Chapter 20: Alternatives*

20.1 Introduction

As described in the 2014 *City Environmental Quality Review* (CEQR) *Technical Manual*, alternatives selected for consideration in an environmental impact statement are generally those that are feasible and have the potential to reduce, eliminate, or avoid adverse impacts of a proposed action while meeting some or all of the goals and objectives of this action. As described in Chapter 1, "Project Description," the Jerome Avenue Rezoning consists of a series of land use actions (collectively, the "Proposed Actions") intended to facilitate the implementation of the objectives of the Jerome Avenue Neighborhood Plan (the "Plan"). The affected area comprises approximately 92 blocks of the Fordham Manor, University Heights, Fordham Heights, Morris Heights, Mount Hope, Mount Eden, Highbridge, and Concourse neighborhoods in Bronx Community Districts (CDs) 4, 5, and 7.

This chapter considers the following four 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 (I.e., no zoning changes).
- 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 residential zoning districts that would result in reduced residential and community facility development.
- An Expanded Rezoning Area Alternative, considered in response to comments relayed by Community Boards 4 and 5 as well as other interested property owners and affordable housing developers following the issuance of the Draft Scope of Work. The Expanded Area Alternative would include nearly the same zoning text and map amendments and city map changes as under the Proposed Actions, but map amendments would be made to a larger area to include approximately ten additional blocks located west of Jerome Avenue.
- An A-Application Alternative was analyzed to reflect an amended zoning text application filed by DCP after the issuance of the DEIS.

* This chapter has been revised since the DEIS to reflect: refinements to Expanded Rezoning Area Alternative (garage parking analysis, HVAC screening analysis and refined modeling analysis results, and cluster analysis for heat and hot water systems); clarify Expanded Rezoning Area Alternative mitigation evaluation by lead agency, DCP, with other involved and interested agencies; inclusion of A-Application Alternative; new figures showing components of impacted resources in the Shadows analyses for the Expanded Rezoning Area and A-Application Alternative.

20.2 Principal Conclusions

20.2.1 NO-ACTION ALTERNATIVE

The No Action Alternative examines future conditions within the Project Area, but assumes the absence of the Proposed Actions (i.e., none of the discretionary approvals proposed as part of the Proposed Actions would be adopted). Under the No Action Alternative, existing zoning would remain in the area affected by the Proposed Actions. It is anticipated that Project Area would experience growth under the No Action Alternative by 2026. Under the No-Action Alternative, it is anticipated that new development would occur on nine of the 45 projected development sites identified under the reasonable worst-case development scenario (RWCDS). In total on the 45 projected development sites, there would be 894,761 sf of market-rate residential floor area (780 DUs), 532,608 sf of commercial uses, 47,795 sf of industrial uses, 82,919 sf of community facility uses, and 945 accessory parking spaces under the 2026 No-Action Alternative. The significant adverse impacts related to shadows, community facilities, transportation, and construction that would occur with the Proposed Actions would not occur with the No Action Alternative.

Under the No Action Alternative, there would be no change to zoning and MIH would not apply to the Project Area; and the expansion of the Corporal Fisher Park would not be facilitated. The substantial amount of affordable housing expected under the Proposed Actions would not be provided. In addition, as compared to the Proposed Actions, the benefits associated with improved economic activity, opportunities for high quality, permanent affordable housing, and enhanced pedestrian conditions and vibrant commercial corridor would not to be realized.

20.2.2 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 changed specifically 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 shadows, community facilities (elementary and middle schools), transportation (traffic, pedestrian and transit), 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.

20.2.3 LOWER DENSITY ALTERNATIVE

The Lower Density Alternative would result in significant adverse impacts with respect to community facilities, shadows, transportation (traffic, pedestrians, and transit) 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 less due to the smaller number of projected and potential development sites and overall lower density.

The Lower Density Alternative was developed 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, three areas proposed for R8A districts would be mapped with R7A districts and one area proposed for a R7D district would be mapped with a R7A district. While the Lower Density Alternative may result in reduced significant adverse impacts, it would ultimately be less effective in achieving critical land use and housing goals outlined in the Proposed Action. The Lower Density Alternative the Proposed Actions in the RWCDS With-Action scenario, as compared to the No Action scenario, are expected to result in a net increase of approximately 2,708,824 gsf of residential space (2,730 dwelling units), 57,975 gsf of community facility space, 20,866 gsf of commercial (retail and office) space; and net decrease of 47,795 square feet of industrial space and 98,002 gsf of auto-related uses.

The Lower Density Alternative would result in the same mix of uses as the Proposed Actions. However, the total amount of residential development would be reduced by approximately 15.6 percent (or 858 fewer residential units) under the Lower Density Alternative. It is noted that for CEQR impact areas that are density related (e.g., community facilities, open space, traffic, etc.), the effects of this alternative are reduced in magnitude since there would be fewer dwelling units, and therefore, fewer residents than under the Proposed Actions. However, since the projected and potential development sites for the Lower Density Alternative are the same as for the Proposed Actions, site-specific effects (e.g., hazardous materials) would be similar under both scenarios.

Mitigation measures for the impacts under the Lower Density Alternative would be similar to mitigation measures under the Proposed Actions. However, mitigation measures for the significant adverse transportation impacts would be somewhat different due to the overall decrease in density and difference in the location of projected development sites as compared to the Proposed Actions.

The Lower Density Alternative would support, to a lesser degree, the Proposed Actions' goals of promoting 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 creating pedestrian-friendly streets through active ground floor retail uses. However, as the Lower Density Alternative would result in fewer residential units, it would be less supportive of the Proposed Action's objectives while continuing to result in significant adverse impacts related to shadows, community facilities, transportation, and construction.

20.2.4 EXPANDED REZONING AREA ALTERNATIVE

The Expanded Rezoning Area Alternative would result in significant impacts with respect to community facilities (elementary and middle schools and childcare services), shadows, transportation (traffic, pedestrians, and transit) and construction. An Expanded Rezoning Area Alternative has been considered

in response to comments from Community Boards 4 and 5 as well as other interested property owners and affordable housing developers following the issuance of the Draft Scope of Work. The Expanded Rezoning Area Alternative would include nearly the same zoning text and map amendments and city map changes as under the Proposed Actions, but map amendments would be made to a larger area to include approximately ten additional blocks in four discrete areas located west of Jerome Avenue and a total of seven additional projected development sites within these areas. With the Expanded Rezoning Area Alternative, contextual zoning districts would be mapped that would protect the existing character of the surrounding residential areas and promote opportunities for permanently affordable housing. In addition, the Expanded Rezoning Area Alternative would replace the existing M1-2 manufacturing district (mapped west of Jerome Avenue, between West 170th Street and West 169th Street) within the rezoning area and map a new residential district with a commercial overlay to allow for a mix of commercial and residential uses in this area, thus permitting residential development in an area where none is currently permitted or would otherwise be permitted in the future without the Expanded Rezoning Area Alternative. Each of the four discrete areas would be mapped adjacent to the proposed rezoning area with new R7D, R8, and R8A zoning districts with C2-4 commercial overlays. In addition to mapping the proposed districts, the proposed Special Jerome Avenue District would also include rules to allow second story retail in mixed use buildings along the elevated rail line, thereby changing the programs of five projected development sites in common with the Proposed Actions.

With the Expanded Area Alternative, the Proposed Actions in the RWCDS With-Action scenario, as compared to the No Action scenario, are expected to result in a net increase of approximately 3,946,422 gsf of residential space (4,187 dwelling units), 99,748 gsf of community facility space, 34,678 square feet of commercial (retail and office) space; and net decrease of 57,795 square feet of industrial space and 115,116 square feet of auto-related uses.

As with the Proposed Actions, the Expanded Rezoning Area Alternative would not result in any significant adverse impacts to land use, zoning, or public policy, socioeconomics, open space, historic and cultural resources, urban design and visual resources, water and sewer infrastructure, solid waste and sanitation services, energy, greenhouse gas emissions and climate change, public health, or neighborhood character.

Similar to the Proposed Actions, the Expanded Rezoning Area Alternative would result in a significant adverse impact on elementary and intermediate schools, but unlike the Proposed Actions the Expanded Rezoning Area Alternative would also result in significant adverse impacts on child care services.

Compared to the Proposed Actions, the Expanded Zoning Alternative would result in increases to incremental shadow coverage at four open space resources, as well as new shadow coverage on five sunlight-sensitive open space resources. The four resources where incremental shadow coverage would increase compared to the Proposed Actions include: the Bronx School of Young Leaders, PS 306 Schoolyard, Townsend Walk, and Jerome/Gerard Greenstreet. As the Bronx School of Young Leaders and PS 306 Schoolyard would be significantly impacted under the Proposed Actions, increases in incremental

shadow duration under the Expanded Zoning Alternative may further worsen conditions at these resources. While Townsend Walk and Jerome/Gerard Greenstreet would experience increases in incremental shadow duration, these resources do not feature any public amenities and are predominantly comprised of trees and vegetation. As these resources would continue to receive adequate sunlight during the growing season (at least the four to six hour minimum specified in the *CEQR Technical Manual*), the incremental shadows that could result from the Expanded Zoning Alternative are not anticipated to adversely impact Townsend Walk or the Jerome Avenue/Gerard Avenue Greenstreet. The Expanded Zoning Alternative would result in new incremental shadow coverage on five open space resources that would not be affected by the Proposed Actions, including: Jennie Jerome Playground, Featherbenches, Palladia Inc. Hill House, Grand/Macombs Greenstreet, and Macombs Road Open Space.

The addition of seven projected development sites and the land-use change of sites 3, 6, 19, 22, and 44 in the Expanded Rezoning Area Alternative would generate a greater number of vehicle, transit, and pedestrian trips and more demand for on-street and off-street public parking as compared to the Proposed Actions (See Appendix I for a summary of the projected sites). Expanded Rezoning Area Alternative would generate approximately 1,078, 4,502, 2,855, and 3,476 more incremental person trips in the weekday AM, midday, and PM, and Saturday midday peak hours, respectively, compared to the Proposed Actions. Depending on the peak hour, this represents an approximately 27 to 47 percent increase in action-generated person trips compared to the Proposed Actions. As in the Proposed Actions, it is anticipated that the Expanded Rezoning Area Alternative would result in significant adverse traffic, bus, and pedestrian impacts. Neither the Proposed Actions nor the Expanded Rezoning Area Alternative would result in significant adverse subway or parking impacts.

The potential for construction-related impacts associated with the Expanded Rezoning Area Alternative, as with the Proposed Actions, would be limited to the vicinity of each projected and potential development site, because those are the locations where construction would occur as part of the Expanded Rezoning Area Alternative; because these projected development sites and the historic resources of concern are the same for either the Proposed Actions or the Expanded Rezoning Area Alternative, the potential for construction-period effects would be the same. Similar to the Proposed Actions, the Expanded Rezoning Area Alternative would result in significant adverse construction-period traffic and noise impacts. The mitigation measures that would be employed for the Expanded Rezoning Area Alternative would generally be similar to those required for the Proposed Actions, though somewhat different due to the overall increase in density and difference in the location of projected development sites as compared to the Proposed Actions. In addition the Expanded Rezoning Area Alternative would result in significant adverse impacts to Child Care services that would not occur the Proposed Actions; therefore, mitigation measures to eliminate or reduce this impacts are discussed in the mitigation section of this alternative.

The Expanded Rezoning Area Alternative would support, to a similar degree, the Proposed Actions' goals of promoting 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 creating pedestrian-friendly streets through active ground floor retail uses.

20.2.4 A-APPLICATION ALTERNATIVE

Since the issuance of the Draft EIS, DCP has prepared and filed an amended zoning text application that addresses issues raised after the issuance of the DEIS. The amended application, filed as ULURP application C 180051(A) ZMX and N 180050(A) ZRX, consists of modifications to the Proposed Actions that would extend the boundaries of the Rezoning Area and Special Jerome Avenue District. The A-Application Alternative considers modifications to the Proposed Actions that would extend the Rezoning Area and special district in three places. The A-Application Alternative would extend the boundaries of the proposed rezoning area and proposed Special Jerome Avenue District to include additional blocks and lots, located west and south of Jerome Avenue, and rezone them from R7-1 and M1-2 to R8A with a C2-4 commercial overlay and R7D with a C2-4 commercial overlay. The modified application would also include zoning text amendment provisions to allow second story retail along Jerome Avenue as-of-right, allow the second story as an obstruction in a rear yard within 100' of Jerome Avenue, allow Physical Culture Establishments as of right within the Special Jerome Avenue District, and clarify street wall and ground floor regulations. Finally, the special district text provides bulk requirements for an irregular lot within the rezoning area. The amended application was analyzed in a technical memorandum issued on November 9, 2017, and is further analyzed as the "A-Application Alternative" in this FEIS.

The A-Application Alternative would result in the same or very similar significant adverse impacts related to Community Facilities, Shadows, Transportation (traffic, transit, and pedestrians), Construction (traffic and noise), as identified in the DEIS for the Proposed Actions. As a consequence, the significant adverse impacts under the A-Application Alternative could be mitigated using the same types of mitigation measures identified for the Proposed Actions or the Expanded Rezoning Area Alternative.

20.3 No-Action Alternative

20.3.1 INTRODUCTION

The No-Action Alternative assumes that the Proposed Actions are not implemented. This includes no zoning map and text changes and no city map changes to facilitate the development of Corporal Fischer Park. Conditions under this alternative are similar to the "Future without the Proposed Actions" described in the preceding chapters, which are compared in the following section to conditions under the Proposed Actions.

Under the No-Action Alternative, it is anticipated that new development would occur on nine of the 45 projected development sites identified under the reasonable worst-case development scenario (RWCDS). In total on the 45 projected development sites, there would be 894,761 sf of market-rate residential floor area (780 DUs), 532,608 sf of commercial uses, 47,795 sf of industrial uses, 82,919 sf of

community facility uses, and 945 accessory parking spaces under the 2026 No-Action Alternative. The effects of the No-Action Alternative in comparison to those of the Proposed Actions are provided below.

20.3.2 LAND USE, ZONING, AND PUBLIC POLICY

In the No-Action Alternative, based on existing zoning and land use trends and general development patterns, it is anticipated that the rezoning area would experience limited overall growth. Under the No-Action Alternative, it is expected that the rezoning area would experience a net increase in residential, commercial and community facility uses. In comparison to the future with the Proposed Actions, under the No-Action Alternative there would be less auto-related, warehouse, garage, other commercial, and industrial uses and more residential, local retail, FRESH supermarket, restaurant, office, and community facility uses in the rezoning area.

Like the Proposed Actions, the No-Action Alternative would not result in any significant adverse impacts to land use, zoning, or public policy. Development within the rezoning area would be consistent with existing uses and is not expected to significantly affect the mix of existing land uses in the area. However, under the No-Action Alternative, significantly fewer residential units would be constructed, with no new affordable housing developed under this alternative.

Under the No-Action Alternative, no changes to zoning are anticipated. Development could occur throughout the rezoning area under the current mix of residential, commercial, and manufacturing zoning districts. New developments within the existing zoning districts are expected to primarily comprise mixed-use developments with some residential, community facility, and commercial introduced under the No-Action Alternative. Unlike the Proposed Actions, the No-Action Alternative would not expand development opportunities for the creation of residential development and commercial and retail development.

New development under the Proposed Actions would occur at the densities and scale that are currently allowed under the existing zoning districts. Thus, the benefits of the Proposed Actions with respect to the creation of new residential development that would match the existing built character where feasible through the zoning of new contextual residential districts would be foregone, as would the proposed Mandatory Inclusionary Housing zoning, which would facilitate expansion of the neighborhood's supply of affordable housing and the construction of new permanently affordable housing development.

The benefits expected to result from the Proposed Actions – including providing opportunities for affordable housing development by increasing residential density and establishing Mandatory Inclusionary Housing, promoting local retail uses on the ground floor by mapping commercial overlays and require active ground floor uses in areas defined by the Special Jerome Avenue District, designating strategic locations as a full commercial district to strengthen an existing active commercial node, and maintaining existing zoning for heavy commercial and light industrial uses in targeted areas – would not be realized under this alternative.

20.3.3 SOCIOECONOMIC CONDITIONS

Future conditions with the No-Action Alternative would result in less residential, community facility, and commercial development than would otherwise occur with implementation of the Proposed Actions. Absent the Proposed Actions, it is anticipated that development would only occur on nine of the 45 projected development sites. No-Action development on these nine projected development sites would result in a net increase of 850,453 sf of residential floor area (674 DUs), 61,096 sf of commercial uses, and 36,120 sf of community facility uses than with the Proposed Actions, which would result in less housing production and comparatively fewer jobs. The following summarizes the potential socioeconomic effects of the No-Action Alternative as compared to 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. No direct residential displacement would occur under the No-Action Alternative, while the Proposed Actions could potentially directly displace an estimated 18 residents residing in six dwelling units on two projected development sites. Similar to the Proposed Actions, the Gerard Avenue Apartments (which contain 60 residential units) on projected development site 45 could potentially be enlarged with more dense residential use on the portion of the site occupied by at-grade parking lots fronting on River Avenue under the No-Action Alternative. As the 60 existing housing units are rent-stabilized[1], any redevelopment of this site would require that the owner present a plan to the New York State Homes and Community Renewal (NYSHCR) for relocation of these tenants. The owner of this projected development site has indicated that site 45 would be redeveloped based on the site's current zoning irrespective of the Proposed Actions.

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 674 dwelling units would be constructed on eight of the 45 projected development sites, housing a population that would be well below the *CEQR Technical Manual* threshold of five percent of the existing study area population, indicating that the development would not be large enough to substantially alter the secondary study area's socioeconomic character and demographic composition or real estate market conditions.

Demand for housing in the secondary study area is expected to continue to increase given its relative affordability compared to the surrounding areas and its relatively convenient location and proximity to public transit. Given the trends experienced in the neighborhoods surrounding the study area, low

[1] Rent stabilized apartments are rent regulated. Tenants of rent stabilized apartments are protected from sharp increases in rent and have the right to renew their leases.

vacancy rates, and the increased interest in and limited housing stock of the study area, it is likely that rents within the study area could significantly increase under the No-Action Alternative. In absence of the Proposed Actions, much of the new housing in the foreseeable future is expected to be affordable and targeted to a mix of incomes, providing new opportunities for a variety of housing types. Some of the new housing anticipated in absence of the Proposed Actions would be targeted to households that exceed typical income levels in the study area.

Based on upward trends in income and real estate values near the secondary study area and the limited stock of available apartments, it is likely that low-income households in unprotected units (at-risk households) would continue to experience indirect residential displacement pressures under the No-Action Alternative and could potentially decrease. 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 to be included in any new residential development, would not be realized under the No-Action Alternative. The Proposed Actions and associated RWCDS would create capacity for the construction of new affordable housing in the approximately 92-block rezoning area, in areas where residential uses are not currently permitted, and would also increase the allowable residential density in areas that can support additional development in a transit accessible area. Through providing affordable housing and increasing the supply of housing, it is anticipated that the Proposed Actions would help to relieve displacement pressures and provide for a more diverse demographic composition within the study area, which is not expected to occur in the No-Action Alternative.

Direct Business Displacement

Like the Proposed Actions, the No-Action Alternative would not result in significant adverse impacts due to direct business displacement. Both the Proposed Actions and the No-Action Alternative would result in some direct business and institutional displacement. The No-Action Alternative could result in the direct displacement of seven businesses affecting an estimated 86 workers in the retail, wholesale, and other services (public parking), health care and social assistance, and professional and educational services sectors on seven of the 45 projected development sites. As with the Proposed Actions, which could have the potential to directly displace significantly more businesses than the No-Action Alternative, the directly displaced businesses do not provide product 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. These businesses are not unique to the ¼ -mile secondary study area, nor do they serve a user base that is dependent on their location within the study area. As with the Proposed Actions, it is expected that the potentially displaced businesses would be able to find comparable space within the study area or elsewhere in the city under the No-Action Alternative.

Indirect Business Displacement

Neither the No-Action Alternative nor the Proposed Actions are expected to 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 ¼-mile secondary study area already has well-established commercial and residential markets, and neither the Proposed Actions nor the No-Action Alternative are expected to substantially alter commercial real estate trends in the area.

