

**APPENDIX N**

**CB9 197-A PLAN ALTERNATIVE 1**

**APPENDIX N.1**

**CB9 197-A PLAN ALTERNATIVE 1:  
IMPACT ANALYSES**

## **A. IMPACT ANALYSIS**

### **LAND USE, ZONING, AND PUBLIC POLICY**

Similar to the Proposed Actions, the 197-a Plan Alternative 1 would result in no significant adverse impacts on land use, zoning, and public policy. However, the two proposals would result in different land use patterns and densities, as discussed below.

#### *SUBDISTRICT 1*

The development scenario of the 197-a Plan Alternative 1 anticipates very little change in Subdistrict 1, which extends from 250 feet east of Twelfth Avenue westward to the waterfront, between West 125th and West 134th Streets. (Under the rezoning for the Proposed Actions, this area corresponds to Subdistricts B and C, and the area of Subdistrict A within 200 feet of the east side of Twelfth Avenue.) Conversions of existing buildings for “super specialty” uses in Subdistrict 1 are possible, which could result in some active uses that would support the new West Harlem Waterfront park. All uses permitted on the first two floors would be subject to transparency requirements. However, projected development sites were not identified for Subdistrict 1, and it is not anticipated that the existing land uses in Subdistrict 1 would substantially change. Community facility or residential uses would not be permitted in Subdistrict 1.

The primary effect of the 197-a Plan Alternative 1 in Subdistrict 1 would thus be to retain existing uses. This contrasts with the new commercial uses that would be developed in Subdistrict B with the Proposed Actions, and the new community facility development that would occur in the portion of Subdistrict 1 in Subdistrict A with the Proposed Actions. As discussed in Chapter 1, this development under the Proposed Actions would create active uses that would draw the public to the area of the new West Harlem Waterfront park. However, like the Proposed Actions, the changes in Subdistrict 1 would not result in any significant adverse land use, zoning, or public policy impacts.

#### *SUBDISTRICT 2*

In Subdistrict 2—the area that corresponds to the Other Area east of Broadway and Subdistrict A of the proposed Special Manhattanville Mixed-Use District, except for that portion of Subdistrict A within 200 feet of Twelfth Avenue—land use patterns and zoning regulations would be different from those of the Proposed Actions. Whereas the Proposed Actions would produce approximately 6.9 million sf in Subdistrict A and the Other Area east of Broadway (2.0 million sf of which would be below grade), nearly all consisting of new construction containing community facility use, the 197-a Plan Alternative 1 development scenario, if realized, would produce 2.2 million sf of manufacturing, commercial office, retail, community facility, and

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residential use, 1.3 million sf of which would be in new construction, and nearly 0.9 million sf in converted buildings and converted/expanded buildings. There would be no significant below-grade space in the 197-a Plan Alternative 1.

The zoning assumed under the 197-a Plan Alternative 1 for Subdistrict 2 would also be different from that with the Proposed Actions. The 197-a Plan Alternative 1 would permit a wide range of uses, including residential use, but would limit community facility uses to a maximum of 4.0 FAR, which would be less than the 6.0 FAR proposed with the Proposed Actions. The bulk regulations for the zoning assumed under 197-a Plan Alternative 1 for Subdistrict 2 would preserve the streetwall in that area, thereby promoting consistency between the built form for new development and existing buildings.

Unlike the rezoning with the Proposed Actions, zoning regulations assumed for the 197-a Plan Alternative 1 would not produce at-grade setbacks that would widen the sidewalks along most of the side streets and along the east side of Twelfth Avenue, in order to open up visual and physical access toward the waterfront. The regulations would also not require publicly accessible open space and midblock open areas. However, the 197-a Plan Alternative 1 development scenario assumes that new public, passive open space, approximately 0.41 acres (17,849 sf), would be provided on the triangular block on the west side of Broadway between West 125th and West 129th Streets (Acquisition for public use by either agreement or eminent domain would be required to create this open space, since this site currently is privately owned.) The 197-a Plan Alternative would encourage some ground-floor retail (20 percent of the first two floors could be occupied by retail, as of right, and a larger percentage allowed by Special Permit); all uses permitted in M1 and C zones on the first two floors would be subject to transparency requirements.

Like the Proposed Actions, development under the 197-a Plan Alternative 1 would be consistent with some of the elements of the West Harlem Master Plan and inconsistent with others. Like the Proposed Actions, the 197-a Plan Alternative 1 would not conflict with the construction of or access to the West Harlem Waterfront park, and it would also be consistent with the Master Plan's goals of allowing a greater variety of uses. Also like the Proposed Actions, the 197-a Plan Alternative 1's projected low-rise commercial development west of Twelfth Avenue would be consistent with the Master Plan's recommendations for the area underneath the viaduct. Unlike the Proposed Actions, the 197-a Plan Alternative 1's development strategy east of Twelfth Avenue would be consistent with the Master Plan's low density approach, and its goal of reusing existing buildings. However, the 197-a Plan Alternative 1 would not enhance pedestrian access to the waterfront as the Proposed Actions do with the removal of curb cuts that inhibit pedestrian flow and with the special urban design controls (mandatory sidewalk widenings and midblock open areas). The 197-a Plan Alternative 1 would not create new pedestrian pathways through the east-west blocks and street-level retail along Twelfth Avenue and West 125th Street, as recommended by the Master Plan.

In summary, land use patterns under the zoning assumed for the 197-a Plan Alternative 1 would be substantially different from those with the Proposed Actions. In Subdistrict 1, the 197-a Plan Alternative 1 would result in little or no new development, and existing uses would be retained; this contrasts with the new commercial development that would occur in Subdistrict B with the Proposed Actions and the new community facility development in the portion of Subdistrict A with the Proposed Actions that is in Subdistrict 1. Under the development scenario for the 197-a Plan Alternative 1, if realized, land use in Subdistrict 2 would consist of a combination of new infill development and conversion of existing buildings containing a variety of uses, with

consistency between the built form for new development and existing buildings. This contrasts with the Proposed Actions, which propose a single, major community facility use for Subdistrict A consisting of a Columbia University Manhattanville university area, newly constructed according to a unified design, with taller buildings than exist today and including publicly accessible open spaces, widened sidewalks, and other design features. Like the Proposed Actions, the 197-a Plan Alternative 1 would not result in significant adverse land impacts on land use, zoning, or public policy.

#### *SOCIOECONOMIC CONDITIONS*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would have no significant adverse impact on direct residential or business displacement, on indirect business displacement, or on specific industries, but it could have an adverse effect on indirect residential displacement. Under the development scenario for the 197-a Plan Alternative, if realized, there would be an increase of employment in the Project Area, and it would be expected that a number of new employees would seek to reside in the study area. Likewise, a build-out under the development scenario would increase the attractiveness of the neighborhood, drawing other new residents to the study area. As with the Proposed Actions, by 2030 this could result in some indirect residential displacement of the at-risk population in the 1,319 unprotected units in the primary study area, including the 823 units in the Riverside Park Community/3333 Broadway. However, the likelihood of this impact occurring would be less under the 197-a Plan Alternative 1 than with the Proposed Actions. Each area of socioeconomic analysis is discussed below.

#### *Direct Residential Displacement and Additions to Study Area Population*

The 197-a Plan Alternative 1 development scenario includes substantial new mixed-use development and does not assume the direct displacement of an estimated 291 existing residents which would occur under the Proposed Actions. However, as noted above and discussed in greater detail in Chapter 4, the Proposed Actions would not have a significant adverse socioeconomic impact based on direct residential displacement. The 197-a Plan Alternative 1 would add up to 1,116 residents (based on 421 units and an average household size of 2.65).

#### *Direct Business Displacement and Additions to Employment*

Build-out under the development scenario for the 197-a Plan Alternative 1 would result in the direct displacement of a number of existing businesses and employees, although to a lesser extent than with the Proposed Actions. Overall, the 197-a Plan Alternative 1 development scenario would directly displace an estimated 52 businesses and institutional uses and 620 employees, compared with the direct displacement of 85 businesses and 880 workers with the Proposed Actions. However, neither the Proposed Actions nor the 197-a Plan Alternative 1 would result in significant adverse impacts due to direct business displacement; displace businesses with substantial economic value to the City, or that are the subjects of City or other policies to preserve, enhance or protect them, or define neighborhood character.

Like the Proposed Actions, the development scenario under the 197-a Plan Alternative 1 would add employment to the Project Area that would offset employment displacement. The amount and type of floor area assumed under the development scenario could hypothetically generate up to 5,445 employees, based on standard employment rates for individual land uses (see Table N.1-1). However, as noted above, a number of factors suggest that the amount and type of development assumed for the development scenario under the 197-a Plan Alternative 1 are unlikely to be realized under current or likely future market conditions.

**Table N.1-1**

**197-a Plan Alternative 1 Development Scenario: Employment Calculation Based on Standard Employment Rates**

<b>Uses</b>	<b>GSF</b>	<b>Employees</b>
Office	661,936	2,648
Community Facility	661,936	1,324
Residential	378,926	64
Retail	249,483	624
Manufacturing	261,764	785
<b>TOTAL</b>	<b>2,214,045</b>	<b>5,445</b>
<b>Notes:</b>	Based on the following standard employment rates: 4/1,000 sf office, 2/1,000 sf community facility, 1/5,900 sf residential, 2.5/1,000 sf retail, and 3/1,000 sf manufacturing.	

*Indirect Residential Displacement*

Under the development scenario for the 197-a Plan Alternative 1, if realized, an adverse impact could occur because, as with the Proposed Actions, build-out under the 197-a Plan Alternative 1 could initiate a trend toward increased rents in the primary study area. The new residential, commercial, office, retail, and community facility uses assumed under the development scenario, if realized, could make the Project Area more attractive as a destination and, by increasing the residential appeal of the Project Area and study areas, could attract additional persons seeking housing in the area. By 2030, this could result in some indirect residential displacement of the at-risk population in 1,319 unprotected units in the primary study area, including the 823 units in the Riverside Park Community/3333 Broadway. As with the Proposed Actions, this impact could be significant, but would be limited to the primary study area. However, the provision of 211 units of affordable housing in the 197-a Plan Alternative 1 development scenario, if realized, would help to limit the effect of the indirect displacement pressures. In addition, the Academic Mixed-Use Development with the Proposed Actions would introduce a greater population of students, faculty, and employees (some of whom would be provided housing in the university area and others who would seek housing throughout the study area) to the Project Area than under the 197-a Plan Alternative 1. For these reasons, the likelihood of an impact occurring and its extent would be less under the 197-a Plan Alternative 1 than with the Proposed Actions.

*Indirect Business Displacement*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in significant adverse indirect business displacement. A major objective of the alternative is to retain and increase manufacturing uses in the area and retain other businesses, while providing more space for commercial and retail businesses. This alternative is more likely than the Proposed Actions to leave the retail strip on Broadway and the manufacturing district on Amsterdam Avenue relatively unchanged.

*Impacts on Specific Industries*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not have an adverse effect on specific industries either within or outside the Project Area and study areas. Businesses subject to direct displacement by both the Proposed Actions and the 197-a Plan Alternative 1 vary in type and size, and are not concentrated in any specific industry sector. In addition, none of the businesses subject to displacement are essential to the survival of an industry sector within, or outside of, the study area.

*COMMUNITY FACILITIES AND SERVICES*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in any significant adverse impacts on community facilities and services. Like the Proposed Actions, it would not directly displace police, fire, public education, public day care,<sup>1</sup> or health care facilities.

As is the case in the No Action Alternative, in the 197-a Plan Alternative 1, Columbia University would still collaborate with the City of New York on the creation of a new public secondary school focused on education in science, math, and engineering. However, because the zoning supporting the 197-a Plan would not allow community facilities on the ground floors, except by Special Permit, the secondary school would have to be located on the third floor or higher, or would require a mayoral override of the zoning. Such overrides have been granted for new public schools in recent years.

In the 197-a Plan Alternative 1 development scenario, new residential uses in the Project Area would generate new demand for public schools, libraries, day care centers, and health care facilities. As shown in Table N.1-2, the development scenario would generate 55 elementary school children and a total of 86 public school students overall. Based on this number of students, similar to conditions in the Proposed Actions, there would be adequate capacity at public elementary and intermediate schools, libraries, and health care facilities to support this assumed level of growth. Therefore, the 197-a Plan Alternative 1, like the Proposed Actions, would not result in significant adverse impacts on community facilities.

**Table N.1-2  
CB9 Proposed 197-a Plan Alternative 1 Development Scenario: Projected New  
Housing Units and Estimated Number of Students Generated by the New  
Housing Units**

<b>Income Level of Units</b>	<b>Total Units</b>	<b>Projected Elementary Students</b>	<b>Projected Middle School Students</b>	<b>Projected High School Students</b>	<b>Total Students Generated</b>
Moderate-High Income	210	25	6	8	39
Low-income	211	30	6	11	47
<b>Total</b>	<b>421</b>	<b>55</b>	<b>12</b>	<b>19</b>	<b>86</b>
<b>Source:</b> Student generation rates are based on the <i>CEQR Technical Manual's</i> Table 3C-2, "Projected Public School Pupil Ratios in New Housing Units of All Sizes."					

*OPEN SPACE*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would, if realized, add worker and residential populations, as well as open space, and would create certain significant adverse impacts on open space. Since these impacts would occur in both 2015 and 2030, both analysis years are discussed. Both the Proposed Actions and the 197-a Plan Alternative 1 development scenario would result in a significant adverse indirect impact on passive open space in 2015. Both the Proposed Actions and the 197-a Plan Alternative 1 development scenario would create a significant, adverse indirect impact on passive open space in the non-residential study area in 2030, for which mitigation would be required. Unlike the

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<sup>1</sup> The estimated 221 units of affordable housing under the 197-a Plan Alternative development scenario are below the *CEQR Technical Manual* threshold of 357 to 417 units required to generate more than 50 children eligible for public day care (see Table 3C-4 on page 3C-5).

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Proposed Actions, however, the 197-a Plan Alternative 1 development scenario would not result in a significant adverse direct shadow impact on the I.S. 195 Playground, nor would it create a significant adverse indirect impact on active open space in the study area.

In the 197-a Plan Alternative 1 development scenario, the population of the study area and the amount of new open space would increase. New public, passive open space, approximately 0.41 acres (17,849 sf), would be provided on the triangular block on the west side of Broadway between West 125th and West 129th Streets (Acquisition for public use would be required to create this open space, since this site currently is not in public ownership.) Although the development scenario would provide new open space, it would be less than the 93,965 sf of publicly accessible open space that would be provided by the Proposed Actions for a difference of approximately 1.75 acres (76,111 sf). Thus, the 197-a Plan Alternative 1 development scenario would not provide all the open space benefits that would be realized with the Proposed Actions.

As discussed below, the 197-a Plan Alternative 1 development scenario would, if realized, increase the population of the study area by a maximum of 1,116 residents and 5,445 employees. In 2015, all open space ratios, in both the residential and non-residential study areas, would be slightly lower under the 197-a Plan Alternative 1 development scenario than with the Proposed Actions, indicating less open space available per resident and non-resident (see Table N.1-3).

**Table N.1-3**

**CB9 Proposed 197-a Plan Alternative 1 Development Scenario, Adequacy of Open Space Resources Compared with the Proposed Actions 2015 and 2030**

Ratio	City Guideline Ratio	No Build	Proposed Actions	197-a Plan Alternative <u>1</u>	Percent Change Proposed Actions	Percent Change 197-a Plan
		Ratio	Ratio	Ratio		
<b>2015 Non-Residential Study Area</b>						
Passive/non-residents	0.15	4.04	2.45*	2.42*	(39.4)	(40.1)
Passive/total population	0.40	0.80	0.71*	0.70*	(11.3)	(12.5)
<b>2015 Residential Study Area</b>						
Total/residents	2.50	1.65	1.65	1.64	0	(0.6)
Passive/residents	0.50	0.89	0.89	0.89	0	0
Active/residents	2.00	0.76	0.76	0.75	0	(1.3)
Passive/total population	0.39	0.64	0.61	0.61	(4.7)	(4.7)
<b>2030 Non-Residential Study Area</b>						
Passive/non-residents	0.15	4.04	1.66*	2.42*	(58.9)	(40.1)
Passive/total population	0.37	0.75	0.59*	0.66*	(21.3)	(12.0)
<b>2030 Residential Study Area</b>						
Total/residents	2.50	1.53	1.51	1.53	(1.1)	0
Passive/residents	0.50	0.83	0.83	0.82	0	(1.2)
Active/residents	2.00	0.71	0.69*	0.70	(2.8)	(1.4)
Passive/total population	0.38	0.61	0.55	0.58	(9.8)	(4.9)
<b>Note:</b> Ratios in acres per 1,000 people.						
* Results in a significant adverse impact						

In the non-residential study area, the combined passive open space ratio would decrease from 0.80 acres per 1,000 workers and residents in the No Build condition to 0.70 acres with the 197-a Plan Alternative 1, a decrease of approximately 12.5 percent. The passive open space ratio would decrease from 4.04 acres per 1,000 non-residents to 2.42, a decrease of approximately 40.1 percent. Although all passive open space ratios in the non-residential study area would continue to be above the levels recommended by the City, the substantial decrease in the passive

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open space ratios would result in a significant adverse impact with both the Proposed Actions and the 197-a Plan Alternative 1 (see Table N.1-3) in 2015.

Under the 197-a Plan Alternative 1 development scenario, the active open space ratio within the residential study area would decrease slightly, from 0.76 acres per 1,000 residents in the No Build condition to 0.75 acres, a decrease of approximately 1.0 percent. The passive open space ratio for the combined population would decrease by approximately 0.64 to 0.61 acres per 1,000 residents and workers. As with the Proposed Actions, the 197-a Plan Alternative 1 would not result in a significant adverse impact on open space in the residential study area in 2015.

In 2030, the 197-a Plan Alternative 1 development scenario's open space ratios would be higher than the Proposed Actions' ratios, since the Academic Mixed-Use Development would introduce a greater population of students, faculty, and other employees to the Project Area, which would outweigh the difference between the two proposals with respect to the amount of publicly accessible open space provided. As with the Proposed Actions, all open space ratios in the 197-a Plan Alternative 1 development scenario, except for the active and total open space ratios for the residential study area, would be above the City's open space guidelines. In the non-residential study area, the combined passive open space ratio would decrease from 0.75 acres per 1,000 workers and residents in the No Build condition to 0.66 acres with the 197-a Plan Alternative 1, a decrease of approximately 12 percent. The passive open space ratio would decrease from 4.04 acres per 1,000 non-residents to 2.42, a decrease of approximately 40.1 percent. Although all passive open space ratios in the non-residential study area would continue to be above the levels recommended by the City under both the Proposed Actions and the 197-a Plan Alternative 1 (see Table N.1-3), the substantial decrease in the passive open space ratios is considered to be a significant adverse impact for both the Proposed Actions and the 197-a Plan Alternative 1 in 2030.

Under the 197-a Plan Alternative 1 development scenario, the active open space ratio within the residential study area would decrease slightly, from 0.71 acres per 1,000 residents in the No Action condition to 0.70 acres, an approximately 1.4 percent decrease. Therefore, unlike the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not have a significant adverse active impact on open space in 2030. The passive open space ratio for the combined population would decrease by approximately 0.61 to 0.58 acres per 1,000 residents and workers. Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in a significant adverse indirect impact on passive open space in the residential study area in 2030.

Like the Proposed Actions, the development scenario under the 197-a Plan Alternative 1 would have an indirect impact on passive open space in the non-residential study area. However, since the development scenario would not generate as many potential new residents as the Proposed Actions, in contrast to the Proposed Actions, the 197-a Plan Alternative 1 would not have a significant indirect impact on active open space. As noted below, in "Shadows," because there would be no change in development on the block between West 132nd and West 133rd Streets between Broadway and Twelfth Avenue, and the buildings on the east side of Broadway, under the 197-a Plan Alternative 1, would be substantially lower than those of the Proposed Actions, the Proposed Actions' shadow impact on the I.S. 195 Playground between September and March would not occur.

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### *SHADOWS*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in any significant shadow impact on the West Harlem Waterfront park, the Broadway Malls, Montefiore Park, the Manhattanville Houses open spaces, or Riverside Park. Unlike the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in a significant adverse shadow impact on the I.S. 195 Playground. The development scenario under the 197-a Plan Alternative 1 does not include any new development on the block between West 132nd and West 133rd Streets, directly south of the I.S. 195 Playground. In addition, buildings on the east side of Broadway in Subdistrict 2 of the 197-a Plan Alternative 1 would not be as tall as those with the Proposed Actions. Assuming that the height of the new residential building on Block 1987, Lot 7 would be 110 feet high, a shadow study concluded that incremental shadows from this building would not reach the I.S. 195 Playground on the March/September, May/August and June analysis days. On the December analysis day, the building would cast an incremental shadow on a small section of the playground from approximately 10:00 AM to 11:15 AM. Therefore, the development under the 197-a Plan Alternative 1 would not cast significant new shadows on the I.S. 195 Playground north of West 133rd Street, whereas the Proposed Actions would result in a significant adverse impact on this sun-sensitive receptor.

