

Astoria Cove

**CHAPTER 25: POTENTIAL MODIFICATIONS TO THE
PROPOSED PROJECT¹**

A. INTRODUCTION

Following discussions with the New York City Department of City Planning (DCP), and in response to the interest expressed by Queens Community Board (CB) 1 and local elected officials, including Queens Borough President Melinda Katz and Council Member Costa Costantinides, regarding expanding opportunities for affordable housing in relation to Astoria Cove, the Applicant has proposed modifications to the Proposed Action. Specifically, the Applicant has proposed modifications to the LSGD special permits (ULURP No. C140323(A)ZSQ), waterfront special permit (ULURP No. C140324(A)ZSQ), and zoning text amendment (ULURP No. N140329(A)ZRQ). The modifications (the “Modified Action”) would make the Inclusionary Housing Program (IHP) applicable to the proposed R7A and R6B zoning districts in addition to the R7-3 zoning district, which would increase the allowable residential floor area by approximately 34,103 gross square feet (gsf). In addition, under the modified proposal the market-rate and affordable dwelling units would be redistributed, to provide affordable housing in all of the proposed buildings.

In total, the Modified Action would facilitate the development of 1,723,519 gross square feet (gsf) of residential floor area (1,723 dwelling units [DU], comprised of 345 affordable units and 1,378 market-rate units); 109,470 gsf of commercial floor area (including a 25,000 gsf supermarket); a site for a 62,248 gsf elementary school; 900 accessory parking spaces; and 1.92 acres of publicly accessible open space (the “proposed modified project”). The Modified Action would represent an increase of 34,103 gsf of residential floor area (34 DU) over the Proposed Action, including 50 additional affordable units and 16 fewer market-rate units.

This chapter described the proposed modification and examines whether the changes would result in significant adverse environmental impacts for each technical area presented in the Final Environmental Impact Statement (FEIS). Where appropriate, the analyses compare the effects of the Modified Action to those of the Proposed Action. Additional information as referenced in this chapter is provided in Appendix J, “Potential Modifications to the Proposed Project.”

B. PRINCIPAL CONCLUSIONS

The Modified Action would facilitate the development of 34 DU over the Proposed Action, including 50 additional affordable units and 16 fewer market-rate units. As discussed in more detail below, the Modified Action would result in the same significant adverse impacts as the Proposed Action. The identified significant adverse community facilities, open space, traffic, transit, and construction-related traffic impacts would be mitigated to the same extent as under the Proposed Action. As the Modified Action would redistribute the affordable residential units throughout the entirety of the project site, rather than just the waterfront parcel as under the Proposed Action, the Modified Action would trigger the identified child care impact earlier in the project’s development. With the Modified Action, the hazardous

¹ This chapter is new to the FEIS.

material (E) designation would be the same as for the Proposed Action and the air quality (E) designation for Buildings 1 would still require a restriction on fuel type (natural gas) with controlled low NO_x boilers with flue gas recirculation, with different restrictions on stack location and height.

C. DESCRIPTION OF MODIFIED ACTION AND PROPOSED MODIFIED PROJECT

Under the Modified Action, the IHP zoning regulations would be extended to the proposed R7A and R6B zoning districts in addition to the R7-3 zoning district under the Proposed Action, facilitating the development of an additional 34,103 gsf of residential floor area comprised of approximately 34 additional residential units (i.e., 50 additional affordable units and 16 fewer market-rate units). The Modified Action would incorporate a mandatory inclusionary housing requirement, with the development of residential floor area conditioned on the provision of affordable housing based on the standards set forth in the IHP. By adding the proposed R7A and R6B districts to the proposed inclusionary housing-designated area, the Modified Action would require that a minimum of 20 percent of the proposed project's total residential floor area be permanently affordable. The Modified Action would also apply existing provisions of the IHP that allow the option of providing a share of affordable units for moderate- or middle-income households, if an increased share of floor area is made affordable. While the Applicant intends that the proposed affordable units would be provided without public subsidy, the modified proposed text amendment provides that in the event that public funding is used, the CPC, in consultation with the New York City Department of Housing Preservation and Development (HPD), may determine that a share of the units supported by public funding shall not be used to satisfy the IHP requirement. The proposed zoning text amendment for the Modified Action is included in its entirety in Appendix J.

Proposed Modified Project

The Modified Action would increase the allowable residential floor area by approximately 34,103 gsf. This would result in a total development of approximately 1,723 DU (34 more than under the Proposed Action), including 345 affordable units (50 more than under the Proposed Action). The 34 additional dwelling units would result in an additional 79 residents² for the proposed modified project. In addition, under the modified proposal the market-rate and affordable units would be redistributed (within Buildings 1, 4, and 5), to provide affordable housing in all of the proposed buildings. As described in greater detail below, the additional allowable residential floor would be located in Building 1 of the Applicant's development project.

The development program and building design for the Applicant's proposed development project represents the reasonable worst case development scenario (RWCDS) for the Proposed Action. Similarly, the RWCDS for the Modified Action would be the Applicant's proposed modified project. Table 25-1, "Comparison of the Proposed Action and the Modified Action," below, compares the proposed project with the proposed modified project. As indicated in the table, the total commercial, community facility, parking, and open space area would remain the same; an additional 50 affordable DU would be provided, with sixteen fewer market-rate units.

Table 25-2, "Comparison of Market-Rate and Affordable Residential Units by Building," below, compares the number of market-rate and affordable residential units by building under the Proposed Action and under the Modified Action. As indicated in the table, an additional 28 affordable dwelling units would be developed on the upland parcel (along with 28 fewer market-rate DU), and an additional

² Based on the 2010 Census average household size for Queens Community District 1 of 2.34.

22 affordable DU and 12 market-rate DU would be developed in Building 1; the Building 2 and 3 programs would not change.

Table 25-1: Comparison of the Proposed Action and the Modified Action

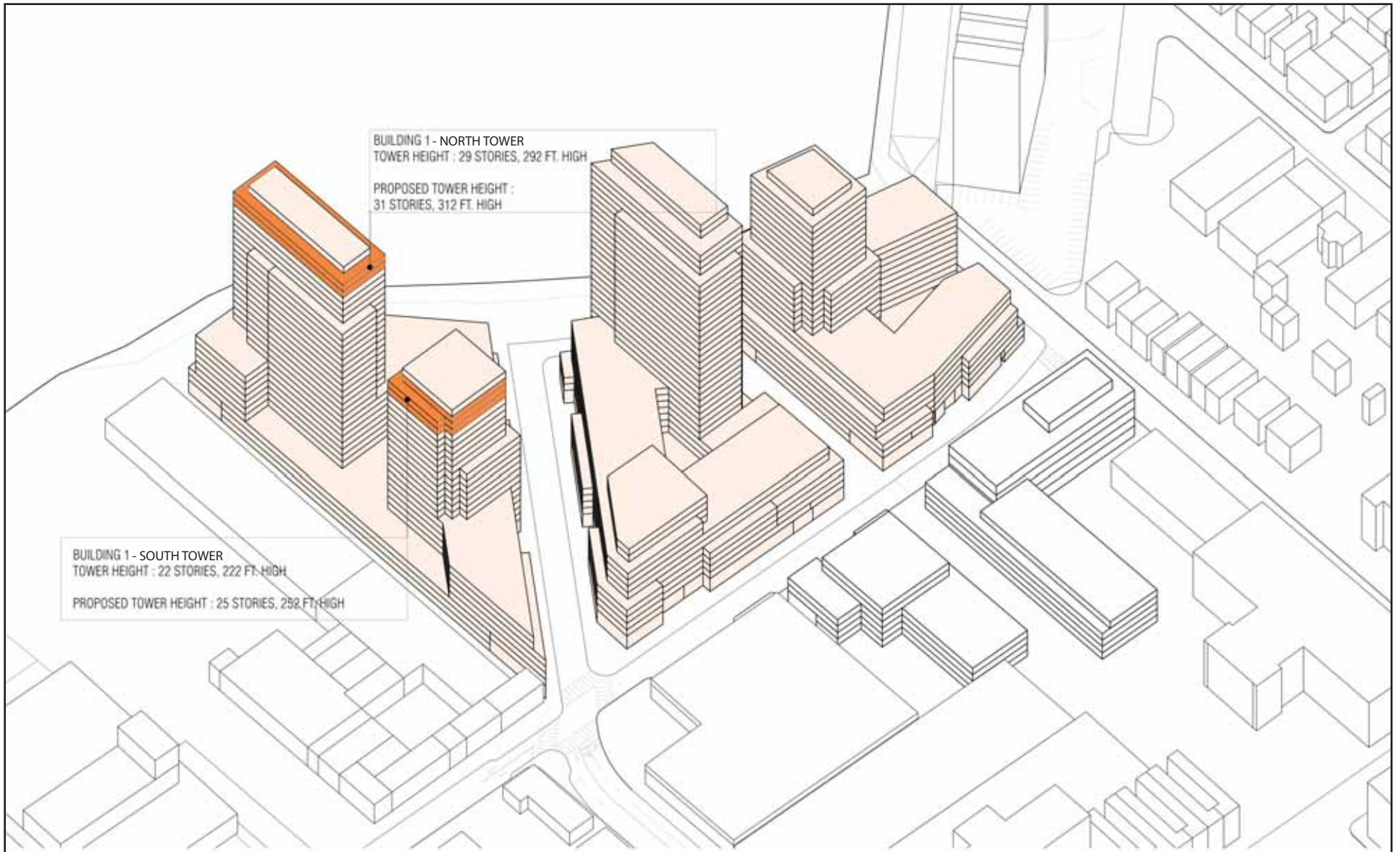
Land Use	Proposed Action	Modified Action	Increment
Residential			
- gsf	1,689,416	1,723,519	+ 34,103
- total DU	1,689	1,723	+ 34
- market-rate DU	1,394	1,378	- 16
- affordable DU	295	345	+ 50
Commercial	109,470	109,470	0
Community Facility (school)	62,248	62,248	0
Parking			
- gsf	298,086	298,086	0
- spaces	900	900	0
Open Space	83,846 (1.92 acres)	83,846 (1.92 acres)	0

Table 25-2: Comparison of Market-Rate and Affordable Residential Units by Building—Proposed Action and Modified Action

Building	Affordable			Market-Rate			Total Residential		
	Proposed Action	Modified Action	Increment	Proposed Action	Modified Action	Increment	Proposed Action	Modified Action	Increment
<i>Waterfront Parcel</i>									
Building 1	112 DU (112,494 gsf)	134 DU (134,655 gsf)	+ 22 DU (+22,161 gsf)	527 DU (526,674 gsf)	539 DU (538,617 gsf)	+ 12 DU (+11,943 gsf)	639 DU (639,168 gsf)	673 DU (673,271 gsf)	+ 34 DU (+34,103 gsf)
Building 2	114 DU (113,593 gsf)	114 DU (113,593 gsf)	No Change	454 DU (454,370 gsf)	454 DU (454,370 gsf)	No Change	568 DU (567,963 gsf)	568 DU (567,963 gsf)	No Change
Building 3	69 DU (68,756 gsf)	69 DU (68,756 gsf)	No Change	275 DU (275,025 gsf)	275 DU (275,025 gsf)	No Change	344 DU (343,781 gsf)	344 DU (343,781 gsf)	No Change
<i>Upland Parcel</i>									
Buildings 4 and 5	0 DU (0 gsf)	28 DU (27,701 gsf)	+ 28 DU (+27,701 gsf)	138 DU (138,504 gsf)	110 DU (110,803 gsf)	- 28 DU (-27,701 gsf)	138 DU (138,504 gsf)	138 DU (138,504 gsf)	No Change

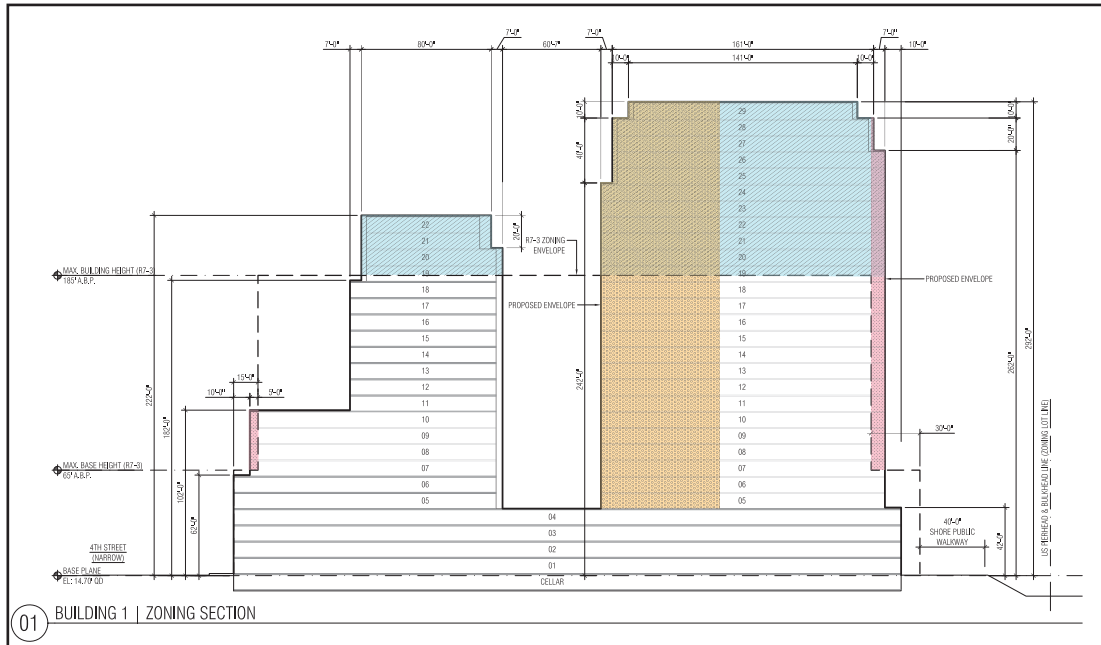
As also indicated in Table 25-2, the residential floor area of Buildings 2, 3, 4, and 5 would remain as under the Proposed Action; Building 1 would increase its residential floor area by 34,103 gsf. The additional Building 1 floor area would result in an increase in Building 1's northern tower by approximately twenty feet (from 292 feet to 312 feet) and an increase in Building 1's southern tower by approximately thirty feet (from 222 feet to 252 feet), as shown in Figure 25-1. Figure 25-2 compares the requested special permit waivers for Building 1 under the Proposed Action and under the Modified Action.

Although the Modified Action would increase the allowable residential floor area by approximately 34,103 gsf, the overall construction phasing and schedule for the Applicant's proposed modified project would remain as described in Chapter 19, "Construction Impacts." The increased floor area, which would be constructed during the final construction phase and increase the two towers of Building 1 by approximately two and three stories respectively, would not alter the project's construction period or phasing appreciably.



