Chapter 22: Alternatives

A. INTRODUCTION

As described in the 2020 *City Environmental Quality Review (CEQR) Technical Manual*, alternatives selected for consideration in an environmental impact statement (EIS) are generally those that are feasible and have the potential to reduce, eliminate, or avoid any adverse impacts of a proposed action while meeting some or all of the goals and objectives of the action. As described in Chapter 1, "Project Description," the Proposed Actions consist of several land use actions—including zoning map amendments, zoning text amendments, City Map amendments, and disposition of City-owned property (collectively, the "Proposed Actions")—to implement land use and zoning recommendations in the Gowanus Neighborhood Plan (the "Neighborhood Plan" or "Plan"). The Proposed Actions are intended to facilitate development patterns that meet the long-term vision of a thriving, inclusive, and more resilient Gowanus where existing and future residents and workers can participate in civic, cultural, and economic activities and where a wholly unique resource—the Gowanus Canal—can thrive and play an active role in that equitable and sustainable growth.

This chapter considers the following three alternatives to the Proposed Actions:

- A No Action Alternative, which is mandated by CEQR and the State Environmental Quality Review Act (SEQRA), and is intended to provide the lead and involved agencies with an assessment of the expected environmental impacts of no action on their part.
- A No Unmitigated Significant Adverse Impacts Alternative, which considers a development scenario that would not result in any identified significant, unmitigated adverse impacts.
- A Lower Density Alternative, which considers lower density zoning that would result in reduced residential development.

The alternatives analyses are qualitative, except in those technical areas where significant adverse impacts for the Proposed Actions have been identified. The level of analysis provided depends on a preliminary assessment of project impacts as determined by the analysis connected with the appropriate tasks.

B. PRINCIPAL CONCLUSIONS

NO ACTION ALTERNATIVE

The No Action Alternative examines the future (2035) conditions in the Project Area under the existing zoning without the Proposed Actions (i.e., assumes none of the proposed discretionary approvals proposed as part of the Proposed Actions would be adopted). Under the No Action Alternative, the Project Area would not be rezoned and much of Gowanus would remain largely unchanged and underutilized. Any future development would occur in a piecemeal manner and without the benefit of a comprehensive plan to coordinate appropriate densities and urban design controls throughout the neighborhood. Under this alternative, it is anticipated that 30 of the 63 projected development sites would be redeveloped or undergo conversion. This would include 816

dwelling units (DUs) 241,232 square feet (sf) of local retail space, 103,595 sf of destination retail space, 374,983 sf of other commercial space, 107,361 sf of auto-related commercial space, 190,093 sf of medical office space, 26,974 sf of community facility space, and 415,490 sf of industrial space.

Under the No Action Alternative, there would be no change to zoning and Mandatory Inclusionary Housing (MIH) would not apply to the Project Area. The substantial amount of affordable housing expected under the Proposed Actions would not be provided. Under the No Action Alternative, it is anticipated that the socioeconomic gap between higher-income and lower-income Gowanus residents would continue to grow. In addition, as compared with the Proposed Actions, the benefits associated with improved economic activity, waterfront open space, a more resilient Gowanus, and enhanced pedestrian conditions would not be realized.

Unlike the Proposed Actions, under the No Action Alternative, the significant adverse impacts related to community facilities (early childhood programs), open space, shadows, historic and cultural resources (architectural and archaeological resources), transportation (traffic, transit, and pedestrians), and construction (noise) would not occur.

NO UNMITIGATED SIGNIFICANT ADVERSE IMPACTS ALTERNATIVE

The No Unmitigated Significant Adverse Impacts Alternative examines a scenario in which the density and other components of the Proposed Actions are modified to avoid the unmitigated significant adverse impacts associated with the Proposed Actions. There is the potential for the Proposed Actions to result in unmitigated significant adverse impacts related to community facilities (early childhood programs), open space, shadows, historic and cultural resources (architectural and archaeological resources), transportation (traffic), and construction (noise).

While this alternative considers development that would not result in any unmitigable significant adverse impacts, to eliminate all unmitigated significant adverse impacts, the Proposed Actions would have to be modified to such a degree that the principal goals and objectives of the Proposed Actions would not be fully realized.

The Proposed Actions would result in a significant adverse impact to publicly funded early childhood programs with the addition of a projected 615 children under the age of six eligible for publicly funded early childhood programs. With the added children, the combined utilization rate of early childhood programs within the two-mile study area would increase to approximately 167 percent, an approximately 25 percent increase over the No Action condition. Between this DEIS and the FEIS, mitigation measures will be explored with DCP and the New York City Department of Education's (DOE) Division of Early Childhood Education Services between the DEIS and FEIS. Should practical and feasible mitigation measures not be found, this significant adverse impact would remain unmitigated.

The Proposed Actions would result in a significant adverse quantitative impact associated with the active open space ratio. Under the Proposed Actions, the active open space ratio would decrease by approximately 2.66 percent from the No Action condition. This impact is primarily the result of the low existing active open space ratio in the study area and the addition of a substantial project-generated residential population. Partial mitigation measures being considered to address this impact include improvements to existing parks to allow for expanded programming and enhanced usability, and making New York City public school playgrounds accessible to the community afterschool hours through the Schoolyards to Playgrounds program. Because these measures would only partially mitigate the significant adverse impact, even with the implementation of these measures, the impact would not be fully mitigated. Since the study area

has such a low open space ratio, changes in the ratio as low as 1 percent may result in result in a significant adverse impact. A reduction of approximately 1,671 DUs would result in a decrease of 0.90 percent, which is below the 1 percent threshold; however, such a reduction in housing, including affordable housing, would conflict with one of the primary goals of the Proposed Actions.

The Proposed Actions would also result in significant adverse shadow impacts to two sunlight-sensitive resources: Our Lady of Peace Church, located on Carroll Street between Whitwell and Denton Places, and the Douglass and DeGraw Pool in Thomas Greene Playground. With regard to the church, project-generated incremental shadows would fall on some of the stained-glass windows for a portion of the day, and the extent and/or duration of the shadows would be substantial enough to significantly affect the potential enjoyment or appreciation by the public of the churches' interior spaces. With regard to the pool, project-generated incremental shadows would cover most of the large main pool and the small kiddie pool for approximately two hours in the late afternoon of the May 6/August 6 analysis day, significantly impacting the user experience of the pool on this analysis day. DCP will explore possible mitigation measures with the Landmarks Preservation Commission (LPC) and NYC Parks. As discussed below, in order to avoid these impacts, portions of the rezoning area would need to be eliminated or building heights reduced on certain development sites. If feasible mitigation is found, the impacts will be considered partially mitigated. In the absence of feasible mitigation, the significant adverse shadow impacts to Our Lady of Peace Church and Douglass and Degraw Pool would be unavoidable.

The Proposed Actions would result in direct and indirect significant adverse impacts to both archaeological and architectural resources. This includes direct and indirect impacts on the State and National Registers of Historic Places (S/NR)-eligible Gowanus Canal Historic District, potential construction-related impacts to contributing properties located within the boundaries of the district and to other individual architectural resources located both within and outside of the S/NR-eligible Gowanus Canal Historic District from adjacent projected construction, and construction-related impacts on properties that were determined to be archaeologically sensitive. There are no mechanisms to require mitigation at properties under private ownership; therefore, these impacts would be unmitigated.

The Proposed Actions would result in significant adverse traffic impacts at 43 study area intersections during one or more analyzed peak hours. Because of the anticipated congestion at a total of 39 intersections in the No Action Condition, even small increases in incremental With Action traffic volumes at some of the congested intersection approach movements would result in significant adverse impacts that could not be fully mitigated during one or more analysis peak hours, and almost any new development in the rezoning area could result in unmitigated traffic impacts. Therefore, no reasonable alternative could be developed to completely avoid such impacts without substantially compromising the Proposed Actions' stated goals.

Finally, temporary noise level increases exceeding *CEQR Technical Manual* impact criteria are expected at several locations throughout the Project Area during construction. While construction activity is expected to follow the requirements of the New York City Noise Control Code, to completely avoid significant adverse construction noise impacts, project-generated construction would have to be limited in such a way so as to occur on the same block as, or within one to two blocks from, existing sensitive receptors, which would require elimination of the rezoning area in the vicinity of these sensitive receptors. This would compromise the Proposed Actions' goals and objectives. Overall, given the above-described limitations, in order to fully mitigate all identified

significant adverse impacts, the Proposed Actions would have to be modified to a point where their principal goals and objectives would not be realized.

LOWER DENSITY ALTERNATIVE

The Lower Density Alternative was analyzed for the purpose of assessing whether lower-density residential development in some portions of the Project Area would eliminate or reduce the significant adverse impacts of the Proposed Actions while also meeting the goals and objectives of the Proposed Actions. Under the Lower Density Alternative, the residential density in the Canal Corridor Subarea would be reduced. The reduction of the residential floor area ratio (FAR) would result in fewer DUs on 11 projected development sites. Compared to the Proposed Actions, the Lower Density Alternative would result in 376 fewer residential units on projected development sites. The remaining land uses would not change and the Lower Density Alternative would result in the same mix of uses as the Proposed Actions.

As with the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts with respect to Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Urban Design and Visual Resources; Natural Resources; Hazardous Materials; Water and Sewer Infrastructure; Solid Waste and Sanitation Services; Energy; Air Quality; Greenhouse Gas Emissions and Climate Change; Noise; Public Health; and Neighborhood Character. It is noted that for CEQR impact areas that are density-related (e.g., community facilities, open space, transportation, etc.), the effects of this alternative are also reduced since there would be fewer DUs and fewer residents than under the Proposed Actions. However, compared with the Proposed Actions, the Lower Density Alternative would slightly reduce, but not eliminate, the significant adverse impacts related to community facilities (early childhood programs), open space, and transportation (traffic, pedestrians, and public transit). Compared with the Proposed Actions, the Lower Density Alternative would result in the same significant adverse impacts related to historic and cultural resources (architectural and archaeological impacts), shadows, and construction.

As compared to the Proposed Actions, the significant adverse impacts expected under the Lower Density Alternative would be generally the same, although the duration and/or extent of the impacts would be slightly lessened due to the reduced number of DUs and overall lower density. Similar to the Proposed Actions, (E) Designations would be mapped in connection with the zoning changes to preclude impacts to hazardous materials, noise, and air quality. Mitigation measures for the impacts under the Lower Density Alternative would be similar to mitigation measures under the Proposed Actions.

Like the Proposed Actions, the Lower Density Alternative would work in unison with the comprehensive set of strategies put forth in the Neighborhood Plan, which seeks to foster a resilient Gowanus where existing and future residents and workers are able to participate in civic, cultural, and economic activities, and where the Canal would continue to play an active role in that equitable and sustainable growth. The Lower Density Alternative would result in development on the same projected and potential developments sites as the Proposed Actions, and would facilitate the creation of a waterfront esplanade and new neighborhood open space. It would promote affordable housing development by increasing residential density and establishing MIH, encouraging economic development by mapping new commercial districts and increasing density in a highly transit-accessible area of the City, and create pedestrian-friendly streets through active ground floor retail uses. However, the Lower Density Alternative would result in fewer DUs, including fewer affordable units, and would be somewhat less supportive of the Proposed Action's objectives with respect to affordable housing, while also resulting in significant adverse impacts

related to community facilities (early childhood programs), open space, shadows, historic and cultural resources, transportation (traffic, transit, and pedestrians), and construction noise.

C. NO ACTION ALTERNATIVE

The No Action Alternative examines future conditions within the Project Area, but assumes the absence of the Proposed Actions. Under the No Action Alternative, there would be no change to zoning and MIH regulations would not apply to the Project Area.

Under the No Action Alternative, 30 of the 63 projected development sites in the Project Area are expected to be redeveloped, enlarged, or undergo conversion to a new use. Development on projected development sites includes approximately 800 DUs (of which approximately 100 would be affordable), 217,000 sf of community facility space, and 872,000 sf of commercial space (including 241,300 sf of local retail, 103,600 of destination retail, 375,000 of office space, 107,300 of commercial-related auto-related use, and 133 hotel rooms). Compared to the existing conditions, there would be a decrease of just under 2,000 sf of industrial space. Anticipated development on the projected development sites in the No Action condition are expected to result in a total of 1,788 residents and 3,176 workers on the projected development sites by the 2035 Build Year.

Approximately 3,700 DUs (including approximately 800 affordable DUs), 236,000 sf of retail space, 182,000 sf of office space, 224,000 sf of community facility space, and 229,000 sf of manufacturing space is expected to be developed in the Project Area and in areas within ¼-mile of the Project Area, including portions of Carroll Gardens, Boerum Hill, Downtown Brooklyn, Park Slope, and the industrial area of Gowanus south of the Project Area. These planned developments are discussed below, and in more detail in Chapter 2, "Land Use, Zoning, and Public Policy."

The significant adverse impacts related to shadows, open space, community facilities, shadows, historic and cultural resources, transportation, and construction that would occur with the Proposed Actions would not occur with the No Action Alternative.

LAND USE, ZONING, AND PUBLIC POLICY

With the No Action Alternative, it is expected that current land use trends and general development patterns would continue. These trends and patterns are characterized by a mix of uses and primarily include residential (mainly on 4th Avenue), commercial, self-storage, and community facility development.

In the No Action Alternative, 30 of the 63 projected development sites are expected to be redeveloped, enlarged, or undergo conversion to a new use. On projected development sites, 816 DUs, 241,232 sf of local retail space, 103,595 sf of destination retail space, 374,983 sf of other commercial space, and 107,361 sf of auto-related commercial space; 190,093 sf of medical office space and 26,974 sf of community facility space; a total of 415,490 sf of industrial space including warehouse space and self-storage uses, and 2,154 parking spaces would be developed. Under the No Action alternative, a total of 1,788 residents and 3,176 workers on the projected development sites would result by the 2035 Build Year.

Under the No Action Alternative, existing land use trends are expected to continue. The current trend of market-rate residential development, increased rents, and the introduction of higher-income residents to the area would continue. Zoning and public policies affecting the primary land use study area are expected to remain unchanged as compared with existing conditions. MIH

would not apply, affordable housing would continue to be in short supply, and projected development sites would remain underutilized.

SOCIOECONOMIC CONDITIONS

Under the No Action Alternative scenario, it is anticipated that the socioeconomic disparity between higher-income and lower-income residents would continue to grow.

Under the No Action Alternative, it is anticipated that 30 of the 63 projected development sites would be redeveloped or undergo conversion. Development or conversions on these 30 projected development sites under the No Action Alternative would result in an increment of 509,807 sf of residential floor area (585 market-rate DUs and eight affordable DUs), 476,864 sf of commercial uses, 208,067 sf of community facility uses, and a loss of 1,916 sf of industrial uses on the projected development sites as compared with the existing condition.