Under the 197-a Plan Alternative 1 development scenario, there would be no new construction in Subdistrict 1, so there would be no incremental shadows on the West Harlem Waterfront park, as there would be with the Proposed Actions. However, shadows on the park from the new buildings in the Proposed Actions were found to be insignificant; accordingly, neither proposal would result in significant adverse shadow impacts on this open space.

Building heights in Subdistrict 2 under the 197-a Plan Alternative 1 would be lower than with the Proposed Actions. However, buildings with the Proposed Actions were found not to have shadow impacts on Montefiore Park, the Broadway Malls, the Manhattanville Houses open spaces, or Riverside Park. Accordingly, neither proposal would result in significant adverse shadow impacts on these facilities.

### *HISTORIC RESOURCES*

Since the Project Area has been determined not archaeologically sensitive, like the Proposed Actions, no archaeological resources would be disturbed in the 197-a Plan Alternative 1 development scenario. Unlike the Proposed Actions, however, development under the 197-a Plan Alternative 1 would have no adverse effects on any historic resources in the Project Area.

More specifically, the 197-a Plan Alternative 1 development scenario assumes conversion of the former Sheffield Farms Stable at 3229 Broadway to office/community facility use, rather than its demolition, as is proposed under the Proposed Actions, thus avoiding a potential significant adverse impact on this historic resource. However, while this is a conversion site under the development scenario, this building could be demolished under the 197-a Plan Alternative 1, since it is not a designated New York City Landmark (NYCL); this resource is listed only on the State and National Registers of Historic Places (S/NR), and there is no mechanism in the Zoning Resolution to require its preservation. Changes to this resource associated with conversion to office/community facility could require modifications to the interior and exterior, including windows and the ground floor. Without detailed plans regarding such conversion, it is not known what effect it would have on the historic character of this resource, much of which is associated with its interior configuration. However, unlike the Proposed Actions, the 197-a Plan Alternative 1 would not require demolition of this historic resource.

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The 197-a Plan Alternative 1 development scenario assumes conversion of the Claremont Theater building and overbuilding on a portion of the tax lot (Projected Development Site 34 in Figure 24-9). Since this building is an NYCL, any proposed changes to the property would be regulated and reviewed by LPC, and, like the Proposed Actions, this alternative would not result in a significant adverse impact on this historic resource.

Similar to the Proposed Actions, new construction adjacent to historic buildings could result in inadvertent damage, including ground-borne vibration, falling debris, and accidental damage from heavy machinery. In the 197-a Plan Alternative 1 development scenario, potential adverse impacts could also result from conversion of properties that include overbuilding adjacent to historic properties. Historic resources that could be affected through adjacent construction and/or overbuilding include the former Warren Nash Service Station building, the Studebaker Building, the former Sheffield Farms Stable, the Claremont Theater building, and the Manhattan Valley IRT viaduct. Under the 197-a Plan Alternative 1, construction would comply with the procedures set forth in DOB's *Technical Policy and Procedure Notice* (TPPN) #10/88, which is designed to provide for the protection of historic resources during construction.

### *URBAN DESIGN AND VISUAL RESOURCES*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in significant adverse impacts on the urban design and visual resources of the study area.

In Subdistrict 1, the development scenario assumes that the area's urban design would remain relatively unchanged from current conditions, except for the possible introduction of a small number of "super specialty" manufacturing uses with retail outlets that would enliven portions of the streetscape. By contrast with the Proposed Actions, the Twelfth Avenue corridor would not contain the retail and commercial buildings on the west side of the avenue. On the east side of the avenue, the 197-a Plan Alternative 1 would maintain the generally low scale buildings that line Twelfth Avenue, keeping the Riverside Drive viaduct visible from within the neighborhood. This contrasts with the Proposed Actions' community facilities buildings that would be tall, but would be set back from the viaduct to increase light and air to the avenue. Under the 197-a Plan Alternative 1, the existing bus depot, which straddles Subdistricts 1 and 2 on the full block bounded by Twelfth Avenue, Broadway, and West 132nd and West 133rd Streets, would remain, leaving the bus parking lot to front on the avenue in Subdistrict 1. In general, Twelfth Avenue, along with portions of the blocks to the east, would retain a manufacturing character defined by one- and two-story masonry buildings. Mostly blank masonry walls and ground-floor openings covered by roll-down metal security gates would continue to define the streetwalls, and other remaining elements of the streetscape would be narrow sidewalks and curb cuts. There would be no open market area along the east side of Twelfth Avenue and no widened sidewalks along the side streets that would open views through the area to the waterfront.

In the development scenario, new uses in Subdistrict 2 would be residential and community facility or commercial with some ground-floor retail and manufacturing space, rather than the institutional uses with ground-floor retail that would be developed with the Proposed Actions. The total new floor area (new construction, conversion, and conversion with expansion), if realized, would be considerably lower than that of the Proposed Actions. In addition, the 197-a Plan Alternative 1 development scenario assumes that 16 existing structures would be retained and converted to other uses, and therefore more of the existing built form would remain in the Project Area than with the Proposed Actions, which would retain only the former Warren Nash Service Station building (the Studebaker Building would be preserved and reused in the future

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without either the Proposed Actions or the 197-a Plan Alternative 1). Thus, in Subdistrict 2, the 197-a Plan Alternative 1 would create a mixture of new, mid-rise buildings interspersed with other existing mid- and low-rise structures, many of which would be converted to new uses.

Comparing the 197-a Plan Alternative 1 development scenario directly with the scenario for the rezoning's Subdistrict A (which includes all of the 197-a Plan Subdistrict 2 and the portion of Subdistrict 1 east of Twelfth Avenue), the majority of new buildings would be located midblock between Broadway and Twelfth Avenue, and West 129th and West 132nd Streets. Broadway would experience more building conversions than new development, and there would be no new development along Twelfth Avenue or on the block between Broadway and Twelfth Avenue/West 132nd and West 133rd Streets. This contrasts with the Proposed Actions, which would place new development all along the Broadway corridor and along Twelfth Avenue, extending up to West 133rd Street. All new development under the 197-a Plan Alternative 1 would be required to conform to prevailing streetwalls (six stories or 85 feet), and setbacks of 15 feet on wide streets and 20 feet on narrow streets would be required above six stories or 85 feet, whichever is less. Under the 197-a Plan Alternative 1, new buildings would be less bulky and shorter than the majority of buildings in the Academic Mixed-Use Development with the Proposed Actions. Buildings constructed under the 197-a Plan Alternative 1 development scenario would have smaller and more varied footprints than those built with the Proposed Actions, because it is assumed they would conform to existing lot sizes, and new buildings would typically be no taller than 128 feet due to streetwall, setback, and yard requirements.

Under the reasonable worst-case development scenario for the Proposed Actions, buildings in the Academic Mixed-Use Development would have large footprints and would be constructed within maximum building heights, resulting in heights ranging from 120 to 260 feet (160 to 320 feet with mechanical space). Under the 197-a Plan Alternative 1, there would be a less dramatic change to the streetscape than with the Proposed Actions, as there would be fewer new building façades and entrances, many more curb cuts and industrial entrances would remain, side-street sidewalks would not be widened, and no publicly accessible open space areas would be created between West 129th and West 133rd Streets. The open space assumed to be created under the 197-a Plan Alternative 1 would be a public park on the triangular block bounded by Broadway and West 125th and West 129th Streets, at the southern end of the Project Area. New ground-floor retail uses would enliven sections of the streetscape, intermixed with existing manufacturing and automotive-related uses. The settings of the area's visual resources—the Riverside Drive and Manhattan Valley IRT viaducts, the Studebaker Building, and the waterfront—would remain largely unaltered. There would be no widened views through the Project Area to the waterfront and the new park, and there would be no new midblock open areas from which to view the Studebaker Building. Along West 125th Street, the main pedestrian corridor to the waterfront, a service station and manufacturing buildings would continue to line the north side of the street from the intersection with West 129th Street to the new waterfront park.

Overall, the 197-a Plan Alternative 1 would retain more of the existing urban design and visual character of the Project Area than the Proposed Actions. Development would be less dense, buildings would be shorter, a large number of existing low-rise industrial buildings would remain, sidewalks would continue to be narrow, and there would be no interconnected system of publicly accessible open spaces within the Project Area. Like the Proposed Actions, the 197-a Plan Alternative 1 would not have an adverse impact on urban design and visual resources.

*NEIGHBORHOOD CHARACTER*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario, if realized, would not result in any significant adverse impact on neighborhood character in the Project Area or in the primary and secondary study areas. As discussed below, the 197-a Plan Alternative 1 development scenario would create a very different character in the Project Area than the Proposed Actions.

Neighborhood character is an amalgam of several elements that give an area its distinctive personality and help distinguish it from other neighborhoods. These components include land use, street layout, scale, type and style of development, historic features, patterns and volumes of traffic noise levels, and any other relevant physical or social characteristics. Not all of these elements affect neighborhood character in all cases; a neighborhood usually draws its character from a few determining elements. As discussed in Chapter 10, “Neighborhood Character,” the components that most determine neighborhood character in the Project Area and primary and secondary study areas, and that would also be affected by the Proposed Actions and the 197-a Plan Alternative 1 development scenario, are as follows:

- **Land Use:** Land use is considered in this alternatives comparison, because both the Proposed Actions and the 197-a Plan Alternative 1, if realized, would generate substantial changes in land use in the Project Area.
- **Urban Design and Visual Resources:** Both the Proposed Actions and the 197-a Plan Alternative 1 would introduce new design regulations and new development, so urban design and visual resources are included in this comparative analysis.
- **Historic Resources:** The Proposed Actions would result in significant adverse impacts on historic resources; this impact would not occur under the 197-a Plan Alternative 1. For comparative purposes, historic resources are considered in this analysis of neighborhood character.
- **Socioeconomic Conditions:** Both the Proposed Actions and the 197-a Plan Alternative 1 development scenario, if realized, would affect socioeconomic conditions, introducing new population and employment, and result in a significant indirect residential displacement impact in the primary study area. Therefore, socioeconomic conditions related to indirect residential displacement are considered in this comparative analysis.
- **Traffic and Pedestrians:** Since both the Proposed Actions and the 197-a Plan Alternative 1, if realized, would alter traffic and pedestrian patterns and cause significant adverse traffic impacts requiring mitigation, this category is considered in the neighborhood character analysis.
- **Noise Levels:** The Proposed Actions would result in a significant pedestrian level noise impact on West 125th Street in the Project Area. This impact would not occur with the 197-a Plan Alternative 1, although the alternative could result in a significant pedestrian level noise impact in a different location. Thus noise is considered in the comparative analysis.

One of the goals of the 197-a Plan Alternative 1 is to build on the existing social, economic, and cultural base of the district through an approach that would recognize, reinforce, and reinvigorate the ethnically and culturally diverse community. Therefore, the 197-a Plan Alternative 1 is intended to support and enhance the existing neighborhood character of the Project Area. The 197-a Plan Alternative 1 development scenario—which assumes a new land use pattern with considerable new construction and substantial conversion—would, if realized, change the neighborhood, but in a different way from that of the Proposed Actions. In general,

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the existing neighborhood character of the Project Area would be enhanced with the introduction of new manufacturing, residential, community facility, and commercial uses.

The 197-a Plan Alternative 1 development scenario would replace some of the aging industrial portions of the Project Area with a new mix of uses; however, the areas nearest the waterfront in Subdistrict 1 would remain largely unchanged. The 197-a Plan Alternative 1 would require new manufacturing uses in the first two floors of all development sites in Subdistrict 2. The development scenario assumes that this would occur in all converted buildings, and that the new construction sites would accommodate retail on the ground floor and community facility/office uses on the second floor by means of a Special Permit to waive the 80 percent manufacturing requirement. These ground-floor retail and second-floor community facility/office uses on new construction sites, similar to the active ground-floor requirement with the Proposed Actions, would enliven the streetscape.

Urban design resulting from the 197-a Plan Alternative 1 development scenario would be different from that of the Proposed Actions. The alternative would retain considerably more of the existing built form in Subdistricts 1 and 2 than that of the Proposed Actions, which would retain only the former Warren Nash Service Station building (the Studebaker Building is being preserved and reused in the future as a No Build project under both the Proposed Actions and the 197-a Plan Alternative 1). All new development in Subdistrict 2 would be required to maintain the existing streetwalls. There would also be different setback requirements under the 197-a Plan Alternative 1 than those for the Special Manhattanville Mixed-Use District. The development scenario assumes that new buildings in Subdistrict 2 would be less bulky and shorter than the majority of buildings in the Academic Mixed-Use Development with the Proposed Actions. Buildings constructed under this alternative would have smaller and more varied footprints than those built with the Proposed Actions. Unlike the Proposed Actions, the 197-a Plan Alternative 1 does not require demolition of the former Sheffield Farms Stable, a historic resource. However, this building is not critical to neighborhood character either in the Project Area or adjacent primary study area, and its loss would not significantly affect neighborhood character with the Proposed Actions.

The new residential, commercial, office, retail, and community facility uses that would be developed in the 197-a Plan Alternative 1 development scenario, if realized, would introduce new workers seeking housing in the area and would increase the residential appeal of the area, which could result in a significant indirect residential displacement of the at-risk population in the primary study area. However, the likelihood of an impact occurring would be less under the 197-a Plan Alternative 1 than with the Proposed Actions, and as is the case of the Proposed Actions, housing in the primary study area would remain typified by large publicly subsidized housing complexes and other rent regulated apartments, representing 73.1 percent of all units in the primary study area, which would be unaffected by both the Proposed Actions and the 197-a Plan Alternative 1. Therefore, the significant adverse indirect residential displacement impact of the 197-a Plan Alternative 1 would not result in a significant adverse impact on neighborhood character. Thus, the socioeconomic effects of both the CB9 proposed 197-a Plan Alternative 1 and the Proposed Actions, although different, would not produce significant adverse impacts on neighborhood character.

Along with the increase in density and activity, the 197-a Plan Alternative 1 development scenario would, if realized, increase travel demand, including auto and truck trips, transit riders, and pedestrians, although the increase would be less than that of the Proposed Actions. Traffic impacts requiring mitigation would occur in Subdistricts 1 and 2; these impacts would be

comparable to those of the Proposed Actions without its transportation improvements and greater than those of the Proposed Actions with transportation improvements (see discussion below). Like the Proposed Actions, off-site impacts are predicted to occur along the 125th Street corridor under the 197-a Plan Alternative 1 development scenario. However, 125th Street is a street that is already heavily traveled and subject to congestion, so, like the Proposed Actions, the change from the 197-a Plan Alternative 1 development scenario would not affect neighborhood character there.

A review of the pedestrian locations that would be significantly and adversely affected with the Proposed Actions without project transportation improvements shows that the 197-a Plan Alternative 1 development scenario would also result in significant adverse pedestrian impacts at the Broadway/West 125th Street and Broadway/West 129th Street west crosswalks, but during fewer time periods, and it would not result in significant adverse pedestrian impacts at the Broadway/West 130th Street west crosswalk. These impacts could be mitigated, and none of them are predicted to be large enough or persistent enough to create an adverse impact on neighborhood character. Accordingly, in the case of both the Proposed Actions without transportation improvements and the 197-a Plan Alternative 1 development scenario, the pedestrian impacts would not affect neighborhood character.

The unmitigated significant noise impact attributed to the Proposed Actions (see Chapter 20, “Noise”) on West 125th Street near Twelfth Avenue would be caused by the traffic improvement proposed as part of the Proposed Actions at that location; this impact would not occur under the 197-a Plan Alternative 1. However, this noise impact under the Proposed Actions would not affect neighborhood character; thus, neither the Proposed Actions nor the 197-a Plan Alternative 1 would result in significant adverse impacts on neighborhood character with respect to noise.

Overall, the 197-a Plan Alternative 1, like the Proposed Actions, would not result in significant adverse impacts on neighborhood character.

#### *NATURAL RESOURCES*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would increase the concentration of pollutants during a CSO discharge to the Hudson River, although to a lesser extent than the Proposed Actions. The potential for an increased loss of migratory birds due to building collisions would be lower, due to the reduced level of development expected with the 197-a Plan Alternative 1 development scenario. As discussed in Chapter 11, “Natural Resources,” the Proposed Actions would not result in significant adverse impacts on water quality, terrestrial resources, wetlands, floodplains, aquatic resources, or endangered, threatened, or special concern species. The lower amounts of development under the 197-a Plan Alternative 1 development scenario would therefore similarly not result in significant adverse impacts on natural resources.

#### *HAZARDOUS MATERIALS*

Generally, developments that may occur within the Project Area in the 197-a Plan Alternative 1 could result in the exposure of construction workers and nearby residents to hazardous materials, if development were to occur on any lot in the Project Area that has the potential for hazardous materials contamination. However, it is assumed that E-designations would be assigned to all projected development sites in Subdistrict 2 for the 197-a Plan Alternative 1 development scenario, and, therefore, the 197-a Plan Alternative 1, like the Proposed Actions, would not result in significant adverse hazardous materials impacts. Unlike the Proposed Actions, under the

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197-a Plan Alternative 1, portions of the Project Area would remain in their current condition, and subsurface conditions would be largely the same as they are now. There would be a low potential for disturbance of hazardous materials at these locations, but unlike with the Proposed Actions (where remediation would be performed in health and safety plans), there would be little or no remediation of hazardous materials at these locations.

### *WATERFRONT REVITALIZATION PROGRAM*

Like the Proposed Actions, the 197-a Plan Alternative 1 would conform to the policies of the City's Waterfront Revitalization Program and would further the goal of encouraging commercial and residential development within an appropriate coastal zone area. The 197-a Plan Alternative 1 would result in less development within the coastal zone than the Proposed Actions. The 197-a Plan Alternative 1 development scenario, if realized, would replace some of the existing automotive uses, storage facilities, and industrial uses with new residential, commercial, community facility, and manufacturing development. While this development would not occur to the same extent as with the Proposed Actions, it would enliven and attract residents and visitors to the Manhattanville waterfront and the new West Harlem Waterfront park. However, the streetwall requirements for the 197-a Plan Alternative 1 would not provide the widened view corridors that would result from the setback requirements with the Proposed Actions. Overall, with less development than the Proposed Actions, the 197-a Plan Alternative 1 would generate fewer visitors, residents, and workers to the coastal zone and the proposed West Harlem Waterfront park than the Proposed Actions.

### *INFRASTRUCTURE*

The 197-a Plan Alternative 1 would generate less demand for City water supply and sewer services than the Proposed Actions. Based on the projected development scenario, the water demand for the 197-a Plan Alternative 1 would be estimated at approximately 516,930 gallons per day (gpd) of water. Like the Proposed Actions, this increased demand would not be large enough to significantly impact the water supply system's ability to deliver water reliably based on the *CEQR Technical Manual* criteria, and demand for water would not be expected to affect local water pressure. Based on the development scenario, the anticipated new sewage generation under the 197-a Plan Alternative 1 development scenario, if realized, would be about 278,060 gpd, which would be conveyed to the North River WPCP. This volume is about 0.17 percent of the State Pollutant Discharge Elimination System (SPDES) permitted flow to the North River WPCP. Like the Proposed Actions, the additional sanitary sewage expected to result from the CB9 proposed 197-a Plan Alternative 1 would not cause the North River WPCP to exceed its design capacity or SPDES permit flow limit.

The 197-a Plan Alternative 1 would also require the additional sewer segment upgrades and replacements needed with the Proposed Actions. Like the Proposed Actions, any new connections and sewer upgrades in the 197-a Plan Alternative 1 would require DEP-approved Drainage Plan amendments. Stormwater from development under the 197-A Plan Alternative 1 development scenario would flow into the existing combined sewers in the Project Area, whereas in the Proposed Actions, stormwater from West 133rd to West 130th Streets between Twelfth Avenue and Broadway would be collected through new storm sewers installed in those streets to reduce the total design flow to the sewers and at the North River WPCP. Therefore, like the Proposed Actions, the 197-a Plan Alternative 1 would not cause any significant adverse impacts to infrastructure systems.

*SOLID WASTE AND SANITATION SERVICES*

Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not result in a significant adverse impact on solid waste and sanitation services. Solid waste generated from the Project Area in the 197-a Plan Alternative 1 development scenario, if realized, would total approximately 168,100 pounds (or slightly more than 83 tons) per week. Unlike the Proposed Actions, private carters and not the New York City Department of Sanitation (DSNY) would collect, transport, and dispose of the majority of the solid waste in the 197-a Plan Alternative 1. This increase in solid waste generation is not expected to overburden New York City's solid waste handling services.

The 197-a Plan also recommends that a "Zero Waste Zone" be created for all of Community District 9. It is unclear, however, how a "Zero Waste Zone" would be implemented, or whether it is feasible to do so. Accordingly, the amount of solid waste cited above for the 197-a Plan Alternative 1 development scenario conservatively assumes that solid waste would be generated by this alternative at the normal rate.

