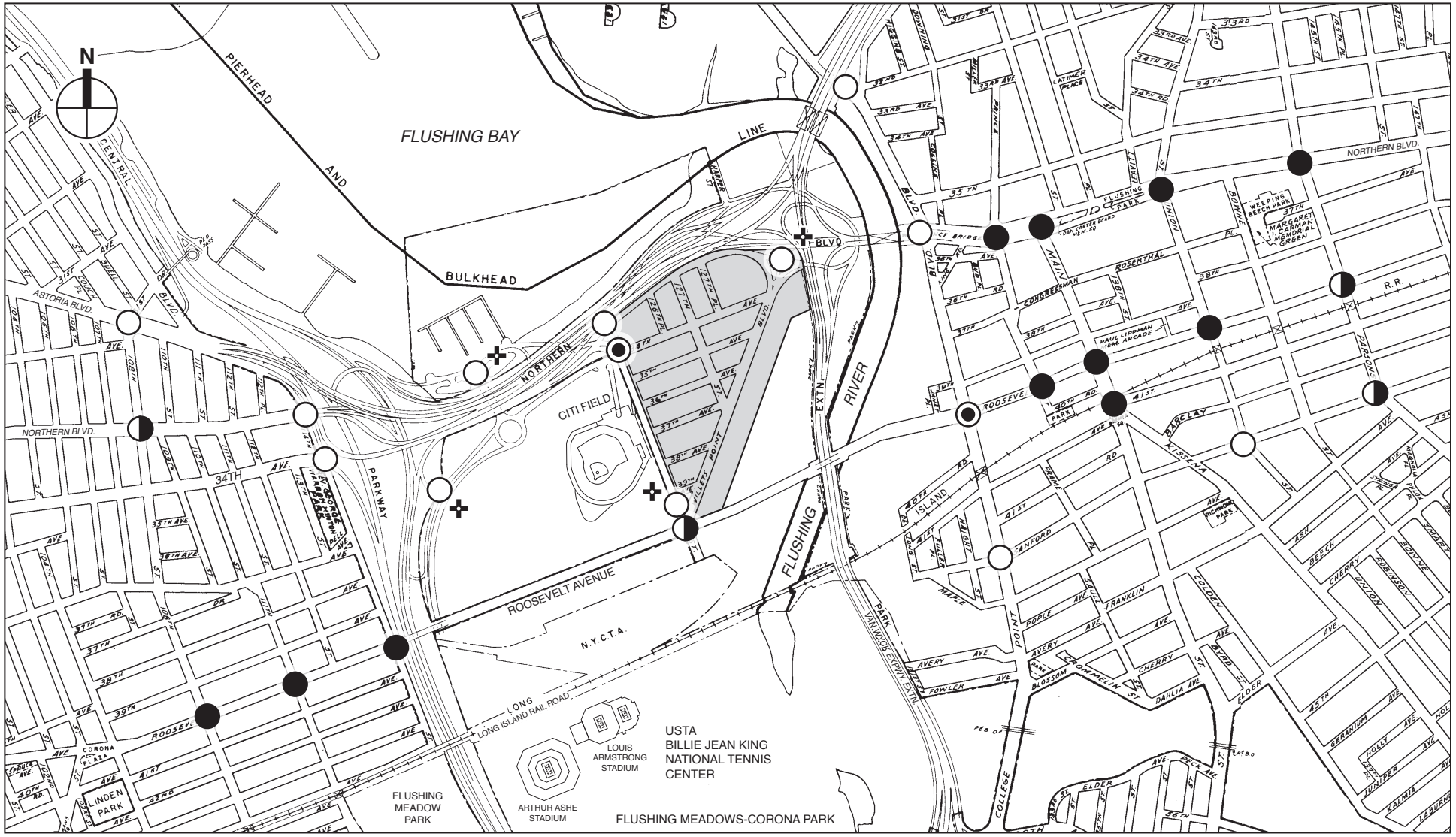


Figure 4

2016 No Build Traffic Levels of Service
Weekday Non-Game PM Peak Hour



Willets Point Development District

Unsignalized Intersection

LOS A, B, or C

LOS D

LOS E

LOS F

NOTE: *Overall intersection LOS is shown*

0 1000 2000 FEET

SCALE

Figure 5

2016 No Build Traffic Levels of Service Saturday Non-Game Midday Peak Hour

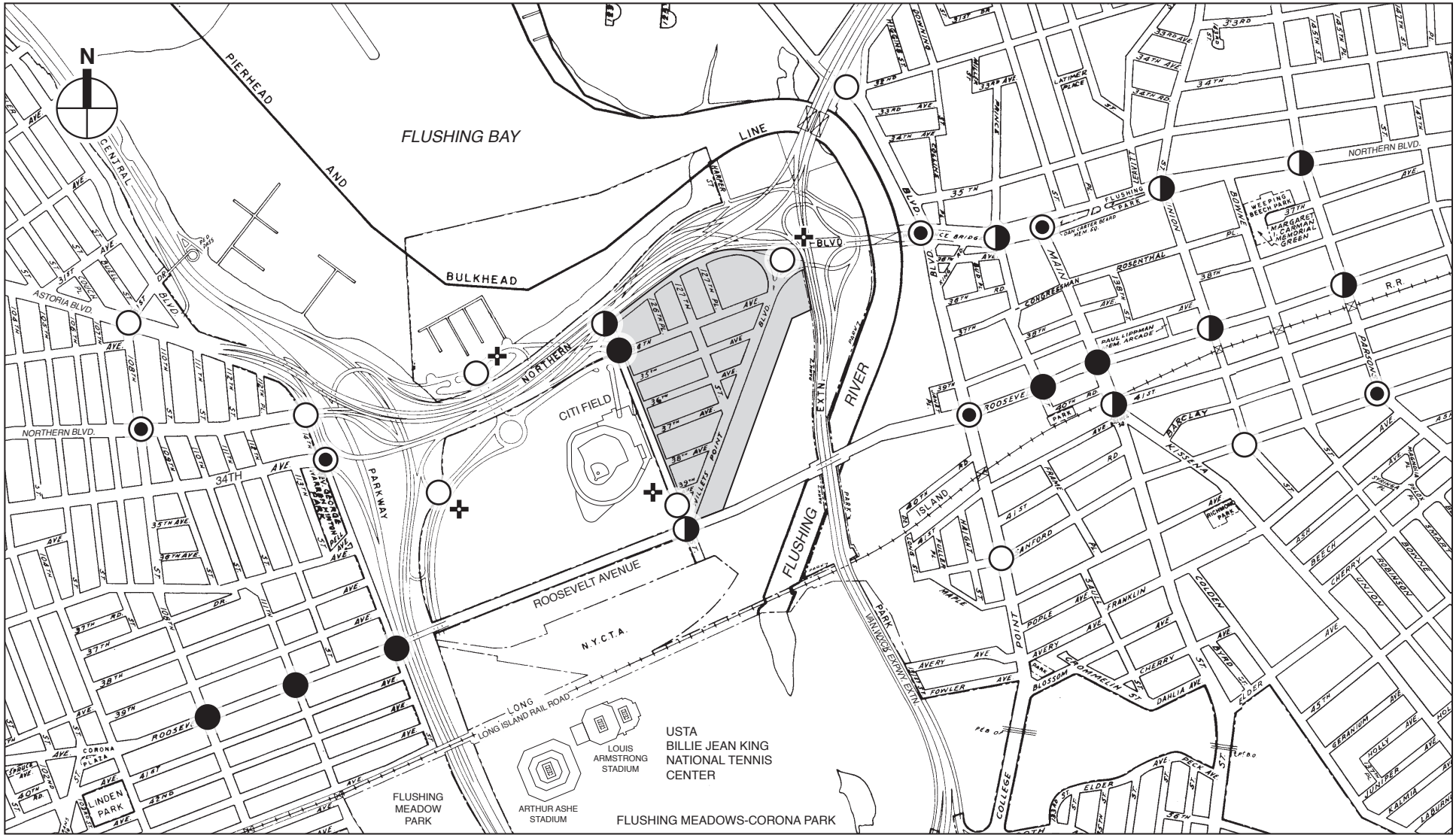
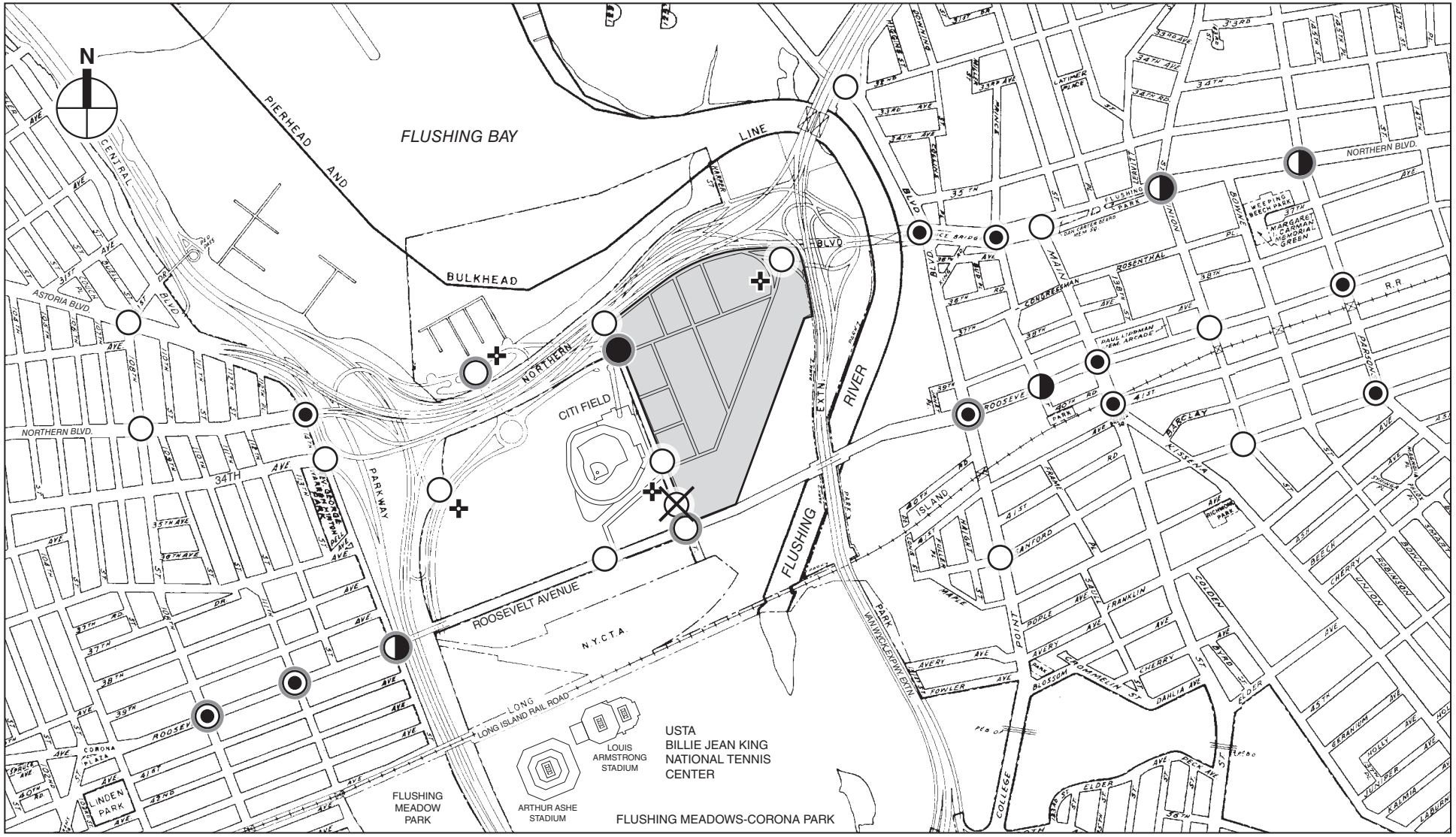