It is anticipated that the existing trends of rising rents and increasing average and median household income in the study area would continue. In the No Action condition, the MIH program would not be mapped in the Project Area. As discussed in Chapter 3, "Socioeconomic Conditions," there is an existing trend of increasing average and median household incomes in the study area and a concurrent existing trend in the study area of increasing average and median gross rents. In the absence of MIH in the Project Area and based on future development, it is expected that existing trends would continue into the future, leading to even higher incomes and rents in the No Action Alternative.

The following summarizes the potential socioeconomic effects of the No Action Alternative as compared with those of the Proposed Actions for the five issues of socioeconomic concern under CEQR.

DIRECT RESIDENTIAL DISPLACEMENT

Neither the No Action Alternative nor the Proposed Actions would result in significant adverse impacts due to direct residential displacement. Both the Proposed Actions and the No Action Alternative would result in potential direct residential displacement, but the numbers of potentially displaced residents would fall well below the *CEQR Technical Manual* threshold of 500 displaced residents, which indicates the potential for significant adverse impacts. The No Action Alternative could result in the direct displacement of an estimated 125 residents residing in 57 DUs from three projected development sites, while the Proposed Actions would result in the potential direct displacement of an additional estimated 20 residents residing in nine DUs on five of the 62 projected development sites.[1] Similar to the Proposed Actions, the amount of direct residential displacement under the No Action Alternative would not be large enough to substantially alter the socioeconomic character of the neighborhood.

DIRECT BUSINESS DISPLACEMENT

Like the Proposed Actions, the No Action Alternative would not result in significant adverse impacts due to direct business displacement; however, both the Proposed Actions and the No Action Alternative would result in direct business displacement. The No Action Alternative could result in the direct displacement of businesses (including parking) on 22 of 63 projected development sites. As with the Proposed Actions, the directly displaced businesses do not provide

[1] Residents and businesses that would be displaced in the No Action condition are not considered displaced in the With Action condition.

products or services that would no longer be available to local residents or businesses, nor are they the subject of regulations or publicly adopted plans aimed at preserving, enhancing, or otherwise protecting them in their current location. The businesses are not unique to the ½-mile socioeconomic study area, nor do they serve a user base that is dependent on their location within the study area.

INDIRECT RESIDENTIAL DISPLACEMENT

Neither the No Action Alternative nor the Proposed Actions would be expected to have a significant adverse indirect residential displacement impact. Under the No Action Alternative, approximately 593 DUs would be constructed or undergo conversion on seven of the 63 projected development sites. Given the trends experienced in the neighborhoods that comprise the study area, it is estimated that only eight of the 593 DUs would be affordable. Therefore, it is likely that rents within the study area would be higher under the No Action Alternative as compared with the Proposed Actions, which would introduce more overall housing, but substantially more affordable housing. Current real estate data show a trend towards higher rents and household incomes. Based on upward trends in income and real estate values in the study area, it is likely that low-income households in unprotected units (at-risk households) would continue to experience rent pressures under the No Action Alternative. The anticipated socioeconomic benefits of the Proposed Actions, including promoting the development of permanently affordable housing and facilitating mixed-income communities by requiring affordable housing units be included in any new residential development, would not be realized under the No Action Alternative. Through providing affordable housing and increasing the supply of housing, it is anticipated that the Proposed Actions would help to relieve displacement pressures. Unlike the Proposed Actions, the No Action Alternative would provide a minimal amount of affordable housing and in this respect would not further the City's goal of increasing affordable housing.

INDIRECT BUSINESS DISPLACEMENT

Neither the No Action Alternative nor the Proposed Actions would result in significant adverse impacts due to indirect business displacement. Similar to the Proposed Actions, the No Action Alternative would not introduce new economic activities that would substantially alter existing economic patterns in the study area, nor would it alter the land use character of the study area. The ½-mile study area already has well-established commercial, residential, and industrial markets, and neither the Proposed Actions nor the No Action Alternative would substantially alter commercial real estate trends in the area.

Compared with the Proposed Actions, the No Action Alternative would result in less commercial, manufacturing, and residential development than would occur with the implementation of the Proposed Actions. There would be comparably fewer new jobs under the No Action Alternative. The anticipated socioeconomic benefits of the Proposed Actions, including creating opportunities for economic development while preserving the vitality of the existing commercial and manufacturing uses, improving the pedestrian experience, and preserving existing affordability, would not be realized under the No Action Alternative.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

Neither the Proposed Actions nor the No Action Alterative would result in significant adverse impacts on specific industries. A significant adverse impact on a specific industry would generally occur only in the case of a regulatory change affecting the City as a whole or in the case of a local action that affects an area in which a substantial portion of that sector is concentrated relative to the City as a whole. Like the Proposed Actions, the No Action Alternative would not significantly

affect business conditions in any industry or any category of business within or outside of the study area.

COMMUNITY FACILITIES AND SERVICES

The No Action Alternative would introduce fewer residents to the community facilities study area as compared with the Proposed Actions and, therefore, would result in a smaller increase in demand on area community facilities. As with the Proposed Actions, the No Action Alternative would not result in any significant adverse impacts with regard to schools, library services; or police, fire, and emergency medical services. Unlike the Proposed Actions, the No Action Alternative would not result in significant adverse impacts to early childhood programs.

OPEN SPACE

Like the Proposed Actions, the No Action Alternative would not result in significant adverse impacts on open space. Three new open spaces, comprising ten acres, would be constructed in the non-residential study area under the No Action Alternative: Pacific Park, 625 Fulton Street, and the Head End open spaces. In addition, Thomas Greene Playground would be reconstructed as part of the Superfund remedy. As the No Action Alternative would introduce fewer residents and workers than the Proposed Actions, in terms of indirect effects the open space ratios for both the non-residential and residential study areas under the No Action Alternative would be slightly higher than those under the Proposed Actions.

SHADOWS

Under the No Action Alternative, 30 of the 63 projected development sites are expected to undergo redevelopment, with structures of lower height and decreased bulk. The No Action Alternative would remove all incremental shadow from Our Lady of Peace Church. Under the Proposed Actions project-generated incremental shadows would fall on some of the stained-glass windows for a portion of the day, and the extent and/or duration of the shadows would be substantial enough to affect the potential enjoyment or appreciation by the public of the church's interior spaces. Without the new shadows on this resource, the experience of users would not change. Therefore, the No Action Alternative would not result in a significant shadow impact on this resource. The No Action Alternative would remove all incremental shadow from the Douglass and Degraw Pool in Thomas Greene Playground. With the Proposed Actions, project-generated incremental shadow would cover most of the pool for two hours in the late afternoon of the May 6/August 6 analysis day, which would significantly impact the user experience on this analysis day. Without this new shadow, the user experience would not change. Therefore the No Action Alternative would not result in a significant shadow impact on this resource.

HISTORIC AND CULTURAL RESOURCES

As with the Proposed Actions, the No Action Alternative would result in direct effects associated with the demolition of historic and cultural resources and construction-related significant adverse impacts to architectural and archaeological resources.

ARCHAEOLOGICAL RESOURCES

Like the Proposed Actions, the No Action Alternative would result in significant adverse impacts to archaeological resources; however, fewer archaeologically sensitive sites would be potentially disturbed. In the No Action Alternative, it is assumed that development would occur in accordance with existing zoning throughout the Project Area on 13 of the 46 projected and potential development sites that were identified as archaeologically sensitive, and they will be directly

affected through as-of-right development. For the remaining 33 of the 46 archaeologically sensitive sites, no change is anticipated in the No Action Alternative. Three additional sites would be converted for other uses, but such conversion is not expected to result in new subsurface development and no disturbance is expected.

Under the Proposed Actions, impacts could occur on as many as 45 archaeologically sensitive sites. However, it should be noted that under the No Action Alternative, if any of the 13 sensitive sites were to be developed through future discretionary actions that would be subject to review under CEQR or other environmental review legislation (e.g., Section 106 of the National Historic Preservation Act or Section 14.09 of the New York State Historic Preservation Act), additional archaeological analysis would be completed to confirm the presence or absence of archaeological resources as part of any future discretionary action. With the completion of any further archaeological analysis, no significant adverse impacts would occur for those sites subjected to archaeological inquiry.

ARCHITECTURAL RESOURCES

As with the Proposed Actions, the No Action Alternative would result in direct effects associated with the demolition of architectural resources and construction-related significant adverse impacts to architectural resources.

Thirteen projected development sites located within the S/NR-Eligible Gowanus Canal Historic District are expected to be directly affected through as-of-right development:

- Projected Development Site 7 will involve the conversion of an existing building to mixed-use containing residential, medical offices, retail, and parking. This is the site of the R.G. Dun Building at 255 Butler Street, a contributing resource to the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 8 at 209 Butler Street will be developed with a new 45-foot-tall mixed-use development containing residential, medical offices, retail, and parking. This is a vacant site in the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 11 at 192 Butler Street will be developed with a new 45-foot-tall mixed-use development containing medical offices and retail. This is a vacant site in the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 12 at 233 and 239 Nevins Street and 251 Douglass Street and Butler Street will involve the conversion of buildings to retail and other commercial uses, including the buildings at 233 Nevins Street and 239 Nevins Street (Scranton & Lehigh Coal Co. Garage), which are contributing resources to the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 20 will involve conversion of the existing building at 537 Sackett Street to medical office and other community facility uses. This is the site of Majestic Company factory, a contributing resource to the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development 22 involves conversion of the existing warehouse building at 498 Sacket Street to commercial use. A new 60-foot-tall self-storage development will occur at 510 Sackett Street, which contains a factory. No development will occur at 287 Bond Street (a factory building) and 499 Union Street (two warehouses). These are all contributing properties to the S/NR-Eligible Gowanus Canal Historic District.

- Projected Development Site 29 involves the conversion of a utility building at 300 Nevins Street to retail. This is a non-contributing property to the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 30 at 469 President Street and 514 Union Street will be developed with a new 120-foot-tall mixed-use development containing retail and other commercial uses. 469 President Street and 514 Union Street contain buildings that are contributing resources to the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 34 at 341 Nevins Street will be developed with new 30-foot-tall building containing commercial uses. The property at 341 Nevins Street contains a parking lot in the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 37 at 420 and 430 Carroll Street will be developed with new self-storage uses at a height of 45 feet. 420 Carroll Street contains a factory that is non-contributing to the S/NR-Eligible Gowanus Canal Historic District. 430 Carroll Street is developed with a garage that is a contributing resource to the S/NR-Eligible Gowanus Canal Historic District.
- Projected Development Site 43 at 3rd Street and 421 Bond Street will be developed with new commercial and industrial uses at a height of 164 feet. The parcel at 3rd Street is a vacant lot and 421 Bond Street is occupied by a warehouse that contributes to the S/NR-Eligible Gowanus Canal Historic District.
- The west portion of Projected Development Site 57 contains a parking lot at 233 Butler Street that will be developed with new retail and other commercial uses at a height of 32 feet. The east portion of Projected Development Site 57 contains the ASPCA Memorial Building, a contributing resource to the S/NR-Eligible Gowanus Canal Historic District and also designated by LPC as a New York City Landmark (NYCL). The resource will be retained.
- Projected Development Site 59 will involve the conversion of a factory building at 98 4th Street to warehouse use. This is a non-contributing property to the S/NR-Eligible Gowanus Canal Historic District.

Of these development sites, four (Projected Development Sites 22, 30, 37, and 43) would involve demolition of buildings that are contributing resources to the S/NR-Eligible Gowanus Canal Historic District.

Five potential development sites located within the S/NR-Eligible Gowanus Canal Historic District are expected to be directly affected through as-of-right development. These include Potential Development Sites C, D, E, W, and BS. Therefore, as-of-right development would affect contributing properties to the S/NR-Eligible Gowanus Canal Historic District (a portion of Potential Development Site E at 475 Baltic Street contains a property that is non-contributing to the S/NR-Eligible Gowanus Canal Historic District). In addition, as-of-right development will directly affect the S/NR-Eligible property located at 544 4th Avenue on Potential Development Site BY (Resource No. 2), where new as-of-right residential and commercial development to a maximum height of 105 feet will occur.

Additional protective measures apply to designated NYCLs and S/NR-Listed historic buildings located within 90 linear feet of proposed construction. For these structures, the New York City Department of Building (DOB)'s *Technical Policy and Procedures Notices* (TPPN) #10/88 applies. TPPN #10/88 supplements the standard building protections afforded by the Building Code by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent NYCL-designated or S/NR-Listed architectural resources (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures

can be changed. The procedures and protections of the TPPN #10/88 apply to five NYCLs: the ASPCA Memorial Building (Resource No. 1), the Carroll Street Bridge and Operator's House (Resource No. 6), the Brooklyn Improvement Co. Office (Resource No. 8), the BRT Central Power Station Engine House (Resource No. 12), and the Gowanus Canal Flushing Tunnel Pumping Station and Gate House (Resource No. 20), as they are located within 90 feet of development sites as described below and shown in Table 7-8 of Chapter 7, "Historic and Cultural Resources":

- Projected Development Site 8 will be developed with a new building to a maximum height of 45 feet (not including rooftop mechanicals). It is within 90 feet of the ASPCA Memorial Building (Resource No. 1, NYCL, S/NR-Eligible).
- Projected Development Site 11 will be developed with a new building to a maximum height of 45 feet (not including rooftop mechanicals). It is within 90 feet of the Gowanus Canal Flushing Tunnel Pumping Station and Gate House (Resource No. 20, NYCL, S/NR-Eligible).
- Projected Development Site 29 will be converted to retail use. It is within 90 feet of the Carroll Street Bridge and Operator's House (Resource No. 6, NYCL, S/NR-Eligible).
- Projected Development Site 37 will be developed with a new self-storage building to a maximum height of 45 feet (not including rooftop mechanicals). It is within 90 feet of the Carroll Street Bridge and Operator's House (Resource No. 6, NYCL, S/NR-Eligible).
- Projected Development Site 41 will be partially developed with new commercial uses to a maximum height of 45 feet (not including rooftop mechanicals). It is adjacent to the BRT Central Power Station Engine House (Resource No. 12, NYCL, S/NR-Eligible) and within 90 feet of the Brooklyn Improvement Co. Building (Resource No. 8, NYCL, S/NR-Eligible)

There are two mechanisms to protect buildings in New York City from potential damage caused by adjacent construction. All buildings are provided some protection from accidental damage through DOB controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code Section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19. While these regulations serve to protect all structures adjacent to construction areas, they do not afford special consideration for historic structures.