Compared to the Proposed Actions, the No-Action Alternative would result in less commercial, community facility, and residential development than would otherwise 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 new centers of activity that would bring together housing, commercial uses, community services and street level activities, promoting continuous active non-residential ground floor uses and minimizing curb cuts which disrupt the sidewalk, would not be realized under the No-Action Alternative. Jerome Avenue is anticipated to continue to remain a service area that is largely characterized by low-density commercial, automotive, and transportation-related uses.

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. Although the Proposed Actions could result in the potential direct displacement of a number of auto-related uses, which include used car sales, automotive parts and accessory stores, car leasing agencies, gas stations, car washes, automotive glass shops, tire stores, and repair and service shops, from the rezoning area, these displaced businesses and their associated employment are not expected to significantly impact the industry as a whole. The potentially displaced automotive repair and service shops represent a small percentage of employment within the industry in the Bronx, and these businesses could relocate within the City, potentially in other auto-related clusters, thereby maintaining existing business and employment counts within the industry. It is expected that there would remain numerous automotive repair and service businesses nearby, in the greater borough, and in the City as a whole, which would ensure that there are ample locations to provide this type of service. Therefore, there would be on significant adverse impacts form the Proposed Actions. Under the No-Action Alternative, the area would not be rezoned and would continue to support a number of automotive uses. 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.

20.3.4 COMMUNITY FACILITIES AND SERVICES

The No-Action Alternative would introduce fewer residents to the study area as compared to the Proposed Actions and, therefore, would result in a smaller increase in demand on community facilities. Neither the Proposed Actions nor the No-Action Alternative would result in direct impacts to community facilities and services or indirect impacts to high schools, library services, child care facilities, or police, fire, and emergency medical services. Unlike the Proposed Actions, the No-Action Alternative would not result in significant adverse impacts to public schools.

Under the No-Action Alternative, there would be some new residential development on the projected development sites, introducing approximately 758 elementary school students, 352 intermediate school students and 382 high school students. As with the Proposed Actions, the No-Action Alternative would not result in significant adverse impacts to CSD 9, Sub-district 1 and 3 elementary and intermediate schools, and CSD 10, Sub-district 4 intermediate schools. The No-Action Alternative would add fewer students to CSD 9, Sub-district 2 elementary and intermediate schools and CSD 10, Sub-district 4 elementary schools and would not result in significant adverse impacts to these sub-districts.

20.3.5 OPEN SPACE

Similar to the Proposed Actions, the No-Action Alternative would not have any direct impacts on any open space resources.

In terms of indirect effects, the open space ratios for the non-residential (¼-mile) study area for the No-Action Alternative — like the Proposed Actions — would exceed the *CEQR Technical Manual* open space ratio guidelines. Therefore, daytime users of passive open space will be well-served by the resources available, and there would be no significant adverse impacts in the non-residential study area as a result of either this alternative or the Proposed Actions.

With regard to the open space ratios for the residential (½-mile) study area, the No-Action Alternative would have slightly higher ratios with respect to overall open space, as well as passive and active open space. Under the No-Action Alternative, the total, passive, and active open space ratios for the residential study area would be 0.540, 0.176, and 0.364 per 1,000 residents, respectively (compared to 0.526, 0.171, and 0.355, respectively, under the Proposed Actions). The passive open space ratio for the worker ¼-mile study area would be 0.567 per 1,000 total users, compared to 0.554 under the Proposed Actions. As under the Proposed Actions, under the No-Action Alternative the total, passive, and active open space ratios would be below the *CEQR Technical Manual* open space per 1,000 residents, including 0.5 aces of passive open space and 2.0 acres of active open space.

The open space ratios for both the non-residential and residential study areas under the No-Action Alternative would, therefore, generally be slightly higher than those under the Proposed Actions. However, as with the Proposed Actions, the open space ratios for the residential study area would be below the *CEQR Technical Manual* open space guidelines for open space adequacy and citywide planning goals.

20.3.6 SHADOWS

Unlike the Proposed Actions, the No-Action Alternative would not result in any significant adverse shadows impacts. In the No-Action Alternative, incremental shadows identified with the Proposed Actions would not be cast on publicly accessible open spaces or sunlight-sensitive historic resources. As such, the No-Action Alternative would not result in the significant adverse shadows impacts identified at eight resources (Bronx School of Young Leaders, PS 306 Schoolyard, Mount Hope Playground, Goble Playground, Inwood Park, Keltch Park, Edward L. Grant Greenstreet, Jerome Avenue/Grant Avenue Greenstreet) that would occur with the Proposed Actions. Furthermore, similar to the Proposed Actions, no other publicly accessible open spaces or sunlight-sensitive historic resources would be significantly affected by shadows under the No-Action Alternative.

20.3.7 HISTORIC AND CULTURAL RESOURCES

As with the Proposed Actions, the No-Action Alternative would not result in any significant adverse impacts to archaeological resources or any indirect impacts to architectural resources. Unlike the Proposed Actions, the No- Action Alternative would not result in direct or construction-related significant adverse impacts to architectural resources.

The No-Action Alternative assumes that development would occur on nine of the 45 projected development sites in accordance with existing zoning. The New York City Landmarks Preservation Commission (LPC) reviewed and identified projected and potential development sites that could experience new/additional in-ground disturbance and concluded that none of the lots comprising those sites have any archaeological significance. Therefore, like the Proposed Actions, the No-Action Alternative would not result in any significant adverse impacts to archaeological resources.

It is possible that some or all of the buildings identified as eligible for LPC and/or S/NR designation could become listed under the No-Action Alternative. Privately-owned properties that are New York City Landmarks (NYCL) or S/NR- listed, or are pending designation as landmarks, are protected under the New York City Landmarks Law, which requires LPC review and approval before any alteration or demolition can occur. In addition, the City has procedures for avoiding damage to historic resources from adjacent construction.

20.3.8 URBAN DESIGN AND VISUAL RESOURCES

Like the Proposed Actions, the No-Action Alternative would not have significant adverse impacts on urban design, view corridors, and visual resources. Under the No-Action Alternative, urban design in the rezoning area is expected to continue existing trends.

In the future without the proposed actions, there would be some notable change to urban design and streetscape appearance in two broadly defined portions of the primary study area – somewhat near the northern end of the primary study area, in the vicinity of Burnside Avenue and Tremont Avenue corridors, and in the southern and southwestern extent of the primary study area. Though the concentration of No-Action developments in the River Avenue corridor would be several blocks from the southernmost concentration of uses between the Edward L. Grant Highway and Jerome Avenue corridors, considered all together, these No-Action developments would contribute to a substantial concentration of new development at the southern end of the primary study area in the future without the Proposed Actions. In addition, as described, there would be two new commercial developments along the west side of Jerome Avenue, a couple of blocks north of the Cross Bronx Expressway, which would be adjacent to the rezoning area and contribute to the commercial character, urban design and streetscape of an approximately two-block portion of the Jerome Avenue corridor.

The changes to urban design and streetscape likely will be perceptible to the pedestrians in these areas of the primary study area where No-Action development will be relatively concentrated (such as in the River Avenue corridor). The overall pattern of expected No-Action development, however, generally would be scattered throughout the length of the primary study area corridor. The types of uses associated with the No-Action developments (multiple residential and/or commercial uses, as well as some community facilities) would be similar to existing uses and building typologies in the primary study area. The heights of No-Action buildings known at this time (expected to range in height from five stories to 12 stories), also would be similar to existing buildings in the area. Therefore, these No-Action developments would not be expected to represent substantial changes to the established development context of the Proposed Actions. The overall urban design of the primary study area, including building types, bulk, and height, as well as the conditions of properties that would not be directly changed by the expected No-Action development, and character of streetscapes throughout all corridors in the future without the Proposed Actions, would generally resemble existing conditions.

The neighborhood areas comprising the secondary study area would remain similar to existing conditions with regard to their characteristic land uses, building types, densities, and overall urban form. The changes to urban design and streetscape likely will be perceptible to the pedestrians in the immediate vicinity of each No-Action buildings. The overall pattern of expected No-Action development in the secondary study area, however, generally will be one of limited new construction distributed throughout the secondary study area. The types of uses associated with these No-Action developments in the secondary study area (residential and/or commercial uses, as well as some community facilities) would be similar to existing uses and building typologies in the secondary study area. The heights of the

No-Action buildings known at this time (expected to range in height from five stories to 13 stories), also would be similar to existing buildings in the study area.

Therefore, these No-Action developments will not represent substantial changes to the established development of the neighborhoods context surrounding the proposed rezoning area. The overall urban design of the secondary study area, including building types, bulk, and height, as well as the conditions of properties that will not be directly changed by the expected No-Action development, and character of streetscapes throughout the secondary study area in the future without the Proposed Actions, generally will resemble existing conditions.

Further, as described in Chapter 8, the inventory of existing visual resources is expected remain the same in the future without the Proposed Actions; none of the No-Action developments would alter the visual resources or otherwise affect view corridors, and it is expected that these visual resources, generally, would resemble their existing conditions.

Therefore, as would be the case the Proposed Actions, the No-Action Alternative, likewise, would result in no substantial change to, or significant adverse impacts to, urban design and visual resources in the rezoning area and its vicinity.

20.3.9 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 measure that would be placed on the projected development sites under the Proposed Actions. As such, the No-Action Alternative would involve less soil disturbance, but potentially the controls on its performance would not be as stringent as under the Proposed Actions.

20.3.10 WATER AND SEWER INFRASTRUCTURE

Neither the Proposed Actions nor the No-Action Alternative would result in significant adverse impacts on the City's water supply, wastewater treatment, or stormwater conveyance infrastructure. Compared with the Proposed Actions, the No-Action Alternative would generate less demand on the City's Water supply and wastewater treatment infrastructure. Similar to the Proposed Actions, the incorporation of selected best management practices (BMPs) would be required as part of the New York City Department of Environmental Protection (DEP) site connection application process for new buildings.

20.3.11 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.

20.3.12 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 2026.

20.3.13 TRANSPORTATION

The No-Action Alternative would not result in any significant adverse impacts with respect to transportation unlike the Proposed Actions, as discussed below. Unlike the Proposed Actions, the No-Action Alternative would not result in significant adverse traffic impacts to 14, 14, 21, and 19 intersections in the weekday AM, midday, and PM, and Saturday midday peak hours, respectively. The Proposed Actions' significant adverse impact to east and westbound Bx11, southbound Bx32, and eastbound Bx35 in the AM peak hour and on westbound Bx11, north and southbound Bx32, and east and westbound Bx35 in the PM peak hour would not occur in the No-Action Alternative. Furthermore, the Proposed Actions' significant adverse impact to one sidewalk element during one peak hour would not occur in the No-Action Alternative. Like the Proposed Actions, within the parking study area, on-street parking spaces would remain available during the weekday and overnight peak 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 rezoning area.

Traffic

Independent of the Proposed Actions, traffic levels of services at many locations in the study area would experience congested conditions in the future. In the No-Action Alternative, a total of 19 intersections will have at least one congested lane group in one or more peak hours; these same 19 intersections have at least one congested lane group in one or more peak hours in the Proposed Actions. There would be no intersections with significant adverse traffic impacts in the No-Action Alternative compared to 14, 14, 20, and 19 impacted intersections during the weekday AM, midday, and PM, and Saturday midday peak hours, respectively, in the Proposed Actions.

Transit

Subway

Subway Stations

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 rezoning area in the No-Action Alternative. All analyzed stairs and fare arrays at these stations would operate at an acceptable LOS C or better in both the weekday AM and PM peak hours in this alternative. Neither the No-Action Alternative nor the Proposed Actions are expected to result in significant adverse subway station impacts.

Subway Line Haul

Subway trains serving stations in proximity to the rezoning area would experience increased ridership through their maximum load points as a result of background growth and new development in the No-Action Alternative. In this alternative, southbound 4 trains and northbound 4 trains are projected to operate above capacity in the AM and PM peak hours, respectively. The 4 train would also operate over capacity in the Proposed Actions. Similar to the Proposed Action, the No-Action Alternative would not result in significant adverse line haul impacts.

Bus

Demands on the local bus services operating in the vicinity of the rezoning area are expected to increase compared to existing ridership as a result of background growth and new development in the No-Action Alternative. The existing levels of bus service would not be sufficient to provide adequate supply to meet the projected demand in the No-Action Alternative on the Bx11, Bx32, and Bx35 in both directions in the AM peak hour. The westbound Bx11 and the east and westbound Bx35 would also experience a capacity shortfall in the PM peak hour. Based on a loading guideline of 54 passengers per standard bus, an additional 13 standard buses per hour in the AM peak hour and six standard buses per hour in the PM peak hour would need to be added to accommodate projected demand in the No-Action Alternative. The Proposed Actions' significant adverse impacts to east and westbound Bx11, southbound Bx32, and eastbound Bx35 in the AM peak hour and to the westbound Bx11, north and southbound Bx32, and east and westbound Bx35 in the PM peak hour would not occur in the No-Action Alternative.

Pedestrians

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

Sidewalks

All analyzed sidewalks are expected to operate at an acceptable LOS C or better in all peak hours with the exception of one sidewalk, which would operate at a congested LOS D in the weekday AM peak hour in the No-Action Alternative. This compares to one significant adverse impact to one sidewalk in the Saturday midday peak hour in the Proposed Actions, which would not occur in the No-Action Alternative.

Crosswalks

All analyzed crosswalks are expected to operate at an acceptable LOS C or better in all peak hours.

Corners

All analyzed corners are expected to operate at an acceptable LOS C or better in all peak hours.

Parking

It is anticipated that demand for both off-street and on-street parking would increase due to new development and general background growth in the No-Action Alternative. Four off-street parking facilities are projected to be displaced by new development in the No-Action Alternative pursuant to existing zoning, eliminating 316 parking spaces. Seventy-six off-street parking spaces will be constructed as part of development in the No-Action Alternative. Sufficient parking is projected within a ¼-mile radius of the study area to accommodate parking demand in the No-Action Alternative. Parking within a ¼-mile radius of the study area is projected to be 90 percent utilized during the weekday midday period and 84 percent utilized in the weekday overnight and Saturday midday periods. This compares to the Proposed Actions, when parking is projected to be 94 percent utilized during the weekday midday period, 92 percent utilized during the weekday overnight period, and 87 percent utilized during the Saturday midday period. Significant adverse parking impacts are therefore not anticipated in this alternative or the Proposed Actions.

20.3.14 AIR QUALITY

Mobile Sources

In the No-Action 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 rezoning area. As reported in Chapter 14, "Air Quality," under the No-Action Alternative, no exceedances of the national ambient air quality standards for carbon monoxide or particulate matter less than ten micron in diameter. Significant adverse mobile source impacts are therefore not anticipated under this alternative.

Stationary Sources

As outlined in Chapter 14, while some development within the study area 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 9 of the 45 projected 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 air quality (E) designations.

Specifically, they would not have the restrictions specified in Chapter 14 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.

20.3.15 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

With less development than under the Proposed Actions, the No-Action Alternative would have less energy use and would therefore result in fewer carbon dioxide equivalent (CO2e) emissions per year. Neither the Proposed Actions nor the No-Action Alternative would result in significant greenhouse gas (GHG) emission or climate change impacts.

20.3.16 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 but, as outlined in Chapter 16, "Noise," the maximum increase in Leq noise levels would be 7.4 dBA. Changes of this magnitude would be clearly perceptible to nearby residents. However, this increase would only apply to site 11. No other site would experience noise increases greater than the 3dBA perception threshold. In terms of CEQR noise exposure guidelines, noise levels at receptor site 9 would remain classified in the "marginally acceptable" category, noise levels at receptor sites 2, 3, 6, 7, 8, 11, 12, 14, 16, 18, 19, and 20 would remain in the "marginally unacceptable" category, and noise levels at receptor sites 1, 4, 5, 10, 13, 15, and 17 would remain in the "clearly unacceptable" category.

20.3.17 PUBLIC HEALTH

Neither the Proposed Actions nor the No-Action Alternative would result in significant adverse public health impacts. In 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.

20.3.18 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. Like the Proposed Actions, the No-Action Alternative would not result in any significant adverse impacts to neighborhood character. The significant adverse transportation 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 be moderate, as compared to the Proposed Actions, and the overall neighborhood character of the area would remain substantially the same as it is today under the No-Action Alternative. The study area would continue to be characterized by the presence of multiple neighborhoods, often physically separated by the Jerome Avenue corridor, which extends north-south and accommodates the elevated viaduct of the No. 4 subway line, as well as the Cross Bronx Expressway, an eight-lane, below-grade east-west roadway. While each neighborhood is generally residential in character, Jerome Avenue, with its low-density commercial uses, including garages, tire shops, and other automotive businesses, currently creates a disjointed character within the overall study area. Neither the Proposed Actions nor the No-Action Alternative would result in significant adverse impacts to neighborhood character, however, the improvements to neighborhood character that would occur under the Proposed Actions, including reintegrating the Jerome Avenue corridor into the neighborhoods in the surrounding area, would not occur under this alternative.

20.3.19 CONSTRUCTION

As the amount of new construction under the No-Action Alternative would be less as compared to 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 less potential construction-related impacts to non-designated historic resources in the area.

Neither the Proposed Actions nor the No-Action Alternative would result in significant adverse construction impacts with respect to land use and neighborhood character, socioeconomic conditions, community facilities, ore open space, hazardous materials, or air quality. The No-Action Alternative would involve less soil disturbance, but potentially the 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 rezoning area are developed independent of the Proposed Actions. It is anticipated that this construction, if it would occur, would be 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 locations in close proximity to development sites under the No-Action Alternative.

20.4 No Unmitigated Significant Adverse Impacts Alternative

20.4.1 INTRODUCTION

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 (public schools), shadows, transportation, and construction-period traffic, air quality and 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 their principal goals and objectives would not be fully realized.

20.4.2 COMMUNITY FACILITIES AND SERVICES

Under the RWCDS, the Proposed Actions would result in a significant adverse impact to CSD 9, Sub-district 2 elementary and intermediate schools and CSD 10, Sub-district 4 elementary schools. By 2026, it is anticipated that 759 elementary school students and 312 intermediate school students would be added to Sub-district 2 of CSD 9 and 319 elementary school students would be added to Sub-district 4 of CSD 10. With the addition of these students, CSD 9, Sub-district 2 elementary school utilization would increase 22.8 percent above the No-Action condition to 151.5 percent. CSD 9, Sub-district 2 intermediate school utilization would increase 45.3 percent above the No-Action condition to 171.2 percent. CSD 10, Sub-district 4 elementary school utilization would increase 5.9 percent above the No-Action condition to 113.3 percent. Chapter 21, "Mitigation," outlines measures that could offset or would serve to at least partially mitigate the identified impacts. If however the significant adverse public school impacts are not completely eliminated, an unavoidable significant adverse impact would result.

To avoid the identified significant adverse elementary school impact in CSD 9, Sub-district 2, the number of incremental dwelling units that could be developed would have to be reduced to 427, generating 166 elementary school students as compared to No-Action conditions. This would represent a decrease of

1,520 DUs (78.1 percent) in CSD 9, Sub-district 2. Alternatively, 594 new seats could be added to CSD 9, Sub-district 2 elementary schools to avoid the unmitigated significant adverse impact.

To avoid the significant adverse intermediate school impact in CSD 9, Sub-district 2, the number of incremental dwelling units that could be developed would have to be reduced to 210 DUs, generating 34 intermediate school students as compared to the No Action condition. This would represent a decrease of 1,737 DUs (89.2 percent) in CSD 9, Sub-district 2. Alternatively, 279 new seats could be added to CSD 9, Sub-district 2 intermediate schools to avoid the unmitigated significant adverse impact.

To avoid the significant adverse elementary school impact in CSD 10, Sub-district 4, the number of incremental dwelling units that could be developed would have to be reduced to 692 DUs, generating 270 elementary school students as compared to No-Action conditions. This would represent a decrease of 127 DUs (15.5 percent) in CSD 10, Sub-district 4. Alternatively, 49 new seats could be added to CSD 10, Sub-district 4 elementary schools to avoid the unmitigated significant adverse impact.