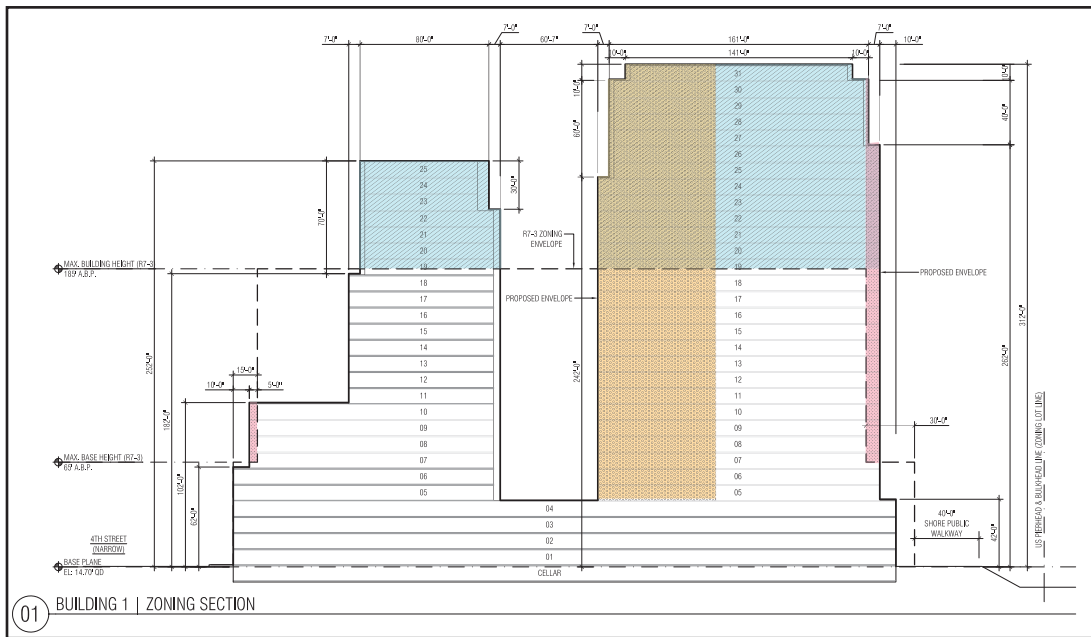
Source: Studio V

Building 1 Waivers - Proposed Project vs. Proposed Modified Project



Source: Studio V

Proposed Project



Source: Studio V

Proposed Modified Project

Legend

Waterfront Special Permit Waivers

- Building exceeds maximum building height
- Gross area exceeds maximum residential tower size
- Building exceeds maximum base height without providing a setback
- Length of wall exceeding maximum length of wall facing shoreline

D. ANALYSES

As described above, the Modified Action would result in an increase of 34,103 gsf of residential floor area (34 DU). The Modified Action would not change the overall proposed land uses, the building footprints, or the construction schedule presented in other chapters of this FEIS, and, therefore, no additional analyses are required for historic and cultural resources; natural resources; hazardous materials; or construction. The assessment below focuses on the following environmental analyses that could be affected by the proposed modifications to the Astoria Cove project: land use, zoning, and public policy; socioeconomic conditions; community facilities (child care, public schools, and libraries); open space; shadows; urban design and visual resources; water and sewer infrastructure; energy; transportation (traffic, transit, pedestrians, and parking); air quality (mobile source and stationary source); greenhouse gas; noise; public health; and neighborhood character.

Land Use, Zoning, and Public Policy

Neither the Proposed Action nor the Modified Action would result in significant adverse impacts to land use, zoning, and public policy. The Modified Action would result in an additional 34,103 gsf of residential development compared with the Proposed Action, including 50 additional affordable residential units and 16 fewer market-rate units. The Modified Action would not affect the overall land uses within the project site, and the additional development would be consistent with the surrounding area. Furthermore, the Modified Action would support the goals of the Proposed Action, by providing additional opportunities for new residential development in the area.

The Modified Action's extension of the IHP to the R7A and R6B portions of the project site would further support the City's goal to increase the supply of housing in the City, including affordable housing, in order to support future population growth, as outlined in PlaNYC and Housing New York (the Mayor's ten-year affordable housing strategy, issued on May 5, 2014). As noted above, the Modified Action would result in a greater number of affordable residential units, thereby resulting in a population with a more varied mix of incomes. At the same time, the Modified Action would result in slightly higher density overall, compared to the Proposed Action, resulting in 2.2 percent more incremental dwelling units. The Modified Action and resultant proposed modified project would be compatible with City-wide public initiatives that aim toward increasing the supply of housing in the City, reclaiming underutilized industrial land, and expanding access to affordable housing.

Socioeconomic Conditions

The effects of the Modified Action on indirect residential displacement, direct and indirect business displacement, and specific industries would be similar to those described for the Proposed Action (i.e., no significant adverse impact), although the Modified Action would have the added benefit of introducing 50 additional affordable DU. The Modified Action would result in the same direct business displacement as the Proposed Action and would have no significant adverse impacts due to direct business displacement. The Modified Action would facilitate the development of 50 additional affordable units and a decrease in the number of market-rate units by 16, as compared to the Proposed Action (for a net increase in residential density of 34 DU). While this would represent a slight net increase of approximately 79 new residents, as compared to the Proposed Action, this increase, together with the increased population associated with the Proposed Action, would be in keeping with existing trends toward higher density residential development.

Similar to the Proposed Action, the Modified Action would help to further ensure more housing opportunities for low-income residents and maintain a more diverse demographic composition within the study area. In addition, there is not a substantial population in the study area potentially at risk of indirect

residential displacement. Therefore, the Modified Action would not result in any significant adverse impacts due to indirect residential displacement.

Community Facilities

Public Schools

Elementary Schools

As noted above, the Modified Action would generate an estimated 34 additional residential units, for a net increment of 1,557 DU over the No-Action condition. In applying the elementary school generation rates presented in Table 6-1a of the *CEQR Technical Manual* (0.28, in the borough of Queens), the Modified Action would generate a net increment of approximately 436 elementary school students, ten additional elementary school students over the Proposed Action. As under the proposed project, the proposed modified project would include the provision of a site for a 456-seat elementary school, to be developed in the final (fourth) phase of the project's construction.

As shown in Table 25-3, "Future with Modified Action Public Elementary, Intermediate, and High School Enrollment, Capacity, and Utilization," under the Modified Action, the 2023 With-Action utilization of elementary schools within Queens Community School District (CSD) 30, Sub-district 3 would decrease from 120.9 percent in the No-Action condition to 118.6 percent (compared to a decrease to 118.4 percent under the Proposed Action). As under the Proposed Action, the Modified Action would not result in a significant adverse elementary school impact in the 2023 Build Year.

Table 25-3: 2023 Future with Modified Action Public Elementary, Intermediate, and High School Enrollment, Capacity, and Utilization

Study Area	Projected No-Action Enrollment	Students Introduced by the Proposed Modified Project	Total Enrollment with the Proposed Modified Project	Capacity ¹	Available Seats	Utilization (%)
<i>Elementary Schools</i>						
CSD 30, Sub-district 3	5,479	436	5,915	4,989	-926	118.6
<i>Intermediate Schools</i>						
CSD 30, Sub-district 3	2,677	187	2,864	2,981	117	96.1
<i>High Schools</i>						
Queens	95,839	218	96,057	70,157	-25,900	136.9

Notes:

¹ Capacity includes the 456-seat public elementary school as part of the proposed project.

As the building programs for Buildings 2, 3, 4, and 5 (the first three phases of the project's development) would not change under the proposed modified program (see Table 25-2), a potential temporary elementary school impact could occur upon their completion and occupancy, prior to completion of the Phase 4 elementary school, as under the proposed project. A discussion of mitigation measures for the temporary impact on elementary schools under the Modified Action is presented in the "Mitigation" section at the end of this chapter.

Intermediate Schools

Based on the intermediate school generation rates presented in Table 6-1a of the *CEQR Technical Manual* (0.12 in the borough of Queens) the incremental 1,557 residential DU facilitated by the Modified Action would generate an estimated 187 intermediate school students, four additional intermediate school students over the Proposed Action. As shown in Table 25-3, under the Modified Action, the 2023 With-

Action utilization of intermediate schools within Queens Community School District (CSD) 30, Sub-district 3 would increase from 89.8 percent in the No-Action condition to 96.1 percent (compared to an increase to 95.9 percent under the Proposed Action). As under the Proposed Action, the Modified Action would not result in a significant adverse intermediate school impact.

High Schools

The Modified Action would generate approximately 218 high school students over the No-Action condition (based on the CEQR high school generation rate of 0.14 in Queens). This represents an additional five high school students over the Proposed Action. As shown in Table 25-3, under the Modified Action, the 2023 With-Action utilization of Queens high schools would increase from 136.6 percent in the No-Action condition to 136.9 percent, as under the Proposed Action. As the Modified Action result in a 0.3 percent increase over the No-Action condition high school utilization rate, below the CEQR impact threshold of five percent, no significant adverse high school impact would result.

Child Care Centers

The Modified Action would facilitate the development of 345 affordable DU, 50 more units than under the Proposed Action. Based on the child care generation rates presented in Table 6-1b of the *CEQR Technical Manual* (0.14 in the borough of Queens), the Modified Action would generate 48 children under age six eligible for publicly fund child care. Table 25-4, “Future with Modified Action Publicly Funded Child Care Facility Enrollment, Capacity, and Utilization,” below, compares the 2023 No-Action and With-Action child care enrollment, capacities, and utilization rates. As indicated in the table, the Modified Action would result in a 23.0 percent increase in child care utilization, for a 163.6 percent utilization rate (compared to a 19.6 percent increase to 160.3 percent under the Proposed Action). As under the Proposed Action, the increase in the child care center utilization rate under the Modified Action would exceed five percent (the CEQR impact threshold). Therefore, a significant adverse child care impact would result.

Table 25-4: 2023 Future with Modified Action Publicly Funded Child Care Facility Enrollment, Capacity, and Utilization

	Budget Capacity	Enrollment	Available Slots	Utilization (%)
2023 Future Without the Modified Action	209	294	-85	140.7
With-Action Increment	0	48		
2023 Future With the Modified Action	209	342	-133	163.6

As presented in Table 25-2, above, the Modified Action would change the distribution of the affordable housing units throughout the project site. Based on the proposed modified project’s distribution of affordable units, which includes affordable housing on the upland parcel, the significant adverse child care impact would occur upon completion of Building 3 in the second phase of the project’s construction; under the Proposed Action, the significant adverse child care impact would occur upon completion of Building 2 in the third phase of the project’s construction. A discussion of mitigation measures for the impact on child care facilities under the Modified Action is presented in the “Mitigation” section at the end of this chapter.

Libraries

Neither the Modified Action nor the Proposed Action would result in significant adverse library impacts. As discussed in Chapter 4, “Community Facilities,” the study area is currently served by one public library branch: the Astoria Library, located at 14-01 Astoria Boulevard. Under existing conditions, the

Astoria Library has combined holdings of 6,802 items and serves approximately 44,807 residents, for a holdings-to-residents ratio of 0.15. Under the No-Action condition, planned or anticipated development projects are expected to introduce approximately 9,977 residents in the library study area, reducing the holding-to-residents ratio to 0.12.

The Modified Action's incremental 1,557 DU would generate approximately 3,643 residents (compared to 3,564 under the Proposed Action), increasing the library study area population by approximately 6.6 percent (compared to a 6.5 percent increase under the Proposed Action. However, the library holdings per resident ratio would remain 0.12 under the Modified Action, the same as under No-Action condition. Therefore, while the Astoria Library study area population would increase, the increase would not be expected to impair the delivery of library services. As under the Proposed Action, the Modified Action would result in significant adverse library impacts.

Health Care Facilities and Police and Fire Protection Services

As under the Proposed Action, the Modified Action would not result in the creation of a sizeable new neighborhood where none existed before, and therefore, pursuant to CEQR, no significant adverse impacts on health care facilities or police and fire protection services are anticipated.

Open Space

The Modified Action, like the Proposed Action, would result in a significant adverse active open space impact upon completion and occupancy of Building 2 (in year 2021, per the anticipated construction schedule).

Table 25-5, "Quantitative Analysis of Publicly Accessible Open Space Resources under the Modified Action," compares the open space ratios under the Modified Action and No-Action conditions. As indicated in the table, in the future with the Modified Action, the total open space ratio would decrease by 10.1 percent to 2.67 acres per 1,000 residents (compared a 9.8 percent decrease to 2.68 acres under the Proposed Action); the active open space ratio would decrease by 11.5 percent to 0.96 acres per 1,000 residents (compared to an 11.2 percent decrease to 0.96 acres under the Proposed Action); and the passive open space ratio would decrease by 9.2 percent to 1.71 acres per 1,000 residents (compare to a nine percent decrease to 1.72 acres under the Proposed Action).

Table 25-5: Quantitative Analysis of Publicly Accessible Open Space Resources under the Modified Action

Scenario	Residential Population	Open Space Acreage			Open Space Ratios (Acres per 1,000 Residents)			Open Space Planning Goal (Acres per 1,000 Resident)			Citywide Community District Median Open Space Ratio (Acres per 1,000 Resident)		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Future without the Modified Action	26,156	77.69	28.33	49.36	2.97	1.08	1.89	2.5	2.0	0.5	1.5	1.2 ¹	0.3 ¹
Future with the Modified Action	29,799	79.61	28.57	51.04	2.67	0.96	1.71						
Increment/Percent Change	3,643	1.92	0.24	1.68	-10.1%	-11.5%	-9.2%						

Notes:

¹ Based on planning goal of a balance of 80 percent active open space and 20 percent passive open space.

As under the Proposed Action, while the total and passive open space ratios would decrease by more than five percent under the Modified Action, the ratios (2.67 and 0.96 acres per 1,000 residents, respectively)

would continue to be above the City’s optimal planning goals of 2.5 acres and 0.5 acres per 1,000 residents, respectively. Therefore, the open space study area residents would continue to be adequately served by the amount of total and passive open space in the future with the Modified Action, and no significant adverse impact to total or passive open space would result.

The Modified Action would result in decrease of over five percent in the active open space ratio from the No-Action condition, decreasing the future active open space ratio to 0.96 acres per 1,000 residents. As the Modified Action would decrease the active open space ratio by more than five percent and the future active open space ratio would be below the City’s optimal planning goal of 2.0 acres of active open space per 1,000 residents, as under the Proposed Action, the Modified Action would result in a significant adverse active open space impact.

As the building programs for Buildings 2, 3, 4, and 5 (the first three phases of the project’s development) would not change under the Modified Action, the timing of the active open space impact would similarly occur upon completion and occupancy of Building 2 (Phase 3). A discussion of mitigation measures for the impact on active open space under the Modified Action is presented in the “Mitigation” section as the end of this chapter.

Shadows

Neither the Proposed Action nor the Modified Action would result in significant adverse shadows impacts. The Modified Action would only affect the building height of Building 1 on the westernmost portion of the project site: Building 1’s northern tower would increase by approximately twenty feet (from 292 feet to 312 feet); and Building 1’s southern tower would increase by approximately thirty feet (from 222 feet to 252 feet). As shown in Table 25-6, “Incremental Shadow Durations,” below, the proposed modified project would increase shadow coverage and duration at Whitey Ford Field on March 21/September 21, May 6/August 6, and June 21 by six minutes, seven minutes, and seven minutes, respectively, and the East River on May 6/August 6 and June 21 by 23 minutes and 15 minutes, respectively, as compared to the Proposed Action (see Figures 25-3 through 25-6).