The second protective measure applies to NYCLs, properties within New York City Historic Districts, and S/NR-Listed properties. For these structures, TPPN #10/88 applies. TPPN #10/88 supplements the standard building protections afforded by Building Code C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage to adjacent NYCLs and S/NR-Listed properties (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

Four architectural resources that are not NYCLs or S/NR-Listed properties, as well as properties within the S/NR-Eligible Gowanus Canal Historic District, could experience accidental construction damage in the future without the Proposed Actions from anticipated as-of-right development on adjacent projected and potential developments sites. While these resources would be offered some protection through DOB controls governing the protection of adjacent properties from construction activities, without additional protection provided by TPPN #10/88, potential construction-related impacts could occur:

- Projected Development Site 8 will be developed with a new building to a maximum height of 45 feet (not including rooftop mechanicals). It is within 90 feet of the Gowanus Canal Flushing Tunnel (Resource No. 20, S/NR-Eligible), which runs under Butler Street.
- Projected Development Site 11 will be developed with a new building to a maximum height of 45 feet (not including rooftop mechanicals). It is within 90 feet of the Gowanus Canal Flushing Tunnel, which runs under Butler Street in the Project Area (Resource No. 20, S/NR-Eligible).
- Projected Development Site 48 will be developed with a new building to a maximum height of 45 feet (not including rooftop mechanicals). It is within 90 feet of the Independent (IND) Subway Viaduct (Resource No. 27, S/NR-Eligible).
- The western portion of Projected Development Site 57 that contains a parking lot will be developed with a new building to a maximum height of 32 feet (not including rooftop mechanicals). It is within 90 feet of the Gowanus Canal Flushing Tunnel (Resource No. 20, S/NR-Eligible), which runs under Butler Street in the Project Area.
- Potential Development Site B will be developed with a new building to a height of 125 feet (not including rooftop mechanicals). It is within 90 feet of the row house at 374 Bergen Street (Resource No. 5, S/NR-Eligible) and the western grouping of row houses at 376-414 Bergen Street (Resource No. 17, S/NR-Eligible).
- Numerous projected and potential development sites located within the boundaries of the S/NR-Eligible Gowanus Canal Historic District (Resource A, S/NR-Eligible) are adjacent to or within 90 feet of buildings within the historic district.

Buildings that are expected to be constructed on the potential and projected development sites in the No Action Alternative will generally be between four and 16 stories (40 to 160 feet tall). Most buildings are expected to have residential and commercial uses, with some residential buildings having ground-floor retail and community facility spaces.

Planned No Build Developments Within the Project and Study Areas

Project Area

Other developments expected to occur as-of-right that could affect architectural resources in the future without the Proposed Actions are described below. Construction from these No Build projects could directly impact architectural resources:

- No Build #5 is a planned approximately 48-foot-tall hotel at 489 Baltic Street. It is located within the S/NR-Eligible Gowanus Canal Historic District (Resource A).The property is a three-story mid-19th century rowhouse that is a contributing resource to the S/NR-Eligible Gowanus Canal Historic District.
- No Build #13 is a planned approximately 52- foot-tall office development at 445 Carroll Street within the S/NR-Eligible Gowanus Canal Historic District (Resource A). The property is a two-story late 19th century rowhouse that is a contributing resource to the S/NR-Eligible Gowanus Canal Historic District.
- No Build #14 is a planned approximately 108-foot-tall industrial development with parking at 497 Carroll Street within the S/NR-Eligible Gowanus Canal Historic District (Resource A). The property is an early 20th century factory complex with two buildings that is a contributing resource to the S/NR-Eligible Gowanus Canal Historic District.
- No Build #41 is a planned reuse and expansion of the BRT Central Power Station Engine House at 153 2nd Street, at a height of 96 feet. The BRT Central Power Station Engine House

has been designated a NYCL by LPC and is located within the S/NR-Eligible Gowanus Canal Historic District (Resource A).

Although No Build #22 is a planned approximately 65-foot-tall residential development with parking at 399 3rd Avenue within the S/NR-Eligible Gowanus Canal Historic District (Resource A), the property is a parking lot that does not contain contributing buildings to the S/NR-Eligible Gowanus Canal Historic District.

No Build projects could also potentially result in construction-related impacts to architectural resources from one as-of-right development project located within 90 feet of architectural resources. TPPN #10/88 applies to one S/NR-Listed property:

- No Build #26 is a planned approximately 125-foot-tall mixed-use development with residential, retail, and community facility uses at 262 9th Street. It is located within 90 feet of the IND 4th Avenue Station (Resource No. 10, S/NR-Listed).

The following four S/NR-Eligible properties are not protected under TPPN#10/88 and could experience construction-related impacts without the Proposed Actions:

- No Build #12 is a planned approximately 69-foot-tall hotel development at 529 President Street, located at Potential Development Site AS. It is located adjacent to the S/NR-Eligible Gowanus Canal Historic District (Resource A).
- No Build #28 is a planned approximately 49-foot-tall residential development at 139 15th Street. It is located adjacent to the rowhouse at 544 4th Avenue (Resource No. 2, S/NR-Eligible).

Study Area

- No Build #7 is a planned approximately 50-foot-tall residential development at 280 Bond Street. It is located within 90 feet of the S/NR-Eligible Gowanus Canal Historic District (Resource A).
- No Build #10 is a planned approximately 50-foot-tall residential development at 326 Bond Street. It is located within 90 feet of the S/NR-Eligible Gowanus Canal Historic District (Resource A).
- No Build #42 is a planned approximately 86-foot-tall mixed-use development containing retail, office, and manufacturing uses at 300 Huntington Street. The development is also anticipated to include public open space along the frontage with the Gowanus Canal. No Build #42 will be adjacent to the Gowanus Canal which is included within the S/NR-Eligible Gowanus Canal Historic District (Resource A) and will also be adjacent to, or within 90 feet of, the IND Subway Viaduct (Resource No. 27) that extends through the block.

In general, the No Build developments within the Project Area and 400-foot study area are between approximately 40 to 125 feet tall with most buildings rising to a height of less than 100 feet. They will add primarily residential developments (including three that will contain affordable housing) to the study area, with a number of No Build developments also containing retail and community facility uses. Other developments include three hotels, an office development, and a new manufacturing use.

Superfund Remediation

Remediation of the Gowanus Canal and related upland sites pursuant to the Comprehensive, Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or "Superfund") will include dredging the Canal, scheduled to begin in 2020; remediation, expected to be

completed by 2028; and bulkhead repairs. The remediation will, therefore, alter and potentially impact original bulkheads of the Gowanus Canal, which are contributing features to the S/NR-Gowanus Canal Historic District.

As part of the Superfund remediation, the New York City Department of Environmental Protection (DEP) plans to construct two new combined sewer overflow (CSO) facilities with improved outfall capacity, one at the head of the Canal (Head End Facility) and another near the middle of the Canal (Owls Head Facility). Full build out is planned for 2028. The CSO facilities are designed to collect and retain combined sewer overflow from their respective combined sewer systems, which currently discharge to the Canal. Both the Head End and Owls Head facility sites are located within the boundaries of the S/NR-Eligible Gowanus Canal Historic District within the study area. While not part of the Proposed Actions or within the Project Area, construction of the CSO facilities will require the demolition of contributing properties to the S/NR-Eligible Gowanus Canal Historic District at the Head End site: buildings at 242 Nevins Street, 270 Nevins Street, and 234 Butler Street, constituting a significant adverse impact and requiring that DEP undertake mitigation measures to partially mitigate the adverse impact. Construction of the CSO facility at the Owls Head site would require the demolition of properties that are non-contributing to the significance of the S/NR-Eligible Gowanus Canal Historic District.

URBAN DESIGN AND VISUAL RESOURCES

Like the Proposed Actions, the No Action Alternative would not result in significant adverse impacts on urban design. Under the No Action Alternative, it is anticipated that current urban design trends and general development patterns would continue. These trends and patterns are characterized by a mix of older buildings—including one- to three-story industrial buildings with large footprints, three- and four-story tenements and rowhouses, and institutional facilities (including churches and schools)—and newer one- to 16-story buildings with large footprints, many of which include residential, office, industrial, commercial, and community facility uses. The Project Area would continue to be characterized by underutilized and vacant lots, interspersed with low-scale industrial buildings. The Canal would be remediated; however, access to it would continue to be limited due to the lack of publicly accessible waterfront open space. The 4th Avenue corridor would experience redevelopment with new mixed-use buildings; however, some recent buildings with inactive ground-floor spaces are expected to remain.

Development under the alternative is expected to include as-of-right construction on projected development sites and other planned as-of-right development. Thirty of the 63 projected development sites in the Project Area are expected to be redeveloped, converted, and/or enlarged under existing zoning under the No Action Alternative. The massing and scale of the new developments would be generally comparable to existing buildings. However, the No Action Alternative would not provide the urban design benefits afforded under the Proposed Actions such as a revitalized, active, and more resilient Canal waterfront with a continuous public walkway, new parks, or pedestrian-friendly streetscapes.

NATURAL RESOURCES

Like the Proposed Actions, the No Action Alternative would not result in any significant adverse impacts to natural resources. With the No Action Alternative, the identified projected development sites are assumed to either remain unchanged from existing conditions or become occupied by uses that are as-of-right under existing zoning and reflect current trends. No significant changes to natural resources are anticipated.

HAZARDOUS MATERIALS

The No Action Alternative, like the Proposed Actions, would involve building construction, additions, and conversions. However, construction on new buildings for as-of-right uses under the current zoning may occur without regulatory oversight such that environmental conditions of these sites are not addressed, and residual contamination could be encountered by construction workers or the general public without their knowledge. It is assumed that all construction and required removal or handling of hazardous materials would be conducted in accordance with applicable state and federal requirements, thereby minimizing the potential for exposure.

A greater amount of ground disturbance in areas where soil is potentially contaminated from hazardous materials would occur under the Proposed Actions, as compared with the No Action Alternative, since some projected development sites would be redeveloped under the Proposed Actions but not under the No Action Alternative. However, development under the Proposed Actions would be conducted in accordance with the testing and remediation requirements required pursuant to the E Designations or comparable measures that would be placed on development sites under the Proposed Actions. No such measures would be required under the No Action Alternative, and no mechanisms would be in place to require cleanup of upland sites that may experience redevelopment in the No Action Alternative. As such, the No Action Alternative would involve less soil disturbance, but any development under this alternative would potentially be held to less stringent oversight than that with the Proposed Actions.

WATER AND SEWER INFRASTRUCTURE

Under the No Action Alternative, as compared to existing conditions, there would be an increase in water demand and sanitary sewage generation due to the redevelopment, enlargement, or conversions that would occur in the Project Area. However, as with the Proposed Actions, there is expected to be sufficient capacity in the water supply system to support the increase in water demand and the increase in sanitary sewage is expected to be well within the capacity of the Red Hook and Owls Head Wastewater Resource Recovery Facilities (WRRFs). Stormwater runoff would continue to be collected and directed through the combined sewer system and then conveyed to the Red Hook and Owls Head WRRFs for treatment. As new development is anticipated on several of the projected development sites on an as-of-right basis, the amount of lot area comprising roofs would increase in four of the six affected subcatchment areas, with corresponding decreases in the area comprised of pavement/walks and grass/softscape. However, as DEP has proposed a Unified Stormwater Rule that increases the amount of stormwater to be managed on-site as part of the new development, and further restricts the release rate for sites that require a connection to a city sewer. As a result of these requirements, given that the existing development sites do not provide the same level of retention or slow-release detention, it is expected that there would be a reduction in uncontrolled runoff on the projected development sites where new construction is anticipated in the No Action Alternative.

Improvements to current infrastructure, such as the installation of High Level Storm Sewers and construction of the CSO control facilities, are also expected to be undertaken by DEP in the No Action Alternative; these improvements are expected to result in area-wide reductions in stormwater flows to the combined sewer system. Based on analysis prepared by DEP, under the No Action Alternative, there would be a significant reduction in surcharging/flooding conditions and CSO volumes/frequencies as compared to current conditions as a result of the construction of the CSO facilities. As compared to the Proposed Actions, the No Action Alternative would result in slightly higher total volume of CSO discharged to the Canal. In particular, as discussed in Chapter 11, “Water and Sewer Infrastructure,” the Proposed Actions would result in a decrease in

CSO volume discharged to the Canal as compared to the No Action alternative, despite the increase in sanitary flows from new development, due to increased on-site stormwater management volume requirements, updated release rate restrictions, and the number of retention practices implemented with new development in accordance with the proposed Unified Stormwater Rule. Therefore, neither the No Action Alternative nor the Proposed Actions would result in significant adverse impacts to local water supply or wastewater and stormwater conveyance and treatment infrastructure.

SOLID WASTE AND SANITATION SERVICES

Neither the Proposed Actions nor the No Action Alternative would adversely affect solid waste and sanitation services or place a significant burden on the City's solid waste management system. While solid waste generated by the projected development sites would increase under both the No Action Alternative and the Proposed Actions, the No Action Alternative would generate less demand on New York City's solid waste services and sanitation services.

ENERGY

Neither the Proposed Actions nor the No Action Alternative would result in significant adverse impacts with respect to the transmission or generation of energy. Like the Proposed Actions, the No Action Alternative would generate increased demands on New York City's energy services, but the demand generated under the No Action Alternative would be considerably less than for the Proposed Actions. However, under both the Proposed Actions and the No Action Alternative, the annual increase in demand would represent a negligible amount of the City's forecasted annual energy requirements for 2030.

TRANSPORTATION

As discussed below, unlike the Proposed Actions, the No Action Alternative would not result in any significant adverse impacts with respect to transportation. Unlike the Proposed Actions, the No Action Alternative would not result in the potential for significant adverse traffic impacts to 37, 23, 36, and 33 intersections in the weekday AM, midday and PM, and Saturday peak hours, respectively. The Proposed Actions' significant adverse impacts to four street stairs and one fare array at the Union Street (R) subway station and to line haul conditions on northbound F train service in the AM peak hour would not occur under the No Action Alternative. Furthermore, the Proposed Actions' significant adverse impacts to nine sidewalks and five crosswalks in one or more peak hours would not occur under the No Action Alternative. Like the Proposed Actions, demand for off-street and on-street parking spaces within the parking study area would exceed capacity during the analyzed weekday midday and overnight periods.

In the No Action Alternative, traffic, parking, transit and pedestrian demand in the study area would increase as a result of background growth, development that could occur pursuant to existing zoning (i.e., as-of-right development), and other development projects likely to occur within and in the vicinity of the Project Area.

TRAFFIC

Independent of the Proposed Actions, traffic levels of service (LOS) at many locations in the study area would experience congested conditions in the future. Under the No Action Alternative, a total of 39 intersections (34 signalized and five unsignalized) would have at least one congested lane group in one or more peak hours; this is compared with a total of 52 intersections (35 signalized and 17 unsignalized) with at least one congested lane group in one or more peak hours under the Proposed Actions. There would be no intersections with significant adverse traffic

impacts under the No Action Alternative compared with 37, 23, 36, and 33 impacted intersections during the weekday AM, midday and PM, and Saturday peak hours, respectively, under the Proposed Actions.