Figure 6

2016 No Build Traffic Levels of Service
Weekday Pre-Game Peak Hour



Willets Point Development District

Unsignalized Intersection

Significant Impacts

LOS A, B, or C

LOS D

LOS E

LOS F

Removed under Build Condition

NOTE: *Overall intersection LOS is shown*

Figure 7

2016 Phase I Build Traffic Levels of Service
Weekday Non-Game AM Peak Hour

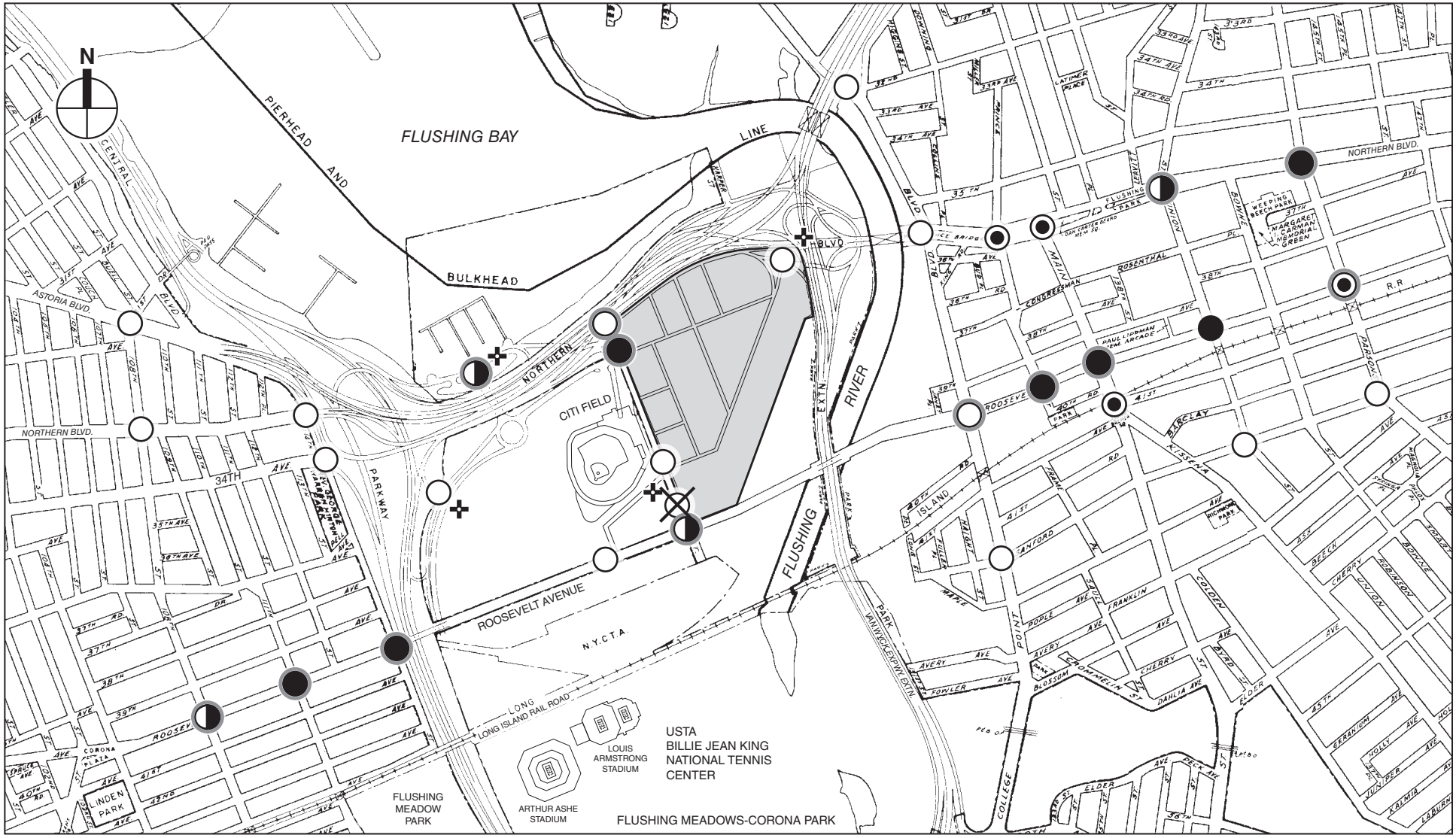
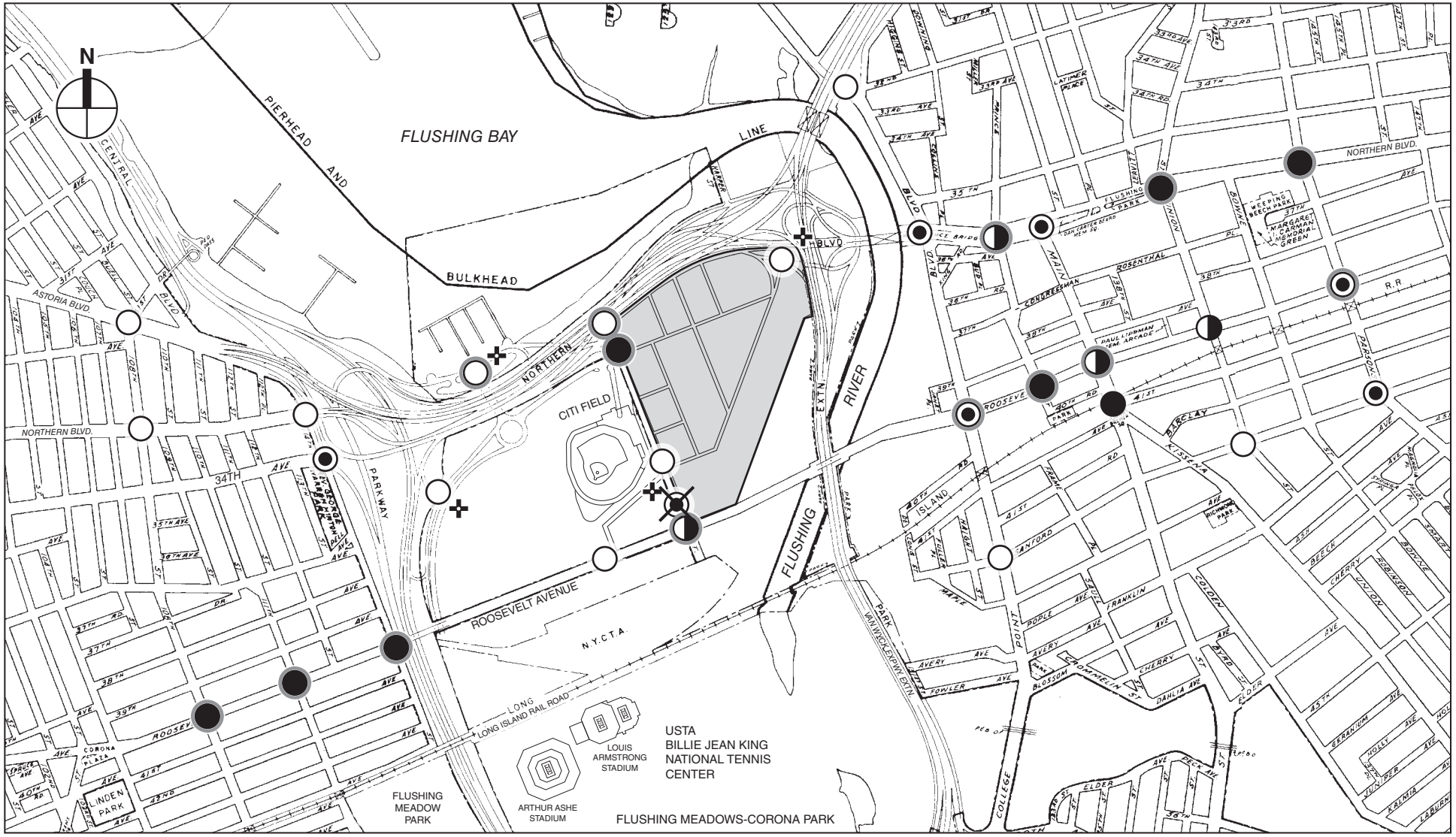


