A. INTRODUCTION

In accordance with the 2014 *City Environmental Quality Review* (CEQR) *Technical Manual*, where significant adverse impacts are identified, mitigation measures to reduce or eliminate the impacts to the fullest extent practicable are developed and evaluated. Measures to further mitigate adverse impacts have been evaluated between the DEIS and FEIS. Therefore, the FEIS includes more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Actions.

B. PRINCIPAL CONCLUSIONS

Community Facilities

Public Schools

Under the reasonable worst-case development scenario (RWCDS), 2,925 incremental DU would be developed within CSD 19, Sub-district 2 (compared to the No-Action condition), which would result in significant adverse impacts on elementary and intermediate schools within the sub-district that are projected to occur in year 2024, based on the conceptual construction schedule. To avoid the significant adverse elementary school impact, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 1,308, generating 379 elementary school students, as compared to No- Action conditions. This would represent a decrease of 1,617 DU (55.3 percent) in CSD 19, Sub-district 2. To avoid the identified significant adverse intermediate school impacts in Sub-district 2 of CSD 19, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 1,279, generating 153 intermediate school students, as compared to No-Action conditions. This would represent a decrease of 1,646 DU (56.3 percent) in CSD 19, Sub-district 2. Alternately, based on the RWCDS for the Proposed Actions, an additional 454 elementary school seats and 183 intermediate school seats would be needed in order to reduce the incremental increase in utilization rates to less than the *CEQR Technical Manual* impact threshold of five percent.

The following measures, would mitigate the significant adverse impacts: a) restructuring or reprogramming existing school space under the DOE's control in order to make available more capacity in existing school buildings located within CSD 19, Sub-district 2; b) relocating administrative functions to another site, thereby freeing up space for classrooms; and/or c) creating additional capacity in the area by constructing a new school(s), building additional capacity at existing schools, or leasing additional school space constructed as part of projected development within CSD 19, Sub-district 2. To mitigate the identified elementary and intermediate school impacts resulting from the Proposed Actions, enrollment in CSD 19, Sub-district 2 will be monitored. If a need for additional capacity is identified, DOE will evaluate the appropriate timing and mix of measures, identified above, to address increased school enrollment. In coordination with the New York City School Construction Authority (SCA), if additional school construction is warranted, and if funding is available, it will be identified in the Five-Year Capital Plan that covers the period in which the capacity need would occur (refer to the DOE's letter to the City Planning Commission Chairman dated February 5, 2016, provided in Appendix C, "Agency Correspondence").

The Proposed Actions would not result in a significant adverse impact on CSD 19, Sub-district 1 elementary schools in the 2030 With-Action condition, as 682 elementary school seats would be introduced on projected development site 66 under the RWCDS. However, as the With-Action school is not expected to be completed until the 2020-2021

academic year, the elementary school utilization rate that would occur in 2020 (Q2) would constitute a significant adverse impact, but because the impact would last only until the school's anticipated 2020 (Q3) completion, the impact is considered to be temporary, and no mitigation is warranted.

Child Care Services

To avoid the identified significant adverse child care center impact, the number of affordable DU that could be developed on the projected development sites would have to be reduced to 2,401, a 32 percent (1,137 DU) reduction in the number of affordable units anticipated under the RWCDS. The 2,401 affordable DU would generate 427 children under age six eligible for publicly funded child care and study area child care facilities would operate at capacity with no child care slot shortfall. Alternately, the provision of an additional 203 child care slots would mitigate the significant adverse child care center impact. With 203 additional child care slots, study area child care facilities would operate at capacity, with no child care slot shortfall.

Since the publication of the DEIS, possible mitigation measures for this significant adverse impact on publicly funded child care centers were further explored in consultation with the New York City Administration for Children's Services (ACS).

As noted in Chapter 4 of both the DEIS and this FEIS, in the discussion of the indirect effects on publicly funded child care centers, several factors could limit the number of children in need of publicly funded child care slots in ACS-contracted child care facilities. The projected increase in demand for child care slots could be offset by private day care facilities and day care centers outside of the study area, which are not included in this analysis – some parents may choose day care providers that are closer to their workplace rather than their home. Additionally, the City's new universal Pre-Kindergarten program has greatly expanded the number of free Pre-K seats available for 4-5 year olds, which seats are not accounted for in this analysis. Families might choose to enroll their children in Pre-K rather than in day care, reducing the demand for child care seats.

In addition, the increased demand for child care slots could be met through expanded capacity. The Department of Housing Preservation and Development (HPD) is expected to subsidize the development of a significant number of new mixed-use buildings in the proposed Enhanced Commercial Districts. These districts require non-residential ground floor uses in any new development, thus expanding the amount of available commercial and community facility space in the neighborhood. These spaces could be occupied by retail or community facility uses such as day cares. HPD will work with the New York City Department of Small Business Services (SBS) and other agencies to understand local needs for day care and other community facilities and make appropriate referrals to developers receiving City subsidy. To support local capacity to meet the need for additional day care slots while providing economic opportunity for area residents, SBS will sponsor programs in East New York tailored to the needs of day care operators to help them establish and grow their businesses.

Finally, ACS will monitor the demand and need for additional publicly funded day care services in the area and identify the appropriate measures to meet demand for additional slots.

While the above measures could offset or would serve to at least partially mitigate the identified impact, in the event that the significant adverse impact on publicly funded child care facilities is not completely eliminated, an unavoidable significant adverse impact would result.

Open Space

To avoid the identified significant adverse residential study area open space impact, the number of residents that could be introduced on the projected development sites would have to be reduced to less than 10,748 (or less than approximately 3,614 residential units). This would represent an approximately 44.3 percent reduction in the number of residential units anticipated under the RWCDS. Alternately, in order to avoid a significant adverse open space impact, the Proposed Actions would have to provide approximately 4.93 acres of additional open space (including a minimum of 2.29 acres of passive open space and a minimum of 2.52 acres of active open space) to the study area.

Potential mitigation measures were explored in coordination with the lead agency, DCP, and the New York City Department of Parks and Recreation (DPR) between the DEIS and FEIS. Based on these discussions, the following mitigation measures have been identified. Improvements to study area open space resources would be implemented to add and/or enhance park components that would address the need for increased fitness and recreation opportunities for current and future residents. The scope of improvements to study area open space resources would be contingent upon available funds and the deficiencies or needs specific to the open space resource. New open space would also be provided by making the schoolyards of two area schools (P.S. 677 and P.S. 345) accessible to the public after school hours through the City's Schoolyards to Playgrounds program and creating a publicly accessible playground at the new school to be built as part of the Proposed Actions. These measures, which would substantially increase the usability of and enhance open space resources for the additional population introduced by the Proposed Actions, would partially mitigate the significant adverse open space impact. As a consequence, the Proposed Actions' significant adverse open space impact would not be completely eliminated and, as a result, an unavoidable significant adverse open space impact would occur.

Shadows

As discussed in Chapter 6, "Shadows," and Chapter 7, "Historic and Cultural Resources," the Proposed Actions would result in a significant shadows impact (and shadow-related historic resource impact) on the NYCL-eligible and S/NR-eligible Holy Trinity Russian Orthodox Church. It should be noted that the sites that would cast incremental shadows on this historic resources are potential, rather than a projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

DCP, in consultation with the New York City Landmarks Preservation Commission (LPC) explored between the DEIS and FEIS whether measures to mitigate the identified shadow impact were feasible. It has been determined that there are no feasible or practicable mitigation measures that can be implemented to mitigate this impact, and the Proposed Actions' significant adverse shadows impact on the Holy Trinity Russian Orthodox Church therefore remains unmitigated.

Historic and Cultural Resources

As described in Chapter 7, "Historic and Cultural Resources," the Proposed Actions could result in significant adverse historic resources impacts to one resource that is eligible for S/NR-listing and NYCL-designation. Projected development site 37, which is expected to be developed under RWCDS With-Action conditions, contains the S/NR- and NYCL-eligible Empire State Dairy Building. As the maximum permitted With-Action FAR on site 37 could be constructed without the demolition or enlargement of the Empire State Dairy Building, the structure is not projected to be demolished, either partially or entirely, or substantially altered under the RWCDS. However, the Proposed Actions do not include any measures that would prevent the demolition or alteration of the Empire State Dairy Building.

In the event that the structure was designated as a landmark by the LPC, the significant adverse impact would be fully mitigated. However, as the designation process is subject to LPC approval, and not CPC approval, it cannot be assumed or predicted with any certainty. The possibility of potential designation of this resource was explored, in consultation with the LPC, between the DEIS and FEIS. Specifically, LPC has been in contact with the property owner(s) of the S/NR- and NYCL-eligible Empire State Dairy Building with the intent of potentially designating the property as a NYCL. However, as this process is ongoing, designation of the building by LPC is not certain at this time. Absent LPC's designation of the Empire State Dairy Building, the implementation of measures such as photographically documenting the eligible structure in accordance with the standards of the Historic American Buildings Survey (HABS) could partially mitigate the identified significant adverse direct impact to this historic architectural resource. However, a mechanism to require such measures is not available. Accordingly, this impact

would not be completely eliminated, and, if the Empire State Dairy Building is not designated as a landmark, an unavoidable significant adverse impact on this historic resource would occur.

Transportation

Traffic

As described in Chapter 13, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 47 study area intersections during one or more analyzed peak hours; specifically 59 lane groups at 41 intersections during the weekday AM peak hour, 40 lane groups at 25 intersections during the midday peak hour, 67 lane groups at 39 intersections during the PM peak hour, and 38 lane groups at 26 intersections during the Saturday midday peak hour. Implementation of traffic engineering improvements such as signal timing changes or modifications to curbside parking regulations would provide mitigation for many of the anticipated traffic impacts. Implementation of the recommended traffic engineering improvements is subject to review and approval by DOT. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified.

Table 20-1 shows that significant adverse impacts would be fully mitigated at all but 18 lane groups at 11 intersections during the weekday AM peak hour, 13 lane groups at four intersections during the midday peak hour, 21 lane groups at 11 intersections during the PM peak hour, and ten lane groups at five intersections during the Saturday midday peak hour. Table 20-2 provides a more detailed summary of the intersections and lane groups that would have significant adverse traffic impacts and indicates whether the impacts would be fully mitigated. In total, impacts to one or more approach movements would remain unmitigated in one or more peak hours at 16 intersections.

TABLE 20-1
Summary of Lane Groups/Intersections with Significant Adverse Traffic Impacts

Peak Hour	Lane Groups/ Intersections Analyzed	Lane Groups/ Intersections With No Significant Impacts	Lane Groups/ Intersections With Significant Impacts	Mitigated Lane Groups/ Intersections	Unmitigated Lane Groups/ Intersections
Weekday AM	268/74	209/33	59/41	41/30	18/11
Weekday Midday	268/74	228/49	40/25	27/21	13/4
Weekday PM	272/74	205/35	67/39	46/28	21/11
Saturday Midday	268/74	230/48	38/26	28/21	10/5

Transit

BUS

The Proposed Actions would result in a capacity shortfall of 17 spaces on westbound Q8 service in the PM peak hour. This significant adverse impact to Q8 local bus service could be fully mitigated by the addition of one standard bus in the westbound direction in the PM peak hour. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Pedestrians

Incremental demand from the Proposed Actions would significantly adversely impact a total of two sidewalks, one crosswalk and one corner area in one or more peak hours. Recommended mitigation measures to address these impacts are discussed below. Implementation of these measures would be subject to review and approval by DOT. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified.

TABLE 20-2
Lane Groups With Unmitigated Significant Adverse Traffic Impacts

	Peak Hour			
	Weekday AM	**Weekday Midday**	**Weekday PM**	**Saturday Midday**
Signalized Intersections				
Atlantic Ave & Rockaway Ave	WB-TR	EB-TR, WB-TR	--	--
Atlantic Ave & Eastern Pkwy	WB-T (main)	---	NB-R	---
Atlantic Ave & Pennsylvania Ave	WB-TR, NB-TR, SB-L, SB-TR	EB-L, EB-TR, WB-TR, NB-TR, SB- L, SB-TR	EB-L, EB-LT, WB-TR, NB-TR, SB-L	EB-TR, WB-TR, NB-TR, SB-L
Atlantic Ave & Warwick St	--	--	EB-TR	--
Atlantic Ave & Logan St	SB-LTR	---	SB-LTR	SB-LTR
Broadway & Eastern Pkwy	EB-TR, WB-LT	---	EB-L, EB-TR, WB-LT	---
Fulton St & Pennsylvania Ave	---	---	NB-TR, SB-L	---
Fulton St & Miller Ave	---	---	EB-TR	---
Fulton Street & Logan St	WB-LTR	---	WB-LTR	---
Bushwick Ave/Jamaica Ave & Pennsylvania Ave/Jackie Robinson Pkwy	EB-Jamaica-TR, WB-L, WB-T, NB-L	EB-Bushwick-R, WB-L, WB-T, NB-L	EB-Bushwick-R, WB-L, WB-T, NB-L	WB-L, WB-T, NB-L
Pitkin Ave & Mother Gaston Blvd	WB-LTR	---	---	---
Pitkin Ave & Pennsylvania Ave	WB-LTR	WB-LTR	WB-LTR	WB-LTR
Unsignalized Intersections				
Arlington Ave & Jamaica Ave	---	---	---	NB-LR
Fulton St & Elton St	NB-TR	---	---	---
Glenmore Ave & Miller Ave	WB-LT	--	--	--
Pitkin Ave & Elton St	---	---	NB-LTR	---

Notes:
NB – northbound, SB – southbound, EB – eastbound, WB – westbound
L – left-turn, T – through, R – right-turn, DefL – defacto left-turn

SIDEWALKS

Two of the 79 analyzed sidewalks are expected to be significantly adversely impacted by the Proposed Actions—the north sidewalk on Atlantic Avenue between Logan and Chestnut streets in the weekday midday peak hour and the east sidewalk on Van Siclen Avenue between Pitkin and Glenmore avenues in the PM peak hour. Widening the north sidewalk on Atlantic Avenue between Logan and Chestnut streets by 0.5-foot would fully mitigate the significant adverse impact to this sidewalk in the midday. (It is anticipated that this sidewalk widening would occur in conjunction with the development of adjacent projected development site 66 without the need to alter the existing curb lines.) Removing a tree pit at the most constrained point on the east sidewalk on Van Siclen Avenue between Pitkin and Glenmore avenues would fully mitigate the significant adverse impact to this sidewalk in the PM peak hour. No unmitigated significant adverse sidewalk impacts would remain upon incorporation of the recommended mitigation measures.

CROSSWALKS

One of the 67 analyzed crosswalks would be significantly adversely impacted by the Proposed Actions—the west crosswalk on Atlantic Avenue at Euclid Avenue in the weekday midday peak hour. The transfer of three seconds of green time from the eastbound/westbound traffic signal phase to the northbound/southbound phase as part of the traffic mitigation plan would also fully mitigate this significant adverse cross walk impact. No unmitigated significant adverse crosswalk impacts would remain with implementation of the recommended mitigation measures.

CORNER AREAS

One of the 58 analyzed corner areas would be significantly adversely impacted by the Proposed Actions—the northeast corner at Liberty Avenue at Berriman Street in the weekday AM peak hour. To address this impact, it is proposed to widen one of the adjoining sidewalks by 0.5 feet. (It is anticipated that this sidewalk widening would occur in conjunction with the development of adjacent projected development site 46 without the need to alter the existing curb lines.) No unmitigated significant adverse corner impacts would remain with implementation of the recommended mitigation measure.

Air Quality

As described in Chapter 14, "Air Quality," concentrations of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) related to traffic generated by the Proposed Actions could result in a significant adverse air quality impact at the intersection of Atlantic Avenue and Logan Street. Traffic mitigation measures were developed to reduce congestion and increase speeds along Logan Street which would mitigate these impacts. No unmitigated significant adverse air quality impacts would remain upon incorporation of the mitigation measures.

Noise

Chapter 16, "Noise," concludes that the Proposed Actions would result in a significant adverse noise impact at receptor site 10 on Richmond Street between Fulton Street and Dinsmore Place, with predicted noise level increases of 4.9 dBA at this location.

Traffic mitigation measures were developed to reduce congestion and increase speeds along Logan Street. The traffic mitigation measures would tend to result in lower levels of traffic noise, and consequently, using the methodology described in Chapter 16, "Noise," a mobile source noise analysis was conducted for receptor site 10 with the proposed traffic mitigation measures in place to determine whether the predicted significant adverse impact at this location would be removed or lessened in magnitude with the traffic mitigation measures. At all other receptor sites where significant adverse noise impacts were not predicted to occur in the With-Action condition, noise levels in the With-Action with Traffic Mitigation condition would be expected to experience noise levels equal to or less than those predicted in Chapter 16, "Noise," and additional analyses were not conducted.