TRANSIT

Subway

Subway Stations

Under the No Action Alternative, the four analyzed subway stations would experience an increase in demand as a result of background growth and future developments anticipated within and in the vicinity of the Project Area. No pedestrian elements (stairs, escalators and fare arrays) at any of these stations would experience significant adverse impacts under this alternative. By comparison, under the Proposed Actions four street stairs and one fare array at the Union Street (R) station would be significantly adversely impacted by With Action demand in either the AM or PM peak hour.

Subway Line Haul

Under the No Action Alternative, subway trains serving stations in proximity to the Project Area would experience increased ridership through their maximum load points as a result of background growth and new development. No subway route would experience significant adverse line haul impacts under this alternative. By comparison, northbound F service would be significantly adversely impacted by the Proposed Actions in the AM peak hour.

Bus

Under the No Action Alternative, demands on the local bus services operating in the vicinity of the rezoning area are expected to increase compared with existing ridership as a result of background growth and new development. The existing level of bus service would not be sufficient to provide adequate supply to meet projected demand under the No Action Alternative on the westbound B103 Limited (LTD) service in the AM peak hour. Based on a loading guideline of 54 passengers per standard bus, two additional westbound B103 LTD buses would be needed in the AM peak hour (for a total of 25 buses) in order to accommodate projected demand. Like the Proposed Actions, the No Action Alternative would not result in significant adverse bus impacts.

PEDESTRIANS

Under the No Action Alternative, pedestrian volumes along analyzed sidewalks, crosswalks and corner areas are expected to increase compared with existing levels as a result of background growth as well as demand from new development.

Sidewalks

Under the No Action Alternative, all analyzed sidewalks are expected to operate at an acceptable LOS C or better in all peak hours. The Proposed Actions' significant adverse impacts to nine of the 81 analyzed sidewalks in one or more peak hours would not occur under this alternative.

Crosswalks

Under the No Action Alternative, all analyzed crosswalks are expected to operate at an acceptable LOS C or better in all peak hours. The Proposed Actions' significant adverse impacts to five of the 51 analyzed crosswalks would not occur under this alternative.

Corners

Under the No-Action Alternative all analyzed corner areas are expected to operate at an uncongested LOS A in all peak hours. Like the Proposed Actions, the No Action Alternative would not result in any significant adverse corner impacts in any peak hour.

PARKING

Under the No Action Alternative, it is anticipated that demand for both off-street and on-street parking would increase due to new development and general background growth. Under both this alternative and the Proposed Actions, DOT safety improvements planned for Fourth Avenue would result in the displacement of an estimated 26 curbside parking spaces. One existing public parking facility with a total of 120 spaces that would be displaced under the Proposed Actions would remain under this alternative.

Under the No Action Alternative, the combined supply of on-street and public off-street parking capacity within ¼-mile of projected development sites would not be sufficient to accommodate demand during either the midday or overnight periods, with estimated shortfalls of 646 spaces and 497 spaces during these periods, respectively. This compares to estimated shortfalls of 2,980 and 2,838 spaces during these periods, respectively, under the Proposed Actions. While some drivers destined for the Project Area would potentially have to travel a greater distance (e.g., between ¼ and ½ mile) to find available parking, these shortfalls would not be considered a significant adverse impact based on *CEQR Technical Manual* criteria due to the magnitude of available alternative modes of transportation. Therefore, like the Proposed Actions, the No Action Alternative is not expected to result in a significant adverse parking impact.

AIR QUALITY

MOBILE SOURCES

In the No Action Alternative, emissions from traffic demand in the air quality study area would increase as a result of background growth and development that could occur pursuant to existing zoning (i.e., as-of-right-development). As reported in Chapter 15, "Air Quality," under the No Action Alternative, there would be no exceedances of the national ambient air quality standards for carbon monoxide or particulate matter less than 10 microns in diameter. Significant adverse mobile source impacts are therefore not anticipated under this alternative.

STATIONARY SOURCES

As outlined in Chapter 15, while some development would occur under the No Action Alternative, the Proposed Actions would result in more development and therefore the emissions from heat and hot water systems associated with the Proposed Actions would cumulatively be greater than the emissions from heat and hot water systems in the No Action Alternative. However, unlike the Proposed Actions, the as-of-right development on 30 of the 63 projected development sites would not have an environmental assessment of air quality exposure as conducted for the Proposed Actions; thus, such development would not be subject to any air quality E designations. Specifically, they would not have the restrictions specified in Chapter 15 for the control of emissions for fossil-fuel-fired heating, ventilation, and air conditioning (HVAC) systems, which would be designed to ensure that there would be no significant adverse air quality impacts at nearby receptor locations.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

GREENHOUSE GAS EMISSIONS

In the No Action Alternative, greenhouse gas (GHG) emissions associated with land uses in the Project Area would change over the years due to changes in development that would occur under existing zoning rules depending on changes in the local real estate market and due to changes in the mix of fuel in the electricity provided to buildings as well as fuels used locally for heating and vehicles.

RESILIENCE TO CLIMATE CHANGE

The resilience challenges associated with sea level rise, the future increase in potential severe storm levels, and the City's response to these challenges would be the same as those described for the Proposed Actions, but would potentially affect the smaller development that would occur in the area without the zoning changes.

NOISE

In the No Action Alternative, traffic volumes would increase in the area due to general background growth and trips associated with new development that would be independent of the Proposed Actions. These increases in traffic would in general result in small changes in noise levels; as outlined in Chapter 17, "Noise," the increases in L_{eq} noise levels would be less than 3.0 dBA. Changes of this magnitude would be barely perceptible. Like the Proposed Actions, the No Action Alternative would not result in significant adverse impacts. However, unlike the Proposed Actions, the as-of-right development on projected or potential development sites would not have an environmental assessment of air quality exposure as conducted for the Proposed Actions, and thus, such development would not be subject to any noise (E) Designations. Specifically, they would not have the restrictions specified in Chapter 17 for window-wall attenuation.

PUBLIC HEALTH

Neither the Proposed Actions nor the No Action Alternative would result in significant adverse public health impacts. Under the No Action Alternative, no unmitigated significant adverse impacts would occur in the areas of hazardous materials, air quality, noise, or construction, and thus there would be no significant adverse public health impacts associated with construction or operation of the new development anticipated under the No Action Alternative.

NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, a proposed action could have a significant adverse neighborhood character impact if it would have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact in any relevant technical area, or through a combination of moderate effects in those technical areas. The Proposed Actions would not result in significant adverse impacts in the areas of land use, zoning, and public policy; socioeconomic conditions; open space; urban design and visual resources; traffic; or noise. As discussed in Chapter 19, "Neighborhood Character," although significant adverse impacts would occur with respect to historic resources, shadows, and transportation, these impacts would not result in significant adverse impacts to neighborhood character. The significant adverse historic resources, shadows, and traffic impacts would not affect any defining feature of neighborhood character, nor would a combination of moderately adverse effects affect such a defining feature. New development that could occur under the No Action Alternative would include new market-rate housing and commercial space. The provision of affordable dwelling

units required under MIH would not occur, and the existing trend of increasing rents would continue unabated. Income levels would continue to increase under the No Action Alternative, as the rental market for housing grows increasingly expensive, potentially forcing long-time residents to move out of the neighborhood. With the No Action Alternative, the land use, open space and urban design benefits expected with the Proposed Actions would not occur. Unlike the Proposed Actions, the No Action Alternative may result in changes in the socioeconomic composition of Gowanus residents. Although this does not constitute a significant adverse impact, the trend of increasing incomes and rents would continue unencumbered.

CONSTRUCTION

As the amount of new construction under the No Action Alternative would be less as compared with the Proposed Actions, the No Action Alternative would not generate as much temporary construction disruption. The No Action Alternative would result in shorter durations of construction-related noise and traffic than the Proposed Actions, and may also result in fewer potential construction-related impacts to non-designated historic resources in the area.

The No Action Alternative would not result in significant adverse construction impacts with respect to land use and neighborhood character, socioeconomic conditions, community facilities, open space, hazardous materials, air quality, or vibration. The No Action Alternative would involve less soil disturbance; however, it is possible that the regulatory controls on its performance would not be as stringent as under the Proposed Actions.

With the No Action Alternative, there could be new construction if parcels within the area are developed independent of the Proposed Actions. It is anticipated that this construction, if it were to occur, would be much smaller in scale and of a shorter duration than what would be undertaken for the Proposed Actions. Therefore, construction noise impacts would not be expected at the locations identified as having the potential to experience significant adverse construction impacts under the Proposed Actions.

D. NO UNMITIGATED SIGNIFICANT ADVERSE IMPACTS ALTERNATIVE

Based on the analyses presented in other chapters of this EIS, there is the potential for the Proposed Actions to result in a number of significant adverse impacts for which no practicable mitigation has been identified. Specifically unmitigated impacts were identified with respect to community facilities (early childhood programs), open space, shadows, historic and cultural resources (architectural and archaeological resources), transportation (traffic, transit, and pedestrians), and construction (noise). This alternative considers development that would not result in any significant adverse impacts that could not be fully mitigated. However, to eliminate all unmitigated significant adverse impacts, the Proposed Actions would have to be modified to a point where the principal goals and objectives of the Proposed Actions would not be fully realized.

COMMUNITY FACILITIES

PUBLICLY FUNDED EARLY CHILDHOOD PROGRAMS

The Proposed Actions would result in a significant adverse impact to publicly funded early childhood programs. The Proposed Actions would introduce 615 children under the age of six eligible for publicly funded early childhood programs. With the addition of these children, the combined utilization rate of early childhood programs within the two-mile early childhood study area would increase to approximately 169 percent, an approximately 25 percent increase over the

No Action condition. Mitigation measures will be explored with DCP and DOE between the DEIS and FEIS. Should practical and feasible mitigation measures not be found, the significant adverse impact to early childhood programs would remain unmitigated.

To avoid the identified significant adverse impact to early childhood programs, the number of affordable DUs that could be developed on the projected development sites would have to be reduced from 3,457 DUs to 688 DUs, a reduction of 2,769 affordable units. A substantial reduction in the number of affordable housing units developed in the Project Area would be less supportive of the goals and objectives of the Proposed Actions. Alternatively, the provision of 331 early childhood slots under this alternative would avoid the unmitigated significant adverse impact to early childhood programs.

OPEN SPACE

The Proposed Actions would result in a significant adverse quantitative impact associated with the active open space ratio. The active open space ratio would decrease by approximately 2.66 percent over the No Action condition. The impact to open space is primarily due to the existing low active open space ratio in the study area and the addition of a substantial residential population. Partial mitigation measures being considered to address the significant adverse open space impact include improvements to existing parks to allow for expanded programming and enhanced usability, and making New York City public school playgrounds accessible to the community afterschool hours through the Schoolyards to Playgrounds program. Because these measures would only partially mitigate the significant adverse impact, even with the implementation of these measures, the impact would not be fully mitigated. For a study area that exhibits a low open space ratio, changes as low as 1 percent may result in result in a significant adverse impact. The Proposed Actions would result 2.66 percent decrease in the active open space ratio, A reduction of approximately 1,671 DUs would result in a decrease of less than 1 percent (0.9 percent), however such a reduction would not facilitate the provision of housing, including a substantial amount of affordable housing, which is one of the primary goals of the Proposed Actions.

SHADOWS

As described in Chapter 6, "Shadows," the Proposed Actions would result in a significant adverse impact to Our Lady of Peace Church, located on Carroll Street between Whitwell and Denton Places, and to the Douglass and Degraw Pool in Thomas Greene Playground. As discussed below and in Chapter 21, "Mitigation," DCP, as lead agency, will explore possible mitigation measures with LPC regarding the church and with NYC Parks regarding the pool between the DEIS and FEIS that could partially mitigate the significant adverse impacts. With regard to the church, such measures could include the use of artificial lighting or modifications to the height, shape, size, or orientation of proposed developments that cause or contribute to the significant adverse shadow impact. In order to fully avoid the significant adverse impacts, the height of projected development on Site 38 would have to be substantially reduced. With regard to the pool, as described in more detail below, possible mitigation measures may include relocating the pool to the north side of the park, where it would receive much less shadow. Other measures could include modifications to the height, shape, size, or orientation of proposed developments that cause or contribute to the significant adverse shadow impact. In order to fully avoid the significant adverse impacts, the height of potential and projected development on Sites W and 18 would have to be substantially reduced.

Our Lady of Peace Church is located on the south side of Carroll Street between Whitwell and Denton Places. On the morning of the winter analysis day, Projected Development Site 38, located a block southeast of the church, would cast new shadows resulting in the complete elimination of direct sunlight on the stained-glass windows for approximately 50 minutes. The total duration of incremental shadow would be approximately 2 hours and 19 minutes (from 8:51 AM to 11:10 AM), including the 50-minute period when all remaining direct sunlight would be eliminated. The long duration and at times complete elimination of direct sun would significantly affect the public's enjoyment or appreciation of the church interior during this time, especially given that winter mornings are typically when the church holds holiday services. In order to eliminate this significant adverse impact, Projected Development Site 38 would have to be reduced in height by a minimum of approximately 60 feet, from 155 feet to 95 feet. This height reduction would reduce the duration of incremental shadow by approximately an hour, to a duration of an hour and 10 minutes, and would not eliminate all the remaining sunlight from the windows at any time. The reduction in building height and corresponding floor area would result in the loss of needed housing, including affordable housing, and would not meet the goals and objectives of the Proposed Actions.

Thomas Greene Playground occupies the entire block bounded by Douglass Street, Degraw Street, 3rd Avenue, and Nevins Street. Thomas Greene Playground is anticipated to be substantially renovated, as discussed in Chapter 5, "Open Space," with or without the Proposed Actions. Currently, the programming and layout of the reconstructed park is not confirmed. The analysis in Chapter 6, "Shadows," therefore focused on identifying the extent and duration of incremental shadows on various areas of the park, and how potential features and vegetation might fare in the resulting shade conditions. However, given the heavy use of the Douglass and Degraw Pool in the summer months, the analysis included a consideration of incremental shadow effects on the pool at its current location in the western part of the park, on the May 6/August 6 and June 21 analysis days. The pool is open in the summer months from 11:00 AM to 7:00 PM Eastern Daylight Time (EDT). On the May 6/August 6 analysis day the pool would be entirely in sun from the time it opens until 3:15 PM, when incremental shadow would enter from the west. From 4:00 PM to closing time at 6:00 PM (7:00 PM EDT), both the main pool and the kiddie pool would be mostly covered by incremental shadow.