Table 25-6: Incremental Shadow Durations – Proposed Project vs. Proposed Modified Project

Resource	March 21/September 21 7:36 AM- 4:29 PM			May 6/August 6 6:27 AM- 5:18 PM			June 21 5:57 AM- 6:01 PM			December 21 8:51 AM- 2:53 PM		
	Proposed	Proposed Modified	Difference	Proposed	Proposed Modified	Difference	Proposed	Proposed Modified	Difference	Proposed	Proposed Modified	Difference
Whitey Ford Field	---	7:36 AM-7:42 AM (6m)	6m	6:27 AM-6:57 AM (30m)	6:27 AM-7:04 AM (37m)	7m	5:57 AM-6:41 AM (44m)	5:57 AM-6:48 AM (51m)	7m	---	---	---
Astoria Park	---	---	---	---	---	---	---	---	---	2:33 PM-2:53 PM (20m)	2:33 PM-2:53 PM (20m)	0m
East River	7:36 AM-4:29 PM (8h 53m)	7:36 AM-4:29 PM (8h 53m)	0m	6:27 AM-8:23 AM (1h 56m) 9:00 AM-5:18 PM (8h 18m)	6:27 AM-8:31 AM (2h 4m) 8:45 AM-5:18 PM (8h 33m)	8m 15m	5:57 AM-6:05 AM (8m) 7:40 AM-8:12 AM (32m) 12:31 PM- 6:01 PM (5h 20m)	5:57 AM-6:12 AM (15m) 7:40 AM-8:22 AM (40m) 12:31 PM-6:01 PM (5h 20m)	7m 8m 0m	8:51 AM-2:53 PM (6h 2m)	8:51 AM-2:53 PM (6h 2m)	0m



8:00 AM



10:00 AM



2:00 PM



4:00 PM

Project Site
 Incremental Shadow – Proposed Project
 Additional Incremental Shadow – Proposed Modified Project
 Open Space

Astoria Cove

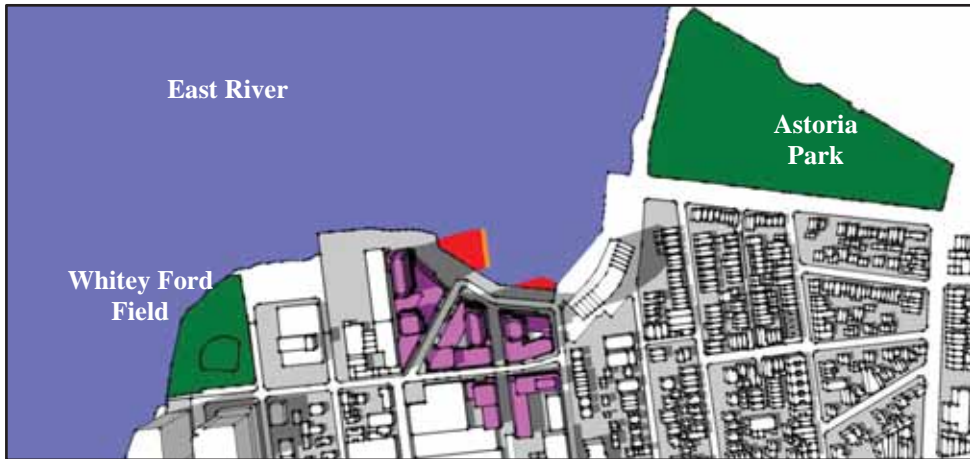
Figure 25-3
Incremental Shadows on March 21/September 21—Proposed Project vs. Proposed Modified Project



6:45 AM



12:00 PM



3:00 PM

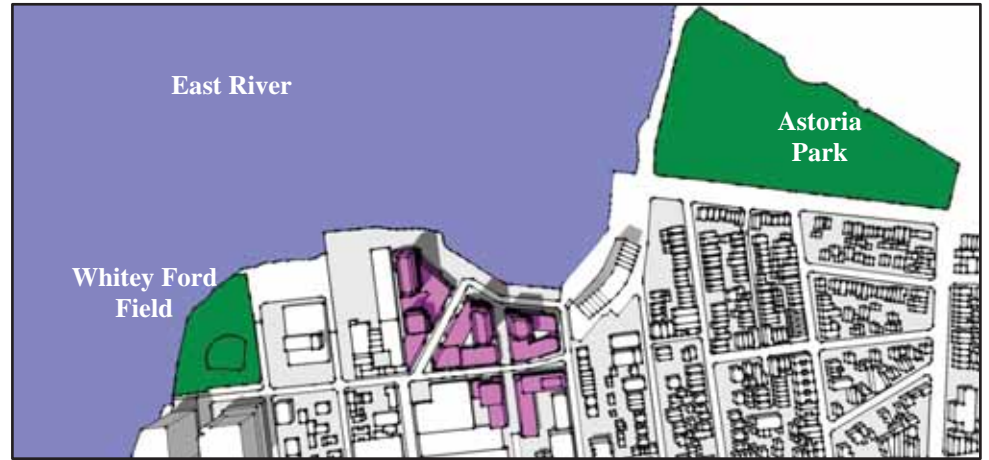


5:00 PM





6:15 AM



1:00 PM



3:30 PM



6:00 PM

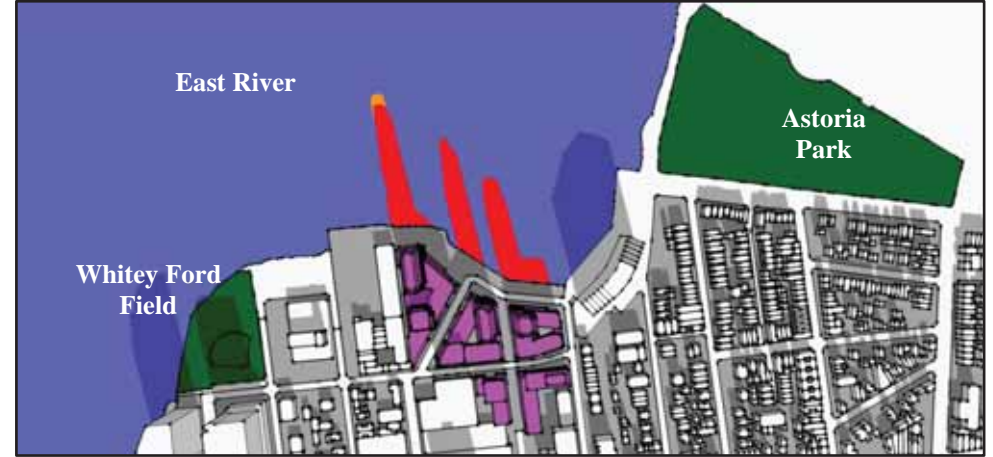


Astoria Cove

Figure 25-5
Incremental Shadows on June 21—Proposed Project vs. Proposed Modified Project



9:00 AM



11:00 AM



1:00 PM



2:45 PM

Project Site
 Incremental Shadow – Proposed Project
 Additional Incremental Shadow – Proposed Modified Project
 Open Space

Astoria Cove

Figure 25-6
Incremental Shadows on December 21—Proposed Project vs. Proposed Modified Project

While the proposed modifications to height would result in increases to shadow coverage and duration on both Whitey Ford Field and the East River on one or more analysis day, these increases would be minimal and would not substantially reduce direct sunlight on any sunlight-sensitive resource of concern on any analysis day.

The Modified Action would result in a maximum increase of approximately seven minutes of incremental shadow duration on Whitey Ford Field on the May 6/August 6 and June 21 analysis days. In addition, unlike under the Proposed Action, the proposed modified project would cast incremental shadows on Whitey Ford Field on the March 21/September 21 analysis day. As under the Proposed Action, the shadow coverage would be limited to a relatively small area of the field and would only occur in the early morning shortly after sunrise; the maximum incremental shadow duration would be 51 minutes on the June 21 analysis day. Therefore, incremental shadows cast by the proposed modified project would not be large enough in extent or long enough in duration to result in significant adverse shadow impacts. Similar to the proposed project, the proposed modified project would also not affect the utilization or enjoyment of any sunlight-sensitive resources and all open spaces would continue to receive the minimum of four hours of direct sunlight throughout the growing season.

As shown in the table above, both the proposed project and the proposed modified project would cast incremental shadows on the East River on all four analysis days. Incremental shadows on this sunlight-sensitive resource on the March 21/September 21 and December 21 analysis days would be identical under the Proposed Action and the Modified Action. On the May 6/August 6 analysis day, the proposed modified project would result in a total of 23 additional minutes of incremental shadows on the East River, a 3.7 percent increase over the incremental shadow period under the Proposed Action. On the June 21 analysis day, the proposed modified project would result in a total of 15 additional minutes of incremental shadows on the East River, a 4.2 percent increase over the incremental shadow period under the Proposed Action. As shown in Figures 25-4 and 25-5, only small portions of the East River and Pot Cove located immediately north of the project site would be cast in shade on these two analysis days. As such, the incremental shadows cast by the proposed modified project would not result in a significant loss of sunlight on this sunlight sensitive resource, and no significant adverse shadow impacts on the East River would result.

Urban Design and Visual Resource

The Modified Action would result in significant changes to the pedestrian realm, including the construction of new mixed-use buildings and roadways, reactivation of the streetscape with ground floor retail, improvements to existing roadways and sidewalks, and the creation of new waterfront open space. By applying the IHP on the R7A and R6B portions of the project site, in addition to the proposed R7-3 zoning district, 34,103 gsf of additional residential floor area would be constructed, as compared to the Proposed Action. As discussed above, the incremental floor area increase would only affect Building 1, on the waterfront parcel. The proposed buildings on the upland parcel, as well as Buildings 2 and 3 on the waterfront parcel would remain as under the Proposed Action.

Under the Modified Action, Building 1's northern tower would increase by approximately twenty feet (from 292 feet to 312 feet); and Building 1's southern tower would increase by approximately thirty feet (from 222 feet to 252 feet). The increase in the maximum Building 1 height would be approximately 7 percent that the maximum Building 1 height under the Proposed Action and would not adversely affect the pedestrian experience in the study area. Figures 25-7 through 25-10 illustrate the effect of the modified building heights on views from Whitey Ford Field, the base of Astoria Park, the Astoria Park Esplanade, and the East River Esplanade, respectively. As indicated in the figures, the additional stories on the Building 1 towers would not block any visual resources that are visible from the surrounding area

With-Action View from Whitey Ford Field - Proposed Project vs. Proposed Modified Project



Proposed Project



Proposed Modified Project

With-Action View Southwest from Shore Blvd & Astoria Park
- Proposed Project vs. Proposed Modified Project



Proposed Project



Proposed Modified Project

With-Action View from Astoria Park Explanade
- Proposed Project vs. Proposed Modified Project



Proposed Project



Proposed Modified Project

With-Action View from East River Esplanade at East 102nd Street
- Proposed Project vs. Proposed Modified Project



Proposed Project



Proposed Modified Project

under existing conditions. At locations more proximate to the project site, the minimal increase in Building 1's height would be imperceptible.

As the building bulk changes under the Modified Action would be limited to the Building 1 towers, the anticipated wind conditions at the northeast corner of Building 3 (where the highest pedestrian wind conditions are predicted) would remain unchanged, and no significant adverse pedestrian wind impacts would result.

Water and Sewer Infrastructure

Water Supply

The Modified Action would facilitate development at a higher density than under the Proposed Action, and therefore would result in somewhat greater water demand and wastewater generation. In total, the proposed modified project would have a total water demand of 463,207 gallons per day (gpd), resulting in a net increase of approximately 346,567 gpd over the No-Action condition. This compares to a total water usage of 455,251 gpd and a net increase of 338,611 gpd under the Proposed Action. As under the Proposed Action, incremental water demand from the proposed modified project would represent an increase of less than 0.1 percent from the City's water supply demand, the minor incremental demand resulting from the Modified Action would not be large enough to significantly affect the ability of the City's water system to deliver water.

Wastewater

The proposed modified project would have a total wastewater generation of 434,015 gallons per day, resulting in a net increase of approximately 350,474 gpd over the No-Action condition. This compares to a total wastewater generation of 426,059 gpd and a net increase of 342,518 gpd under the Proposed Action. With an existing average dry weather flow of 110 million gallons per day (mgd) to the Bowery Bay Water Pollution Control Plant (WPCP) and the addition of approximately 0.43 mgd sanitary sewage in the future with the Modified Action, the Bowery Bay WPCP would continue to have ample reserve capacity with this anticipated new demand, and no significant adverse impact would result.

Stormwater and Drainage Management

The amount of impervious surface area on the project site would not change under the proposed modified project, as compared to the proposed project. As such, it is anticipated that the same amount of stormwater would be generated on the project site. Stormwater generated on the project site would be conveyed to the proposed stormwater outfalls at the northern termini of 4th and 9th Streets, as under the Proposed Action and therefore would not contribute to combined sewer system volumes in the affected subcatchment areas. In addition, as under the Proposed Action, the proposed modified project would include BMP measures and infrastructure improvements (refer to Figure 11-5, "Stormwater Best Management Practices Concept Plan," in Chapter 11, "Water and Sewer Infrastructure"). Therefore, it is concluded that the Modified Action would not result in significant adverse impacts to stormwater and drainage management.

Energy

The Modified Action would facilitate development at a slightly higher density than under the Proposed Action, and therefore would generate a somewhat greater energy demand. It is estimated that the proposed modified project would use approximately 257.7 billion British Thermal Units (BTUs) of energy annually, a net increase of 128.6 BTUs over the No-Action condition. In comparison, the

Proposed Action would consume 253.3 BTUs of energy annually, a net increase of 124.3 BTUs over the No-Action condition. The anticipated annual energy demand under the Modified Action would represent approximately 0.039 percent of Con Edison’s annual consumption in the New York City and Westchester County service area, and therefore would be considered a negligible change. As under the Proposed Action, the Modified Action would not have any significant adverse impacts on energy.

Transportation

The 34 additional residential units under the Modified Action and their corresponding 79 additional residents would increase transportation demand, as compared to the Proposed Action. Table 25-7, “Comparison of Weekday Peak Hour Incremental Person Trips by Mode,” below, compares the incremental trips that would be generated by the proposed project (by mode) and the proposed modified project. As indicated in Table 25-7, the proposed modified project would generate 2,242, 3,286, and 3,070 incremental person trips during the weekday AM, midday, and PM peak hours, an increment of 26, 14, and 30 person trips during these respective peak hours, as compared to the Proposed Action.