20.4.3 SHADOWS

As discussed in Chapter 6, "Shadows," the Proposed Actions would result in significant shadow impacts on eight open space resources, including: Bronx School of Young Leaders, PS 306 Schoolyard, Mount Hope Playground, Goble Playground, Inwood Park, Keltch Park, Edward L. Grant Greenstreet, Jerome Avenue/Grant Avenue Greenstreet. Potential mitigation measures for the identified impacts vary by resource. As discussed below and in Chapter 19, "Mitigation," between the DEIS and FEIS, DCP and NYC Parks have explored potential mitigation measures. 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 no feasible or practicable mitigation measures can be identified and/or implemented to mitigate these shadow impacts, the Proposed Actions would result in an unavoidable significant adverse shadow impacts on these open space resources. The specific modifications to the Proposed Actions that would eliminate significant adverse shadow impacts on the eight open space resources are described below.

Bronx School of Young Leaders

The Bronx School of Young Leaders schoolyard is an approximately 1.09-acre open space located on West 177th Street between West Tremont Avenue and Jerome Avenue. Incremental shadows would last for a total of approximately 5 hours 44 minutes on March 21, approximately 6 hours 17 minutes on May 6, approximately 6 hours 39 minutes on June 21, and approximately 5 hours and 2 minutes on December 21. It should be noted that the site that would cast incremental shadows on this open space, Potential Development Site 40, is a potential, rather than a projected, development site. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the schoolyard and eliminate the potential for an unmitigated impact, the maximum building height of Potential Development Site 40 would have to be reduced to approximately 65 feet, compared to a maximum height of 165 feet under the Proposed Actions. Such a reduction in height would substantially limit the development potential on this site. Furthermore, reducing the height of Potential Development Site 40 (located along Jerome Avenue) would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

PS 306 Schoolyard

The PS 306 Schoolyard is an approximately 0.05-acre open space located immediately southeast of the Bronx School of Young Leaders schoolyard along West 177th Street. Incremental shadows would last for a total of approximately 5 hours 44 minutes on March 21, approximately 6 hours 17 minutes on May 6, approximately 6 hours 39 minutes on June 21, and approximately 5 hours and 2 minutes on December 21. It should be noted that the site that would cast incremental shadows on this open space, Potential Development Site 40, is a potential, rather than a projected, development site. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the schoolyard and eliminate the potential for an unmitigated impact, the maximum building height of Potential Development Site 40 would have to be removed. This would substantially limit the development potential on the site. Furthermore, removal of Potential Development Site 40 (located along Jerome Avenue) would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

Mount Hope Playground

Mount Hope Playground is an approximately 0.7-acre open space located on East 177th Street between Jerome Avenue and Walton Avenue. Incremental shadows would last for a total of approximately 3 hours 47 minutes on March 21, approximately 4 hours 59 minutes on May 6, approximately 5 hours 40 minutes on June 21, and approximately 1 hour and 57 minutes on December 21. It should be noted that the sites that would cast incremental shadows on this open space, Potential Development Sites 41, 42, 43, are potential, rather than projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the playground and eliminate the potential for an unmitigated impact, the maximum building height of Potential Development Sites 41, 42, and 43 would have to be reduced to approximately 65, 65, and 85 feet, respectively, compared to a maximum height

of 165, 165, and 145 feet, respectively, under the Proposed Actions. Such a reduction in height would substantially limit the development potential on these sites. Furthermore, reducing the height of Potential Development Sites 41, 42, and 43 (located along Jerome Avenue) would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

Goble Playground

Goble Playground is an approximately 0.38-acre open space located on the south side of Goble Place between Inwood Avenue and Macombs Road. Incremental shadows would last for a total of approximately 7 hours 49 minutes on March 21, approximately 8 hours 3 minutes on May 6, approximately 9 hours 56 minutes on June 21, and approximately 6 hours 2 minutes on December 21. It should be noted that three of the four sites that would cast incremental shadows on this open space, Potential Development Sites 52, 53, and 54 are potential, rather than projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the playground and eliminate the potential for an unmitigated impact, the maximum building height of Potential Development Sites 52, 53, and 54 would have to be reduced to approximately 95, 85, and 85 feet, respectively, compared to a maximum height of 115, 145, and 95 feet, respectively, under the Proposed Actions. Such a reduction in height would substantially limit the development potential on these sites. As such, reductions in building heights of development sites further to the south including Projected Development Site 23 may also be required to eliminate the potential for an unmitigated impact. Height reductions of this scale would substantially limit the development potential on these sites.

Inwood Park

Inwood Park is an approximately 0.36-acre open space located on West Mount Eden Avenue between Jerome Avenue and Inwood Avenue. This open space resource would experience incremental shadow coverage on all four representative analysis days, with incremental shadow duration ranging from approximately 6 hours and 2 minutes on December 21 to 12 hours and 4 minutes on June 21. It should be noted that two of the three sites that would cast incremental shadows on this open space, Potential Development Sites 49 and 50, are potential, rather than projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the park and eliminate the potential for an unmitigated impact, Potential Development Site 49 would have to be removed and the maximum building height of

Projected Development Site 21 and Potential Development Site 50, would have to both be reduced to approximately 20 feet, compared to maximum heights of 95 and 115 feet, respectively, under the Proposed Actions. It is important to note that these development sites are located between Inwood Park and other development sites further to the south. As such, reductions in building heights of development sites further to the south including Potential Development Site 52 may also be required to eliminate the potential for an unmitigated impact. Height reductions of this scale would substantially limit the development potential on these sites. Furthermore, removal or reducing the height of development sites located along Jerome Avenue (Potential Development Sites 49 and 50) would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

Keltch Park

Keltch Park is an approximately 0.29-acre open space bounded by Jerome Avenue to the east, Plaza Drive to the west, Macombs Road to the north, and Elliot Place to the south. Incremental shadows would last for a total of approximately 5 hours 53 minutes on March 21, approximately 7 hours 7 minutes on May 6, approximately 7 hours 55 minutes on June 21, and approximately 4 hours 51 minutes on December 21. It should be noted that three of the sites that would cast incremental shadows on this open space, Potential Development Sites 63, 84, and 85 are potential, rather than projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the park and eliminate the potential for an unmitigated impact, the maximum building height of Potential Development Sites 63, 84, and 85 would have to be reduced to approximately 65, 45, and 45 feet, respectively, compared to a maximum height of 165, 145, and 145 feet, respectively, under the Proposed Actions. It is important to note that some of these development sites are located between Keltch Park and other development sites further to the east. As such, reductions in the building heights of development sites further to the east including Projected Development Site 28 and Potential Development Sites 64 and 65 may also be required to eliminate the potential for an unmitigated impact. Such a reduction in height would substantially limit the development potential on these sites. Furthermore, reducing the height of development sites located along Jerome Avenue, including Projected Development Site 27 and Potential Development Sites 63, 72, and 84, would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

Edward L. Grant Greenstreet

This open space resource serves as a median for Edward L. Grant Highway, stretching the entire length of the street from University Avenue in the north to Jerome Avenue in the south. This greenstreet would experience incremental shadow coverage on all four representative analysis days ranging from 6 hours 2 minutes on December 21 to 9 hours 46 minutes on June 21. It should be noted that 12 of the 19 sites

that would cast incremental shadows on this greenstreet, Potential Development Sites 76, 77, 78, 79, 80, 82, 83, 90, 92, 93, 95, and 101, are potential, rather than projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on the park and eliminate the potential for an unmitigated impact, the maximum building height of 19 projected and potential development sites would have to be reduced to approximately 25 to 45 feet. Such reductions in height would substantially limit the development potential on these sites. Furthermore, reducing the height of these 19 sites (located along Edward L. Grant Highway) would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

Jerome Avenue/Grant Avenue Greenstreet

Jerome/Grant Greenstreet is an approximately 0.04-acre open space located at the intersection of Jerome Avenue and Edward L. Grant Highway. Incremental shadows would last for a total of approximately 7 hours 18 minutes on March 21, approximately 8 hours 36 minutes on May 6, approximately 9 hours 1 minute on June 21, and approximately 4 hours and 5 minutes on December 21. It should be noted that two of the three sites that would cast incremental shadows on this greenstreet, Potential Development Sites 93 and 95, are potential, rather than projected, development sites. As described in Chapter 1, "Project Description," potential development sites are considered less likely to be developed than projected development sites. Consequently, the likelihood of this impact occurring is less than if it were to result from development on a projected development site.

To minimize incremental shadow coverage on this facility and eliminate the potential for an unmitigated impact, the maximum building height of Projected Development Site 40 and Potential Development Sites 93 and 95 would have to be reduced to approximately 25, 45, and 25 feet, respectively, compared to a maximum height of 225, 225, and 175 feet, respectively, under the Proposed Actions. Such reductions in height would substantially limit the development potential on these sites. Furthermore, reducing the height of Projected Development Site 40 and Potential Development Sites 93 and 95 (located along Jerome Avenue) would be inconsistent with the urban design goals of the Proposed Actions of locating bulk along the rezoning area's primary corridors and preserving lower-scale side streets.

20.4.4 TRANSPORTATION

As presented in Chapter 21, "Mitigation," the Proposed Actions would result in significant adverse traffic impacts at 22 study area intersections (see Figure 21-1, "Summary of Lane Groups/Intersections with Significant Adverse Traffic Impacts") during one or more analyzed peak hours; specifically, 15 lane

groups at 14 intersections during the weekday AM peak hour, 17 lane groups at 14 intersections in the weekday midday peak hour, 33 lane groups at 20 intersections in the weekday PM peak hour, and 28 lane groups at 19 intersections during the Saturday midday peak hour. Implementation of traffic engineering improvements such as signal timing changes or modifications to curbside parking regulations would provide mitigation for many, but not all, of the anticipated traffic impacts. Specifically, the significant adverse impacts would be fully mitigated at all but one lane group at one intersection during the weekday AM and midday peak hours, 19 lane groups at eight intersections during the PM peak hour, and five lane groups at three intersections during the Saturday midday peak hour.

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 19 intersections will have at least one congested lane group in one or more peak hours in the No-Action condition. A total of 11, 7, 15, and 9 intersections would have one or more lane groups operating at or over capacity in the weekday AM, midday, PM, Saturday midday 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.

20.4.5 CONSTRUCTION

HISTORIC AND CULTURAL RESOURCES

The rezoning area is substantially contiguous to the Croton Aqueduct System at approximately West 183rd Street and also at approximately Ogden Avenue and Dr. Martin Luther King, Jr., Boulevard (just south of the Cross-Bronx Expressway). In each of these two areas, there is one potential development site within 90 feet of the mapped Croton Aqueduct System/Aqueduct Walk; as described following, in this chapter, it is presumed that appropriate protections would be in place during construction to ensure that the aqueduct system and the public park would not experience construction-related impacts.

Any designated NYCL or S/NR-listed historic buildings located within 90 linear feet of a projected or potential new construction site are subject to the protections of the New York City Department of Building's (DOB's) Technical Policy and Procedure Notice (TPPN) #10/88. In effect, this policy would prevent construction-related impacts to properties within the Grand Concourse Historic District that would be within 90 feet of potential development sites 75, 76, and 77. Therefore, no construction

impacts to the Grand Concourse Historic District would result with the Proposed Actions. There are no projected or potential development sites within the Morris Avenue Historic District, and the nearest site that would be developed with the Proposed Actions would be Potential Development Site 43, which is located approximately 170 feet southwest of the historic district boundary; therefore, the Proposed Actions would result in no construction impacts to the Morris Avenue Historic District.

As described following, in this chapter, one projected development site and four potential development sites are located within approximately 90 feet of the U.S. Post Office – Morris Heights Station (S/NR-eligible). As defined in the procedure notice TPPN #10/88, "historic resources" that are considered adjacent to construction activities, only include designated NYCLs and S/NR-listed properties that are within 90 feet of a lot under development or alteration. They do not include S/NR-eligible, NYCL-eligible, potential, or unidentified architectural resources. Without the particular protections of TPPN #10/88, or similar protections in place, the Proposed Actions could result in construction impacts on the U.S. Post Office – Morris Heights Station, with the development of potential development sites 96 and 97, the boundaries of which are nearly adjacent to the post office building structure.

NOISE

As presented in Chapter 19, "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.

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 at which the Proposed Actions' goals and objectives would not be realized.

AIR QUALITY

Quantitative air quality analysis for the two construction analysis areas, Projected Development Sites 33, 34, 35, and 36 for the peak emissions year 2018 and Projected Development Sites 43, 44, and 45 for the peak emissions year 2022 indicated that the construction activities of the Proposed Action would not result in any concentrations of NO_2, PM_{10}, and CO that exceed the National Ambient Air Quality Standards (NAAQS). However, the maximum predicted incremental concentrations of $PM_{2.5}$ would exceed the City's *de minimis* criteria for Projected Development Sites 43, 44, and 45. Therefore, adverse air quality impacts are expected from the construction-related sources.

20.5 Lower Density Alternative

20.5.1 INTRODUCTION

The Lower Density Alternative was developed for the purposes of assessing whether lower density residential development in some portions of the rezoning 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 proposal analyzed is the same as the Proposed Actions except for a few locations, as shown on Figure 20.5.1-1, "Comparison of Zoning Changes Under the Lower Density Alternative." As shown on the figure, three areas proposed for R8A districts would be mapped with R7A districts and one area proposed for a R7D district would be mapped with a R7A district.

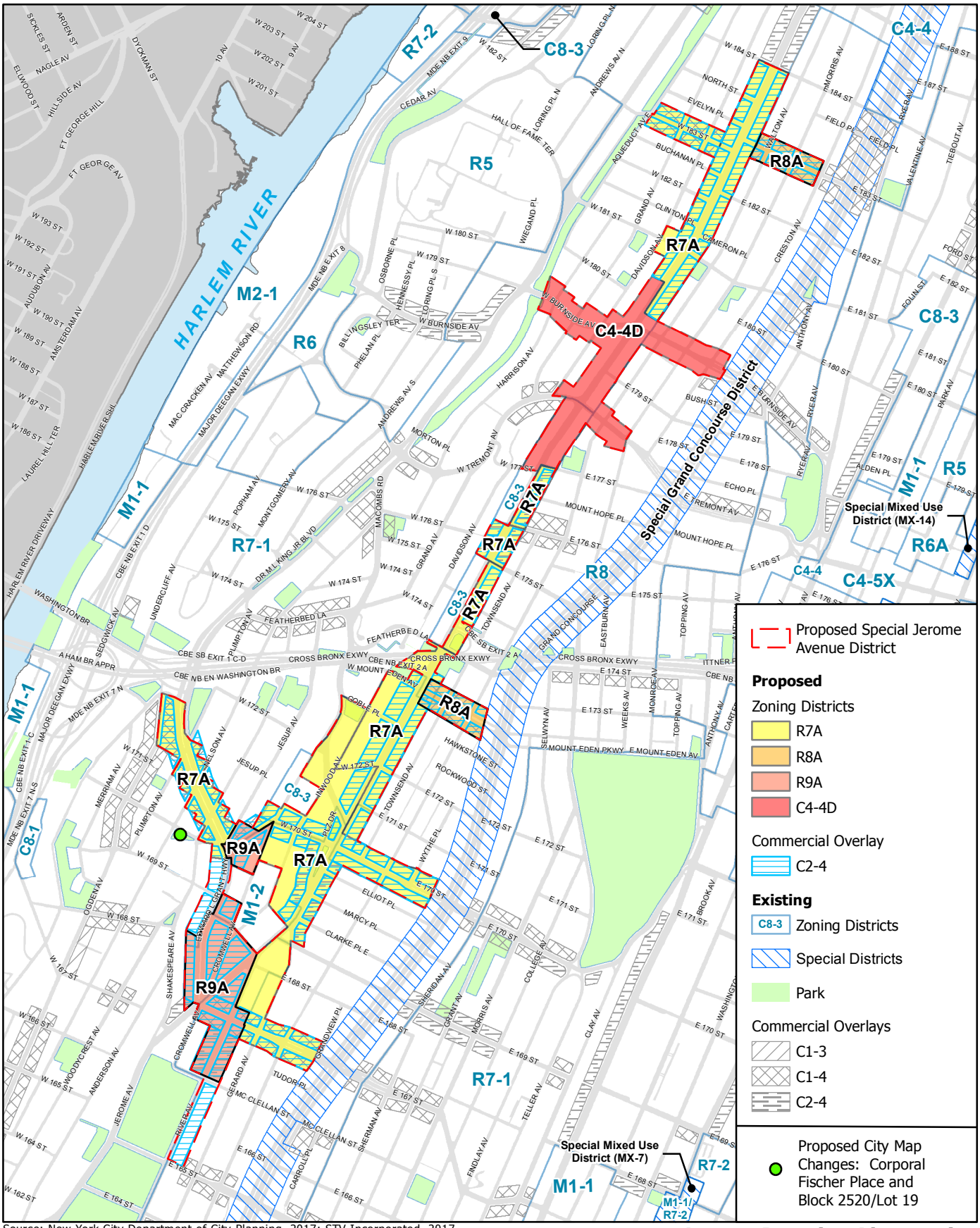
Table 20.5-1 below summarizes the zoning changes that would occur under this alternative, and provides a comparison of the maximum FAR that would be allowed in the affected portions of the rezoning area under the Lower Density Alternative.

Table 20.5.1-1: Comparison of Zoning Changes Under the Lower Density Alternative

Proposed Zoning – With-Action			Proposed Zoning – Lower Density Alternative			RWCDS Projected and Potential Development Sites Affected
District	**Maximum FAR**	**Max. Bldg. Height (ft)[1]**	**District**	**Maximum FAR**	**Max. Bldg. Height (ft)[1]**	
R8A	R: 6.02 (7.2 with IH); C: 0.0; CF: 6.5; M: 0.0	145	R7A	R: 4.0 (4.6 with IH); C: 0.0; CF: 4.0; M: 0.0	95	**Projected Sites** 18, 19, 23, 24, 25, 27, 28, 29, 30, 31, 34, and 35 **Potential Sites** 45, 46, 53, 56, 58, 59, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89
R7D	R: 4.2 (5.6 with IH); C: 0.0; CF: 4.2; M: 0.0	125	R7A	R: 4.0 (4.6 with IH); C: 0.0; CF: 4.0; M: 0.0	95	**Potential Sites** 43 and 44

Notes:
R=Residential; C=Commercial; CF=Community Facility; M=Manufacturing
[1] Based on maximum heights for Inclusionary Housing zones

Source: Zoning Resolution of the City of New York



Source: New York City Department of City Planning, 2017; STV Incorporated, 2017.

Lower Density Alternative

N

0 0.25 0.5 Mile

Figure 20.5.1-1

PROPOSED LDA ZONING

Under the Lower Density Alternative, development would occur on the same 45 projected and 101 potential development sites. However, as the Lower Density Alternative would reduce the maximum permitted residential density on some portions of the rezoning area, as compared to the Proposed Actions (see Table 20.5.1-1), the RWCDS assumptions for 44 of the development sites in those affected areas (projected development sites 18, 19, 23, 24, 25, 27, 28, 29, 30, 31, 34, and 35 and potential development sites 43, 44, 45, 46, 53, 56, 58, 59, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, and 89) would change. Table 20.5.1-2 shows the change in program for the 12 projected development sites, whereas Table 20.5.1-3 shows the effect of those changes on the overall RWCDS analyzed for the Proposed Actions. As shown in Table 20.5.1-3, compared to the Proposed Actions, the Lower Density Alternative would result in 858 fewer residential units, 14,298 sf less community facility uses, and 48 fewer accessory parking spaces; the commercial floor area would remain the same as under the Proposed Actions.