This substantial extent and duration of new shadow would significantly impact the user experience of the pools on this analysis day. In order to eliminate this significant adverse impact, Potential Development Site W would have to be reduced in height from 20 stories to approximately 8 stories and Projected Development Site 18 would have to be reduced from 18 to approximately 12 stories. These height reductions would reduce incremental shadow duration in the late afternoon on the pool from 2 and three-quarter hours to one hour, and much of the pool would remain in sun during the one hour duration of incremental shadow. The reduction in building height and corresponding floor area would result in the loss of needed housing, including affordable housing, and would not meet the goals and objectives of the Proposed Actions.

HISTORIC AND CULTURAL RESOURCES

The Proposed Actions would result in direct and indirect significant adverse impacts to both archaeological and architectural resources, as described in greater detail below. This includes direct and indirect impacts on the S/NR-eligible Gowanus Canal Historic District, construction-related impacts to contributing properties located within the boundaries of the district and to other individual architectural resources located both within and outside of the S/NR-eligible Gowanus Canal Historic District from adjacent projected construction, incremental shadow impacts on Our

Lady of Peace Church, and construction-related impacts on properties that were determined to be archaeologically sensitive.

ARCHAEOLOGICAL RESOURCES

The Proposed Actions have the potential to result in an unmitigated significant adverse archaeology impact associated with all or portions of 46 potential and projected development sites, including: Sites Aa, Ab, 2c, 2d, 2e, 2f, 2j, 3a, 3b, 4a, 4b, 4c, 5a, 5d, 6c, 15d, 18a, 18b, 22b, 28c, 28e, 28f, 29a, 37a, 37b, 40b, 41a, 41c, 42a, 42b, 43a, 43b, 44a, 47b, 48a, 58a, 59a, Aha, AHe, AIa, AOa, APa, BBa, BJaa/ab, Boa, and Wb. The sites are archaeologically sensitive for resources associated with the Gowanus Canal bulkhead and associated landfill; 19th century shaft features; and/or evidence associated with milling or agricultural activities dating between the 17th and 19th centuries, including evidence of the role of forced labor and enslavement as they related to those efforts. All but one of the affected development sites are under private ownership. With respect to sites under private ownership, there is no mechanism in place to require a developer to conduct archaeological testing or require the preservation or documentation of archaeological resources, should they exist. Because there is no mechanism to avoid or mitigate potential impacts at these sites, the significant adverse impact would be unmitigated.

Of the 46 development sites that are archaeologically sensitive, mitigation can only be required at Projected Development Site 47 (Gowanus Green Site). The development site is under City ownership, and any future development would be subject to disposition approval and development in accordance with provisions in the Land Disposition Agreement between the City of New York, acting through HPD, and the developer. The Land Disposition Agreement is a binding mechanism that would ensure mitigation is implemented prior to the commencement of ground disturbing activities and site development. As noted above, there is no mechanism to ensure that additional archaeological analysis be performed at the remaining 45 development sites under private ownership. Therefore, the No Unmitigated Significant Adverse Impacts Alternative would result in the same significant adverse impacts that would occur with the Proposed Actions. The removal of all or portions of the 45 development sites that are under private ownership from the rezoning area could would fully mitigate all identified significant adverse archaeology impacts; however, the Proposed Actions would have to be modified to a point where their principal goals and objectives would not be realized.

ARCHITECTURAL RESOURCES

The Proposed Actions would result in significant adverse impacts to the S/NR-Eligible Gowanus Canal Historic District as a result of the demolition of contributing resources to the historic district. The demolition of buildings that contribute to the significance of the eligible historic district that are located on 16 projected development sites with contributing resources (projected development sites 4, 5, 6, 7, 12, 15, 18, 20, 22, 23, 24, 28, 42, 44, 53, and 55) and 18 potential development sites with contributing resources (potential development sites D, E, F, G, P, W, AG, AH, AO, AQ, AT, AY, BB, BC, BI, BK, BL, BO) would facilitate the construction of new projected developments under the Proposed Actions. Because there is no mechanism to avoid the demolition of the resources, the significant adverse impact would be unmitigated.

Significant adverse impacts associated with inadvertent construction damage would occur to contributing resources in the S/NR-Eligible Gowanus Canal Historic District as a result of adjacent construction located within 90 feet of projected or potential development sites. Furthermore, such impacts would result to three other S/NR-Eligible resources as a result of adjacent construction: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway

Viaduct. Because the resources identified above are not S/NR-Listed or NYCLs, they are not afforded the added special protections under the DOB's TPPN #10/88. Additional protective measures afforded under TPPN #10/88, which include a monitoring program to reduce the likelihood of construction damage to adjacent historic buildings, would only become applicable if the S/NR-Eligible resources are listed or designated in the future prior to the initiation of construction. Otherwise, there is the potential for inadvertent construction damage and impacts to occur as a result of adjacent development resulting from the Proposed Actions. The Our Lady of Peace Church may also be adversely impacted due to incremental shadows impacts. In order to fully mitigate all identified significant adverse impacts associated with direct and indirect effects, the Proposed Actions would have to be modified to a point where their principal goals and objectives would not be realized.

TRANSPORTATION

As presented in Chapter 21, "Mitigation," the Proposed Actions would result in significant adverse traffic impacts at 43 study area intersections during one or more analyzed peak hours; specifically, 37 intersections during the weekday AM peak hour, 23 intersections during the weekday midday peak hour, 36 intersections during the weekday PM peak hour, and 33 intersections during the Saturday peak hour. Implementation of traffic engineering improvements, such as signal timing changes, the installation of new traffic signals, and modifications to lane striping and curbside parking regulations would provide mitigation for many of the anticipated traffic impacts. Specifically, the significant adverse impacts would be fully mitigated at 10 lane groups in the weekday AM peak hour, 13 lane groups in the midday, 13 lane groups in the PM, and 12 lane groups in the Saturday peak hour. Intersections where all impacts would be fully mitigated would total 7, 12, 9, and 11 during these same periods, respectively. In total, impacts to one or more lane group would remain unmitigated in one or more peak hours at 34 intersections.

Because of existing congestion at a number of these intersections, even a minimal increase in traffic would result in unmitigated impacts. Specifically, in the No Action condition, a total of 39 intersections would have at least one congested lane group in one or more peak hours, and a total of 24, 9, 18 and 19 intersections would have one or more lane groups operating at or over capacity in the weekday AM, midday and PM, and Saturday peak hours, respectively. According to the *CEQR Technical Manual*, for a lane group that would operate at LOS F in the No Action condition, a projected delay of three or more seconds is considered a significant impact. As such, small increases in incremental With Action traffic volumes at some of the congested intersection approach movements would result in significant adverse impacts that could not be fully mitigated during one or more analysis peak hours, and almost any new development in the rezoning area could result in unmitigated traffic impacts. Therefore, no reasonable alternative could be developed to completely avoid such impacts without substantially compromising the Proposed Actions' stated goals.

CONSTRUCTION

NOISE

As presented in Chapter 20, "Construction," noise level increases exceeding *CEQR Technical Manual* impact criteria would occur at several locations throughout the rezoning area.

Construction activities would follow the requirements of the *NYC Noise Control Code* (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the *NYC Noise Control Code*. These measures could

include a variety of source and path controls. In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the *NYC Noise Control Code*:

- Equipment that meets the sound level standards specified in Subchapter 5 of the *NYC Noise Control Code* would be utilized from the start of construction.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable.
- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the *NYC Administrative Code*.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

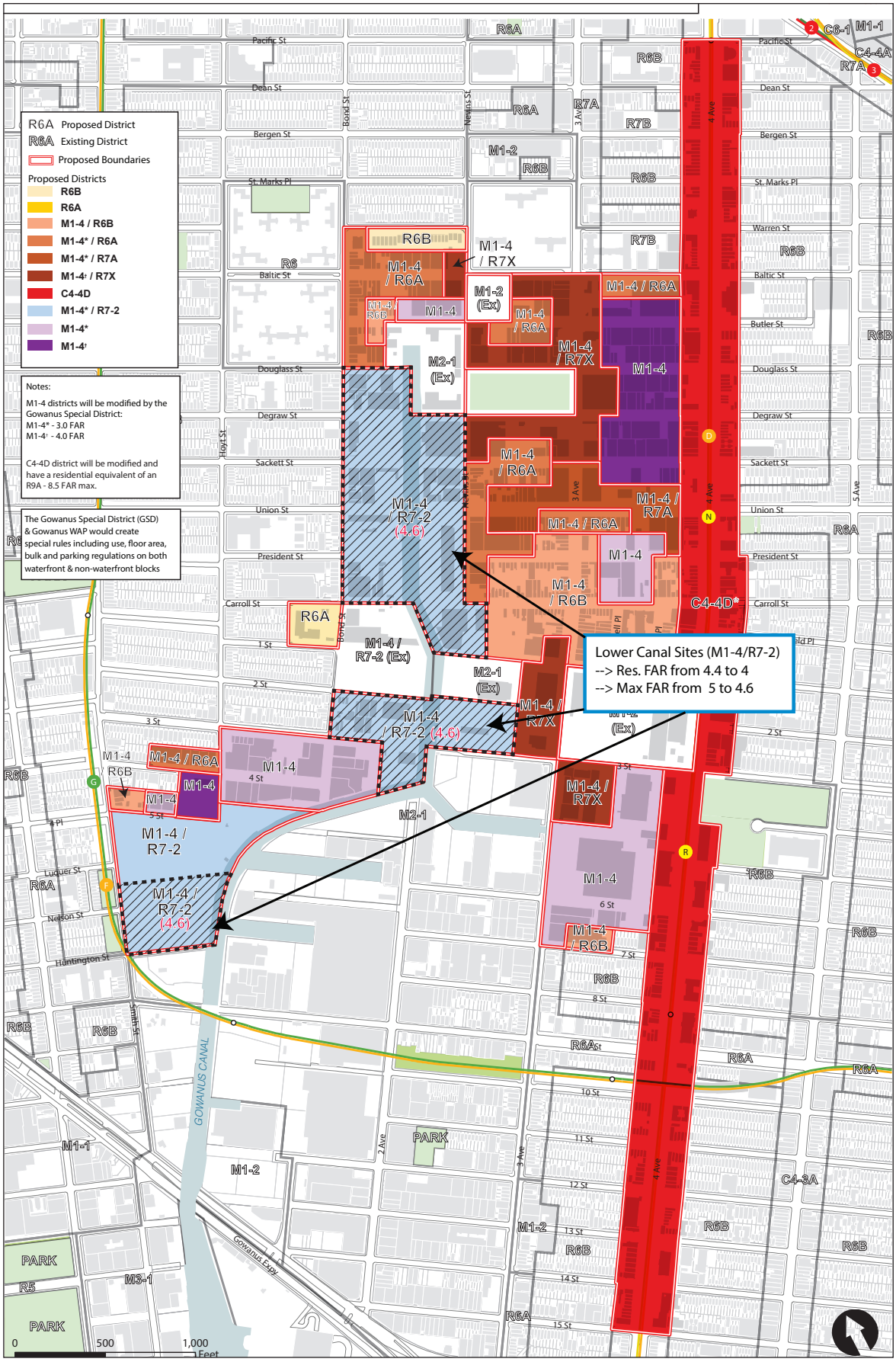
In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practicable:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Noise barriers constructed from plywood or other materials would be erected to provide shielding; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) for certain dominant noise equipment would be employed to the extent feasible and practical based on the results of the construction noise calculations.

Construction activity is expected to follow the requirements of the *NYC Noise Control Code*. However, the implementation of these measures would not eliminate the identified significant adverse construction noise impacts predicted to occur during hours when the loudest pieces of construction equipment are in use. In order to completely avoid significant adverse construction noise impacts, project-generated construction would have to be restricted in such a manner so as to not occur on the same block as, or within one to two blocks from, existing sensitive receptors, which would require elimination of the proposed rezoning area in the vicinity of these sensitive receptors. This would severely limit achievable development density and the Proposed Actions' goals and objectives.

E. LOWER DENSITY ALTERNATIVE

The Lower Density Alternative was developed for the purposes of assessing whether lower-density residential development in some portions of the Project Area would eliminate or reduce the significant adverse impacts of the Proposed Actions, while also meeting its goals and objectives. Under the Lower Density Alternative, the proposal analyzed is the same as that with the Proposed Actions except for the locations indicated below and shown in **Figure 22-1**. Under the Lower Density Alternative, the residential density along portions of the Canal proposed as an M14/R7-2 district (excluding the Gowanus Green Site on Block 471, Lots and 100) would be reduced from 4.4 FAR to 4.0 FAR. The reduction of FAR would result in fewer DUs on 11 projected development sites. Compared with the Proposed Actions, the Lower Density Alternative would result in 376 fewer residential units on projected development sites. The remaining land



Source: NYC Department of City Planning

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Lower Density Alternative

uses would not change, and the Lower Density Alternative would result in the same mix of uses as the Proposed Actions (see **Table 22-1**).

Table 22-1
Comparison of RWCDS for Projected Development Sites—With Action vs. Lower Density Alternatives

Alternative	Residential (DU)	Community Facility	Local Retail	Destination Retail	Office	Industrial	Total Building Floor Area
WA[1]	9,311	468,460	594,340	20,125	936,739	98,571	10,110,730
LDA[2]	8,935	468,480	594,340	20,125	936,739	98,571	9,791,025

Notes:
[1] WA = With Action
[2] LDA = Lower Density Alternative

As shown in **Table 22-2**, the total amount of residential space would be slightly reduced under the Lower Density Alternative, but the amounts of non-residential space would remain the same. The Lower Density Alternative would continue to support, though to a slightly lesser degree, the Proposed Actions' goals of promoting affordable housing development by increasing residential density and establishing MIH. Like the Proposed Actions, the Lower Density Alternative would support the strategies put forth in the Neighborhood Plan, and facilitate the creation of a waterfront esplanade and new neighborhood parks. It would also encourage job-generating uses like commercial, light industrial, arts-related, and civic uses, increase density in a highly transit-accessible neighborhood, and create pedestrian-friendly streets through active ground floor retail uses.

Table 22-2
Comparison of Total RWCDS for Projected Development Sites under With Action Conditions vs. Lower Density Alternative

Land Use	No Action Condition	With Action Condition	Lower Density Alternative	No Action to With Action Increment	No Action to Lower Density Alternative Increment	Difference
Residential						
Total Res. DU	816	9,311	8,935	8,495	8,119	**-376**
Commercial						
Local Retail	241,232	594,340	594,340	353,108	353,108	**0**
Destination Retail	103,595	20,125	20,125	-83,470	-83,470	**0**
Office	374,983	936,739	936,739	561,756	561,756	**0**
Hotel	133	133	133	0	0	**0**
Auto-related	107,361	0	0	-107,361	-107,361	**0**
Total Commercial	**844,773**	**1,606,074**	**1,606,074**	**734,293**	**734,293**	**0**
Other Uses						
Community Facility	217,067	468,480	468,480	251,413	251,413	**0**
Industrial	415,490	98,571	98,571	-316,919	-316,919	**0**
Population						
Residents	**1,788**	**20,391**	**19,568**	**18,604**	**17,780**	**-824**
Workers	**3,141**	**6,669**	**6,654**	**3,494**	**3,460**	**-34**

Note: [1] Retail is composed of the following uses; local retail, restaurant, grocery store, and destination retail.