Figure 8

2016 Phase I Build Traffic Levels of Service
Weekday Non-Game Midday Peak Hour



Willets Point Development District

Unsignalized Intersection

Significant Impacts

LOS A, B, or C

LOS D

LOS E

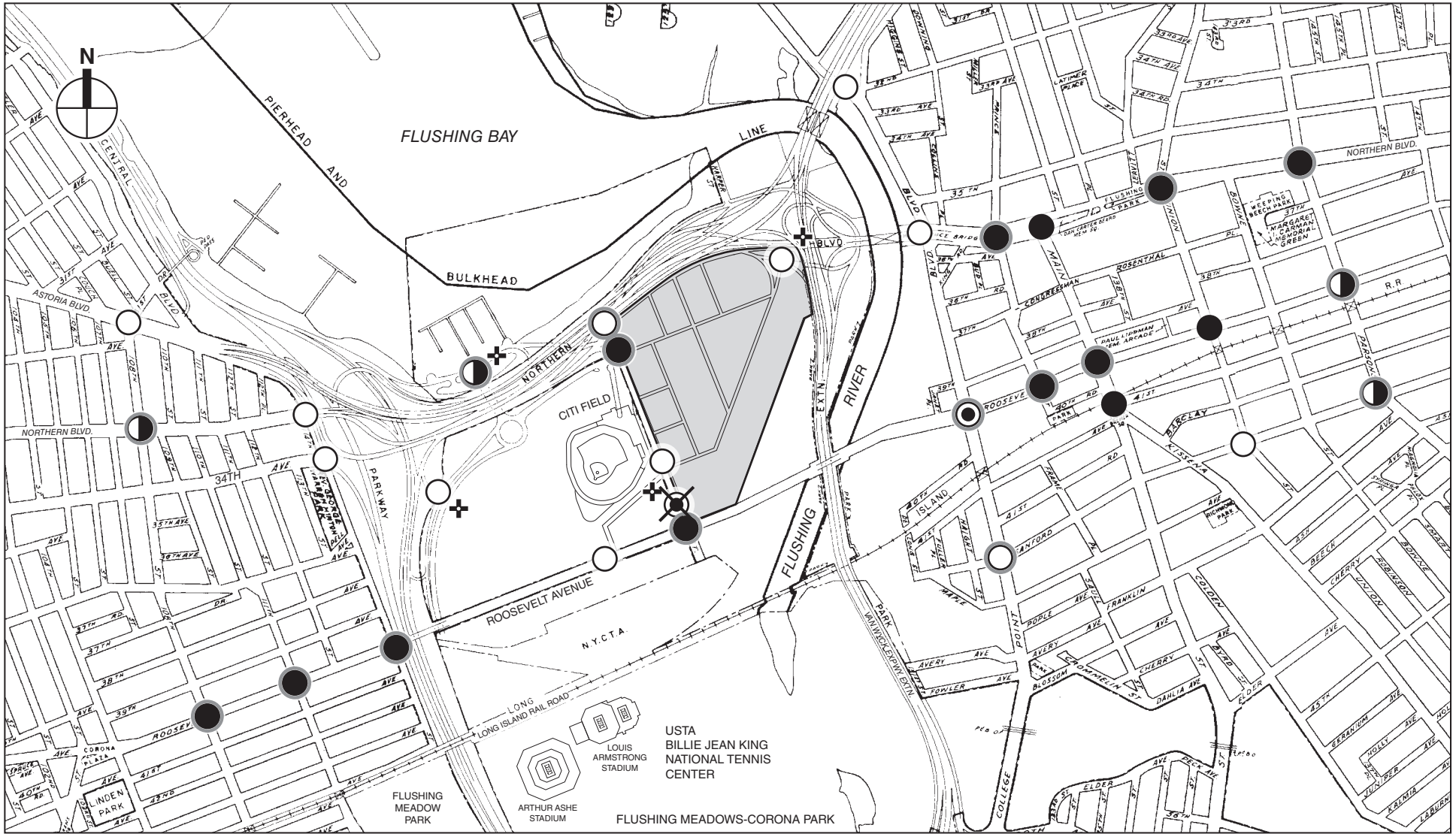
LOS F

Removed under Build Condition

NOTE: *Overall intersection LOS is shown*

Figure 9

2016 Phase I Build Traffic Levels of Service Weekday Non-Game PM Peak Hour



Willets Point Development District

Unsignalized Intersection

Significant Impacts

LOS A, B, or C

LOS D

LOS E

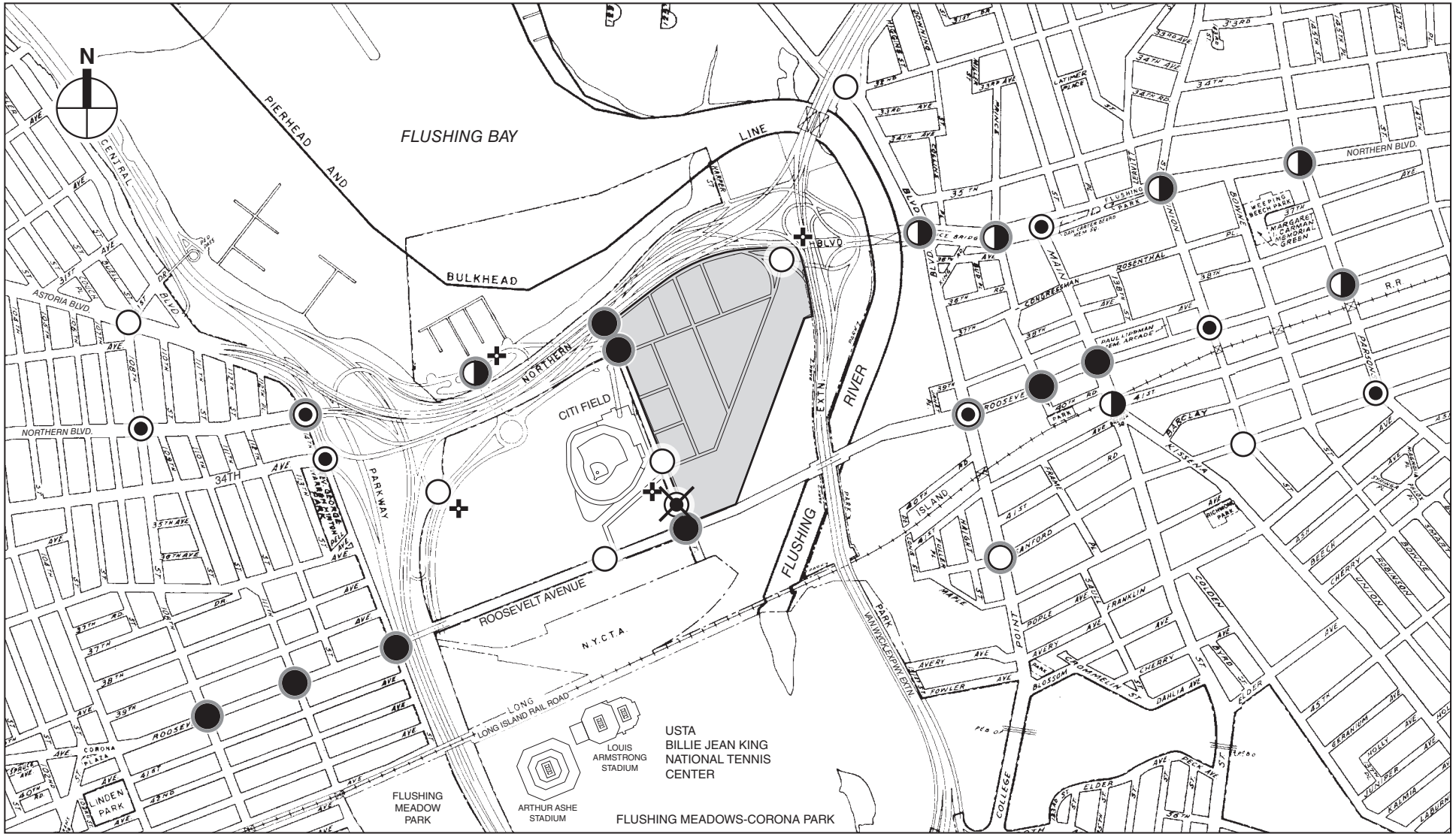
LOS F

Removed under Build Condition

NOTE: *Overall intersection LOS is shown*

Figure 10

2016 Phase I Build Traffic Levels of Service
Saturday Non-Game Midday Peak Hour



Willets Point Development District

Unsignalized Intersection

Significant Impacts

LOS A, B, or C

LOS D

LOS E

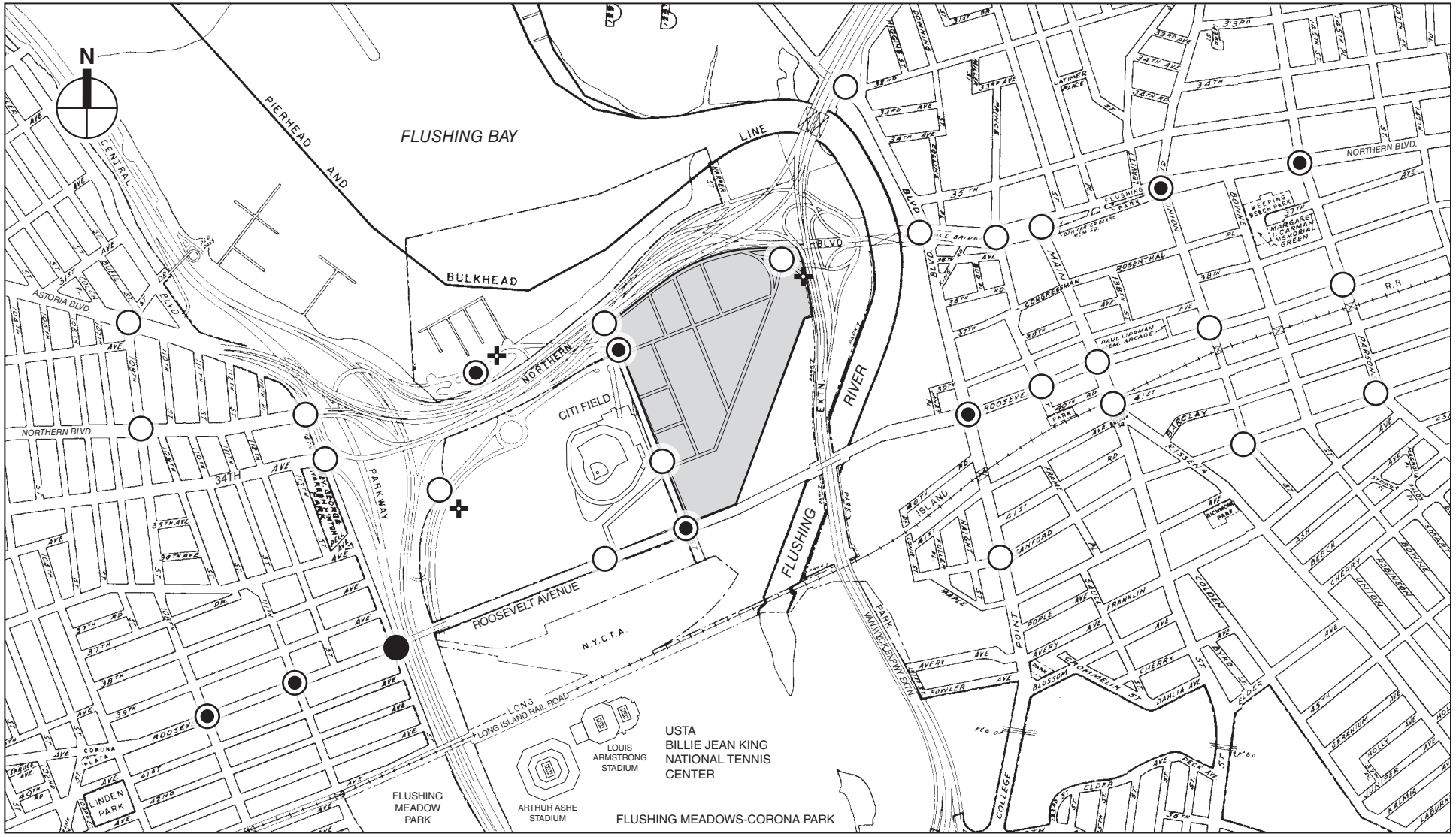
LOS F

Removed under Build Condition

NOTE: *Overall intersection LOS is shown*

Figure 11

2016 Phase I Build Traffic Levels of Service
Weekday Pre-Game Peak Hour



Willets Point Development District

Unsignalized Intersection

No Significant Impact

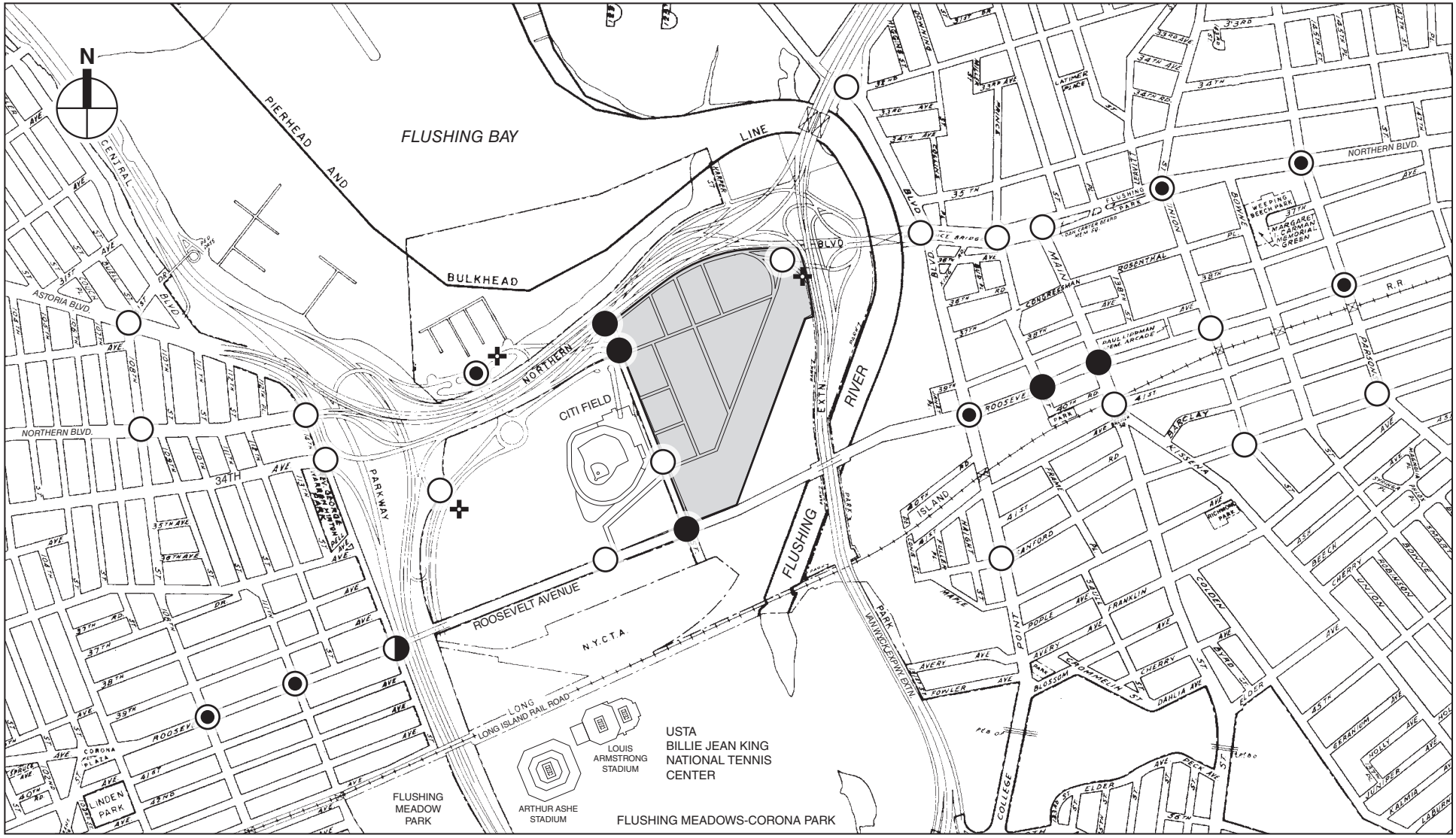
Mitigated Impact

Partially Mitigated Impact

Unmitigated Impact

Figure 12

Traffic Mitigation Overview
Weekday Non-Game AM Peak Hour



Willets Point Development District

Unsignalized Intersection

No Significant Impact

Mitigated Impact

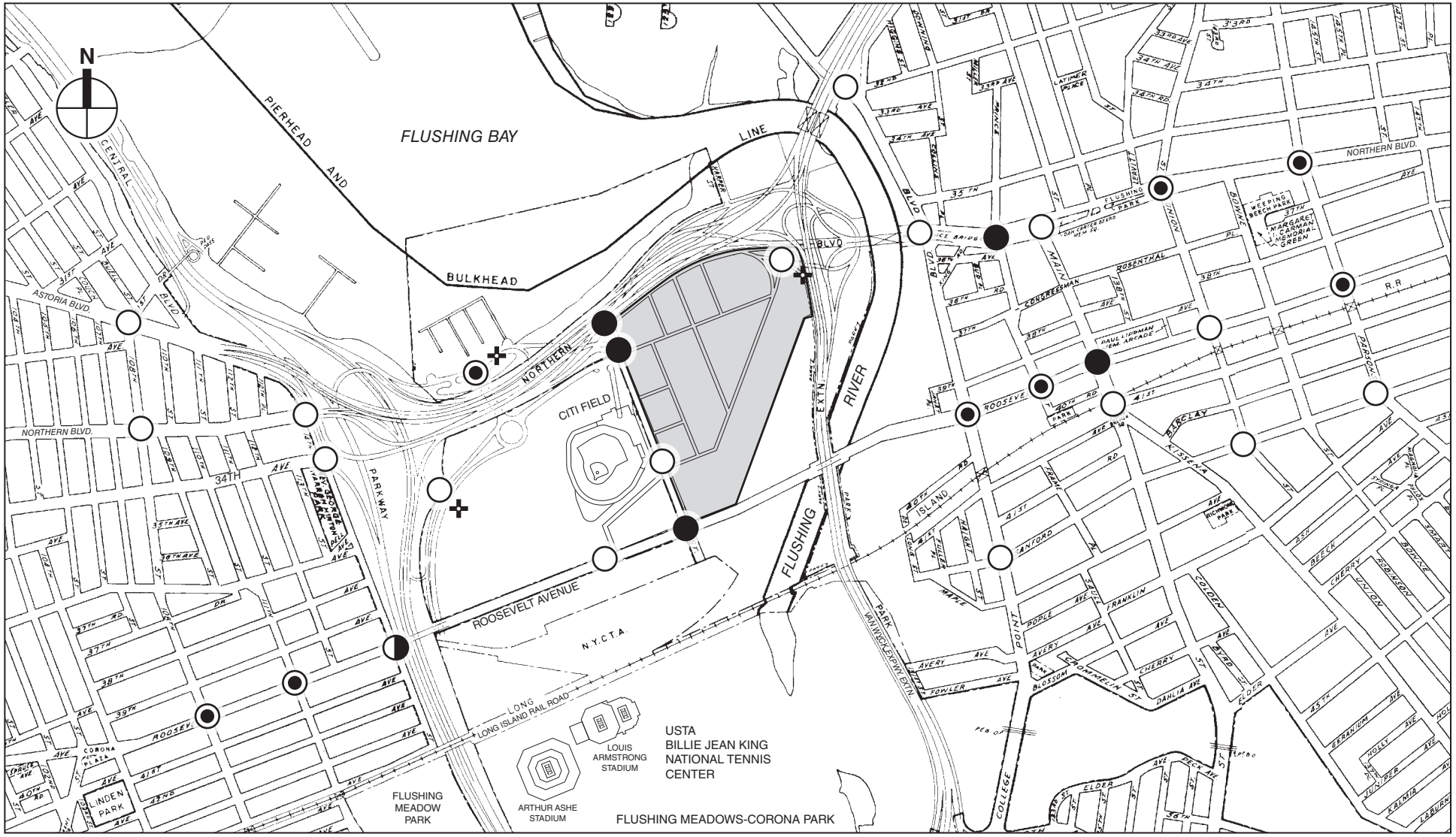
Partially Mitigated Impact

Unmitigated Impact

Figure 13

Traffic Mitigation Overview

Weekday Non-Game Midday Peak Hour



Willets Point Development District

Unsignalized Intersection

No Significant Impact

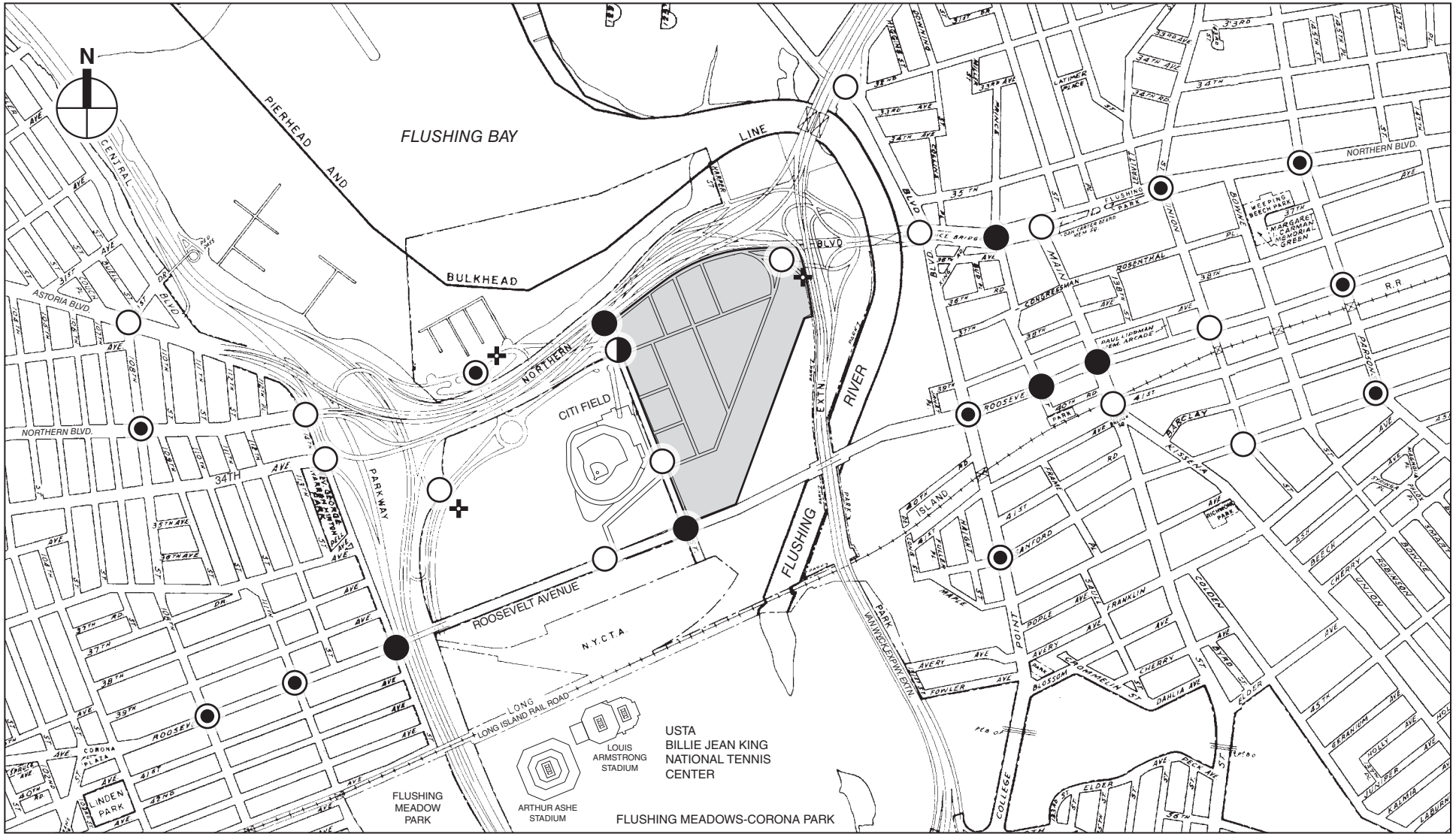
Mitigated Impact

Partially Mitigated Impact

Unmitigated Impact

Figure 14

Traffic Mitigation Overview
Weekday Non-Game PM Peak Hour



Willets Point Development District

Unsignalized Intersection

No Significant Impact

Mitigated Impact