Noise levels increases due to traffic mitigation measures are expected to result in smaller noise level increases to the Proposed Actions during all analyzed time periods. The maximum increase in $L_{eq(1)}$ noise levels for the With-Action with Traffic Mitigation condition compared to the No-Action condition for receptor site 10 would be 3.9 dBA during the AM peak hour, which constitutes a significant adverse impact, although with a smaller magnitude than that predicted to occur in the With-Action condition. According to field observations, all of the residences at this location appear to have double-glazed windows, and most of the residences appear to have through-wall air conditioners or window air conditioners (i.e., an alternate means of ventilation). With respect to upgrades at the residential units with double-glazed windows and an alternate means of ventilation, there are no further practical or feasible mitigation measures that would fully or partially mitigate the significant adverse noise impact at these locations. Window air conditioners potentially could be installed at residential units with double-glazed windows and no alternate means of ventilation to provide an alternate means of ventilation, which would partially mitigate the significant adverse noise impact at these locations. With respect to upgrades at the residential units, there are no further practical or feasible mitigation measures that would fully mitigate the significant adverse noise impact at these locations.

Construction

Historic and Cultural Resources

As described in Chapter 18, "Historic and Cultural Resources," development under the Proposed Actions—specifically, on projected development sites 7, 13, 35, 38, 39, 49, and 74 and potential development sites A3, A7, A8,

A14, A18, A25, A40, A41, A50, A65, A70, A82, A86, A87, A95, and A102—could result in inadvertent construction-related damage to 12 NYCL- and/or S/NR-eligible historic resources, as they are located within 90 feet of one or more of the aforementioned projected and potential development sites. If these eligible resources are designated in the future prior to the initiation of construction, the protective measures of New York City Department of Buildings (DOB) Technical Policy and Procedure Notice (TPPN) #10/88 would apply and indirect significant adverse impact from construction would be avoided. Should they remain undesignated, however, the additional protective measures of TPPN #10/88 would not apply, and the potential for significant adverse construction-related impacts would not be mitigated.

In order to make TPPN #10/88 or similar measures applicable to historic resources in the absence of site-specific approval, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement this mitigation. DCP, as lead agency, explored the viability of this and other mitigation measure between DEIS and FEIS and determined that there were no feasible and practical mitigation measures to fully mitigate the identified significant adverse construction-related impact on historic resources.

Noise

Chapter 19, "Construction," concludes that the Proposed Actions would have the potential to result in significant adverse construction noise impacts at several locations throughout the rezoning area. There are no practical or feasible mitigation measures that would fully mitigate the significant adverse construction noise impacts at these locations.

C. COMMUNITY FACILITIES

Public Schools

As discussed in Chapter 4, "Community Facilities and Services," in the future with the Proposed Actions, the elementary and intermediate school enrollment of Sub-district 2 of Community School District (CSD) 19 is projected to exceed the projected capacity based on the conceptual construction schedule for the RWCDS in year 2024. CSD 19, Sub-district 2 elementary schools would increase from a No-Action utilization rate of 98.3 percent to 109.5 percent in the With-Action condition (an 11.2 percentage point increase). In terms of intermediate schools, CSD 19, Sub- district 2 intermediate schools would increase from a No-Action utilization rate of 103.2 percent to 114.6 percent in the With-Action condition (an 11.4 percentage point increase). As CSD 19, Sub-district 2 elementary and intermediate schools would operate over capacity in the future with the Proposed Actions with an increase of five percentage points or more in their collective utilization rates between the No-Action and With-Action conditions, significant adverse impacts to this sub-district would result.

Under the reasonable worst-case development scenario (RWCDS), 2,925 incremental DU would be developed within CSD 19, Sub-district 2 (compared to the No-Action condition). While the Proposed Actions would also result in 170 and 352 incremental DU in Sub-districts 1 and 2 of CSD 23 and 3,045 incremental DU in CSD 19, Sub-district 1, no significant adverse public school impacts would occur in these sub-districts in the 2030 With-Action condition. To avoid the identified significant adverse elementary school impact in Sub-district 2 of CSD 19, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 1,308, generating 379 elementary school students, as compared to No-Action conditions. This would represent a decrease of 1,617 DU (55.3 percent) in CSD 19, Sub-district 2. An increase of 379 elementary school students within Sub-district 2 of CSD 19, would increase the No-Action utilization rates in the sub-district by less than five percentage points and would be below the *CEQR Technical Manual* threshold and, thus, not a significant adverse impact.

To avoid the identified significant adverse intermediate school impacts in Sub-district 2 of CSD 19, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 1,279, generating 153 intermediate school students, as compared to No-Action conditions. This would represent a decrease of 1,646

DU (56.3 percent) in CSD 19, Sub-district 2. The 153 intermediate school students within CSD 19, Sub-district 2 would increase the No-Action utilization rate in the sub-districts by less than five percentage points and would similarly be below the *CEQR Technical Manual* threshold that would be considered a significant adverse impact.

Table 20-3, below, indicates the number of incremental dwelling units within CSD 19, Sub-district 2 that would result in a significant adverse impact requiring mitigation, as well as the number of additional elementary and intermediate school seats that would need to be provided in order to mitigate the identified significant adverse impacts. In accordance with *CEQR Technical Manual* impact criteria, the number of seats needed to mitigate the significant adverse impacts would either: (1) reduce the incremental increase in the sub-district's elementary or intermediate school capacity to less than five percentage points over the No-Action condition; or (2) reduce the With-Action utilization rate to less than 100 percent.

TABLE 20-3
CSD 19, Sub-district 2 Elementary and Intermediate School Impact Thresholds and Mitigation School Seats

Sub-District	Impact Threshold[1]	Mitigation Seats Needed to Fully Mitigate the Significant Adverse Impact
CSD 19, Sub-district 2	1,309 DU (380 students)	454
	1,280 DU (154 students)	183

Notes:
[1] Represents increment over No-Action condition.

As indicated in the table, based on the RWCDS for the Proposed Actions, an additional 454 elementary school seats and 183 intermediate school seats would be needed in order to reduce the incremental utilization increase in CSD 19, Sub-district 2 elementary and intermediate school utilization rates to less than the five percentage point *CEQR Technical Manual* impact threshold.

Measures utilized by the DOE to address increased school enrollments include:

- Restructuring or reprogramming existing school space under the Department of Education's control in order to make available more capacity in existing school buildings located within CSD 19, Sub-district 2;
- Relocating administrative functions to another site, thereby freeing up space for classrooms; and/or
- Creating additional capacity in the area by constructing a new school(s), building additional capacity at existing schools, or leasing additional school space constructed as part of projected development within CSD 19, Sub-district 2.

To mitigate the identified elementary and intermediate school impacts resulting from the Proposed Actions, enrollment in CSD 19, Sub-district 2 will be monitored. If a need for additional capacity is identified, DOE will evaluate the appropriate timing and mix of measures, identified above, to address increased school enrollment. In coordination with the New York City School Construction Authority (SCA), if additional school construction is warranted, and if funding is available, it will be identified in the Five-Year Capital Plan that covers the period in which the capacity need would occur (refer to the DOE's letter to the City Planning Commission Chairman dated February 5, 2016, provided in Appendix C, "Agency Correspondence").

In general, the Proposed Actions would allow for the development of community facility space, including new school facilities, within the project area. It should also be noted that any new school facility would be subject to its own site selection process and separate environmental review.

As also noted in Chapter 4, the Proposed Actions would not result in a significant adverse impact on CSD 19, Sub-district 1 elementary schools in the 2030 With-Action condition, as 682 elementary school seats would be introduced on projected development site 66 under the RWCDS. However, as the With-Action school is not expected to be completed until the 2020-2021 academic year, the elementary school utilization rate that would occur in 2020 (Q2)

would constitute a significant adverse impact, but because the impact would last only until the school's anticipated 2020(Q3) completion, the impact is considered to be temporary, and no mitigation is warranted.

Child Care Services

Under the RWCDS, the Proposed Actions would result in a significant adverse impact on publicly funded child care facilities. The RWCDS for the Proposed Actions are expected to introduce approximately 3,538 low- to moderate-income DU by 2030, which would generate approximately 630 children under the age of six eligible for publicly funded child care programs based on the *CEQR Technical Manual* child care multipliers. With the addition of these children, the combined utilization rate of child care facilities within the two-mile child care study area would increase to 103.4 percent, a 10.6 percentage point increase over the No-Action condition. As discussed in Chapter 4, this significant adverse impact to publicly funded group child care facilities in the study area could occur in year 2020 based on the conceptual construction schedule.

To avoid the identified significant adverse child care center impact, the number of affordable DU that could be developed on the projected development sites would have to be reduced to 2,401, a 32 percent (1,137 DU) reduction in the number of affordable units anticipated under the RWCDS. The 2,401 affordable DU would generate 427 children under age six eligible for publicly funded child care and study area child care facilities would operate at capacity with no child care slot shortfall.

Table 20-4, below, indicates the minimum number of affordable DUs that would result in a significant adverse child care center impact (2,402 affordable DU), as well as the number of additional child care slots that would need to be provided in order to mitigate the identified significant adverse impacts. In accordance with *CEQR Technical Manual* impact criteria, the number of slots needed to mitigate the significant adverse child care center impact would reduce the With-Action utilization rate to 100 percent. As indicated in the table, based on the RWCDS for the Proposed Actions, an additional 203 child care slots would be needed. With 203 additional child care slots, study area child care facilities would operate at capacity, with no child care slot shortfall.

TABLE 20-4
Child Care Center Impact Threshold and Mitigation Child Care Seats

Impact Threshold[1]	Mitigation Child Care Slots Needed to Fully Mitigate the Significant Adverse Impact
2,402 DU (428 child-care eligible children)	203

Notes:
[1] Represents increment over No-Action condition.

Since the publication of the DEIS, possible mitigation measures for this significant adverse impact on publicly funded child care centers were further explored in consultation with the ACS.

As noted in Chapter 4 of both the DEIS and this FEIS, in the discussion of the indirect effects on publicly funded child care centers, several factors could limit the number of children in need of publicly funded child care slots in ACS-contracted child care facilities. Private day care facilities and day care centers outside of the study area are not accounted for in this analysis. Some of the increased child care demand would likely be offset by parents who choose to take their children to day care centers outside of the study area (e.g., closer to parent's workplace). Additionally, the City's new universal Pre-Kindergarten program has greatly expanded the number of free Pre-K seats available for 4-5 year olds, which seats are not accounted for in this analysis. Families might choose to enroll their children in Pre-K rather than in day care, reducing the demand for child care seats.

As residential development occurs, new capacity will be needed to meet the increased demand for child care slots. Enhanced Commercial Districts are being established along major corridors in East New York, and the NYC Department of Housing Preservation and Development (HPD) is expected to subsidize the development of a

significant number of new mixed-use buildings in these districts. These districts require non-residential ground floor uses in any new development, thus expanding the amount of available commercial and community facility space in the neighborhood. These spaces could be occupied by retail or community facility uses such as day cares. HPD will work with the Department of Small Business Services (SBS) and other agencies to understand local needs for day care and other community facilities and make appropriate referrals to developers receiving City subsidy. To support local capacity to meet the need for additional day care slots while providing economic opportunity for area residents, SBS will sponsor programs in East New York tailored to the needs of day care operators to help them establish and grow their businesses.

Finally, ACS will monitor the demand and need for additional publicly funded day care services in the area and identify the appropriate measures to meet demand for additional slots.

While the above measures would offset or serve to at least partially mitigate the identified impact, in the event that the projected demand for child care slots cannot be met, an unavoidable significant adverse impact would result.

D. OPEN SPACE

As discussed in Chapter 5, "Open Space," given the anticipated decrease in the total, active, and passive open space ratios in the residential study area and the fact that open space ratios in the study area would remain below the City guideline ratios, the Proposed Actions would result in a significant adverse indirect impact to the total, passive, and active open space resources in the residential study area. As discussed in Chapter 5, this significant adverse impact to open space in the residential study area could occur in year 2022 based on the conceptual construction schedule.

The Proposed Actions are expected to introduce 19,296 residents to the ½-mile residential study area under the RWCDS. To avoid the identified significant adverse residential study area open space impact, the number of residents that could be introduced on the projected development sites would have to be reduced to less than 10,748 (or less than approximately 3,614 residential units). This would represent an approximately 44.3 percent reduction in the number of residential units anticipated under the RWCDS. Alternately, in order to avoid a significant adverse open space impact, the Proposed Actions would have to provide approximately 4.93 acres of additional open space (including a minimum of 2.29 acres of passive open space and a minimum of 2.52 acres of active open space) to the study area.

The *CEQR Technical Manual* lists potential mitigation measures for open space impacts. These measures include, but are not limited to, creating new open space within the study area; funding for improvements, renovation, or maintenance at existing local parks; or improving existing open spaces to increase their utility or capacity to meet identified open space needs in the area, such as through the provision of additional active open space facilities. Except for the creation of new open space, the other measures noted herein would only partially mitigate a significant adverse open space impact. These potential mitigation measures were explored in coordination with the lead agency, DCP, and DPR and between the DEIS and FEIS.

In order to mitigate the significant adverse impact on open space in the residential study area, several improvements to study area open space resources would be implemented. In addition, the schoolyards at two area schools – P.S. 677 East New York Elementary School of Excellence (housed in the former PS 72 building), and PS 345 Patrolman Robert Bolden – would be made open to the public under the City's Schoolyards to Playground program. Finally, the new school to be built in the rezoning area in connection with the Proposed Actions (projected to occur on Site 66) would include a publicly accessible playground. The goal of these mitigation measures, which are described in more detail below, is to increase the amount of publicly accessible open space in the rezoning area and to add and/or enhance park components that would address the need for increased fitness and recreation opportunities for current and future residents.

Improvements to open space resources in the study area could allow local parks to better serve the existing and future population. As identified in the Open Space analysis, planned improvements to City Line Park, Sperandeo Brothers Playground and Highland Park will enhance the usability of these resources. The handball and basketball

courts and Sperandeo Brothers playground will be repaired. Highland Park Lower Playground, which is within the 1/4 mile study area, will be improved with a reconstruction of the western half of lower playground area, which could include seating areas, efficient circulation, welcoming entrances, improved landscaping/increased planted areas and improvement of safety for children and playground patrons. At City Line Park, an existing deteriorated asphalt surfaced athletic field will be converted into an active recreational area. While the full project scope will be determined at future meetings open to the public, this project could include the addition of a synthetic turf field, a perimeter rubberized surface track, adult fitness equipment, seating areas and expanded landscape plantings. In addition, the design shall provide for an improved pedestrian connection from the project area to the existing comfort station located on Fountain Avenue. These planned improvements will expand the recreational opportunities at existing parks. The scope of potential improvements to other residential study area open resources would be contingent upon available funds and the deficiencies or needs of the specific open space and could serve to further mitigate the identified passive and active open space impact.

In addition, as noted above, the existing schoolyard playgrounds at P.S. 345 Patrolman Robert Bolden, located at 111 Berriman Street, directly south of projected development site 46—Arlington Village, and P.S. 677 East New York Elementary School of Excellence (formerly P.S. 72), located at 605 Shepherd Avenue less than a quarter-mile south of the project area, will be opened to the public during non-school weekday and weekend hours through the Schoolyard to Playground program operated by DOE and DPR. In total, this measure would add an additional 1.5 acres of publicly accessible open space to the primary study area. The goal of this mitigation measure is to increase the amount of publicly accessible open space in the rezoning area and to close a significant 'walk gap' in the rezoning area, by increasing the percentage of existing and future residents within walking distance to a park.

Lastly, as described in Chapters 1 and 4 of this FEIS, the Proposed Actions include the construction of a new school on projected development site 66, the City-owned Dinsmore-Chestnut site. This school site would include at-grade open space accessible to the public. This would provide new open space to the community, in close proximity to an area where significant residential development is projected, on site 66 as well as adjacent site 67. This would add an additional .25 acres of publicly accessible open space to the rezoning area.

The measures described above, which would substantially increase the usability of and enhance open space resources for the additional population introduced by the Proposed Actions, would partially mitigate the significant adverse impact to active and passive open space resources in the residential study area. As a consequence, the Proposed Actions' significant adverse open space impact would not be completely eliminated and, as a result, an unavoidable significant adverse open space impact would occur.