As with the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts with respect to land use, zoning, and public policy; socioeconomic conditions; urban design and visual resources; natural resources; hazardous materials; water and sewer

infrastructure; solid waste and sanitation services; energy; air quality; greenhouse gas emissions and climate change; noise; public health; and neighborhood character. Compared to the Proposed Actions, the Lower Density Alternative would slightly reduce, but not eliminate, the significant adverse impacts related to community facilities (early childhood programs), open space, and transportation (traffic, pedestrians, and transit). Compared to the Proposed Actions, the Lower Density Alternative would result in the same significant adverse impacts related to open space, historic and cultural resources (architectural and archaeological impacts), and shadows.

LAND USE, ZONING, AND PUBLIC POLICY

As under the Proposed Actions, no significant adverse impacts on land use, zoning, or public policy are anticipated under the Lower Density Alternative. Both the Proposed Actions and the Lower Density Alternative would result in an overall increase in residential, commercial, community facility, and industrial uses when compared with conditions in the future without the Proposed Actions. As noted above, the Lower Density Alternative would result in the same amount of industrial development as the Proposed Actions. However, this alternative would lead to the production of fewer housing units, including fewer affordable housing units, and less commercial and community facility development as compared with the Proposed Actions. The Lower Density Alternative would require the same discretionary land use approvals as the Proposed Actions and would affect the same area. The Lower Density Alternative, like the Proposed Actions, would change the zoning in the Project Area to facilitate development patterns that meet the long-term vision of a sustainable, mixed-use neighborhood anchored by a resilient waterfront and would support new housing and jobs in a neighborhood with strong public transit access and in close proximity to the Central Business Districts of Downtown Brooklyn and Lower Manhattan. As under the Proposed Actions, residential use would be allowed throughout most of the Project Area, expanding the City's housing supply to help meet the housing needs of current and future residents, and significantly increasing the supply of affordable housing through the application of MIH. New housing would be allowed along major north-south corridors (3rd and 4th Avenues) and east–west corridors (Union, Carroll, and 3rd Streets), around Thomas Greene Playground, and along the Canal, albeit with somewhat less residential space along the Canal. The development that would occur along the Canal would reactivate contaminated, vacant, and underutilized land and facilitate the creation of a new esplanade along the Gowanus Canal.

The Lower Density Alternative, like the Proposed Actions, would create opportunities for new light industrial, commercial, arts-related, and community facility space. The Proposed Actions would promote these opportunities in new mixed-use buildings throughout the Project Area. The Lower Density Alternative and the Proposed Actions would include similar regulations tailored to Gowanus and intended to encourage a range of heights and building forms, allowing sufficient flexibility for buildings to achieve the development goals identified by the community while addressing unique site conditions and reflecting the existing built character of the neighborhood. The range of permitted heights would address the existing low-scale context of adjacent residential neighborhoods while allowing limited portions of buildings to rise higher on certain blocks and frontages. The new land uses generated as a result of the Proposed Actions would support the existing residential populations of adjacent neighborhoods.

The Lower Density Alternative would support, to a slightly lesser degree, the housing goals of the Proposed Actions. Although this alternative would increase the supply of housing available in Gowanus and increase the supply of affordable housing, which is consistent with City housing policy, the additional housing built would not be as extensive as that built under the Proposed Actions, nor would this alternative introduce as much affordable housing as that introduced under

the Proposed Actions. Therefore, since this alternative would lead to the production of fewer housing units, the beneficial effects of the Lesser Density Alternative would not be as great as those produced under the Proposed Actions.

SOCIOECONOMIC CONDITIONS

Similar to the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts due to changes in socioeconomic conditions. The Lower Density Alternative would result in the same amount of direct residential and business displacement as the Proposed Actions, which do not result in significant adverse impacts due to direct displacement. With respect to potential indirect effects, the Lower Density Alternative results in 376 (four percent) fewer DUs, including 94 fewer affordable DUs. The Lower Density Alternative would result in 824 fewer residents as compared to Proposed Actions. Like the Proposed Actions, there would be no significant adverse impacts due to indirect business displacement in the Lower Density Alternative, but as there would be 824 fewer new residents, demand for goods and services from local businesses would be lower.

Like the Proposed Actions, the Lower Density Alternative would expand the opportunity for additional housing and promote the development of affordable housing within the Project Area, although the total number of housing units as compared with the Proposed Actions would be lower. Like the Proposed Actions, this alternative would serve to support housing growth and affordable housing in the Project Area. The additional housing units would provide added supply to meet the increasing housing demands in New York City, although there would be fewer affordable units than under the Proposed Action as noted above.

COMMUNITY FACILITIES AND SERVICES

The Lower Density Alternative would introduce fewer residents to the study area as compared to the Proposed Action, thereby resulting in decreased demand on community facilities. Neither the Proposed Actions nor the Lower Density Alternative would result in direct impacts to community facilities and services or indirect impacts to schools, public libraries, or police, fire, and healthcare facilities. Like the Proposed Actions, the Lower Density Alternative would result in a significant adverse impact to publicly funded early childhood programs.

PUBLICLY FUNDED EARLY CHILDHOOD PROGRAMS

The Lower Density Alternative would introduce 3,344 affordable housing units. Based on the *CEQR Technical Manual* early childhood multipliers, these units would result in approximately 595 children under the age of five who would be eligible for publicly funded early childhood programs.

With the addition of these children, early childhood programs in the study area would operate at 168 percent utilization with a deficit of 1,680 slots. Total enrollment in the study area would increase to 4,139 children, compared with a capacity of 2,459 slots, which represents a decrease in the utilization rate of approximately 0.81 percentage points under the With Action condition, but an overall increase of 24.2 percentage points over the No Action condition. Therefore, like the Proposed Actions, the Lower Density Alternative would result in significant adverse impacts to early childhood programs.

OPEN SPACE

The Lower Density Alternative, like the Proposed Actions, would result in a significant adverse open space impact. As the Lower Density Alternative would introduce fewer residents and

workers than the Proposed Actions, the open space ratios for both the non-residential and residential open space study areas would be slightly higher than those under the Proposed Actions. Like the Proposed Actions, the Lower Density Alternative would introduce new publicly accessible open space that includes two open spaces on the Gowanus Canal and a continuous waterfront esplanade. The Lower Density Alternative would include the same mapping actions as the Proposed Actions, and the similarly, the mapping of new parkland would facilitate the provision of new passive and active recreational space for current and future residents and reconnect the community to the Gowanus Canal. However, the Lower Density Alternative would still result in a decrease in the active open space ratio of 2.13 percent, which is above the 1 percent threshold.

SHADOWS

The Lower Density Alternative would reduce the duration and extent of incremental shadow throughout the year on several sunlight-sensitive open spaces and historic resources when compared with the Proposed Actions. The Lower Density Alternative would not reduce shadow on the resources significantly impacted by new incremental shadow with the Proposed Actions. Therefore, the Lower Density Alternative would cause a significant impact to the same sunlight-sensitive resources as the Proposed Actions: Our Lady of Peace Roman Catholic Church and the Douglass and Degraw Pool in Thomas Greene Playground.

On the March 21/September 21 analysis day, the Lower Density Alternative would reduce the duration of incremental shadow on three publicly accessible open space resources: 363-365 Bond St Public Access Area, Gowanus Sponge Park, and St. Mary's Park. 363-365 Bond St Public Access Area would receive an additional 5 minutes of direct sunlight and the extent of incremental shadow would be reduced across the northern section in the morning. Gowanus Sponge Park would receive an additional 17 minutes of direct sunlight and the extent of incremental shadow would be reduced across the southern section of the park in the morning. St. Mary's Park would receive an additional 30 minutes of direct sunlight and the extent of incremental shadow would be reduced on both the northern and southern sections of the park throughout the morning. St. Mary Star of the Sea Church Complex would no longer be cast in any incremental shadow on the March 21/September 21 analysis day. The Lower Density Alternative would reduce the extent of incremental shadow on Head End Open Space, 1st Street Turning Basin, the Gowanus Canal, and the Gowanus Canal Esplanade on the March 21/September 21 analysis day.

On the May 6/August 6 analysis day, the Lower Density Alternative would reduce the duration of incremental shadow on three publicly accessible open space resources: 363-265 Bond St Public Access Area, 4th Street Turning Basin, and St. Mary's Park. In the morning, 363-265 Bond St Public Access Area would receive an additional 20 minutes of direct sunlight and the extent of incremental shadow would be reduced in the northern section of the park. In the morning, 4th Street Turning Basin would receive an additional 10 minutes of direct sunlight and the extent of incremental shadow would be slightly reduced in the northern section. St. Mary's Park would receive an additional 35 minutes of direct sunlight in the morning. The extent of incremental shadow would be reduced in the northern section of the park from 8:45 AM to 9:25 AM and in the southern section of the park from 9:55 AM to 10:30 AM when the incremental shadow exists the resource. On the May 6/August 6 analysis day the Lower Density Alternative would reduce the extent of incremental shadow on Head End Open Space, Gowanus Green Development/Canal Park, the Gowanus Canal, and the Gowanus Canal.

On the June 21 analysis day the Lower Density Alternative would reduce the duration of incremental shadow on three publicly accessible open space resources: Greenstreet on Douglass

Street, 363-365 Bond St. Public Access Area, and St. Mary's Park. The Greenstreet on Douglass Street would receive an additional 5 minutes of direct sunlight in the afternoon. In the morning, 363-365 Bond St Public Access Area would receive an additional 25 minutes of direct sunlight and the extent of incremental shadow would be reduced in the northern section of the park. St. Mary's Park would receive an additional 40 minutes of direct sunlight and the extent of incremental shadow would be reduced in the northern section of the park in the morning. On the June 21 analysis day the Lower Density Alternative would reduce the extent of incremental shadow on Head End Open Space, Gowanus Green Development/Canal Park, the Gowanus Canal, and the Gowanus Canal.

On the December 21 analysis day the Lower Density Alternative would reduce the duration of incremental shadow on three publicly accessible open space resources and one historic resource: Greenstreet on Douglass Street, 363-365 Bond St Public Access Area, St. Mary's Park, and St. Mary Star of the Sea Church Complex. The Greenstreet on Douglass Street would receive an additional 12 minutes of direct sunlight in the afternoon. In the morning, 363-365 Bond St Public Access Area would receive an additional 5 minutes of direct sunlight and the incremental shadow would be reduced in the northern section of the park in the morning and afternoon. St. Mary's Park would receive an additional 8 minutes of direct sunlight and the incremental shadow would be reduced on both the northern and southern sections of the park throughout the morning. St. Mary Star of the Sea Church Complex would receive an additional 14 minutes of direct sunlight and the incremental shadow would be reduced in the morning. On the December 21 analysis day the Lower Density Alternative would reduce the extent of incremental shadow on the Gowanus Canal, and the Gowanus Canal.

HISTORIC AND CULTURAL RESOURCES

Like the Proposed Actions, the Lower Density Alternative would result in significant adverse impacts to architectural and archaeological resources. The Lower Density Alternative would result in the same significant adverse impacts as the Proposed Actions to both archaeological and architectural resources. This includes direct and indirect impacts on the S/NR-eligible Gowanus Canal Historic District, construction-related impacts to contributing properties located within the boundaries of the district and to other individual architectural resources located both within and outside of the S/NR-eligible Gowanus Canal Historic District from adjacent projected construction, incremental shadow impacts on Our Lady of Peace Church, and significant adverse impacts on the 45 privately owned properties that were determined to be archaeologically sensitive.

URBAN DESIGN AND VISUAL RESOURCES

Like the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts on urban design, view corridors, or visual resources. With the Lower Density Alternative, residential density would be reduced from 4.4 to 4.0 for sites within the Canal Corridor Subarea, and height reductions ranging from 10 feet to 70 feet. The changes would apply to all development sites within the Canal Corridor Subarea with the exception of Projected Development Site 47. The alternative would result in somewhat less residential development and pedestrian activity as compared with the Proposed Actions. The Lower Density Alternative, like the Proposed Actions, would result in beneficial effects related to urban design by reinforcing the street wall, enlivening the streetscape with new activity and enhancing pedestrian conditions in the Project Area. Like the Proposed Actions, the zoning changes under the alternative would provide for sufficient flexibility and variety for building envelopes that account for the unique conditions in Gowanus, appropriate transitions between lower and medium density adjacencies, the creation of new

waterfront open space, and enhanced pedestrian-oriented sidewalk conditions and lively, active streets. Like the Proposed Actions, the Lower Density Alternative would also encourage a range of heights and building forms to achieve the development goals identified in the Neighborhood Plan, while addressing unique site conditions and reflecting the existing built character of the Gowanus.

NATURAL RESOURCES

Like the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts to natural resources. With the Lower Density Alternative, the same development sites identified under the Proposed Actions would be developed under the alternative, although somewhat fewer housing units would be developed. No significant changes to natural resources are anticipated.

HAZARDOUS MATERIALS

Like the Proposed Actions, development sites identified under the Lower Density Alternative would be mapped with E Designations to preclude exposure to hazardous materials.

WATER AND SEWER INFRASTRUCTURE

As compared to the Proposed Actions, the Lower Density Alternative would result in less demand on the City's water supply and wastewater treatment infrastructure. In particular, sanitary sewage demand would be reduced by approximately 82,300 gallons per day (gpd). However, as there would be sufficient capacity to support the higher demand associated with the Proposed Actions, there would similarly be no significant adverse impacts to the water supply and wastewater treatment systems under the Lower Density Alternative. Similar to the Proposed Actions, new developments under the Lower Density Alternative must be in compliance with the required on-site stormwater volume requirements and stormwater release rate as detailed in the Unified Stormwater Rule as part of DEP's site connection application process, which would reduce stormwater flows to the combined sewer system. As with the Proposed Actions, the Lower Density Alternative would result in a decrease in CSO volumes discharged to the Canal as compared to the No Action condition, despite the increase in sanitary flows from higher density development, and the total volume would remain significantly lower than existing conditions. In particular, CSO discharges would be reduced due to increased on-site stormwater management volume requirements, updated release rate restrictions, and the number of retention practices implemented with new development in accordance with the proposed Unified Stormwater Rule. Therefore, the Lower Density Alternative is not projected to have incremental impacts on water quality in the Gowanus Canal. Overall, as with the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts to local water supply or wastewater and stormwater conveyance and treatment infrastructure.