Table 20.5.1-2: Comparison of RWCDS for Projected Development Sites 18, 19, 23, 24, 25, 27, 28, 29, 30, 34, and 35 – With-Action and Lower Density Alternative

Site	Residential (Dus)		Retail/Restaurant		Supermarket		Office		Comm. Facility	
	With-Action	LDA	With-Action	LDA	With-Action	LDA	With-Action	LDA	With-Action	LDA
18	99,282 (99 Dus)	13,290 (59 Dus)	12,490	12,490	0	0	0	0	800	800
19	120,650 (121 Dus)	71,250 (71 Dus)	16,150	16,150	0	0	0	0	0	0
23	147,021 (147 Dus)	85,367 (86 Dus)	0	0	0	0	0	0	0	0
24	58,615 (58 Dus)	34,034 (34 Dus)	0	0	0	0	0	0	0	0
25	127,000 (128 Dus)	75,000 (76 Dus)	0	0	17,000	17,000	0	0	0	0
27	71,755 (72 Dus)	42,375 (42 Dus)	9,605	9,605	0	0	0	0	0	0
28	82,842 (83 Dus)	48,923 (49 Dus)	11,089	11,089	0	0	0	0	0	0
29	56,147 (56 Dus)	33,158 (33 Dus)	7,516	7,516	0	0	0	0	0	0
30	169,767 (170 Dus)	100,256 (101 Dus)	22,725	22,725	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	48,913	34,615
34	141,887 (142 Dus)	82,386 (82 Dus)	0	0	0	0	0	0	0	0
35	133,573 (134 Dus)	77,558 (78 Dus)	0	0	0	0	0	0	0	0

Source: New York City Department of City Planning, 2017; STV Incorporated, 2017.

Table 20.5.1-3: Comparison of RWCDS for All Projected Development Sites Under With-Action Conditions and 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 Residential	894,761 sf (780 Dus)	4,103,185 sf (4,008 Dus)	3,603,585 sf (3,510 Dus)	+ 3,208,424 sf (+ 3,228 Dus)	+ 2,708,824 sf (+ 2,730 Dus)	- 499,600 sf (- 858 Dus)
Commercial						
Local Retail	207,719 sf	443,916 sf	443,917 sf	+ 236,198 sf	+ 236,198 sf	0 sf
FRESH Supermarket	28,405 sf	51,562 sf	51,562 sf	+ 23,157 sf	+ 23,157 sf	0 sf
Restaurant	2,260 sf	13,891 sf	13,890 sf	+ 11,630 sf	+ 11,630 sf	0 sf
Auto-Related	98,002 sf	0 sf	0 sf	- 98,002 sf	- 98,002 sf	0 sf
Office	4,818 sf	44,105 sf	44,105 sf	+ 39,287 sf	+ 39,287 sf	0 sf
Warehouse	168,650 sf	0 sf	0 sf	- 168,650 sf	- 168,650 sf	0 sf
Garage	22,154 sf	0 sf	0 sf	- 22,154 sf	- 22,154 sf	0 sf
Other Commercial	600 sf	0 sf	0 sf	- 600 sf	- 600 sf	0 sf
Total Commercial	**532,608 sf**	**553,474 sf**	**553,474 sf**	**+ 20,866 sf**	**+ 20,866 sf**	**0 sf**
Other Uses						
Industrial	47,795 sf	0 sf	0 sf	- 47,795 sf	- 47,795 sf	0 sf
Community Facility	82,919 sf	155,192 sf	140,894 sf	+ 72,273 sf	+ 57,975 sf	- 14,298 sf
Parking						
Parking Spaces	945	1,162	1,114	- 217	+ 169	- 48
Population[1]						
Residents	2,268	11,727	10,279	+ 9,459	+ 8,011	- 1,448
Workers	1,154	2,128	2,063	+ 974	+ 909	- 65

[1] Assumes 2.87 persons per DU for residential units in Bronx Community District 7, 3.06 persons per DU for residential units in Bronx Community District 5 and 2.92 persons per DU for residential units in Bronx Community District 4.

Source: New York City Department of City Planning, 2017; STV Incorporated, 2017.

The Lower Density Alternative would result in the same mix of uses as the Proposed Actions, and the same amount of commercial development (refer to Table 20.5.1-3). As shown on Table 20.5.1-3, the total amount of residential development would be reduced by approximately 15.6 percent under the Lower Density Alternative. As shown on Table 20.5.1-3, compared to the Proposed Actions, the Lower Density Alternative would result in about 858 fewer incremental dwelling units compared to the No-Action conditions, which would represent a reduction of approximately 1,448 incremental residents. In addition, the Lower Density Alternative would result in a 19.8 percent reduction in community facility floor area increment over No-Actions conditions, as compared to the Proposed Actions. In total, the number of workers introduced in the rezoning area under the Lower Density Alternative would be approximately 65 fewer than under the Proposed Actions.

A comparison of conditions under this alternative with conditions under the Proposed Actions is presented below. It is noted that for CEQR impact areas that are density-related (e.g., community facilities, open space, traffic, etc.), the effects of this alternative are reduced in magnitude since there are fewer dwelling units and, therefore, fewer residents than under the Proposed Actions. However, since the projected and potential development sites for the Lower Density Alternative are the same as for the Proposed Actions, site-specific impacts (e.g., hazardous materials) would be the same under both scenarios.

20.5.2 LAND USE, ZONING, AND PUBLIC POLICY

As with 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, and community facility uses, when compared to conditions in the future without the Proposed Actions. However, this alternative would lead to the production of fewer housing units and less community facility development as compared to the Proposed Actions.

The Lower Density Alternative would include similar zoning actions as the Proposed Actions (zoning map amendments and zoning text changes) that would affect the same area. As noted earlier, three areas proposed for R8A districts would be mapped with R7A districts and one area proposed for a R7D district would be mapped with a R7A district. The Lower Density Alternative, like the Proposed Actions, would increase density in strategic locations where additional density and growth can be accommodated. The Lower Density Alternative, like the Proposed Actions, would include mapping contextual zoning districts that would protect the existing built context of the surrounding neighborhoods. Both the Proposed Actions and the Lower Density Alternative would also map new commercial overlays and an Enhanced Commercial District (ECD) to promote local retail uses on the ground floor, therefore providing an improved pedestrian experience.

The Lower Density Alternative would support the same housing goals of the Proposed Actions, though to a slightly lesser degree than the Proposed Actions. Like the Proposed Actions, this alternative would change zoning designations with the rezoning area in a manner that is intended to promote affordable housing development, encourage economic development, and create pedestrian-friendly streets. Although this alternative would increase the supply of housing available in the rezoning area, which is consistent with City housing policy, that additional housing would not be as extensive as under the Proposed Actions. Therefore, as this alternative would lead to the production of fewer housing units compared to the Proposed Actions, the beneficial effects would be similar to the Proposed Actions but would be less substantial under the Lower Density Alternative.

20.5.3 SOCIOECONOMIC CONDITIONS

The Lower Density Alternative (LDA) would result in less development than under the Proposed Actions and is expected to result in the same general socioeconomic effects as the Proposed Actions. Under this alternative, 500 (15 percent) fewer housing units and (thus fewer affordable housing units) would be added to the proposed rezoning area than under the Proposed Actions. Thus, the LDA would introduce approximately 2,730 housing units compared to No-Action conditions. In addition, the LDA would result in 14,298 sf less incremental community facility space compared to the No-Action conditions, which would represent an approximately 20 percent decrease in community facility floor area increment over No-Action conditions, as compared to the Proposed Actions. The LDA would result in the same amount of commercial square footage as the Proposed Actions. In total, the number of workers introduced in the rezoning area under the LDA would be approximately 65 fewer than under the Proposed Actions as compared to the No-Action condition.

The Proposed Actions and LDA would result in the same direct residential and business/institutional displacement. As with the Proposed Actions, the direct displacement of these uses would not constitute a significant adverse impact. The Proposed Actions and LDA would not displace a substantial or significant portion of the study area population, nor would they result in the direct displacement of businesses/institutions that provide products or services essential to the local economy that would no longer be available to local residents and businesses due to the difficulty of relocating, or the subject of regulations or publicly adopted plans to preserve, enhance, or protect them.

Like the Proposed Actions, the LDA would expand the opportunity for additional housing and promote the development of affordable housing within the proposed rezoning area, although the total number of housing units as compared with the Proposed Actions would be less. 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 Actions. With fewer residential units, the market may be less likely to meet the long-term demand for new housing in the area. However, the overall effects of this alternative with respect to direct and indirect impacts on residents and businesses would be comparable to the Proposed Actions.

Similar to the Proposed Actions, the LDA would result in increasing economic activity in an area where commercial corridors are largely characterized by heavy commercial, automotive, light industrial, and transportation-related uses. The proposed commercial overlays under both the Proposed Actions and the LDA are intended to improve walkability connecting neighborhood streets by promoting continuous retail and community facility uses. The LDA would not constitute new economic activities in the study area, nor would it alter or accelerate commercial markets in the study area, and therefore, it would not result in any significant adverse impacts due to indirect business displacement. In addition, like the Proposed Actions, the LDA would not result in any significant adverse impacts on specific industries.

20.5.4 COMMUNITY FACILITIES AND SERVICES

The Lower Density Alternative would introduce fewer residents to the study area as compared to the Proposed Actions and, therefore, would result in a smaller increase in demand on area community facilities. There are no direct effects to any existing community facilities in the Lower Density Alternative.

As the Lower Density Alternative would introduce fewer incremental residents to the rezoning area, as compared to the Proposed Actions, the Lower Density Alternative would similarly not result in significant adverse indirect impacts on high schools, libraries, or police, fire, and emergency medical services. Both the Proposed Actions and the Lower Density Alternative would result in significant adverse impacts to public elementary and middle school districts, although the Lower Density Alternative would result in lesser impacts to the affected sub-districts than the Proposed Actions.

Public Schools

Under the Lower Density Alternative, there would be new residential development on the projected development sites, with approximately 2,730 incremental residential dwelling units being added to the rezoning area over No-Action Alternative. The Lower Density Alternative residential development would introduce an estimated 1,065 elementary school students, 437 intermediate school students, and 519 high school students.

Table 20.5.4-1: 2026 Lower Density Alternative Estimated With-Action School Enrollment, Capacity, and Utilization

Study Area	Students Introduced by the Lower Density Alternative	Total Lower Density Alternative With- Action Enrollment	Capacity	Available Seats	Utilization (%) under LDA	Change in Utilization (%) compared to No-Action Condition	Change in Utilization (%) compared to Proposed Actions
Elementary Schools							
CSD 9, Sub-district 1	155	7,355	6,352	-1,003	115.8	2.5	0.0
CSD 9, Sub-district 2	580	4,867	3,330	-1,537	146.2	17.5	-5.3
CSD 9, Sub-district 3	26	4,508	3,571	-937	126.2	0.7	0.0
CSD 10, Sub-district 4	304	6,153	5,445	-708	113.0	5.6	-0.3
Intermediate Schools							
CSD 9, Sub-district 1	64	4,014	3,896	-118	103.0	1.6	0.0
CSD 9, Sub-district 2	238	1,106	689	-417	160.5	34.6	-10.7
CSD 9, Sub-district 3	10	2,505	2,669	164	93.9	0.4	0.0
CSD 10, Sub-district 4	125	3,987	3,124	-863	127.6	4.0	-0.2
High Schools							
Bronx	519	54,421	70,817	16,396	76.8	0.8	-0.1

Source: STV Incorporated, 2017.

As with the Proposed Actions, CSD 9, Sub-district and CSD 10, Sub-district 4 elementary schools and CSD 9, Sub-district 2 intermediate schools would operate with significant adverse impacts in the Lower Density Alternative, operating over capacity with utilization increases from the No-Action Alternative of more than five percent (the *CEQR Technical Manual* impact threshold). However as indicated in Table 20.5.4-1, "2026 Lower Density Alternative Estimated With-Action School Enrollment, Capacity, and Utilization," the significant adverse impacts with the Lower Density Alternative would be less than with the Proposed Actions, with an increase in CSD 9, Sub-district 2 elementary utilization rates of 17.5 percent, (compared to 22.8 percent with the Proposed Actions), and therefore requires lesser mitigation. CSD 10, Sub-district 4 elementary school utilization rate would increase in the Lower Density Alternative above the No-Action Alternative 5.6 percent (compared to 5.9 percent under the Proposed Actions), also requiring lesser mitigation. CSD 9, Sub-district 2 intermediate schools utilization rate would increase 34.6 percent under the Lower Density Alternative (10.7 percent lower than under the Proposed Actions), requiring lesser mitigation (See "Mitigation Measures Required" section, below).

Child Care Services

As noted above, the Lower Density Alternative would add an increment of 1,899 affordable units to the study area, a 344 DU reduction from the Proposed Actions. These units would generate 264 children under the age of 6 who are eligible for publicly funded childcare programs. While the child care facilities within the study area would be operating above 100 percent capacity in the Lower Density Alternative, the increase would be less than five percent above the 2026 No-Action Alternative, therefore not resulting in a significant adverse impact.

Table 20.5.4-2: Comparison of Budget Capacity, Enrollment, Available Slots, and Percent Utilized for the 2026 Future No-Action and With-Action Alternatives

	Budget Capacity	Enrollment	Available Slots	Utilization (%)
Existing Conditions	7,775	6,747	1,028	86.8
No-Action Increment	0	+808	-808	+10.4
2030 No-Action Condition	7,775	7,555	220	97.2
With-Action Increment	0	+264	-264	+3.4
2030 With-Action Condition	7,775	7,819	-44	100.6
Notes: *CEQR Technical Manual,* Table 6-1b.				

20.5.5 OPEN SPACE

The Lower Density Alternative would not result in significant adverse open space impacts. As described in the *CEQR Technical Manual,* open space can be indirectly affected by a proposed action if the project would add enough population, either residential or non-residential, to noticeably diminish the capacity of open space in the area to serve the future population. A detailed analysis was provided that considered the indirect effects of the population generated by the Lower Density Alternative on open

space resources. The analysis finds that Lower Density Alternative would not result in significant adverse impacts on open space due to reduced total, active, and passive open space ratios.

An analysis on potential direct effects on open space was also prepared. While the Lower Density Alternative would result in significant adverse shadow impacts on open spaces, these direct effects would not result in significant adverse open space impacts. No other direct open space effects would result from the Proposed Actions.

A detailed open space analysis performed according to the guidance of the *CEQR Technical Manual* supports the conclusion that the Lower Density Alternative would not result in any significant adverse impacts to open space. Similar to the Proposed Actions, the Lower Density Alternative would not have any direct impacts on any open space resources. Also similar to the Proposed Actions, the Lower Density Alternative, would not result in a significant adverse indirect impact to passive open space or to active open space in the residential study area, nor would it result in a significant adverse indirect impact to passive open space in the worker study area.

The Lower Density Alternative would result in incremental shadow coverage on 41 open space resources. The shadows analysis identified significant adverse impacts at eight of these resources. The analysis determined that six resources (Bronx School of Young Leaders, PS 306 Schoolyard, Mount Hope Playground, Goble Playground, Inwood Park, Keltch Park) would experience significant incremental shadow coverage, duration, and/or periods of complete sunlight loss that could have the potential to affect open space utilization or enjoyment. Two resources (Edward L. Grant Greenstreet, Jerome Avenue/Grant Avenue Greenstreet) would not receive adequate sunlight during the growing season (at least the four to six hour minimum specified in the *CEQR Technical Manual*) as a result of incremental shadow coverage and vegetation at these resources could be significantly impacted. The analysis found that although the significant adverse shadow impacts would reduce the utility of these open spaces and public's enjoyment, the open spaces would continue to be available and provide other passive or active open space uses and therefore would not be a direct significant open space impact.

The study area for the Lower Density Alternative is the same as for the Proposed Actions; please refer to Chapter 5: "Open Space" for a detailed description of open space resources in the study area.

As the Lower Density Alternative would introduce fewer residents and workers than the Proposed Actions, in terms of indirect effects, the open space ratios for both the worker and residential study areas with the Lower Density Alternative would, therefore, generally be slightly higher than those with the Proposed Actions. As presented in Table 20.5.5-1, the open space ratios for the worker (1/4-mile) study area for the Lower Density Alternative — like the Proposed Actions would exceed the *CEQR Technical Manual* open space ratio guidelines at 0.15 acres per 1,000 non-residents in both scenarios. Therefore, daytime users of passive open space will be well-served by the resources available, and there would be no significant adverse open space impacts in the non-residential study area as a result of either this alternative or the Proposed Actions.

With regard to the open space ratios for the total study area residential (½-mile) study area, as presented in Table 20.5.5-1, the Lower Density Alternative would have slightly higher total (0.529), passive (0.172), and active (0.357) open space ratios than the Proposed Actions total (0.526), passive (0.171), and active (0.355) open space ratios (please refer to Chapter 5: "Open Space"). Despite these slightly higher ratios, they would remain below the *CEQR Technical Manual* guideline for total (2.5), passive (0.5), and active (2.0) open space ratios. The North Subarea's total (0.525), passive (0.213), and active (0.311) open space ratios with the Lower Density Alternative would increase from the Proposed Actions' total (0.524), passive (0.213), and active (0.311) open space ratios (please refer to Chapter 5: "Open Space"). The South Subarea's total (0.533), passive (0.122), and active (0.411) open space ratios with the Lower Density Alternative would increase from the Proposed Actions' total (0.529), passive (0.121), and active (0.408) open space ratios (please refer to Chapter 5: "Open Space"). As with the Proposed Actions, the change in the residential study area open space ratios from No-Action conditions to the future with the Lower Density Alternative would not exceed five percent with any condition and, therefore, not constitute a significant adverse indirect impact, however, the residential study area would continue to be underserved by open space.

Table 20.5.5-1: Open Space Ratios Summary

Total Study Area	*CEQR Technical Manual* Open Space Guideline	Open Space Ratios per 1,000			Percent Change (Future No-Action to Future LDA)
		Existing	No-Action	LDA	
Worker (1/4-Mile) Study Area					
Passive-Workers	0.15	0.625	0.567	0.555	-2.12%
Residential (1/2-Mile) Study Area					
Total - Residents	2.5	0.562	0.540	0.529	-2.04%
Passive - Residents	0.5	0.185	0.176	0.172	-2.27%
Active - Residents	2	0.378	0.364	0.357	-1.92%

North Subarea	*CEQR Technical Manual* Open Space Guideline	Open Space Ratios per 1,000			Percent Change (Future No-Action to Future LDA)
		Existing	No-Action	LDA	
Worker (1/4-Mile) Study Area					
Passive-Workers	0.15	0.596	0.550	0.539	-2.00%
Residential (1/2-Mile) Study Area					
Total - Residents	2.5	0.536	0.533	0.525	-1.50%
Passive - Residents	0.5	0.218	0.217	0.213	-1.84%
Active - Residents	2	0.318	0.317	0.311	-1.89%

South Subarea	*CEQR Technical Manual* Open Space Guideline	Open Space Ratios per 1,000			Percent Change (Future No-Action to Future LDA)
		Existing	No-Action	LDA	
Worker (1/4-Mile) Study Area					
Passive-Workers	0.15	0.666	0.589	0.577	-2.04%
Residential (1/2-Mile) Study Area					
Total - Residents	2.5	0.599	0.548	0.533	-2.70%
Passive - Residents	0.5	0.140	0.126	0.122	-3.17%
Active - Residents	2	0.458	0.422	0.411	-2.61%

Source: U.S. Census Bureau, 2010 Census; U.S. Census Bureau, ACS 2006-2010 Five-Year Estimates. Special Tabulation: Census Transportation Planning

20.5.6 SHADOWS

As with the Proposed Actions, the Lower Density Alternative would result in significant adverse impacts to eight open space resources, including: Bronx School of Young Leaders, PS 306 Schoolyard, Mount Hope Playground, Goble Playground, Inwood Park, Keltch Park, Edward L. Grant Greenstreet, Jerome Avenue/Grant Avenue Greenstreet. As noted previously, in terms of bulk, new development on projected and potential development sites would have the same maximum heights under the Lower Density Alternative (or taller) than under the Proposed Actions. Compared to the Proposed Actions, the maximum shadows cast by these development sites would be similar to those cast under the Proposed Actions. As such, the shadow effects of the projected and potential developments in the rezoning area would be essentially the same as with the Proposed Actions, and the same significant adverse shadows impacts identified for the Proposed Actions would be expected to occur under this Lower Density Alternative.