E. SHADOWS

As discussed in Chapter 6, "Shadows," and Chapter 7, "Historic and Cultural Resources," the Proposed Actions would result in a significant shadows impact (and shadow-related historic resource impact) on the NYCL-eligible and S/NR-eligible Holy Trinity Russian Orthodox Church. Under RWCDS With-Action conditions, incremental shadows on sunlight-sensitive features of the Holy Trinity Russian Orthodox Church would occur on all four representative analysis days, with durations ranging from 36 minutes to two hours and 50 minutes; on the March 21, May 6, and June 21 analysis days, shadow coverage would be limited to the lower levels of the church's western and southern façades. On these days, incremental shadows would cover a maximum of two stained glass windows at any one time. On the December 21 analysis day, incremental shadows would reach sunlight-sensitive features on both the clerestory and lower level of the church's western and southern facades. On December 21, incremental shadows would cover parts of anywhere from one to eight stained glass windows. As project-generated incremental shadows would reach a maximum of eight of the church's twenty-two stained glass windows at any one time, incremental shadows would not result in the complete elimination of direct sunlight on all sunlight-sensitive features of this historic resource. However, as these incremental shadows may have the potential to affect the public's enjoyment of this feature, albeit for a brief duration of approximately 36 minutes on March 21, 45 minutes on May 6, 49 total minutes on June 21, and two hours and 50 minutes on December 21, this is being considered a significant adverse shadow impact. It should be noted that the sites that would cast incremental shadows on this historic resources are potential,

rather than a projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

DCP, in consultation with the LPC explored between the DEIS and FEIS whether measures to mitigate the identified shadow impact were feasible. It has been determined that there are no feasible or practicable mitigation measures that can be implemented to mitigate this impact, and the Proposed Actions' significant adverse shadows impact on the Holy Trinity Russian Orthodox Church therefore remains unmitigated.

F. HISTORIC AND CULTURAL RESOURCES

As described in Chapter 7, "Historic and Cultural Resources," the Proposed Actions could result in significant adverse historic resources impacts to one resource that is eligible for S/NR-listing and NYCL-designation. Projected development site 37, which is expected to be developed under RWCDS With-Action conditions, contains the S/NR- and NYCL-eligible Empire State Dairy Building. As the maximum permitted With-Action FAR on site 37 could be constructed without the demolition or enlargement of the Empire State Dairy Building, the structure is not projected to be demolished, either partially or entirely, or substantially altered under the RWCDS. However, the Proposed Actions do not include any measures that would prevent the demolition or alteration of the Empire State Dairy Building.

In the event that the structure was designated as a landmark by the LPC, the significant adverse impact would be fully mitigated. However, as the designation process is subject to LPC approval, and not CPC approval, it cannot be assumed or predicted with any certainty. The possibility of potential designation of this resource was explored, in consultation with the LPC, between the DEIS and FEIS. Specifically, LPC has been in contact with the property owner(s) of the S/NR- and NYCL-eligible Empire State Dairy Building with the intent of potentially designating the property as a NYCL. However, as this process is ongoing, designation of the building by LPC is not certain at this time. Absent LPC's designation of the Empire State Dairy Building, the implementation of measures such as photographically documenting the eligible structure in accordance with the standards of the Historic American Buildings Survey (HABS) could partially mitigate the identified significant adverse direct impact to this historic architectural resource. However, a mechanism to require such measures is not available. Accordingly, this impact would not be completely eliminated, and, if the Empire State Dairy Building is not designated as a landmark, an unavoidable significant adverse impact on this historic resource would occur.

G. TRANSPORTATION

Traffic

As described in Chapter 13, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 47 study area intersections during one or more analyzed peak hours; specifically 59 lane groups at 41 intersections during the weekday AM peak hour, 40 lane groups at 25 intersections during the midday peak hour, 67 lane groups at 39 intersections during the PM peak hour, and 38 lane groups at 26 intersections during the Saturday midday peak hour.

As demonstrated below, most of these impacts could be mitigated through the implementation of traffic engineering improvements, including:

- Installation of a new traffic signal at the intersection of Fulton and Chestnut Streets;
- Modification of traffic signal phasing and/or timing;
- Elimination of on-street parking within 100 feet of intersections to add a limited travel lane, known as "daylighting";

- Channelization and lane designation changes to make more efficient use of available street widths;
- Conversion of Dinsmore Place from two-way to one-way operation; and
- Street widening to provide an additional travel lane at an intersection approach.

The types of mitigation measures proposed herein are standard measures that are routinely identified by the City and considered feasible for implementation. Table 20-5 summarizes the recommended mitigation measures for each of the intersections with significant adverse traffic impacts during the weekday AM, midday and PM and Saturday midday peak hours. Implementation of the recommended traffic engineering improvements is subject to review and approval by DOT. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified. In the absence of the application of mitigation measures, the impacts would remain unmitigated.

As discussed previously in Chapter 13, "Transportation," the With-Action RWCDS includes the development of a 1,000-seat PS/IS school on projected development site 66 bounded by Atlantic Avenue on the south, Dinsmore Place on the north, Chestnut Street on the east, and Logan Street on the west. It is anticipated that pickup and drop-off activity by both autos and school buses would primarily occur along the south side of Dinsmore Place between Richmond and Chestnut Streets, and that new pedestrian trips by students, parents, and staff would be most concentrated along sidewalks and crosswalks at intersections along Dinsmore Place and Fulton Street at Logan, Richmond, and Chestnut Streets. As noted above, conversion of Dinsmore Place from two-way to one-way eastbound operation is recommended as part of the Proposed Actions' traffic mitigation plan. Signalization of the Logan Street/Dinsmore Place intersection is also proposed as a pedestrian safety improvement and is reflected in the analysis of Action-With-Mitigation conditions. New crosswalks would be installed on the Logan Street approaches to Dinsmore Place in conjunction with this signal installation. For analysis purposes a signal timing was developed for the proposed traffic signal based on the timings at upstream and downstream intersections, required pedestrian crossing times, and the need to accommodate future peak period traffic volumes.

Tables 20-6 through 20-9 show the v/c ratios, delays, and levels of service (LOS) for impacted lane groups at each intersection with implementation of these mitigation measures and compares them to No-Action and With-Action conditions for the weekday AM, midday and PM and Saturday midday peak hours, respectively. (The Action-With-Mitigation level of service analyses for all lane groups at each impacted intersection are shown in Table E-6 in Appendix E.) According to *CEQR Technical Manual* criteria, an impact is considered fully mitigated when the resulting LOS degradation under the Action-with-Mitigation condition compared to the No-Action condition is no longer deemed significant following the impact criteria described in Chapter 13, "Transportation." Tables 20-6 through 20-9 show that significant adverse impacts would be fully mitigated at all but 18 lane groups at 11 intersections during the weekday AM peak hour, 13 lane groups at four intersections during the midday peak hour, 21 lane groups at 11 intersections during the PM peak hour, and ten lane groups at five intersections during the Saturday midday peak hour. In total, impacts to one or more approach movements would remain unmitigated in one or more peak hours at 16 intersections. Consequentially, these impacts would constitute unavoidable significant adverse traffic impacts as a result of the Proposed Action (refer to Chapter 22, "Unavoidable Adverse Impacts").

Effects of Pedestrian Mitigation on Traffic Conditions

Proposed pedestrian mitigation measures (discussed later in this chapter) are not expected to affect traffic conditions at any analyzed intersection in any peak hour.

TABLE 20-5
Proposed Traffic Mitigation Measures

Intersection	Signal Phase	No-Action Signal Timing (Seconds) (1)				Proposed Signal Timing (Seconds) (1)				Recommended Mitigation
		AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	
Arlington Avenue &	EB/WB	-	-	-	-	-	-	-	-	Unmitigatable
Jamaica Avenue	NB/SB	-	-	-	-	-	-	-	-	
Atlantic Avenue &	EB-L/WB-L	15	12	15	15	15	12	15	15	- Install "No Standing Anytime" regulation along east curb of NB and west curb of SB approach for 100 feet.
Rockaway Avenue	EB/WB	56	33	56	56	58	33	57	56	- Restripe NB and SB approaches from one 22-foot-wide shared left-through-right lane to one 11-foot-wide left-turn only lane and one 11-foot-wide shared through-right lane.
	NB	13	11	13	13	13	11	13	13	- Transfer 2s of green time from NB/SB to EB/WB in AM and 1s in PM.
	NB/SB	36	34	36	36	34	34	35	36	
Atlantic Avenue &	EB/WB	61	38	61	38	61	39	61	39	- Install "No Standing Anytime" regulation along west curb of SB approach for 100 feet to allow for three effective moving lanes.
Eastern Parkway	PED	7	7	7	7	7	7	7	7	- Transfer 1s of green time from NB/SB to EB/WB in midday and Saturday midday.
	NB/SB	45	38	45	38	45	37	45	37	
	PED	7	7	7	7	7	7	7	7	
Atlantic Avenue &	EB/WB	81	81	81	55	79	79	79	55	- Transfer 2s of green time from EB/WB to NB/SB in AM, midday, and PM.
Georgia Avenue	NB/SB	39	39	39	35	41	41	41	35	
Atlantic Avenue &	EB/WB	52	46	41	31	52	46	41	31	Unmitigatable
Pennsylvania Avenue	EB	15	12	15	12	15	12	15	12	
	NB-L/SB-L	15	13	15	12	15	13	15	12	
	NB/SB	38	49	49	35	38	49	49	35	
Atlantic Avenue &	WB	-	-	-	-	12	14	11	12	- Introduce new WB leading signal phase.
Miller Avenue	EB/WB	81	81	81	59	68	67	67	47	- Transfer 1s of green time from EB/WB to SB in AM and 2s in PM.
	SB	39	39	39	31	40	39	42	31	
Atlantic Avenue &	EB/WB	79	79	79	54	79	79	79	54	- Install "7AM-7PM Except Sunday" regulation along west curb of NB approach for 100 feet to allow for two effective moving lanes.
Schenck Avenue	PED	7	7	7	7	7	7	7	7	
	NB	34	34	34	29	34	34	34	29	
Atlantic Avenue &	EB/WB	64	68	68	42	62	65	68	42	- Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulation along west curb of SB approach for 100 feet to allow for two effective moving lanes.
Warwick Street	WB	15	13	13	13	17	16	14	13	- Transfer 2s of green time from EB/WB to WB in AM and 3s in midday.
	PED	7	7	7	7	7	7	7	7	- Transfer 1s of green time from SB to WB in PM.
	SB	34	32	32	28	34	32	31	28	
Atlantic Avenue &	EB	-	-	-	-	13	13	13	11	- Introduce new EB leading signal phase.
Elton Street	EB/WB	81	81	81	55	68	68	68	44	
	Ped	39	39	39	35	39	39	39	35	
Atlantic Avenue &	EB	-	-	-	-	13	13	13	11	- Introduce new EB leading signal phase.
Highland Place	EB/WB	79	74	79	53	66	61	67	45	- Stripe NB receiving-end and SB approach from an unstriped 2-way 30-foot-wide road with parking along SB approach to one 10-foot-wide SB left-turn only lane, one 10-foot-wide SB left-right turn lane, and one 10-foot-wide NB receiving lane.
	PED	7	7	7	7	7	7	7	7	- Set back SB approach stop bar 45 feet from crosswalk.
	SB	34	39	34	30	34	39	33	27	- Install "No Standing Anytime" regulation along west curb of SB approach and east curb of NB receiving-end for 195 feet.
Atlantic Avenue &	EB/WB	66	67	66	41	66	63	62	42	- Narrow west sidewalk along Logan Street by three feet (from 18 feet to 15 feet) for approximately 160 feet from the intersection with Atlantic Avenue.
Logan Street	NB/SB	54	53	54	49	54	57	58	48	- Restripe SB approach and NB receiving-end from one 15-foot-wide shared SB left-through-right lane and one 15-foot-wide NB receiving lane to one 11-foot-wide SB shared through-right lane, one 11-foot-wide SB left-turn only lane, and one 11-foot-wide NB receiving lane for approximately 150 feet. - Set back SB approach stop bar 45 feet from crosswalk. - Install 'No Standing Anytime" regulation along west curb of SB approach and east curb of NB receiving-end for approximately 160 feet. - Install "No Standing 4PM-7PM Mon-Fri" regulation along south curb of EB approach for 250 feet. - Transfer 4s of green time from EB/WB to NB/SB in midday and PM. - Transfer 1s of green time from NB/SB to EB/WB in Saturday midday.
Atlantic Avenue &	EB/WB	79	79	79	47	76	76	75	47	- Install "No Standing 4PM-7PM Mon-Fri" regulation along east curb of SB approach for 250 feet.
Euclid Avenue	PED	7	7	7	7	7	7	7	7	- Transfer 3s of green time from EB/WB to NB/SB in AM and midday; 4s in PM.
	NB/SB	34	34	34	36	37	37	38	36	
Atlantic Avenue &	WB	13	13	13	13	13	13	16	13	- Transfer 3s of green time from EB/WB to WB in PM.
Crescent Street	EB/WB	68	58	68	46	68	58	64	46	- Transfer 1s of green time from EB/WB to NB/SB in PM.
	NB/SB	39	49	39	31	39	49	40	31	
Atlantic Avenue &	WB	14	11	12	11	14	11	13	11	- Install "No Standing 4PM-7PM Mon-Fri" regulation along south curb of EB approach for 250 feet.
Rockaway Boulevard	EB/WB	62	38	67	38	62	39	66	39	- Transfer 1s of green time from NB/SB to EB/WB in midday and Saturday midday.
	NB/SB	44	41	41	41	44	40	41	40	- Transfer 1s of green time from EB/WB to WB in PM.

This table has been revised for the FEIS.

TABLE 20-5 (continued)
Proposed Traffic Mitigation Measures

Intersection	Signal Phase	No-Action Signal Timing (Seconds) (1)				Proposed Signal Timing (Seconds) (1)				Recommended Mitigation
		AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	
Broadway &	EB/WB	72	54	72	54	72	54	72	55	- Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulation along north curb of WB approach for 100 feet to allow for two effective moving lanes.
Rockaway Avenue/	NB/SB	48	36	48	36	48	36	48	35	- Transfer 1s of green time from NB/SB to EB/WB in Saturday midday.
Cooper Street										
Broadway &	EB/WB	39	30	39	30	39	33	39	33	- Transfer 3s of green time from NB/SB to EB/WB in Midday and Saturday midday.
Eastern Parkway/	NB/SB	63	45	63	45	63	42	63	42	
Hull Street	NB-Hull Street	18	15	18	15	18	15	18	15	
Bushwick Avenue &	EB/WB	75	57	75	57	75	57	74	57	- Restripe WB approach from one 10-foot-wide left-turn only lane and 11-foot-wide shared left-through-right lane to one 10-foot-wide left-turn only lane and one 12-foot-wide shared left-through-right lane.
Eastern Parkway	WB-L/NB-R	34	22	34	22	34	22	35	22	- Transfer 1s of green time from EB/WB to WB-L/NB-R in PM.
	EB/SB-R	11	11	11	11	11	11	11	11	
Dinsmore Place &	WB	-	-	-	-	-	-	-	-	- Install new traffic signal and crosswalks with timing plan shown as a pedestrain safety improvement.
Logan Street	PED	-	-	-	-	35	35	35	35	- Convert Dinsmore Place between Logan Street and Chestnut Street from a two-way (EB/WB) street with parking along north curb (WB-approaches) to a one-way EB street with parking along south curb.
	NB/SB	-	-	-	-	55	55	55	55	- Install "No Standing Anytime" regulations on north curb of entire length of Dinsmore Place between Logan Street and Chestnut Street.
										- Install "No Parking 7AM-4PM School Days, Department of Education" regulation on south curb of Dinsmore Place between Richmond Street and Chestnut Street.
Fulton Street &	EB/WB	60	40	60	40	60	40	58	40	- Transfer 2s of green time from EB/WB to NB/SB in PM.
Van Sinderen Avenue	NB/SB	40	30	40	30	40	30	42	30	
	SB-only (Bus Lane)	20	20	20	20	20	20	20	20	
Fulton Street &	EB	50	42	50	27	47	40	50	27	- Transfer 3s of green time from EB to NB/SB in AM and 2s in midday.
Pennsylvania Avenue	NB/SB	52	60	52	50	55	62	52	50	
	SB	18	18	18	13	18	18	18	13	
Fulton Street &	EB	54	54	54	54	53	54	54	54	- Transfer 1s of green time from EB to SB in AM.
Miller Avenue	SB	36	36	36	36	37	36	36	36	
Fulton Street &	EB	-	-	-	-	-	-	-	-	- Install "No Standing 7AM-7PM Except Sunday" regulation along east curb of NB approach for 150 feet to allow for two effective moving lanes.
Elton Street	NB	-	-	-	-	-	-	-	-	
Fulton Street &	EB	36	36	36	36	36	36	36	37	- Transfer 1s of green time from NB/SB to EB in Saturday midday.
Highland Place	NB/SB	24	24	24	24	24	24	24	23	
Fulton Street &	EB/WB	33	33	33	33	35	34	36	35	- Install "No Standing Anytime" regulation on west curb of SB receiving-end for 150 feet.
Logan Street	NB/SB	27	27	27	27	25	26	24	25	- Install "No Standing Anytime" regulation on east curb of NB approach for 140 feet.
										- Install "No Standing 7AM-7PM Except Sunday" regulation on north curb of WB approach for 100 feet.
										- Restripe SB receiving-end and NB approach from one 15-foot-wide SB receiving lane and one 15-foot-wide NB shared left-through-right lane to one 10-foot-wide SB receiving lane, one 10-foot-wide NB left-turn only lane with 100 feet of storage, and one 10-foot-wide NB shared through-right lane.
										- Set back NB approach stop bar 40 feet from crosswalk.
										- Transfer 2s of green time from NB/SB to EB/WB in AM and Saturday midday; 1s in midday and 3s in PM.
Fulton Street &	EB/WB	-	-	-	-	29	35	32	35	- Install new traffic signal and crosswalks with timing plan shown.
Chestnut Street	NB	-	-	-	-	31	25	28	25	
Fulton Street &	EB/WB	36	36	36	36	34	36	34	36	- Transfer 2s of green time from EB/WB to SB in AM and PM.
Euclid Avenue	SB	24	24	24	24	26	24	26	24	
Glenmore Avenue &	EB/WB	39	39	39	30	39	39	39	30	- Install "No Standing 7AM-10AM Mon-Fri" regultion on south curb of WB approach for 60 feet to allow for two effective moving lanes.
Pennsylvania Avenue	NB/SB	81	81	81	60	81	81	81	60	
Glenmore Avenue &	WB	-	-	-	-	-	-	-	-	Unmitigatable
Miller Avenue	SB	-	-	-	-	-	-	-	-	
Bushwick/Jamaica Aves &	EB-Bushwick/NB	34	36	36	28	34	36	36	28	Unmitigatable
Pennsylvania Avenue/	EB-Jamaica	30	28	31	22	30	28	31	22	
Jackie Robinson Parkway	WB	17	21	17	15	17	21	17	15	
	NB/SB	39	35	36	25	39	35	36	25	
Jamaica Avenue &	EB/WB	30	30	30	30	30	31	27	31	- Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulation on south curb of EB approach for 100 feet.
Highland Place/	NB/SB	30	30	30	30	30	29	33	29	- Transfer 1s of green time from NB/SB to EB/WB in midday and Saturday midday.
Force Tube Avenue										- Transfer 3s of green time from EB/WB to NB/SB in PM.
Jamaica Avenue &	EB/WB	37	37	37	37	37	37	37	37	- Install "No Standing Anytime" regulation on south curb of EB approach for length of block.
Euclid Avenue/	SB/WB-R	23	23	23	23	23	23	23	23	
Cypress Hill Street										

This table has been revised for the FEIS.