SOLID WASTE AND SANITATION SERVICES

Neither the Proposed Actions nor the Lower Density Alternative would adversely affect solid waste and sanitation services or place a significant burden on the City's solid waste management system. While solid waste generated by the projected development sites would increase under both the Lower Density Alternative and the Proposed Actions, the Lower Density Alternative would generate less demand on New York City's solid waste services and sanitation services.

ENERGY

Neither the Proposed Actions nor the Lower Density Alternative would result in significant adverse impacts with respect to the transmission or generation of energy. Like the Proposed Actions, the Lower Density Alternative would generate increased demands on New York City's energy services, but the demand generated under the Lower Density Alternative would be slightly less than for the Proposed Actions. However, under both the Proposed Actions and the Lower Density Alternative, the annual increase in demand would represent a negligible amount of the City's forecasted annual energy requirements for 2035.

TRANSPORTATION

The reduction in residential units on 11 projected development sites under the Lower Density Alternative would generally result in fewer action generated vehicle and transit trips and less demand for on-street and public off-street parking compared with the Proposed Actions. There would also be fewer total pedestrian trips (walk-only trips plus pedestrians en route to/from subway stations and bus stops) in all peak hours. Based on the transportation planning factors detailed in Chapter 14, "Transportation," the Lower Density Alternative would generate approximately 310, 152, 334 and 288 fewer incremental person trips in the weekday AM, midday and PM, and Saturday peak hours, respectively (see **Table 22-3**). Depending on the peak hour, this represents an approximately 1.5 percent to three percent decrease in action generated person trips compared with the Proposed Actions. Overall, it is anticipated that the Lower Density Alternative would result in similar or fewer significant adverse traffic, subway and pedestrian impacts. While both the Proposed Actions and the Lower Density Alternative are expected to result in a parking shortfall in the weekday midday and overnight periods, the shortfalls under this alternative would be somewhat smaller than under the Proposed Actions, and there would be no significant adverse parking impacts under either scenario based on *CEQR Technical Manual* criteria.

Table 22-3
Comparison of Incremental Peak Hour Person Trips by Mode
Proposed Actions vs. Lower Density Alternative

Scenario	Auto	Taxi	Subway	Bus	Walk/ Other	Total
Weekday AM						
Proposed Actions	1,179	128	5,823	399	2,801	10.340
Lower Density Alternative	,146	128	5,587	395	2,764	10.030
Net Difference	***(33)***	***0***	***(236)***	***(4)***	***(37)***	***(310)***
Weekday Midday						
Proposed Actions	712	88	3.057	395	5,952	10.204
Lower Density Alternative	696	88	2,937	393	5,938	10.052
Difference	***(16)***	***0***	***(120)***	***(2)***	***(14)***	***(152)***
Weekday PM						
Proposed Actions	1,358	159	6,430	492	3,831	12,270
Lower Density Alternative	1,322	159	6,177	485	3,793	11,936
Difference	***(36)***	***0***	***(253)***	***(7)***	***(38)***	***(334)***
Saturday						
Proposed Actions	835	76	5,274	318	3,853	10.356
Lower Density Alternative	804	74	5,058	312	3,820	10,068
Difference	***(31)***	***(2)***	***(216)***	***(6)***	***(33)***	***(288)***

TRAFFIC

As presented in **Table 22-4**, compared with the Proposed Actions, the Lower Density Alternative would generate approximately 31, 10, 32 and 24 fewer incremental vehicle trips during the weekday AM, midday, and PM and Saturday peak hours, respectively. Depending on the peak hour, this represents a decrease of approximately 1.9 percent to 3.4 percent as compared with the incremental vehicle trips that would be generated under the Proposed Actions. Consequently, the number of lane groups and intersections with significant adverse traffic impacts under the Lower Density Alternative would likely be comparable to or less than the number under the Proposed Actions. As discussed in Chapter 14, "Transportation," under the Proposed Actions there would be a total of 58 impacted lane groups at 37 intersections in the weekday AM peak hour, 29 impacted lane groups at 23 intersections in the midday, 58 impacted lane groups at 36 intersections in the PM, and 41 impacted lane groups at 33 intersections in the Saturday peak hour.

Table 22-4
Comparison of Incremental Peak Hour Vehicle Trips by Mode
Proposed Actions vs. Lower Density Alternative

Scenario	Auto	Taxi	Truck	School Bus	Total
Weekday AM					
Proposed Actions	1,069	178	38	2	1,287
Lower Density Alternative	1,038	178	38	2	1,256
Net Difference	***(31)***	***0***	***0***	***0***	***(31)***
Weekday AM					
Proposed Actions	380	94	62	0	536
Lower Density Alternative	370	94	62	0	526
Net Difference	***(10)***	***0***	***0***	***0***	***(10)***
Weekday PM					
Proposed Actions	1,100	218	2	0	1,320
Lower Density Alternative	1,068	218	2	0	1,288
Net Difference	***(32)***	***0***	***0***	***0***	***(32)***
Saturday					
Proposed Actions	596	112	6	0	714
Lower Density Alternative	576	108	6	0	690
Net Difference	***(20)***	***(4)***	***0***	***0***	***(24)***

TRANSIT

Subway

Subway Stations

As shown in **Table 22-3**, the Lower Density Alternative would generate 236 and 253 fewer incremental subway trips during the weekday AM and PM peak hours, respectively, than would the Proposed Actions. Consequently, there would likely be fewer trips at all four analyzed subway stations. As discussed in Chapter 14, "Transportation," under the Proposed Actions, four street stairs and one fare array at the Union Street (R) subway station would be significantly adversely impacted by incremental demand in either the AM or PM peak hour. As the Lower Density Alternative is expected to generate fewer subway trips at this station, the number of impacted station elements would likely be comparable to or less than the number under the Proposed Actions.

Subway Line Haul

Under the Proposed Actions, northbound F service would be considered significantly adversely impacted by the Proposed Actions in the AM peak hour under *CEQR Technical Manual* impact criteria. Although the Lower Density Alternative would generate fewer new subway trips than the

Proposed Actions, this alternative is also expected to result in a significant adverse subway line haul impact to northbound F service in the AM peak hour.

Bus

As presented in **Table 22-3**, the Lower Density Alternative would generate only four and seven fewer incremental bus trips during the weekday AM and PM peak hours, respectively, than would the Proposed Actions. Consequently, under this alternative the number of bus trips on the three analyzed bus routes—the B37, B57 and B103 LTD—would be generally comparable to the number under the Proposed Actions in both peak hours. Like the Proposed Actions, the Lower Density Alternative is not expected to result in any significant adverse impacts to bus service in either the AM or PM peak hour.

PEDESTRIANS

As discussed above, under the Lower Density Alternative there would be fewer total pedestrian trips (walk-only trips plus pedestrians en route to/from subway stations and bus stops) in all peak hours. As shown in **Table 22-5**, the Lower Density Alternative is expected to generate 8,746, 9,268, and 10,455 incremental pedestrian trips (including walk-only trips and trips to/from area transit services) in the weekday AM, midday and PM peak hours, respectively, compared with the 9,023, 9,404, and 10,753 incremental pedestrian trips that would be generated under the Proposed Actions during these same periods, respectively. Compared with the Proposed Actions, pedestrian demand under this alternative would be from 1.5 percent to 3.1 percent less in the weekday AM, midday, and PM peak hours.

Table 22-5
Comparison of Incremental Peak Hour Pedestrian Trips
Proposed Actions vs. Lower Density Alternative

Scenario	Total
Weekday AM	
Proposed Actions	9,023
Lower Density Alternative	8,746
Net Difference	***(277)***
Weekday Midday	
Proposed Actions	9,404
Lower Density Alternative	9,268
Net Difference	***(136)***
Weekday PM	
Proposed Actions	10,753
Lower Density Alternative	10,455
Net Difference	***(298)***

Notes: Includes walk-only trips and trips en route to/from area transit services.

As discussed in Chapter 14, "Transportation," based on *CEQR Technical Manual* criteria, nine sidewalks and five crosswalks would be significantly adversely impacted by the Proposed Actions in one or more of the analyzed peak hours, and there would be no significant impacts to any corner areas. As discussed above, pedestrian demand under the Lower Density Alternative would be from 1.5 percent to 3.1 percent less than under the Proposed Actions in each analyzed peak period. It is therefore anticipated that pedestrian conditions under the Lower Density Alternative would be generally comparable to, or better than those under the Proposed Actions in all periods, and that there would be no new significant adverse pedestrian impacts under this alternative.

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

A review of DOT crash data for the 3-year reporting period between January 1, 2015, and December 31, 2017 identified two intersections in the traffic and pedestrian study areas as high crash locations. Improvements to enhance pedestrian and cyclist safety have been implemented at both of these intersections, including high-visibility crosswalks, sidewalk extensions (to reduce pedestrian crossing distance) and a striped bicycle lane (on Court Street). Additional improvements that may warrant consideration at one or both locations under both the Proposed Actions and the Lower Density Alternative could include improved street lighting, and modifying the traffic signal timing plan to provide a leading pedestrian interval (LPI).

PARKING

Under both the Proposed Actions and the Lower Density Alternative, one existing public parking facility with a total of 120 spaces would be displaced. It is assumed that a total of approximately 1,835accessory parking spaces would be developed on projected development sites under this alternative compared to 1,940 under the Proposed Actions. However, the reduction in dwelling units under the Lower Density Alternative would also result in less demand for on-street and off-street public parking compared with the Proposed Actions.

Under the Proposed Actions, the combined supply of on-street and public off-street parking capacity would not be sufficient to accommodate demand in the weekday midday and overnight periods. It is anticipated that there would be comparable parking shortfalls under the Lower Density Alternative. While some drivers destined for the Project Area would potentially have to travel a greater distance (e.g., between ¼ and ½-mile) to find available parking in the midday and overnight periods under this alternative, these shortfalls would not be considered significant adverse impacts based on *CEQR Technical Manual* criteria due to the magnitude of available alternative modes of transportation. Therefore, like the Proposed Actions, the Lower Density Alternative is not expected to result in significant adverse parking impacts.

AIR QUALITY

MOBILE SOURCES

In the Lower Density Alternative, emissions from traffic demand in the study area would increase as a result of background growth, development that could occur pursuant to existing zoning (i.e., as-of-right development), and other development projects likely to occur within and in the vicinity of the Project Area. Like the Proposed Actions, the Lower Density Alternative would result in a significant adverse mobile source air quality impact at the intersection of Smith and 5th Streets, requiring similar mitigation.

STATIONARY SOURCES

Most of the differences between the Proposed Actions and the Lower Density Alternative will not affect air quality from stationary sources. The exception to this is the modification of Projected Development Sites 37 and 48. The floor area and building heights at these sites with multiple systems were modified, which resulted in changes to the restrictions specified in Chapter 15, "Air Quality." For Projected Development Sites 15, 18, 22, and 41, which have a stack height requirement if fuel oil is used, the stack height requirement would be adjusted to account for the changes for the Lower Density Alternative. For Projected Development Sites 40, 56 and Potential Development Site AO, the stack setback requirements for the Proposed Actions may change due to the reduced floor area under the Lower Density Alternative. Overall, nine of the projected

development sites and one potential development site would have modified restrictions as compared to those of the Proposed Actions specified in Chapter 15, "Air Quality," for the control of emissions from heat and hot water systems. The restrictions would ensure that there would be no significant adverse air quality impacts at nearby receptor locations.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

GREENHOUSE GAS EMISSIONS

The Lower Density Alternative would have slightly less energy use and would result in fewer carbon dioxide equivalent (CO_2e) emissions per year. Neither the Proposed Actions nor the Lower Density Alternative would result in significant GHG emission or climate change impacts.

RESILIENCE TO CLIMATE CHANGE

Similar to the Proposed Actions, since sites would be developed as a result of the Lower Density Alternative but would not otherwise be controlled by the City, and since implementing specific resilience measures for each site prior to design while considering local street and utility elevations and the effect on existing buildings is not practicable, addressing resilience through the Lower Density Alternative is not practicable. Resilience for the Project Area will be addressed in the future as part of the resilience process for the City overall.

The Lower Density Alternative would not adversely affect other resources (including ecological systems, public access, visual quality, water-dependent uses, infrastructure, or adjacent properties) due to climate change.

NOISE

Under the Lower Density Alternative, slightly less residential development would occur as compared to the Proposed Actions; however, this would have a negligible effect on noise and projected noise levels would be similar to noise levels expected with the Proposed Actions. The Lower Density Alternative would result in fewer projected residential units; however, the same E Designation for noise expected under the Proposed Actions would apply under the Lower Density Alternative.

PUBLIC HEALTH

Neither the Proposed Actions nor the Lower Density Alternative would result in significant adverse public health impacts. Under the Lower Density Alternative, no unmitigated significant adverse impacts would occur in the areas of hazardous materials, air quality, or noise, and thus there would be no significant adverse public health impacts associated with operation of the new development anticipated under the Lower Density Alternative. Any impacts associated with construction would be temporary and not result in significant adverse impacts.

NEIGHBORHOOD CHARACTER

Like the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts. Both the Lower Density Alternative and the Proposed Actions would result in changes to neighborhood character in certain locations, primarily in the blocks along the waterfront and around Thomas Greene Park, but the change would not be adverse. The Lower Density Alternative, like the Proposed Actions, would enhance neighborhood character by simultaneously maintaining and fostering the Gowanus mix of residential, commercial, and light industrial uses, and reinforcing the neighborhood's street walls and streetscape. Furthermore, like the Proposed Actions, the alternative would result in benefits to neighborhood character by establishing a

distinctive urban fabric with new large-scale mixed-use development along the waterfront and contextual districts along upland portions, while ensuring that new development integrates appropriately with the existing low-rise character found within the Project Area and the adjacent neighborhoods.

According to the *CEQR Technical Manual*, a proposed action could have a significant adverse neighborhood character impact if it would have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact in any relevant technical area, or through a combination of moderate effects in those technical areas. The Proposed Actions would not result in significant adverse impacts in the areas of land use, zoning, and public policy; socioeconomic conditions; open space; urban design and visual resources; traffic; or noise.

As discussed in Chapter 19, "Neighborhood Character," although significant adverse impacts would occur with respect to historic resources, shadows, and traffic, these impacts would not result in significant adverse impacts to neighborhood character. The significant adverse historic resources, shadows, and traffic impacts would not affect any defining feature of neighborhood character, nor would a combination of moderately adverse effects affect such a defining feature. The Lower Density Alternative would result in fewer affordable units as compared with the Proposed Actions.