*ENERGY*

Like the Proposed Actions, the 197-a Plan Alternative 1 would not result in any significant adverse impacts to energy systems. The increase in energy consumption in the 197-a Plan Alternative 1 development scenario, if realized, would be approximately 196,721 million British Thermal Units (BTUs), compared with 563,246 million BTUs under the Proposed Action. These amounts of additional consumption would be very small compared with the existing energy demands in the Con Edison service area, which total to 513 trillion BTUs. Further, this additional demand would not be expected to overburden the energy generation, transmission, and distribution system, and would not cause a significant adverse energy impact. In the 197-a Plan Alternative 1, the Con Edison cooling station located between West 131st and West 132nd Streets and Broadway and Twelfth Avenue would not have to be relocated.

*TRAFFIC AND PARKING*

Like the Proposed Actions without its transportation improvement components, the 197-a Plan Alternative 1 development scenario, if realized, would result in significant adverse traffic impacts at several locations in the Project Area (Subdistricts 1 and 2 in the Plan) and along 125th Street east of the Project Area. The mitigation required for both the Proposed Actions and the alternative would be similar. The 197-a Plan Alternative 1 development scenario, which would result in the removal of existing parking without any replacement, would create a greater parking shortfall and significant adverse parking impact than the Proposed Actions.

An analysis was prepared to compare the potential impacts of the Proposed Actions with those of the 197-a Plan Alternative 1 development scenario. This analysis includes developing trip generation estimates for the 197-a Plan Alternative 1 development scenario, comparing these estimates against projected trips generated by the reasonable worst-case transportation scenario for Subdistrict A of the Proposed Actions and the surrounding projected development (in Subdistrict B and the Other Area east of Broadway) in 2030, and identifying similarities and differences in traffic- and parking-related issues between the 197-a Plan Alternative 1 and the Proposed Actions without project improvements, as presented in Appendix M, "Impacts of the Proposed Actions without Transportation Improvements." The details of the trip generation and traffic analyses for the 197-a Plan Alternative 1 development scenario are presented in Section B, "CB9 Proposed A-Plan Alternative Traffic Analysis," and are summarized below.

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*Trip Generation*

The projection of future trips associated with the 197-a Plan Alternative 1 development scenario considers six types of use—residential, manufacturing, office, community facility, destination retail, and neighborhood retail—each having different travel characteristics. Since specific uses for the development parcels have not yet been identified, practical assumptions were made to develop the reasonable development scenario for analysis, as shown in Appendix Table N.1-14, and summarized as follows:

Office/Community Facility—Half of the space was assumed for typical office use and the other half for institutional office use.

Destination Retail—Within the conversion/expansion and new construction sites, 25 percent of the total retail space was assumed to be destination retail.

Neighborhood Retail—Within the conversion/expansion and new construction sites, 75 percent of the total retail space was assumed to be neighborhood retail.

The result of this analysis, shown in Tables N.1-4 and N.1-5, is that the 197-a Plan Alternative 1 development scenario would generate 38, 11, and 42 percent fewer total person trips than the Proposed Actions during the AM, midday, and PM peak hours, respectively; and the 197-a Plan Alternative 1 development scenario would generate 32, 23, and 47 percent fewer total vehicle trips than the Proposed Actions during the AM, midday, and PM peak hours, respectively.

**Table N.1-4**  
**Comparison of 197-a Plan Alternative 1 and Proposed Actions: Person Trips**

Peak Hour	Scenarios	Mode of Travel					Walk	Total
		Auto	Taxi	Subway	Bus	Other		
AM	Proposed Actions	1,126	126	2,457	504	133	1,489	5,835
	197-a Plan Alternative <u>1</u>	800	65	1,380	506	164	663	3,578
Midday	Proposed Actions	546	192	889	409	118	4,192	6,346
	197-a Plan Alternative <u>1</u>	243	238	855	294	2	3,998	5,630
PM	Proposed Actions	1,341	182	2,660	608	134	1,983	6,908
	197-a Plan Alternative <u>1</u>	722	86	1,397	487	143	1,152	3,987

**Notes:**  
Proposed Actions = Reasonable worst-case transportation scenario + Subdistrict B and the Other Area developments  
CB9 Proposed 197-a Plan = Mixed-use development scenario within Subdistrict 2  
Other = Columbia shuttle and commuter rail

**Table N.1-5**  
**Comparison of 197-a Plan Alternative 1 and Proposed Actions: Vehicle Trips**

Peak Hour	Scenarios	Type of Vehicle				Total
		Auto	Taxi	Truck	Shuttle	
AM	Proposed Actions	925	180	90	24	1,219
	197-a Plan Alternative <u>1</u>	665	86	76	0	827
Midday	Proposed Actions	400	214	92	24	730
	197-a Plan Alternative <u>1</u>	191	282	86	0	559
PM	Proposed Actions	1,061	242	38	24	1,365
	197-a Plan Alternative <u>1</u>	595	104	16	0	715

**Notes:**  
Proposed Actions = Reasonable worst-case transportation scenario + Subdistrict B and the Other Area developments  
CB9 Proposed 197-a Plan = Mixed-use development scenario within Subdistrict 2

*Traffic*<sup>1</sup>

While the 197-a Plan Alternative 1 development scenario, if realized, would generate fewer vehicle trips to and from the Project Area, these trips would flow in a different pattern from that of the Proposed Actions. The vehicle trips generated by the Proposed Actions would be oriented toward central access points to the underground garage and truck loading, whereas the trips under the alternative would be directed toward all the different individual buildings in the area. For purposes of evaluating potential traffic impacts, vehicle trips due to the 197-a Plan Alternative 1 development scenario were assumed to have origins/destinations at the blockfaces of the land uses generating the trips, and these trips were assigned to locations where on-street parking spaces are physically available. This unconstrained assignment did not take into account the shortfall of both on-street and off-street parking within the parking study area (totaling nearly 900 spaces) predicted for the 197-a Plan Alternative 1 [see parking discussion below].

Due to differences in land use within the Project Area, different parking assumptions, and different patterns of travel, the 197-a Plan Alternative 1, while generating fewer total vehicle trips than the Proposed Actions, would result in significant impacts at a comparable number of intersections to the Proposed Actions without traffic improvements. As shown in Table N.1-6, in the AM peak hour, the 197-a Plan Alternative 1 would generate significant adverse impacts at one or more movements in six signalized and six unsignalized intersections in the primary study area. By comparison, the Proposed Actions without the proposed traffic improvements would result in significant adverse impacts at one or more movements in five signalized and seven unsignalized intersections in the primary study area. In the secondary study area, the 197-Plan Alternative 1 would result in significant impacts at one or more movements in five intersections, which is slightly more than the Proposed Actions, which would significantly affect three such intersections.

In the evening peak hour, the results would be similar. The 197-a Plan Alternative 1 would generate significant adverse impacts at one or more movements in seven signalized and six unsignalized intersections, while the Proposed Actions without traffic improvements would similarly affect eight signalized and six unsignalized intersections in the primary study area. In the secondary study area, both the 197-Plan Alternative 1 and the Proposed Actions would result in significant traffic impacts at one or more movements in five intersections.

Not shown in Table N.1-6, but as discussed in Chapter 17, “Traffic and Parking,” the Proposed Actions with the proposed traffic improvements would create fewer significant adverse traffic impacts, particularly in the primary study area. In the morning peak hour, a significant impact would occur at only one signalized intersection and at no unsignalized intersections; in the evening peak hour, there would be no significant adverse traffic impacts at all in the primary study area. Because the traffic improvements would be in place within the Project Area and in adjacent locations in the primary study area, the benefits would accrue only to these two areas. In the secondary study area, the impacts of the Proposed Actions with traffic improvements would be the same as the Proposed Actions without such improvements.

Based on the comparisons in Table N.1-7, it is expected that the proposed mitigation measures outlined in Chapter 23, “Mitigation,” and Appendix M would be, for the most part, adequate in

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<sup>1</sup> The traffic and related analyses in this section have not been updated from the DEIS to include information available from the 125th Street Rezoning DEIS. It can be assumed that, with the additional information, the comparative analyses between the 197-a Plan Alternative 1 and the Proposed Actions would arrive at the same conclusions as the analysis discussed herein.

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mitigating the significant adverse traffic impacts associated with the 197-a Plan Alternative 1 development scenario. However, for certain locations, it is possible that the proposed mitigation measures would no longer be needed, a variation of the proposed mitigation measures would be more appropriate, or new mitigation measures would be needed for impacts that would not have occurred with the Proposed Actions. The results of this assessment are detailed in Section B, “CB9 Proposed A-Plan 1 Alternative Traffic Analysis,” and summarized in Table N.1-8.

**Table N.1-6**  
**Comparison of 197-a Plan Alternative 1 and Proposed Actions: Summary of Significantly Impacted Lane Groups at Study Area Locations**

Study Areas	Analysis Intersections	AM Peak Hour		PM Peak Hour	
		197-a	PA	197-a	PA
<b>Primary Study Area</b>					
Signalized Intersections	Marginal Street @ West 125th Street				
	Riverside Drive @ West 135th Street				2
	Twelfth Avenue @ West 133rd Street	2	2	1	3
	Twelfth Avenue @ West 132nd Street	1	1		
	Twelfth Avenue @ West 125th Street	1	1	1	1
	Broadway @ West 138th Street				
	Broadway Northbound @ West 135th Street				
	Broadway Southbound @ West 135th Street				
	Broadway Northbound @ West 133rd Street			1	1
	Broadway Southbound @ West 133rd Street			1	
	Broadway Northbound @ West 132nd Street				
	Broadway Southbound @ West 132nd Street				
	Broadway @ West 131st Street				
	Broadway @ West 130th Street				1
	Broadway @ West 129th Street	1			
	Broadway @ West 125th Street	3	4	1	6
Amsterdam Avenue @ West 135th Street			2	2	
Amsterdam Avenue @ West 125th Street	3	3	4	3	
Unsignalized Intersections	Marginal Street @ West 133rd Street	1	1	1	1
	Marginal Street @ West 132nd Street	1	1	1	1
	Marginal Street @ St. Clair Place	1	1	1	1
	Riverside Drive @ Tiemann Place				
	Twelfth Avenue @ West 131st Street	1	1	1	1
	Twelfth Avenue @ West 125th Street Southbound (R)				
	Twelfth Avenue @ St. Clair Place		1		
	Riverside Drive @ St. Clair Place	2	2	2	2
West 125th Street @ West 129th Street/St. Clair Place	3	2	3	3	
<b>Secondary Study Area</b>					
Signalized Intersections	Broadway @ West 110th Street				
	Broadway @ West 120th Street				
	Amsterdam Avenue @ West 120th Street				
	Frederick Douglass Boulevard @ West 125th Street	2	2	2	2
	Madison Avenue @ East 125th Street	1	1	1	1
	Second Avenue @ East 125th Street	3	3	2	3
	First Avenue @ East 125th Street	1		1	1
Broadway @ West 145th Street	2		1	1	
Unsignalized	First Avenue @ East 125th Street Southbound (R)				
<b>Totals</b>	<b>Significantly Impacted Lane Groups</b>	<b>29</b>	<b>26</b>	<b>27</b>	<b>36</b>
	<b>Significantly Impacted Intersections</b>	<b>17</b>	<b>15</b>	<b>18</b>	<b>19</b>
<b>Notes:</b> Lane groups = grouping of movements in one or more travel lanes 197-a = CB9 proposed 197-a Plan Alternative 1 development scenario PA = Proposed Actions without project improvements					

**Appendix N.1: CB9 Proposed 197-a Plan Alternative 1 Impact Analyses**

**Table N.1-7**  
**Comparison of 197-a Plan Alternative 1 and Proposed Actions: Lane Group Levels of Service at Study Area Locations**

Study Areas	Analysis Intersections	AM Peak Hour			PM Peak Hour		
		197-a	Same	PA	197-a	Same	PA
<b>Primary Study Area</b>							
Signalized Intersections	Marginal Street @ West 125th Street		2		2		
	Riverside Drive @ West 135th Street	1	3		1	4	
	Twelfth Avenue @ West 133rd Street	1	3		2	2	
	Twelfth Avenue @ West 132nd Street	1	3			4	1
	Twelfth Avenue @ West 125th Street	1	5			6	
	Broadway @ West 138th Street	1	3			4	
	Broadway Northbound @ West 135th Street		3			4	
	Broadway Southbound @ West 135th Street		4		1	4	
	Broadway Northbound @ West 133rd Street		4		2	1	1
	Broadway Southbound @ West 133rd Street		3			3	
	Broadway Northbound @ West 132nd Street		2			2	
	Broadway Southbound @ West 132nd Street		3			3	
	Broadway @ West 131st Street		5		1	3	1
	Broadway @ West 130th Street		3		1	2	
	Broadway @ West 129th Street	1	3	1		4	
	Broadway @ West 125th Street	3	6		4	5	
Amsterdam Avenue @ West 135th Street	1	4		3	2		
Amsterdam Avenue @ West 125th Street	1	7		1	6	1	
Unsignalized Intersections	Marginal Street @ West 133rd Street		2		2		
	Marginal Street @ West 132nd Street	1	2		1	2	
	Marginal Street @ St. Clair Place	1	1			2	
	Riverside Drive @ Tiemann Place		4			4	
	Twelfth Avenue @ West 131st Street		4		1	3	
	Twelfth Avenue @ West 125th Street Southbound (R)		1			1	
	Twelfth Avenue @ St. Clair Place	1	2			3	
	Riverside Drive @ St. Clair Place		3		1	2	
West 125th Street @ West 129th Street/St. Clair Place	1	2	1		4		
<b>Secondary Study Area</b>							
Signalized Intersections	Broadway @ West 110th Street		4	1	1	2	2
	Broadway @ West 120th Street		4			4	
	Amsterdam Avenue @ West 120th Street		5	1		6	
	Frederick Douglass Boulevard @ West 125th Street		6			5	
	Madison Avenue @ East 125th Street		3			3	
	Second Avenue @ East 125th Street		6			5	
	First Avenue @ East 125th Street		5			5	
Broadway @ West 145th Street		5			5		
Unsignalized	First Avenue @ East 125th Street Southbound (R)		1			1	
<b>Totals</b>		<b>15</b>	<b>126</b>	<b>4</b>	<b>20</b>	<b>120</b>	<b>6</b>
<b>Notes:</b>	Lane groups = grouping of movements in one or more travel lanes 197-a = more favorable LOS with 197-a Plan Alternative <u>1</u> development scenario PA = more favorable LOS with Proposed Actions without project improvements Same = LOS the same under both analysis scenarios						

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**Table N.1-8**

**Summary of Mitigation Assessment for 197-a Plan Alternative 1 Development Scenario**

<b>Study Areas</b>	<b>Analysis Intersections</b>	<b>AM Peak Hour</b>	<b>PM Peak Hour</b>
<b>Primary Study Area</b>			
Signalized Intersections	Marginal St @ W. 125th St		
	Riverside Dr @ W. 135th St		Eliminate PA mitigation
	Twelfth Ave @ W. 133rd St	PA mitigation	PA mitigation
	Twelfth Ave @ W. 132nd St	PA mitigation	
	Twelfth Ave @ W. 125th St	PA mitigation	PA mitigation
	Broadway @ W. 138th St		
	Broadway NB @ W. 135th St		
	Broadway SB @ W. 135th St		
	Broadway NB @ W. 133rd St		Adjusted PA mitigation
	Broadway SB @ W. 133rd St		New 197-a mitigation
	Broadway NB @ W. 132nd St		
	Broadway SB @ W. 132nd St		
	Broadway @ W. 131st St		
	Broadway @ W. 130th St		Eliminate PA mitigation
	Broadway @ W. 129th St	New 197-a mitigation	
Broadway @ W. 125th St	Unmitigatable*	Unmitigatable*	
Amsterdam Ave @ W. 135th St		PA mitigation	
Amsterdam Ave @ W. 125th St	PA mitigation	Adjusted PA mitigation	
Unsignalized Intersections	Marginal St @ W. 133rd St	PA mitigation	PA mitigation
	Marginal St @ W. 132nd St	PA mitigation	PA mitigation
	Marginal St @ St. Clair Pl	PA mitigation	PA mitigation
	Riverside Dr @ Tiemann Pl		
	Twelfth Ave @ W. 131st St	PA mitigation	PA mitigation
	Twelfth Ave @ W. 125th St SB (R)		
	Twelfth Ave @ St. Clair Pl	Eliminate PA mitigation	
	Riverside Dr @ St. Clair Pl	PA mitigation	PA mitigation
	W. 125th St @ W. 129th St/St. Clair Pl	PA mitigation	PA mitigation
<b>Secondary Study Area</b>			
Signalized Intersections	Broadway @ W. 110th St		
	Broadway @ W. 120th St		
	Amsterdam Ave @ W. 120th St		
	Frederick Douglass Blvd @ W. 125th St	Adjusted PA mitigation	PA mitigation
	Madison Ave @ E. 125th St	PA mitigation	PA mitigation
	Second Ave @ E. 125th St	PA mitigation	PA mitigation
	First Ave @ E. 125th St	New 197-a mitigation	PA mitigation
	Broadway @ W. 145th St	New 197-a mitigation	PA mitigation
Unsignalized	First Ave @ E. 125th St SB (R)		
<b>Notes:</b>	197-a = CB9 proposed 197-a Plan Alternative 1 development scenario PA = Proposed Actions without project improvements * Significant adverse impacts at this intersection are also unmitigatable under the Proposed Actions without project improvements.		

*Parking*

As shown in Table N.1-9, the 197-a Plan Alternative 1 development scenario, if realized, would result in a peak weekday demand of 982 parking spaces. It would also displace four existing parking facilities in the Project Area (sites 1, 2, 3, and 4, shown in Figures 17-11a and 17-11b) with new construction and conversions, without providing any new parking either to replace the loss or to accommodate the parking demands of the new businesses, employees, and residents. Three of the four parking facilities would be displaced by new construction, and the fourth, on West 129th Street, would be displaced by a conversion. In total, 609 public parking spaces would be lost.

**Table N.1-9**  
**Projected Parking Demand Generated by 197-a Plan Alternative 1**

Begin Time	Office		Residential		Destination Retail		Neighborhood Retail		Manufacturing		Grand Total		
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Accum
12:00 AM	0	0	3	3	0	0	0	0	0	0	3	3	98
1:00 AM	0	0	1	1	0	0	0	0	0	0	1	1	98
2:00 AM	0	0	1	1	0	0	0	0	0	0	1	1	98
3:00 AM	0	0	1	1	0	0	0	0	0	0	1	1	98
4:00 AM	0	0	1	1	0	0	0	0	0	0	1	1	98
5:00 AM	0	0	1	1	0	0	0	0	0	0	1	1	98
6:00 AM	0	0	0	2	0	0	0	0	0	0	0	2	96
7:00 AM	39	6	3	11	0	0	0	0	2	0	44	17	123
8:00 AM	545	28	6	25	1	1	2	2	42	13	596	69	650
9:00 AM	347	34	5	17	1	0	1	0	13	6	367	57	960
10:00 AM	90	66	6	11	2	1	2	1	4	3	104	82	982
11:00 AM	14	37	7	7	3	2	3	2	1	1	28	49	961
12:00 PM	44	79	8	8	9	9	11	11	6	6	78	113	926
1:00 PM	64	35	8	8	7	7	9	8	3	2	91	60	957
2:00 PM	38	19	7	7	5	5	5	6	1	2	56	39	974
3:00 PM	6	22	11	7	4	4	5	5	1	1	27	39	962
4:00 PM	53	431	23	13	4	4	6	6	20	35	106	489	579
5:00 PM	48	424	16	9	4	4	5	5	2	21	75	463	191
6:00 PM	11	100	21	11	4	5	5	6	1	5	42	127	106
7:00 PM	1	19	19	9	2	4	2	4	0	1	24	37	93
8:00 PM	0	0	10	2	0	0	0	0	0	0	10	2	101
9:00 PM	0	0	3	6	0	0	0	0	0	0	3	6	98
10:00 PM	0	0	6	6	0	0	0	0	0	0	6	6	98
11:00 PM	0	0	4	4	0	0	0	0	0	0	4	4	98
<b>Total</b>	<b>1,300</b>	<b>1,300</b>	<b>171</b>	<b>171</b>	<b>46</b>	<b>46</b>	<b>56</b>	<b>56</b>	<b>96</b>	<b>96</b>	<b>1,669</b>	<b>1,669</b>	

With the Proposed Actions, much of the parking demand projected for the Proposed Actions would be accommodated within various below-grade on-site parking facilities, whereas under the 197-a Plan Alternative 1 development scenario, more demand for on-street parking would result. Compared with the Proposed Actions, which were determined to result in an off-street significant adverse parking impact from a projected off-street parking shortfall of just over 120 spaces at facilities within one mile of the Project Area and no significant on-street parking impacts, the 197-a Plan Alternative 1 development scenario, if realized, would exhaust the area's on-street and off-street supply and is expected to result in both on- and off-street parking shortfalls. Because there would already be a lack of off-street parking supply in the area under the No Build condition and the 197-a Plan Alternative 1 development scenario would displace four existing parking facilities in the Project Area, the majority of the parking demand from the 197-a Plan development would likely seek available on-street parking. Absent the construction of new public and/or accessory parking facilities, which, as discussed in Chapter 23, could be created by market forces to accommodate the needs at that time, the predicted on- and off-street parking shortfalls under the 197-a Plan Alternative 1 would be approximately 360 and nearly 600 spaces within ½ mile and one mile of the Project Area, respectively (see discussion in Section B, "CB9 Proposed A-Plan 1 Alternative Traffic Analysis"). This parking shortfall, which represents over 12 percent of the area's total on- and off-street parking supply within ½ mile and one mile of the Project Area, would constitute a significant parking impact.