Partially Mitigated Impact

Unmitigated Impact

Figure 15

Traffic Mitigation Overview

Saturday Non-Game Midday Peak Hour

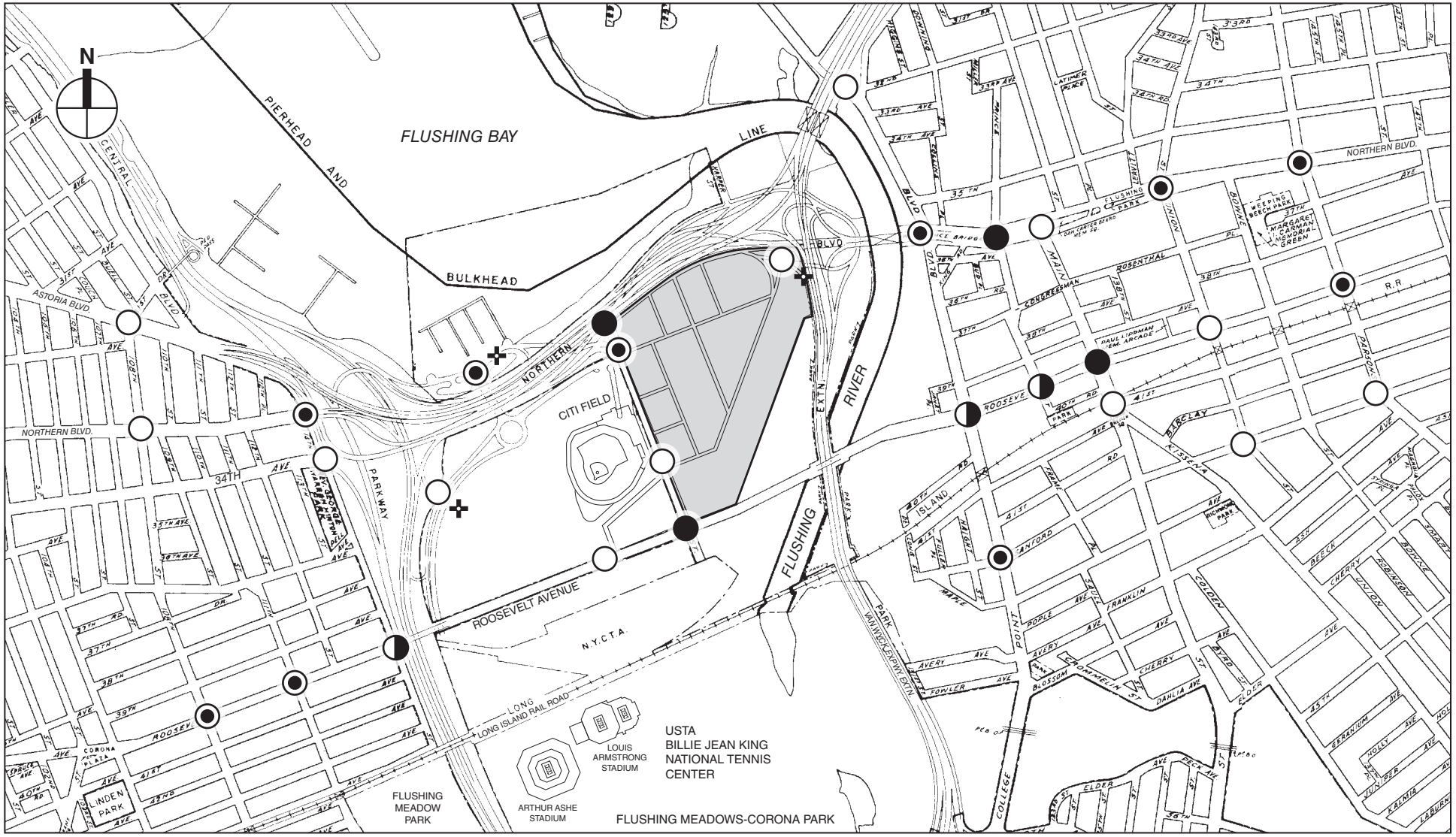


Figure 16
Traffic Mitigation Overview
Weekday Pre-Game Peak Hour

APPENDIX E
GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Appendix E: Greenhouse Gas Emissions and Climate Change

A. INTRODUCTION

There is general consensus in the scientific community that the global climate is changing as a result of increased concentrations of greenhouse gases (GHGs) in the atmosphere. GHGs are those gaseous constituents of the atmosphere, from both natural and anthropogenic (i.e., resulting from the influence of human beings) emission sources, that absorb infrared radiation (heat) emitted from the earth's surface, the atmosphere, and clouds. This property causes the general warming of the earth's atmosphere, or the "greenhouse effect."

As discussed in the *2010 CEQR Technical Manual*, climate change could have wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. Although this is occurring on a global scale, the environmental effects of climate change are also likely to be felt at the local level. Through PlaNYC, the City has established sustainability initiatives and goals for both greatly reducing GHG emissions and adapting to climate change in the City. The goal to reduce citywide GHG emissions 30 percent below 2005 levels by 2030 was codified by Local Law 22 of 2008, known as the New York City Climate Protection Act (the "GHG reduction goal"). See §24-803 of the Administrative Code of the City of New York. Per the 2010 *CEQR Technical Manual*, the City's citywide GHG reduction goal is currently the most appropriate standard by which to analyze a project under CEQR.