Per *CEQR Technical Manual* guidelines, possible measures that could mitigate significant adverse shadow impacts on open spaces may include relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating or replacing vegetation; undertaking additional maintenance to reduce the likelihood of species loss; or providing replacement facilities on another nearby site. Other potential mitigation strategies include the redesign or reorientation of the open space site plan to provide for replacement facilities, vegetation, or other features. Additional strategies could include the modification of height, shape, size, or orientation of the projected and potential development sites that create the significant adverse shadow impacts.

20.5.7 HISTORIC AND CULTURAL RESOURCES

The Lower Density Alternative would not result in any significant adverse impacts to historic or cultural resources. The Lower Density Alternative assumes that development would occur on the same 45 projected development sites and 101 potential development sites as the Proposed Action, however, the development would be at a lower density. As with the Proposed Action, the Lower Density Alternative would not result in any significant adverse impacts to archaeological resources, any direct significant adverse impacts to architectural resources, any indirect significant adverse impacts to architectural resources, any significant adverse construction impacts, or any significant adverse shadow impacts on historic architectural resources.

Archaeological Resources

The New York City Landmarks Preservation Committee (LPC) reviewed the identified projected and potential development sites that could experience new/additional in-ground disturbance as a result of the Lower Density Alternative and concluded that none of the lots comprising those sites have any archaeological significance. Therefore, the Lower Density Alternative are not expected to result in any significant adverse impacts to archaeological resources.

Architectural Resources

The Lower Density Alternative would not result in any direct or indirect (contextual) significant adverse impacts to architectural resources. It is possible that some or all of the buildings identified as eligible for LPC and/or S/NR could become listed under the Lower Density Alternative. Privately-owned properties that are New York City Landmarks (NYCL) or S/NR-listed, or are pending designation as landmarks, are protected under the New York City Landmarks Law, which requires LPC review and approval before any alteration or demolition can occur. In addition, the City has procedures for avoiding damage to historic resources from adjacent construction.

Direct (Physical) Impacts

The Lower Density Alternative would not result in any direct significant adverse impacts to any NYCL-designated and S/NR listed historic districts. As with the Proposed Actions, the Expanded Rezoning Area Alternative includes a portion of the Morris Avenue Historic District (NYCL-Designated) and one eligible historic resources, the U.S. Post Office – Morris Heights Station (S/NR Eligible Individual Landmark); the projected and potential development sites identified in the Reasonable Worst-Case Development Scenario are neither located within the Morris Avenue Historic District nor include any S/NR Eligible Individual Landmark buildings or structures. Therefore the Proposed Actions would not result in any direct impacts to the Morris Avenue Historic District or the U.S. Post Office – Morris Heights Station

Indirect (Contextual) Impacts

The Lower Density Alternative would not result in any indirect (contextual) significant adverse impacts to any designated, listed or eligible historic resources. As with the Proposed Action, the Lower Density Alternative rezoning area extends into a portion of the Morris Avenue Historic District, however, no projected or potential development sites are located within the historic district or substantially contiguous to it. Therefore, no indirect, or contextual, impacts to the Morris Avenue Historic District would result with the Lower Density Alternative. Similarly, the rezoning area extends into a portion of the Grand Concourse Historic District in the vicinity of East 173rd Street, but no projected or potential development sites are located within this portion of the rezoning area. Therefore, no indirect, or contextual, impacts to the Grand Concourse Historic District would result with the Lower Density Alternative.

Although Potential Development Sites 20 and 21 are located near the Croton Aqueduct System within the area mapped as Aqueduct Walk, the Lower Density Alternative would not result in indirect (contextual) impacts to the Croton Aqueduct System, itself, which is below-grade.

Finally, as described in Chapter 7, "Historic and Cultural Resources," although several potential development sites and one projected development site are located adjacent to, or otherwise substantially contiguous to the U.S. Post Office – Morris Heights Station, the historic architectural significance of this resource is not dependent upon or otherwise specifically related to the surrounding development context. Therefore, the Lower Density Alternative would not result in indirect impacts to the U.S. Post Office – Morris Heights Station.

Construction Impacts

The rezoning area is substantially contiguous to the Croton Aqueduct System at approximately West 183rd Street and also at approximately Ogden Avenue and Dr. Martin Luther King, Jr., Boulevard (just south of the Cross-Bronx Expressway). In each of these two areas, there is one potential development site within 90 feet of the mapped Croton Aqueduct System/Aqueduct Walk; as described in Chapter 7 Historic and Cultural Resources, it is presumed that appropriate protections would be in place during construction to ensure that the aqueduct system and the public park would not experience construction-related impacts.

Any designated NYCL or S/NR-listed historic buildings located within 90 linear feet of a projected or potential new construction site are subject to the protections of the New York City Department of Building's (DOB's) Technical Policy and Procedure Notice (TPPN) #10/88. In effect, this policy would prevent construction-related impacts to properties within the Grand Concourse Historic District that would be within 90 feet of Potential Development Sites 75, 76, and 77. Therefore, no construction impacts to the Grand Concourse Historic District would result with the Lower Density Alternative. There are no projected or potential development sites within the Morris Avenue Historic District, and the nearest site that would be developed with the Lower Density Alternative would be Potential Development Site 43, which is located approximately 170 feet southwest of the historic district boundary; therefore, the Lower Density Alternative would result in no construction impacts to the Morris Avenue Historic District.

As described in Chapter 7 Historic and Cultural Resources, one projected development site and four potential development sites are located within approximately 90 feet of the U.S. Post Office – Morris Heights Station (S/NR-eligible). As defined in the procedure notice TPPN #10/88, "historic resources" that are considered adjacent to construction activities, only include designated NYCLs and S/NR-listed properties that are within 90 feet of a lot under development or alteration. They do not include S/NR-eligible, NYCL-eligible, potential, or unidentified architectural resources. Without the particular protections of TPPN #10/88, or similar protections in place, the Lower Density Alternative could result in construction impacts on the U.S. Post Office – Morris Heights Station, with the development of Potential Development Sites 96 and 97, the boundaries of which are nearly adjacent to the post office building structure.

Shadow Impacts

As described earlier in the Lower Density Alternative section of Chapter 20, subheading "Shadows," the Lower Density Alternative would not result in any significant adverse impacts as a result of incremental shadows on historic architectural resources.

20.5.8 URBAN DESIGN AND VISUAL RESOURCES

Like the Proposed Actions, the Lower Density Alternative would not have significant adverse impacts on urban design, view corridors, and visual resources. Both the Lower Density Alternative and the Proposed Actions would result in development at a greater density than currently permitted as-of-right in the rezoning area and would represent a notable change in the urban design character of the rezoning area. As described previously in this section, the only differences between the Proposed Actions and the Lower Density Alternative would be on Projected Development Sites 18, 19, 23, 24, 25, 27, 28, 29, 30, 31, 34, and 35 and Potential Development Sites 43, 44, 45, 46, 53, 56, 58, 59, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, and 89. With the Lower Density Alternative, new development on Projected Development Sites 18, 19, 23, 24, 25, 27, 28, 29, 30, 31, 34, and 35 and Potential Development Sites 45, 46, 53, 56, 58, 59, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, and 89 would have maximum heights of 95 feet and a maximum permitted FAR of 4.6, as compared to maximum heights of 145 feet and a maximum permitted FAR of 7.2 under the Proposed Actions. With the Lower Density Alternative, new development on Potential Development Sites 43 and 44 would have maximum heights of 95 feet and a maximum permitted FAR of 4.6, as compared to maximum heights of 125 feet and a maximum permitted FAR of 5.6 under the Proposed Actions. While development on these 44 projected and potential development sites would be of a lower height and lesser bulk than would be the case with the Proposed Actions, it would be greater than the No-Action conditions. Given that the number of sites are the same between the Lower Density Alternative and the Proposed Actions, the overall extent to which

the pedestrian experience of the streetscape would be altered would be similar with either the Lower Density Alternative or the Proposed Actions, compared to the No-Action conditions.

As with the Proposed Actions, the development of the 45 projected development sites in the Lower Density Alternative would represent the addition of land uses and building typologies, bulk, and height that would not otherwise be present in the future without the Proposed Actions; however, the development of the 45 projected development sites, though perceptible at each location, would not necessarily represent wholesale change to individual corridors. Rather, the notable changes to urban design resulting with the Lower Density Alternative, as with the Proposed Actions, generally would represent consistency among the corridors throughout the primary study area.

Also, as with the Proposed Actions, the greatest potential change to urban design throughout the corridor with the Lower Density Alternative, particularly with regard to the effect of overall urban design consistency and streetscape improvement, may occur after 2026, if all 101 potential development sites were to be developed, in addition to the 45 projected development sites.

In addition to contributing to new bulk, height, and streetscape improvements at intersections, the Proposed Actions would also lead to similar urban design changes evident along the remaining block faces comprising the streetscapes in the primary study area. Therefore, as with the Proposed Actions, a pedestrian is likely to perceive changes to streetwall continuity, uniformity of setbacks, and landscaping, with the Lower Density Alternative, and changes to these elements of urban design may establish cohesiveness among buildings that although separate and potentially of varying architectural style, still share and contribute to the overall form of the streetscape. As with the Proposed Actions, the presence of such cohesiveness in urban design may contribute to a pleasant pedestrian experience with the Lower Density Alternative.

With the Lower Density Alternative, the concentrations of new bulk and height with the projected development sites would primarily be at intersections, as with the Proposed Actions, and specifically at the same intersections that would be similarly affected with the Proposed Actions. Excluding instances already accounted for previously in the discussion of urban design at intersections, there is one block with frontages that would be substantially developed with the development of two or more adjacent projected development sites and/or contiguous sites (directly opposite one another on two sides of the same street). In the River Avenue corridor, nearly the entire block frontages on both the east and west sides of River Avenue, between East 167th Street on the north and McClellan Street on the south, would be developed with Projected Development Sites 41, 42, 43, and 44; this development of contiguous block frontage would be adjacent to and, therefore, a continuation northward from the intersection of McClellan Street and River Avenue, as described for the Proposed Actions in Chapter 8, “Urban Design and Visual Resources.”

Similarly, assuming continuous streetwall is shared with the new developments that would be constructed adjacent to one another, these effects of streetwall continuity introduced by new development with the Proposed Actions would also be concentrated at intersections. However, to the extent that the projected development sites would be developed throughout the primary study area, it is likely that they would contribute by way of "infill," thus replacing existing vacant lots/parking areas with buildings that would thereby continue the streetwall that may already be present with existing buildings on either side, which would be expected to remain in place were only the projected development sites constructed. This effect with the Lower Density Alternative would be generally equivalent to such streetwall improvement described for the Proposed Actions in Chapter 8.

Assuming all the potential development sites would be developed, as well, then many block frontages throughout the entire primary study area would be completely – or nearly completely – redeveloped, thereby extending with some degree of continuity to/from the intersections described previously as being substantially redeveloped with the Lower Density Alternative, similar to the effect of the Proposed Actions. Existing development would be expected to remain in place in several instances as well, both on some corners, as discussed previously, and also midblock, wherever neither projected nor potential development sites have been identified.

In general, as with the Proposed Actions, the more extensive redevelopment of block frontages that would be expected with the development of the potential development sites in the Lower Density Alternative, sometime after the analysis year, would affect all but a few blocks throughout the entire primary study area, and would comprise much of the entire length of the Jerome Avenue corridor and the River Avenue corridor, which together form the north-south "spine" of the rezoning area along the elevated 4-train (and the effective "width" for much of the primary study area).

As with the Proposed Actions, the development of projected development sites with the Lower Density Alternative – compared to the No-Action conditions – would introduce relative clustering of new buildings that would, together, contribute new height and bulk within particular areas of the primary study area. This clustering would occur primarily in five areas and around 18 intersections, which comprise a series of nodal reference points for the urban design throughout the primary study area.

As with the Proposed Actions, the most substantial potential effect to urban design with the Lower Density Alternative, would likely occur sometime after the analysis year, when all potential development sites have been developed, together with the projected development sites. With the potential development sites, the urban design would be changed throughout the primary study area. Although not every property within the primary study area would be redeveloped as either a projected or potential development site, many would be redeveloped, even if sometime after the analysis year. The effect would be the establishment of urban design characterized by buildings of height and bulk that would be consistent throughout the primary study area and in particular, consistent throughout the combined north-south Jerome Avenue and River Avenue corridors that are both the spine of the

rezoning area (and not much less than the entire width of the rezoning area) and also the corridor served directly by the elevated 4-train subway line that follows it.

This substantial alteration of urban design would be perceptible to the pedestrians throughout the streetscapes of the rezoning area, and in particular it would define the experience of the pedestrian at almost any point along Jerome Avenue or River Avenue in the primary study area. Further, streetwall consistency, in particular, will be readily apparent as part of the broader urban design continuity in numerous instances where the new buildings developed on the projected and potential development sites would have frontage extending for nearly half of an entire block.

In addition, as with the Proposed Actions, the passenger on the elevated 4-train traveling along this corridor would perceive these same changes to urban design; though views from within a moving subway car, given the speed of travel as well as given the limitations of confined views through windows, are not comparable to the experience of the pedestrian at street level, the 4-train passenger would also perceive the clusters of development that would result with the projected development sites. Moreover, the subway passenger may experience the full extent of the change to urban design resulting with the Proposed Actions in a way that would not be experienced by a pedestrian at street level who may not be walking similar distances along the corridor.

With the full development of all the potential development sites, the continuity that would characterize much of the urban design of the primary study area with the Lower Density Alternative (as with the Proposed Actions), would likely be directly perceptible to the passenger of the 4-train during a single ride in a way that it would not be perceived by the pedestrian on the sidewalk whose experience is more localized. In all, the 4-train passenger – who reasonably, is also a pedestrian moving to and from the subway service, in addition to being a passenger – would experience the continuity of building heights and bulk, and perhaps architectural style, finishes, etc., in a way that would continue to inform their pedestrian experience while not a passenger on the train. Thus, not only would the urban design be consistent with the Lower Density Alternative, the pedestrian/subway passenger experience of it would also be consistent and more complete than may be possible in other parts of the city.

Finally, given that the projected and potential development sites are the same with either the Lower Density Alternative or the Proposed Actions, there would also be no significant adverse impacts to visual resources with either the Lower Density Alternative or the Proposed Actions. Overall, the improvement to the urban design context of the visual resources identified within and sharing view corridors with the rezoning area would be a positive effect to visual resources. No important view corridors would be substantially altered, however, in a way that would detract from the enjoyment of visual resources within or in the vicinity of the rezoning area with either the Lower Density Alternative or the Proposed Actions.

Therefore, as would be the case with the Proposed Actions, the Lower Density Alternative would not result in any significant adverse impacts to urban design and visual resources in the rezoning area and its vicinity.

20.5.9 HAZARDOUS MATERIALS

The effects of the Lower Density Alternative with respect to hazardous materials is expected to be similar to those of the Proposed Actions. While this alternative would result in a decrease in development bulk on 44 of the RWCDS development sites (Projected Development Sites 18, 19, 23, 24, 25, 27, 28, 29, 30, 31, 34, and 35 and Potential Development Sites 43, 44, 45, 46, 53, 56, 58, 59, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, and 89), the potential for site-specific hazardous materials impacts still remains for all projected and potential development sites identified in the RWCDS. As with the Proposed Actions, all of the projected and potential development sites would receive an (E) designation (E-442) or comparable measure under the Lower Density Alternative. The placement of (E) designations or comparable measure would ensure that no significant adverse impacts related to hazardous materials would occur as a result of the Proposed Actions or the Lower Density Alternative.

20.5.10 WATER AND SEWER INFRASTRUCTURE

Under this alternative, demands on water and sewer infrastructure would be somewhat less than under the Proposed Actions. However, neither this alternative nor the Proposed Actions would cause significant adverse impacts to water and sewer infrastructure. As presented in Table 20.5.10-1, the additional water usage as a result of the Lower Density Alternative is expected to total 1,250,440 gpd (compared to 1,303,561 gpd with the Proposed Actions). This represents an increment of 709,233 over the No-Action condition on the Lower Density Alternative. As with the Proposed Actions, this incremental demand would represent approximately 0.1 percent of the City's average daily water supply of one billion gpd, and changes of this magnitude would not be large enough to have a significant adverse impact on the City's water system.

Table 20.5.10-1: Water Demand and Wastewater Generation

Land Use	Water Demand & Wastewater Generation Rates[1]	Area (sf) or DUs	Domestic Water/Wastewater Generation (gpd)	Air Conditioning (gpd)
Residential	Domestic: 100 gpf/person[2]	3,510	1,024,920	0
Commercial/Office/ Retail[3]	Domestic: 0.24 gpd/sf	694,367	69,437	118,042
	A/C: 0.17 gpd/sf			
Community Facility[4]	Domestic: 0.10 gpd/sf	140,894	14,089	23,952
	A/C: 0.17 gpd/sf			
Industrial/ Warehouse	Domestic: 10,000 gpd/acre[5]	0	0	0
	A/C: 0.17 gpd/sf			
Hotel	120 gpd/room/occupant	0	0	0
	A/C: 0.17 gpd/sf			
Total Water Demand			***1,250,440***	
Total Wastewater Generation			***1,108,446***	

Notes:

**All Calculations by CSA Group, 2017*

1. Consumption rates obtained from the *CEQR Technical Manual* Table 13-2, "Water Usage and Sewage Generation Rates for Use in Impact Assessment," unless otherwise noted.

2. Assumes 2.92 residents per DU for all residential development.

3. Uses comprise retail, supermarket, and restaurant.

4. Assumes same rate as commercial/office. Includes house of worship, day care, medical office, and community center uses.

5. Based on 2014 East NY *Rezoning FEIS.* Calculated based on total building floor area, assuming no additional water demand from open storage.

Source: New York City Department of City Planning, 2017; CSA Group, 2017.

Based on rates in the *CEQR Technical Manual*, the Lower Density Alternative has the potential to result in a sanitary sewage discharge of approximately 1,108,446 gpd, (compared to approximately 1,180,587 gpd for the Proposed Actions). This represents an increment of 702,225 over the No-Action condition for the Lower Density Alternative.

The decreased sanitary flows under this alternative would only affect subcatchment area WI-R60/WI-R60A. As with the Proposed Actions, with this incremental increase in sanitary flows, the Wards Island Wastewater Treatment Plant (WWTP) would continue to have ample reserve capacity, and no significant adverse impacts to wastewater treatment would occur as a result of the Lower Density Alternative.

The same development sites would be developed under the Lower Density Alternative, with no significant changes in the sites' surface areas, as compared to the Proposed Actions. As such, for storm events from 0 to up to 2.5 inches of rainfall, the total runoff volumes to the WI-R60/WI-R60A combined sewer systems would range from 0.0 to 1.11 million gallons. As lower sanitary flows would be generated in subcatchment areas R60/WI-R60A, the combined sewer volumes in these subcatchment areas would be less than under the Proposed Actions (Table 20.5.10-2).

Because of the available assimilative capacity of the Wards Island WWTP, the projected increased flows to the combined sewer system would not have a significant adverse impact on water quality. As under the Proposed Actions, and in consideration of the required best management practices (BMP) measures that would be implemented on each projected development site by their respective developer in accordance with the City's site connection requirements, the Lower Density Alternative would not result in significant adverse impacts to local water supply or wastewater and stormwater conveyance and treatment infrastructure.

Table 20.5.10-2: Runoff and Wastewater Volume Calculations

EXISTING WI-R60/WI-R60A Sewershed						
Rainfall, in	**Duration, hr**	**Total Area (A), acre**	**Weighted Runoff Coefficient (C)**	**Stormwater to CSS, MG**	**Daily Sanitary Sewage Generation per CEQR TM, MGD**	**Sanitary to CSS, MG**
0.00	3.80	18.62	0.88	0.00	0.41	0.064
0.40	3.80	18.62	0.88	0.18	0.41	0.064
1.20	11.30	18.62	0.88	0.53	0.41	0.191
2.50	19.50	18.62	0.88	1.11	0.41	0.330
WITH-ACTION WI-R60/WI-R60A Sewershed						
Rainfall, in	**Duration, hr**	**Total Area (A), acre**	**Weighted Runoff Coefficient (C)**	**Stormwater to CSS, MG**	**Daily Sanitary Sewage Generation per CEQR TM, MGD**	**Sanitary to CSS, MG**
0.00	3.80	18.62	0.88	0.00	1.11	0.175
0.40	3.80	18.62	0.88	0.18	1.11	0.175
1.20	11.30	18.62	0.88	0.53	1.11	0.522
2.50	19.50	18.62	0.88	1.11	1.11	0.900

Notes:

1. RUNOFF VOLUMES for EXISTING and WITH-ACTION condition have been calculated as follows:

$Q_{VOL} = [R_{VOL} \times A \times RC \times 7.48GAL/1{,}000{,}000 \text{ MGD per GAL}] - S_{VOL}$; where

Q_{VOL} = Total Volume of Rainfall for 24-hour storm event discharged offsite (either to River or into CSS), in MG

R_{VOL} = RAINFALL VOLUME, in Inches, for the corresponding RAINFALL RETURN PERIOD listed in WS2 in the EXISTING and PLAN Tables.