CONSTRUCTION

As presented above in **Table 22-1**, the total amount of residential development would be slightly reduced under the Lower Density Alternative. Therefore, the Lower Density Alternative would result in the same construction noise and transportation impacts that would occur with the Proposed Actions. However, as the amount of new construction under the Lower Density Alternative along portions of the Canal would be less as compared with the Proposed Actions, the Lower Density Alternative would not generate as much temporary construction disruption along the Canal corridor. Neither the Proposed Actions nor the Lower Density Alternative would result in significant adverse construction impacts with respect to land use and neighborhood character, socioeconomic conditions, community facilities, open space, hazardous materials, air quality, or vibration. The Lower Density Alternative would involve less soil disturbance, but potentially the controls on its performance would not be as stringent as under the Proposed Actions.

As discussed above, like the Proposed Actions, the Lower Density Alternative would result in significant adverse impacts to architectural and archaeological resources.

MITIGATION MEASURES REQUIRED FOR THE LOWER DENSITY ALTERNATIVE

In accordance with the 2020 *CEQR Technical Manual*, where significant adverse impacts are identified, mitigation measures to reduce or eliminate the impacts to the fullest extent practicable are developed and evaluated. Measures to mitigate the significant adverse impacts will be evaluated between the DEIS and FEIS.

The Lower Density Alternative would continue to have significant adverse impacts related to community facilities early childhood programs), open space, shadows, historic and cultural resources, transportation (traffic, pedestrians, and transit), and construction. Mitigation measures being proposed to address those impacts, where feasible and/or practical, are discussed below. If no possible mitigation can be identified, an unavoidable significant adverse impact would result.

COMMUNITY FACILITIES AND SERVICES

Similar to the Proposed Actions, the Lower Density Alternative would result in a significant adverse impact to publicly funded early childhood programs.

Publicly Funded Early Childhood Programs

As with the Proposed Actions, the Lower Density Alternative would result in a significant adverse impact on publicly funded early childhood programs. Several factors may reduce the number of children in need of publicly funded slots in DOE-contracted early childhood programs. Families in the study area could make use of alternatives to publicly funded early childhood programs. There are slots at homes licensed to provide family-based child care that families of eligible children could elect to use instead of public early childhood programs. As noted above, these facilities provide additional slots in the study area but are not included in the quantitative analysis. Parents of eligible children are also not restricted to enrolling their children in early childhood programs in a specific geographical area and could use public early childhood programs outside of the study area.

Possible mitigation measures for this significant adverse impact will be developed in consultation with DOE and may include provision of suitable space on-site for an early childhood program, provision of a suitable location off-site and within a reasonable distance (at a rate affordable to DOE providers), or funding or making program or physical improvements to support adding capacity to existing facilities if determined feasible through consultation with DOE, or providing a new early childhood program within or near the project sites. As a city agency, DOE does not directly provide new early childhood programs, instead it contracts with providers in areas of need. DOE is also working to create public/private partnerships to facilitate the development of new early childhood programs where there is an area of need. As part of that initiative, DOE may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new facilities.

OPEN SPACE

The Lower Density Alternative would result in a significant adverse impact related to active open space. Like the Proposed Action, the impact to open space is primarily due to the existing low active open space ratio in the study area and the addition of a substantial residential population. Partial mitigation measures could include the provision of improvements to existing parks to allow for expanded programming and enhanced usability, and making New York City public school playgrounds accessible to the community afterschool hours through the Schoolyards to Playgrounds program.

SHADOWS

As described above, the Lower Density Alternative would result in a significant adverse shadow impact to Our Lady of Peace Church, located on Carroll Street between Whitwell and Denton Places. Project-generated incremental shadows would fall on some of the stained-glass windows for a portion of the day, and the extent and/or duration of shading would be substantial enough to significantly affect the potential enjoyment or appreciation of the churches' interior spaces by the public.

The *CEQR Technical Manual* identifies potential mitigation strategies to reduce or eliminate, to the greatest extent practicable, adverse shadow impacts to sunlight-sensitive architectural features, including changes to the bulk or configuration of projected or potential development sites that cause or contribute to the adverse impact. For adverse impacts to stained-glass windows, potential

mitigations measures could also include the provision of artificial lighting to simulate the effect of direct sunlight. These mitigation measure will be explored in consultation with LPC between the DEIS and the FEIS. If feasible mitigation is found, the impacts will be considered partially or fully mitigated. In the absence of feasible mitigation, the significant adverse shadow impact to the church would be unavoidable.

HISTORIC AND CULTURAL RESOURCES

The Lower Density Alternative, like the Proposed Actions, would result in the same direct and indirect significant adverse impacts to archaeological and architectural resources. This includes direct and indirect impacts on the S/NR-eligible Gowanus Canal Historic District, construction-related impacts to contributing properties located within the boundaries of the district from adjacent projected construction, incremental shadow impacts on Our Lady of Peace Church, and construction-related impacts on properties that were determined to be archaeologically sensitive.

Architectural Resources

The Lower Density Alternative would result in significant direct adverse impacts to the S/NR-Eligible Gowanus Canal Historic District as a result of the demolition of contributing resources to the historic district. These significant adverse impacts would be unavoidable, as the contributing buildings and bulkheads along the Gowanus Canal are privately owned and would be demolished and modified to allow for developments constructed as-of-right under the proposed zoning.

Potential significant adverse impacts would occur to contributing resources in the S/NR-Eligible Gowanus Canal Historic District as a result of adjacent construction located within 90 feet of projected or potential development sites, and such impacts may also result to three other S/NR-Eligible resources as a result of adjacent construction: Our Lady of Peace Church Complex, the Gowanus Canal Flushing Tunnel, and the IND Subway Viaduct.

Buildings or structures that are S/NR-Listed or NYCLs would be afforded standard protection under DOB TPPN #10/88, regulations applicable to all buildings located adjacent (within 90 feet) to construction sites; however, since the resources identified above are not S/NR-Listed or NYCLs, they are not afforded the added special protections under DOB's TPPN #10/88. Additional protective measures afforded under DOB TPPN #10/88, which include a monitoring program to reduce the likelihood of construction damage to adjacent S/NR-Listed resources or NYCLs, would only become applicable if the S/NR-Eligible resources are listed or designated in the future prior to the initiation of construction. Otherwise, there is the potential for inadvertent construction damage and impacts to occur as a result of adjacent development resulting from the Proposed Actions.

Archaeological Resources

The Lower Density Alternative would result in construction activity on 54 projected or potential development sites that were identified as potentially archaeologically significant by LPC. A Phase 1A Archaeological Documentary Study of those sites identified all or portions of 46 potential and projected development sites as archaeologically sensitive for resources associated with the Gowanus Canal bulkhead and associated landfill; 19th century shaft features; and/or evidence associated with milling or agricultural activities dating between the 17th and 19th centuries, including evidence of the role of forced labor and enslavement as they related to those efforts. The Project Area was determined to have low sensitivity for precontact archaeological resources, some of which may be deeply buried; evidence of industrial uses in the 19th and 20th centuries; and for human remains associated with the Revolutionary War or with homestead burial grounds.

Mitigation measures include additional archaeological analysis for certain development sites, including archaeological monitoring; Phase 1B Archaeological Testing; a geomorphological assessment of deeply buried landscapes; and the preparation of an Unanticipated Human Remains Discoveries Plan in addition to continued consultation with LPC and submission and concurrence of all required work plans.

In order to mitigate the significant adverse impact on archaeological resources, additional archaeological analysis would be required on each of the development sites before they are redeveloped. However, there are no mechanisms currently in place to ensure that such archaeological analysis would occur on privately owned land subsequent to the rezoning, and such analysis can only be legally required on City-owned properties. Only one of the 46 archaeologically sensitive sites (Site 47 on Block 471, Lot 100) is currently owned by the City. With the completion of additional archaeological analyses as necessary and continued consultation with LPC, the alternative would not result in significant adverse impacts on Site 47.

However, none of the remaining 45 development sites identified as archaeologically sensitive are under the City's control. Future development on these properties would occur on an as-of-right basis and there would be no mechanism available to require archaeological analysis to determine the presence of archaeological resources (i.e., Phase 1B testing) or mitigation for any identified significant resource through avoidance or excavation and data recovery (i.e., Phase 2 or Phase 3 archaeological testing). Therefore, the Lower Density Alternative would result in significant adverse impacts on archaeological resources.

TRANSPORTATION

Traffic

As shown in **Table 21-3** and discussed in Chapter 21, "Mitigation," the Proposed Actions' traffic mitigation plan would include implementation of traffic engineering improvements such as signal timing changes, the installation of new traffic signals, and modifications to lane striping and curbside parking regulations. The recommended measures would provide mitigation for many of the traffic impacts anticipated under the Proposed Actions. Significant adverse impacts would be fully mitigated at 10 lane groups during the weekday AM peak hour, 13 lane groups during the midday peak hour, 13 lane groups during the PM peak hour and 12 lane groups during the Saturday peak hour. Intersections where all impacts would be fully mitigated would total 7, 12, 9, and 11 during each of these periods, respectively. In total, impacts to one or more approach movements would remain unmitigated in one or more peak hours at 34 intersections.

As discussed previously, compared with the Proposed Actions, the Lower Density Alternative would generate approximately 31, 10, 32 and 24 fewer incremental vehicle trips during the weekday AM, midday and PM, and Saturday peak hours, respectively. It is therefore anticipated that the traffic mitigation measures recommended for the Proposed Actions would be equally effective at addressing the traffic impacts that would occur under the Lower Density Alternative. It is also anticipated that most if not all of the mitigation measures recommended for the Proposed Actions would likely be warranted under the Lower Density Alternative, and that the number of impacts that would remain unmitigated under the Lower Density Alternative would be comparable to, or somewhat fewer than under the Proposed Actions.

Transit

Subway Stations

As discussed above, under the Proposed Actions, four street stairs and one fare array at the Union Street (R) subway station would be significantly adversely impacted by incremental demand in either the AM or PM peak hour. As the Lower Density Alternative would generate fewer subway trips at the Union Street (R) station, the number of impacted station elements would likely be comparable to or less than the number under the Proposed Actions. Stairway widening is the most common form of mitigation for significant stairway impacts, provided that New York City Transit (NYCT) deems it practicable; i.e., that it is worthwhile to disrupt service on an existing stairway to widen it and that a given platform and sidewalk affected by such mitigation are wide enough to accommodate the stairway widening. Another potential mitigation measure would be to add vertical capacity (i.e., adding an elevator, escalator, or additional stairway) in the vicinity of the impacted stairway. Increasing throughput capacity through the installation of additional turnstiles is a common form of mitigation for significant fare array impacts, provided that NYCT deems it practicable (i.e., that sufficient space is available to accommodate the additional fare array elements). In the absence of practicable mitigation measures, significant AM and PM peak hour stair impacts at the Union Street (R) station under the Lower Density Alternative would remain unmitigated. DCP, as lead agency, will explore potential mitigation measures in coordination with NYCT between the DEIS and FEIS. Absent the identification and implementation of feasible mitigation measures that would mitigate the subway stair impacts to the greatest extent practicable, the Lower Density Alternative, like the Proposed Actions, would result in unmitigated significant adverse subway station impacts.

Subway Line Haul

As discussed above, although the Lower Density Alternative would generate fewer new subway trips than the Proposed Actions, this alternative is also expected to result in a significant adverse subway line haul impact to northbound F service in the AM peak hour. As standard practice, NYCT routinely conducts periodic ridership counts and adjusts subway frequency to meet its service criteria, within fiscal and operating constraints. As was the case under the Proposed Actions, the addition of two northbound F trains during the AM peak hour (increasing average frequency from 12.6 to 14.6 trains per hour) would fully mitigate the potential significant adverse subway line haul impact under the Lower Density Alternative. In the absence of the additional frequencies or other mitigation measure in the AM peak hour, the impact to northbound F service under both the Proposed Actions and this alternative would remain unmitigated.

Pedestrians

As discussed above, nine sidewalks and five crosswalks would be significantly adversely impacted by the Proposed Actions in one or more of the analyzed peak hours, and it is anticipated that pedestrian conditions under the Lower Density Alternative would be generally comparable to, or better than those under the Proposed Actions in all periods. As shown in **Tables 21-11 and 21-12** and discussed in Chapter 21, "Mitigation," the Proposed Actions' pedestrian mitigation plan would generally consist of the relocation/removal of impediments to sidewalk flow and the widening of crosswalks. Implementation of the recommended mitigation measures would fully mitigate the impacts to three of the nine impacted sidewalks and all five impacted crosswalks. Unmitigated impacts would remain along two sidewalks in both the AM and PM peak hours.

As the Lower Density Alternative would generate less pedestrian demand in each peak hour compared to the Proposed Actions, it is anticipated that the pedestrian mitigation measures recommended for the Proposed Actions would be equally effective at addressing the impacts that

would occur under this alternative. The unmitigated impacts to six sidewalks would likely remain under the Lower Density Alternative.

AIR QUALITY

Like the Proposed Actions, the Lower Density Alternative is expected to exceed the annual *de minimis* criterion of 0.1 $\mu g/m^3$ for the annual averaging period at Smith and 5th Streets. The incorporation of similar traffic mitigation measures (installation of traffic signal and signal time adjustments) to address the impact under the Proposed Actions would also be required under the Lower Density Alternative.

CONSTRUCTION

Like the Proposed Actions, the Lower Density Alternative would be required to follow the requirements of the City's Noise Control Code for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s), as required under the NYC Noise Code. These measures could include a variety of source and path controls.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the NYC Noise Code:

- Equipment that meets the sound level standards specified in Subchapter 5 of the *NYC Noise Control Code* would be utilized from the start of construction. See Chapter 20, "Construction," for the noise levels for typical construction equipment and the mandated noise levels for the equipment that would be used for construction under the Proposed Actions.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable.
- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the *NYC Administrative Code*.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practicable:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Noise barriers constructed from plywood or other materials would be erected to provide shielding; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) for certain dominant noise equipment would be employed to the extent feasible and practical based on the results of the construction noise calculations. The details

to construct portable noise barriers, enclosures, tents, etc. are shown in DEP's "Rules for Citywide Construction Noise Mitigation."[2]

The above mitigation measures, which are intended to address the pieces of construction equipment that would produce the highest noise levels, were explored. However, even if all of the above mitigation measures are determined to be feasible and practicable, some significant adverse construction noise impacts could potentially continue to be experienced at sensitive receptors and, as the result, be unavoidable. It was found that there are no reasonable means to ensure measures be employed that would mitigate, partially or fully, the significant adverse construction noise impacts; therefore, the significant adverse construction noise impacts would be unavoidable. ✷

[2] As found at: http://www.nyc.gov/html/dep/pdf/noise_constr_rule.pdf.