TABLE 20-5 (continued)
Proposed Traffic Mitigation Measures

Intersection	Signal Phase	No-Action Signal Timing (Seconds) (1)				Proposed Signal Timing (Seconds) (1)				Recommended Mitigation
		AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	
Liberty Avenue &	EB/WB	39	39	39	30	39	41	41	34	- Install "No Standing 7AM-7PM Mon-Fri" regulation along north curb of WB approach for 100 feet.
Pennsylvania Avenue	NB-L/SB-L	11	11	11	11	11	11	11	11	- Transfer 2s of green time from NB/SB to EB/WB in midday and PM; 4s in Saturday midday.
	NB/SB	70	70	70	49	70	68	68	45	
Liberty Avenue &	EB/WB	78	78	78	59	75	77	76	58	- Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulation along east curb of SB approach for 150 feet to allow for two effective moving lanes.
Miller Avenue	SB	42	42	42	31	45	43	44	32	- Transfer 3s of green time from EB/WB to SB in AM; 1s in midday and Saturday midday; and 2s in PM.
Liberty Avenue &	EB/WB	84	84	84	84	83	84	84	84	- Install "No Standing 7AM-10AM Mon-Fri" regulation along north curb of WB approach for 100 feet.
Schenck Avenue	NB	36	36	36	36	37	36	36	36	- Transfer 1s of green time from EB/WB to NB in AM.
Liberty Avenue &	EB/WB	78	78	78	59	75	78	76	58	- Install "No Standing 7AM-10AM Mon-Fri" regulation along north curb of WB approach for 100 feet.
Warwick Street	SB	42	42	42	31	45	42	44	32	- Transfer 3s of green time from EB/WB to SB in AM; 2s in PM; and 1s in Saturday midday.
Liberty Avenue &	EB/WB	79	79	79	59	79	79	76	59	- Install "No Standing 7AM-10AM Mon-Fri" regulation along north curb of WB approach for 100 feet.
Shepherd Avenue	SB	41	41	41	31	41	41	44	31	- Transfer 3s of green time from EB/WB to SB in PM.
Liberty Avenue &	EB/WB	78	78	78	59	77	78	77	58	- Install "No Standing 7AM-7PM Except Sunday" regulation along west curb of SB approach for 100 feet.
Montauk Avenue	NB/SB	42	42	42	31	43	42	43	32	- Transfer 1s of green time from EB/WB to NB/SB in AM, PM and Saturday midday.
Liberty Avenue &	EB/WB	77	77	77	58	77	77	80	58	- Install "No Standing 7-10AM, 4-7PM Mon-Fri" regulation along north curb of WB approach for 100 feet.
Milford Street	SB	43	43	43	32	43	43	40	32	- Transfer 3s of green time from SB to EB/WB in PM.
Liberty Avenue &	EB/WB	84	84	84	54	83	84	82	55	- Install "No Standing 7-10AM, 4-7PM Mon-Fri" regulation along south curb of EB approach for 200 feet.
Logan Street	NB/SB	36	36	36	36	37	36	38	35	- Install "No Standing Anytime" regulation along west curb of SB approach for 250 feet.. - Set back SB approach and EB approach stop bars 40 feet from crosswalks. - Restripe SB approach and NB receiving-end from one 11-foot-wide SB left-right turn lane with parking and one 11-foot-wide NB receiving lane to one 10-foot-wide SB right-turn only lane with 210 feet of storage, one 10 foot-wide SB left-turn only lane, and one 10 foot-wide NB receiving lane. - Transfer 1s of green time from EB/WB to NB/SB in AM; 2s in PM. - Transfer 1s of green time from NB/SB to EB/WB in Saturday midday.
Liberty Avenue &	EB/WB	57	42	42	36	59	44	46	38	- Transfer 2s of green time from SB to EB/WB in AM, midday and Saturday midday; and 4s in PM.
South Conduit Boulevard	SB	63	78	78	54	61	76	74	52	
Liberty Avenue &	EB/WB	42	42	42	36	42	45	45	38	- Transfer 3s of green time from NB to EB/WB in midday and PM and 2s in Saturday midday.
North Conduit Boulevard	NB	78	78	78	54	78	75	75	52	
Pitkin Avenue &	EB/WB	66	66	66	66	68	66	66	66	- Transfer 2s of green time from NB/SB to EB/WB in AM.
Mother Gaston Boulevard	NB/SB	54	54	54	54	52	54	54	54	
Pitkin Avenue &	EB/WB	39	39	39	30	41	41	42	33	- Install "No Standing Anytime" regulation along west curb of SB approach for 150 feet.
Pennsylvania Avenue	NB/SB	81	81	81	60	79	79	78	57	- Install "No Standing Anytime" regulation along west curb of SB receiving-end for 150 feet. - Install "No Standing Anytime" regulation along south curb of EB approach for 35 feet. - Restripe SB approach from two 11-foot-wide shared left-through-right-lanes with parking to one 10-foot-wide left-turn only lane with 50 feet of storage, one 10-foot-wide through lane and one 11-foot-wide shared through-right lane. - Restripe SB receiving-end and NB approach from two 11-foot-wide receiving lanes with parking and two 11-foot-wide NB approach shared left-through-right lanes with parking to two (one 11-foot-wide and 10-foot-wide) SB receiving lanes, one 10 foot-wide NB left-turn only lane with 50 feet of storage, one 11-foot-wide through lane and one 11-foot-wide shared through-right lane with parking. - Set back EB approach stop bar 35 feet from crosswalk. - Transfer 2s of green time from NB/SB to EB/WB in AM and midday; 3s in PM and Saturday midday.
Pitkin Avenue &	EB/WB	-	-	-	-	-	-	-	-	- Install "No Standing Anytime" regulation for 100 feet along east and west curbs of NB approach to allow for two effective moving lanes.
Elton Street	NB	-	-	-	-	-	-	-	-	
Pitkin Avenue &	EB/WB	50	50	50	33	51	50	50	34	- Transfer 1s of green time from SB to EB/WB in AM and Saturday midday.
South Conduit Boulevard	SB	70	70	70	57	69	70	70	56	
Sutter Avenue &	EB/WB	39	39	39	30	40	39	39	30	- Transfer 1s of green time from NB/SB to EB/WB in AM.
Pennsylvania Avenue	NB/SB	81	81	81	60	80	81	81	60	
Sutter Avenue &	EB/WB	73	55	73	73	72	55	71	72	- Transfer 1s of green time from EB/WB to NB/SB in AM; and 2s in PM
Fountain Avenue	NB/SB	47	35	47	47	48	35	49	48	

Notes : **This table has been revised for the FEIS.**

(1) Signal timings shown indicate green plus yellow (including all red) for each phase.

TABLE 20-6
Action-With-Mitigation Conditions at Impacted Lane Groups – Weekday AM Peak Hour

	Weekday AM Peak Hour No-Action					Weekday AM Peak Hour With-Action					Weekday AM Peak Hour Mitigation				
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Signalized Intersection															
Atlantic Avenue &	WB	L	0.87	52.1	D	WB	L	0.89	57.2	E	WB	L	0.86	50.1	D
Rockaway Avenue	WB	TR	1.08	81.6	F	WB	TR	1.14	103.9	F	WB	TR	1.10	85.1	F
Atlantic Avenue &	WB-Main	T	1.03	64.2	E	WB-Main	T	1.11	91.0	F	WB-Main	T	1.11	91.0	F
Eastern Parkway															
Atlantic Avenue &	NB	LTR	1.14	130.6	F	NB	LTR	1.19	150.4	F	NB	LTR	1.12	122.2	F
Georgia Avenue															
Atlantic Avenue &	WB	TR	1.02	62.7	E	WB	TR	1.15	109.1	F	WB	TR	1.15	109.1	F
Pennsylvania Avenue	NB	TR	1.37	217.9	F	NB	TR	1.44	248.6	F	NB	TR	1.44	248.6	F
	SB	L	0.94	147.1	F	SB	L	1.07	215.9	F	SB	L	1.07	215.9	F
	SB	TR	1.15	123.0	F	SB	TR	1.16	129.8	F	SB	TR	1.16	129.8	F
Atlantic Avenue &	SB	LTR	1.22	161.0	F	SB	LTR	1.32	203.1	F	SB	LTR	1.21	154.9	F
Miller Avenue															
Atlantic Avenue &											NB	L	0.91	75.0	E
Schenck Avenue											NB	TR	1.40	248.8	F
	NB	LTR	1.51	286.6	F	NB	LTR	1.74	390.2	F	NB	LTR		162.8	F
Atlantic Avenue &	WB	L	0.81	58.4	E	WB	L	0.87	68.7	E	WB	L	0.82	60.9	E
Warwick Street											SB	L	1.35	222.9	F
											SB	TR	0.14	36.6	D
	SB	LTR	1.39	237.2	F	SB	LTR	1.45	265.7	F	SB	LTR		205.8	F
Atlantic Avenue &	EB	L	0.56	30.5	C	EB	L	0.79	63.5	E	EB	L	0.45	23.7	C
Elton Street															
Atlantic Avenue &	EB	L	0.67	43.7	D	EB	L	0.92	96.3	F	EB	L	0.47	26.2	C
Highland Place											SB	L	0.74	54.3	D
											SB	R	0.74	59.5	E
	SB	LR	1.02	93.8	F	SB	LR	1.05	103.0	F	SB	LR		56.3	E
Atlantic Avenue &											SB	L	1.42	254.4	F
Logan Street											SB	TR	0.62	33.5	C
	SB	LTR	0.91	61.8	E	SB	LTR	2.06	526.5	F	SB	LTR		138.4	F
Atlantic Avenue &	NB	LR	0.40	41.5	D	NB	LR	0.56	47.1	D	NB	LR	0.49	42.1	D
Euclid Avenue															
Broadway &											WB	LT	0.87	34.7	C
Rockaway Avenue											WB	R	0.08	12.5	B
	WB	LTR	0.85	34.1	C	WB	LTR	1.00	57.8	E	WB	LTR		33.5	C
Broadway &	EB	TR	0.91	70.7	E	EB	TR	0.98	85.2	F	EB	TR	0.98	85.2	F
Eastern Parkway	WB	LT	1.13	126.1	F	WB	LT	1.58	318.2	F	WB	LT	1.58	318.2	F
Bushwick Avenue &	WB	TR	1.09	80.3	F	WB	TR	1.12	92.2	F	WB	TR	1.08	77.8	E
Eastern Parkway															
Fulton Street &	NB	TR	1.11	99.2	F	NB	TR	1.18	127.6	F	NB	TR	1.11	96.8	F
Pennsylvania Avenue															
Fulton Street &	SB	LT	0.92	51.1	D	SB	LT	0.96	58.9	E	SB	LT	0.93	51.9	D
Miller Avenue															
Fulton Street &	WB	LTR	0.80	26.5	C	WB	LTR	1.25	149.5	F	WB	LTR	1.20	121.3	F
Logan Street											NB	L	0.58	25.6	C
											NB	TR	0.97	51.6	D
	NB	LTR	0.96	46.6	D	NB	LTR	1.19	122.8	F	NB	LTR		45.8	D
Fulton Street &	SB	LTR	0.93	46.3	D	SB	LTR	1.03	69.5	E	SB	LTR	0.93	43.1	D
Euclid Avenue															
Glenmore Avenue &											WB	L	0.74	51.1	D
Pennsylvania Avenue											WB	R	1.09	126.9	F
	WB	LR	1.14	133.8	F	WB	LR	1.36	221.3	F	WB	LR		87.8	F
Bushwick /Jamaica Avenue &	EB-Jamaica	TR	1.11	112.4	F	EB-Jamaica	TR	1.14	121.6	F	EB-Jamaica	TR	1.14	121.6	F
Penn. /Jackie Robinson Pkwy	WB	L	1.11	152.8	F	WB	L	1.36	246.1	F	WB	L	1.36	246.1	F
	WB	T	1.11	150.9	F	WB	T	1.35	241.5	F	WB	T	1.35	241.5	F
	NB	L	1.16	142.9	F	NB	L	1.22	166.2	F	NB	L	1.22	166.2	F
Jamaica Avenue &	EB	LTR	1.12	98.2	F	EB	LTR	1.20	128.2	F	EB	LTR	0.93	40.6	D
Highland Pl/Force Tube Ave.															
Jamaica Avenue &	EB	LTR	1.18	111.9	F	EB	LTR	1.53	262.5	F	EB	LTR	1.18	109.6	F
Euclid Av/Cypress Hill Street															
Liberty Avenue &	WB	LTR	0.91	70.5	E	WB	LTR	1.05	103.5	F	WB	LTR	0.86	60.4	E
Pennsylvania Avenue															
Liberty Avenue &											SB	L	0.22	30.1	C
Miller Avenue											SB	TR	0.99	77.1	E
	SB	LTR	0.93	66.7	E	SB	LTR	1.20	151.8	F	SB	LTR		69.9	E
Liberty Avenue &	WB	TR	0.89	29.9	C	WB	TR	1.02	55.8	E	WB	TR	0.85	25.0	C
Schenck Avenue	NB	LTR	0.68	49.1	D	NB	LTR	0.79	55.9	E	NB	LTR	0.76	53.0	D
Liberty Avenue &	WB	LT	0.85	29.1	C	WB	LT	1.04	65.2	E	WB	LT	0.89	34.0	C
Warwick Street	SB	LTR	1.38	227.7	F	SB	LTR	1.47	269.1	F	SB	LTR	1.36	216.5	F
Liberty Avenue &	WB	LT	0.84	28.1	C	WB	LT	0.98	49.4	D	WB	LT	0.81	24.4	C
Shepherd Avenue															
Liberty Avenue &	SB	LR	0.45	37.8	D	SB	LR	0.68	48.3	D	SB	LR	0.52	38.5	D
Montauk Avenue															

This table has been revised for the FEIS.