A = SITE AREA, in SQ. FT., as indicated in WS1 EXISTING and WITH-ACTION Tables for the various site areas.

RC = RAINFALL RUNOFF COEFFICIENT for each of the applicable Site Areas as per EXISTING and WITH-ACTION tables (refer to WS1).

2. RAINFALL RUNOFF COEFFICIENTS used are composite rates as shown in WS1 in the EXISTING and WITH-ACTION tables

Source: *WS2_Volume Calculations, Calculation Matrix spreadsheet, 2014 CEQR Technical Manual, NYCDEP*

Table 20.5.10-3: Total Volume to Combined Sewer System

EXISTING WI-R60/WI-R60A Sewershed					
RAINFALL VALUME (in)	**RAINFALL DURATION (hr)[1]**	**RUNOFF VOLUME DIRECT DRAINAGE (MG)**	**RUNOFF VOLUME TO CSS (MG)**	**SANITARY VOLUME TO CSS (MG)**	**TOTAL VOLUME TO CSS (MG)**
0.00	3.80	0.00	0.00	0.06	0.06
0.40	3.80	0.00	0.18	0.06	0.24
1.20	11.30	0.00	0.53	0.19	0.72
2.50	19.50	0.00	1.11	0.33	1.44
WITH-ACTION WI-R60/WI-R60A Sewershed					
RAINFALL VALUME (in)	**RAINFALL DURATION (hr)[1]**	**RUNOFF VOLUME DIRECT DRAINAGE (MG)**	**RUNOFF VOLUME TO CSS (MG)**	**SANITARY VOLUME TO CSS (MG)**	**TOTAL VOLUME TO CSS (MG)**
0.00	3.80	0.00	0.00	0.18	0.18
0.40	3.80	0.00	0.25	0.18	0.36
1.20	11.30	0.00	0.75	0.52	1.05
2.50	19.50	0.00	1.56	0.90	2.01

Notes:
1. Based on *Intensity/duration/Frequency Rainfall Analysis, New York City and the Catskill Mountain Water Supply Reservoirs, Vieux & Associates, Inc., April 4, 2006. The 24-hour rainfall volume is based on average rainfall intensity over 24-hours (inch/per) times 24 hrs. (Duration information provided by T. Newman & P. Jadhav, HydroQual).*

Source: *Summary Table, Calculation Matrix spreadsheet, 2014 CEQR Technical Manual, NYCDEP*

Because of the available assimilative capacity of the Wards Island WWTP, the projected increased flows to the combined sewer system with the Lower Density Alternative would not have a significant adverse impact on the plant or water quality. As under the Proposed Actions, and in consideration of the required best management practice (BMP) measures that would be implemented on each projected development site by their respective developer in accordance with the City's site connection requirements, the Lower Density Alternative would not result in significant adverse impacts to local water supply or wastewater and stormwater conveyance and treatment infrastructure.

20.5.11 SOLID WASTE AND SANITATION SERVICES

Solid Waste generation would increase under both the Proposed Actions and the Lower Density Alternative, with a slightly higher incremental increase under the Lower Density Alternative because of increased commercial uses. However, neither the Lower Density Alternative nor the Proposed Actions would cause significant adverse impacts to the City's solid waste services.

The Lower Density Alternative would result in an incremental development decrease of 498 fewer residential units and approximately 14,298 sf less of community facility uses than the Proposed Actions. This would result in slightly lower volumes of solid waste that would be handled by DSNY (74 tons/week, or an incremental increase of 57 tons/week over the No-Action conditions). Based on a typical DSNY collection truck capacity of approximately 12.5 tons, the Lower Density Alternative's incremental residential and community facility uses would be expected to generate solid waste equivalent to approximately six truckloads per week, compared to seven truckloads under the Proposed Action. As under the Proposed Actions, this increase is not expected to overburden the DSNY's solid waste handling services.

Table 20.5.11-1: Comparison of Weekly Solid Waste Generation on Projected Development Sites No-Action, Lower Density Alternative and Proposed Actions

	No Action	Proposed Action		Lower Density Alternative	
		Proposed Actions	Increment over No-Action	LDA	Increment over No-Action
Total Solid-Waste Generation (tons/week)	85	150	65	140	55
Solid Waste Handled by DSNY (tons/week)	17	84	67	74	57
Solid Waste Handled by Private Carters (tons/week)	67	66	-2	66	-2

Source: New York City Department of City Planning, 2017; CSA Group, 2017.

The Lower Density Alternative would also result in no change to the 553,474 sf of commercial uses in the Proposed Actions. Therefore, there would be no change to the approximate volume of solid waste that would be handled by private carters (66 tons/week, or an equivalent of two tons/week less than the No-Action conditions). This would represent a less than 0.03 percent increase in City's anticipated future commercial and industrial solid waste generation of 74,000 tons per week that would be handled by private carters, according to the SWMP. Based on the typical commercial carter truck capacity of 12 to 15 tons of waste material per truck, the commercial and industrial uses introduced by the Lower Density Alternative would be expected to add the equivalent of two additional commercial carter truckloads per week. There are more than 2,000 private commercial carting businesses authorized to serve New York City. It is expected that their fleets would be sufficient to accommodate this increase. Therefore, as under the Proposed Actions, the net increase of commercial solid waste handled by private carriers would not overburden the City's waste management system.

20.5.12 ENERGY

While neither the Proposed Actions nor the Lower Density Alternative would result in significant adverse energy impacts, the Lower Density Alternative would result in a slightly lower incremental increase in energy usage compared to the No-Action condition.

As shown in Table 20.5.12-1, future development on the 45 potential development sites under the Lower Density Alternative would use approximately 642.1 billion BTUs of energy annually, which would represent an approximately 392.7 billion BTUs increase over the No-Action condition. By comparison, the Proposed Actions on the 45 development sites would result in an incremental annual increase of approximately 439.8 billion BTUs over the No-Action condition.

Table 20.5.12-1 – Annual Energy Consumption for the Projected Development Sites – No-Build, Lower Density Alternative and Proposed Alternative

Land Use	Floor Area (SF)	Average Yearly Energy Use Rate (MBTU/sf)[1]	Lower Density Alternative Annual Energy Use (MBTU)	LDA Incremental Annual Energy Use (MBTU) over No-Action Conditions	Proposed Action Incremental Annual Energy Use (MBTU) over No-Action Condition
Residential[2]	3,603,585	126.7	456,574,220	343,208,001	413,965,390
Commercial[3]	694,367	216.3	150,191,582	34,988,472	7,694,873
Industrial[4]	0	554.3	0	0	0
Community Facility[5]	140,894	250.7	35,322,126	14,534,333	18,118,560
		Total	**642,087,927**	**392,730,805**	**439,778,853**

Notes:
[1]Energy generation is based on citywide average rates presented in Table 15-1 of the CEQR Technical Manual
[2]Residential: Data provided by NYCDCP, April 2016.
[3]Commercial: Data provided by NYCDCP, April 2016.
[4]Industrial use: Data provided by NYCDCP, April 2016.
[5]Community Facility: Data provided by NYCDCP, April 2016.

Source: New York City Department of City Planning, 2017; CSA Group, 2017.

The incremental increase in annual energy consumption under the Proposed Actions would represent approximately 0.26 percent of the City's forecasted annual energy requirement of 171 Trillion BTUs, with slightly lower percentage, 0.23 percent, under the Lower Density Alternative. Increases of this magnitude would not result in adverse impacts on energy systems.

20.5.13 TRANSPORTATION

The reduction in size of projected development sites 3, 13, 18, 19, 21, 23, 24, 25, 27, 28, 29, 30, 31, 33, 34, and 35 in the Lower Density Alternative would generate fewer vehicle, transit, and pedestrian trips and less demand for on-street and off-street public parking compared to the Proposed Actions Based on the trip generation assumptions detailed in Chapter 13, "Transportation," the Lower Density Alternative would generate approximately 526, 671, 726, and 722 fewer incremental person trips in the weekday AM, midday, and PM, and Saturday midday peak hours, respectively, compared to the Proposed Actions (see Table 20.5.13-1). Depending on the peak hour, this represents an approximately 7 to 13 percent decrease in action-generated person trips compared to the Proposed Actions. As in the Proposed Actions, it is anticipated that the Lower Density Alternative would result in significant adverse traffic, bus, and pedestrian impacts. Neither the Proposed Actions nor the Lower Density Alternative would result in significant adverse subway or parking impacts.

Table 20.5.13-1: Comparison of Incremental Peak Hour Person Trips by Mode – Proposed Actions vs. Lower Density Alternative

Scenario	Auto	Taxi	Bus	Subway	Railroad	Walk/Other	Total
Weekday AM							
Proposed Actions	363	71	555	1,382	77	1,607	4,055
Lower Density Alternative	276	61	481	1,169	64	1,478	3,529
Increment	***-87***	***-10***	***-74***	***-213***	***-13***	***-129***	***-526***
Weekday Midday							
Proposed Actions	410	205	1,037	1,136	40	6,772	9,600
Lower Density Alternative	347	192	958	1,007	34	6,391	8,929
Increment	***-63***	***-13***	***-79***	***-129***	***-6***	***-381***	***-671***
Weekday PM							
Proposed Actions	596	165	935	1,748	86	4,143	7,673
Lower Density Alternative	491	152	837	1,504	73	3,890	6,947
Increment	***-105***	***-13***	***-98***	***-244***	***-13***	***-253***	***-726***
Saturday Midday							
Proposed Actions	662	194	985	1,649	77	4,787	8,354
Lower Density Alternative	563	181	889	1,432	65	4,502	7,632
Increment	***-99***	***-13***	***-96***	***-217***	***-12***	***-285***	***-722***

Source: STV Incorporated, 2017.

Traffic

The Lower Density Alternative would generate approximately 90, 61, 102, and 78 fewer incremental vehicle trips during the weekday AM, midday, and PM and Saturday midday peak hours, respectively, compared to the Proposed Actions (see Table 20.5.13-2). Depending on the peak hour, this represents a decrease of approximately 12 to 22 percent as compared to the incremental vehicle trips that would be generated in the Proposed Actions. Study area intersections with significant adverse traffic impacts were therefore evaluated to determine if the impacts would also occur in the Lower Density Alternative, and if the impacts could be mitigated.

Overall, the Lower Density Alternative would result in significant adverse traffic impacts at a total of 21 study area intersections during one or more analyzed peak hours, one less intersection than in the Proposed Actions. Table 20.5.13-3 presents a comparison of the numbers of lane groups and intersections that would have significant adverse impacts in each peak hour in the Proposed Actions and the Lower Density Alternative. In the Lower Density Alternative, 10 lane groups at 10 intersections would be impacted (compared to 15 lane groups at 14 intersections in the Proposed Actions) in the weekday AM peak hour, 16 lane groups at 13 intersections (compared to 17 lane groups at 14 intersections in the Proposed Actions) in the midday, 34 lane groups at 20 intersections (compared to 33 lane groups at 20 intersections in the Proposed Actions) in the PM and 26 lane groups at 16 intersections (compared to 28 lane groups at 19 intersections in the Proposed Actions) in the Saturday midday. Potential measures to mitigate significant adverse traffic impacts are discussed in the Mitigation section below.

Table 20.5.13-2: Comparison of Incremental Peak Hour Vehicle Trips by Mode – Proposed Actions vs. Lower Density Alternative

Scenario	Auto	Taxi	Truck	Total
Weekday AM				
Proposed Actions	293	104	8	405
Lower Density Alternative	223	90	2	315
Increment	***-70***	***-14***	***-6***	***-90***
Weekday Midday				
Proposed Actions	196	314	14	524
Lower Density Alternative	159	294	10	463
Increment	***-37***	***-20***	***-4***	***-61***
Weekday PM				
Proposed Actions	429	238	4	671
Lower Density Alternative	347	218	4	569
Increment	***-82***	***-20***	***0***	***-102***
Saturday Midday				
Proposed Actions	333	274	10	617
Lower Density Alternative	275	256	8	539
Increment	***-58***	***-18***	***-2***	***-78***

Source: STV Incorporated, 2017.

Table 20.5.13-3: Comparison of the Numbers of Lane Groups/Intersections with Significant Adverse Impacts – Proposed Actions vs. Lower Density Alternative

Peak Hour	Development Scenario	Lane Groups/Intersections with Significant Impacts
AM	Proposed Actions	15/14
	Lower Density Alternative	10/10
Midday	Proposed Actions	17/14
	Lower Density Alternative	16/13
PM	Proposed Actions	33/20
	Lower Density Alternative	34/20
Saturday Midday	Proposed Actions	28/19
	Lower Density Alternative	26/16

Source: STV Incorporated, 2017.

Transit

Subway

Subway Stations

The Lower Density Alternative would generate 213 and 244 fewer incremental subway trips during the weekday AM and PM Peak hours, respectively, than would the Proposed Actions (see Table 20.5.13-1). Incremental subway trips generated in the Lower Density Alternative would not result in significant adverse impacts to any area subway stations, as in the Proposed Actions.

Subway Line-Haul

No analyzed subway line would be significantly adversely impacted in either the weekday AM or PM peak hour under *CEQR Technical Manual* impact criteria as in the Proposed Actions. The Lower Density Alternative would generate fewer new subway trips than the Proposed Actions; therefore, this alternative is also not expected to result in significant adverse subway line haul impacts in either period.

Bus

Weekday AM and PM peak hour incremental bus trips would total 481 and 837 in the Lower Density Alternative, compared to 555 and 935 trips in the Proposed Actions (see Table 20.5.13-1). Although there would be 74 and 98 fewer bus trips during the weekday AM and PM peak hours, respectively, in the Lower Density Alternative, this alternative, like the Proposed Actions, would result in a significant adverse bus impact to the Bx11, Bx32, and Bx35 services in one or more peak hours based on *CEQR Technical Manual* criteria (see Table 20.5.13-4).

Table 20.5.13-4: Lower Density Alternative Local Bus Analysis

Peak Hour (1)	Route	Direction	Maximum Load Point(s)	Peak Hour Buses (1)	No-Action Available Capacity (2)	Project Increment	Available Capacity w/Proposed Actions (2)
AM	Bx11	EB	Claremont Pky and Webster Av / W 170th St and Jerome Av	13	29	72	-42
		WB	E 170th St and Jerome Ave / Claremont Pky and Webster Av	13	19	18	1
	Bx32	NB	Morris Av and E 170th St	6	24	20	5
		SB	Morris Av and E 170th St / Morris Av and E 161st St	8	37	63	-25
	Bx35	EB	E 167th St and Grand Concourse / Webster Av and E 168th St	15	13	41	-28
		WB	E 167th St and College Av / E 167th St and Grand Concourse	18	40	15	26
PM	Bx11	EB	Claremont Pky and Webster Av	12	159	61	98
		WB	Claremont Pky and Webster Av	12	36	95	-59
	Bx32	NB	Morris Av and E 170th St	6	75	87	-11
		SB	Morris Av and E 170th St	5	57	59	-1
	Bx35	EB	E 167th St and Grand Concourse	10	24	44	-20
		WB	E 167th St and Grand Concourse / Webster Av and E 168th St	11	11	61	-50

Notes:
(1) Assumes service levels adjusted to address capacity shortfalls in the No-Action Condition.
(2) Available capacity based on NYCT loading guideline of 54 passengers per standard bus.

Source: STV Incorporated, 2017.

Based on projected levels of bus service in the No-Action condition, the Lower Density Alternative would result in the following capacity shortfalls:

- Eastbound Bx11 would experience a shortfall of 42 passengers in the AM peak hour, compared to 63 in the Proposed Actions.
- Westbound Bx11 would experience a shortfall of 59 passengers in the PM peak hour, compared to 78 in the Proposed Actions.
- Northbound Bx32 would experience a shortfall of 11 passengers in the PM peak hour, compared to 25 in the Proposed Actions.
- Southbound Bx32 would experience a shortfall of 25 passengers in the AM peak hour, compared to 35 in the Proposed Actions, and one passenger in the PM peak hour, compared to 11 in the Proposed Actions.

- Eastbound Bx35 would experience a shortfall of 28 passengers in the AM peak hour, the same as the Proposed Actions and 20 passengers in the PM peak hour, compared to 21 in the Proposed Actions.
- Westbound Bx35 would experience a shortfall of 50 passengers in the PM peak hour, the same as the Proposed Actions.

The Lower Density Alternative would not result in capacity shortfalls on the westbound Bx11 in the AM peak hour, as it would in the Proposed Actions. The significant adverse impacts to bus service could be mitigated by increasing the number of buses in service. The general policy of the MTA is to provide additional bus service where demand warrants, taking into account fiscal and operational constraints.

Pedestrians

The Lower Density Alternative is expected to generate 3,468, 8,737, 6,795, and 7,451 incremental pedestrian trips (including walk/other trips and trips to/from area transit services and public parking facilities) in the weekday AM, midday, and PM, and Saturday midday peak hours, respectively. This represents a decrease of seven to thirteen percent compared to the 3,984, 9,395, 7,508, and 8,160 incremental pedestrian trips that would be generated in the Proposed Actions during these same periods, respectively. Therefore, there would be no change in the number or location of significant adverse impacts as a result of the overall decrease in incremental pedestrian trips in the Lower Density Alternative as compared to the Proposed Actions (see Table 20.5.13-5).

Sidewalks

The south sidewalk of West 170th Street between Edward L. Grant Highway and Cromwell Avenue is projected to experience a significant adverse impact during the Saturday midday peak hour, operating at LOS D, the same significant adverse impact as in the Proposed Actions.

Table 20.5.13-5: Sidewalk Conditions in the Lower Density Alternative

Intersection	Sidewalk	No-Action			With-Action			Lower Density Alternative		
		Effective Width	SFP	LOS	Effective Width	SFP	LOS	Effective Width	SFP	LOS
Saturday MD Peak Hour										
West 170th Street between Edward L. Grant Highway and Cromwell Avenue	South	3	126.1	B	3	33.8	D	3	34.3	D

Notes: Shading denotes a significant adverse impact

Source: STV Incorporated, 2017.

Vehicular and Pedestrian Safety Evaluation

A review of NYCDOT crash data for the three-year reporting period between January 1, 2012, and December 31, 2014 identified nine intersections in proximity to the rezoning area as high crash accident locations. The *Vision Zero Bronx Pedestrian Safety Action Plan* was released on February 18, 2015. Portions of the Jerome Avenue Rezoning traffic study area were identified as Priority Areas where safety issues were found to occur systematically at an area-wide level. NYCDOT's recommended improvements to select intersections and corridors in the study area include measures to improve pedestrian safety, such as the installation of additional lighting under elevated trains, expanded midblock treatments, and modifications to signal timings to add exclusive pedestrian cross time. In both the Proposed Actions and the Lower Density Alternative, additional improvements to increase pedestrian/bicyclist safety at high crash locations could include the installation of high-visibility crosswalk striping, pedestrian countdown signals, signs warning turning vehicles to yield to pedestrians in the crosswalk, and improved street lighting.

Parking

As in the Proposed Actions, no additional parking capacity would be developed in the Lower Density Rezoning Alternative. Similarly, development in the Lower Density Rezoning Alternative would displace the same number of off-street parking spaces as in the Proposed Actions. The reduction in the amount of projected development between the Lower Density Rezoning Alternative and the Proposed Actions results in a lower demand for parking in the Lower Density Rezoning Alternative. As such, the supply of parking within a ¼-mile radius of the rezoning area in the Lower Density Rezoning Alternative is projected to be sufficient to accommodate the projected demand, as was the case in the Proposed Actions.