Mitigation for this impact could include requirements for the provision of parking in new construction in Subdistrict 2 and/or the construction of public parking facilities. Absent these measures, the predicted significant adverse parking impacts under the 197-a Plan Alternative 1 would be unmitigated.

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### *TRANSIT AND PEDESTRIANS*

#### *Subways*

Significant adverse subway impacts were identified for the Proposed Actions at the E101 and E102 escalators at the 125th Street No. 1 subway station. As shown in Table N.1-10, with substantially fewer projected peak hour subway trips, development under the 197-a Plan Alternative 1, if realized, would not be expected to result in significant adverse impacts at these station elements. Hence, it would also not warrant the recommended replacement of the existing escalators, as proposed mitigation for the Proposed Actions, with wider and more efficient escalators.

#### *Buses*

As shown above in Table N.1-4, similar peak-hour bus trips were projected for the Proposed Actions and the 197-a Plan Alternative 1 development scenario during the AM peak hour, and approximately 120 fewer trips were projected for the 197-a Plan Alternative 1 during the PM peak hour. During the AM peak hour, neither the Proposed Actions nor the 197-a Plan Alternative 1 would result in a significant adverse bus line-haul impact. However, as shown in Table N.1-11, during the PM peak hour, the eastbound Bx15 route would operate over capacity under both future scenarios, with the 197-a Plan Alternative 1 requiring one additional bus to mitigate the significant adverse bus line-haul impact, while three additional buses would be required to mitigate the significant adverse bus line-haul impact resulting from the Proposed Actions.

**Table N.1-10**

**Comparison of 197-a Plan Alternative 1 and Proposed Actions:  
Subway Station Elements: Volumes, V/SVCD Ratios, and LOS**

Stairways		Effective Width (feet)	Width (feet)	Pedestrian Volumes		15-Minute V/SVCD Ratio		LOS	
				PA	197-a	PA	197-a	PA	197-a
				AM Peak Period					
<b>137th Street/Broadway Station (1)</b>									
S1 (M1)	Broadway & W.137th St (NW corner)	5.20	4.20	310	311	0.62	0.62	B	B
S2 (M2)	Broadway & W.137th St (SW corner)	5.54	4.54	370	361	0.60	0.59	B	B
S3 (M3)	Broadway & W.137th St (NE corner N)	5.20	4.20	159	155	0.32	0.31	A	A
S4 (M4)	Broadway & W.137th St (NE corner S)	5.20	4.20	278	258	0.55	0.51	B	B
<b>125th Street/Broadway Station (1)</b>									
E102	Broadway & W.125th St (SW corner N Up)	4.71	2.00	100	112	0.19	0.21	A	A
E101	Broadway & W.125th St (SW corner, S Down)	4.71	2.00	531	379	1.01	0.72	D*	C
E103	Broadway & W.125th St (SE corner, Up)	4.71	2.00	190	190	0.36	0.36	A	A
S1	Broadway & W.125th St (SE corner)	5.00	4.00	247	233	0.52	0.49	B	B
P1	NW and SW downtown platform stairways	9.00	7.00	407	409	0.43	0.43	A	A
P2	NE and SE uptown platform stairways	9.34	7.34	720	563	0.82	0.64	C	B
<b>125th Street/St Nicholas Avenue Station (A/C/B/D)</b>									
S1	St. Nicholas & W.125th St (NE corner)	5.75	4.75	204	204	0.32	0.32	A	A
S2	St. Nicholas & W.125th St (SE corner)	5.84	4.84	448	448	0.69	0.69	B	B
S3	St. Nicholas & W.125th St (NW corner)	5.84	4.84	323	290	0.56	0.44	B	A
S4	St. Nicholas & W.125th St (SW corner)	5.92	4.92	417	385	0.63	0.58	B	B
<b>PM Peak Period</b>									
<b>137th Street/Broadway Station (1)</b>									
S1 (M1)	Broadway & W.137th St (NW corner)	5.20	4.20	282	278	0.50	0.49	B	B
S2 (M2)	Broadway & W.137th St (SW corner)	5.54	4.54	290	266	0.47	0.43	B	A
S3 (M3)	Broadway & W.137th St (NE corner N)	5.20	4.20	247	247	0.49	0.49	B	B
S4 (M4)	Broadway & W.137th St (NE corner S)	5.20	4.20	367	358	0.73	0.71	C	C
<b>125th Street/Broadway Station (1)</b>									
E102	Broadway & W.125th St (SW corner N Up)	4.71	2.00	536	379	1.02	0.72	D*	C
E101	Broadway & W.125th St (SW corner, S Down)	4.71	2.00	107	118	0.20	0.23	A	A
E103	Broadway & W.125th St (SE corner, Up)	4.71	2.00	137	123	0.26	0.23	A	A
S1	Broadway & W.125th St (SE corner)	5.00	4.00	210	210	0.44	0.44	A	A
P1	NW and SW downtown platform stairways	9.00	7.00	706	547	0.84	0.65	C	B
P2	NE and SE uptown platform stairways	9.34	7.34	443	442	0.50	0.50	B	B
<b>125th Street/St Nicholas Avenue Station (A/C/B/D)</b>									
S1	St. Nicholas & W.125th St (NE corner)	5.75	4.75	285	285	0.50	0.50	B	B
S2	St. Nicholas & W.125th St (SE corner)	5.84	4.84	421	421	0.64	0.64	B	B
S3	St. Nicholas & W.125th St (NW corner)	5.84	4.84	356	319	0.54	0.49	B	B
S4	St. Nicholas & W.125th St (SW corner)	5.92	4.92	398	361	0.60	0.54	B	B
<p><b>Note:</b> Capacities were calculated based on rates presented in NYCT, <i>Station Planning and Design Guidelines</i> (January 2001) in accordance with the <i>CEQR Technical Manual</i>. PA = Proposed Actions. * denotes significant adverse impact.</p>									

**Table N.1-11**

**Comparison of 197-a Plan Alternative 1 and Proposed Actions:  
Peak Hour Bx15 Bus Line-Haul**

Location	Buses/ Hour	Projected Load		Capacity		Over Capacity	
		PA	197-a	PA	197-a	PA	197-a
<b>AM PEAK PERIOD</b>							
Westbound @ Morningside Avenue & W.125th Street	8	64	64	65	65	-	-
Westbound @ NYCT Maximum Load Point	8	64	64	65	65	-	-
<b>PM PEAK PERIOD</b>							
Eastbound @ Morningside Avenue & W.125th Street	8	85*	69*	65	65	20	4
Eastbound @ NYCT Maximum Load Point	8	84*	75*	65	65	19	10
PA = Proposed Actions. * denotes significant adverse impact.							

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### *Pedestrians*

As shown above in Table N.1-4, the 197-a Plan Alternative 1 development scenario, if realized, would generate substantially lower numbers of total AM, midday, and PM peak hour person trips than the Proposed Actions. A review of the affected locations identified for the Proposed Actions without transportation improvements shows that the 197-a Plan Alternative 1 development scenario would also result in significant adverse pedestrian impacts at the Broadway/West 125th Street and Broadway/West 129th Street west crosswalks, but during fewer time periods. Unlike the Proposed Actions, it would not result in significant adverse pedestrian impacts at the Broadway/West 130th Street west crosswalk (see Table N.1-12). These crosswalk impacts could be fully mitigated in the manner described in Appendix M by widening the corresponding crosswalk locations, as follows:

- The significant adverse impact projected for the west crosswalk of Broadway and West 129th Street during the midday peak period could be mitigated by widening this crosswalk 1 foot, from 15 to 16 feet.
- The significant adverse impacts projected for the west crosswalk of Broadway and West 125th Street during the midday and PM peak periods could be mitigated by widening this crosswalk 4 feet, from 19 to 23 feet.

### *AIR QUALITY*

The 197-a Plan Alternative 1 development scenario, if realized, would add new community facility, commercial, open space, and residential uses to a portion of the Project Area, although at a much lower density as compared with the Proposed Actions. As described above in “Traffic and Parking,” travel to the destination uses proposed in the 197-a Plan Alternative 1 development scenario, including community facilities, offices, manufacturing space, and local retail, would share similar vehicular characteristics and peaking patterns with those with the Proposed Actions, although direction and location of traffic flow would differ. Overall, the volume of vehicles would be slightly lower than with the Proposed Actions, and even in the few locations where the number of cars and trucks would be greater than with the Proposed Actions, the difference would not be great enough to create substantial increases in CO concentrations. Like the Proposed Actions, the 197-a Plan Alternative 1 would not be expected to have a significant adverse impact on air quality from mobile sources of pollution.

**Table N.1-12**  
**Comparison of 197-a Plan Alternative 1 and Proposed Actions:**  
**Crosswalks: SFP and LOS**

Location	Cross walk	Street Width (feet)	Cross walk Width (feet)	Conditions with conflicting vehicles											
				AM		Midday		PM							
				SFP PA	LOS 197-a	SFP PA	LOS 197-a	SFP PA	LOS 197-a						
Twelfth Av and W.133rd St	North	60	10	1611.9	1611.9	A	A	998.6	886.6	A	A	1337.3	1337.3	A	A
	East	38	18	1934.0	1933.1	A	A	2058.0	1815.1	A	A	901.2	804.8	A	A
	South	60	10	345.9	317.9	A	A	257.5	249.4	A	A	180.2	164.8	A	A
	West	30	13	1319.7	1319.7	A	A	839.4	839.4	A	A	460.7	450.4	A	A
Broadway and W.133rd St	North	103	10	61.6	66.7	A	A	92.0	119.6	A	A	64.1	71.5	A	A
	East	30	24	146.7	168.6	A	A	120.8	135.5	A	A	105.5	113.3	A	A
	South	103	11	131.4	127.1	A	A	141.2	210.7	A	A	151.4	150.9	A	A
	West	38	17	104.6	147.2	A	A	153.3	183.7	A	A	101.1	129.1	A	A
Twelfth Av and W.132nd St	North	60	13	502.4	511.8	A	A	583.8	610.3	A	A	424.6	406.9	A	A
	East	30	16	451.5	363.2	A	A	585.7	400.2	A	A	329.2	245.2	A	A
	South	60	13	697.1	697.1	A	A	235.8	225.4	A	A	523.3	523.3	A	A
	West	30	14	1192.9	1132.5	A	A	707.8	665.7	A	A	868.7	835.9	A	A
Broadway and W.132nd St	North	102	13	797.1	666.4	A	A	957.3	620.6	A	A	730.0	619.5	A	A
	South	102	14	416.8	297.7	A	A	246.3	242.2	A	A	339.4	250.1	A	A
	West	30	14	51.7	144.2	B	A	47.2	190.9	B	A	43.9	126.8	B	A
Broadway and W.131st St	North	102	11	430.2	229.1	A	A	312.9	256.9	A	A	312.2	184.4	A	A
	East	52	14	115.9	65.4	A	A	94.1	74.7	A	A	105.0	66.1	A	A
	South	109	11	453.5	414.0	A	A	396.3	365.7	A	A	869.6	682.5	A	A
	West	34	19	53.3	114.4	B	A	43.6	76.2	B	A	40.5	86.2	B	A
Broadway and W.130th St	North	110	11	1246.3	1088.7	A	A	665.5	741.0	A	A	950.2	822.8	A	A
	South	110	11	296.5	265.8	A	A	167.0	163.4	A	A	286.3	286.3	A	A
	West	29	11	25.1	46.9	C	B	19.1	25.9	D*	C	16.3	34.7	D*	C
Twelfth Av and W.125th St	North	110	12	618.1	616.0	A	A	596.6	599.7	A	A	396.6	390.4	A	A
	East	70	12	240.0	232.1	A	A	591.3	548.6	A	A	316.7	252.9	A	A
	South	134	11	1209.8	1209.5	A	A	1082.4	979.1	A	A	979.6	894.2	A	A
	West	70	12	424.5	449.8	A	A	363.8	363.8	A	A	272.6	263.2	A	A
Broadway and W.129th St	North	110	11	173.2	287.4	A	A	111.0	144.7	A	A	124.6	155.5	A	A
	East	50	15	72.9	55.2	A	B	63.1	58.6	A	B	69.4	52.6	A	B
	South	115	15	197.0	271.6	A	A	104.5	110.7	A	A	142.1	166.9	A	A
	West	30	15	24.4	37.7	C	C	19.0	19.7	D*	D*	15.8	28.3	D*	C
Broadway and W.125th St	North	118	17	74.9	115.9	A	A	49.8	43.5	B	B	68.1	83.3	A	A
	East	70	13	28.4	25.3	C	C	27.6	25.8	C	C	26.9	22.7	C	D
	South	118	14	51.1	80.6	B	A	33.0	29.4	C	C	44.2	46.3	B	B
	West	70	19	14.98	25.2	E*	C	14.6	16.7	E*	D*	11.2	18.5	E*	D*

**Note:** SFP = square feet per pedestrian. PA = Proposed Actions. \* denotes significant adverse impact.

Under the 197-a Plan Alternative 1 development scenario, it is anticipated that new buildings would have separate HVAC systems, whereas most of the heating and cooling for the University buildings with the Proposed Actions would be provided by the proposed central energy plants. A screening analysis was performed to assess air quality impacts associated with emissions from the 197-a Plan Alternative 1 development scenario HVAC systems. The methodology described in the *CEQR Technical Manual* was used for the analysis and considered impacts on sensitive uses (see Chapter 19, Air Quality,” for a description of the methodology).

Each of the proposed development sites was evaluated to assess impacts on existing buildings and other projected development sites (i.e., project-on-project impacts). In addition, other proposed residential developments (i.e., No Build developments) were reviewed for analysis as potential receptor sites. The analysis was performed assuming both natural gas and No. 4 fuel oil as the HVAC systems’ fuel types. The primary pollutant of concern when burning natural gas is nitrogen dioxide (NO<sub>2</sub>), and when burning oil, sulfur dioxide (SO<sub>2</sub>).

The initial *CEQR Technical Manual* screening method, which is very conservative, was undertaken for all sites for No. 4 fuel oil and for natural gas as the type of fuel to be used in the

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HVAC system. In all cases, the HVAC stack was assumed to be placed at the edge of the roof closest to the nearest building. The screening analysis determined that at most of the development sites, utilizing either fuel would not result in significant adverse air quality impacts. For Sites 20 and 33, the screening analysis determined that based on No. 4 oil as the fuel type and the maximum proposed development size, the distance from the nearest receptor of a similar or greater height was less than the allowable distance in Figure 3Q-6 of the *CEQR Technical Manual*. However, for each of these sites, the screening analysis passed when assuming natural gas as the fuel type. For Sites 4A, 4B, 14, 18A, 18B and 23, the screening analysis determined the distance from the nearest receptor of a similar or greater height was less than the allowable distance in Figure 3Q-6 and 3Q-9 of the *CEQR Technical Manual* using No. 4 oil or natural gas as the fuel type, respectively. Therefore, for these sites, a refined air quality analysis was undertaken utilizing the U.S. Environmental Protection Agency (EPA) AERMOD dispersion model. The results of the analysis determined that maximum NO<sub>2</sub> concentrations, when added to maximum monitored background concentrations, would be less than the NAAQS utilizing natural gas. When utilizing No. 4 oil, SO<sub>2</sub> maximum concentrations were determined to be below NAAQS for Sites 14 and 18A. At each of the other sites, the HVAC stacks would need to be placed at a minimum distance from the nearest receptor site. Therefore, under the 197-a Plan Alternative 1, an E-designation would be incorporated into the rezoning proposal for each of the affected sites, to preclude the potential for significant adverse air quality impacts on other projected developments from the HVAC emissions. The E-designation would provide restrictions regarding the location of HVAC exhaust stacks and/or require the use of natural gas for fossil fuel-fired HVAC equipment.

Therefore, like the Proposed Actions, the 197-a Plan Alternative 1 would not be expected to result in significant adverse impacts on air quality from stationary sources of pollution. It is expected that no violations of the NAAQS would be predicted to occur in the 197-a Plan Alternative 1, and this alternative would be consistent with the New York SIP.

The juxtaposition of new community facilities and existing or new manufacturing operations that would coexist as part of the 197-a Plan Alternative 1 raises the question of possible air quality issues with respect to manufacturing or processing facilities and potential sensitive uses under the 197-a Plan Alternative 1 development scenario. These potential issues were intended to be addressed between the DEIS and FEIS. However, since that time, CB9 has revised the 197-a Plan, and this alternative is referred to as 197-a Plan Alternative 2 in Chapter 24, "Alternatives," of this FEIS. These issues are addressed in the analysis of the 197-a Plan Alternative 2 in Chapter 24.

### *NOISE*

To assess potential noise impacts of the 197-a Plan Alternative 1 development scenario, a noise analysis was performed using the same analysis methodologies that were used for impact analyses of the Proposed Actions. This analysis examined potential noise impacts at three noise receptors—Sites 6, 10, and 13—for the 2030 analysis year. These three noise receptor sites were selected for analysis because they were the locations where, based upon the analyses of the Proposed Actions (both with and without proposed traffic improvements), the largest incremental change in noise levels would be expected. (Site 6 was chosen because it is a location which is fairly sensitive to increased project-generated traffic; Site 10 was chosen because this is the only location where the Proposed Actions with traffic improvements result would result in a significant noise impact; and Site 13 was selected because it is a location which is fairly sensitive to increased project-generated traffic.) The noise analysis for the 197-a Plan

**Appendix N.1: CB9 Proposed 197-a Plan Alternative 1 Impact Analyses**

Alternative 1 development scenario was performed using traffic conditions without project proposed traffic improvements.

The 197-a Plan Alternative 1 development scenario would, if realized, generate fewer vehicle trips than the Proposed Actions, and those trips would be distributed differently on the network than for the Proposed Actions; this condition applies to the Proposed Actions both with and without transportation improvements. However, as shown in Table N.1-13, noise levels with the 197-a Plan Alternative 1 development scenario would be comparable to noise levels with the Proposed Actions without traffic improvements. ( $L_{10}$  values for the 197-a Plan Alternative 1 are presented in Section B, “CB9 Proposed A-Plan 1 Alternative Traffic Analysis”). Both the 197-a Plan Alternative 1 development scenario and the Proposed Actions scenario without transportation improvements would not have a midblock traffic signal on West 125th Street between Broadway and Twelfth Avenue (to facilitate pedestrian movements), and, therefore, both scenarios would not result in significant noise impacts at receptor Site 10. At all other locations, the 197-a Plan Alternative 1 development scenario, similar to the Proposed Actions, both with and without traffic improvements, would not result in any significant noise impacts.

**Table N.1-13  
 $L_{eq(1)}$  Noise Levels for the 197-a Plan Alternative 1 in the Year 2030**

Site	Location	Time Period	No Build	197-a Plan Alternative 1		Proposed Actions With Improvements		Proposed Actions Without Improvements	
				Build	Increase	Build	Increase	Build	Increase
6	12th Av, W131–W132	AM	75.7	75.8	0.1	77.2	1.5	77.2	1.5
		PM	68.1	69.0	0.9	69.5	1.4	69.4	1.3
10	W125th, 12th Av –St Clair PI	AM	69.8	69.3	-0.5	73.3	<b>3.5</b>	69.2	-0.6
		PM	69.8	69.7	-0.1	74.7	<b>4.9</b>	69.4	-0.4
13	B'way, Tiemann PI–W125th	AM	77.2	77.6	0.4	77.0	-0.2	77.7	0.5
		PM	76.2	76.9	0.7	76.5	0.3	76.9	0.7

**Note:** Noise levels in bold denotes values that exceed CEQR significant impact criteria.

It is expected that comparable levels of attenuation, at the same locations, would be necessary under the 197-a Plan Alternative 1 as those specified under the Proposed Actions.

**CONSTRUCTION**

The 197-a Plan Alternative 1 development scenario, if realized, would result in new manufacturing, community facility, commercial, open space, and residential uses on a portion of the Project Area, although to a lower density as compared with the Proposed Actions. Of the 35 sites identified as possible for development in Subdistrict 2 of the 197-a Plan Alternative 1, 15 would likely undergo conversion, and 20 would require new construction. The 197-a Plan does not assume the implementation of the state-of-the-art air quality pollutant emission reduction program nor assure the implementation of the noise reduction measures committed to by Columbia University for construction in Subdistrict A for the Proposed Actions (see Chapter 21 for a discussion of the emission reduction and noise reduction program commitments). Accordingly, although the alternative would be smaller in scale and its construction activities shorter in duration than those of the Proposed Actions, the potential for construction impacts would exist. However, similar to construction on sites under the Proposed Actions located outside the Academic Mixed-Use Area, E-designations or similar measures could be applied to

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development sites in order to provide for emission and noise reduction measures. In the event the E-designations enacted as part of any rezoning required for the 197-a Plan, do not fully address the potential for impacts, construction associated with the Plan could result in significant adverse air quality impacts.