TABLE 20-6 (continued)
Action-With-Mitigation Conditions at Impacted Lane Groups – Weekday AM Peak Hour

	Weekday AM Peak Hour No-Action					Weekday AM Peak Hour With-Action					Weekday AM Peak Hour Mitigation					
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	
Liberty Avenue & Milford Street	WB	LT	0.82	27.5	C	WB	LT	1.03	65.0	E	WB	LT	0.85	29.2	C	
Liberty Avenue &	EB	LT	0.42	11.7	B	EB	LT	0.99	60.2	E	EB	LT	0.73	21.3	C	
Logan Street	NB	LTR	0.77	54.1	D	NB	LTR	0.83	59.2	E	NB	LTR	0.80	55.8	E	
											SB	L	0.40	44.8	D	
											SB	R	0.66	48.6	D	
	SB	LR	0.52	45.4	D	SB	LR	1.24	185.1	F	SB	LR		47.9	D	
Liberty Avenue & South Conduit Boulevard	WB	L	1.09	111.3	F	WB	L	1.16	137.0	F	WB	L	1.09	110.6	F	
Pitkin Avenue &	EB	LTR	0.89	46.0	D	EB	LTR	0.95	57.8	E	EB	LTR	0.91	48.0	D	
Mother Gaston Boulevard	WB	LTR	0.95	55.7	E	WB	LTR	1.10	96.0	F	WB	LTR	1.06	80.2	F	
Pitkin Avenue &	EB	TR	1.63	339.6	F	EB	TR	1.73	384.6	F	EB	TR	1.60	324.0	F	
Pennsylvania Avenue	WB	LTR	1.35	216.1	F	WB	LTR	2.39	679.2	F	WB	LTR	2.16	576.1	F	
											SB	L	0.73	39.8	D	
											SB	TR	0.66	16.8	B	
	SB	LTR	1.05	63.7	E	SB	LTR	1.17	106.6	F	SB	LTR		18.5	B	
Pitkin Avenue & South Conduit Boulevard	WB	L	0.91	76.2	E	WB	L	0.94	82.2	F	WB	L	0.90	73.0	E	
Sutter Avenue & Pennsylvania Avenue	WB	LTR	1.14	133.8	F	WB	LTR	1.16	140.2	F	WB	LTR	1.12	125.5	F	
Sutter Avenue & Fountain Avenue	NB	L	0.53	40.3	D	NB	L	0.63	47.7	D	NB	L	0.60	44.8	D	
Unsignalized Intersection																
Dinsmore Place & Logan Street (Two-Way Stop Controlled)	WB	LR	0.19	22.7	C	WB	LR	9.50	4440.0	F	--- (Signalized)	---	---	---	---	*
Fulton Street &											NB	T	1.23	191.6	F	
Elton Street											NB	R	0.19	17.0	C	
(Two-Way Stop Controlled)	NB	TR	1.10	135.6	F	NB	TR	1.50	294.2	F	NB	TR		149.4	F	**
Fulton Street & Chestnut Street (Two-Way Stop Controlled)	NB	LTR	1.04	104.1	F	NB	LTR	2.30	628.3	F	NB (Signalized)	LTR	1.15	102.6	F	
Glenmore Avenue & Miller Avenue (All-Way Stop Controlled)	WB	LT	---	52.6	F	WB	LT	---	96.2	F	WB	LT	---	96.2	F	**
Pitkin Avenue &											NB	L	0.06	24.2	C	
Elton Street											NB	TR	0.36	29.9	D	
(Two-Way Stop Controlled)	NB	LTR	0.32	25.0	C	NB	LTR	0.41	31.8	D	NB	LTR		29.1	D	**

EB-eastbound, WB-westbound, NB-northbound, SB-southbound
L-left turn, T-through, R-right turn, DefL-defacto left turn
Shading denotes lane groups with unmitigated impacts.
* Lane group would not be impacted in the future condition with the conversion of Dinsmore Place and installation of a new traffic signal.
** Impact could be mitigated by a new traffic signal; however, signalization is not proposed as future conditions would not satisfy required warrants.

This table has been revised for the FEIS.

TABLE 20-7
Action-With-Mitigation Conditions at Impacted Lane Groups – Weekday Midday Peak Hour

	Weekday Midday Peak Hour No-Action					Weekday Midday Peak Hour With-Action					Weekday Midday Peak Hour Mitigation					
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	
Signalized Intersection																
Atlantic Avenue &	EB	TR	0.92	41.7	D	EB	TR	0.96	46.9	D	EB	TR	0.96	46.9	D	
Rockaway Avenue	WB	TR	1.04	67.2	E	WB	TR	1.08	79.2	E	WB	TR	1.08	79.2	E	
Atlantic Avenue &	WB-Main	T	1.11	89.8	F	WB-Main	T	1.15	106.5	F	WB-Main	T	1.11	91.6	F	
Eastern Parkway																
Atlantic Avenue &	NB	LTR	1.06	105.3	F	NB	T	1.10	118.1	F	NB	LTR	1.04	95.7	F	
Georgia Avenue																
Atlantic Avenue &	EB	L	1.01	113.6	F	EB	L	1.11	188.7	F	EB	L	1.23	188.7	F	
Pennsylvania Avenue	EB	LTR	1.02	62.9	E	EB	LTR	1.00	154.6	E	EB	TR	1.25	154.6	F	
	WB	TR	0.92	49.2	D	WB	TR	1.00	62.4	E	WB	TR	1.00	62.4	E	
	NB	TR	1.33	197.0	F	NB	TR	1.44	245.3	F	NB	TR	1.44	245.3	F	
	SB	L	1.23	187.5	F	SB	L	1.53	290.4	F	SB	L	1.53	290.4	F	
	SB	TR	0.82	41.5	D	SB	TR	0.98	63.2	E	SB	TR	0.98	63.2	E	
Atlantic Avenue &											NB	L	0.73	54.8	D	
Schenck Avenue											NB	TR	0.80	66.5	E	
	NB	LTR	1.10	122.6	F	NB	LTR	1.18	152.7	F	NB	LTR		59.9	E	
Atlantic Avenue &	WB	L	0.80	57.5	D	WB	L	0.88	72.3	E	WB	L	0.79	59.4	E	
Warwick Street																
Atlantic Avenue &	EB	L	0.73	46.8	D	EB	L	0.93	85.6	F	EB	L	0.62	30.7	C	
Highland Place																
Atlantic Avenue &	NB	TR	0.58	31.1	C	NB	TR	0.90	52.7	D	NB	TR	0.83	41.4	D	
Logan Street											SB	L	1.18	155.7	F	
											SB	TR	0.59	30.1	C	
	SB	LTR	1.01	87.6	F	SB	LTR	2.05	522.2	F	SB	LTR		87.7	F	
Atlantic Avenue &	NB	LR	0.41	42.1	D	NB	LR	0.64	52.3	D	NB	LR	0.57	45.9	D	
Euclid Avenue	SB	L	0.47	43.2	D	SB	L	0.60	48.3	D	SB	L	0.55	43.7	D	
Atlantic Avenue &	EB	TR	1.10	85.1	F	EB	TR	1.13	97.5	F	EB	TR	1.10	85.0	F	
Rockaway Boulevard																
Broadway &	EB	TR	0.91	62.4	E	EB	TR	0.99	79.6	E	EB	TR	0.88	54.5	D	
Eastern Parkway	WB	LT	0.69	38.4	D	WB	LT	0.84	50.7	D	WB	LT	0.72	37.6	D	
Fulton Street &	NB	TR	1.01	58.7	E	NB	TR	1.05	72.4	E	NB	TR	1.01	59.7	E	
Pennsylvania Avenue																
Fulton Street &	WB	LTR	0.56	16.2	B	WB	LTR	1.06	78.1	E	WB	LTR	0.92	39.4	D	
Logan Street																
Bushwick /Jamaica Avenue &	EB-Bushwick	R	0.85	55.2	E	EB-Bushwick	R	0.89	59.5	E	EB-Bushwick	R	0.89	59.5	E	
Penn. /Jackie Robinson Pkwy	WB	L	1.13	153.2	F	WB	L	1.20	176.6	F	WB	L	1.20	176.6	F	
	WB	T	1.14	154.3	F	WB	T	1.20	177.3	F	WB	T	1.20	177.3	F	
	NB	L	1.08	117.2	F	NB	L	1.13	132.3	F	NB	L	1.13	132.3	F	
Jamaica Avenue &	EB	LTR	1.12	101.4	F	EB	LTR	1.15	109.2	F	EB	LTR	1.09	68.8	E	
Highland Pl/Force Tube Ave.																
Jamaica Avenue &	EB	LTR	1.00	51.2	D	EB	LTR	1.13	92.3	F	EB	LTR	0.87	26.1	C	
Euclid Av/Cypress Hill Street																
Liberty Avenue &	EB	LTR	0.75	55.8	E	EB	LTR	0.86	68.4	E	EB	LTR	0.79	57.3	E	
Pennsylvania Avenue	WB	LTR	0.96	82.5	F	WB	LTR	1.22	167.0	F	WB	LTR	0.94	71.0	E	
Liberty Avenue &	SB	LTR	0.76	48.5	D	SB	LTR	0.83	54.2	D	SB	LTR	0.81	51.4	D	
Miller Avenue																
Liberty Avenue &	SB	LR	0.25	32.9	C	SB	LR	0.59	45.6	D	SB	LR	0.46	38.7	D	
Montauk Avenue																
Liberty Avenue &											SB	L	0.29	40.5	D	
Logan Street											SB	R	0.51	42.9	D	
	SB	LR	0.40	41.5	D	SB	LR	0.93	84.4	F	SB	LR		42.4	D	
Liberty Avenue &	WB	L	1.21	173.8	F	WB	L	1.33	223.4	F	WB	L	1.19	165.6	F	
South Conduit Boulevard																
Liberty Avenue &	WB	TR	1.04	94.4	F	WB	TR	1.12	119.2	F	WB	TR	1.03	88.7	F	
North Conduit Boulevard																
Pitkin Avenue &	EB	LTR	1.13	132.1	F	EB	LTR	1.21	161.3	F	EB	LTR	1.12	125.8	F	
Pennsylvania Avenue	WB	LTR	0.78	54.1	D	WB	LTR	1.01	94.7	F	WB	LTR	0.93	71.7	E	
											SB	L	0.73	37.5	D	
											SB	TR	0.59	15.4	B	
	SB	LTR	1.05	62.8	E	SB	LTR	1.10	81.2	F	SB	LTR		18.1	B	
Unsignalized Intersection																
Dinsmore Place &	WB	LR	0.15	19.5	C	WB	LR	0.71	171.7	F	---	---	---	---	---	*
Logan Street											(Signalized)					
(Two-Way Stop Controlled)																
Fulton Street &	NB	LTR	0.56	27.9	D	NB	LTR	1.58	322.7	F	NB	LTR	0.87	39.2	D	
Chestnut Street											(Signalized)					
(Two-Way Stop Controlled)																

EB-eastbound, WB-westbound, NB-northbound, SB-southbound
L-left turn, T-through, R-right turn, DefL-defacto left turn
Shading denotes lane groups with unmitigated impacts.
* Lane group would not be impacted in the future condition with the conversion of Dinsmore Place and installation of a new traffic signal.

This table has been revised for the FEIS.

TABLE 20-8
Action-With-Mitigation Conditions at Impacted Lane Groups – Weekday PM Peak Hour

	Weekday PM Peak Hour No-Action					Weekday PM Peak Hour With-Action					Weekday PM Peak Hour Mitigation				
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Signalized Intersection															
Atlantic Avenue & Rockaway Avenue	EB	TR	0.94	43.3	D	EB	TR	0.99	51.9	D	EB	TR	0.97	47.2	D
Atlantic Avenue & Eastern Parkway	NB	R	1.09	111.9	F	NB	R	1.20	150.4	F	NB	R	1.20	150.4	F
Atlantic Avenue & Georgia Avenue	NB	LTR	1.12	124.5	F	NB	LTR	1.17	143.4	F	NB	LTR	1.11	116.8	F
Atlantic Avenue & Pennsylvania Avenue	EB	L	1.26	194.5	F	EB	L	1.35	231.9	F	EB	L	1.35	231.9	F
	EB	LT	1.24	148.3	F	EB	LT	1.34	193.4	F	EB	LT	1.34	193.4	F
	WB	TR	1.12	108.1	F	WB	TR	1.23	152.9	F	WB	TR	1.23	152.9	F
	NB	TR	0.97	61.1	E	NB	TR	1.10	99.0	F	NB	TR	1.10	99.0	F
	SB	L	0.94	84.5	F	SB	L	1.26	175.4	F	SB	L	1.26	175.4	F
Atlantic Avenue & Miller Avenue	WB	DefL	1.76	412.7	F	WB	DefL	3.18	1046.0	F	WB	DefL	1.37	239.9	F
	SB	LTR	1.34	212.3	F	SB	LTR	1.44	252.4	F	SB	LTR	1.32	199.5	F
Atlantic Avenue & Schenck Avenue											NB	L	0.79	59.5	E
											NB	TR	1.29	203.1	F
	NB	LTR	1.26	183.1	F	NB	LTR	1.56	308.7	F	NB	LTR		135.4	F
Atlantic Avenue & Warwick Street	EB	TR	0.94	36.1	D	EB	TR	1.05	61.3	E	EB	TR	1.05	61.3	E
	WB	L	0.99	105.7	F	WB	L	1.02	114.9	F	WB	L	0.96	99.1	F
											SB	LT	1.48	278.6	F
											SB	R	0.19	39.8	D
	SB	LTR	1.46	268.5	F	SB	LTR	1.54	302.8	F	SB	LTR		254.0	F
Atlantic Avenue & Elton Street	EB	L	0.66	36.5	D	EB	L	0.93	85.5	F	EB	L	0.59	27.6	C
	EB	T	0.76	17.4	B	EB	T	1.07	61.3	E	EB	T	0.82	19.7	B
Atlantic Avenue & Highland Place	EB	L	0.76	53.0	D	EB	L	0.93	92.9	F	EB	L	0.53	27.1	C
	EB	T	0.93	29.3	C	EB	T	1.04	54.0	D	EB	T	1.00	41.4	D
											SB	L	1.02	96.4	F
											SB	LR	1.02	108.7	F
	SB	LR	1.19	149.6	F	SB	LR	1.40	237.9	F	SB	LR		101.2	F
Atlantic Avenue & Logan Street	NB	TR	0.53	29.8	C	NB	TR	0.91	51.5	D	NB	TR	0.84	40.7	D
											SB	L	1.52	295.1	F
											SB	TR	0.53	26.9	C
	SB	LTR	0.99	79.5	E	SB	LTR	2.36	658.5	F	SB	LTR		159.5	F
Atlantic Avenue & Euclid Avenue	NB	LR	0.44	42.8	D	NB	LR	0.69	54.7	D	NB	LR	0.60	45.8	D
	SB	L	0.83	61.7	E	SB	L	1.01	95.5	F	SB	L	0.79	53.1	D
	SB	R	0.40	42.0	D	SB	R	0.66	54.3	D	SB	R	0.57	45.6	D
Atlantic Avenue & Crescent Street	WB	DefL	0.90	45.0	D	WB	DefL	0.98	96.4	F	WB	DefL	0.90	47.5	D
	SB	LTR	1.15	146.5	F	SB	LTR	1.20	164.0	F	SB	LTR	1.14	143.2	F
Atlantic Avenue & Rockaway Boulevard	WB	L	1.14	137.9	F	WB	L	1.19	159.4	F	WB	L	1.14	139.9	F
Broadway & Rockaway Avenue											WB	LT	0.67	22.5	C
											WB	R	0.28	14.9	B
	WB	LTR	0.92	40.7	D	WB	LTR	0.97	49.6	D	WB	LTR		20.7	C
Broadway & Eastern Parkway	EB	L	0.36	40.5	D	EB	L	0.46	47.1	D	EB	L	0.46	47.1	D
	EB	TR	1.12	128.1	F	EB	TR	1.35	219.5	F	EB	TR	1.35	219.5	F
	WB	LT	0.98	87.4	F	WB	LT	1.61	334.6	F	WB	LT	1.61	334.6	F
Bushwick Avenue & Eastern Parkway	WB	L	1.14	120.4	F	WB	L	1.16	127.9	F	WB	L	1.14	120.1	F
Fulton Street & Van Sinderen Avenue	SB	LTR	0.62	42.4	D	SB	LTR	0.79	50.8	D	SB	LTR	0.75	46.1	D
Fulton Street & Pennsylvania Avenue	NB	TR	1.08	87.9	F	NB	TR	1.17	120.7	F	NB	TR	1.17	120.7	F
	SB	L	0.97	92.6	F	SB	L	1.21	170.2	F	SB	L	1.21	170.2	F
Fulton Street & Miller Avenue	EB	TR	0.94	40.1	D	EB	TR	1.14	99.2	F	EB	TR	1.14	99.2	F
Fulton Street & Logan Street	WB	LTR	0.69	20.5	C	WB	LTR	1.50	256.8	F	WB	LTR	1.28	155.4	F

This table has been revised for the FEIS.