Since the completion of the FGEIS, guidance for conducting a GHG emissions analysis under CEQR has been developed and presented in Chapter 18 of the *2010 CEQR Technical Manual*. This appendix discusses the potential for greenhouse gas (GHG) emissions from the Updated Plan and the anticipated development on Lots B and D, as described in the "Procedural and Analytic Framework," discussed in Chapter 2, of the Willets Point Development Plan FGEIS.[1] The development that would occur in the first phase of the Updated Plan would result in lower GHG emissions than the full build-out. Therefore, the analysis presented here is for the full build-out of the Updated Plan in 2022. Specific measures to reduce GHG emissions that are either included in Special District Guidelines or would be considered though the commitment to attain the LEED® for neighborhood development (LEED®-ND) rating are discussed in the context of the GHG reduction goal.

The City is also engaged in several initiatives related to assessing potential local impacts of global climate change and developing strategies to make existing and proposed infrastructure and development more resilient to potential effects of climate change. Planned improvements, which would increase the neighborhood's resilience to current weather conditions and to some of the potential effects of climate change, are described along with additional strategies for

[1] Development on Lots B and D is included in the analysis of greenhouse gas emissions and climate change because this analysis was not included in the FGEIS.

protecting the neighborhood infrastructure, which would be implemented if needed based on future regulations and guidance.

PRINCIPAL CONCLUSIONS

As discussed in the following sections, the building energy use and vehicle use associated with the development in the District would result in approximately 174,000 metric tons of carbon dioxide equivalent (CO_2e) emissions per year. The emissions would be slightly lower under the No Convention Center Scenario. The anticipated development on Lots B and D would result in approximately 10,000 metric tons of CO_2e emissions from building energy consumption and vehicle use.