Economic benefits attributable to construction expenditures and construction jobs are a direct function of the cost of construction. Since the 197-Plan Alternative 1 development scenario, if realized, would result in a development that would be considerably smaller than that of the Proposed Actions, its economic benefits during construction would be proportionally smaller, as well. Although no projection of likely construction cost are available, based on typical cost per square foot, the 197-a Plan Alternative 1 development would likely entail construction costs of about 10 percent of those under the Proposed Actions. As a result, the economic benefits attributable to construction expenditures and construction jobs would be approximately 10 percent of those that would result with the Proposed Actions, or about \$1 billion in total economic activity.

### ***PUBLIC HEALTH***

As discussed in Chapter 22, “Public Health,” potential public health impacts are informed by potential impacts in other impact areas, including air quality, noise, and hazardous materials. Like the Proposed Actions, the 197-a Plan Alternative 1 development scenario would not be expected to result in significant adverse impacts on air quality from stationary or mobile sources of air pollution. With E-designations or similar measures, construction under the 197-a Plan Alternative 1 would also not be expected to result in significant adverse impacts on air quality during construction.

The Proposed Actions would have a significant unmitigated pedestrian-level noise impact on West 125th Street near Twelfth Avenue; the 197-a Plan Alternative 1 would not cause this impact. At all other locations, the 197-a Plan Alternative 1 development scenario, similar to the Proposed Actions, both with and without traffic improvements, would not result in any significant noise impacts. Also as with the Proposed Actions, construction under the 197-a Plan Alternative 1 could result in limited periods of time during which there would be intrusive and annoying noise levels at some locations, which would not rise to the level of being significant adverse impacts. These noise levels at discrete locations and the predicted overall changes in noise levels would not be large enough to significantly affect public health. Therefore, like the Proposed Actions, no significant adverse health impacts from noise are expected from operation and construction of the 197-a Plan Alternative 1 development scenario.

The 197-a Plan Alternative 1, like the Proposed Actions, would also not result in significant adverse hazardous materials impacts. Therefore, no significant adverse public health impacts related to hazardous materials are expected to occur as a result of the either the Proposed Actions or the 197-a Plan Alternative 1.

## **B. TRAFFIC**

### **TRAVEL DEMAND ASSUMPTIONS**

The CB9 proposed 197-a Plan would result in different uses within the Project Area. The travel demand assumptions for developing the trip estimates presented in Chapter 24, “Alternatives,” are summarized in Table N.1-14.

**Table N.1-14**

**Travel Demand Assumptions for the CB9 Proposed 197-a Plan Alternative**

	Manufacturing Component		Residential Component		Office/Community Facility Component		Destination Retail Component		Neighborhood Retail Component			
<b>Daily Trip Rates</b>	(1,4)		(6,7)		(1,8)		(1,9)		(1,9)			
Person Trips	5.0		8,075		15.34		47.42		47.42			
Truck Trips	0.2		0.03		0.2		0.35		0.35			
<b>Modal Split</b>	(3) (10)		(3) (3)		(3) (10)		(1,9) (1,9)		(1) (1)			
	AM/PM	MD	AM/PM	MD	AM/PM	MD	AM/PM	MD	AM/PM	MD		
Auto	26.0%	5.0%	12.0%	12.0%	26.0%	5.0%	5.0%	5.0%	2.0%	2.0%		
Taxi	1.5%	5.0%	3.0%	3.0%	1.5%	5.0%	4.0%	4.0%	3.0%	3.0%		
Subway	39.5%	10.0%	52.0%	52.0%	39.5%	10.0%	20.0%	20.0%	20.0%	20.0%		
Bus	15.5%	5.0%	12.5%	12.5%	15.5%	5.0%	5.0%	5.0%	5.0%	5.0%		
Commuter Rail	5.5%	0.0%	1.5%	1.5%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%		
Walk	12.0%	75.0%	19.0%	19.0%	12.0%	75.0%	66.0%	66.0%	70.0%	70.0%		
<b>Total</b>	100%		100%		100%		100%		100%			
<b>Vehicle Occupancy</b>	(2,3)		(3,10)		(2,3)		(2)		(2)			
Auto	1.20		1.20		1.20		1.60		1.60			
Taxi	1.40		1.20		1.40		1.20		1.20			
<b>Temporal Distribution</b>	(1,4)		(5,6)		(1,2)		(1)		(1)			
<b>Person Trips</b>	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
AM Peak Hour	19.1%	77.0%	23.0%	9.1%	20.0%	80.0%	14.0%	95.0%	5.0%	3.1%	50.0%	50.0%
MD Peak Hour	20.5%	48.0%	52.0%	4.7%	51.0%	49.0%	15.6%	36.0%	64.0%	19.0%	50.0%	50.0%
PM Peak Hour	19.3%	36.0%	64.0%	10.7%	65.0%	35.0%	11.8%	11.0%	89.0%	9.6%	50.0%	50.0%
<b>Truck Trips</b>												
AM Peak Hour		10.0%			9.7%			10.0%			8.0%	
MD Peak Hour		11.0%			9.1%			11.0%			11.0%	
PM Peak Hour		2.0%			5.1%			2.0%			2.0%	
<b>Source:</b>	(1) Harlem Park Development EAS (May 2004) (2) Harlem Center Project EA (December 1999) (3) Census Data, US Census Bureau (4) ITE Trip Generation Manual, 7th Edition (5) Urban Space for Pedestrians (1975), Pushkarev & Zupan (6) Motor Trucks in the Metropolis (1969), Wilbur Smith Associates (7) CEQR Technical Manual (8) Columbia University Department of Facilities Planning and Space Management (July 2004, June 2006) (9) Retail and Industrial Zoning Text Amendments FGEIS (October 1996) (10) AKRF assumptions and comparisons of various sources											

**DETAILED TRAFFIC ANALYSIS**

Both the Proposed Actions and the CB9 proposed 197-a Plan would result in primarily destination uses, with a relatively smaller portion of housing. Travel to these destination uses, including community facilities, offices, manufacturing space, and local retail, would share similar characteristics and peaking patterns among the two alternatives. As discussed in Chapter 17, “Traffic and Parking,” the Henry Hudson Parkway is the primary highway connection to the area, with West 125th Street, Riverside Drive, Broadway, and Amsterdam Avenue providing key local access. Travel to area destinations with either the Proposed Actions or the CB9 proposed 197-a Plan would involve traversing one or more of these corridors and follow similar travel patterns. However, the vehicle trips generated by the Proposed Actions would be oriented toward central access points to the underground garage and truck loading, whereas the trips under this alternative would be directed toward all the available on-street parking spaces in the area. The AM and PM peak hour vehicle trip assignments are illustrated in Figures N.1-1 to N.1-6 for the primary study area, and in Figures N.1-7 to N.1-12 for the secondary study area. The corresponding future AM and PM peak hour traffic networks are shown in Figures N.1-13 and N.1-14, respectively, for the primary study area, and in Figures N.1-15 and N.1-16, respectively, for the secondary study area.

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### *2030 197-A PLAN DEVELOPMENT SCENARIO BUILD ANALYSIS*

A detailed analysis of intersection operations was conducted for the same intersections analyzed for the Proposed Actions. The results comparing the future 2030 condition with the implementation of the CB9 proposed 197-a Plan and the 2030 No Build condition are presented in Tables N.1-2 through N.1-5. In addition, analysis results for the 2030 Build and Mitigated Build conditions<sup>1</sup> are included for comparison. Overall, the CB9 proposed 197-a Plan would result in significant adverse impacts at 17 intersections during the AM peak hour and 18 intersections during the PM peak hour. As detailed below and discussed in Chapter 24, “Alternatives,” the same or similar mitigation measures recommended for the 2030 Build condition are expected to be adequate in mitigating the CB9 proposed 197-a Plan significant traffic impacts, with the exception of those at the Broadway and West 125th Street intersection, where projected impacts would remain unmitigated. A quantitative mitigation analysis was intended to be provided for the FEIS. However, since that time, CB9 has revised the 197-a Plan and this alternative is referred to as 197-a Plan Alternative 2 in Chapter 24. The traffic-related impacts for the revised CB9 197-a Plan are addressed in Chapter 24.

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<sup>1</sup> For comparison purposes, analysis results presented for the Build and Mitigated Build conditions correspond to those in Appendix M for intersections within and bordering the Project Area and in Chapters 17 and 23 for the other study area intersections.

**Appendix N.1: CB9 Proposed 197-a Plan Alternative 1 Impact Analyses**

**1. Table N.1-15**

**Primary Study Area Signalized Intersection Level-of-Service Analysis**

Intersection	2030 AM Peak Hour												2030 PM Peak Hour																							
	No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation														
	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay												
Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS									
<b>Marginal Street @ West 125th Street</b>																																				
Southbound	LT	0.45	14.0	B	LT	0.46	14.1	B	LT	0.49	14.5	B		LT	0.65	17.5	B	LT	0.67	17.9	B	LT	0.75	20.0	B											
Westbound	L	0.52	26.0	C	L	0.53	26.2	C	L	0.53	26.2	C		L	0.59	27.3	C	L	0.62	28.0	C	L	0.60	27.6	C											
	Int.		19.7	B	Int.		19.8	B	Int.		19.8	B		Int.		21.4	C	Int.		22.1	C	Int.		22.9	C											
<b>Riverside Drive @ West 135th Street</b>																																				
Northbound	TR	0.25	8.3	A	TR	0.25	8.3	A	TR	0.23	8.2	A	T	0.20	12.2	B	TR	1.15	83.7	F	TR	1.12	71.2	E	TR	1.10	62.2	E	T	1.13	77.8	E				
									R	0.23	13.0	B															R	0.52	15.5	B						
Southbound																											DefL	0.98	110.7	F+	DefL	0.55	35.0	D		
Westbound	LT	0.94	19.8	B	LT	0.94	19.8	B	LT	0.97	24.6	C	LT	0.88	11.4	B	LT	0.14	7.6	A	LT	0.14	7.6	A				T	0.21	8.2	A	T	0.20	6.5	A	
	L	0.62	35.9	D	L	0.47	31.2	C	L	0.30	27.4	C	L	0.36	31.6	C	L	0.21	26.3	C	L	0.19	26.0	C	L	0.18	25.8	C	L	0.22	29.5	C	L	0.22	29.5	C
	R	0.47	32.8	C	R	0.47	32.8	C	R	0.51	33.9	C	R	0.61	42.6	D	R	0.66	40.9	D	R	0.66	40.9	D	R	0.74	46.3	D+	R	0.55	30.5	C	R	0.55	30.5	C
	Int.		19.7	B	Int.		19.0	B	Int.		22.0	C	Int.		14.4	B	Int.		72.6	E	Int.		62.3	E	Int.		57.3	E	Int.		59.8	E	Int.		59.8	E
<b>Twelfth Avenue @ West 133rd Street</b>																																				
Northbound	L	1.11	94.3	F	L	1.13	99.9	F+	L	1.25	149.5	F+	L	1.04	66.2	E	L	1.01	60.1	E	L	1.02	61.9	E	L	1.31	173.6	F+	L	0.97	45.0	D	L	0.97	45.0	D
	LTR	0.21	11.2	B	LTR	0.22	11.3	B	LTR	0.41	13.7	B	LTR	0.44	14.2	B	LTR	0.76	24.1	C	LTR	0.81	27.3	C	LTR	1.00	57.4	E+	LTR	0.96	42.7	D	LTR	0.96	42.7	D
Southbound	LTR	0.16	10.5	B	LTR	0.16	10.5	B	LTR	0.16	10.5	B	LTR	0.16	10.5	B	LTR	0.11	10.1	B	LTR	0.11	10.1	B	LTR	0.11	10.1	B	LTR	0.10	7.8	A	LTR	0.10	7.8	A
Westbound	LTR	0.80	40.5	D	LTR	0.91	52.5	D+	LTR	1.04	81.1	F+	LTR	0.49	25.0	C	LTR	1.36	206.1	F	LTR	1.57	297.4	F+	LTR	1.78	390.9	F+	LTR	1.01	64.2	E	LTR	1.01	64.2	E
	Int.		55.4	E	Int.		60.8	E	Int.		85.1	F	Int.		36.9	D	Int.		96.8	F	Int.		136.2	F	Int.		211.3	F	Int.		48.9	D	Int.		48.9	D
<b>Twelfth Avenue @ West 132nd Street</b>																																				
Northbound	LTR	0.52	14.4	B	LTR	0.53	14.5	B	LTR	0.64	16.5	B	LTR	0.63	16.3	B	LTR	0.74	19.1	B	LTR	0.77	20.1	C	LTR	0.87	25.0	C	LTR	0.86	24.4	C	LTR	0.86	24.4	C
Southbound																																				
	LTR	0.14	10.4	B	LTR	0.14	10.4	B	LTR	0.27	11.7	B	LTR	0.27	11.6	B	LTR	0.06	9.8	A	LTR	0.10	10.2	B	LTR	0.13	10.3	B	LTR	0.13	10.3	B	LTR	0.13	10.3	B
Eastbound	LTR	0.81	39.0	D	LTR	1.04	77.9	E+	LTR	1.41	225.1	F+	LTR	0.86	38.5	D	LTR	0.63	29.9	C	LTR	0.70	32.3	C	LTR	0.74	34.7	C	LTR	0.46	24.7	C	LTR	0.46	24.7	C
Westbound	LTR	0.12	20.8	C	LTR	0.17	21.5	C	LTR	0.19	21.5	C	LTR	0.19	21.5	C	LTR	0.12	20.7	C	LTR	0.20	21.6	C	LTR	0.45	25.8	C	LTR	0.45	25.8	C	LTR	0.45	25.8	C
	Int.		21.7	C	Int.		36.7	D	Int.		91.8	F	Int.		24.0	C	Int.		21.1	C	Int.		22.6	C	Int.		26.1	C	Int.		23.6	C	Int.		23.6	C
<b>Twelfth Avenue @ West 125th Street</b>																																				
Northbound	LTR	0.34	20.8	C	LTR	0.44	22.5	C	LTR	0.57	25.3	C	LTR	0.63	29.1	C	LTR	0.45	22.7	C	LTR	0.50	23.7	C	LTR	0.52	24.0	C	LTR	0.52	24.0	C	LTR	0.52	24.0	C
Southbound	LT	0.42	22.9	C	LT	0.52	25.4	C	LT	0.46	23.9	C	LT	0.51	27.6	C	LT	0.39	22.8	C	LT	0.52	26.8	C	LT	0.56	29.3	C	LT	0.56	29.3	C	LT	0.56	29.3	C
Eastbound	LTR	0.22	13.0	B	LTR	0.23	13.1	B	LTR	0.23	13.1	B	LTR	0.22	11.5	B	LTR	0.40	14.9	B	LTR	0.41	15.2	B	LTR	0.44	15.6	B	LTR	0.44	15.5	B	LTR	0.44	15.5	B
Westbound	L	0.15	13.0	B	L	0.18	13.6	B	L	0.16	13.2	B	L	0.15	11.5	B	L	0.29	15.6	B	L	0.46	19.6	B	L	0.22	14.5	B	L	0.22	14.5	B	L	0.22	14.5	B
	T	0.74	24.0	C	T	0.76	24.8	C	T	0.73	23.8	C	TR	0.57	15.8	B	T	0.78	25.9	C	T	0.84	30.1	C	T	0.81	28.1	C	T	0.81	28.1	C	T	0.71	20.7	C
	R	1.03	68.0	E	R	1.06	74.4	E+	R	1.44	229.0	F+	R	1.02	64.4	E	R	1.23	135.7	F	R	1.26	148.2	F+	R	1.49	250.0	F+	R	1.14	103.3	F	R	1.14	103.3	F
	Int.		35.7	D	Int.		37.7	D	Int.		94.8	F	Int.		30.2	C	Int.		63.0	E	Int.		67.3	E	Int.		105.9	F	Int.		41.5	D	Int.		41.5	D
<b>Broadway @ West 138th Street</b>																																				
Northbound	LT	0.37	6.3	A	LT	0.37	6.3	A	LT	0.39	6.5	A		LT	0.44	6.9	A	LT	0.47	7.0	A	LT	0.46	7.0	A											
	R	0.03	4.7	A	R	0.03	4.7	A	R	0.03	4.7	A		R	0.03	4.8	A	R	0.03	4.8	A	R	0.04	4.8	A											
Southbound	LTR	0.63	9.0	A	LTR	0.66	9.5	A	LTR	0.70	10.4	B		LTR	0.45	7.0	A	LTR	0.46	7.1	A	LTR	0.52	7.7	A											
Westbound	LTR	0.19	24.5	C	LTR	0.19	24.5	C	LTR	0.19	24.5	C		LTR	0.16	24.1	C	LTR	0.16	24.1	C	LTR	0.19	24.6	C											
	Int.		8.5	A	Int.		8.7	A	Int.		9.3	A		Int.		7.4	A	Int.		7.5	A	Int.		7.9	A											

**Notes:** L = Left Turn; T = Through; R = Right Turn; DefL = Defacto Left Turn; Int. = Intersection.  
V/C = Volume to Capacity; LOS = Level of Service; "+" = Significant Adverse Traffic Impact.

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**2. Table N.1-15 (Continued)**

**Primary Study Area Signalized Intersection Level-of-Service Analysis**

Intersection	2030 AM Peak Hour												2030 PM Peak Hour												
	No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			
	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	
<b>Broadway Northbound @ West 135th Street</b>																									
Northbound	LTR	0.54	8.2	A	LTR	0.55	8.4	A	LTR	0.59	8.9	A		LTR	0.70	10.5	B	LTR	0.78	12.7	B	LTR	0.86	16.5	B
Eastbound														DefL	1.04	108.8	F	DefL	1.00	97.4	F	DefL	1.05	111.7	F
Westbound	LT	0.39	26.2	C	LT	0.39	26.2	C	LT	0.44	27.0	C		T	0.44	28.3	C	T	0.44	28.3	C	T	0.44	28.1	C
	TR	0.53	29.5	C	TR	0.54	29.6	C	TR	0.59	30.7	C		TR	0.58	30.6	C	TR	0.59	30.8	C	TR	0.62	31.7	C
	Int.		17.1	B	Int.		17.3	B	Int.		18.3	B		Int.		27.2	C	Int.		26.2	C	Int.		29.4	C
<b>Broadway Southbound @ West 135th Street</b>																									
Southbound	L	0.11	5.2	A	L	0.11	5.2	A	L	0.15	5.4	A		L	0.08	5.0	A	L	0.08	5.0	A	L	0.08	5.0	A
Eastbound	TR	0.75	12.3	B	TR	0.78	13.2	B	TR	0.72	11.3	B		TR	0.55	8.3	A	TR	0.55	8.4	A	TR	0.59	8.8	A
Westbound	TR	0.45	27.6	C	TR	0.44	27.5	C	TR	0.48	28.3	C		TR	0.71	34.2	C	TR	0.62	31.1	C	TR	0.59	30.3	C
									DefL	0.50	34.6	C						DefL	0.63	42.9	D				
	LT	0.36	25.9	C	LT	0.32	25.4	C	T	0.28	25.3	C		LT	0.44	27.6	C	LT	0.45	27.7	C	T	0.44	28.3	C
	Int.		16.9	B	Int.		17.0	B	Int.		16.8	B		Int.		19.5	B	Int.		18.0	B	Int.		19.1	B
<b>Broadway Northbound @ West 133rd Street</b>																									
Northbound	LT	0.58	14.2	B	LT	0.60	14.5	B	LT	0.65	15.5	B		LT	0.83	21.1	C	LT	0.92	27.9	C	LT	0.99	40.4	D
Eastbound	R	0.12	9.8	A	R	0.23	11.1	B	R	0.37	15.7	B		R	0.06	9.1	A	R	0.07	9.2	A	R	0.37	15.9	B
Westbound	LT	0.23	17.6	B	LT	0.26	18.0	B	LT	0.37	19.8	B		LT	0.26	18.3	B	LT	0.39	21.0	C	LT	0.61	28.3	C
	TR	0.53	24.9	C	TR	0.60	26.6	C	TR	0.64	28.1	C		TR	0.93	50.9	D	TR	1.10	94.4	F+	TR	0.97	60.0	E+
	Int.		17.1	B	Int.		17.8	B	Int.		19.2	B		Int.		29.6	C	Int.		47.8	D	Int.		43.3	D
<b>Broadway Southbound @ West 133rd Street</b>																									
Southbound	LTR	0.56	13.2	B	LTR	0.60	13.9	B	LTR	0.71	16.0	B		LTR	0.50	12.6	B	LTR	0.49	12.3	B	LTR	0.58	13.7	B
Eastbound	TR	0.13	18.1	B	TR	0.14	18.2	B	TR	0.23	19.2	B		TR	0.10	17.8	B	TR	0.13	18.0	B	TR	0.23	19.3	B
Westbound	LT	0.38	19.7	B	LT	0.57	23.7	C	LT	0.59	23.8	C		LT	0.78	30.4	C	LT	0.96	51.5	D+	LT	0.92	44.0	D
	Int.		14.7	B	Int.		16.3	B	Int.		18.0	B		Int.		19.0	B	Int.		28.2	C	Int.		25.0	C
<b>Broadway Northbound @ West 132nd Street</b>																									
Northbound	LT	0.43	12.0	B	LT	0.48	12.6	B	LT	0.55	13.5	B		LT	0.61	14.3	B	LT	0.66	15.3	B	LT	0.77	18.1	B
Eastbound	L	0.41	20.7	C	L	0.42	20.8	C	L	0.38	20.0	C		L	0.33	19.0	B	L	0.45	21.0	C	L	0.44	20.8	C
	Int.		14.2	B	Int.		14.5	B	Int.		14.9	B		Int.		15.1	B	Int.		16.6	B	Int.		18.6	B
<b>Broadway Southbound @ West 132nd Street</b>																									
Southbound	LTR	0.55	13.3	B	LTR	0.58	13.8	B	LTR	0.64	14.8	B		LTR	0.46	12.2	B	LTR	0.48	12.4	B	TR	0.50	12.7	B
Eastbound	TR	0.63	28.7	C	TR	0.68	30.5	C	TR	0.71	32.0	C		TR	0.49	23.5	C	TR	0.60	26.4	C	TR	0.74	31.5	C
Westbound	LT	0.06	15.8	B	LT	0.08	16.0	B	LT	0.18	17.0	B		LT	0.04	15.6	B	LT	0.11	16.2	B	LT	0.08	15.9	B
	Int.		17.4	B	Int.		18.2	B	Int.		19.2	B		Int.		15.5	B	Int.		17.0	B	Int.		19.5	B
<b>Broadway @ West 131st Street</b>																									
Northbound	LTR	0.40	9.0	A	LTR	0.50	10.0	B	LTR	0.54	10.5	B		LTR	0.51	10.0	B	LTR	0.62	11.5	B	LTR	0.81	16.6	B
Southbound	LTR	0.54	10.3	B	LTR	0.57	10.7	B	LTR	0.61	11.4	B		LTR	0.45	9.4	A	LTR	0.48	9.7	A	LTR	0.52	10.2	B
Eastbound	LTR	0.21	21.8	C	LTR	0.33	23.7	C	LTR	0.43	25.6	C		LTR	0.22	21.9	C	LTR	0.28	22.7	C	LTR	0.34	24.1	C
Westbound	LT	0.13	20.8	C	LT	0.14	21.0	C	LT	0.19	21.8	C		LT	0.17	21.6	C	LT	0.24	22.6	C	LT	0.41	25.7	C
	R	0.04	19.8	B	R	0.04	19.8	B	R	0.04	19.8	B		R	0.04	19.8	B	R	0.11	20.7	C	R	0.04	19.8	B
	Int.		10.9	B	Int.		11.8	B	Int.		12.9	B		Int.		11.0	B	Int.		12.3	B	Int.		15.4	B
<b>Notes:</b> L = Left Turn; T = Through; R = Right Turn; DefL = Defacto Left Turn; Int. = Intersection. V/C = Volume to Capacity; LOS = Level of Service; "+" = Significant Adverse Traffic Impact.																									