TABLE 20-8 (continued)
Action-With-Mitigation Conditions at Impacted Lane Groups – Weekday PM Peak Hour

	Weekday PM Peak Hour No-Action					Weekday PM Peak Hour With-Action					Weekday PM Peak Hour Mitigation					
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	
Fulton Street & Euclid Avenue	SB	LTR	0.81	31.8	C	SB	LTR	1.04	72.2	E	SB	LTR	0.94	44.4	D	
Bushwick /Jamaica Avenue &	EB-Bushwick	R	1.08	103.6	F	EB-Bushwick	R	1.15	130.1	F	EB-Bushwick	R	1.15	130.1	F	
Penn. /Jackie Robinson Pkwy	WB	L	1.21	187.5	F	WB	L	1.34	238.5	F	WB	L	1.34	238.5	F	
	WB	T	1.23	194.1	F	WB	T	1.35	238.9	F	WB	T	1.35	238.9	F	
	NB	L	0.89	69.1	E	NB	L	0.95	79.6	E	NB	L	0.95	79.6	E	
Jamaica Avenue &	EB	LTR	0.94	44.8	D	EB	LTR	0.99	56.4	E	EB	LTR	0.93	43.7	D	
Highland Pl/Force Tube Ave.	SB	TR	1.13	99.6	F	SB	TR	1.25	145.9	F	SB	TR	1.11	90.2	F	
Jamaica Avenue & Euclid Av/Cypress Hill Street	EB	LTR	1.20	118.8	F	EB	LTR	1.46	229.7	F	EB	LTR	1.13	87.7	F	
Liberty Avenue &	EB	LTR	0.97	82.3	F	EB	LTR	1.04	101.4	F	EB	LTR	0.97	79.6	E	
Pennsylvania Avenue	WB	LTR	1.04	104.5	F	WB	LTR	1.34	217.2	F	WB	LTR	1.02	90.0	F	
Liberty Avenue &											SB	L	0.17	29.8	C	
Miller Avenue											SB	TR	1.05	96.0	F	
	SB	LTR	1.04	94.4	F	SB	LTR	1.20	148.2	F	SB	LTR		86.8	F	
Liberty Avenue & Warwick Street	SB	LTR	1.25	173.3	F	SB	LTR	1.33	204.3	F	SB	LTR	1.26	173.2	F	
Liberty Avenue & Shepherd Avenue	SB	LTR	0.49	38.6	D	SB	LTR	0.77	51.7	D	SB	LTR	0.70	44.6	D	
Liberty Avenue & Montauk Avenue	SB	LR	0.37	35.8	D	SB	LR	0.81	64.3	E	SB	LR	0.62	43.8	D	
Liberty Avenue & Milford Street	WB	LT	0.70	23.2	C	WB	LT	1.23	144.5	F	WB	LT	0.93	42.9	D	
Liberty Avenue &	EB	LT	0.54	13.3	B	EB	LT	1.15	104.8	F	EB	LT	0.86	28.0	C	
Logan Street	NB	LTR	0.82	58.0	E	NB	LTR	0.92	71.0	E	NB	LTR	0.86	60.7	E	
											SB	L	0.59	54.2	D	
											SB	R	0.54	42.5	D	
	SB	LR	0.57	48.9	D	SB	LR	1.40	249.8	F	SB	LR		45.9	D	
Liberty Avenue &	WB	L	0.75	54.5	D	WB	L	0.82	62.6	E	WB	L	0.72	48.0	D	
South Conduit Boulevard	WB	T	1.12	125.7	F	WB	T	1.25	174.9	F	WB	T	1.13	124.8	F	
Liberty Avenue & North Conduit Boulevard	WB	TR	1.36	220.0	F	WB	TR	1.45	259.6	F	WB	TR	1.35	211.2	F	
Pitkin Avenue &	EB	LTR	1.40	242.2	F	EB	LTR	1.48	274.4	F	EB	LTR	1.31	199.0	F	
Pennsylvania Avenue	WB	LTR	1.09	115.3	F	WB	LTR	1.54	300.4	F	WB	LTR	1.34	210.4	F	
											NB	L	0.49	22.1	C	
											NB	TR	0.71	18.8	B	
	NB	LTR	1.03	55.7	E	NB	LTR	1.14	94.2	F	NB	LTR		19.0	B	
											SB	L	0.76	46.2	D	
											SB	TR	0.68	17.7	B	
	SB	LTR	1.09	75.5	E	SB	LTR	1.20	119.1	F	SB	LTR		20.2	C	
Sutter Avenue & Fountain Avenue	NB	L	0.85	67.7	E	NB	L	0.95	90.2	F	NB	L	0.87	70.4	E	
Unsignalized Intersection																
Dinsmore Place & Logan Street (Two-Way Stop Controlled)	WB	LR	0.27	23.3	C	WB	LR	4.35	1812.0	F	--- (Signalized)	---	---	---	---	*
Fulton Street & Elton Street											NB	T	0.95	125.4	F	
											NB	R	0.23	18.6	C	
(Two-Way Stop Controlled)	NB	TR	0.99	112.8	F	NB	TR	1.24	200.8	F	NB	TR		86.0	F	**
Fulton Street & Chestnut Street (Two-Way Stop Controlled)	NB	LTR	1.05	123.3	F	NB	LTR	2.99	956.7	F	NB (Signalized)	LTR	1.03	66.4	E	
Pitkin Avenue &											NB	L	0.14	27.3	D	
Elton Street											NB	TR	0.51	38.7	E	
(Two-Way Stop Controlled)	NB	LTR	0.45	29.9	D	NB	LTR	0.65	49.6	E	NB	LTR		36.4	E	**

EB-eastbound, WB-westbound, NB-northbound, SB-southbound
L-left turn, T-through, R-right turn, DefL-defacto left turn
Shading denotes lane groups with unmitigated impacts.
* Lane group would not be impacted in the future condition with the conversion of Dinsmore Place and installation of a new traffic signal.
** Impact could be mitigated by a new traffic signal; however, signalization is not proposed as future conditions would not satisfy required warrants.

This table has been revised for the FEIS.

TABLE 20-9
Action-With-Mitigation Conditions at Impacted Lane Groups – Saturday Midday Peak Hour

	Saturday Midday Peak Hour No-Action					Saturday Midday Peak Hour With-Action					Saturday Midday Peak Hour Mitigation					
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	
Signalized Intersection																
Atlantic Avenue &	EB	TR	0.95	41.4	D	EB	TR	0.98	46.7	D	EB	TR	0.95	40.7	D	
Eastern Parkway	WB-Main	T	1.22	137.3	F	WB-Main	T	1.26	154.9	F	WB-Main	T	1.23	137.9	F	
Atlantic Avenue &	EB	L	0.87	63.0	E	EB	TR	0.93	73.5	E	EB	TR	0.93	73.5	E	
Pennsylvania Avenue	WB	TR	1.07	79.6	E	WB	TR	1.18	120.2	F	WB	TR	1.18	120.2	F	
	NB	TR	1.22	139.9	F	NB	TR	1.31	179.7	F	NB	TR	1.31	179.7	F	
	SB	L	1.11	116.8	F	SB	LTR	1.23	161.4	F	SB	L	1.23	161.4	F	
Atlantic Avenue &											NB	L	0.83	50.3	D	
Schenck Avenue											NB	TR	0.68	42.7	D	
	NB	LTR	1.07	96.1	F	NB	TR	1.20	146.5	F	NB	LTR		47.4	D	
Atlantic Avenue &	EB	L	1.39	250.5	F	EB	L	1.59	336.3	F	EB	L	0.67	32.4	C	
Highland Place											SB	L	0.76	44.4	D	
											SB	LR	0.78	52.5	D	
	SB	LR	0.90	51.4	D	SB	LR	0.96	62.8	E	SB	LR		47.5	D	
Atlantic Avenue &	WB	TR	0.99	45.7	D	WB	TR	1.03	55.9	E	WB	TR	1.00	47.5	D	
Logan Street											SB	L	1.20	145.8	F	
											SB	TR	0.48	18.9	B	
	SB	LTR	0.84	37.0	D	SB	LTR	1.51	268.4	F	SB	LTR		83.8	F	
Atlantic Avenue &	EB	TR	1.00	56.5	E	EB	TR	1.03	63.8	E	EB	TR	1.00	54.7	D	
Rockaway Boulevard																
Broadway &	WB	LTR	0.91	36.7	D	WB	LTR	0.97	46.9	D	WB	LTR	0.95	42.0	D	
Rockaway Avenue																
Broadway &	EB	TR	0.95	68.4	E	EB	TR	1.06	97.2	F	EB	TR	0.95	63.4	E	
Eastern Parkway	WB	LT	0.59	35.0	C	WB	LT	0.82	51.0	D	WB	LT	0.64	34.1	C	
Fulton Street &	EB	TR	0.96	37.6	D	EB	TR	1.02	52.2	D	EB	TR	0.99	42.9	D	
Highland Place																
Fulton Street &	WB	LTR	0.65	18.9	B	WB	LTR	1.13	103.0	F	WB	LTR	0.93	39.1	D	
Logan Street																
Bushwick /Jamaica Avenue &	WB	L	1.09	133.2	F	WB	L	1.19	166.9	F	WB	L	1.19	166.9	F	
Penn. /Jackie Robinson Pkwy	WB	T	1.13	146.6	F	WB	T	1.23	174.7	F	WB	T	1.23	174.7	F	
	NB	L	0.94	66.7	E	NB	L	0.98	76.1	E	NB	L	0.98	76.1	E	
Jamaica Avenue &	EB	LTR	1.14	101.6	F	EB	LTR	1.18	116.6	F	EB	LTR	1.12	92.6	F	
Highland Pl/Force Tube Ave.																
Jamaica Avenue &	EB	LTR	1.10	81.6	F	EB	LTR	1.29	157.8	F	EB	LTR	1.00	46.8	D	
Euclid Av/Cypress Hill Street																
Liberty Avenue &	WB	LT	0.94	66.7	E	WB	LTR	1.12	116.8	F	WB	LTR	0.95	62.4	E	
Pennsylvania Avenue																
Liberty Avenue &	SB	LTR	0.73	38.9	D	SB	LTR	0.85	47.7	D	SB	LTR	0.82	43.6	D	
Miller Avenue																
Liberty Avenue &	SB	LTR	0.97	69.8	E	SB	LTR	1.01	80.4	F	SB	LTR	0.98	69.9	E	
Warwick Street																
Liberty Avenue &	SB	LR	0.44	31.0	C	SB	LR	0.96	86.1	F	SB	LR	0.71	43.3	D	
Montauk Avenue																
Liberty Avenue &	EB	LT	0.46	14.7	B	EB	LT	0.95	48.6	D	EB	LT	0.92	42.5	D	
Logan Street																
Liberty Avenue &	WB	L	1.19	152.7	F	WB	L	1.31	199.8	F	WB	L	1.15	134.7	F	
South Conduit Boulevard	WB	T	0.87	48.9	D	WB	T	0.93	58.8	E	WB	T	0.87	47.8	D	
Liberty Avenue &	WB	TR	1.30	182.2	F	WB	TR	1.37	211.6	F	WB	TR	1.29	174.9	F	
North Conduit Boulevard																
Pitkin Avenue &	EB	LTR	0.80	47.2	D	EB	LTR	0.86	54.0	D	EB	LTR	0.74	39.0	D	
Pennsylvania Avenue	WB	LTR	1.15	126.4	F	WB	LTR	1.45	249.5	F	WB	LTR	1.23	156.3	F	
											NB	L	0.61	26.9	C	
											NB	TR	0.89	25.9	C	
	NB	LTR	1.00	42.5	D	NB	LTR	1.04	55.6	E	NB	LTR		26.0	C	
Pitkin Avenue &	WB	L	1.20	163.4	F	WB	L	1.26	187.9	F	WB	L	1.15	146.6	F	
South Conduit Boulevard																
Unsignalized Intersection																
Arlington Avenue &	NB	LR	0.65	25.6	D	NB	LR	0.77	33.8	D	NB	LR	0.77	33.8	D	*
Jamaica Avenue																
(Two-Way Stop Controlled)																
Dinsmore Place &	WB	LR	0.16	22.8	C	WB	LR	0.96	253.9	F	---	---	---	---	---	**
Logan Street											(Signalized)					
(Two-Way Stop Controlled)																
Fulton Street &											NB	T	0.45	34.3	D	
Elton Street											NB	R	0.19	14.9	B	
(Two-Way Stop Controlled)	NB	TR	0.57	31.6	D	NB	TR	0.67	41.3	E	NB	TR		25.2	D	*
Fulton Street &	NB	LTR	0.58	35.9	E	NB	LTR	1.88	467.2	F	NB	LTR	0.55	18.3	C	
Chestnut Street											(Signalized)					
(Two-Way Stop Controlled)																

EB-eastbound, WB-westbound, NB-northbound, SB-southbound
L-left turn, T-through, R-right turn, DefL-defacto left turn
Shading denotes lane groups with unmitigated impacts.
* Impact could be mitigated by a new traffic signal; however, signalization is not proposed as future conditions would not satisfy required warrants.
** Lane group would not be impacted in the future condition with the conversion of Dinsmore Place and installation of a new traffic signal.

This table has been revised for the FEIS.

Proposed Schedule for Traffic Mitigation Measures

Subject to the approval of DOT, the mitigation measures summarized in Table 20-5 would be implemented to mitigate the significant adverse traffic impacts resulting from full build-out of the Proposed Actions in 2030. As the development of the Proposed Actions would be expected to occur over an approximately 15-year period, it is possible that some of the significant adverse traffic impacts could occur prior to full build-out in 2030. Based on the anticipated construction schedule shown in Chapter 19, "Construction," incremental vehicle trips associated with traffic generated by projected development sites could potentially result in significant adverse traffic impacts beginning in the 2nd quarter of 2018 with the completion of the first phase of projected development site 67. This level of development would result in a net increase of 206 dwelling units, 16,072 gsf of office space, and 36,480 gsf of community facility (medical office) space along with a net reduction of 66,584 gsf of retail space, and would generate more than the CEQR Technical Manual analysis threshold of 50 peak hour vehicle trip ends in all peak periods. At this earlier point in time, implementation of some or all of the mitigation measures developed for full build-out of the Proposed Actions in 2030 would be considered at impacted intersections in proximity to projected development site 67, including the conversion of Dinsmore Place from two-way to one-way eastbound operation between Logan and Chestnut Streets, and additional measures at four intersections along the Logan Street corridor at Atlantic and Liberty Avenues, Dinsmore Place, and Fulton Street, as well as the intersections of Fulton Street with Chestnut Street and with Euclid Avenue.

Transit

Bus

As discussed in Chapter 13, "Transportation," the Proposed Actions would add approximately 18 trips through the maximum load point on the westbound Q8 service in the PM peak hour, resulting in a capacity shortfall of 17 spaces. Therefore, westbound Q8 service would be significantly adversely impacted in the PM peak hour based on *CEQR Technical Manual* criteria. As shown in Table 20-10, these significant adverse impacts to Q8 bus service could be fully mitigated by the addition of one standard bus in the westbound direction in the PM peak hour. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

TABLE 20-10
Action-With-Mitigation Local Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	No-Action Available Capacity[2]	Project Increment	Available Capacity w/ Proposed Actions[2]	Additional Peak Hour Buses Needed to Accommodate Project-Generated Demand	Available Capacity With Mitigation[2]
PM	Q8	WB	101st Ave & Cresskill Pl	9	1	18	-17*	1	37

Notes:
[1] Assumes service levels adjusted to address capacity shortfalls in the No-Action condition.
[2] Available capacity based on MTA loading guidelines of 54 passengers per standard bus.
* Denotes a significant adverse impact.

Pedestrians

As discussed in Chapter 13, "Transportation," the results of the analyses of pedestrian conditions show that demand from the Proposed Action would significantly adversely impact a total of two sidewalks, one crosswalk and one corner area in one or more peak hours under the With-Action condition (refer to Table 20-11, below).

TABLE 20-11
Summary of Significant Pedestrian Impacts

Corridor/Intersection	Impacted Element	Peak Hour		
		Weekday AM	Weekday Midday	Weekday PM
Atlantic Ave, Logan St to Chestnut St	North Sidewalk		X	
Van Siclen Ave, Pitkin Ave to Glenmore Ave	East Sidewalk			X
Atlantic Ave/Euclid Ave	West Crosswalk		X	
Liberty Ave/Berriman St	Northeast Corner	X		

A significant adverse pedestrian impact is considered mitigated if measures implemented return the anticipated conditions to an acceptable level, following the same impact criteria used in determining impacts. Standard mitigation for projected significant adverse pedestrian impacts can include providing additional signal green time or new signal phases; widening crosswalks; relocating or removing street furniture; providing curb extensions, neck-downs or lane reductions to reduce pedestrian crossing distance; and sidewalk widening. Discussed below are recommended mitigation measures to address the Proposed Actions' significant adverse pedestrian impacts. The mitigation measures generally consist of sidewalk and crosswalk widening and minor signal timing changes. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified.

Sidewalks

Of the 79 sidewalks analyzed, two are expected to be significantly adversely impacted—the north sidewalk on Atlantic Avenue between Logan and Chestnut streets in the weekday midday peak hour and the east sidewalk on Van Siclen Avenue between Pitkin and Glenmore Avenues in the PM. Table 20-12 shows the recommended mitigation measures to address these impacts and their effectiveness. As shown in Table 20-12 and discussed below, with implementation of the proposed mitigation measures, both of these sidewalks would operate at an acceptable LOS C in the impacted peak hours, and all significant adverse sidewalk impacts would be fully mitigated.