In the Lower Density Rezoning Alternative, there is projected to be a parking shortfall within ¼-mile of Projected Development Sites 30, 32, and 33 during the weekday midday and weekday overnight periods, as is also expected in the Proposed Actions. As listed in Table 20.5.13-6, a deficit of approximately 12 and 256 parking spaces is projected during the weekday midday and overnight periods, respectively, compared to a deficit of 88 and 453 parking spaces in the Proposed Actions. Sufficient parking would be available within a ¼-mile radius of Projected Development Sites 30, 32, and 33 during the Saturday midday period, with a projected utilization rate of 91 percent.

Overall, the study area has a parking surplus. Some drivers destined for the Projected Development Sites 30, 32, and 33 would potentially have to travel a greater distance (e.g., between ¼ and ½ mile) to find available parking in the weekday midday and overnight periods. The parking shortfall for the Projected Development Sites 30, 32, and 33 would not be considered a significant adverse impact, based on *CEQR Technical Manual* criteria, due to the availability of sufficient parking outside the ¼-mile radius within the overall study area and the magnitude of available alternative modes of transportation. Therefore, the Lower Density Alternative is not expected to result in significant adverse parking impacts.

Table 20.5.13-6: Lower Density Rezoning Alternative Public Parking Capacity, Demand, and Utilization within ¼-mile of Sites 30, 32, and 33

	Weekday Midday	Weekday Overnight	Saturday Midday
Capacity			
No-Action Capacity (Off-Street and On-Street)	4,294	4,349	4,294
Capacity Displaced by With-Action Developments	(175)	(175)	(175)
Total With-Action Capacity	4,119	4,174	4,119
Demand			
No-Action Demand (Off-Street and On-Street)	3,892	3,723	3,529
Projected Demand from With-Action Developments	239	707	220
Total With-Action Demand	4,131	4,430	3,749
Utilization			
With-Action Utilization	100%	106%	91%
With-Action Parking Surplus/(Deficit)	(12)	(256)	370

Source: STV Incorporated, 2017.

20.5.14 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 compared to the Proposed Actions. However, it would be lower than that of the Proposed Actions; and therefore, like the Proposed Actions, the Lower Density Alternative would not result in significant adverse mobile source impacts.

Stationary Sources

While some development within the study area would occur under the Lower Density 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 Lower Density Alternative. Similar to the Proposed Actions, all projected and potential development sites would receive an (E) designation requiring the use of natural gas in order to avoid potential significant air quality impacts under the Lower Density Alternative; and therefore, there would be no significant adverse air quality impacts.

20.5.15 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Greenhouse Gas Emissions

With less development than under the Proposed Actions, the Lower Density Alternative would have less energy use and would therefore result in fewer carbon dioxide equivalent (CO2e) 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.

Regarding the impact of the Lower Density Alternative on resilience in the area and on other environmental effects as they may be affected by climate change, the Proposed Actions would not result in any development in the water or on the waterfront, and therefore other considerations identified in WRP Policy 6.2 such as providing protection to avoid coastal erosion, protecting other properties, and other design considerations for waterfront areas, are not relevant for the Lower Density Alternative. The Lower Density Alternative would also not adversely affect other resources (including ecological systems, public access, visual quality, water-dependent uses, infrastructure, and adjacent properties) due to climate change.

20.5.16 NOISE

Under the Lower Density Alternative, less development would occur as compared to the Proposed Actions, resulting in fewer vehicular trips. Traffic volumes would be lower as compared to the Proposed Actions. The Lower Density Alternative would result in development of the same projected and potential development sites as with the Proposed Actions, though at a lower density and with a slightly different use mix in some buildings. The same projected development sites would be mapped with an E designation requiring an environmental assessment of noise exposure as for the Proposed Actions.

20.5.17 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, 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 Lower Density Alternative.

20.5.18 NEIGHBORHOOD CHARACTER

As with the Proposed Actions, the Lower Density Alternative would not result in significant adverse impacts on neighborhood character. Compared to the Proposed Actions, the Lower Density Alternative would result in similar impacts on shadows, transportation, and noise, while also resulting in similar effects to land use zoning and public policy, as well as socioeconomic conditions, and open space. Therefore, the effects to the neighborhood character with the Lower Density Alternative would be similar to the effects of the Proposed Actions. The Lower Density Alternative would result in a slightly smaller increase in the residential population, as compared to the Proposed Actions, but would still facilitate the development of a mix of residential, commercial, and community facility uses that would be consistent with the mixed-use character of the neighborhoods. In addition, under both scenarios the affordable housing units would help to ensure that a considerable portion of the new households would have incomes that would more closely reflect existing incomes in the study area and help ensure that the neighborhoods continue to serve diverse housing needs. However, as noted above, less affordable housing would be built under the Lower Density Alternative. The proposed commercial overlays with both the Proposed Actions and the Lower Density Alternative are intended to improve walkability connecting neighborhood streets by promoting continuous retail and community facility uses, thereby improving the neighborhood character, as compared to No-Action conditions. Therefore, as with the Proposed Actions, the Lower Density Alternative would not result in any significant adverse impacts on neighborhood character.

20.5.19 CONSTRUCTION

The Lower Density Alternative would result in the same construction noise impacts that would occur with the Proposed Actions. As the amount of new construction under the Lower Density Alternative would be less as compared with the Proposed Actions, the Lower Density Alternative would not generate as much temporary construction disruption. 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.

The construction processes and phasing under the Lower Density Alternative for the remaining projected development sites are expected to be similar to those for the Proposed Actions. Therefore, it is anticipated that the predicted noise levels due to peak construction-related activities at these locations under the Lower Density Alternative would be similar to the Proposed Actions. However, since the Lower Density Alternative would result in fewer projected development sites, the extent of the significant adverse noise impacts under this alternative would be reduced when compared with those under the Proposed Actions.

As discussed above, like the Proposed Actions, the Lower Density Alternative would result in significant adverse impacts to architectural resources as a result of demolition and construction or through inadvertent construction-related damage. The Lower Density Alternative would result in the same significant adverse construction-related impacts that would occur with the Proposed Actions.

20.5.20 MITIGATION MEASURES REQUIRED FOR THE LOWER DENSITY ALTERNATIVE

Transportation

The identified bus and pedestrian impacts could be fully mitigated in the Proposed Actions and Lower Density Alternative. Due to the existing congested conditions at many study area intersections, it is anticipated that a number of the significant adverse traffic impacts in the Lower Density Alternative could not be fully mitigated through standard traffic improvement measures, as would also be the case in the Proposed Actions.

Traffic

Table 20.5.20-1 summarizes the recommended mitigation measures for each intersection with significant adverse traffic impacts during the weekday AM, midday, and PM, and Saturday midday peak hours in the Lower Density Alternative. At most impacted intersections, recommended mitigation measures would be similar to the measures recommended for the Proposed Actions (see Table 21-5 in Chapter 21, “Mitigation”).

Tables 20.5.20-2 through 20.5.20-5 show the Lower Density Alternative Action-with-Mitigation v/c ratios, delays, and levels of service (LOS) for impacted lane groups at each intersection with implementation of these mitigation measures and compares them to No-Action and Lower Density Alternative With-Action conditions for the weekday AM, midday, and PM, and Saturday midday peak hours, respectively. Lane groups that would have unmitigated significant adverse impacts are summarized in Table 20.5.20-6, while Table 20.5.20-7 compares the numbers of lane groups and intersections with mitigated and unmitigated impacts in the Lower Density Alternative with the impacts in the Proposed Actions. The Lower Density Alternative would result in fewer unmitigated significant adverse impacts than the Proposed Actions during the PM and Saturday midday peak hours. Unmitigated impacts would remain the same during the weekday AM and midday peak hours. Specifically, in the Lower Density Alternative, unmitigated significant impacts would remain at a total of one lane group at one intersection (compared to one lane group at one intersection with the Proposed Actions) during the weekday AM peak hour, one lane group at one intersection (compared to one lane group at one intersection with the Proposed Actions) during the weekday midday peak hour, 19 lane groups at eight intersections (compared to 19 lane groups at eight intersections with the Proposed Actions) during the weekday PM peak hour, and five lane groups at three intersections (compared to five lane groups at three intersections with the Proposed Actions) during the Saturday midday peak hour. The following lane groups, which would be unmitigated in the Proposed Actions, would either be fully mitigated or would not be impacted in the Lower Density Alternative:

- The north and southbound Jerome Avenue shared left-through-right lane group at Fordham Road in the weekday PM peak hour; and

An unmitigated significant adverse impact would be added at the eastbound Burnside Avenue shared left-through-right lane group at Jerome Avenue during the weekday PM peak hour in the Lower Density Alternative.

Table 20.5.20-1: Proposed Traffic Mitigation Measures for Lower Density Alternative

Intersection	Signal Phase	No-Action Signal Timing (Seconds)				Proposed Signal Timing (Seconds)				Recommended Mitigation
		AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	
Jerome Avenue and Kingsbridge Road	EB/WB	54	39	54	39	54	36	54	39	- Transfer 3 seconds of green from EB/WB to NB/SB during Midday. - PM and Saturday are unmitigatable
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	52	37	52	37	52	40	52	37	
	Ped	7	7	7	7	7	7	7	7	
Jerome Avenue and Fordham Road	EB/WB	81	56	86	78	74	51	80	73	- Transfer 7 seconds of green time from the EB/WB to NB/SB during AM. - Transfer 5 seconds from EB/WB to NB/SB during Midday and Saturday. - Transfer 6 seconds from EB/WB to NB/SB during PM.
	NB/SB	39	34	34	42	46	39	40	47	
Jerome Avenue and Burnside Avenue	EB/WB	60	60	60	60	60	60	60	60	- Midday, PM, and Saturday are unmitigatable
	NB/SB	60	60	60	60	60	60	60	60	
Jerome Avenue and Tremont Avenue	EB/WB	57	57	57	57	58	58	58	59	- Transfer 1 second from NB/SB to EB/WB during AM, Midday and PM. - Transfer 2 seconds from NB/SB to EB/WB during Saturday.
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	56	56	56	56	55	55	55	54	
Jerome Avenue and Featherbed Lane	EB/WB	30	30	30	30	32	31	31	31	- Transfer 2 seconds from NB/SB to EB/WB during AM. - Transfer 1 second from NB/SB to EB/WB during Midday, PM and Saturday.
	NB/SB	60	60	60	60	58	59	59	59	
Jerome Avenue and SB I-95 Ramps	WB	45	45	45	45	45	45	44	45	- Transfer 1 second from WB to NB/SB during PM.
	NB/SB	45	45	45	45	45	45	46	45	
Jerome Avenue and NB I-95 Ramps	EB	43	43	43	43	41	41	43	43	- Transfer 2 seconds of green from EB to SB-L during AM. - Transfer 2 seconds of green from EB to NB/SB during Midday. - Transfer 2 seconds of green from NB/SB to SB-L during PM. - Transfer 1 second of green from NB/SB to SB-L on Saturday.
	NB/SB	32	32	32	32	32	34	30	31	
	SB-L	15	15	15	15	17	15	17	16	
Jerome Avenue and Macombs Dam Bridge	EB	21	21	26	21	21	22	27	21	- Transfer 1 second of green time from NB/SB to EB during Midday and PM.
	Ped	31	31	31	31	31	31	31	31	
	NB/SB	38	38	33	38	38	37	32	38	
Jerome Avenue and 170th Street	EB/WB	31	31	31	31	32	33	34	33	- Transfer 1 second of green time from NB/SB to EB/WB during AM. - Transfer 2 seconds from NB/SB to EB/WB during Midday and Saturday. - Transfer 3 seconds from NB/SB to EB/WB during PM.
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	52	52	52	52	51	50	49	50	
Jerome Avenue and 167th Street	EB/WB-R	28	28	28	28	28	28	28	28	-PM is unmitigatable.
	WB/NE	30	30	30	30	30	30	30	30	
	NB/SB	32	32	32	32	32	32	32	32	
Jerome Avenue and E. 165th Street	WB	36	36	36	36	37	36	37	36	- Transfer 1 second from NB/SB to WB during AM and PM.
	NB/SB	54	54	54	54	53	54	53	54	
Grand Concourse and 176th Street	EB/WB	38	41	38	41	38	42	39	41	- Transfer 1 second from NB/SB to EB/WB during Midday and PM.
	SB/SB-L	15	15	15	15	15	15	15	15	
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	60	57	60	57	60	56	59	57	

Table 20.5.20-1 (continued): Proposed Traffic Mitigation Measures for Lower Density Alternative

Intersection	Signal Phase	No-Action Signal Timing (Seconds)				Proposed Signal Timing (Seconds)				Recommended Mitigation
		AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	
Grand Concourse and Burnside Avenue	EB/WB	42	42	42	42	42	42	42	43	-Transfer 1 second from NB/SB to EB/WB on Saturday
	NB-L/SB-L	16	16	16	16	16	16	16	16	
	NB/SB	62	62	62	62	62	62	62	61	
Grand Concourse and Tremont Avenue	EB/WB	36	36	36	36	37	36	36	38	- Transfer 1 second from NB/SB to EB/WB during AM. - PM is unmitigatable. - Transfer 3 seconds from NB/SB and add 2 second to EB/WB and 1 second to NB-L/SB-L during Saturday.
	NB-L/SB-L	16	16	16	16	16	16	16	17	
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	61	61	61	61	60	61	61	58	
Grand Concourse and Mt. Eden Avenue	EB/WB	42	42	42	42	42	43	42	43	- Transfer 2 seconds of green time from NB/SB, and add 1 second to EB/WB and 1 second to NB-L/SB-L during Midday. - PM is unmitigatable. - Transfer 1 second of green time from NB/SB to EB/WB on Saturday.
	NB-L/SB-L	15	15	15	15	15	16	15	16	
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	56	56	56	56	56	54	56	54	
Grand Concourse and 170th Street	EB/WB	45	45	45	45	45	45	45	44	- Transfer 1 second from NB/SB to NB-L/SB-L during PM. - Transfer 1 second from EB/WB to NB-L/SB-L on Saturday.
	NB-L/SB-L	15	15	15	15	15	15	16	16	
	NB/SB	60	60	60	60	60	60	59	60	
Grand Concourse and 167th Street	EB/WB	42	43	42	43	42	48	42	43	- AM, PM and Saturday are unmitigatable. - Transfer 5 seconds of green time from NB/SB to EB/WB during Midday.
	SB-L	15	15	15	15	15	15	15	15	
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	56	55	56	55	56	50	56	55	
River Avenue and 167th Street	EB/WB	54	52	52	52	54	50	52	51	- Transfer 2 seconds of green time from EB/WB to NB/SB during Midday. - PM is unmitigatable. - Transfer 1 second of green time from EB/WB to NB/SB during Saturday.
	Ped	7	7	7	7	7	7	7	7	
	NB/SB	36	31	31	31	36	33	31	32	
Edward L. Grant Highway and W. 170th Street	EB/WB	40	40	40	40	41	40	41	41	- Transfer 1 second of green time from NB/SB to EB/WB during AM, PM and Saturday.
	NB/SB	80	80	80	80	79	80	79	79	
Inwood Avenue and W. 170th Street	EB/WB	46	46	46	46	46	48	46	48	- Transfer 2 seconds from NB to EB/WB during Midday and Saturday. - Daylight to allow for two 10' lanes during PM.
	Ped	7	7	7	7	7	7	7	7	
	NB	30	30	30	30	30	28	30	28	
	Ped	7	7	7	7	7	7	7	7	
University Avenue and Washington Bridge Off-Ramps	EB	30	30	30	30	31	30	31	31	- Transfer 1 second from NB/SB2 to EB/WB during AM and PM. - Transfer 1 second from NB/SB to EB/WB during Saturday.
	NB2/SB2	33	33	35	33	32	33	34	33	
	NB/SB	27	27	25	27	27	27	25	26	

Table 20.5.20-2: Lower Density Alternative With-Mitigation Conditions at Impacted Lane Groups – Weekday AM Peak Hour

INTERSECTION & APPROACH	Mvt.	AM No-Action			AM Lower Density			AM Mitigated		
		V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Jerome Avenue and Fordham Road										
Jerome Avenue NB	LTR	0.88	67.6	E	1.16	146.4	F	0.92	67.0	E
Jerome Avenue and Tremont Avenue										
Tremont Avenue EB	LTR	1.07	95.4	F	1.09	101.9	F	1.06	92.6	F
Jerome Avenue and Featherbed Lane										
Featherbed Lane EB	DefL	1.11	152.9	F	1.12	155.9	F	0.96	101.4	F
Jerome Avenue and NB I-95 Off Ramps										
Jerome Avenue SB	DefL	1.02	78.0	E	1.11	109.9	F	1.02	78.2	E
Jerome Avenue and 170th Street										
170th Street EB	LTR	0.88	51.9	D	0.92	57.5	E	0.89	51.3	D
Jerome Avenue and E. 165th Street										
E. 165th Street WB	LR	0.94	61.8	E	0.97	67.7	E	0.94	60.0	E
Grand Concourse and Tremont Avenue										
Tremont Avenue EB	TR	1.38	247.1	F	1.47	258.6	F	1.37	238.9	F
Grand Concourse and 167th Street										
167th Street EB	TR	1.04	110.4	F	1.16	151.5	F	1.16	151.5	F
Edward L. Grant Highway and W. 170th Street										
W. 170th Street WB	LTR	1.00	84.7	F	1.02	88.8	F	0.98	78.8	E
University Avenue and Washington Bridge Off-Ramps										
Washington Bridge Off-Ramps EB	LR	1.03	84.6	F	1.04	88.8	F	1.00	76.0	E

Note: shaded cells indicate unmitigated delays.

Source: STV Incorporated, 2017.

Table 20.5.20-3: Lower Density Alternative With-Mitigation Conditions at Impacted Lane Groups – Weekday Midday Peak Hour

INTERSECTION & APPROACH		Mvt.	Midday No-Action			Midday Lower Density			Midday Mitigated		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Jerome Avenue and Kingsbridge Road											
Jerome Avenue	NB	LTR	1.09	104.5	F	1.26	167.2	F	1.05	87.5	F
Jerome Avenue and Fordham Road											
Jerome Avenue	NB	LTR	0.99	75.0	E	1.24	161.4	F	1.00	71.3	E
	SB	LTR	0.95	65.5	E	1.06	93.7	F	0.86	44.2	D
Jerome Avenue and Burnside Avenue											
Jerome Avenue	SB	LTR	0.68	31.8	C	0.89	48.5	D	0.89	48.5	D
Jerome Avenue and Tremont Avenue											
Tremont Avenue	EB	LTR	1.05	91.0	F	1.07	96.4	F	1.05	87.6	F
Jerome Avenue and Featherbed Lane											
Featherbed Lane	EB	DefL	1.02	116.7	F	1.07	129.8	F	1.00	107.5	F
Jerome Avenue and NB I-95 Ramps											
Jerome Avenue	SB	DefL	0.88	51.9	D	0.92	60.2	E	0.88	51.9	D
Jerome Avenue and Macombs Dam Bridge											
Jerome Avenue	EB	L	0.95	78.1	E	0.98	84.4	F	0.92	70.2	E
Jerome Avenue and 170th Street											
170th Street	WB	LTR	0.88	54.0	D	0.96	67.3	E	0.88	52.1	D
River Avenue and 167th Street											
River Avenue	NB	LTR	1.07	112.6	F	1.15	138.1	F	1.07	106.8	F
Grand Concourse and 176th Street											
176th Street	EB	LTR	0.77	56.7	E	0.82	62.3	E	0.80	58.0	E
Grand Concourse and Mt. Eden Avenue											
Mt. Eden Avenue	EB	LTR	1.09	123.2	F	1.13	136.3	F	1.08	119.5	F
	WB	LTR	1.14	141.2	F	1.18	152.7	F	1.13	136.2	F
Grand Concourse Mainline	NB	L	0.53	66.7	E	0.61	71.8	E	0.55	66.1	E
Grand Concourse and 167th Street											
167th Street	EB	TR	1.15	144.4	F	1.33	213.4	F	1.16	140.7	F
Inwood Avenue and W. 170th Street											
W. 170th Street	EB	LT	1.04	78.8	E	1.12	107.9	F	1.04	78.8	E

Note: shaded cells indicate unmitigated delays.