**Appendix N.1: CB9 Proposed 197-a Plan Alternative 1 Impact Analyses**

**3. Table N.1-15 (Continued)**

**Primary Study Area Signalized Intersection Level-of-Service Analysis**

Intersection	2030 AM Peak Hour												2030 PM Peak Hour																			
	No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation										
	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS								
<b>Broadway @ West 130th Street</b>																																
Northbound	LT	0.28	5.8	A	LT	0.34	6.1	A	LT	0.32	6.0	A		LT	0.35	6.2	A	LT	0.36	6.2	A	LT	0.39	6.4	A	LT	0.39	6.4	A			
Southbound	LT	0.40	6.5	A	LT	0.42	6.6	A	LT	0.42	6.6	A		LT	0.35	6.2	A	LT	0.36	6.2	A	LT	0.38	6.4	A	LT	0.38	6.4	A			
Eastbound	LR	0.27	26.0	C	LR	0.36	27.5	C	LR	0.53	32.0	C		LR	0.34	27.0	C	LR	0.61	34.3	C	LR	1.50	268.3	F+	L	0.44	29.2	C			
																									R	0.64	34.2	C				
																										R	0.48	32.0	C			
	<b>Int.</b>		<b>7.4</b>	<b>A</b>	<b>Int.</b>		<b>7.9</b>	<b>A</b>	<b>Int.</b>		<b>9.0</b>	<b>A</b>		<b>Int.</b>		<b>7.7</b>	<b>A</b>	<b>Int.</b>		<b>9.6</b>	<b>A</b>	<b>Int.</b>		<b>69.2</b>	<b>E</b>	<b>Int.</b>		<b>12.6</b>	<b>B</b>			
<b>Broadway @ West 129th Street</b>																																
Northbound	DefL	0.70	43.5	D	DefL	0.81	59.2	E+						LT	0.74	25.4	C	LT	0.84	30.4	C	LT	0.80	27.6	C							
	T	0.50	19.7	B	T	0.61	21.9	C	LT	0.55	20.1	C																				
Southbound	TR	0.64	18.5	B	TR	0.68	19.3	B	TR	0.71	19.9	B		TR	0.52	19.3	B	TR	0.60	20.8	C	TR	0.74	23.8	C							
Westbound	LT	0.46	19.6	B	LT	0.46	19.7	B	LT	0.51	20.9	C		LT	0.62	23.1	C	LT	0.72	26.7	C	LT	0.66	24.6	C							
	R	0.22	16.4	B	R	0.28	17.2	B	R	0.27	17.4	B		R	0.27	17.1	B	R	0.28	17.3	B	R	0.34	18.7	B							
	<b>Int.</b>		<b>20.2</b>	<b>C</b>	<b>Int.</b>		<b>22.0</b>	<b>C</b>	<b>Int.</b>		<b>20.0</b>	<b>B</b>		<b>Int.</b>		<b>22.2</b>	<b>C</b>	<b>Int.</b>		<b>25.2</b>	<b>C</b>	<b>Int.</b>		<b>25.0</b>	<b>C</b>							
<b>Broadway @ West 125th Street</b>																																
Northbound	L	0.50	33.5	C	L	0.50	33.5	C	L	0.58	36.0	D		L	0.64	38.4	D	L	0.68	40.0	D	L	0.74	43.4	D							
	LT	0.52	32.2	C	LT	0.61	34.2	C	LT	0.56	33.2	C		LT	0.97	62.1	E	LT	0.97	62.1	E	LT	1.01	70.7	E+							
	R	0.67	47.4	D	R	0.67	47.4	D	R	0.93	94.1	F+		R	0.70	49.9	D	R	0.70	49.9	D	R	1.08	132.6	F+							
Southbound	L	0.40	31.1	C	L	0.46	32.2	C	L	0.47	32.4	C		L	0.38	30.4	C	L	0.53	33.3	C	L	0.63	36.3	D							
	LTR	1.11	102.9	F	LTR	1.12	105.5	F	LTR	1.21	142.7	F+		LTR	0.94	55.7	E	LTR	0.95	58.6	E	LTR	1.17	126.0	F+							
Eastbound	L	1.57	331.3	F	L	1.67	381.4	F+	L	1.42	278.7	F		L	0.51	39.9	D	L	0.53	42.1	D	L	0.61	54.8	D+							
	TR	0.77	33.0	C	TR	0.80	34.8	C	TR	0.86	39.8	D		TR	1.11	96.7	F	TR	1.24	149.3	F+	TR	1.17	120.0	F+							
Westbound	L	1.16	159.4	F	L	1.24	190.5	F+	L	1.41	260.8	F+		L	1.04	140.8	F	L	1.04	140.8	F	L	1.04	140.8	F							
	TR	1.01	62.0	E	TR	1.17	120.6	F+	TR	1.31	177.6	F+		TR	0.87	39.4	D	TR	0.91	43.4	D	TR	1.05	73.9	E+							
	<b>Int.</b>		<b>74.9</b>	<b>E</b>	<b>Int.</b>		<b>92.1</b>	<b>F</b>	<b>Int.</b>		<b>117.8</b>	<b>F</b>		<b>Int.</b>		<b>62.6</b>	<b>E</b>	<b>Int.</b>		<b>78.1</b>	<b>E</b>	<b>Int.</b>		<b>91.2</b>	<b>F</b>							
<b>Amsterdam Avenue @ West 135th Street</b>																																
Northbound	LTR	0.53	8.4	A	LTR	0.53	8.5	A	LTR	0.58	9.4	A	LTR	0.58	9.4	A	LTR	0.76	13.4	B	LTR	0.75	13.1	B	LTR	0.82	16.3	B	LTR	0.89	25.4	C
Southbound	LTR	0.62	9.6	A	LTR	0.66	10.2	B	LTR	0.72	11.6	B	LTR	0.72	11.6	B	LTR	0.61	9.5	A	LTR	0.61	9.6	A	LTR	0.67	10.6	B	LTR	0.73	15.1	B
Eastbound	LT	0.44	28.8	C	LT	0.49	30.2	C	LT	0.55	32.1	C	L	0.34	29.1	C	LT	0.65	39.0	D	LT	0.88	62.7	E+	LT	1.12	122.9	F+	L	0.76	44.9	D
													T	0.29	25.6	C											T	0.16	21.1	C		
Westbound	R	0.41	30.6	C	R	0.41	30.7	C	R	0.58	37.1	D	R	0.60	38.2	D	R	0.28	26.9	C	R	0.29	27.0	C	R	0.46	31.4	C	R	0.40	26.5	C
	LTR	0.47	29.6	C	LTR	0.53	31.4	C	LTR	0.51	30.8	C	LTR	0.51	30.7	C	LTR	0.70	39.1	D	LTR	0.78	46.2	D+	LTR	0.89	60.9	E+	LTR	0.61	30.9	C
	<b>Int.</b>		<b>14.2</b>	<b>B</b>	<b>Int.</b>		<b>15.0</b>	<b>B</b>	<b>Int.</b>		<b>16.6</b>	<b>B</b>	<b>Int.</b>		<b>16.1</b>	<b>B</b>	<b>Int.</b>		<b>18.0</b>	<b>B</b>	<b>Int.</b>		<b>21.9</b>	<b>C</b>	<b>Int.</b>		<b>33.5</b>	<b>C</b>	<b>Int.</b>		<b>24.1</b>	<b>C</b>
<b>Amsterdam Avenue @ West 125th Street</b>																																
Northbound	L	0.39	17.1	B	L	0.39	17.1	B	L	0.46	19.3	B	L	0.54	24.2	C	L	0.25	18.3	B	L	0.25	18.6	B	L	0.29	19.3	B	L	0.30	19.2	B
	TR	0.79	31.0	C	TR	0.82	33.0	C	TR	0.78	30.9	C	T	0.42	21.4	C	TR	0.98	50.4	D	TR	0.99	52.6	D	TR	0.97	48.9	D	T	0.90	44.4	D
													R	0.76	38.8	D											R	0.78	48.3	D		
Southbound	L	0.59	31.0	C	L	0.62	33.3	C	L	0.59	30.8	C	L	0.59	27.5	C	L	0.81	53.3	D	L	0.86	59.7	E+	L	0.82	53.6	D	L	0.79	51.4	D
	TR	0.47	22.2	C	TR	0.47	22.2	C	TR	0.48	22.3	C	TR	0.48	22.3	C	TR	0.87	45.5	D	TR	0.89	47.8	D	TR	0.89	47.5	D	TR	0.54	29.2	C
Eastbound	L	1.46	294.2	F	L	1.46	294.2	F	L	1.46	294.2	F	L	1.46	292.2	F	L	0.99	118.0	F	L	1.13	165.8	F+	L	1.21	198.5	F+	L	0.72	50.0	D
	TR	0.98	56.5	E	TR	1.04	73.1	E+	TR	1.11	96.0	F+	TR	0.97	52.3	D	TR	1.12	98.6	F	TR	1.31	179.2	F+	TR	1.42	224.8	F+	TR	1.11	90.5	F
Westbound	L	1.10	151.9	F	L	1.24	208.6	F+	L	1.27	221.2	F+	L	1.04	130.4	F	L	0.65	59.8	E	L	0.65	59.8	E	L	0.65	59.8	E	L	0.65	55.6	E
	TR	1.04	72.8	E	TR	1.30	172.8	F+	TR	1.30	172.1	F+	T	0.88	36.2	D	TR	0.90	43.1	D	TR	0.97	54.6	D+	TR	1.02	67.1	E+	T	0.62	23.3	C
													R	0.45	26.6	C											R	0.39	23.5	C		
	<b>Int.</b>		<b>58.3</b>	<b>E</b>	<b>Int.</b>		<b>93.6</b>	<b>F</b>	<b>Int.</b>		<b>99.3</b>	<b>F</b>	<b>Int.</b>		<b>45.7</b>	<b>D</b>	<b>Int.</b>		<b>61.8</b>	<b>E</b>	<b>Int.</b>		<b>90.3</b>	<b>F</b>	<b>Int.</b>		<b>107.6</b>	<b>F</b>	<b>Int.</b>		<b>51.9</b>	<b>D</b>

**Notes:** L = Left Turn; T = Through; R = Right Turn; DefL = Defacto Left Turn; Int. = Intersection. V/C = Volume to Capacity; LOS = Level of Service; "+" = Significant Adverse Traffic Impact.

Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS

4. Table N.1-16

Primary Study Area Unsignalized Intersection Level-of-Service Analysis

Intersection	2030 AM Peak Hour												2030 PM Peak Hour																										
	No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation																	
	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay															
Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS												
<b>Marginal Street @ West 133rd Street</b>																																							
Southbound	T	1.12	92.2	F	T	1.26	144.9	F+	T	1.46	231.3	F+	T	1.04	51.2	D	T	1.18	110.0	F	T	1.22	123.4	F+	T	1.23	129.2	F+	T	0.99	39.6	D							
Westbound	L	0.22	10.8	B	L	0.23	10.9	B	L	0.24	10.9	B	L	0.64	42.5	D	L	0.21	10.6	B	L	0.22	10.6	B	L	0.26	11.0	B	L	0.53	33.8	C							
														<b>Int.</b>	<b>49.9</b>	<b>D</b>																							
<b>Marginal Street @ West 132nd Street</b>																																							
Southbound	LT	---	76.9	F	LT	---	132.5	F+	LT	---	241.5	F+	LT	0.95	32.1	C	LT	---	86.3	F	LT	---	112.1	F+	LT	---	149.3	F+	LT	0.91	27.3	C							
	T	---	8.1	A	T	---	8.2	A	T	---	8.4	A	T	---	---	---	T	---	10.2	B	T	---	10.5	B	T	---	11.5	B	T	---	---	---							
Westbound	L	---	9.2	A	L	---	9.2	A	L	---	10.1	B	L	0.14	21.6	C	L	---	10.0	A	L	---	10.3	A	L	---	10.8	B	L	0.27	23.7	C							
														<b>Int.</b>	<b>63.2</b>	<b>F</b>	<b>Int.</b>	<b>81.0</b>	<b>F</b>	<b>Int.</b>	<b>103.7</b>	<b>F</b>	<b>Int.</b>	<b>27.1</b>	<b>C</b>														
<b>Marginal Street @ St. Clair Place</b>																																							
Southbound	L	0.20	9.9	A	L	0.20	9.9	A	L	0.23	10.2	B	L	0.12	9.8	A	L	0.31	10.8	B	L	0.31	10.8	B	L	0.34	11.0	B	L	0.18	10.3	B							
	T	0.96	45.0	E	T	0.99	53.0	F+	T	0.98	50.4	F+	LT	0.50	13.3	B	T	1.10	84.7	F	T	1.19	117.1	F+	T	1.27	149.9	F+	LT	0.66	16.1	B							
														<b>Int.</b>	<b>12.9</b>	<b>B</b>																							
<b>Riverside Drive @ Tiemann Place</b>																																							
Northbound	R	---	7.4	A	R	---	7.5	A	R	---	7.6	A					R	---	7.3	A	R	---	7.3	A	R	---	7.4	A											
Southbound	L	---	10.4	B	L	---	10.4	B	L	---	10.5	B					L	---	10.4	B	L	---	10.4	B	L	---	10.5	B											
	T	---	9.0	A	T	---	9.0	A	T	---	9.2	A					T	---	8.4	A	T	---	8.4	A	T	---	8.5	A											
Westbound	L	---	8.4	A	L	---	8.4	A	L	---	8.6	A					L	---	8.4	A	L	---	8.4	A	L	---	8.5	A											
														<b>Int.</b>	<b>9.3</b>	<b>A</b>	<b>Int.</b>	<b>9.1</b>	<b>A</b>	<b>Int.</b>	<b>9.1</b>	<b>A</b>	<b>Int.</b>	<b>9.2</b>	<b>A</b>														
<b>Twelfth Avenue @ West 131st Street</b>																																							
Northbound	LT	0.01	7.8	A	LT	0.01	7.9	A	LT	0.01	8.3	A	LTR	0.65	16.7	B	LT	0.02	7.8	A	LT	0.03	7.8	A	LT	0.03	7.9	A	LTR	0.85	24.2	C							
Southbound	LT	0.18	11.8	B	LT	0.21	12.1	B	LR	0.15	12.1	B	LTR	0.54	15.1	B	LT	0.07	12.1	B	LT	0.13	12.8	B	LR	0.05	12.4	B	LTR	0.19	10.7	B							
Eastbound	LTR	0.02	17.4	C	LTR	0.04	24.1	C	LTR	0.03	22.8	C	LTR	0.01	19.5	B	LTR	0.05	19.9	C	LTR	0.06	22.5	C	LTR	0.08	26.4	D	LTR	0.03	19.7	B							
Westbound	LTR	0.43	40.5	E	LTR	0.72	80.4	F+	LTR	1.33	268.9	F+	LTR	0.34	24.0	C	LTR	0.94	105.9	F	LTR	1.39	278.3	F+	LTR	1.62	354.8	F+	LTR	0.56	28.4	C							
														<b>Int.</b>	<b>16.8</b>	<b>B</b>																							
<b>Twelfth Avenue @ West 125th Street Southbound Right Turn</b>																																							
Southbound	R	0.07	11.6	B	R	0.09	11.9	B	R	0.07	11.5	B					R	0.08	11.1	B	R	0.06	11.3	B	R	0.08	11.3	B											
<b>Twelfth Avenue @ St. Clair Place</b>																																							
Northbound	R	---	16.7	C	R	---	22.5	C	R	---	30.4	D+	R	0.91	41.2	D	R	---	14.8	B	R	---	15.7	C	R	---	17.3	C	R	0.78	34.8	C							
Southbound	L	---	9.2	A	L	---	9.3	A	L	---	9.6	A	L	0.11	34.6	C	L	---	9.0	A	L	---	9.1	A	L	---	9.2	A	L	0.06	32.0	C							
Eastbound	T	---	10.4	B	T	---	10.7	B	T	---	11.6	B	T	0.36	25.8	C	T	---	11.9	B	T	---	12.1	B	T	---	12.9	B	T	0.49	26.6	C							
														<b>Int.</b>	<b>15.2</b>	<b>C</b>	<b>Int.</b>	<b>19.9</b>	<b>C</b>	<b>Int.</b>	<b>26.0</b>	<b>D</b>	<b>Int.</b>	<b>37.8</b>	<b>D</b>	<b>Int.</b>	<b>13.7</b>	<b>B</b>	<b>Int.</b>	<b>14.4</b>	<b>B</b>	<b>Int.</b>	<b>15.6</b>	<b>C</b>	<b>Int.</b>	<b>31.9</b>	<b>C</b>		
<b>Riverside Drive @ St. Clair Place</b>																																							
Southbound	LT	0.50	41.9	E	LT	0.78	88.5	F+	LT	1.03	181.6	F+	LT	0.46	38.8	D	LT	0.47	42.1	E	LT	0.76	70.4	F+	LT	0.47	55.1	F+	LT	0.23	33.6	C							
	T	0.46	39.3	E	T	0.62	65.8	F+	T	0.95	157.8	F+	T	---	---	---	T	0.31	39.6	E	T	0.37	46.6	E+	T	0.40	54.3	F+	T	---	---	---							
Eastbound	LTR	0.14	7.8	A	LTR	0.18	7.9	A	LTR	0.24	8.1	A	LTR	0.79	11.9	B	LTR	0.19	8.0	A	LTR	0.21	8.0	A	LTR	0.22	8.1	A	LTR	0.70	10.3	B							
														<b>Int.</b>	<b>16.0</b>	<b>B</b>																							
<b>Notes:</b> L = Left Turn; T = Through; R = Right Turn; DefL = Defacto Left Turn; Int. = Intersection. V/C = Volume to Capacity; LOS = Level of Service; "+" = Significant Adverse Traffic Impact.																																							