NORTH SIDEWALK ON ATLANTIC AVENUE BETWEEN LOGAN AND CHESTNUT STREETS

The existing sidewalk along the north side of Atlantic Avenue between Logan and Chestnut streets is a relatively narrow five feet in width (three feet of effective width) between an existing fence and a planted strip along the curb. Widening this sidewalk by 0.5-foot would fully mitigate this significant impact. It is anticipated that this sidewalk widening would occur in conjunction with the development of adjacent projected development site 66 without the need to alter the existing curb line.

EAST SIDEWALK ON VAN SICLEN AVENUE BETWEEN PITKIN AND GLENMORE AVENUES

The PM peak hour impact to the east sidewalk on Van Siclen Avenue between Pitkin and Glenmore avenues would occur at the most constrained point on the sidewalk where a tree pit is located at curbside opposite from an enclosure around a basement entrance for an adjacent building. Removal of this tree pit would fully mitigate the Proposed Actions' significant adverse impact to this sidewalk in the PM peak hour.

Crosswalks

One of the 67 analyzed crosswalks would be significantly adversely impacted by the Proposed Actions in the weekday midday peak hour—the west crosswalk on Atlantic Avenue at Euclid Avenue. As part of the proposed traffic mitigation plan, three seconds of green time would be shifted from the eastbound/westbound traffic signal phase to the northbound/southbound phase at this intersection. As shown in Table 20-13, this signal timing change would also fully mitigate the significant adverse crosswalk impact at this intersection.

TABLE 20-12
Action-With-Mitigation Sidewalk Conditions

Location	Side	No-Action			With-Action			Action-With-Mitigation			
		Effective Width (ft)	Average Space (ft^2/ped)	LOS	Effective Width (ft)	Average Space (ft^2/ped)	LOS	Effective Width (ft)	Average Space (ft^2/ped)	LOS	Mitigation Measures
Weekday Midday Peak Hour											
(S50) Atlantic Av Logan St to Chestnut St	North	3.0	205.2	B	3.0	37.3	D*	3.5	44.0	C	Mitigated through 0.5-foot sidewalk widening in conjunction with development of adjacent site 66 (with no change to existing curb line).
Weekday PM Peak Hour											
(S69) Van Siclen Av Pitkin Av to Glenmore Av	East	3.5	38.8	D	3.5	34.5	D*	4.2	42.5	C	Mitigated by removing a tree pit at an existing constraint point.

Notes:
* denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

TABLE 20-13
Action-With-Mitigation Crosswalk Conditions

Intersection	Crosswalk	No-Action			With-Action			Action-With-Mitigation			
		Width (ft)	Average Space (ft^2/ped)	LOS	Width (ft)	Average Space (ft^2/ped)	LOS	Width (ft)	Average Space (ft^2/ped)	LOS	Mitigation Measures
Weekday Midday Peak Hour											
(X42) Atlantic Av @ Euclid Av	West	12	82.6	A	12	21.5	D*	15	25.9	C	Mitigated through the transfer of 3 seconds of signal green time from EB/WB phase to NB/SB phase as proposed for traffic mitigation.

Notes:
* denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Corner Areas

One of the 58 analyzed corner areas would be significantly adversely impacted by the Proposed Actions—the northeast corner at Liberty Avenue at Berriman Street in the weekday AM peak hour. The sidewalks adjacent to this corner area are each 7.5-feet in width between the curb and lawn areas surrounding the existing buildings on the block. Widening either one of these sidewalks by 0.5 feet (i.e., from 7.5 feet to eight feet in width) would fully mitigate this significant corner area impact. (It is anticipated that any sidewalk widening would occur in conjunction with the development of adjacent projected development site 46 without the need to alter the existing curb lines.) As shown in Table 20-14, with implementation of this mitigation, the northeast corner area at Liberty Avenue/Berriman Street would operate at an acceptable LOS C in the AM peak hour under Action-with-Mitigation conditions, and the Proposed Actions' significant adverse impact would be fully mitigated.

TABLE 20-14
Action-With-Mitigation Corner Conditions

		No-Action		With-Action		Action-With-Mitigation		
Intersection	Corner	Average Space (ft^2/ped)	LOS	Average Space (ft^2/ped)	LOS	Average Space (ft^2/ped)	LOS	Mitigation Measures
Weekday AM Peak Hour								
(C47) Liberty Av @ Berriman St	NE	67.5	A	22.9	D*	27.3	C	Widen one adjacent sidewalk by 0.5 feet (from 7.5' to 8')

Notes:
* denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Effects of Traffic Mitigation on Pedestrian Conditions

Proposed traffic mitigation measures (discussed previously) would potentially affect pedestrian conditions at a total of 37 analyzed crosswalks and 28 analyzed corner areas at ten intersections in one or more peak hours. Tables 20-15 and 20-16 show conditions at these pedestrian elements with the proposed traffic mitigation measures. As shown in Tables 20-15 and 20-16, all of the affected crosswalks and corner areas would continue to operate at LOS C or better in all peak hours, and there would be no new significant adverse impacts to any of these sidewalks or crosswalks in any analyzed peak hour as a result of the proposed traffic mitigation.

Proposed Schedule for Pedestrian Mitigation Measures

Subject to DOT approval, the mitigation measures described above would be implemented to mitigate the significant adverse pedestrian impacts resulting from full build-out of the Proposed Actions in 2030. As the development of the Proposed Actions would be expected to occur over an approximately 15-year period, it is possible that some of the significant adverse impacts to sidewalks, crosswalks and corner areas could occur prior to full build-out in 2030.

Based on the anticipated construction schedule shown in Chapter 19, "Construction," incremental pedestrian trips generated by projected development could potentially result in significant adverse pedestrian impacts beginning in the 3rd quarter of 2018 with the completion of the first two phases of site 67. This level of development would result in a net increase of 475 dwelling units, 44,816 gsf of office space, 10,000 gsf of restaurant space, and 92,720 gsf of community facility (community center and medical office) space, along with a 26,592 gsf reduction in retail space, and would potentially generate more than the *CEQR Technical Manual* analysis threshold of 200 peak hour pedestrian trips in one or more peak periods on nearby sidewalks or crosswalks that have been identified as significantly adversely impacted. These impacted pedestrian elements would include the north sidewalk on Atlantic Avenue between Logan and Chestnut Streets, and the west crosswalk on Atlantic Avenue at Euclid Avenue. At this earlier point in time, implementation of the mitigation measures developed for full build-out of the Proposed Actions in 2030 would be considered to address the potential significant adverse pedestrian impacts at these locations.

TABLE 20-15
Action-With-Traffic-Mitigation Crosswalk Conditions

Intersection	Crosswalk		No-Action Condition: Average Pedestrian Space (ft^2/ped)			No-Action Condition: Level of Service			With-Action-Condition: Average Pedestrian Space (ft^2/ped)			With-Action-Condition: Level of Service			Action-With-Mitigation: Average Pedestrian Space (ft^2/ped)			Action-With-Mitigation: Level of Service			Proposed Traffic Mitigation
			AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	
Fulton Street and Pennsylvania Avenue	X1	North	554.0	487.9	319.5	A	A	A	340.2	250.7	236.4	A	A	A	311.3	232.2	236.4	A	A	A	- Transfer 3s and 2s of green time from EB to NB/SB in AM and midday peak hours, respectively.
	X2	East	724.0	557.4	419.7	A	A	A	355.9	211.3	161.1	A	A	A	385.3	222.1	161.1	A	A	A	
	X3	South	261.6	223.0	238.5	A	A	A	125.0	107.5	152.9	A	A	A	113.5	98.4	152.9	A	A	A	
	X4	West	960.4	732.3	500.0	A	A	A	516.6	382.3	329.5	A	A	A	551.3	396.9	329.5	A	A	A	
Fulton Street and Norwood Avenue	X5	East	419.6	221.6	205.9	A	A	A	191.7	149.8	161.3	A	A	A	191.7	149.8	161.3	A	A	A	- Traffic diversion from conversion of Dinsmore Place to eastbound operation.
	X6	South	140.5	125.7	75.7	A	A	A	84.1	81.7	59.7	A	A	B	82.9	81.3	59.3	A	A	B	
	X7	West	452.0	413.1	205.0	A	A	A	431.3	396.2	200.4	A	A	A	431.3	396.2	200.4	A	A	A	
Fulton Street and Logan Street	X8	North	177.6	202.2	106.4	A	A	A	117.3	122.2	88.6	A	A	A	127.7	127.9	100.6	A	A	A	- Transfer 2s, 1s and 3s of green time from NB/SB to EB/WB in AM, MD and PM peak hours, respectively. - Traffic diversion from conversion of Dinsmore Place to eastbound operation.
	X9	East	416.5	449.0	479.0	A	A	A	180.7	244.4	260.4	A	A	A	160.6	230.1	217.4	A	A	A	
	X10	South	218.3	196.9	139.2	A	A	A	60.3	93.5	78.1	A	A	A	62.0	96.5	86.7	A	A	A	
	X11	West	333.9	169.3	198.1	A	A	A	123.5	99.7	134.6	A	A	A	109.6	95.3	113.2	A	A	A	
Fulton Street and Richmond Street	X12	North	455.7	505.4	275.5	A	A	A	368.9	269.2	211.8	A	A	A	368.9	269.2	211.8	A	A	A	- Traffic diversion from conversion of Dinsmore Place to eastbound operation.
	X13	East	641.6	395.3	424.3	A	A	A	337.5	262.7	309.9	A	A	A	337.5	263.7	309.9	A	A	A	
	X14	South	527.0	478.3	390.2	A	A	A	372.0	226.3	258.8	A	A	A	377.7	228.7	262.0	A	A	A	
	X15	West	833.6	484.4	466.6	A	A	A	422.3	268.3	273.8	A	A	A	417.0	267.9	265.1	A	A	A	
Fulton Street and Euclid Avenue	X16	North	260.9	249.8	181.8	A	A	A	192.0	124.7	120.1	A	A	A	178.1	124.7	111.3	A	A	A	- Transfer 2s of green time from EB/WB to SB in AM and PM peak hours. - Traffic diversion from conversion of Dinsmore Place to eastbound operation.
	X17	East	359.8	379.5	332.1	A	A	A	308.1	243.4	258.1	A	A	A	349.8	243.4	292.6	A	A	A	
	X18	South	428.9	246.6	213.7	A	A	A	50.0	87.6	111.5	B	A	A	45.5	87.2	101.3	B	A	A	
	X19	West	717.2	333.3	365.4	A	A	A	345.2	146.1	157.1	A	A	A	396.4	146.1	178.5	A	A	A	
Atlantic Avenue and Highland Place	X32	North	483.0	345.2	413.7	A	A	A	195.5	153.0	226.0	A	A	A	158.4	121.4	182.9	A	A	A	- Introduce new EB leading signal phase (13s in the AM, MD, PM peak hours)
	X33	East	515.5	435.1	373.9	A	A	A	152.0	83.4	76.4	A	A	A	152.0	83.4	76.4	A	A	A	
	X34	West	155.6	263.9	221.9	A	A	A	105.0	80.1	72.0	A	A	A	105.0	80.1	72.0	A	A	A	
Atlantic Avenue and Logan Street	X35	North	579.7	240.4	317.2	A	A	A	102.7	66.5	98.2	A	A	A	107.8	63.9	94.3	A	A	A	- Transfer 4s of green time from EB/WB to NB/SB in both the midday and PM peak hours. - Narrow west sidewalk on Logan Street at NW corner by 3 feet. - Traffic diversion from conversion of Dinsmore Place to eastbound operation.
	X36	East	244.9	105.0	157.2	A	A	A	96.5	30.2	46.0	A	C	B	97.1	35.4	54.0	A	C	B	
	X37	South	753.7	294.1	487.9	A	A	A	228.4	85.1	142.4	A	A	A	228.4	78.9	132.1	A	A	A	
	X38	West	361.7	188.8	203.2	A	A	A	103.2	56.2	82.1	A	B	A	104.0	64.7	94.1	A	A	A	
Atlantic Avenue and Euclid Avenue	X39	North	1190.9	470.5	763.2	A	A	A	454.1	100.0	150.6	A	A	A	435.8	95.6	142.2	A	A	A	- Transfer 3s, 3s and 4s of green time from EB/WB to NB/SB in AM, midday and PM peak hours, respectively. - Traffic diversion from conversion of Dinsmore Place to eastbound operation.
	X40	East	328.5	397.3	322.5	A	A	A	162.2	87.0	94.3	A	A	A	195.9	105.6	124.0	A	A	A	
	X41	South	2919.7	758.9	1150.4	A	A	A	851.2	230.6	382.3	A	A	A	817.2	221.1	361.6	A	A	A	
	X42	West	319.4	95.07	123.5	A	A	A	65.6	21.5	28.2	A	**D** *	C	79.6	25.9	36.6	A	C	C	
Liberty Avenue and Shepherd Avenue	X50	North	384.8	891.1	442.9	A	A	A	324.7	307.6	275.1	A	A	A	324.7	307.6	287.0	A	A	A	- Transfer 3s of green time from EB/WB to SB in PM peak hour.
	X51	East	186.9	976.2	278.6	A	A	A	97.4	277.3	173.8	A	A	A	97.4	277.3	156.0	A	A	A	
	X52	South	165.4	842.5	659.3	A	A	A	151.5	291.1	331.1	A	A	A	151.5	291.1	345.9	A	A	A	
Liberty Avenue and Montauk Avenue	X57	North	577.5	936.9	718.5	A	A	A	390.3	204.8	229.3	A	A	A	384.3	204.8	225.8	A	A	A	- Transfer 1s of green time from EB/WB to NB/SB in AM and PM peak hours.
	X58	East	481.8	477.8	503.4	A	A	A	320.5	109.6	128.7	A	A	A	333.4	109.6	134.1	A	A	A	
	X59	South	433.8	991.7	749.9	A	A	A	302.7	198.1	234.7	A	A	A	298.2	198.1	231.2	A	A	A	
	X60	West	514.1	444.1	481.8	A	A	A	222.9	79.3	101.7	A	A	A	232.5	79.3	105.9	A	A	A	

Notes: **This table has been revised for the FEIS.**

***** denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

TABLE 20-16
Action-With-Traffic-Mitigation Corner Area Conditions

Intersection	Corner		No-Action Condition						With-Action-Condition						Action-With-Mitigation						Proposed Traffic Mitigation
			Average Pedestrian Space (ft^2/ped)			Level of Service			Average Pedestrian Space (ft^2/ped)			Level of Service			Average Pedestrian Space (ft^2/ped)			Level of Service			
			AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	
Fulton Street and Pennsylvania Avenue	C1	NE	2015.5	1954.3	1479.7	A	A	A	1162.5	860.2	902.1	A	A	A	1162.2	860.2	902.1	A	A	A	- Transfer 3s and 2s of green time from EB to NB/SB in AM and midday peak hours, respectively.
	C2	SE	1325.9	1346.6	1270.1	A	A	A	627.0	523.8	638.4	A	A	A	626.0	523.5	638.4	A	A	A	
	C3	SW	1313.8	1290.4	1091.9	A	A	A	620.9	563.5	606.0	A	A	A	620.5	563.2	606.0	A	A	A	
	C4	NW	2815.3	2133.5	1541.2	A	A	A	1663.6	1203.9	1121.1	A	A	A	1663.6	1203.9	1121.1	A	A	A	
Fulton Street and Logan Street	C7	NE	454.1	471.7	304.6	A	A	A	277.3	298.7	242.5	A	A	A	277.4	298.9	243.1	A	A	A	- Transfer 2s, 1s and 3s of green time from NB/SB to EB/WB in AM, MD and PM peak hours, respectively.
	C8	SE	464.8	438.8	322.6	A	A	A	173.5	253.7	224.9	A	A	A	173.9	253.8	225.4	A	A	A	
	C9	SW	724.7	572.4	475.5	A	A	A	211.4	272.6	235.2	A	A	A	211.6	272.6	235.2	A	A	A	
	C10	NW	669.2	610.8	471.4	A	A	A	409.7	395.1	381.8	A	A	A	409.8	395.1	381.9	A	A	A	
Fulton Street and Euclid Avenue	C15	NE	440.6	549.2	380.7	A	A	A	369.3	321.2	285.3	A	A	A	369.1	321.2	285.0	A	A	A	- Transfer 2s of green time from EB/WB to SB in AM and PM peak hours.
	C16	SE	1151.8	926.0	813.1	A	A	A	256.1	399.7	493.6	A	A	A	255.8	399.7	493.3	A	A	A	
	C17	SW	571.9	300.3	287.4	A	A	A	84.1	114.6	142.2	A	A	A	83.3	114.6	142.1	A	A	A	
	C18	NW	673.4	540.3	425.6	A	A	A	461.0	261.3	256.7	A	A	A	460.6	261.3	256.5	A	A	A	
Atlantic Avenue and Highland Place	C29	NE	1680.8	1381.4	1545.5	A	A	A	700.3	483.9	685.5	A	A	A	689.2	481.7	683.5	A	A	A	- Introduce new EB leading signal phase (13s in the AM, MD, PM peak hours)
	C30	NW	974.1	1018.8	1046.6	A	A	A	652.4	501.6	605.3	A	A	A	649.9	499.5	603.5	A	A	A	
Atlantic Avenue and Logan Street	C31	NE	362.3	175.8	254.7	A	A	A	109.7	42.5	70.4	A	B	A	109.7	43.0	71.0	A	B	A	- Transfer 4s of green time from EB/WB to NB/SB in both the midday and PM peak hours. - Narrow west sidewalk on Logan Street at NW corner by 3 feet.
	C32	SE	746.1	291.9	455.3	A	A	A	269.0	83.3	137.1	A	A	A	269.0	83.9	137.7	A	A	A	
	C33	SW	1165.2	550.2	702.3	A	A	A	353.7	163.6	253.6	A	A	A	353.7	163.9	254.0	A	A	A	
	C34	NW	941.7	443.9	539.0	A	A	A	235.1	132.4	197.5	A	A	A	186.9	103.8	156.4	A	A	A	
Atlantic Avenue and Euclid Avenue	C35	NE	1468.4	873.9	1153.5	A	A	A	635.2	186.4	263.6	A	A	A	635.1	186.2	263.5	A	A	A	- Transfer 3s, 3s and 4s of green time from EB/WB to NB/SB in AM, midday and PM peak hours, respectively.
	C36	SE	1679.5	1099.2	1298.3	A	A	A	791.6	323.1	456.2	A	A	A	792.5	323.4	456.8	A	A	A	
	C37	SW	3191.9	893.6	1257.8	A	A	A	747.6	220.9	332.1	A	A	A	748.6	221.8	333.3	A	A	A	
	C38	NW	1559.8	520.8	776.8	A	A	A	429.5	110.1	164.2	A	A	A	430.2	110.5	164.8	A	A	A	
Liberty Avenue and Shepherd Avenue	C45	NE	286.7	899.9	407.1	A	A	A	195.4	331.5	266.1	A	A	A	195.4	331.5	266.0	A	A	A	- Transfer 3s of green time from EB/WB to SB in PM peak hour.
	C46	SE	369.3	1638.7	911.6	A	A	A	263.0	531.3	490.2	A	A	A	263.0	531.3	489.8	A	A	A	
Liberty Avenue and Montauk Avenue	C51	NE	747.2	974.0	885.6	A	A	A	514.4	230.4	274.0	A	A	A	514.3	230.4	274.0	A	A	A	- Transfer 1s of green time from EB/WB to NB/SB in AM and PM peak hours.
	C52	SE	315.4	552.2	476.7	A	A	A	220.6	113.6	138.8	A	A	A	220.5	113.6	138.8	A	A	A	
	C53	SW	591.3	891.8	867.4	A	A	A	370.4	181.4	233.6	A	A	A	370.4	181.4	233.7	A	A	A	
	C54	NW	323.7	436.2	358.3	A	A	A	183.6	84.5	100.7	A	A	A	183.6	84.5	100.7	A	A	A	