Table 25-7: Comparison of Weekday Peak Hour Incremental Person Trips by Mode—Proposed Action vs. Modified Action

Scenario	Auto		Taxi		Subway		Bus		School Bus		Walk/Other		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM															
Proposed Action	181	362	7	11	154	551	29	48	20	0	588	265	979	1,237	2,216
Modified Action	182	368	7	11	156	563	29	49	20	0	589	268	983	1,259	2,242
Difference	1	6	0	0	2	12	0	1	0	0	1	3	4	22	26
Midday															
Proposed Action	190	190	39	39	242	242	90	90	0	0	1,075	1,075	1,636	1,636	3,272
Modified Action	192	192	39	39	246	246	90	90	0	0	1,076	1,076	1,643	1,643	3,286
Difference	2	2	0	0	4	4	0	0	0	0	1	1	7	7	14
PM															
Proposed Action	409	293	24	22	519	304	72	63	0	0	663	671	1,687	1,353	3,040
Modified Action	415	297	24	22	530	309	72	63	0	0	665	673	1,706	1,364	3,070
Difference	6	4	0	0	11	5	0	0	0	0	2	2	19	11	30

Traffic

Both the Proposed Action and the Modified Action would result in significant adverse traffic impacts. While the Modified Action will generate additional vehicle trips (as presented in Table 25-7, above), no new intersections would experience significant adverse impacts. While the Modified Action would slightly worsen future traffic conditions, as compared to the Proposed Action, no additional significant adverse impacts would result.

As indicated in Table 25-8, “Comparison of Weekday Peak Hour Incremental Vehicle Trips by Mode,” the proposed modified project would result in eight, four, and ten additional vehicle trips in the weekday

AM, midday, and PM peak hours, respectively. This would represent a maximum increase of less than two percent in any peak hour.

Table 25-8: Comparison of Weekday Peak Hour Incremental Vehicle Trips by Mode—Proposed Action vs. Modified Action

	Auto		Taxi (Balanced)		Shuttle/ School Bus		Truck		Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM											
Proposed Action	139	333	11	11	14	14	5	7	169	365	534
Modified Action	140	338	11	11	14	14	6	8	171	371	542
Difference	1	5	0	0	0	0	1	1	2	6	8
Midday											
Proposed Action	141	137	40	40	0	-1	4	4	185	180	365
Modified Action	143	139	40	40	0	-1	4	4	187	182	369
Difference	2	2	0	0	0	0	0	0	2	2	4
PM											
Proposed Action	342	225	24	24	7	10	0	1	373	260	633
Modified Action	348	229	24	24	7	10	0	1	379	264	643
Difference	6	4	0	0	0	0	0	0	6	4	10

A trip assignment and analysis was conducted to determine whether any intersection where no significant adverse impacts were identified for the proposed project (under either the RWCDS With-Action condition or the Alternate With-Action condition) would experience a significant adverse impact not previously identified due to the additional vehicle trips generated by the proposed modified development. Detailed future With-Action LOS condition tables for the study area intersections under the Modified Action are included in Appendix J. As indicated in the tables, while the v/c ratios and delays would slightly worsen at some study area intersections, the less than two percent increase in total project-generated vehicle trips under the Modified Action would not result in any additional significant adverse impacts. Table 25-9, “Summary of Weekday Impact Locations under the Modified Action,” summarizes the intersections that would experience significant adverse impacts under the Modified Action in the RWCDS With-Action condition and/or the Alternate With-Action condition.

Table 25-9: Summary of Weekday Impact Locations under the Modified Action

Intersection	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour	
	RWCDS With-Action Condition	Alternate With-Action Condition	RWCDS With-Action Condition	Alternate With-Action Condition	RWCDS With-Action Condition	Alternate With-Action Condition
1. 26 th Ave. & 4 th St.						
A. 26 th Ave. & 9 th St.						
2. 27 th Ave. & 4 th St.					X	
3. 27 th Ave. & 8 th St.	X	X	X	X	X	X
4. 27 th Ave. & 12 th St.	X	X		X	X	X
5. 27 th Ave. & 14 th St.	X	X				X
6. 27 th Ave. & 18 th St.						
7. Astoria Blvd. & 21 st St.	X	X	X	X	X	X
8. Astoria Blvd. & 23 rd St.	X	X			X	
9. Astoria Blvd. & Crescent St.	X	X	X	X	X	X
10. Astoria Blvd. & 27 th St.	X					
11. Astoria Blvd. & 28 th St.						
12. Astoria Blvd. & 29 th St.	X	X	X		X	X
13. Astoria Blvd. & 30 th St.						
14. Astoria Blvd. & 31 st St.	X	X		X		X
15. Hoyt Ave. S./Astoria Blvd. & 33 rd St.	X	X	X	X	X	X
16. Hoyt Ave. N. & 29 th St.	X	X				
17. Hoyt Ave. N. & 31 st St.	X				X	
18. Astoria Blvd. N. & 32 nd St.	X	X	X		X	X
19. Astoria Blvd. & 8 th St.					X	
20. 30 th Ave. & 14 th St.	X	X				
21. 30 th Ave. & 21 st St.	X	X				
22. Vernon Blvd. & Welling Court/8 th St.	X	X	X	X	X	X
23. Astoria Blvd. & 18 th St.		X				
24. Hoyt Ave. N. & 21 st St.	X	X			X	X
25. Hoyt Ave. S./Astoria Park S. & 21 st St.	X	X			X	X
26. 27 th Ave. & 9 th St.	X	X	X		X	X
27. Vernon Blvd. & 31 st Ave.	X				X	
28. Vernon Blvd. & Broadway/11 th St.	X	X	X	X	X	X
29. 31 st Ave. & 21 st St.						

Notes:

X – denotes potential for significant adverse impact.

Transit

Both the Proposed Action and the Modified Action would result in significant adverse subway station impacts and significant adverse bus line haul impacts. While the Modified Action would slightly worsen future conditions, as compared to the Proposed Action, no additional significant adverse impacts would result.

Subway

As shown in Table 25-7, subway peak hour trips would increase by eight to 16 trips in any peak hour under the Modified Action, as compared to the Proposed Action, an approximately two percent increase. As indicated in Tables 25-10, “Comparison of With-Action Subway Station LOS,” the minor increase in

action-generated subway trips would not result in significant adverse impacts to any subway station element where significant adverse impacts were not previously under the Proposed Action.

Table 25-10: Comparison of With-Action Subway Station LOS—Proposed Action and Modified Action

Subway Station Element	Peak 15-Minute Increment				V/C Ratio		LOS		WIT (in.)	
	Proposed Action		Modified Action		Proposed Action	Modified Action	Proposed Action	Modified Action	Proposed Action	Modified Action
	In/Up	Out/Down	In/Up	Out/Down						
<i>AM Peak Hour</i>										
Stair S3-M3	134	39	137	39	1.13	1.13	D	D	7	7
Stair P1-P2	63	2	65	1	1.22	1.22	D	D	6	6
Stair P5-P6	63	1	65	2	0.94	0.95	C	C	N/A	N/A
NB Fare Array	11	36	11	36	0.21	0.21	A	A		
SB Fare Array	126	3	130	3	1.02	1.02	D	D		
<i>PM Peak Hour</i>										
Stair S3-M3	64	130	66	133	1.42	1.43	E	E	4	4
Stair P3-P4	3	60	3	61	1.07	1.07	D	D	8	8
Stair P7-P8	3	59	3	61	0.92	0.93	C	C	N/A	N/A
NB Fare Array	6	119	6	122	0.59	0.59	B	B		
SB Fare Array	70	11	72	11	0.41	0.41	A	A		

As under the Proposed Action, the additional subway riders per car would be less than five as seen in Table 25-11, “Comparison of With-Action Subway Line Haul,” below, and therefore would not result in a significant adverse subway line haul impact.

Table 25-11: Comparison of With-Action Subway Line Haul—Proposed Action and Modified Action

Route	Passengers per Hour		V/C Ratio		New Riders per Car	
	Proposed Action	Modified Action	Proposed Action	Modified Action	Proposed Action	Modified Action
<i>AM Peak Hour</i>						
F	19,061	19,063	0.87	0.87	0.68	0.69
N	11,224	11,229	0.99	0.99	2.59	2.65
Q	11,128	11,133	1.01	1.01	2.66	2.72
<i>PM Peak Hour</i>						
F	17,957	17,960	0.83	0.83	0.63	0.65
N	7,267	7,271	0.68	0.68	2.58	2.64
Q	6,228	6,232	0.65	0.65	2.89	2.95

Bus

As with the Proposed Action, significant adverse bus line haul impacts on the Q103 bus routes are anticipated with the Modified Action in both the weekday AM and PM peak hours, as shown in Table 25-12, “Comparison of With-Action Bus Line Haul.” The relatively minor increase in action-generated bus

trips would not result in significant adverse impacts to any other bus line where significant adverse impacts were not previously determined under the Proposed Action.

Table 25-12: Comparison of With-Action Bus Line Haul—Proposed Action and Modified Action

Route	Direction	Project Increment		With-Action Available Capacity		Additional Buses Need to Mitigate Impact	
		Proposed Action	Modified Action	Proposed Action	Modified Action	Proposed Action	Modified Action
<i>AM Peak Hour</i>							
Q103	NB	40	40	9	9	0	0
	SB	127	130	-118	-121	3	3
<i>PM Peak Hour</i>							
Q103	NB	127	129	-117	-119	3	3
	SB	81	82	-55	-56	2	2

Pedestrians

Neither the Proposed Action nor the Modified Action would result in significant adverse pedestrian impacts. The Modified Action would result in an additional two to four walk-only trips in any weekday peak hour, a less than 0.5 percent increase over the Proposed Action (refer to Table 25-7). Total walk trips (including transit-linked walk trips) would increase by ten to 19 trips, as compared to the proposed project, a maximum one percent increase. Based on the pedestrian trip assignment and LOS analysis presented in Table 25-13, “Comparison of With-Action Pedestrian Element LOS,” the Modified Action would not result in any significant adverse pedestrian impacts.

Parking

The proposed modified project would include 900 accessory parking spaces that would be distributed throughout the upland and waterfront parcels, as under the Proposed Action. As the proposed modified project would include 34 additional residential units, as compared to the proposed project, parking demand would be slightly higher than under the Proposed Action. Table 25-14, “Proposed Modified Project Parking Accumulation,” presents the 24-hour parking accumulation under the Modified Action. As indicated in the table, the peak parking demand generated by the proposed modified project would be approximately 982 spaces (as compared to 974 spaces under the Proposed Action), and therefore would exceed the parking garage capacity during certain hours of the day.

As presented in Table 25-15, “2023 Parking Conditions—Future with the Modified Action,” on-street parking spaces in the ½-mile parking study area would adequately accommodate peak overflow parking demand generated by the proposed modified project. As under the Proposed Action, the Modified Action would not result in a significant adverse parking impact.

Table 25-13: Comparison of With-Action Pedestrian Element LOS—Proposed Project and Proposed Modified Project

Element	AM						MD						PM					
	15-Minute Increment		Flow Rate/Average Pedestrian Space		LOS		15-Minute Increment		Flow Rate/Average Pedestrian Space		LOS		15-Minute Increment		Flow Rate/Average Pedestrian Space		LOS	
	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project	Proposed Project	Proposed Modified Project
S1	94	95	345.3	344.2	B	B	122	122	270.3	270.3	B	B	95	95	322.2	322.2	B	B
S2	230	234	161.5	158.9	B	B	76	76	479.9	479.9	B	B	231	236	161.7	158.5	B	B
S3	36	37	617.8	606.2	A	A	116	118	252.9	250.8	B	B	64	64	446.3	443.0	A	A
S4	35	36	166.0	164.5	B	B	125	128	58.6	58.1	C	C	63	63	76.7	76.5	C	C
S5	14	15	202.6	201.8	B	B	71	71	95.3	95.3	B	B	38	38	109.8	109.5	B	B
S6	25	25	113.0	113.0	B	B	112	112	47.9	47.9	C	C	68	68	58.4	58.3	C	C
S7	16	17	226.5	226.5	B	B	69	69	140.5	140.5	B	B	44	44	170.8	170.8	B	B
S8	59	60	224.1	224.1	B	B	153	153	93.4	93.4	B	B	109	110	124.7	124.4	B	B
S9	26	26	249.2	249.2	B	B	86	86	179.2	179.2	B	B	49	49	242.3	242.3	B	B
S10	173	176	48.5	48.1	C	C	104	104	77.8	77.8	C	C	171	175	58.4	57.9	C	C
S11	157	160	72.7	72.1	C	C	107	107	92.0	92.0	B	B	160	163	61.8	61.3	C	C
S12	226	232	104.1	101.4	B	B	371	373	63.2	62.8	C	C	282	288	83.8	81.5	C	C
S13	137	140	206.5	202.3	B	B	178	178	158.9	158.9	B	B	174	177	163.0	160.1	B	B
S14	151	152	124.7	123.9	B	B	338	338	55.4	55.4	C	C	257	258	73.1	72.8	C	C
S15	137	140	206.5	202.3	B	B	178	178	158.9	158.9	B	B	174	177	163.0	160.1	B	B
C1			267.8	265.6	A	A			132.7	132.4	A	A			163.6	163.3	A	A
C2			235.9	235.4	A	A			98.6	98.4	A	A			123.7	123.4	A	A
C3			144.7	143.9	A	A			202.2	202.2	A	A			134.7	133.8	A	A
X1	47	47	83.0	83.0	A	A	190	190	27.0	27.0	C	C	119	120	34.4	34.3	C	C

Table 25-14: Proposed Modified Project Parking Accumulation

	Local Retail		Supermarket		Residential ¹		School Staff		Total Accumulation
	In	Out	In	Out	In	Out	In	Out	
12-1 AM	0	0	0	0	7	7	0	0	959
1-2	0	0	0	0	7	7	0	0	959
2-3	0	0	0	0	7	7	0	0	959
3-4	0	0	0	0	7	7	0	0	959
4-5	0	0	0	0	7	7	0	0	959
5-6	0	0	13	9	14	42	0	0	935
6-7	0	0	27	9	35	121	0	0	867
7-8	0	0	36	22	42	124	0	0	799
8-9	2	2	51	39	80	321	17	0	587
9-10	2	1	67	36	72	109	0	0	582
10-11	5	3	72	54	72	125	0	0	549
11-12	5	5	72	72	76	106	0	0	519
12-1 PM	13	13	51	51	100	100	0	0	519
1-2	6	5	80	98	102	104	0	0	500
2-3	6	4	89	107	107	102	0	0	489
3-4	5	5	80	107	153	92	0	0	523
4-5	5	5	89	85	259	150	0	0	636
5-6	7	7	85	79	287	154	0	17	758
6-7	3	6	44	45	202	101	0	0	855
7-8	3	5	18	27	182	81	0	0	945
8-9	2	2	9	18	108	62	0	0	982
9-10	1	1	0	18	35	40	0	0	959
10-11	0	0	0	10	24	23	0	0	950
11-12	0	0	0	0	21	13	0	0	958
Overnight Demand									958

Sources: Local retail temporal distribution based on the 2004 *No. 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS*; supermarket temporal distribution based on the 2005 *Van Courtland Center EAS*; residential temporal distribution based on 2005 *Brooklyn Bridge Park FEIS*; school staff temporal distribution based on typical school staff working hours.

Notes: 25 percent link trip credit applied to Retail and Supermarket land use.

¹ No credit was taken for the 166 residential units in upland area in No-Action condition.

Table 25-15: 2023 Parking Conditions—Future with the Modified Action

Location	Capacity ¹	Occupied Spaces ²	Available Spaces	Parking Utilization (%)
Project Site Off-Street	900	900	0	100
¼-Mile Radius	1,005	1,005	0	100
¼- to ½-Mile Radius	2,143	2,053	90	95.8
Total	4,048	4,011	90	99.1

Notes:

¹ Includes a net 14 additional on-street parking spaces created as part of the Halletts Point project.