Appendix N.1: CB9 Proposed 197-a Plan Alternative 1 Impact Analyses

5. Table N.1-16 (Continued)

Primary Study Area Unsignalized Intersection Level-of-Service Analysis

Intersection	2030 AM Peak Hour												2030 PM Peak Hour																			
	No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation										
	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay								
Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS	Group	Ratio	(spv)	LOS					
<b>West 125th Street @ West 129th Street/St. Clair Place</b>																																
Northbound																																
Southbound																																
Eastbound	L	0.06	244.5	F	L	---	---	F+	L	0.02	80.0	F	L	0.00	12.8	B	L	---	---	F	L	---	---	F+	L	---	---	F+	L	0.01	13.4	B
	R	0.71	23.5	C	R	0.76	27.3	D	R	17.80	7859.0	F+	R	1.10	98.9	F	R	0.96	71.7	F	R	1.58	317.4	F+	R	1.07	108.5	F+	R	0.87	44.7	D
Westbound	L	0.23	158.3	F	L	0.30	219.3	F+	L	---	---	F+	L	0.02	13.0	B	L	---	---	F	L	---	---	F+	L	---	---	F+	L	0.03	13.7	B
	R	0.94	68.0	F	R	1.05	95.9	F+	R	0.67	25.7	D	R	0.47	18.6	B	R	2.15	556.4	F	R	1.78	386.8	F	R	1.06	84.5	F	R	0.82	32.1	C

**Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS**

**7. Table N.1-17 (Continued)**

**Secondary Study Area Signalized Intersection Level-of-Service Analysis**

Intersection	2030 AM Peak Hour												2030 PM Peak Hour																							
	No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation			No Build			Alt 197-a Plan			PA w/o Improvements			PA w Mitigation														
	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay	Lane	V/C	Delay												
<b>Frederick Douglass Boulevard @ West 125th Street</b>																																				
Northbound	LT	0.20	15.6	B	LT	0.20	15.6	B	LT	0.20	15.6	B	LT	0.22	18.2	B	LTR	0.67	20.2	C	LTR	0.67	20.2	C	LTR	0.67	20.2	C	LTR	0.73	24.6	C				
	R	0.21	16.3	B	R	0.21	16.3	B	R	0.21	16.3	B	R	0.24	19.2	B																				
Southbound	LT	0.61	18.4	B	LT	0.61	18.4	B	LT	0.61	18.4	B	LT	0.68	23.4	C	LT	0.48	19.0	B	LT	0.48	19.0	B	LT	0.48	19.0	B	LT	0.52	21.6	C				
	R	0.26	14.5	B	R	0.26	14.5	B	R	0.26	14.5	B	R	0.29	18.1	B	R	0.37	19.8	B	R	0.37	19.8	B	R	0.37	19.8	B	R	0.40	22.7	C				
Eastbound	LTR	1.00	58.4	E	LTR	1.15	110.9	F+	LTR	1.14	107.7	F+	L	0.81	58.1	E	LTR	1.18	118.1	F	LTR	1.38	203.9	F+	LTR	1.41	217.7	F+	L	0.52	26.7	C				
													TR	0.53	17.6	B																				
Westbound	LTR	0.83	30.0	C	LTR	1.01	54.9	D+	LTR	0.97	46.0	D+	LTR	0.87	29.8	C	LTR	1.03	67.6	E	LTR	1.17	114.7	F+	LTR	1.20	130.7	F+	LTR	1.04	66.7	E				
	Int.		31.5	C	Int.		53.4	D	Int.		49.6	D	Int.		24.9	C	Int.		60.2	E	Int.		102.2	F	Int.		112.5	F	Int.		37.0	D				
<b>Madison Avenue @ East 125th Street</b>																																				
Northbound	LTR	0.63	18.1	B	LTR	0.64	18.3	B	LTR	0.64	18.3	B	LTR	0.64	18.3	B	LTR	0.79	21.8	C	LTR	0.80	22.1	C	LTR	0.79	22.0	C	LTR	0.81	23.6	C				
Eastbound	LT	1.17	113.3	F	LT	1.29	166.9	F+	LT	1.32	176.4	F+	L	0.61	38.0	D	LT	1.32	178.6	F	LT	1.47	245.5	F+	LT	1.56	284.9	F+	L	0.54	27.9	C				
													T	0.89	34.4	C																				
Westbound	TR	0.80	28.7	C	TR	0.94	41.5	D	TR	0.92	39.1	D	TR	0.93	39.9	D	TR	0.63	22.3	C	TR	0.67	23.2	C	TR	0.69	23.8	C	TR	0.67	22.7	C				
	Int.				Int.		74.6	E	Int.		77.0	E	Int.		30.4	C	Int.		76.3	E	Int.		103.8	F	Int.		121.6	F	Int.		38.0	D				
<b>Second Avenue @ East 125th Street</b>																																				
Southbound	LTR	0.64	21.4	C	LTR	0.64	21.4	C	LTR	0.64	21.4	C	LTR	0.75	27.8	C	LTR	0.97	38.4	D	LTR	0.97	38.4	D	LTR	0.97	38.4	D	LTR	0.97	38.4	D				
Eastbound	T	1.36	209.9	F	T	1.39	220.0	F+	T	1.41	230.1	F+	TR	1.03	74.1	E	T	1.19	130.7	F	T	1.22	142.3	F+	T	1.36	203.4	F+	TR	1.15	113.4	F				
	R	0.28	33.6	C	R	0.37	36.1	D	R	0.39	36.6	D	R	0.39	36.6	D	R	0.53	30.2	C	R	0.53	37.9	D	R	0.42	33.9	C								
Westbound	DefL	1.21	158.7	F	DefL	1.21	158.7	F	DefL	1.21	158.7	F	DefL	1.10	116.8	F	DefL	1.10	116.8	F	LT	0.75	45.3	D	LT	0.78	48.1	D	LT	0.81	50.7	D+	LT	0.70	41.5	D
	T	1.36	220.3	F	T	1.56	303.6	F+	T	1.54	297.2	F+	T	1.36	216.9	F	T	1.05	87.7	F	LT	0.75	45.3	D	LT	0.78	48.1	D	LT	0.81	50.7	D+	LT	0.70	41.5	D
Southwestbound	TR	1.26	164.8	F	TR	1.37	210.8	F+	TR	1.41	230.7	F+	TR	1.22	145.8	F	TR	1.05	87.0	F	TR	1.08	96.1	F+	TR	1.11	106.3	F+	TR	1.06	86.1	F	TR	1.06	86.1	F
	Int.		112.3	F	Int.		133.5	F	Int.		152.2	F	Int.		86.2	F	Int.		65.8	E	Int.		69.9	E	Int.		110.2	F	Int.		75.6	F				
<b>First Avenue @ East 125th Street</b>																																				
Northbound	L	0.68	18.7	B	L	0.71	19.9	B	L	0.70	19.4	B					L	0.15	9.8	A	L	0.16	9.8	A	L	0.16	9.8	A	L	0.17	11.9	B				
	T	0.39	11.2	B	T	0.39	11.2	B	T	0.39	11.2	B					T	0.69	14.6	B	T	0.69	14.6	B	T	0.69	14.6	B	T	0.74	17.9	B				
	R	0.25	10.9	B	R	0.25	10.9	B	R	0.25	10.9	B					R	0.52	15.0	B	R	0.52	15.0	B	R	0.52	15.0	B	R	0.56	18.2	B				
Eastbound	L	1.16	119.8	F	L	1.18	126.7	F+	L	1.16	119.8	F					L	1.08	87.7	F	L	1.12	104.0	F+	L	1.17	123.9	F+	L	1.08	86.7	F				
	LT	0.27	19.8	B	LT	0.28	20.0	B	A	0.28	20.0	B					LT	0.65	27.8	C	LT	0.67	28.7	C	LT	0.72	30.6	C	LT	0.66	26.1	C				
	Int.		40.5	D	Int.		42.5	D	Int.		40.4	D					Int.		29.3	C	Int.		32.8	D	Int.		37.6	D	Int.		32.0	C				
<b>Broadway @ West 145th Street</b>																																				
Northbound	LTR	0.62	21.5	C	LTR	0.63	21.7	C	LTR	0.66	22.4	C					LTR	0.91	33.5	C	LTR	0.95	38.4	D	LTR	0.93	37.0	D	LTR	0.96	41.6	D				
Southbound	L	0.22	10.1	B	L	0.23	10.1	B	L	0.23	10.2	B					L	0.47	16.9	B	L	0.48	17.8	B	L	0.48	17.5	B	L	0.49	18.4	B				
	TR	0.51	11.7	B	TR	0.53	12.0	B	TR	0.55	12.2	B					TR	0.51	11.6	B	TR	0.51	11.6	B	TR	0.53	11.8	B	TR	0.54	12.5	B				
Eastbound	LTR	0.25	25.6	C	LTR	0.25	25.6	C	LTR	0.25	25.6	C					LTR	0.28	26.0	C	LTR	0.28	26.0	C	LTR	0.28	26.0	C	LTR	0.27	25.2	C				
Westbound					DefL	0.93	77.6	E+																												
	LTR	0.95	62.8	E	TR	0.93	68.4	E+	LTR	0.95	64.2	E					LTR	1.00	71.7	E	LTR	1.03	78.4	E+	LTR	1.03	79.1	E+	LTR	0.99	66.7	E				
	Int.		26.0	C	Int.		28.3	C	Int.		26.5	C					Int.		33.1	C	Int.		36.7	D	Int.		36.0	D	Int.		36.1	D				
<b>Notes:</b> L = Left Turn; T = Through; R = Right Turn; DefL = Defacto Left Turn; Int. = Intersection. V/C = Volume to Capacity; LOS = Level of Service; "+" = Significant Adverse Traffic Impact.																																				



*Primary Study Area*

*Twelfth Avenue and West 133rd Street*

During the AM peak hour, the northbound left-turn movement would continue to operate at LOS F, with delay increasing from 94.3 to 99.9 seconds and v/c ratio increasing from 1.11 to 1.13. The westbound approach would continue to operate at LOS D, with delay increasing from 40.5 to 52.5 seconds and v/c ratio increasing from 0.80 to 0.91.

During the PM peak hour, the westbound approach would continue to operate at LOS F, with delay increasing from 206.1 to 297.4 seconds and v/c ratio increasing from 1.36 to 1.57.

*Twelfth Avenue and West 132nd Street*

During the AM peak hour, the eastbound approach would deteriorate from LOS D to LOS E, with delay increasing from 39.0 to 77.9 seconds and v/c ratio increasing from 0.81 to 1.06.

*Twelfth Avenue and West 125th Street*

During the AM peak hour, the westbound right-turn movement would continue to operate at LOS E, with delay increasing from 68.0 to 74.4 seconds and v/c ratio increasing from 1.03 to 1.06.

During the PM peak hour, the westbound right-turn movement would continue to operate at LOS F, with delay increasing from 135.7 to 148.2 seconds and v/c ratio increasing from 1.23 to 1.26.

*Broadway Northbound and West 133rd Street*

During the PM peak hour, the westbound approach would deteriorate from LOS D to LOS F, with delay increasing from 50.9 to 94.4 seconds and v/c ratio increasing from 0.93 to 1.10.

*Broadway Southbound and West 133rd Street*

During the PM peak hour, the westbound approach would deteriorate from LOS C to LOS D, with delay increasing from 30.4 to 51.5 seconds and v/c ratio increasing from 0.78 to 0.96.

*Broadway and West 129th Street*

During the AM peak hour, the northbound *de facto* left-turn movement would deteriorate from LOS D to LOS E, with delay increasing from 43.5 to 59.2 seconds and v/c ratio increasing from 0.70 to 0.81.

*Broadway and West 125th Street*

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F, with delay increasing from 331.3 to 381.4 seconds and v/c ratio increasing from 1.57 to 1.67. The westbound left-turn movement would continue to operate at LOS F, with delay increasing from 159.4 to 190.5 seconds and v/c ratio increasing from 1.16 to 1.24, and the westbound through-right movement would deteriorate from LOS E to LOS F, with delay increasing from 62.0 to 120.6 seconds and v/c ratio increasing from 1.01 to 1.17.

During the PM peak hour, the eastbound through-right movement would continue to operate at LOS F, with delay increasing from 96.7 to 149.3 seconds and v/c ratio increasing from 1.11 to 1.24.

Amsterdam Avenue and West 135th Street

During the PM peak hour, the eastbound left-through movement would deteriorate from LOS D to LOS E, with delay increasing from 39.0 to 62.7 seconds and v/c ratio increasing from 0.65 to 0.88. The westbound approach would continue to operate at LOS D, with delay increasing from 39.1 to 46.2 seconds and v/c ratio increasing from 0.70 to 0.78

Amsterdam Avenue and West 125th Street

During the AM peak hour, the eastbound through-right movement would continue to operate at LOS E, with delay increasing from 56.5 to 73.1 seconds and v/c ratio increasing from 0.98 to 1.04. The westbound left-turn movement would continue to operate at LOS F, with delay increasing from 151.9 to 208.6 seconds and v/c ratio increasing from 1.10 to 1.24, and the westbound through-right movement would deteriorate from LOS E to LOS F, with delay increasing from 72.8 to 172.8 seconds and v/c ratio increasing from 1.04 to 1.30.

During the PM peak hour, the southbound left-turn movement would deteriorate from LOS D to LOS E, with delay increasing from 53.3 to 59.7 seconds and v/c ratio increasing from 0.81 to 0.86. The eastbound left-turn movement would continue to operate at LOS F, with delay increasing from 118.0 to 165.8 seconds and v/c ratio increasing from 0.99 to 1.13, and the eastbound through-right movement would continue to operate at LOS F, with delay increasing from 98.6 to 179.2 seconds and v/c ratio increasing from 1.12 to 1.31. The westbound through-right movement would continue to operate at LOS D, with delay increasing from 43.1 to 54.6 seconds and v/c ratio increasing from 0.90 to 0.97.

Marginal Street and West 133rd Street

During the AM peak hour, the southbound approach would continue to operate at LOS F, with delay increasing from 92.2 to 144.9 seconds and v/c ratio increasing from 1.12 to 1.26.

During the PM peak hour, the southbound approach would continue to operate at LOS F, with delay increasing from 110.0 to 123.4 seconds and v/c ratio increasing from 1.18 to 1.22.

Marginal Street and West 132nd Street

During the AM peak hour, the southbound left-through movement would continue to operate at LOS F, with delay increasing from 76.9 to 132.5 seconds.

During the PM peak hour, the southbound left-through movement would continue to operate at LOS F, with delay increasing from 86.3 to 112.1 seconds.

Marginal Street and St. Clair Place

During the AM peak hour, the southbound through movement would deteriorate from LOS E to LOS F, with delay increasing from 45.0 to 53.0 seconds and v/c ratio increasing from 0.96 to 0.99.

During the PM peak hour, the southbound through movement would continue to operate at LOS F, with delay increasing from 84.7 to 117.1 seconds and v/c ratio increasing from 1.10 to 1.19.

Twelfth Avenue and West 131st Street

During the AM peak hour, the westbound approach would deteriorate from LOS E to LOS F, with delay increasing from 40.5 to 80.4 seconds and v/c ratio increasing from 0.43 to 0.72.

During the PM peak hour, the westbound approach would continue to operate at LOS F, with delay increasing from 105.9 to 278.3 seconds and v/c ratio increasing from 0.94 to 1.39.

## **Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS**

### **Riverside Drive and St. Clair Place**

During the AM peak hour, the southbound left-through movement would deteriorate from LOS E to LOS F, with delay increasing from 41.9 to 88.5 seconds and v/c ratio increasing from 0.50 to 0.78, and the southbound through movement would deteriorate from LOS E to LOS F, with delay increasing from 39.3 to 65.8 seconds and v/c ratio increasing from 0.46 to 0.62.

During the PM peak hour, the southbound left-through movement would deteriorate from LOS E to LOS F, with delay increasing from 42.1 to 70.4 seconds and v/c ratio increasing from 0.47 to 0.76, and the southbound through movement would continue to operate at LOS E, with delay increasing from 39.6 to 46.6 seconds and v/c ratio increasing from 0.31 to 0.37.

### **West 125th Street and West 129th Street at St. Clair Place**

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F, with delay and v/c ratio increasing further beyond No Build levels. The westbound left-turn movement would continue to operate at LOS F, with delay increasing from 158.3 to 219.3 seconds and v/c ratio increasing from 0.23 to 0.30, and the westbound right-turn movement would continue to operate at LOS F, with delay increasing from 68.0 to 95.9 seconds and v/c ratio increasing from 0.94 to 1.05.

During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F, with delay and v/c ratio increasing further beyond No Build levels, and the eastbound right-turn movement would continue to operate at LOS F, with delay increasing from 71.7 to 317.4 seconds and v/c ratio increasing from 0.96 to 1.58. The westbound left-turn movement would continue to operate at LOS F, with delay and v/c ratio increasing further beyond No Build levels.

### **Secondary Study Area**

#### **Frederick Douglass Boulevard and West 125th Street**

During the AM peak hour, the eastbound approach would deteriorate from LOS E to LOS F, with delay increasing from 58.4 to 110.9 seconds and v/c ratio increasing from 1.00 to 1.15. The westbound approach would deteriorate from LOS C to LOS D, with delay increasing from 30.0 to 54.9 seconds and v/c ratio increasing from 0.83 to 1.01.

During the PM peak hour, the eastbound approach would continue to operate at LOS F, with delay increasing from 118.1 to 203.9 seconds and v/c ratio increasing from 1.18 to 1.38. The westbound approach would deteriorate from LOS E to LOS F, with delay increasing from 67.6 to 114.7 seconds and v/c ratio increasing from 1.03 to 1.17.

#### **Madison Avenue and East 125th Street**

During the AM peak hour, the eastbound approach would continue to operate at LOS F, with delay increasing from 113.3 to 166.9 seconds and v/c ratio increasing from 1.17 to 1.29.

During the PM peak hour, the eastbound approach would continue to operate at LOS F, with delay increasing from 178.6 to 245.5 seconds and v/c ratio increasing from 1.32 to 1.47.

#### **Second Avenue and East 125th Street**

During the AM peak hour, the eastbound through movement would continue to operate at LOS F, with delay increasing from 209.9 to 220.0 seconds and v/c ratio increasing from 1.36 to 1.39. The westbound through movement would continue to operate at LOS F, with delay increasing from 220.3 to 303.6 seconds and v/c ratio increasing from 1.36 to 1.56. The exit ramp from the

## Appendix N.1: CB9 Proposed 197-a Plan Alternative 1 Impact Analyses

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Triborough Bridge would continue to operate at LOS F, with delay increasing from 164.8 to 210.8 seconds and v/c ratio increasing from 1.26 to 1.37.

During the PM peak hour, the eastbound through movement would continue to operate at LOS F, with delay increasing from 130.7 to 142.3 seconds and v/c ratio increasing from 1.19 to 1.22. The exit ramp from the Triborough Bridge would continue to operate at LOS F, with delay increasing from 87.0 to 96.1 seconds and v/c ratio increasing from 1.05 to 1.08.

### First Avenue and East 125th Street

During the AM peak hour, the eastbound left-turn movement would continue to operate at LOS F, with delay increasing from 119.8 to 126.7 seconds and v/c ratio increasing from 1.16 to 1.18.

During the PM peak hour, the eastbound left-turn movement would continue to operate at LOS F, with delay increasing from 87.7 to 104.0 seconds and v/c ratio increasing from 1.08 to 1.12.

### Broadway and West 145th Street

During the AM peak hour, the westbound approach would continue to operate at LOS E, with delay increasing from 62.8 seconds at the approach to 77.6 seconds at the *de facto* left-turn movement and 68.4 seconds at the through-right movement, and v/c ratio decreasing from 0.95 at the approach to 0.93 at the *de facto* left-turn movement and 0.93 at the through-right movement.

During the PM peak hour, the westbound approach would continue to operate at LOS E, with delay increasing from 71.7 to 78.4 and v/c ratio increasing from 1.00 to 1.03.

## *2030 197-A PLAN DEVELOPMENT SCENARIO MITIGATION ASSESSMENT*

Because the projected impacts for the 197-a Plan development scenario would be different from those identified for the Proposed Actions without project improvements<sup>1</sup>, different mitigation measures could be required for the study area intersections. The following summarizes a detailed comparison of operating conditions under the two development scenarios (see Tables N.1-2 through N.1-5) and provides a qualitative assessment of whether mitigation measures proposed as part of the Proposed Actions would still be needed with the 197-a Plan development scenario, a variation of the proposed mitigation measures would be more appropriate, or new/additional mitigation measures would be needed to address projected impacts associated with the 197-a Plan development scenario. For the FEIS, a quantitative mitigation analysis will be provided to demonstrate the conclusions made in this qualitative assessment. If there are no feasible measures to mitigate certain significant adverse traffic impacts (i.e., at the Broadway and West 125th Street intersection), this analysis will also demonstrate that the projected impacts are unmitigatable.

### *Primary Study Area*

#### Riverside Drive and West 135th Street

The mitigation measures proposed for the PM peak hour under the Proposed Actions would not be required with the 197-a Plan development scenario.

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<sup>1</sup> For comparison purposes, references to the Proposed Actions correspond to Appendix M for intersections within and bordering the Project Area and to Chapters 17 and 23 for the other study area intersections.