This table has been revised for the FEIS.

Parking

Effects of Traffic Mitigation on Parking Conditions

As discussed in Chapter 13, "Transportation," the Proposed Actions are not expected to result in significant adverse on-street parking impacts during the weekday midday peak period for commercial and retail parking demand, nor during the overnight period for residential demand. As discussed above, the proposed traffic mitigation plan would, however, incorporate a number of modifications to curbside parking regulations. Additional restrictions would be implemented at approximately 12 locations within ¼-mile of the overall rezoning area, and five locations within a ¼-mile subarea around sites 46, 66 and 67. Within the overall parking study area, mitigation-related parking restrictions would result in the displacement of approximately 72 on-street parking spaces during the weekday midday period and 55 spaces overnight. Accounting for these displaced spaces, a total of approximately 2,618 and 6,681 on-street parking spaces would remain available during the weekday midday and overnight periods, respectively, within ¼-mile of the rezoning area. The proposed traffic mitigation measures would therefore not result in new significant adverse impacts to on-street parking conditions within ¼-mile of the rezoning area.

Within the ¼-mile subarea around projected development sites 46, 66 and 67, curbside parking restrictions associated with traffic mitigation measures would result in the displacement of approximately 29 on-street parking spaces during the weekday midday period and 20 spaces overnight. The displacement of 29 parking spaces in the weekday midday would increase the on-street parking shortfall during this period from 68 spaces in the With-Action condition to 97 spaces in the Action-with-Mitigation condition. During the overnight period, there would be a surplus of approximately 1,197 on-street parking spaces in the Action-with-Mitigation condition compared to a surplus of 1,217 spaces in the With-Action condition. Although approximately 29 more vehicles destined for locations in proximity to sites 46, 66 and 67 would potentially have to travel a greater distance to find available parking in the weekday midday, the 97-space shortfall in on-street parking under Action-with-Mitigation conditions would not be considered a significant adverse impact based on *CEQR Technical Manual* criteria (see Section F, "Transportation Analysis Methodologies," in Chapter 13, "Transportation"). The proposed traffic mitigation measures would therefore not result in new significant adverse impacts to on-street parking conditions within the ¼-mile parking sub-area around projected development sites 46, 66 and 67.

H. AIR QUALITY

Chapter 14, "Air Quality," presents the maximum predicted carbon monoxide (CO) and particulate matter (PM_{10} and $PM_{2.5}$) concentrations related to traffic generated by the Proposed Actions, and concludes that the Proposed Actions would not result in significant adverse air quality impacts, with the exception of the intersection of Atlantic Avenue and Logan Street, which is predicted to exceed the annual *de minimis* criterion of 0.1 µg/m^3. Therefore, air quality mitigation is required at this location.

Traffic mitigation measures were developed to reduce congestion and increase speeds along Logan Street in the affected area. Table 20-17 presents the results of the mobile source analysis with the proposed traffic mitigation measures in place.

TABLE 20-17
Maximum Predicted Annual Average $PM_{2.5}$ Concentrations with Traffic Mitigation

Receptor Site	Location	Annual Concentration (µg/m^3)	
		Increment	Increment (with Mitigation)
2	Atlantic Avenue & Logan Street	0.16	0.01

Note:
$PM_{2.5}$ *de minimis* criteria—annual (neighborhood scale), 0.1 µg/m^3

As shown in the table, the results of this modeling analysis (performed in accordance with methodologies described in Chapter 14, "Air Quality") indicate that annual incremental concentrations of $PM_{2.5}$ would be significantly lower than the With-Action condition, and would not exceed the *de minimis* criteria for $PM_{2.5}$. No unmitigated significant adverse air quality impacts would remain upon incorporation of the mitigation measures.

I. NOISE

Chapter 16, "Noise," concludes that the Proposed Actions would result in a significant adverse noise impact on Richmond Street between Fulton Street and Dinsmore Place, with predicted noise level increases of 4.9 dBA at this location.

Traffic mitigation measures were developed to reduce congestion and increase speeds along Logan Street. The traffic mitigation measures would tend to result in lower levels of traffic noise, and consequently, using the methodology described in Chapter 16, "Noise," a mobile source noise analysis was conducted for receptor site 10 with the proposed traffic mitigation measures in place to determine whether the predicted significant adverse impact at this location would be removed or lessened in magnitude with the traffic mitigation measures. At all other receptor sites where significant adverse noise impacts were not predicted to occur in the With-Action condition, noise levels in the With-Action with Traffic Mitigation condition would be expected to experience noise levels equal to or less than those predicted in Chapter 16, "Noise," and additional analyses were not conducted.

With-Action with Traffic Mitigation Noise Levels

The With-Action with Traffic Mitigation noise levels for receptor site 10 are shown below in Table 20-18.

TABLE 20-18
2030 With-Action Condition with Traffic Mitigation Noise Levels (in dBA)

Receptor	Location	Time	No-Action $L_{eq(1)}$	With-Action with Traffic Mitigation $L_{eq(1)}$	With-Action Playground $L_{eq(1)}$	With-Action with Traffic Mitigation Total $L_{eq(1)}$	$L_{eq(1)}$ Change	Total With-Action with Traffic Mitigation $L_{10(1)}$
10	Richmond Street between Fulton Street and Dinsmore Place	AM	66.0	69.4	60.3	69.9	3.9	73.6
		MD	70.8	70.5	60.3	70.9	0.1	72.0
		PM	64.5	63.9	60.3	65.5	1.0	69.6

Note:
Noise levels at receptor site 10 were calculated using TNM.
This table is new to the FEIS.

In 2030, the maximum increase in $L_{eq(1)}$ noise levels for the With-Action with Traffic Mitigation condition compared to the No-Action condition for receptor site 10 would be 3.9 dBA during the AM peak hour. This is a result of substantially increased traffic traveling along Richmond Street between Fulton Street and Dinsmore Place in the future With-Action with Traffic Mitigation condition; noise from the proposed playground associated with the school on projected development site 66 Building B would not contribute substantially to noise levels at this site. Changes of the magnitude predicted to occur at site 10 would be perceptible. According to field observations, all of the residences along Richmond Street between Fulton Street and Dinsmore Place appear to have double-glazed windows, and most of these residences also appear to have a means of alternate ventilation in the form of through-wall air conditions or window air conditioners. Residential units with double-glazed windows and an alternate means of ventilation would be expected to achieve approximately 25 dBA of attenuation resulting in interior $L_{10(1)}$ values of approximately 49 dBA during the AM peak hour, which would not be considered acceptable according to *CEQR Technical Manual* criteria. At residential units that do not have an alternate means of ventilation, the typical attenuation would be 5 dBA for an

open window condition resulting in interior $L_{10(1)}$ values of approximately 69 dBA during the AM peak hour, which would not be acceptable according to CEQR Technical Manual criteria. Therefore, noise level increases during the AM peak hour would be considered a significant adverse noise impact. During the MD and PM, noise level increases are predicted to be 1.0 dBA or less and would not be considered a significant adverse noise impact.

With-Action with Traffic Mitigation L_{dn} Noise Levels

The L_{dn} for receptor site 10 was estimated according to the methodology described in Chapter 16, "Noise," including the maximum predicted playground noise levels and was determined to be 70.6 dBA. According to HUD criteria, the calculated With-Action with Traffic Mitigation L_{dn} noise level at receptor site 10 would remain in the "normally unacceptable" category.

Noise Attenuation Measures

CEQR

The *CEQR Technical Manual* has set noise attenuation requirements for buildings based on exterior noise levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential uses and 50 dBA or lower for commercial uses, and are determined based on exterior $L_{10(1)}$ noise levels.

Noise from the School Playground at Projected Development Sites

Table 20-19 shows the results of the playground noise analysis at projected development sites with a line of sight to the playground.

TABLE 20-19
Noise Levels due to the School Playground (dBA)

Analysis Location	Time	Approximate Distance (feet)	With-Action with Traffic Mitigation $L_{eq(1)}$	With-Action Playground $L_{eq(1)}$	With-Action with Traffic Mitigation Total $L_{eq(1)}$	Predicted $L_{10(1)}$[1]
Site 66 Building A	AM	10	69.4	73.7	75.1	77.9
	MD		70.5	73.7	75.4	78.2
	PM		63.9	73.7	74.1	76.9
Site 66 Building B	AM	5	69.4	74.3	75.5	78.3
	MD		70.5	74.3	75.8	78.6
	PM		63.9	74.3	74.7	77.5
Site 67	AM	7	69.4	64.8	70.7	74.4
	MD		70.5	64.8	71.5	72.6
	PM		63.9	64.8	67.4	71.5

Notes:
[1] Predicted L_{10} is calculated by adding 2.8 dBA to the predicted combined Leq, based on SCA Playground Noise Study, AKRF, Inc., October 23, 1992.
This table is new to the FEIS.

Predicted playground L_{10} noise levels at Buildings A and B of projected development site 66 and projected development site 67 were used to determine building attenuation requirements at those locations.

Table 20-20 shows the minimum window/wall attenuation necessary to meet *CEQR Technical Manual* requirements for internal noise levels at receptor site 10. The With-Action with Traffic Mitigation $L_{10(1)}$ noise levels were calculated using the existing noise measurements, the traffic noise analysis, and the playground noise analysis.

TABLE 20-20
Required Attenuation at Noise Measurement Locations

Receptor #	Location	Maximum Calculated Total $L_{10(1)}$ Noise Level in dBA	CEQR Minimum Required Attenuation in dBA[2]
10	Richmond Street between Dinsmore Place and Fulton Street	73.6	31

Note:
Attenuation values are shown for residential uses; retail and office uses would be 5 dBA less.
This table is new to the FEIS.

Based on the value shown in Table 20-20, required attenuation levels for all projected and potential development sites that utilize receptor site 10 as a Governing Noise Receptor would have the same minimum required attenuation in dBA as set forth in Chapter 16, "Noise," Table 16-10 and Appendix G.

Predicted playground L_{10} noise levels at Buildings A and B of project development site 66 and project development site 67 shown above in Table 20-24 would have the same minimum required attenuation in dBA as set forth in Chapter 16, "Noise," Table 16-10 and Appendix G.

The requirement for these levels of façade attenuation as well as the requirement for an alternate means of ventilation will be included in an (E) designation for all privately-held projected and potential development sites.

HUD

As described in the "HUD Development Guidelines" section in Chapter 16, "Noise," the L_{dn} for receptor site 10 was estimated and is shown above. Receptor site 10 is further away from the playground noise levels than projected development site 66's Building B. Therefore, a separate building attenuation analysis was performed.

A total With-Action L_{10} noise level was determined to be 78.6 dBA for projected development site 66's Building B as shown above in Table 20-19. Based on the methodology for estimating the L_{dn} value described in the "HUD Development Guidelines" section in Chapter 16, "Noise," the L_{dn} for projected development site 66's Building B was determined to be 75.6 dBA, which would require a minimum 31 dBA of building attenuation to satisfy HUD development guidelines. This minimum level of attenuation will be required through the LDA between HPD and the future developer.

J. CONSTRUCTION

Historic and Cultural Resources

As described in Chapter 18, "Historic and Cultural Resources," development under the Proposed Actions—specifically, on projected development sites 7, 13, 35, 38, 39, 49, and 74 and potential development sites A3, A7, A8, A14, A18, A25, A40, A41, A50, A65, A70, A82, A86, A87, A95, and A102—could result in inadvertent construction-related damage to 12 NYCL- and/or S/NR-eligible historic resources, as they are located within 90 feet of one or more of the aforementioned projected and potential development sites. These 12 eligible resources include Prince Hall Temple (S/NR- and NYCL-eligible), the Magistrates Court (S/NR- and NYCL-eligible), the Empire State Dairy Building (S/NR- and NYCL-eligible), St. Michael's Roman Catholic Church (S/NR- and NYCL-eligible), Firehouse Engine 236 (S/NR-eligible), Our Lady of Loreto Roman Catholic Church (S/NR- and NYCL-eligible), 1431 Herkimer

Street (S/NR- and NYCL-eligible), Grace Baptist Church (S/NR- and NYCL- eligible), New Lots Town Hall (S/NR-eligible), William H. Maxwell School (S/NR-eligible), the Ninth Tabernacle (S/NR-eligible), and the Church of the Blessed Sacrament (S/NR- and NYCL-eligible).

Development under the Proposed Actions could result in construction-related impacts to these 12 non-designated resources. The New York City Building Code, under section C26-112.4, provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. For designated NYCL and S/NR-listed historic buildings located within 90 feet of a proposed construction site, additional protective measures under the DOB's TPPN #10/88 supplement the procedures of C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage and detect at an early stage the beginnings of damage so that construction procedures can be changed. For the 12 non-designated resources that are within 90 feet of one or more of the projected and/or potential development sites, development under the Proposed Actions could potentially result in construction-related impacts to the resources, and the protective measures under TPPN #10/88 would only apply if the resources become designated.

In order to make TPPN #10/88 or similar measures applicable to historic resources in the absence of site-specific approval, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement this mitigation. DCP, as lead agency, explored the viability of this and other mitigation measure between the DEIS and FEIS and determined that there were no feasible and practical mitigation measures to fully mitigate the identified significant adverse construction-related impact on historic resources.

Noise

Chapter 19, "Construction," concludes that the Proposed Actions would have the potential to result in significant adverse construction noise impacts at several locations throughout the rezoning area.

For projected development site 46 and projected development sites 66 and 67, construction noise was analyzed for a representative two year time period, including both peak and off-peak construction periods. The noise analysis results show that predicted noise levels would exceed the noise impact threshold criteria during two or more years on one or more floors at 31 of the 241 analyzed receptor locations due to construction of projected development sites 66 and 67 and projected development site 46. Affected locations include residential, institutional and open space areas adjacent to the projected development sites.

For all smaller individual projected development sites, construction noise was analyzed, including both peak and off-peak construction periods for each year of the conceptual construction schedule. The noise analysis results show that the predicted noise levels could exceed the *CEQR Technical Manual* impact criteria at several receptors throughout the rezoning area.

There are no practical or feasible mitigation measures that would fully mitigate the significant adverse construction noise impacts at these locations.