The proximity of the proposed development to public transportation, its mixed-use, and dense design are all factors that contribute to the energy efficiency. To meet the requirements of LEED®-ND certification and comply with the Special District Guidelines, specific measures would need to be incorporated into the Updated Plan's design, which would decrease the potential GHG emissions from the Plan and further the GHG reduction goal.

As detailed local climate change projections become available and are adopted into the City's infrastructure design criteria, such criteria would be incorporated into the development program. In addition, the City's agreement with the developer would require the preparation of an engineering study prior to commencement of construction that would assess the feasibility of implementing adaptation strategies for climate change impacts into the design of the development program in light of the most current climate change projections. Based on that engineering study, the City would require the developer to implement the adaption strategies that it determines are practicable.

B. GHG EMISSIONS

POLICY, REGULATIONS, STANDARDS, AND BENCHMARKS FOR REDUCING GHG EMISSIONS

As a result of the growing consensus that human activity resulting in GHG emissions has the potential to profoundly impact the earth's climate, countries around the world have undertaken efforts to reduce emissions by implementing both global and local measures addressing energy consumption and production, land use, and other sectors.

In the U.S., The Energy Independence and Security Act of 2007 includes provisions for increasing the production of clean renewable fuels, increasing the efficiency of products, buildings, and vehicles, and for promoting research on greenhouse gas capture and storage options. The American Recovery and Reinvestment Act of 2009 (ARRA, "economic stimulus package") funds actions and research that can lead to reduced GHG emissions.

Although the U.S. has not ratified the international agreements which set emissions targets for GHGs, in a step toward the development of national climate change regulation, in June 2009 the U.S. House of Representatives passed the American Clean Energy and Security Act (ACES, "cap and trade bill"). The proposed legislation would place a national cap on GHG emissions, resulting in the gradual reduction of emission from large sources (accounting for approximately 85 percent of the U.S. GHG emissions) to 17 percent lower than 2005 levels by 2020 and to 83 percent lower than 2005 levels by 2050. The U.S. has committed to this level of emissions reduction (pending

legislation) via the Copenhagen Accord.[1] Although this legislative activity is still in progress, without such legislation EPA would be required to regulate greenhouse gases under the Clean Air Act (CAA), and has already begun preparing regulations. In May 2010, EPA issued a final rule (effective August 2010) to tailor the applicability criteria for stationary sources subject to permitting requirements under the CAA, which sets thresholds for GHG emissions that define when permits are required for new and existing industrial facilities under the New Source Review Prevention of Significant Deterioration (PSD) and title V Operating Permit programs.

In March 2009, the U.S. Department of Transportation (USDOT) set combined corporate average fuel economy (CAFE) standards for light duty vehicles for the 2011 model year (MY). In June 2009, EPA granted California a previously denied waiver to regulate vehicular GHG emissions, allowing 19 other states (representing 40 percent of the light-duty vehicle market, including New York) to adopt the California mobile source GHG emissions standards. In April 2010, EPA and USDOT established the first GHG emission standards and more stringent CAFE standards for MY 2012 through 2016 light-duty vehicles. The agencies also proposed the first-ever program to reduce GHG emissions and improve fuel efficiency of medium- and heavy-duty vehicles, such as large pickup trucks and vans, semi trucks, and vocational vehicles. These regulations will all serve to reduce vehicular GHG emissions over time.

There are also regional, state, and local efforts to reduce GHG emissions. In 2009, New York's Governor David Paterson issued Executive Order No. 24, establishing a goal of reducing GHG emissions in New York by 80 percent, compared to 1990 levels, by 2050, and creating a Climate Action Council tasked with preparing a climate action plan outlining the policies required to attain the GHG reduction goal (that effort is currently under way[2]). The 2009 New York State Energy Plan,[3] outlines the state's energy goals and provides strategies and recommendations for meeting those goals. The state's goals include:

- Implementing programs to reduce electricity use by 15 percent below 2015 forecasts;
- Updating the energy code and enacting product efficiency standards;
- Reducing vehicle miles traveled by expanding alternative transportation options; and
- Implementing programs to increase the proportion of electricity generated from renewable resources to 30 percent of electricity demand by 2015.

New York State has also developed regulations to cap and reduce CO_2 emissions from power plants in order to meet its commitment to the Regional Greenhouse Gas Initiative (RGGI). Under the RGGI agreement, the governors of 10 northeastern and mid-Atlantic states have committed to regulate the amount of CO_2 that power plants are allowed to emit. The regional emissions cap for power plants will be held constant through 2014, and then gradually reduced to 10 percent below the initial cap through 2018. Each power source with a generating capacity of 25 megawatts or more must purchase a tradable CO_2 emission allowance for each ton of CO_2 it emits. The 10 RGGI states and Pennsylvania have also announced plans to reduce GHG emissions from transportation, through the use of biofuel, alternative fuel, and efficient vehicles.

Many local governments worldwide, including New York City, are participating in the Cities for Climate Protection™ (CCP) campaign and have committed to adopting policies and implementing

[1] Todd Stern, U.S. Special Envoy for Climate Change, letter to Mr. Yvo de Boer, UNFCCC, January 28, 2010.

[2] http://www.nyclimatechange.us/

[3] New York State, *2009 New York State Energy Plan*, December 2009.

quantifiable measures to reduce local GHG emissions, improve air quality, and enhance urban livability and sustainability.

As discussed, New York City has a long-term sustainability program, PlaNYC 2030, which includes GHG emissions reduction goals, specific initiatives that can result in emission reductions and initiatives targeted at adaptation to climate change impacts. For certain projects subject to CEQR, an analysis of the project's contribution to GHG emissions is required to determine their consistency with the City's citywide reduction goal, which is currently the most appropriate standard by which to analyze a project under CEQR, and is therefore applied in this section.

In December 2009, the New York City Council enacted four laws addressing energy efficiency in new and existing buildings, in accordance with PlaNYC. The laws require owners of existing buildings larger than 50,000 square feet to conduct energy efficiency audits every 10 years, to optimize building energy efficiency, and to "benchmark" building energy and water consumption annually, using an EPA online tool. By 2025, commercial buildings over 50,000 square feet will also require lighting upgrades, including the installation of sensors and controls, more efficient light fixtures, and the installation of submeters, so that tenants can be provided with information on their electricity consumption. The legislation also creates a local New York City Energy Code, which requires equipment installed during a renovation to meet current efficiency standards.

A number of benchmarks for energy efficiency and green building design have also been developed. For example, the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED®) system is a benchmark for the design, construction, and operation of high performance green buildings that includes energy efficiency components. It is noteworthy that the Willets Point Development Plan is a pilot project under the LEED® for Neighborhood Design (LEED®-ND).

EPA's Energy Star is a voluntary labeling program designed to identify and promote the construction of new energy efficient buildings, facilities, and homes and the purchase of energy efficient appliances, heating and cooling systems, office equipment, lighting, home electronics, and building envelopes.

METHODOLOGY

Although the contribution of any single project to global climate change is infinitesimal, the combined GHG emissions from all human activity are believed to have a severe adverse impact on global climate. While the increments of criteria pollutants and toxic air emissions are assessed in the context of health- based standards and local impacts, there are no established thresholds for assessing the significance of a project's contribution to climate change. Nonetheless, prudent planning dictates that all sectors address GHG emissions by identifying GHG sources and practicable means to reduce them. Therefore, this section presents the total GHG emissions associated with the Updated Plan and the anticipated development on Lots B and D and identifies the measures that would be implemented to limit the emissions from the development within the District.

The analysis of GHG emissions that would be generated by the Updated Plan is based on the methodology presented in the *2010 CEQR Technical Manual*. Emissions of GHGs from the Updated Plan and anticipated development on Lots B and D have been quantified, including off-site emissions associated with use of electricity on-site, on-site emissions from heat and hot

water systems, and emissions from vehicle use attributable to the Updated Plan and Lots B and D. GHG emissions that would result from construction of the development are discussed as well.

Carbon dioxide (CO_2) is the primary pollutant of concern from anthropogenic emission sources and is accounted for in the analysis of emissions from all development projects. GHG emissions for gases other than CO_2 are included where practicable or in cases where they comprise a substantial portion of overall emissions. The various GHG emissions are added together and presented as metric tons of carbon dioxide equivalent (CO_2e) emissions per year, consistent with the New York City annual inventory.[1] CO_2e is a sum that includes the quantity of each GHG weighted by a factor of its effectiveness as a GHG using CO_2 as a reference. This is achieved by multiplying the quantity of each GHG emitted by a factor called global warming potential (GWP). The GWP accounts for the lifetime and the radiative forcing of each gas over a period of 100 years (e.g., CO_2 has a much shorter atmospheric lifetime than SF_6, and therefore has a much lower GWP). The GWPs for the main GHGs discussed are presented in Table E-1.[2]

Table E-1
Global Warming Potential (GWP) for Major GHGs

Compound	100-year Horizon GWP
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310
Hydrofluorocarbons (HFCs)	140 to 11,700
Perfluorocarbons (PFCs)	6,500 to 9,200
Sulfur Hexafluoride (SF_6)	23,900
Sources: IPCC, Climate Change 1995—The Science of Climate Change: Contribution of Working Group I to the Second Assessment of the Intergovernmental Panel on Climate Change, 1996.	

BUILDING OPERATIONAL EMISSIONS

Emissions due to District energy use were developed using carbon intensity factors by building type presented in Table 18-3 of the 2010 *CEQR Technical Manual* and the floor area by use for the Updated plan. The residential building carbon intensity factor was used to calculate the CO_2 emissions associated with the residential floor area, the institutional building carbon intensity factor was used to calculate the CO_2 emissions associated with the school and community facility floor area, and the commercial building carbon intensity factor was used for all other uses. Because LEED®-ND would be required, the emissions were then adjusted to reflect a 10 percent energy efficiency increase in 90 percent of the floor area that would be developed within the District to account for the minimum building energy requirements under the LEED®-ND rating system.

[1] *Inventory of New York City Greenhouse Gas Emissions*, Mayor's Office of Long-Term Planning and Sustainability, PlaNYC2030, September 2010.

[2] Following standard protocol for greenhouse gas inventories, and consistent with New York City's GHG inventory, the GWP factors from IPCC's Second Assessment Report (1996) are used. These GWP factors are specified for use for national GHG inventories under the Kyoto Protocol.