## **Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS**

### **Twelfth Avenue and West 133rd Street**

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

### **Twelfth Avenue and West 132nd Street**

The mitigation measures proposed for the AM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

### **Twelfth Avenue and West 125th Street**

The mitigation measures proposed for the AM and PM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

### **Broadway Northbound and West 133rd Street**

A restricting parking on the north side of westbound West 133rd street along with a minor signal timing adjustment to the mitigation measures proposed for the PM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

### **Broadway Southbound and West 133rd Street**

During the PM peak hour, a significant adverse impact was identified for the intersection's westbound approach, an impact that would otherwise not occur under the Proposed Actions. To fully mitigate this impact, a shift in green time from the southbound phase to the east-west phase would be necessary.

### **Broadway and West 130th Street**

The mitigation measures proposed for the PM peak hour under the Proposed Actions would not be required with the 197-a Plan development scenario.

### **Broadway and West 129th Street**

During the AM peak hour, a significant adverse impact was identified for the intersection's northbound approach, an impact that would otherwise not occur under the Proposed Actions. To fully mitigate this impact, a shift in green time from the westbound phase to the north-south phase would be necessary.

### **Broadway and West 125th Street**

As with the Proposed Actions, the significant adverse impacts identified at this intersection for both the AM and PM peak hours would be unmitigatable without a redirection of existing and future traffic, which would be possible with the conversion of West 131st, West 132nd, and West 133rd Streets between Broadway and Twelfth Avenue from two-way to on-way operation, as described in Chapter 17, "Traffic and Parking."

### **Amsterdam Avenue and West 135th Street**

The mitigation measures proposed for the PM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

Amsterdam Avenue and West 125th Street

The mitigation measures proposed for the AM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario. During the PM peak hour, a minor signal timing adjustment to the mitigation proposed would also be necessary.

Marginal Street and West 133rd Street

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

Marginal Street and West 132nd Street

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

Marginal Street and St. Clair Place

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

Twelfth Avenue and West 131st Street

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

Twelfth Avenue and St. Clair Place

The mitigation measures proposed for the AM peak hour under the Proposed Actions would not be required with the 197-a Plan development scenario.

Riverside Drive and St. Clair Place

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

West 125th Street and West 129th Street/St. Clair Place

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

*Secondary Study Area*

Frederick Douglass Boulevard and West 125th Street

The mitigation measures proposed for the PM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario. During the AM peak hour, a minor signal timing adjustment to the mitigation proposed would also be necessary.

## **Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS**

### **Madison Avenue and East 125th Street**

The mitigation measures proposed for the AM and PM peak hours under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

### **Second Avenue and East 125th Street**

The mitigation measures proposed for the AM and PM peak hour under the Proposed Actions would fully mitigate the projected significant adverse impacts identified for the 197-a Plan development scenario.

### **First Avenue and East 125th Street**

During the AM peak hour, a significant adverse impact was identified for the intersection's eastbound approach, an impact that would otherwise not occur under the Proposed Actions. To fully mitigate this impact, a minor shift in green time from the northbound phase to the east-west phase would be necessary. During the PM peak hour, the mitigation measures proposed for the Proposed Actions would fully mitigate the projected significant adverse impacts under the 197-a Plan development scenario.

### **Broadway and West 145th Street**

During the AM peak hour, two significant adverse impacts were identified for the intersection's westbound approach, an impact that would otherwise not occur under the Proposed Actions. To fully mitigate these impacts, a minor shift in green time from the north-south phase to the east-west phase would be necessary. During the PM peak hour, the mitigation measures proposed for the Proposed Actions would fully mitigate the projected significant adverse impacts under the 197-a Plan development scenario.

## **PARKING ANALYSIS**

As discussed in Chapter 24, "Alternatives," because there would already be a lack of off-street parking supply in the area under the No Build condition, the majority of the incremental parking demand generated by the 197-a Plan Alternative is expected to be distributed onto the available on-street supply. The analysis presented below assumes that 95 percent of the projected 197-a Plan parking demand would be accommodated on-street and the remaining 5 percent off-street.

### ***ON-STREET PARKING***

Table [N.1-19](#) illustrates the anticipated parking utilization in 2030 under the 197-a Plan Alternative development scenario. Within the ½-mile on-street parking study area, the morning, midday, and evening on-street parking utilization is expected to increase to 94, 107, and 101 percent respectively. The maximum predicted on-street parking shortfall would be 357 parking spaces, constituting a significant adverse on-street parking impact.

**9. Table N.1-19**

**2030 197-a Plan Alternative On-Street Parking Utilization Summary**

<b>2030 197-a Plan Build Condition</b>	<b>AM</b>	<b>MD</b>	<b>PM</b>
2030 No Build Capacity	4,783	4,783	4,783
Spaces Removed due to Geometric Modifications	0	0	0
<b>Total 2030 197-a Plan Build Capacity</b>	<b>4,783</b>	<b>4,783</b>	<b>4,783</b>
2030 No Build Demand	3,893	4,207	4,291
2030 197-a Plan Incremental Demand	618	933	550
<b>Total 2030 197-a Plan Build Demand</b>	<b>4,511</b>	<b>5,140</b>	<b>4,841</b>
<b>Remaining Spaces</b>	<b>272</b>	<b>-357</b>	<b>-58</b>
<b>Utilization</b>	<b>94%</b>	<b>107%</b>	<b>101%</b>

*OFF-STREET PARKING*

As with the 2030 off-street parking analysis conducted for the Proposed Actions, a credit of 16 percent was applied to parking facilities within the Project Area to account for the displacement of existing uses and the relocation of existing parking demand to other areas. Four public parking facilities (sites 1, 2, 3, and 4 in Figures 17-11a and 17-11b) would also be displaced as a result of the 197-a Plan Alternative. In addition, the replacement of No Build projects by components of the 197-a Plan development scenario would result in the parking demand reduction of 90 spaces in the morning, 64 spaces in the midday, and 5 spaces in the evening at area off-street parking facilities. As shown in Table N.1-20, the maximum predicted off-street parking shortfall under the 197-a Plan Alternative would be 515 parking spaces, constituting a significant adverse off-street parking impact.

**10. Table N.1-20**

**2030 197-a Plan Alternative Off-Street Parking Utilization Summary**

<b>2030 197-a Plan Build Condition</b>	<b>AM</b>	<b>MD</b>	<b>PM</b>
2030 No Build Capacity	3,576	3,576	3,576
Displaced Garages			
MTP 3300 Broadway Corp.	200	200	200
West 129th Street LLC	134	134	134
Uni Facility Corp.	100	100	100
Y&H Enterprises Inc.	175	175	175
<b>Total 2030 197-a Plan Build Capacity</b>	<b>2,967</b>	<b>2,967</b>	<b>2,967</b>
2030 No Build Demand	3,687	3,727	2,877
2030 197-a Plan Incremental Demand	32	49	29
Credit for Removal and Reduction of No Build Projects			
New Columbia Office Building (No. 23)	77	70	17
New Columbia Office Building (No. 24)	48	45	11
16% Credit for Displaced Parking Demand	97	97	97
<b>Total 2030 197-a Plan Build Demand</b>	<b>3,497</b>	<b>3,564</b>	<b>2,781</b>
<b>Remaining Spaces</b>	<b>-530</b>	<b>-597</b>	<b>186</b>
<b>Utilization</b>	<b>118%</b>	<b>120%</b>	<b>94%</b>

**C. CB9 PROPOSED 197-A PLAN ALTERNATIVE 1 NOISE ANALYSIS**

**11. Table N.1-21**

**$L_{eq(1)}$  and  $L_{10(1)}$  Noise Levels for the 197-a Plan Alternative in the Year 2030 (in dBA)**

Site	Location	Time Period	197-a Plan Alternative	
			Build $L_{eq(1)}$	Build $L_{10(1)}$
6	12th Av, W131–W132	AM	75.8	78.0
		PM	69.0	74.6
10	W125th, 12th Av –St Clair Pl	AM	69.3	72.5
		PM	69.7	71.8
13	B'way, Tiemann Pl– W125th	AM	77.6	82.5
		PM	76.9	82.2

**Note:** Build  $L_{10(1)}$  values are based on field measurements that were performed by AKRF, Inc. on April 27-29, 2004; May 1, 4-6, 8, 9, And 15, 2004; and October 12, 2004; and August 15, 2006, and September 23, 2006.

\*

**APPENDIX N.2**

**CB9 197-A PLAN ALTERNATIVE 1:  
COLUMBIA UNIVERSITY  
DEVELOPMENT SCENARIO**

**Table N.2-1: Comparison of 197-a Plan Alternative 1 to 197-a Plan Alternative 1, Columbia Development Scenario (in GSF)**

197-a Plan Alternative 1, Columbia Development Scenario									197-a Plan Alternative 1						
Site # <sup>1</sup>	Academic Research	Academic	University Housing	Office/Community Facility	Residential	Retail	Mfg	Total	197-a Site # <sup>2</sup>	Block: Lot <sup>3</sup>	Office/Community Facility	Residential	Retail	Mfg	Total
A									1	1996:21	57,000		9,000		66,000
									2	1996:23	142,500		22,000		164,500
									3	1996:29	57,952		9,990		67,942
	385,711					42,964		428,674		TOTAL	257,452		40,990		298,442
B			40,352			5,008		45,360	4	1996:30	5,009	24,023	5,009		34,041
C			17,478			2,248		19,726	8	1997:33	14,500		2,500		17,000
D									7	1997:27	57,000		9,000		66,000
	226,603					27,476		254,078	9	1997:40	114,000		18,000		132,000
										TOTAL	171,000		27,000		198,000
E			7,492			2,248		9,740	6	1997:17	6,250		2,250		8,500
F			7,492			2,248		9,740	10	1997:47	6,250		2,250		8,500
G									5	1997: 9 (p/o)	42,750		6,750		49,500
		176,921				19,733		196,653	11	1997:49	42,750		6,750		49,500
									12	1997:52	42,750		6,750		49,500
										TOTAL	128,250		20,250		148,500
H									15(half)	1998:24	28,500		4,500		33,000
		56,928				8,991		65,919	16	1998:26	28,500		4,500		33,000
										TOTAL	57,000		9,000		66,000
I			28,455			4,495		32,950	15(half)	1998:24	28,500		4,500		33,000
J										1998: 10 (p/o)	28,500		4,500		33,000
									13	1998:16	2,250	12,000	2,250		16,500
Overbuild									35	1998:13	35,971		2,998	11,990	50,959
		85,396				13,487		98,883		TOTAL	66,721	12,000	9,748	11,990	100,459
K			37,536			6,474		44,010	18	1986:10	6,474	31,075	6,474		44,023
L									17	1986:1	57,901		9,983		67,884
	262,546					40,830		303,376	19	1986:30	186,646		29,533		216,179
										TOTAL	244,547		39,516		284,063
M		110,759				17,235		127,994	20	1987:7	17,550	93,600	17,550		128,700
<b>Columbia</b>	<b>874,859</b>	<b>430,004</b>	<b>138,805</b>	<b>0</b>	<b>0</b>	<b>193,436</b>	<b>0</b>	<b>1,637,103</b>	<b>Columbia</b>		435,447	0	77,732		
									<b>Non-Columbia</b>		574,056	160,698	109,305	11,990	1,369,228
<b>Subtotal</b>	<b>874,859</b>	<b>430,004</b>	<b>138,805</b>	<b>0</b>	<b>0</b>	<b>193,436</b>	<b>0</b>	<b>1,637,103</b>	<b>Subtotal</b>		<b>1,009,503</b>	<b>160,698</b>	<b>187,037</b>	<b>11,990</b>	<b>1,369,228</b>

**Table N.2-1: Comparison of 197-a Plan Alternative 1 to 197-a Plan Alternative 1, Columbia Development Scenario (in GSF)**

197-a Plan Alternative 1, Columbia Development Scenario									197-a Plan Alternative 1						
Site # <sup>1</sup>	Academic Research	Academic	University Housing	Office/Community Facility	Residential	Retail	Mfg	Total	197-a Site # <sup>2</sup>	Block: Lot <sup>3</sup>	Office/Community Facility	Residential	Retail	Mfg	Total
21				20,000		2,000	8,000	30,000	21	1996:34	20,000		2,000	8,000	30,000
22		0				880	3,520	4,400	22	1996:15	0		880	3,520	4,400
23		0				4,000	16,000	20,000	23	1996:16	0		4,000	16,000	20,000
24		9,919				3,968	15,870	29,757	24	1996:18	9,919		3,968	15,870	29,757
25		7,511				3,004	12,017	22,532	25	1997:18	7,511		3,004	12,017	22,532
26				44,896		2,245	8,979	56,120	26	1997:30	44,896		2,245	8,979	56,120
27		24,281				3,885	15,540	43,706	27	1997:34	24,281		3,885	15,540	43,706
28				22,482		2,998	11,990	37,470	28	1997:44	22,482		2,998	11,990	37,470
29				39,820		7,964	31,856	79,640	29	1998:29	39,820		7,964	31,856	79,640
30		14,000				2,800	11,200	28,000	30	1986:6	14,000		2,800	11,200	28,000
31-Nash		184,044						184,044	31-Nash	1986: 65	131,460		10,517	42,067	184,044
<b>Columbia</b>		<b>239,755</b>					<b>54,627</b>	<b>294,382</b>	<b>Columbia - Nash</b>		<b>131,460</b>		<b>10,517</b>	<b>0</b>	<b>141,977</b>
<b>Non-Columbia</b>				<b>127,198</b>		<b>33,744</b>	<b>80,345</b>	<b>241,287</b>	<b>Non-Columbia</b>		<b>182,909</b>		<b>33,744</b>	<b>177,039</b>	<b>393,692</b>
<b>Subtotal</b>		<b>239,755</b>	<b>0</b>	<b>127,198</b>	<b>0</b>	<b>33,744</b>	<b>134,972</b>	<b>535,669</b>	<b>Subtotal</b>		<b>314,369</b>	<b>0</b>	<b>44,261</b>	<b>177,039</b>	<b>535,669</b>
Conversions and Expansions									Conversions and Expansion						
32					86,323	7,194	28,774	122,291	32	1987:1		86,323	7,194	28,774	122,291
33					45,562	3,797	15,187	64,546	33	1988: 60		45,562	3,797	15,187	64,546
34					86,323	7,194	28,774	122,291	34	1988:1		86,323	7,194	28,774	122,291
<b>Subtotal</b>					<b>218,208</b>	<b>18,185</b>	<b>72,735</b>	<b>309,128</b>	<b>Subtotal</b>			<b>218,208</b>	<b>18,185</b>	<b>72,735</b>	<b>309,128</b>
<b>Non-Columbia</b>					<b>218,208</b>	<b>18,185</b>	<b>72,735</b>	<b>309,128</b>	<b>Non-Columbia</b>			<b>218,208</b>	<b>18,185</b>	<b>72,735</b>	<b>309,128</b>
<b>Columbia</b>	<b>874,859</b>	<b>669,759</b>	<b>138,805</b>			<b>193,436</b>	<b>54,627</b>	<b>1,931,485</b>	<b>Columbia</b>		<b>566,907</b>		<b>88,249</b>		<b>141,977</b>
<b>Non-Columbia</b>				<b>127,198</b>	<b>218,208</b>	<b>51,929</b>	<b>153,080</b>	<b>550,415</b>	<b>Non-Columbia</b>		<b>756,965</b>	<b>378,906</b>	<b>161,234</b>	<b>261,764</b>	<b>2,072,048</b>
<b>TOTAL</b>	<b>874,859</b>	<b>669,759</b>	<b>138,805</b>	<b>127,198</b>	<b>218,208</b>	<b>245,365</b>	<b>207,707</b>	<b>2,481,900</b>	<b>TOTAL</b>		<b>1,323,872</b>	<b>378,906</b>	<b>249,483</b>	<b>261,764</b>	<b>2,214,025</b>

Notes:  
<sup>1</sup> Columbia owned or controlled properties shown in Figure N.2-1. Site reference corresponds to Figure N.2-2. See also Figure N.2-3.  
<sup>2</sup> Site reference corresponds to Figure 24-9.  
<sup>3</sup> Block/lot reference corresponds to Figure 24-8.  
p/o = part of  
Sources: CB9, DCP

**Table N.2-2**  
**Comparison of Total Development in the Rezoning Area: Existing Conditions, Proposed Actions, Infill and 197-a Plan Alternative 1 (000 sf)**

	Existing	Proposed Actions		Infill 6 FAR*		Infill Full Build*		197-a Plan 1	
		New Uses Conversions	Remaining Uses						
<b>SUBDISTRICT A</b>									
Market Rate Residential	0.0							123.5	0.0
Affordable Residential	119.1				112.4		112.4	123.5	119.1
Commercial	278.2				59.4		59.4	469.0	12.6
Ground Floor Retail (a)								120.6	
Community Facility	396.8				3.5		3.5		3.5
Industrial	396.8				235.5		235.5	217.8	21.4
Transportation	558.2				336.9		336.9		346.2
Utility	20.0				20.0		20.0		20.0
Parking	7.5				2.5		2.5		
Vacant Building	63.9								12.4
Vacant Land	3.7								3.7
Public Open Space	0.0								
Subtotal Non CU Uses	1,844.1		0.0		770.1		770.1	1,054.4	539.0
<i>CU Above Grade Development</i>									
Academic		1,255.5		1,085.6		1,324.3		184.0	
Academic Research		2,597.0		1,622.6		2,894.2		670.8	
University Housing		509.2		374.8		507.5			
Recreation		250.7				396.1			
Ground Floor Retail		162.6				51.9		117.9	
Parking						341.7			
CU Administrative			220.5		220.5		220.5		297.9
Major Above-Grade Mechanical/Storage						398.6			
CU Development Above Grade Total		4,775.0	220.5	3,083.0	220.5	5,914.3	220.5	972.8	297.9
<i>CU Below Grade (b)</i>									
Academic Research Support		296.2		56.0					
Below-grade academic program		69.8							
Central Energy Plant		70.2							
Mechanical, Freight, Loading		429.2		220.0		276.0			
Storage		189.2		164.0		164.0			
Parking		785.6							
Recreation		145.4							
CU Below Grade Total		1,985.7	0.0	440.0	0.0	440.0	0.0	0.0	0.0
CU Development Total		6,760.7	220.5	3,523.0	220.5	6,354.3	220.5	972.8	297.9
All Development Total	1,844.1	6,760.7	220.5	3,523.0	990.6	6,354.3	990.6	2,027.2	836.9
TOTAL DEVELOPMENT SUBDISTRICT A	1,844.1	6,981.2		4,513.6		7,344.9		2,864.1	
Public Open Spaces	0.0	94.0		38.8		38.8		17.8	
<b>SUBDISTRICT B</b>									
Residential	0.0								0.0
Commercial	33.6	197.0	33.6	197.0	33.6	197.0	33.6		33.6
Community Facility	0.0								0.0
Industrial	78.6		15.0		15.0		15.0		78.6
Transportation	3.0								3.0
Parking	0.0								0.0
Vacant Building	0.0								0.0
Vacant Land	3.7		3.667		3.667		3.667		3.7
Land Under Construction	1.8								1.8
TOTAL DEVELOPMENT SUBDISTRICT B	120.7	197.0	52.2	197.0	52.2	197.0	52.2	0.0	120.7
Public Open Spaces	0.0	249.2		249.2		249.2		120.7	
	0.0	0.0		0.0		0.0		0.0	
<b>SUBDISTRICT C</b>									
Residential	0.0		0.0		0.0		0.0		0.0
Commercial	0.0		0.0		0.0		0.0		0.0
Community Facility	0.0		0.0		0.0		0.0		0.0
Industrial	204.5		204.5		204.5		204.5		204.5
Transportation	0.0		0.0		0.0		0.0		0.0
Parking	0.0		0.0		0.0		0.0		0.0
TOTAL DEVELOPMENT SUBDISTRICT C	204.5	0.0	204.5	0.0	204.5	0.0	204.5	0.0	204.5
Public Open Spaces	0.0	0.0		0.0		0.0		0.0	
<b>OTHER AREA EAST OF BROADWAY</b>									
Market Rate Residential	0.0	88.8		88.8		88.8		65.9	
Affordable Residential	17.0		17.0		17.0		17.0	65.9	16.7
Commercial	93.5								43.0
Ground Floor Retail (a)								11.0	
Community Facility	18.8	61.7		61.7		61.7			
Industrial	0.0							44.0	
Transportation	0.0								
Parking	0.0								
TOTAL DEVELOPMENT OTHER AREA	129.2	150.5	17.0	150.5	17.0	150.5	17.0	186.8	59.7
Public Open Spaces	0.0	167.5		167.5		167.5		246.5	
	0.0	0.0		0.0		0.0		0.0	
TOTAL DEVELOPMENT ALL SUBDISTRICTS	2,298.4	7,602.3		5,134.8		7,966.1		3,435.8	
Public Open Spaces	0.0	94.0		38.8		38.8		17.8	

**Notes:**

1 Columbia owned or controlled properties shown in Figure N.2-1. Site reference corresponds to Figure N.2-2. See also Figure N.2-3.

\* Reflects the Infill Alternatives as presented in the DEIS.

(a) ground-floor retail is included in commercial floor area, except for new construction and conversions.

(b) below-grade space is measured for University uses only.