² Reflects general background growth and late evening overflow parking demand from the Halletts Point project.

Weekend Conditions Assessment

As outlined in Chapter 13, “Transportation,” between issuance of the DEIS and this FEIS, an assessment of a representative weekend peak period (Saturday afternoon) was prepared. This assessment included estimates of action-generated Saturday peak hour trips and comparisons of weekday and Saturday background conditions, as well as detailed traffic LOS analyses, where warranted. In consultation with NYCDOT, it was determined that Saturday peak hour traffic conditions were to be analyzed at thirteen of the 30 study area intersections. The traffic impact analysis indicates that there would be a potential for significant adverse impacts at seven intersections during the Saturday midday peak hour.

As the Modified Action would result in a minor increase in traffic, as compared to the Proposed Action, a trip assignment and analysis was conducted to determine whether any intersection where no significant adverse impacts were identified for the proposed project (under either the RWCDS With-Action condition or the Alternate With-Action condition) would experience a significant adverse impact not previously identified due to the additional vehicle trips generated by the proposed modified development. Detailed future Saturday With-Action LOS condition tables for the study area intersections under the Modified Action are included in Appendix J. As indicated in the tables, while the v/c ratios and delays would slightly worsen at some study area intersections, the Modified Action would not result in any additional significant adverse impacts. Table 25-16, “Summary of Saturday Impact Locations under the Modified Action,” summarizes the intersections that would experience significant adverse impacts during the Saturday midday peak hour under the Modified Action in the RWCDS With-Action condition and/or the Alternate With-Action condition. Potential mitigation measures for these significant adverse Saturday traffic impacts are discussed in the “Mitigation” section at the end of this chapter.

Table 25-16: Summary of Saturday Impact Locations under the Modified Action

Intersection	RWCDS With-Action Condition	Alternate With-Action Condition
2. 27 th Ave. & 4 th St.	X	
3. 27 th Ave. & 8 th St.	X	
4. 27 th Ave. & 12 th St.		X
5. 27 th Ave. & 14 th St.		
6. 27 th Ave. & 18 th St.		
7. Astoria Blvd. & 21 st St.	X	X
14. Astoria Blvd. & 31 st St.		X
15. Hoyt Ave. S./Astoria Blvd. & 33 rd St.	X	X
18. Astoria Blvd. N. & 32 nd St.	X	
19. Astoria Blvd. & 8 th St.		
24. Hoyt Ave. N. & 21 st St.	X	X
25. Hoyt Ave. S./Astoria Park S. & 21 st St.		
26. 27 th Ave. & 9 th St.	X	X

Air Quality

Mobile Source

Neither the Proposed Action nor the Modified Action would result in significant adverse mobile source air quality impacts.

The proposed modified project would generate a maximum of ten additional vehicle trips, which would be distributed throughout the surrounding street network (see Table 25-5, above). At the intersections of 27th Avenue at 9th Street and 27th Avenue at 4th Street (the two intersections analyzed in Chapter 14, “Air Quality”) the proposed modified project would result in a maximum of nine and six additional incremental vehicle trips.

As outlined in Chapter 14, with the Proposed Action's projected maximum of 550 and 373 incremental vehicles at the aforementioned intersections over the No-Action condition, the total one-hour CO would be 4.4 and 4.1 ppm and the total eight-hour CO would be 2.3 and 2.0 ppm, significantly less than the NAAQS of 35 ppm for the one-hour period and nine ppm for the eight-hour period. The maximum increment of nine and six additional vehicles at these intersections under the proposed modified project would represent increases of less than two percent, compared to the conditions analyzed in Chapter 14. This level of increase would not be substantial enough to increase the one-hour and eight-hour CO emissions above the NAAQS.

With the Proposed Action's projected maximum of 550 and 373 incremental vehicles at the intersections of 27th Avenue at 9th Street and 27th Avenue at 4th Street over the No-Action condition, the total 24-hour PM₁₀ would be 87.4 and 73.3 µg/m³, both significantly less than the NAAQS of 150 µg/m³. The maximum of nine and six additional vehicles at these intersections under the proposed modified project would represent increases of less than two percent, compared to the conditions analyzed in Chapter 14. This level of increase would not be substantial enough to increase the 24-hour PM₁₀ emissions above the NAAQS.

As outlined in Chapter 14, with the Proposed Action's projected maximum of 550 and 373 incremental vehicles at the intersections of 27th Avenue at 9th Street and 27th Avenue at 4th Street over the No-Action condition, the 24-hour PM_{2.5} emissions would increase by 4.6 and 0.7 µg/m³, approximately 16 percent less than the *de minimis* of 5.5 µg/m³. The annual PM_{2.5} emissions at the intersection of 27th Avenue and 9th Street would increase by 0.057 µg/m³, less than the *de minimis* of 0.1 µg/m³. The maximum of nine and six additional vehicles at these intersections under the proposed modified project would represent increases of less than two percent in incremental vehicle trips at these worst-case intersections, compared to the conditions analyzed in Chapter 14. This level of increase would not be substantial enough to increase the 24-hour and annual PM_{2.5} emissions above the *de minimis* value.

Stationary Source

Neither the Proposed Action nor the Modified Action would result in significant adverse stationary source air quality impacts. Due to the proposed Building 1 massing changes, the (E) designation language for Building 1's HVAC stack location would need to be updated accordingly.

The proposed modified project would increase the Building 1 towers by approximately twenty to thirty feet, increasing the HVAC stack height from 298 feet to 318 feet. As such, a revised HVAC analysis of Building 1's impacts on Building 2 and the cumulative impact of Buildings 1 and 3 on Building 2 was carried out consistent with the methodology outlined in Chapter 14, "Air Quality," with the following exception: the analysis assumed that the HVAC stack of the modified Building 1 would be at least 318 feet high (six feet above the highest tier). The same location of the HVAC on the Building 1 rooftop was assumed. The results of the revised HVAC analysis for the proposed modified project were used to determine whether changes to the Building 1 stack restrictions as defined in Chapter 14 were warranted. In addition, as a cumulative assessment of Building 1 and Building 3's HVAC stack emissions on Building 2 was included in Chapter 14, a revised analysis was prepared for the proposed modified project to determine whether changes to the Building 3 stack restrictions as defined in the chapter were warranted, as well.

Based upon the results of the revised air quality analysis, with the Building 1 stack height and location restrictions noted above (and all other analysis assumptions unchanged from those presented in Chapter 14, "Air Quality"), total one-hour and annual nitrogen dioxide concentrations at Building 2 generated by the proposed modified project's Building 1 stack would total 152.0 and 42.2 µg/m³, and cumulative

nitrogen dioxide emissions from the proposed modified project's Buildings 1 and 3 on Building 2 would total 187.2 and 42.3 $\mu\text{g}/\text{m}^3$, below the NAAQS standards of 188 and 100 $\mu\text{g}/\text{m}^3$, respectively. $\text{PM}_{2.5}$ concentrations on Building 2 from the proposed modified project's Building 1's HVAC stack would be 2.5 and 0.07 $\mu\text{g}/\text{m}^3$ for the 24-hour and annual periods, respectively, and cumulative $\text{PM}_{2.5}$ emissions from the proposed modified project's Buildings 1 and Building 3 on Building 2 would total 4.1 and 0.09 $\mu\text{g}/\text{m}^3$, below the NAAQS standards of 5.5 and 0.3 $\mu\text{g}/\text{m}^3$, respectively. These results are shown below in Tables 25-17, "Nitrogen Dioxide Concentrations," and 25-18, " $\text{PM}_{2.5}$ Concentrations."

Table 25-17: Nitrogen Dioxide Concentrations ($\mu\text{g}/\text{m}^3$)—Proposed Modified Project on Proposed Buildings

Astoria Cove Building ID	Receiving Building	1-Hour Concentrations ($\mu\text{g}/\text{m}^3$)			Comments
		Average	Background	Total	
1	2	32.0	120.0	152.0	No impact
Cumulative (1 & 3)	2	67.2	120.0	187.2	No impact
NO_2 NAAQS ($\mu\text{g}/\text{m}^3$) Standard				188	
Astoria Cove Building ID	Receiving Building	Annual Concentrations ($\mu\text{g}/\text{m}^3$)			Comments
		Modeled	Background	Total	
1	2	0.2	42.0	42.2	No impact
Cumulative (1 & 3)	2	0.3	42.0	42.3	No impact
NO_2 NAAQS ($\mu\text{g}/\text{m}^3$) Standard				100	

Source: Sandstone Environmental Associates, Inc.

Table 25-18: $\text{PM}_{2.5}$ Concentrations ($\mu\text{g}/\text{m}^3$)—Proposed Modified Project on Proposed Buildings

Astoria Cove Building ID	Receiving Building	24-Hour Concentrations ($\mu\text{g}/\text{m}^3$)	Comments
1	2	2.5	No impact
Cumulative (1 & 3)	2	4.1	No impact
$\text{PM}_{2.5}$ de minimis		5.5	
Astoria Cove Building ID	Receiving Building	Annual Concentrations ($\mu\text{g}/\text{m}^3$)	Comments
1	2	0.07	No impact
Cumulative (1 & 3)	2	0.09	No impact
$\text{PM}_{2.5}$ de minimis		0.3	

Source: Sandstone Environmental Associates, Inc.

The (E) designation language proposed under the Modified Action would restrict the height and location of the HVAC units on the project site buildings, as well as the type of boilers, to ensure that no significant adverse stationary source air quality impacts result. The language for the (E) designations would be the same as for the Proposed Action except that the stack for Building 1 would be a minimum of 318 feet above ground level. The language for the Building 1 air quality (E) designations is provided below. Any changes to the heights or configurations of the buildings or tiers may necessitate revisions to the (E) designations.

Building 1: Block 907, Lots 8 and p/o 1: Any new residential and/or commercial development on the above-referenced properties must use natural gas with low NO_x boilers and flue recirculation for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or at least 318 feet high and at least 228 feet from 4th Street to avoid any potential significant adverse air quality impacts.

With these (E) designations in place, as under the proposed project no significant adverse stationary source air quality impacts would result.

Greenhouse Gas Emissions and Climate Change

Neither the proposed project nor the proposed modified project would result in significant adverse greenhouse gas emission (GHG) impacts. The proposed modified project would result in minor increases to the projected annual greenhouse gas emissions generated by the project, due to both gas and energy use for the additional residential units, as well as emissions from the minimal increase in the resultant vehicle trips generated. Specifically, GHG emissions from vehicle trips would increase from 7,355 metric tons per year to 7,468 metric tons per year, a 1.5 percent increase. GHG emissions from building emissions would increase from 26,347.5 metric tons per year to 26,804.7 metric tons per year, a 1.7 percent increase. Compared to the citywide GHG emissions, this level of increase would be insignificant.

Noise

As noted above, the Modified Action would result in a less than two percent increase in incremental vehicle volumes in any peak hour, as compared to the Proposed Action. Table 25-19, “Comparison of Noise Levels in the Future with the Modified Action and in the No-Action Condition,” below, presents the future With-Action noise levels at area receptor locations in the future with the Modified Action. As indicated in the table, the maximum noise level increase from No-Action conditions (3.8 dBA) are expected to occur at the intersection of 4th Street and 26th Avenue and the intersection of 9th Street and 26th Avenue. In comparison, the maximum noise level increase at these locations under the Proposed Action would be approximately 3.7 dBA. Due to the low No-Action noise levels at these locations (under 62 dBA), no significant adverse noise impacts would result due to these predicted incremental noise increases. In addition, as future noise levels adjacent to the proposed modified project buildings are expected to be less than 70 dBA, noise attenuation would not be required on any project site buildings to achieve interior noise levels of 45 dBA or lower for residential uses and 50 dBA or lower for commercial uses.

As under the Proposed Action, the Modified Action would include a 456-seat elementary school, which could potentially include a new outdoor play area, an additional stationary source of noise according to CEQR. As the potential configuration of the school playground has yet to be determined, and would not be affected by the proposed program changes under the Modified Action, the conclusions of the playground noise analysis presented in Chapter 16, “Noise,” remain unchanged, and no significant adverse noise impacts would result.

Public Health

As with the Proposed Action, the Modified Action would not result in significant adverse impacts in the areas which concern public health, such as air quality, water quality, hazardous materials, or noise. As such, the Modified Action, like the Proposed Action, would not result in significant adverse public health impacts.

Neighborhood Character

As presented in Chapter 18, “Neighborhood Character,” the analysis concluded that the Proposed Action would not result in significant adverse impacts with respect to neighborhood character. The Modified Action would not alter this conclusion. As described above, the Modified Action would not result in any new significant adverse impacts to any of the contributing elements that define neighborhood character (land use, urban design, visual resources, historic resources, socioeconomic conditions, shadows, open

space, traffic, and noise). As with the Proposed Action, the scale of significant adverse impacts to open space and transportation would not affect any defining features of neighborhood character, nor would a combination of moderately adverse effects affect the neighborhood's defining features. The proposed project would be consistent with existing trends and would facilitate new mixed-use development, waterfront open space, and improved neighborhood circulation. Thus, based on the results of the preliminary assessment, there is no potential for the Proposed Action to result in significant adverse impacts to neighborhood character, and further analysis is not warranted.

Table 25-19: Comparison of Noise Levels in the Future with the Modified Action and in the No-Action Condition

Receptor # ¹	Measurement Location	Time	No-Action L _{eq}	No-Action L ₁₀	With-Action L _{eq}	L _{eq} Change	With-Action L ₁₀ ²	CEQR Noise Exposure Category ³
1	9 th Street and 26 th Avenue	AM	59.6	62.6	60.6	1.0	63.6	Marginally Acceptable
		MD	63.2	66.2	63.4	0.2	66.4	
		PM	55.9	58.9	59.6	3.8	62.6	
2	4 th Street and 26 th Avenue	AM	59.4	62.4	62.8	3.3	65.8	Marginally Acceptable
		MD	60.1	63.1	63.1	3.0	66.1	
		PM	61.5	64.5	65.3	3.8	68.3	
3	4 th Street and 27 th Avenue	AM	68.6	71.6	69.0	0.4	72.0	Marginally Unacceptable (I)
		MD	66.1	69.1	66.6	0.5	69.6	
		PM	68.5	71.5	69.6	1.1	72.6	
4	9 th Street and 27 th Avenue	AM	70.0	73.0	71.5	1.5	74.5	Marginally Unacceptable (II)
		MD	67.9	70.9	69.2	1.3	72.2	
		PM	65.8	68.8	67.6	1.8	70.6	
5	Adjacent to Shore Towers (close to the end of 9 th Street)	AM	61.0	64.0	61.4	0.4	64.4	Acceptable
		MD	58.1	61.1	58.4	0.3	61.4	
		PM	58.7	62.9	59.9	1.2	62.9	
6	8 th Street and 26 th Avenue	AM	56.4	59.4	57.7	1.3	60.7	Acceptable
		MD	58.2	61.2	58.8	0.6	61.8	
		PM	60.4	63.4	61.1	0.8	64.1	
7	Public Access Easement (between 4 th and 9 th Street)	AM	N/A	N/A	61.3	N/A	64.3	Acceptable
		MD	N/A	N/A	58.6	N/A	61.6	
		PM	N/A	N/A	59.3	N/A	62.3	
8	4 th Street extension (between 26 th Avenue and the waterfront)	AM	N/A	N/A	58.0	N/A	61.0	Acceptable
		MD	N/A	N/A	59.4	N/A	62.4	
		PM	N/A	N/A	61.9	N/A	64.9	

Notes:

Future noise levels at Receptor Locations 3 and 4 were calculated using proportional modeling; future noise levels at Receptor Locations 1, 2, 5, and 6 were calculated using TNM.