Source: STV Incorporated, 2017.

Table 20.5.20-4: Lower Density Alternative With-Mitigation Conditions at Impacted Lane Groups – Weekday PM Peak Hour

INTERSECTION & APPROACH		Mvt	PM No-Action			PM Lower Density			PM Mitigated		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Jerome Avenue and Kingsbridge Road											
Jerome Avenue	NB	LTR	1.34	206.1	F	1.46	254.9	F	1.46	254.9	F
Jerome Avenue and Fordham Road											
Jerome Avenue	NB	LTR	1.21	163.1	F	1.49	284.8	F	1.18	148.8	F
	SB	LTR	1.34	222.4	F	1.41	250.9	F	1.07	112.6	F
Jerome Avenue and Burnside Avenue											
Burnside Avenue	EB	LTR	0.85	42.9	D	0.89	48.2	D	0.89	48.2	D
	WB	LTR	0.85	43.3	D	0.94	57.0	E	0.94	57.0	E
Jerome Avenue	SB	LTR	0.79	38.3	D	0.91	51.7	D	0.91	51.7	D
Jerome Avenue and Tremont Avenue											
Tremont Avenue	EB	LTR	1.23	154.6	F	1.26	166.5	F	1.23	152.2	F
	WB	LTR	1.27	173.2	F	1.31	190.3	F	1.28	175.5	F
Jerome Avenue and SB I-95 Off Ramps											
Jerome Avenue	SB	DefL	0.85	45.2	D	0.91	55.0	D	0.88	49.3	D
Jerome Avenue and Featherbed Lane											
Featherbed Lane	EB	DefL	1.15	161.6	F	1.21	184.0	F	1.10	143.2	F
Jerome Avenue and NB I-95 Off Ramps											
Jerome Avenue	SB	DefL	1.01	81.4	F	1.07	98.6	F	1.00	77.0	E
Jerome Avenue and Macombs Dam Bridge											
Jerome Avenue	EB	L	0.69	41.6	D	0.79	47.7	D	0.75	43.9	D
Jerome Avenue and 170th Street											
170th Street	WB	LTR	1.01	78.8	E	1.12	112.1	F	1.00	71.6	E
Jerome Avenue and 167th Street											
Edward L. Grant Highway	EB	LTR	0.76	38.7	D	0.87	49.1	D	0.87	49.1	F
		R	0.80	46.7	D	0.85	52.1	D	0.85	52.1	D
167th Street	WB	LT	0.91	39.6	D	0.95	47.3	D	0.95	47.3	D
Jerome Avenue	NB	DefL	0.88	53.8	D	1.00	80.7	F	1.00	80.7	F
River Avenue and 167th Street											
River Avenue	NB	LTR	1.00	90.5	F	1.06	108.8	F	1.06	108.8	F
Jerome Avenue and E. 165th Street											
E. 165th Street	WB	LR	1.04	84.0	F	1.07	93.0	F	1.03	81.1	F
Grand Concourse and 176th Street											
176th Street	EB	LTR	1.05	116.6	F	1.08	125.7	F	1.04	111.9	F
Grand Concourse and Burnside Avenue											
Burnside Avenue	EB	LTR	0.73	51.0	D	0.79	55.2	E	0.79	55.2	E
Grand Concourse and Tremont Avenue											
Tremont Avenue	EB	TR	1.06	119.1	F	1.12	137.2	F	1.12	137.2	F
	WB	L	0.70	66.1	E	0.74	72.4	E	0.74	72.4	E
Grand Concourse Mainline	NB	L	0.78	84.7	F	0.81	89.0	F	0.81	89.0	F
Grand Concourse and Mt. Eden Avenue											
Mt. Eden Avenue	EB	LTR	1.03	103.6	F	1.04	108.3	F	1.04	108.3	F
	WB	LTR	1.20	163.5	F	1.22	172.8	F	1.22	172.8	F
Grand Concourse Mainline	NB	L	0.72	80.9	F	0.78	88.6	F	0.78	88.6	F
Grand Concourse and 170th Street											
Grand Concourse Mainline	NB	L	0.67	76.1	E	0.81	91.6	F	0.73	79.4	E
Grand Concourse and 167th Street											
167th Street	EB	L	1.16	172.6	F	1.17	176.3	F	1.17	176.3	F
		TR	1.00	95.3	F	1.11	127.8	F	1.11	127.8	F
	WB	TR	1.15	142.2	F	1.16	145.7	F	1.16	145.7	F

Table 20.5.20-4 (continued): Lower Density Alternative With-Mitigation Conditions at Impacted Lane Groups – Weekday PM Peak Hour

INTERSECTION & APPROACH	Mvt.	PM No-Action			PM Lower Density			PM Mitigated		
		V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Edward L. Grant Highway and W. 170th Street										
W. 170th Street WB	LTR	0.95	72.0	E	0.97	76.5	E	0.94	68.8	E
Inwood Avenue and W. 170th Street										
W. 170th Street EB	L	1.13	109.4	F	1.25	157.1	F	0.75	38.0	D
University Avenue and Washington Bridge Off-										
Washington Bridge Off-Ramps EB	L	1.08	103.9	F	1.11	115.1	F	1.06	94.6	F
	LR	1.00	78.8	E	1.05	93.1	F	1.01	78.5	E

Note: shaded cells indicate unmitigated delays.

Source: STV Incorporated, 2017.

Table 20.5.20-5: Lower Density Alternative With-Mitigation Conditions at Impacted Lane Groups – Saturday Midday Peak Hour

INTERSECTION & APPROACH		Mvt.	Saturday Midday No-Action			Saturday Midday Lower Density			Saturday Midday Mitigated		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Jerome Avenue and Kingsbridge Road											
Jerome Avenue	NB	LTR	0.85	44.8	D	0.97	64.5	E	0.97	64.5	E
Jerome Avenue and Fordham Road											
Jerome Avenue	NB	LTR	0.99	84.9	F	1.20	156.6	F	1.01	85.7	F
	SB	LTR	0.91	68.3	E	0.99	86.7	F	0.84	52.9	D
Jerome Avenue and Burnside Avenue											
Burnside Avenue	WB	LTR	0.82	40.2	D	0.86	45.2	D	0.86	45.2	D
Jerome Avenue	SB	LTR	0.73	34.0	C	0.89	48.2	D	0.89	48.2	D
Jerome Avenue and Tremont Avenue											
Tremont Avenue	EB	LTR	1.09	102.7	F	1.12	113.1	F	1.07	92.3	F
	WB	LTR	1.03	83.2	F	1.09	101.1	F	1.04	82.3	F
Jerome Avenue and Featherbed Lane											
Featherbed Lane	EB	DefL	1.21	180.4	F	1.26	198.1	F	1.17	160.8	F
Jerome Avenue and NB I-95 Ramps											
Jerome Avenue	SB	DefL	0.99	78.3	E	1.02	85.8	F	0.97	71.7	E
Jerome Avenue and 170th Street											
170th Street	WB	LTR	1.00	77.2	E	1.09	104.4	F	1.01	76.0	E
River Avenue and 167th Street											
River Avenue	NB	LTR	1.14	130.4	F	1.19	150.8	F	1.14	129.7	F
Grand Concourse and Burnside Avenue											
Burnside Avenue	EB	LTR	0.83	57.4	E	0.87	61.7	E	0.83	56.7	E
Grand Concourse and Tremont Avenue											
Tremont Avenue	EB	L	0.74	67.5	E	0.77	71.7	E	0.69	59.7	E
		TR	0.94	88.5	F	1.02	108.5	F	0.95	86.2	F
	WB	TR	0.86	72.3	E	0.90	78.5	E	0.84	66.1	E
Grand Concourse Mainline	NB	L	0.72	78.1	E	0.77	83.1	F	0.70	74.0	E
Grand Concourse and Mt. Eden Avenue											
Mt. Eden Avenue	WB	LTR	1.06	114.1	F	1.08	122.2	F	1.04	108.2	F
Grand Concourse Mainline	NB	L	0.66	75.6	E	0.71	79.5	E	0.64	71.4	E
Grand Concourse and 170th Street											
Grand Concourse Mainline	NB	L	0.47	63.4	E	0.59	69.7	E	0.53	64.6	E
Grand Concourse and 167th Street											
167th Street	EB	TR	1.04	104.4	F	1.15	140.6	F	1.15	140.6	F
	WB	L	0.76	67.3	E	0.83	80.5	F	0.83	80.5	F
Edward L. Grant Highway and W. 170th Street											
W. 170th Street	WB	LTR	1.05	98.3	F	1.08	106.6	F	1.05	94.6	F
Inwood Avenue and W. 170th Street											
W. 170th Street	EB	LT	1.16	116.7	F	1.26	155.8	F	1.15	111.9	F
University Avenue and Washington Bridge Off-Ramps											
Washington Bridge Off-Ramps	EB	L	1.03	86.9	F	1.04	91.6	F	0.99	75.3	E
		LR	1.06	94.4	F	1.09	104.0	F	1.04	87.9	F

Source: STV Incorporated, 2017.

Table 20.5.20-6: Lane Groups with Unmitigated Significant Adverse Traffic Impacts— Lower Density Alternative vs. Proposed Actions

Intersection	Weekday AM		Weekday Midday		Weekday PM		Saturday Midday	
	Proposed Actions	Lower Density	Proposed Actions	Lower Density	Proposed Actions	Lower Density	Proposed Actions	Lower Density
Jerome Avenue and Kingsbridge Road	--	--	--	--	NB - LTR	NB - LTR	NB - LTR	NB - LTR
Jerome Avenue and Fordham Road	--	--	--	--	NB - LTR, SB - LTR	--	--	--
Jerome Avenue and Burnside Avenue	--	--	SB - LTR	SB - LTR	WB - LTR, SB - LTR	EB - LTR, WB - LTR, SB - LTR	WB - LTR, SB - LTR	WB - LTR, SB - LTR
Jerome Avenue and 167th Street	--	--	--	--	EB - LTR, EB - R WB - LT NB - DefL	EB - LTR EB – R WB - LT, NB - DefL	--	--
River Avenue and 167th Street	--	--	--	--	NB - LTR	NB - LTR	--	--
Grand Concourse and Tremont Avenue	--	--	--	--	EB - TR, WB - L, NB - L	EB - TR, WB - L, NB - L	--	--
Grand Concourse and Mt. Eden Avenue	--	--	--	--	EB - LTR, WB - LTR, NB - L	EB - LTR, WB - LTR, NB - L	--	--
Grand Concourse and 167th Street	EB - TR	EB - TR	--	--	EB - L, EB - TR, WB - TR	EB - L, EB - TR, WB - TR	EB - TR, WB - L	EB - TR, WB - L

Source: STV Incorporated, 2017.

Table 20.5.20-7: Comparison of the Number of Lane Groups and Intersections with Mitigated and Unmitigated Significant Adverse Impacts—Proposed Actions vs. Lower Density Alternative

Peak Hour	Development Scenario	Lane Groups/ Intersections with Significant Impacts	Lane Groups/ Intersections with Mitigated Impacts	Lane Groups/ Intersections with Unmitigated Impacts
AM	Proposed Actions	15/14	14/13	1/1
	Lower Density Alternative	10/10	10/9	1/1
Midday	Proposed Actions	17/14	16/13	1/1
	Lower Density Alternative	16/13	15/12	1/1
PM	Proposed Actions	33/20	14/12	19/8
	Lower Density Alternative	35/21	17/14	18/7
Saturday Midday	Proposed Actions	28/19	23/16	5/3
	Lower Density Alternative	26/16	21/13	5/3

Source: STV Incorporated, 2017.

Transit

Bus

The Lower Density Alternative and the Proposed Actions would result in a significant adverse bus impact to the eastbound Bx11, southbound Bx32, and eastbound Bx35 in the AM peak hour and on the westbound Bx11, north and southbound Bx32, and east and westbound Bx35 in the PM peak hour. There would not be a significant adverse impact to the westbound Bx11 in the AM as there would in the Proposed Actions.

There would be a less of a shortfall of available capacity in the Lower Density Alternative compared with the Proposed Actions. As in the Proposed Actions, the significant adverse impact in the Lower Density Alternative could be mitigated by increasing bus service in the peak hours. As listed in Table 20.5.20-8, these significant adverse impacts could be fully mitigated by the addition of a total of three standard buses in the AM peak hour and six standard buses in the PM peak hour (compared to five buses in the AM peak hour and six buses in the PM peak hour in the Proposed Actions). The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Table 20.5.20-8: Lower Density Alternative Action-With-Mitigation Local Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point(s)	Peak Hour Buses (1)	No-Action Available Capacity (2)	Project Increment	Available Capacity w/ Proposed Actions (2)	Additional Peak Hour Buses Needed to Accommodate Project-Generated Demand	Available Capacity with Mitigation(2)
AM	Bx11	EB	Claremont Pky and Webster Av / W 170th St and Jerome Av	13	29	72	-42	1	12
	Bx32	SB	Morris Av and E 170th St / Morris Av and E 161st St	8	37	63	-25	1	29
	Bx35	EB	E 167th St and Grand Concourse / Webster Av and E 168th St	15	13	41	-28	1	26
PM	Bx11	WB	Claremont Pky and Webster Av	12	36	95	-59	2	49
	Bx32	NB	Morris Av and E 170th St	6	75	87	-11	1	43
		SB	Morris Av and E 170th St	5	57	59	-1	1	53
	Bx35	EB	E 167th St and Grand Concourse	10	24	44	-20	1	34
		WB	E 167th St and Grand Concourse / Webster Av and E 168th St	11	11	61	-50	1	4

Notes:
(1) Assumes service levels adjusted to address capacity shortfalls in the No-Action Condition.
(2) Available capacity based on NYCT loading guideline of 54 passengers per standard bus.

Source: STV Incorporated, 2017.

Pedestrians

The Lower Density Alternative and the Proposed Actions are projected to result in significant adverse impacts at one sidewalk area. The mitigation measure proposed in the Proposed Actions includes paving the five-foot grass buffer between the south sidewalk and fence line on West 170th Street between Edward L. Grant Highway and Cromwell Avenue. Implementing this same mitigation measure would mitigate the significant adverse impacts in the Lower Density Alternative at this one location. A summary of proposed mitigation measures in the Lower Density Alternative are presented in Table 20.5.20-9.

Table 20.5.20-9: Lower Density Alternative-With-Mitigation – Sidewalk Conditions

Intersection	Sidewalk	No-Action			Lower Density Alternative			Lower Density Alternative With-Mitigation			
		Effective Width	SFP	LOS	Effective Width	SFP	LOS	Effective Width	SFP	LOS	Mitigation Measures
Weekday AM Peak Hour											
West 170th Street between Edward L. Grant Highway and Cromwell Avenue	South	3	66.5	C	3	52.1	C	8	141.4	B	Not a significant impact in AM. 5' sidewalk widening addresses Saturday MD impact
Weekday MD Peak Hour											
West 170th Street between Edward L. Grant Highway and Cromwell Avenue	South	3	152.3	B	3	43.6	C	8	118.9	B	Not a significant impact in MD. 5' sidewalk widening addresses Saturday MD impact
Weekday PM Peak Hour											
West 170th Street between Edward L. Grant Highway and Cromwell Avenue	South	3	115.6	B	3	47.2	C	8	128.3	B	Not a significant impact in PM. 5' sidewalk widening addresses Saturday MD impact
Saturday MD Peak Hour											
West 170th Street between Edward L. Grant Highway and Cromwell Avenue	South	3	126.1	B	3	34.3	D	**8**	**95.0**	**B**	**Pave 5' grass verge (13' total width)**

Note: Bold Text indicates Mitigated Significant Adverse Impact

Source: STV Incorporated, 2017.

Community Facilities

Public Schools

With the Lower Density Alternative, significant adverse impacts to CSD 9, Sub-district 2 elementary and intermediate schools and CSD 10, Sub-district 4 elementary schools would occur. To avoid the significant adverse elementary school impact in CSD 9, Sub-district 2, the number of incremental dwelling units that could be developed in the sub-district would have to be reduced to 427, generating 166 elementary school students, as compared to No-Action conditions. This would represent a decrease of 1,061 DUs (71.3 percent) in CSD 9, Sub-district 2. To avoid the identified significant adverse intermediate school impacts in Sub-district 2 of CSD 9, the number of incremental dwelling units that could be developed would have to be reduced to 210 DUs, generating 34 intermediate school students, as compared to the No Action condition. This would represent a decrease of 1,275 DUs (85.9 percent) in CSD 9, Sub-district 2. To avoid the significant adverse elementary school impact in CSD 10, Sub-district 4, the number of incremental dwelling units that could be developed would have to be reduced to 692 DUs, generating 270 elementary school students, as compared to No-Action conditions. This would represent a decrease of 87 DUs (11.2 percent) in CSD 10, Sub-district 4. Alternatively, based on the RWCDS for the Lower Density Alternative, an additional 415 elementary school seats and 205 intermediate school seats would be needed in CSD 9, Sub-district 2 and 32 elementary school seats would be needed in CSD 10, Sub-district 4 in order to reduce the incremental utilization rates below *CEQR Technical Manual* impact threshold of five percent.

Possible administrative and capital mitigation measures have been identified:

- Restructuring or reprogramming existing school space under the DOE's control in order to make available more capacity in existing school buildings located within CSD 9, Sub-district 2 and CSD 10, Sub-district 4;
- Relocating administrative functions to another site, thereby freeing up space for classrooms; and/or
- Creating additional capacity in the area by constructing a new school(s), building additional capacity at existing schools, or leasing additional school space constructed as part of projected development within CSD 9, Sub-district 2 and CSD 10, Sub-district 4.

To mitigate the identified elementary and intermediate school impacts resulting from the Lower Desnity Alternative, enrollment in CSD 9, Sub-district 2, and CSD 10, Sub-district 4, will be monitored. If a need for additional capacity is identified, DOE will evaluate the appropriate timing and mix of measures, identified above, to address increased school enrollment. In coordination with the SCA, if additional school construction is warranted, and if funding is available, it will be identified in the Five-Year Capital Plan that covers the period in which the capacity need would occur (refer to the DOE's letter to the City

Planning Commission Chairman dated December 21, 2017, provided in Appendix K, "Written Comments Received on the DEIS").

Shadows

Similar to the Proposed Actions, the Lower Density Alternative would result in new shadows that would significantly impact eight sunlight-sensitive resources: Bronx School of Young Leaders, PS 306 Schoolyard, Mount Hope Playground, Goble Playground, Inwood Park, Keltch Park, Edward L. Grant Greenstreet, Jerome Avenue/Grant Avenue Greenstreet. The duration or extent of incremental shadow cast on these open spaces would be great enough to significantly impact the use of the open space or its ability to support vegetation.

Like the Proposed Actions, in the Lower Density Alternative possible measures that could mitigate significant adverse shadow impacts on open spaces may include relocating sunlight sensitive features within an open space to avoid sunlight loss; relocating or replacing vegetation; undertaking additional maintenance to reduce the likelihood of species loss; or providing replacement facilities on another nearby site. Other potential mitigation strategies include the redesign or reorientation of the open space site plan to provide for replacement facilities, vegetation, or other features. Other measures could include strategies to reduce or eliminate shadow impacts, including modifications to the height, shape, size, or orientation of a proposed development that creates the significant adverse shadow impact.

Construction

HISTORIC AND CULTURAL RESOURCES

Possible mitigation may include measures comparable to TPPN #10/88 applicable to the eligible historic resources. In the absence of site-specific approval, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement the mitigation. Should no feasible mitigation be identified, the significant adverse construction impact on historic resources would be unavoidable.

NOISE

Like the Proposed Actions, the Lower Density Alternative would be required to follow the requirements of the NYC 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.

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.

- 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."

- 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 the event no practical or feasible mitigation measures are selected, the significant adverse construction noise impacts would be unavoidable.

20.6 Expanded Rezoning Area Alternative

Please see separate document for the Expanded Rezoning Area Alternative.