MOBILE SOURCE EMISSIONS

The number of annual weekday and weekend vehicle trips by mode (cars, taxis, and trucks) that would be generated by the Updated Plan was calculated using the transportation planning assumptions developed for the FGEIS. The assumptions used in the calculation include average daily weekday and weekend person trips and delivery trips by proposed use (residential, office, retail, etc), the percentage of vehicle trips by mode, and the average vehicle occupancy. Travel distances shown in Table 18-4 of the 2010 *CEQR Technical Manual* were used in the calculations of annual vehicle miles traveled by cars and trucks. An average one way taxi trip of 7.88 miles, which is based on regional modeling, was provided by the Mayor's Office. The average truck trip was assumed to be 38 miles, as per the *CEQR Technical Manual*. Table 18-6 was used to determine the percentage of vehicle miles traveled by road type and the mobile GHG emissions calculator was used to obtain the total estimated mobile source GHG emissions attributable to the project. Emissions from schoolbus trips that would be generated by the proposed school were also accounted for, using data from the PlaNYC GHG emissions inventory, assuming 8.13 metric tons CO_2e per year per bus and an average of 8.1 busses serving the school.

EPA estimates that the well-to-pump GHG emissions of gasoline and diesel are approximately 22 percent of the tailpipe emissions.[1] Although upstream emissions (emissions associated with production, processing, and transportation) of all fuels can be substantial and are important to consider when comparing the emissions associated with the consumption of different fuels, they are not considered in the analysis for the Updated Plan and anticipated development on Lots B and D. Accounting for tailpipe emissions but not well-to-pump emissions is in accordance with the 2010 *CEQR Technical Manual* guidance and the methodology used in developing the New York City GHG inventory, which is the basis of the GHG reduction goal.

The projected annual vehicle miles traveled, forming the basis for the GHG emissions calculations from mobile sources, are presented in Table E-2.

Table E-2
Annual Vehicle Miles Traveled (miles per year)

	Updated Plan	No Convention Center Scenario	Anticipated Development on Lots B and D
Car	37,324,140	36,448,526	9,597,004
Taxi	2,305,546	1,918,937	641,298
Truck	23,110,612	20,875,148	2,195,211

CONSTRUCTION EMISSIONS

Emissions associated with construction have not been estimated explicitly, but other similar analyses have shown that construction emissions (both direct and emissions embedded in the production of materials, including on-site construction equipment, delivery trucks, and upstream emissions from the production of steel, rebar, aluminum, and cement used for construction) are

[1] Environmental Protection Agency, *MOVES2004 Energy and Emission Inputs*, Draft Report, EPA420-P-05-003, March 2005.

equivalent to the total emissions from the operation of the project over approximately 5 to 10 years.

EMISSIONS FROM SOLID WASTE MANAGEMENT

The Updated Plan would not fundamentally change the City's solid waste management system. Therefore, as per the 2010 *CEQR Technical Manual*, the GHG emissions from solid waste generation, transportation, treatment, and disposal are not quantified.

PROJECTED GHG EMISSIONS FROM THE UPDATED PLAN

A summary of GHG emissions by emission source type, along with total annual emissions from the Updated Plan, the No Convention Center Scenario, and the anticipated development on Lots B and D, is presented in Table E-3. Note that much of these emissions would be associated with similar activity outside of the District. For example, if buildings were to be constructed elsewhere to accommodate the same number of people as the Updated Plan, the emissions from the use of electricity, energy for heating and hot water, and vehicle use could equal or exceed those of the Updated Plan, depending on their location, access to transit, building type, and energy efficiency measures.

Table E-3
Summary of Annual GHG Emissions 2022
(metric tons CO_2e)

Emissions Source	Updated Plan	No Convention Center Scenario	Anticipated Development on Lots B and D
Building Operations	64,049	63,144	4,380
Mobile	110,235	104,500	5,845
TOTAL	*174,284*	*167,644*	*10,226*

As presented above, the estimated energy-related emissions are conservatively high since default rates for city-wide energy consumption by existing buildings from the *CEQR Technical Manual* were applied; new buildings would likely have lower energy demand. It is important to note that the operational emissions from building energy use include on-site emissions from fuel consumption as well as emissions associated with the production and delivery of the electricity to be used on site. To attain the LEED®-ND rating, the District would have to meet an energy efficiency requirement that exceeds code by 10 percent in 90 percent of the floor area that would be developed within the District. The operations emissions presented in Table E-3 for the Updated Plan and the No Convention Center Scenario account for the energy efficiency requirement under LEED®-ND.

The Updated Plan would limit the emissions associated with electricity consumption and heating through energy-efficient design, and reduce emissions associated with transportation because of the available alternatives to driving.

ELEMENTS OF THE UPDATED PLAN THAT WOULD REDUCE GHG EMISSIONS

As discussed in Chapter 1, "Project Description" of the FGEIS, the Willets Point Development Plan would include a number of sustainable design features and has been accepted as a pilot Leadership in Energy and Environmental Design for Neighborhood Development (LEED®-ND) project by the United States Green Building Council (USGBC). The Updated Plan would include the same sustainable design features and the same commitment to LEED®-ND. The City

would require any future development in the District to follow the Special District guidelines and achieve LEED®-ND certification. The dense, mixed-use development and reuse of developed land with access to transit and existing roadways are consistent with sustainable land use planning and smart growth strategies to reduce the carbon footprint of new development. In addition, the proposed school would be built according to the New York City Green Schools Guide, published by the New York City School Construction Authority, which guides the sustainable design, construction, and operation of new schools, modernization projects, and school renovations in New York City. The Green Schools Guide and Rating System include strategies that reduce energy and water use, and require the use of recycled content, recycled materials, and regional materials in construction.

The following discussion outlines features of the Updated Plan, measures that would be required by Special District guidelines or implemented for LEED®-ND certification that would most directly reduce GHG emissions, addressing the PlaNYC goals as outlined in the *CEQR Technical Manual*:

BUILD EFFICIENT BUILDINGS

- 90 percent of the floor area developed will exceed energy code requirements by at least 10 percent.
- Orientation of towers to create favorable conditions for use of passive and active solar energy strategies.

Additional measures that would decrease GHG emissions and may be considered in meeting the LEED®-ND rating include:

- Infrastructure energy efficiency.

USE CLEAN POWER

Measures that would decrease GHG emissions and may be considered in meeting the LEED®-ND rating include:

- On-site renewable energy sources; and
- District heating and cooling.

TRANSIT-ORIENTED DEVELOPMENT AND SUSTAINABLE TRANSPORTATION

The proximity of the District to transit and the diversity of uses proposed would reduce automobile dependence, and therefore GHG emissions from travel. The dense development and reuse of developed land with access to transit and existing roadways are consistent with sustainable land use planning and smart growth strategies to reduce the carbon footprint of new development. In addition, the Updated Plan would feature:

- Parking provisions that encourage car sharing;
- A network of bike lanes and availability of indoor bicycle parking; and
- Walkable streets and street tree planting.

REDUCE CONSTRUCTION OPERATION EMISSIONS

As described in the FGEIS, construction will include an extensive diesel reduction program including diesel particle filters for large construction engines and other measures. These

measures will reduce particulate matter emissions; while particulate matter is not included in the list of standard greenhouse gasses ('Kyoto gases'), recent studies have shown that black carbon—a constituent of particulate matter—may play an important role in climate change.

USE BUILDING MATERIALS WITH LOW CARBON INTENSITY

In meeting the LEED® ND rating the use of recycled content in infrastructure would be considered. In addition, for individual buildings within the District to achieve a LEED® rating, a number of GHG reducing strategies would be considered, including:

- The use of materials with recycled content;
- The use of regional materials; and
- The use of certified wood.

CONCLUSIONS

The potential GHG emissions associated with the Updated Plan are projected to be approximately 174,000 metric tons of CO_2e. The No Convention Center Scenario GHG emissions would be approximately 168,000 metric tons of CO_2e. The emissions from the Anticipated Development on Lots B and D would be approximately 10,000 metric tons of CO_2e.

Measures for reducing GHG emissions that are included in the Special District text, or would be considered for the Updated Plan to achieve the LEED®-ND rating that the City would mandate, have been identified. Overall, the site location, the dense, mixed-use design, the commitments to achieve energy efficiency, and other measures incorporated in the Plan would result in lower GHG emissions than would otherwise be achieved by similar residential and commercial uses, and thus would be consistent with the GHG reduction goal.

C. ADAPTATION TO CLIMATE CHANGE

Currently, an assessment of climate change is not routinely recommended by CEQR or the Mayor's Office of Environmental Coordination for projects in general. However, because of the unique characteristics of the District, including its location in a floodplain, a discussion of early integration of climate change consideration was included in the FGEIS and strategies to increase climate resilience and adaptive management were discussed. Since this discussion of climate change was included in the FGEIS, updated information relevant to that discussion is provided below.

DEVELOPMENT OF POLICY TO IMPROVE CLIMATE CHANGE RESILIENCE

In recognition of the important role that the federal government has to play to address adaptation to climate change, a federal executive order signed October 5, 2009 charged the Interagency Climate Change Adaptation Task Force, composed of representatives from more than 20 federal agencies, with recommending policies and practices that can reinforce a national climate change adaptation strategy. A recent report by the Task Force included recommendations to build resilience to climate change in communities by integrating adaptation considerations into national programs that affect communities, facilitating the incorporation of climate change risks into insurance mechanisms, and

addressing additional cross-cutting issues, such as strengthening resilience of coastal, ocean, and Great Lakes communities.[1]

In New York State, the Sea Level Rise Task Force was created to assess potential impacts to the state's coastlines from rising seas and recommend protective and adaptive measures. The Task Force has prepared a final report of its findings and recommendations.[2] The recommendations are to provide more protective or enforced standards for coastal development, wetlands protection, shoreline armoring, and post-storm recovery; to implement adaptive measures for habitats; integrate climate change adaptation strategies into state environmental plans; and amend local and state regulations or statutes to respond to climate change. The Task Force also recommended the formal adoption of projections of sea level rise. The New York State Climate Action Plan (CAP) will also include strategies for adapting to climate change. The CAP Interim Report identified a number of policy options and actions that could increase the climate change resilience of natural systems, the built environment, and key economic sectors—focusing on agriculture, vulnerable coastal zones, ecosystems, water resources, energy infrastructure, public health, telecommunications and information infrastructure, and transportation.[3]

In New York City, the Climate Change Adaptation Task Force is tasked with securing the city's critical infrastructure against rising seas, higher temperatures, and fluctuating water supplies projected to result from climate change. The Task Force is composed of over 35 New York City and State agencies, public authorities, and companies that operate, regulate, or maintain critical infrastructure in New York City. To assist the task force, the New York City Panel on Climate Change (NPCC), has recently prepared a set of climate change projections for the New York City region and has suggested approaches to create an effective adaptation program for critical infrastructure.[4] The NPCC includes leading climatologists, sea-level rise specialists, adaptation experts, and engineers, as well as representatives from the insurance and legal sectors. The climate change projections include a summary of previously published baseline and projected climate conditions throughout the 21st century including heat waves and cold events, intense precipitation and droughts, sea level rise, and coastal storm levels and frequency. The approaches suggested for the City to create a city-wide adaptation program include ways to assess risks, prioritize strategies, and examine how standards and regulations may need to be adjusted in response to a changing climate.