¹ Refer to Figure 16-2 in Chapter 16, "Noise."

² L₁₀₍₁₎ noise levels were calculated at all sites by conservatively adding three dBA to the No-Action L_{eq(1)} noise levels (the maximum observed difference in the existing L₁₀₍₁₎ and L_{eq(1)} noise levels).

³ For consistency purposes, the CEQR noise exposure categories for existing, No-Action, and With-Action conditions are based on the residential noise exposure guidelines; reflects the worst-case peak hour noise levels.

Mitigation

As with the Proposed Action, the Modified Action would result in significant adverse impacts in the areas of community facilities, open space, transportation, and construction-related transportation. A discussion of the mitigation measures for the Modified Action is presented below.

Community Facilities

Elementary Schools

As under the proposed project, the proposed modified project would include a site for 456-seat elementary school, which would add much-needed elementary school capacity to Community School District (CSD) 30, Sub-district 3 and lower the future elementary school utilization rate, compared to the 2023 No-Action condition. The elementary school shall be constructed pursuant to a certain Letter of Intent (LOI), dated April 17th, 2014, entered into between the Applicant and the School Construction Authority (SCA). The Restrictive Declaration entered into in connection with the proposed project shall require the Applicant to work with the SCA in accordance with the terms set forth in the Letter of Intent to implement the construction of the elementary school, which is contemplated for purposes of this environmental review in the final phase of the proposed project's development, as outlined in the Uniform Land Use Review Procedure (ULURP) Phasing Plan. Therefore, as outlined above, both the Proposed Action and the Modified Action could result in a temporary significant adverse impact on CSD 30, Sub-district 3 elementary schools upon occupancy of Building 2. The Proposed Action would not result in any potential significant adverse impacts on intermediate or high school students.

Based on the public school student generation rates provided in the *CEQR Technical Manual*, Buildings 2, 3, 4, and 5 (residential portion) would generate approximately 248 net elementary school students prior to construction of the proposed 456-seat elementary school and would therefore result in a temporary 7.59 percent increase in the elementary school utilization rate (to 123.1 percent). To mitigate the potential temporary significant adverse elementary school impact, the proposed 456-seat elementary school would need to be constructed prior to completion and occupancy of Building 2. Absent this change in the proposed modified project's phasing schedule, a temporary unmitigated significant adverse impact to elementary schools could result.

However, it should be noted that the analysis of public elementary school conditions relies on conservative assumptions regarding both background growth in the student population and the development of new residential units in future conditions. Should this level of background growth in the Sub-district and residential development in the study area not occur, the temporary impact on elementary school seats in Sub-district 3 of CSD 30 could be reduced or potentially eliminated. It should also be noted that the above analysis does not account for the 1,057 seat PS/IS school that is expected to be developed on the nearby Halletts Point site to mitigate the school impacts identified in the 2013 *Halletts Point Rezoning FEIS*. This future No-Action school could be built and operational by 2018.

Child Care

As outlined in Chapter 4, the child care impact under the Proposed Action would occur upon occupancy of the 75th affordable residential unit (generating approximately 11 children under age six eligible for publicly funded child care). Therefore the child care impact under the Proposed Action would occur upon completion and occupancy of Building 2 in the third phase of the project's development (in year 2021, per the anticipated construction schedule). As the proposed modified project would change the distribution of the affordable housing units throughout the project site, the timing of the child care impact would change accordingly. Based on the currently contemplated distribution of affordable units (which includes affordable housing on the upland parcel), the significant adverse child care impact would occur upon completion of Building 3 in the second phase of the project's construction (in year 2019, per the anticipated construction schedule). To reduce the increase in utilization to below the five percent increase threshold under the Modified Action, future child care center capacity would need to be increased to 235 slots, 26 slots over existing conditions. In comparison, under the Proposed Action, 21 additional child care slots would need to be provided.

However, as the demand for publicly funded child care depends not only on the amount of residential development in the area but also on the proportion of new residents who are children of low-income families (not all children meet the social and income eligibility criteria), at this point it is not possible to know exactly what type of mitigation would be appropriate or when its implementation would be necessary. The child care analysis is conservatively based on the existing inventory of public child care providers in the area and does not reflect likely shifts in demand or the creation of new child care capacity.

The analysis conservatively accounts for the potential child care-eligible children that would be generated by the nearby Halletts Point project (approximately 68 children in 2022) without accounting for the mitigation measures identified in that project's own environmental review. As stated in the 2013 *Halletts Point Rezoning FEIS*, the Halletts Point project would need to provide 37 child care slots to fully mitigate their identified significant adverse child care impact. If this mitigation measure was accounted for in the child care analysis in this EIS, the shortfall of slots would be smaller.

Furthermore, several factors may limit the number of children in need of publicly funded child care slots in New York City Administration of Children's Services- (ACS-) contracted child care facilities. Families in the study area could make use of alternatives to the publicly funded child care facilities included in the analysis, such as family child care center in the study area; child care centers located outside of the study area (as parents of eligible children are not restricted to enrolling their children in child care facilities in a specific geographic area); the use of ACS vouchers to finance care at private child care centers in the study area; or the use of ACS vouchers for private child care providers beyond the 1.5-mile study area.

Mitigation measures for this impact would possibly include adding capacity to existing facilities if determined feasible through consultation with ACS or providing a new child care facility within or near the project site. As a City agency, ACS does not directly provide new child care facilities, but, rather, contracts with providers in areas of need. ACS is also working to create public-private partnerships to facilitate the development of new child care facilities where there is an area of need. As part of this initiative, ACS may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new facilities.

The Restrictive Declaration for the proposed modified project will require the Applicant implement one or more of the mitigation measures identified above, if required, to mitigate the significant adverse impact on child care facilities. Absent the implementation of such needed mitigation measures, the proposed modified project could have an unmitigated significant adverse impact on publicly funded child care facilities.

Open Space

As under the Proposed Action, the Modified Action would result in decrease of over five percent in the active open space ratio from the No-Action condition, decreasing the future active open space ratio to 0.96 acres per 1,000 residents. As the Modified Action would decrease the active open space ratio by more than five percent and the future active open space ratio would be below the City's optimal planning goal of 2.0 acres of active open space per 1,000 residents, as under the Proposed Action, the Modified Action would result in a significant adverse active open space impact.

As the building programs for Buildings 2, 3, 4, and 5 (the first three phases of the project's development) would not change under the Modified Action, the timing of the active open space impact would similarly occur upon completion and occupancy of Building 2 (Phase 3).

In order to address the significant adverse impact on active open space, the Applicant would be required to upgrade or replace adult fitness equipment and construct a comfort station at Whitey Ford Field. These improvements would increase the utility of Whitey Ford Field and its capacity to meet the active open space needs of the study area, and therefore would constitute partial mitigation of the potential significant adverse impact on active open space. Improvements to Whitey Ford Field would occur during Phase 3 of the proposed ULURP Phasing Plan (i.e., before a Temporary Certificate of Occupancy is granted for the 688th DU). As the implementation of the above-described measures would constitute partial mitigation of the potential significant adverse impact on open space, the Modified Action would result in an unavoidable adverse impact on open space.

Transportation

Traffic

As outlined above, the Modified Action would worsen conditions at some intersections where significant adverse impacts were identified and mitigation was proposed for the Proposed Action. Tables 25-20, “RWCDS With-Action Condition Traffic Impact Mitigation under the Modified Action,” and 25-21, “Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action,” below, summarize the mitigation measures at study area intersections under the Modified Action under the RWCDS With-Action and Alternate With-Action conditions, respectively. The mitigation measures would be the same as under the Proposed Action, with minor changes in signal timing at the proposed new signal at 27th Avenue and 9th Street in the weekday PM peak hour (RWCDS With-Action condition). The complete LOS tables showing the v/c ratios, delays, and LOS at all analyzed intersections with the proposed mitigation in the future with the Modified Action are included in Appendix J.

As the proposed project modifications would only increase the total floor area of Building 1, which would be constructed in the final phase of the project’s construction per the ULURP Phasing Plan, the mitigation implementation timing would not change. A discussion of the mitigation implementation timing is provided below.

Transit

As outlined above, the Modified Action, as under the Proposed Action, would result in potential significant adverse subway impacts at the 30th Avenue (N and Q line) Station’s northwest street stair in the PM peak hour and at the southbound fare array in the AM peak hour. In addition, significant adverse bus line haul impacts on the Q103 bus route are anticipated as the projected passenger volumes in the future With-Action condition would exceed the New York City Transit/Metropolitan Transportation Authority (MTA/NYCT) guideline capacity during the weekday AM and PM peak hours. Potential measures to mitigate these impacts are described below.

Subway Station Operations

During the PM peak hour the 30th Avenue Station stairway at the northwest corner of 30th Avenue and 31st Street (S3-M3) would decline from LOS C (v/c = 0.97) under the 2023 No-Action condition to LOS E (v/c = 1.42) under the 2023 With-Action condition. During the AM peak period the southbound fare array would decline from LOS C (v/c = 0.87) under the 2023 No-Action condition to LOS D (v/c = 1.02) under the 2023 With-Action condition. Both subway station operation impacts would occur upon completion of the final phase of the proposed project’s construction. These declines constitute significant adverse subway station impacts that require an evaluation of potential mitigation measures.

Table 25-20: RWCDS With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
2. 27 th Ave. & 4 th St.	No impact.	No impact.	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green time from the SB phase to the EB/WB phase [SB phase green time shifts from 29s to 26s; EB/WB phase green time shifts from 51s to 54s].	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green time from the SB phase to the EB/WB phase [SB phase green time shifts from 31s to 28s; EB/WB phase green time shifts from 49s to 52s].
3. 27 th Ave. & 8 th St.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.
4. 27 th Ave. & 12 th St.	<u>Partially Mitigated</u> Modify signal timing: Shift 1s of green from the NB phase to the EB/WB phase [NB phase green shifts from 16s to 15s; EB/WB phase green shifts from 64s to 65s].	No impact.	Unmitigated	No impact.
5. 27 th Ave. & 14 th St.	<u>Partially Mitigated</u> -Modify signal timing: Shift 1s of green time from the SB phase to the EB/WB phase [SB phase green shift from 40s to 39s; EB/WB phase green shift from 40s to 41s]	No impact.	No impact.	No impact.
7. Astoria Blvd. & 21 st St.	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green time from the NB/SB phase to the EB phase [NB/SB phase green shift from 51s to 48s; EB phase green shift from 24s to 27s; WB phase green time remains the same].	Modify signal timing: Shift 1s of green time from the WB phase to the NB/SB phase [WB phase green shift from 34s to 33s; NB/SB phase green shift from 38s to 39s; EB phase green time remains the same].	Unmitigated	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green from the WB phase to the NB/SB phase [WB phase green shifts from 34s to 31s; NB/SB phase green shifts from 37s to 40s; EB phase green time remains the same].

Table 25-20 (continued): RWCDs With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
8. Astoria Blvd. & 23 rd St.	-Install “No Standing 7AM-10AM, 4PM-7PM Mon-Fri” regulations along the EB approach for 100 feet to bus stop to daylight the approach. - Modify signal timing: Shift 2s of green time from the NB phase to the EB/WB phase [NB phase green shift from 43s to 41s; EB/WB phase green shift from 67s to 69s].	No impact.	-Install “No Standing 7AM-10AM, 4PM-7PM Mon-Fri” regulations along the EB approach for 100 feet to bus stop to daylight the approach.	N/A
9. Astoria Blvd. & Crescent St.	<u>Partially Mitigated</u> -Install “No Standing 7AM-10AM, 4PM-7PM Mon-Fri” regulations along the EB approach for 250 feet to daylight the approach. -Install “No Standing 4pm-7pm Mon-Fri” regulations along the WB approach for 250 feet to daylight the approach. -Install “No Standing Anytime” regulations along the SB approach for 250 feet on the west side to allow for two moving lanes at the approach. -Restripe the SB approach from one 30-foot wide travel lane with parking on both sides to one 11-foot wide right-turn lane, and one 19-foot wide left-through lane with parking for 250 feet. -Modify signal timing: Shift 1s of green from the SB phase to the EB/WB phase [SB phase green shifts from 43s to 42s; EB/WB phase green shifts from 67s to 68s].	-Install “No Standing 7AM-10AM, 4PM-7PM Mon-Fri” regulations along the EB approach for 250 feet to daylight the approach. -Install “No Standing 4pm-7pm Mon-Fri” regulations along the WB approach for 250 feet to daylight the approach. -Install “No Standing Anytime” regulations along the SB approach for 250 feet on the west side to allow for two moving lanes at the approach. -Restripe the SB approach from one 30-foot wide travel lane with parking on both sides to one 11-foot wide right-turn lane, and one 19-foot wide left-through lane with parking for 250 feet. - Modify signal timing: Shift 2s of green time from the SB phase to the EB/WB phase [SB phase green time shift from 31s to 29s; EB/WB phase green time shift from 49s to 51s].	-Install “No Standing 7AM-10AM, 4PM-7PM Mon-Fri” regulations along the EB approach for 250 feet to daylight the approach. -Install “No Standing 4pm-7pm Mon-Fri” regulations along the WB approach for 250 feet to daylight the approach. -Install “No Standing Anytime” regulations along the SB approach for 250 feet on the west side to allow for two moving lanes at the approach. -Restripe the SB approach from one 30-foot wide travel lane with parking on both sides to one 11-foot wide right-turn lane, and one 19-foot wide left-through lane with parking for 250 feet.	N/A
10. Astoria Blvd. & 27 th Str.	<u>Partially Mitigated</u> Modify signal timing: Shift 2s of green from the SB phase to the EB/WB phase [SB phase green shifts from 37s to 35s; EB/WB phase green shifts from 73s to 75s].	No impact.	No impact.	N/A