The New York City Green Code Task force has also recommended strategies for addressing climate change resilience in buildings and for improving stormwater management.[5]

New York City Department of Environmental Protection is evaluating adaptive strategies for City water and wastewater infrastructure. The City has already developed a *New York City Green*

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[1] The White House Council on Environmental Quality, Progress Report of the Interagency Climate Change Adaptation Task Force: Recommended Actions in Support of a National climate Change Adaptation Strategy, October, 2010.

[2] New York State Sea Level Rise Task Force, *Report to the Legislature,* December 2010.

[3] NYSERDA, New York State Climate Action Plan Interim Report, November, 2010.

[4] New York City Panel on Climate Change 2010 Report, *Climate Change Adaptation in New York City: Building a Risk Management Response*, Annals of the New York Academy of Sciences, May 2010.

[5] New York City Green Codes Task Force, *Recommendations to New York City Building Code*, February 2010.

Infrastructure Plan[1], and a *Sustainable Stormwater Management Plan*[2]. Many of the strategies discussed in these plans would improve the City's resilience to climate change.

Overall, strategies and guidelines for addressing the effects of climate change are rapidly being developed on all levels of government. However, there are currently no specific requirements or accepted recommendations for development projects in New York City.

Currently, standards and a framework for analysis of the effects of climate change on a proposed project have not been established, and the 2010 *CEQR Technical Manual* does not recommend assessment at this time due to the lack of accepted recommendations for projects. While qualitative guidance on addressing the effect of climate change is in the process of being developed at the national, state, and local levels, no specific requirements for development projects are available at this time. It is anticipated that climate change considerations will be incorporated into state and local laws prior to the redevelopment of the District and that any future development would be constructed to meet or exceed the codes in effect at the time of construction. Therefore, climate change considerations and measures that would be implemented in the District to increase climate resilience are qualitatively discussed.

RESILIANCE TO CLIMATE CHANGE

Given the District's location within the 100-year floodplain, the potential effects of global climate change on the proposed Plan have been considered, as discussed in the FGEIS. The current 100-year floodplain is currently the only regulatory standard relating to elevation of new development. Under the proposed Plan, the District would be raised above the floodplain, reducing the District's vulnerability to storm surges as compared to existing conditions. The City is working with the Federal Emergency Management Agency (FEMA) to revise the Flood Insurance Rate Maps (FIRMs) for the City and has begun to collect new highly-accurate Light Detection and Ranging (LiDAR) data which would serve as the base for new FIRMs. To achieve the LEED® rating, the District would have to comply with all LEED®-ND prerequisites, including Floodplain Avoidance (Smart Location & Linkage, Prerequisite 6). Therefore, subsequent development within the District will reflect any changes to the floodplain elevations. Furthermore, the developer would be required to submit to the City, prior to the placement of fill, an assessment of the appropriate grade for the District in light of all available information concerning potential sea level and other changes due to climate change. If appropriate and if warranted by data available at that time, the City would have the authority to require an increase in the proposed grade of the District at that time.

The New York City Green Codes Task Force has recommended nine measures to increase the climate resilience of buildings. Some of the recommendations call for further study, while others could serve as the basis for revisions to building code requirements. Notably, one recommendation was to develop flood maps that reflect projected sea-level rise and increases in coastal flooding through 2080 and to require new developments susceptible to future 100-year floods to meet the same standards as buildings in the current 100-year flood zone.[3] The District would incorporate the most recent building code requirements available at the time of construction and consider any prudent guidance and information available.

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[1] New York City, New York City Green Infrastructure Plan, September 2010.

[2] New York City, Sustainable Stormwater Management Plan, December 2008.

[3] Green Codes Task Force, February 2010.

In addition, as described in FGEIS Chapter 14, "Infrastructure", the Plan would include a number of features, in addition to the requirements of the building code and current Department of Environmental Protection (DEP) drainage standards, designed to absorb or retain stormwater and reduce the potential for flooding. These features would form part of a site stormwater management plan that would be reviewed by DEP in light of its developing understanding of the effects of climate change on infrastructure. ✷

APPENDIX F
NOISE

Appendix F: Noise

As described in the "Noise" section of the Technical Memorandum, a number of locations within the District would require noise attenuation in order to avoid impacts from ambient noise. In order to avoid these impacts, an (E) designation would be mapped on these sites.

There are four levels of required noise attenuation depending upon the ambient noise levels: 31 dBA, 35 dBA, 36 dBA, and 37 dBA. The text for the (E) designation for sites requiring 31 dBA is as follows:

> **"In order to ensure an acceptable interior noise environment, future residential uses must provide a closed window condition with a minimum of 31 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA, and future commercial uses must provide a closed window condition with a minimum of 26 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 50 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning sleeves or HUD approved fans."**

For sites requiring 35 dBA noise attenuation, the following (E) designation noise text would apply:

> **"In order to ensure an acceptable interior noise environment, future residential uses must provide a closed window condition with a minimum of 35 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA, and future commercial uses must provide a closed window condition with a minimum of 30 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 50 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning sleeves or HUD approved fans."**

For sites requiring 36 dBA noise attenuation, the following (E) designation noise text would apply:

> **"In order to ensure an acceptable interior noise environment, future residential uses must provide a closed window condition with a** minimum **of 36 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA, and future commercial uses must provide a closed window condition with a minimum of 31 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 50 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning sleeves or HUD approved fans."**

For sites requiring 37 dBA noise attenuation, the following (E) designation noise text would apply:

> **"In order to ensure an acceptable interior noise environment, future residential uses must provide a closed window condition with a minimum of 37 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA, and future commercial uses must provide a closed window condition with a minimum of 32 dBA window/wall attenuation on all façades in order to maintain an** interior **noise level of 50 dBA. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning sleeves or HUD approved fans."**

With the attenuation measures specified above, the proposed plan would not result in any significant adverse noise impacts, and would meet CEQR guidelines. The (E) designations for these sites affected by ambient noise are presented in Table F-1.

Table F-1
Noise Attenuation (E) Designations

Block	Lot	Governing Noise Site	Minimum Required Attenuation[1]
1820	1	4,5	35, 37 on north façade
1820	6	4	37
1820	9	6,4	31, 37 on North façade
1820	18	4	37
1820	34	6	31
1820	108	6,4	31, 37 on North façade
1821	1	4	37
1821	6	4	37
1821	16	6	31
1821	25	6	31
1821	27	6	31
1821	35	6	31
1822	1	5	35
1822	5	6	31
1822	7	6	31
1822	17	6	31
1822	21	6	31
1822	23	6	31
1822	28	6	31
1822	33	6	31
1822	55	6	31
1822	58	6	31
1823	1	5	37
1823	3	6	31
1823	5	6	31
1823	7	6	31
1823	12	6	31
1823	14	6	31
1823	19	6	31
1823	20	6	31
1823	21	6	31
1823	23	6	31
1823	26	6	31
1823	28	6	31
1823	33	6	31
1823	40	6	31

Table F-1 (cont'd)
Noise Attenuation (E) Designations

Block	Lot	Governing Noise Site	Minimum Required Attenuation
1823	44	6	31
1823	47	6	31
1823	52	6	31, 37^2 on north facade
1823	55	6	31, 37^2 on north façade
1823	58	6	31, 37^2 on north façade
1823	59	6	31, 37^2 on north façade
1823	60	5	35, 37^2 on north facade
1824	1	6,5	35, 37^2 on east façade
1824	12	6	31
1824	19	6	31
1824	21	6	31
1824	26	6	31
1824	28	6	31
1824	33	6	31
1824	38	6	31
1824	40	6	31
1824	45	6	31
1824	53	5	35
1825	1	5	35
1825	19	6	31
1825	21	6	31, 37^2 on east facade
1825	25	6	31
1825	28	6	31
1825	30	6	31
1825	37	6	31
1825	46	6	31
1825	48	6	31
1825	53	6	31
1825	55	6	31, 37^2 on north facade
1825	58	6	31
1826	1	5	35
1826	5	5	35
1826	14	6	31
1826	18	6	31
1826	20	7,6	37^2
1826	31	7	36
1826	35	7	36
1827	1	7	36
1828	1	4	37
1828	4	4	37
1828	8	4	37
1828	11	6	31
1828	13	6	31
1828	17	6	31
1828	21	6	31
1828	23	6	31
1828	29	6	31
1828	34	6	31
1828	37	6	31
1828	39	6	31
1829	19	6,4	31, 37 on North façade
1829	21	4	37
1829	40	6	31
1829	71	6	31
1830	9	6	31

Table F-1 (cont'd)
Noise Attenuation (E) Designations

Block	Lot	Governing Noise Site	Minimum Required Attenuation
1830	10	6	31
1830	21	6	31
1831	1	6	31
1831	10	6	31
1831	35	6	31
1832	1	6	31
1832	10	6	31
1833	103	7	36
1833	111	7	36
1833	117	7	36
1833	120	6	31
1833	141	6	31
1833	143	6	31
1833	151	6	37[2]
1833	155	6	31
1833	158	6	31
1833	165	6	31
1833	166	6	31
1833	168	6	31
1833	170	6	31
1833	172	6	31
1833	177	6	31
1833	179	6	31
1833	180	6	31
1833	186	6	31
1833	188	6	31
1833	192	6	31
1833	197	6	31
1833	199	6	31
1833	201	6	31
1833	203	6	31
1833	212	6	31
1833	215	6	31
1833	230	6	31
1833	300	6	31
1833	425	6	31
1833	1	6,7	31, 36 on South façade

Notes:

[1] Attenuation values shown assume a residential use; commercial uses would require 5 dBA less attenuation.

[2] Due to line of sight between this location and existing industrial uses during the temporary condition between 2016 and 2022, a higher attenuation amount is required.

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