Table 25-20 (continued): RWCDs With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
12. Astoria Blvd. & 29 th St.	<p>-Install "No Standing 7AM-10AM, 4PM - 7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the EB approach downstream receiving segment to provide two receiving lanes.</p> <p>-Restripe EB approach downstream receiving segment from one 17-foot wide receiving lane with a 10-foot wide channel zone to one 14-foot wide receiving lane and one 13-foot wide receiving lane.</p> <p>-Modify signal timing: Shift 2s of green from the SB phase to the EB/WB phase [SB phase green shifts from 60s to 58s; EB/WB phase green shifts from 50s to 52s].</p>	<p>-Install "No Standing 7AM-10AM, 4PM - 7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the EB approach downstream receiving segment to provide two receiving lanes.</p> <p>-Restripe EB approach downstream receiving segment from one 17-foot wide receiving lane with a 10-foot wide channel zone to one 14-foot wide receiving lane and one 13-foot wide receiving lane.</p> <p>-Modify signal timing: Shift 3s of green time from the SB phase to the EB/WB phase [SB phase green shift from 35s to 32s; EB/WB phase green shift from 45s to 48s].</p>	<p>-Install "No Standing 7AM-10AM, 4PM - 7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the EB approach downstream receiving segment to provide two receiving lanes.</p> <p>-Restripe EB approach downstream receiving segment from one 17-foot wide receiving lane with a 10-foot wide channel zone to one 14-foot wide receiving lane and one 13-foot wide receiving lane.</p>	N/A
14. Astoria Blvd. & 31 st St.	<p><u>Partially Mitigated</u></p> <p>Modify signal timing: Shift 1s of green from the SB phase to the EB phase [SB phase green shifts from 36s to 35s; EB phase green shifts from 43s to 44s; SB/NB phase green time remains the same].</p>	No impact.	No impact.	No impact.
15. Hoyt Ave. S. /Astoria Blvd. & 44rd St.	<p><u>Partially Mitigated</u></p> <p>Modify signal timing: Shift 3s of green time from the EB Hoyt Avenue S. phase to the EB Astoria Boulevard phase [EB Hoyt Avenue S. phase green time shift from 52s to 49s; EB Astoria Boulevard phase green time shift from 31s to 34s; NB phase green time remains the same].</p>	Modify signal timing: Shift 2s of green time from the EB Hoyt Avenue S. phase to the EB Astoria Boulevard phase [EB Hoyt Avenue S. phase green time shift from 29s to 27s; EB Astoria Boulevard phase green time shift from 24s to 26s; NB phase green time remains the same].	Modify signal timing: Shift 2s of green time from the EB Hoyt Avenue S. phase to the EB Astoria Boulevard phase [EB Hoyt Avenue S. phase green time shift from 40s to 38s; EB Astoria Boulevard phase green time shift from 34s to 36s; NB phase green time remains the same].	Unmitigated.
16. Hoyt Ave. N. & 29 th St.	Modify signal timing: Shift 2s of green time from the WB phase to the SB phase [WB phase green time shift from 82s to 80s; SB phase green time shift from 21s to 23s; the bus queue jump phase green time remains the same].	No impact.	No impact.	N/A

Table 25-20 (continued): RWCDs With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
17. Hoyt Ave. N. & 31 st St.	-Install "No Standing 7AM-10AM Mon-Fri" regulations along the SB approach for 250 feet to daylight the approach. -Modify signal timing: Shift 1s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shifts from 32s to 31s; WB phase green time shifts from 78s to 79s].	No impact.	Modify signal timing: Shift 3s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shifts from 43s to 40s; WB phase green time shifts from 67s to 70s].	N/A
18. Astoria Blvd. N. & 32 nd St.	Modify signal timing: Shift 1s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shift from 25s to 24s; WB phase green time shift from 85s to 86s].	Modify signal timing: Shift 2s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shift from 22s to 20s; WB phase green time shift from 58s to 60s].	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shifts from 31s to 28s; WB phase green time shifts from 79s to 82s].	Modify signal timing: Shift 3s of green from the NB phase to the WB phase [NB phase green shifts from 22s to 19s; WB phase green shifts from 58s to 61s].
19. Astoria Blvd. & 8 th St.	No impact.	No impact.	<u>Partially Mitigated</u> Modify signal timing: Shift 2s of green time from the EB/WB phase to the NB/SB phase [EB/WB phase green time shifts from 41s to 39s; NB/SB phase green time shifts from 69s to 71s].	No impact.
20. 30 th Ave. & 14 th St.	Unmitigated	No impact.	No impact.	N/A
21. 30 th Ave. & 21 st St.	Modify signal timing: Shift 3s of green time from the NB/SB phase to the EB/WB phase [NB/SB phase green time shift from 73s to 70s; EB/WB phase green time shift from 37s to 40s].	No impact.	No impact.	N/A
22. Vernon Blvd. & Welling Ct./8 th St.	<u>Partially Mitigated</u> Modify signal timing: Shift 1s of green time from the WB phase to the EB/SB phase [WB phase green time shifts from 29s to 28s; EB/SB phase green time shifts from 29s to 30s; NB phase green time remains the same].	<u>Partially Mitigated</u> Modify signal timing: Shift 1s of green time from the WB phase to the EB/SB phase [WB phase green time shifts from 29s to 28s; EB/SB phase green time shifts from 28s to 29s; NB phase green time remains the same].	<u>Partially Mitigated</u> Modify signal timing: Shift 1s of green time from the WB phase to the EB/SB phase; Shift 1s of green time from the NB phase to the EB/SB phase [WB phase green time shifts from 29s to 28s; NB phase green time shifts from 20s to 19s; EB/SB phase green time shifts from 26s to 28s].	N/A

Table 25-20 (continued): RWCDS With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
24. Hoyt Ave. N. & 21 st St.	<p><u>Partially Mitigated</u> Install "No Standing 7AM-10AM Mon-Fri" regulations along the SB approach for 250 feet to daylight the approach. -Restripe WB approach from one 5-foot wide bike lane, one 11-foot wide through-right lane and two 11-foot wide left-turn lanes to one 5-foot wide bike lane, one 11-foot wide through-right lane and two 12-foot wide left-turn lanes.</p>	No impact.	<p><u>Partially Mitigated</u> -Restripe WB approach from one 5-foot wide bike lane, one 11-foot wide through-right lane and two 11-foot wide left-turn lanes to one 5-foot wide bike lane, one 11-foot wide through-right lane and two 12-foot wide left-turn lanes.</p>	<p><u>Partially Mitigated</u> Restripe WB approach from one 5-foot wide bike lane, one 11-foot wide through-right lane and two 11-foot wide left-turn lanes to one 5-foot wide bike lane, one 11-foot wide through-right lane and two 12-foot wide left-turn lanes.</p>
25. Hoyt Ave. S./Astoria Park S. & 21 st St.	Unmitigated	No impact.	Modify signal timing: Shift 3s of green time from the EB phase to the NB/SB phase [EB phase green time shift from 35s to 33s; NB/SB phase green time shift from 75s to 78s].	No impact.
26. 27 th Ave. & 9 th St.	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 43s; SB phase green time is 37s; all phases have 3s of amber and 2s of all red time]. -Install "No Standing Anytime" regulations along the east curb of 9th Street for 150 feet to allow for a left-turn lane. -Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 20-foot wide right-turn lane with parking and one 12-foot wide left-turn lane for 100 feet. -Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes. [Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 45s; SB phase green time is 35s; all phases have 3s of amber and 2s of all red time]. -Install "No Standing Anytime" regulations along the east curb of 9th Street for 150 feet to allow for a left-turn lane. -Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 20-foot wide right-turn lane with parking and one 12-foot wide left-turn lane for 100 feet. -Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes. [Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 53s; SB phase green time is 27s; all phases have 3s of amber and 2s of all red time]. -Install "No Standing Anytime" regulations along the east curb of 9th Street for 150 feet to allow for a left-turn lane. -Install "No Standing 4PM-7PM Mon-Fri" regulations along the WB approach for 250 feet and along the 9th Street east curb for 250 feet. -Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 20-foot wide right-turn lane with parking and one 10-foot wide left-turn lane for 100 feet. -Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes. [Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 50s; SB phase green time is 30s; all phases have 3s of amber and 2s of all red time]. -Install "No Standing Anytime" regulations along the total western length of 9th Street and along the east curb of 9th Street for 150 feet to allow for two-way traffic. -Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 10-foot wide right-turn lane, one 10-foot wide left-turn lane, and one 12-foot wide NB receiving lane for 100 feet. -Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes. [Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>
27. Vernon Blvd. & 31 st Ave.	Unmitigated	No impact.	Unmitigated	N/A

Table 25-20 (continued): RWCDS With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
28. Vernon Blvd. & Broadway/11 th St.	<p><u>Partially Mitigated</u> Modify signal timing: Shift 1s of green time from the EB/WB phase to the NB/SB Vernon Boulevard phase [EB/WB phase green time shifts from 25s to 24s; NB/SB Vernon Boulevard phase green time shifts from 43s to 44s; NB 11th Street phase green time remains the same].</p>	<p>Modify signal timing: Shift 1s of green time from the NB 11th Street phase to the EB/WB phase [NB 11th Street phase green time shifts from 20s to 19s; EB/WB phase green time shifts from 26s to 27s; NB/SB Vernon Boulevard phase green time remains the same].</p>	<p>Modify signal timing: Shift 3s of green time from the NB 11th Street phase to the NB/SB Vernon Boulevard phase [NB 11th Street phase green time shifts from 25s to 22s; NB/SB Vernon Boulevard phase green time shifts from 45s to 48s; EB/WB phase green time remains the same].</p>	N/A

Table 25-21: Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
3. 27 th Ave. & 8 th St.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.	-Install “No Standing Anytime” regulations to daylight the WB approach along 27 th Avenue between 8 th and 9 th Streets. -Install “No Standing Anytime” regulations along the WB receiving lane for 100 feet to allow vehicles to realign with the receiving end. -Shift the WB approach centerline 1 foot to the south and restripe the WB approach from one 11-foot wide travel lane with parking and one 11-foot wide receiving lane to one 10-foot wide through-only lane, one 10-foot wide left-turn only lane, and one 10-foot wide receiving lane.	No impact.
4. 27 th Ave. & 12 th St.	Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time = 58s; NB phase time = 22 s; all phases have 3s of amber and 2s of all red time].	Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time = 55s; NB phase time = 25s; all phases have 3s of amber and 2s of all red time].	Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time = 56s; NB phase time = 24s; all phases have 3s of amber and 2s of all red time].	Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time = 55s; NB phase time = 25s; all phases have 3s of amber and 2s of all red time].
5. 27 th Ave. & 14 th St.	Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time = 40s; SB phase time = 40 s; all phases have 3s of amber and 2s of all red time].	No impact.	Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time = 40s; SB phase time = 40 s; all phases have 3s of amber and 2s of all red time].	No impact.

Table 25-21 (continued): Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
7. Astoria Blvd. & 21 st St.	<p><u>Partially Mitigated</u></p> <p>-Install “No Standing Anytime” regulations along the NB approach for 165 feet, along the NB receiving side for 135 feet, along the SB approach for 340 feet, and along the SB receiving side for 125 feet to allow for three moving lanes at the NB and SB approaches.</p> <p>-Shift the NB approach centerline 3 feet to the west and restripe the NB approach from one 11-foot wide travel lane, one 20-foot wide travel lane with parking, one 12-foot wide receiving lane, and one 18-foot wide receiving lane with parking to two 11-foot wide travel lanes, one 12-foot wide right-turn lane, and one 15-foot wide receiving lane for 125 feet from the intersection.</p> <p>-Shift the SB approach centerline 4 feet to the east and restripe the SB approach from one 11-foot wide travel lane, one 19-foot wide travel lane with parking, one 11-foot wide receiving lane, and one 19-foot wide receiving land with parking to two 11-foot wide travel lanes, one 12-foot wide right turn lane, one 11-foot wide receiving lane, and one 15-foot wide receiving lane for 135 feet from the intersection.</p> <p>- Modify signal timing: Shift 1s of green time from NB/SB phase to the EB phase [NB/SB phase green shift from 51s.</p>	<p>-Install “No Standing Anytime” regulations along the NB approach for 165 feet, along the NB receiving side for 135 feet, along the SB approach for 340 feet, and along the SB receiving side for 125 feet to allow for three moving lanes at the NB and SB approaches.</p> <p>-Shift the NB approach centerline 3 feet to the west and restripe the NB approach from one 11-foot wide travel lane, one 20-foot wide travel lane with parking, one 12-foot wide receiving lane, and one 18-foot wide receiving lane with parking to two 11-foot wide travel lanes, one 12-foot wide right-turn lane, and one 15-foot wide receiving lane for 125 feet from the intersection.</p> <p>-Shift the SB approach centerline 4 feet to the east and restripe the SB approach from one 11-foot wide travel lane, one 19-foot wide travel lane with parking, one 11-foot wide receiving lane, and one 19-foot wide receiving land with parking to two 11-foot wide travel lanes, one 12-foot wide right turn lane, one 11-foot wide receiving lane, and one 15-foot wide receiving lane for 135 feet from the intersection.</p>	No impact.	<p>-Install “No Standing Anytime” regulations along the NB approach for 165 feet, along the NB receiving side for 135 feet, along the SB approach for 340 feet, and along the SB receiving side for 125 feet to allow for three moving lanes at the NB and SB approaches.</p> <p>-Shift the NB approach centerline 3 feet to the west and restripe the NB approach from one 11-foot wide travel lane, one 20-foot wide travel lane with parking, one 12-foot wide receiving lane, and one 18-foot wide receiving lane with parking to two 11-foot wide travel lanes, one 12-foot wide right-turn lane, and one 15-foot wide receiving lane for 125 feet from the intersection.</p> <p>-Shift the SB approach centerline 4 feet to the east and restripe the SB approach from one 11-foot wide travel lane, one 19-foot wide travel lane with parking, one 11-foot wide receiving lane, and one 19-foot wide receiving land with parking to two 11-foot wide travel lanes, one 12-foot wide right turn lane, one 11-foot wide receiving lane, and one 15-foot wide receiving lane for 135 feet from the intersection.</p>
8. Astoria Blvd. & 23 rd St.	Install “No Standing 7AM-10AM, 4PM-7PM Mon-Fri” regulations along the EB approach for 100 feet to bus stop to daylight the approach.	No impact.	No impact.	N/A

Table 25-21 (continued): Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
9. Astoria Blvd. & Crescent St.	<p>-Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing 4pm-7pm Mon-Fri" regulations along the WB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the SB approach for 250 feet on the west side to allow for two moving lanes at the approach.</p> <p>-Restripe the SB approach from one 30-foot wide travel lane with parking on both sides to one 11-foot wide right-turn lane, and one 19-foot wide left-through lane with parking for 250 feet.</p> <p>- Modify signal timing: Shift 1s of green time from the SB phase to the EB/WB phase [SB phase green time shift from 43s to 42s; EB/WB phase green time shift from 67s to 68s].</p>	<p>-Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing 4pm-7pm Mon-Fri" regulations along the WB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the SB approach for 250 feet on the west side to allow for two moving lanes at the approach.</p> <p>-Restripe the SB approach from one 30-foot wide travel lane with parking on both sides to one 11-foot wide right-turn lane, and one 19-foot wide left-through lane with parking for 250 feet.</p> <p>-Modify signal timing: Shift 2s of green time from the SB phase to the EB/WB phase [SB phase green time shift from 31s to 29s; EB/WB phase green time shift from 49s to 51s].</p>	<p>-Install "No Standing 7AM-10AM, 4PM-7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing 4pm-7pm Mon-Fri" regulations along the WB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the SB approach for 250 feet on the west side to allow for two moving lanes at the approach.</p> <p>-Restripe the SB approach from one 30-foot wide travel lane with parking on both sides to one 11-foot wide right-turn lane, and one 19-foot wide left-through lane with parking for 250 feet.</p> <p>- Modify signal timing: Shift 1s of green time from the SB phase to the EB/WB phase [SB phase green time shift from 43s to 42s; EB/WB phase green time shift from 67s to 68s].</p>	N/A
12. Astoria Blvd. & 29 th St.	<p>-Install "No Standing 7AM-10AM, 4PM - 7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the EB approach downstream receiving segment to provide two receiving lanes.</p> <p>-Restripe EB approach downstream receiving segment from one 17-foot wide receiving lane with a 10-foot wide channel zone to one 14-foot wide receiving lane and one 13-foot wide receiving lane.</p> <p>-Modify signal timing: Shift 3s of green time from the SB phase to the EB/WB phase [SB phase green time shifts from 60s to 57s; EB/WB phase green time shifts from 50s to 53s].</p>	No impact.	<p>-Install "No Standing 7AM-10AM, 4PM - 7PM Mon-Fri" regulations along the EB approach for 250 feet to daylight the approach.</p> <p>-Install "No Standing Anytime" regulations along the EB approach downstream receiving segment to provide two receiving lanes.</p> <p>-Restripe EB approach downstream receiving segment from one 17-foot wide receiving lane with a 10-foot wide channel zone to one 14-foot wide receiving lane and one 13-foot wide receiving lane.</p>	N/A

Table 25-21 (continued): Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
14. Astoria Blvd. & 31 st St.	-Install "No Standing Anytime" regulations along the EB approach for 200 feet to allow for two moving lanes at the approach. -Restripe the EB approach from one 25-foot wide travel lane with parking to one 12-foot wide through lane and one 13-foot wide through-right lane for 200 feet.	-Install "No Standing Anytime" regulations along the EB approach for 200 feet to allow for two moving lanes at the approach. -Restripe the EB approach from one 25-foot wide travel lane with parking to one 12-foot wide through lane and one 13-foot wide through-right lane for 200 feet.	-Install "No Standing Anytime" regulations along the EB approach for 200 feet to allow for two moving lanes at the approach. -Restripe the EB approach from one 25-foot wide travel lane with parking to one 12-foot wide through lane and one 13-foot wide through-right lane for 200 feet.	-Install "No Standing Anytime" regulations along the EB approach for 200 feet to allow for two moving lanes at the approach. -Restripe the EB approach from one 25-foot wide travel lane with parking to one 12-foot wide through lane and one 13-foot wide through-right lane for 200 feet.
15. Hoyt Ave. S. /Astoria Blvd. & 44rd St.	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green time from the EB Hoyt Avenue S. phase to the EB Astoria Boulevard phase [EB Hoyt Avenue phase green time shifts from 52s to 49s; EB Astoria Boulevard phase green time shifts from 31s to 34s; NB phase green time remains the same].	<u>Partially Mitigated</u> Modify signal timing: Shift 2s of green time from the EB Hoyt Avenue S. phase to the EB Astoria Boulevard phase [EB Hoyt Avenue phase green time shifts from 31s to 29s; EB Astoria Boulevard phase green time shifts from 22s to 24s; NB phase green time remains the same].	<u>Partially Mitigated</u> Modify signal timing: Shift 3s of green time from the EB Hoyt Avenue S. phase to the EB Astoria Boulevard phase [EB Hoyt Avenue phase green time shifts from 43s to 40s; EB Astoria Boulevard phase green time shifts from 31s to 34s; NB phase green time remains the same].	Unmitigatable.
16. Hoyt Ave. N. & 29 th St.	Modify signal timing: Shift 2s of green time from the WB phase to the SB phase [WB phase green time shift from 84s to 82s; SB phase green time shift from 19s to 21s].	No impact.	No impact.	N/A
17. Hoyt Ave. N. & 31 st St.	-Install "No Standing 7AM-10AM Mon-Fri" regulations along the SB approach for 250 feet to daylight the approach. - Modify signal timing: Shift 1s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shifts from 32s to 31s; WB phase green time shifts from 78s to 79s].	No impact.	No impact.	N/A
18. Astoria Blvd. N. & 32 nd St.	Modify signal timing: Shift 1s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shift from 25s to 24s; WB phase green time shift from 85s to 86s].	No impact.	Modify signal timing: Shift 4s of green time from the NB/SB phase to the WB phase [NB/SB phase green time shift from 31s to 27s; WB phase green time shift from 79s to 83s].	No impact.
20. 30 th Ave. & 14 th St.	Unmitigated	No impact.	No impact.	N/A
21. 30 th Ave. & 21 st St.	Modify signal timing: Shift 2s of green time from the NB/SB phase to the EB/WB phase [NB/SB phase green time shift from 73s to 71s; EB/WB phase green time shift from 37s to 39s].	No impact.	No impact.	N/A

Table 25-21 (continued): Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
22. Vernon Blvd. & Welling Ct./8 th St.	Modify signal timing: Shift 1s of green time from the NB phase to the EB/SB phase; Shift 1s of green time from WB phase to EB/SB phase [NB phase green time shifts from 20s to 19s; EB/SB phase green time shifts from 26s to 28s; WB phase green time shifts from 29s to 28s].	Modify signal timing: Shift 1s of green time from the NB phase to the EB/SB phase; Shift 1s of green time from WB phase to EB/SB phase [NB phase green time shifts from 20s to 19s; EB/SB phase green time shifts from 26s to 28s; WB phase green time shifts from 29s to 28s].	<u>Partially Mitigated</u> Modify signal timing: Shift 1s of green time from the NB phase to the EB/SB phase; Shift 1s of green time from WB phase to EB/SB phase [NB phase green time shifts from 20s to 19s; EB/SB phase green time shifts from 26s to 28s; WB phase green time shifts from 29s to 28s].	N/A
23. Astoria Blvd. & 18 th St.	Install a traffic signal with 120-second cycle length and two phases [EB/WB phase green time is 55s; SB phase green time is 55s; all phases have 3s of amber and 2s of all red time].	No impact.	No impact.	No impact.
24. Hoyt Ave. N. & 21 st St.	<u>Partially Mitigated</u> -Install "No Standing 7AM-10AM Mon-Fri" regulations along the SB approach for 250 feet to daylight the approach. -Restripe WB approach from one 5-foot wide bike lane, one 11-foot wide through-right lane and two 11-foot wide left-turn lanes to one 5-foot wide bike lane, one 11-foot wide through-right lane and two 12-foot wide left-turn lanes.	No impact.	-Install "No Standing 7AM-10AM Mon-Fri" regulations along the SB approach for 250 feet to daylight the approach. -Restripe WB approach from one 5-foot wide bike lane, one 11-foot wide through-right lane and two 11-foot wide left-turn lanes to one 5-foot wide bike lane, one 11-foot wide through-right lane and two 12-foot wide left-turn lanes. -Modify signal timing: Shift 1s of green time from the WB lag phase to the NB/SB phase [WB lag phase green time shifts from 38s to 37s; NB/SB phase green time shifts from 45s to 46s; EB/WB phase green time remains the same].	-Restripe WB approach from one 5-foot wide bike lane, one 11-foot wide through-right lane and two 11-foot wide left-turn lanes to one 5-foot wide bike lane, one 11-foot wide through-right lane and two 12-foot wide left-turn lanes. -Modify signal timing: Shift 2s of green time from the WB lag phase to the NB/SB phase [WB lag phase green time shifts from 38s to 36s; NB/SB phase green time shifts from 45s to 47s; EB/WB phase green time remains the same].
25. Hoyt Ave. S./Astoria Park S. & 21 st St.	Modify signal timing: Shift 3s of green time from the EB phase to the NB/SB phase [EB phase green time shift from 37s to 34s; NB/SB phase green time shift from 73s to 76s].	No impact.	Modify signal timing: Shift 3s of green time from the EB phase to the NB/SB phase [EB phase green time shift from 37s to 34s; NB/SB phase green time shift from 73s to 76s].	No impact.

Table 25-21 (continued): Alternate With-Action Condition Traffic Impact Mitigation under the Modified Action

Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
26. 27 th Ave. & 9 th St.	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 43s; SB phase green time is 37s; all phases have 3s of amber and 2s of all red time].</p> <p>-Install “No Standing Anytime” regulations along the east curb of 9th Street for 150 feet to allow for a left-turn lane.</p> <p>-Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 20-foot wide right-turn lane with parking and one 12-foot wide left-turn lane for 100 feet.</p> <p>-Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes.</p> <p>[Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>	No impact.	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 43s; SB phase green time is 37s; all phases have 3s of amber and 2s of all red time].</p> <p>-Install “No Standing Anytime” regulations along the east curb of 9th Street for 150 feet to allow for a left-turn lane.</p> <p>-Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 20-foot wide right-turn lane with parking and one 12-foot wide left-turn lane for 100 feet.</p> <p>-Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes.</p> <p>[Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>	<p>-Install a traffic signal with 90-second cycle length and two phases [EB/WB phase green time is 48s; SB phase green time is 32s; all phases have 3s of amber and 2s of all red time].</p> <p>-Install “No Standing Anytime” regulations along the east curb of 9th Street for 150 feet to allow for a left-turn lane.</p> <p>-Restripe the SB approach from one 16.5 foot wide travel lane with parking and one 15.5 foot wide NB receiving lane with parking to one 20-foot wide right-turn lane with parking and one 12-foot wide left-turn lane for 100 feet.</p> <p>-Shift the EB approach centerline 1 foot to the south and restripe the EB approach from one 11-foot wide travel lane to one 19-foot wide receiving lane with parking to one 10-foot wide through-only lane and two 10-foot wide receiving lanes.</p> <p>[Two-way (NB/SB) 9th Street would be converted to a one-way SB roadway between 26th and 27th Avenue as a result of the proposed mitigation measures].</p>
28. Vernon Blvd. & Broadway/11 th St.	<p>-Install “No Standing Anytime” regulations along the WB approach for 100 feet to allow for two moving lanes at the approach.</p> <p>-Restripe the WB approach from one 21-foot wide travel lane with parking to one 11-foot wide through lane and one 10-foot wide right-turn lane for 100 feet.</p> <p>- Modify signal timing: Shift 3s of green time from the EB/WB phase to the NB/SB Vernon Boulevard phase; Shift 1s of green time from the NB 11th Street phase to the NB/SB Vernon Boulevard phase [EB/WB phase green time shift from 25s to 22s; NB/SB Vernon Boulevard phase green time shift from 43s to 47s; NB 11th Street phase green time shift from 17s to 16s].</p>	<p>-Install “No Standing Anytime” regulations along the WB approach for 100 feet to allow for two moving lanes at the approach.</p> <p>-Restripe the WB approach from one 21-foot wide travel lane with parking to one 11-foot wide through lane and one 10-foot wide right-turn lane for 100 feet.</p>	<p>-Install “No Standing Anytime” regulations along the WB approach for 100 feet to allow for two moving lanes at the approach.</p> <p>-Restripe the WB approach from one 21-foot wide travel lane with parking to one 11-foot wide through lane and one 10-foot wide right-turn lane for 100 feet.</p>	N/A

In consultation with DCP (the lead agency) and NYCT, and in consideration of the feasibility and practicality of potential mitigation measures, it was determined that the identified significant adverse 30th Avenue Station fare array and street stair impacts could be mitigated by relocating the proposed N/Q-line shuttle stop from the 30th Avenue Station to the Astoria Boulevard Station. It is anticipated that the Astoria Boulevard mitigation shuttle route would operate via Hoyt Avenue South en route to the station and via Astoria Boulevard/27th Avenue en route to the project site.

While the Proposed Action would not result in any significant adverse subway line haul impacts, NYCT expressed concerns about the future capacity of the N/Q lines due to the proposed project and other recently approved projects in the area. To address this concern, the Applicant has committed to provide two mitigation shuttle routes: one to the Astoria Boulevard (N/Q) Station, and a second route to the 21st Street-Queensbridge (F) Station. It is anticipated that the 21st Street-Queensbridge (F) Station mitigation shuttle route would operate via 8th Street/Vernon Boulevard. LOS analyses at these subway stations indicated that they will operate with ample capacity in the future With-Action condition with implementation of the aforementioned alternate shuttle route mitigation measure.

In addition, it should be noted that the provision of ferry service to the project site is currently being contemplated by the City. The provision of an alternate form of public transit in close proximity to both existing and anticipated future residents on and adjacent to the Halletts Point peninsula is expected to reduce subway demand in the area (see Chapter 21, “Alternatives”). As potential plans for the ferry are evaluated in the future, subway station ridership will be monitored, and the need for the implementation of mitigation for the identified impacts at the 30th Avenue Station will be reevaluated.

Bus Line Haul

The Q103 bus route would experience significant adverse impacts in the southbound direction during the weekday AM and PM peak hours, as well as in the northbound direction during the weekday PM peak hour. Table 25-22, “2023 Mitigated Bus Line Haul Levels,” provides a comparison of existing service and the number of buses required to fully mitigate the identified potential significant adverse line haul impacts along the Q103 bus route in both impacted peak hours. While NYCT and MTA Bus Company routinely monitor changes in bus ridership and would make the necessary service adjustments where warranted, these service adjustments are subject to the agencies’ fiscal and operational constraints and, if implemented, are expected to take place over time.

Table 25-22: 2023 Mitigated Bus Line Haul Levels

Route	Direction	Peak Hour Buses	No-Action Available Capacity ¹	Project Increment	With-Action Available Capacity ²	Additional Peak Hour Buses Needed (Mitigation)	With-Action Available Capacity with Mitigation
Weekday AM Peak Hour							
Q103	Southbound	7	9	130	-121	3	41
Weekday PM Peak Hour							
Q103	Northbound	6	10	129	-119	3	43
	Southbound	4	26	82	-56	2	52

Notes:

¹ Assumes service levels adjusted to address capacity shortfalls in the No-Action condition.

² Available capacity based on MTA/NYCT loading guidelines of 54 passengers per standard bus.

Construction

Transportation

As discussed above, although the Modified Action would increase the allowable residential floor area by approximately 34,103 gsf, the overall construction phasing and schedule for the Applicant's proposed modified project would remain as described in Chapter 19, "Construction Impacts." As such, as under the Proposed Action, incremental vehicle trips during the proposed modified project's peak construction period (2022[Q4]) are expected to result in significant adverse impacts at three of the five intersections analyzed for potential construction traffic-related impacts: 27th Avenue at 4th Street; 27th Avenue at 8th Street; and 27th Avenue at 9th Street. At all other study area intersections where significant adverse traffic impacts are anticipated for the proposed project's full build, similar or lesser impacts are anticipated during the construction traffic peak period. By early implementation of the same mitigation measures as those proposed for mitigation in the "Transportation" section, above, two of the three impacted intersections would be fully mitigated (refer to Table 19-6 in Chapter 19, "Construction"). A description of the mitigation measures to be applied at the three impacted intersections is provided below:

- ***27th Avenue at 4th Street:*** The 3-4 PM significant adverse impact at the 27th Avenue westbound right-turn movement would be partially mitigated by modifying signal timing.
- ***27th Avenue at 8th Street:*** The significant adverse impact at the 27th Avenue westbound approach would be fully mitigated through lane restriping and daylighting measures.
- ***27th Avenue at 9th Street:*** The 9th Street southbound approach impact could be fully mitigated by installing a traffic signal along with daylighting and restriping. These mitigation measures would convert two-way (northbound/southbound) 9th Street to a one-way southbound roadway between 26th and 27th Avenues.