

A. INTRODUCTION

Unavoidable significant adverse impacts are defined as those that meet the following two criteria:

- There are no reasonably practicable mitigation measures to eliminate the impact; and
- There are no reasonable alternatives to the Proposed Actions that would meet the purpose and need of the actions, eliminate the impact, and not cause other or similar significant adverse impacts.

As described in Chapter 23, “Mitigation,” a number of the potential impacts identified for the Proposed Actions could be mitigated. However, as described below, in some cases, project impacts would not be fully mitigated.

B. COMMUNITY FACILITIES**PUBLIC SCHOOLS**

As presented in Chapter 4, “Community Facilities,” under either the proposed development program or the Affordable Housing Scenario, the elementary and intermediate school-aged children that would be introduced by the Proposed Actions would generate a significant adverse impact on both elementary and intermediate schools within Planning Zone 4. Under the construction phasing schedule described in Chapter 20, “Construction Impacts,” a significant adverse impact to elementary schools within Planning Zone 4 could occur as early as 2011. Under the “Alternative Construction Scenario” (also described in Chapter 20), a significant adverse impact to elementary schools within Planning Zone 4 could occur as early as 2010.

The Draft SEIS analysis stated that in order to mitigate the projected shortfall in school seats, either one or a combination of the following measures would need to be undertaken:

- Shifting the boundaries of school catchment areas within CSD 2 to move students to schools with available capacity;
- Creating new satellite facilities in less crowded schools;
- Leasing school space to be constructed on the development parcels; and/or
- Building new school facilities off-site.

As described in Chapter 23, “Mitigation,” in order to address the Proposed Actions’ potential significant adverse impact on schools, the applicant will enter into an agreement with the School Construction Authority (SCA) for the construction of an approximately 630-seat, K-8 elementary/intermediate school to be located at 616 First Avenue. The school would occupy approximately 92,500 square feet in the community facility space proposed for the 616 First

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Avenue parcel (i.e., part of the 119,936 square feet of community facility [medical office] space analyzed in this SEIS).

The school is planned to be operational by September 2012. Given that 2010 is the first year in which a significant adverse school impact could occur under the Proposed Actions, with the construction of the school completed by September 2012 there would be an unmitigated temporary significant adverse school impact for up to approximately two school years (from the time the 685 First Avenue residential building is occupied until the school is available.). Other potential mitigation measures identified in the Draft SEIS—shifting the boundaries of school catchment areas within the CSD, creating new satellite facilities in less crowded schools, and building new school facilities off-site—if feasible, could fully or partially mitigate the temporary significant adverse impact. However, if these mitigation measures are determined by DOE to be infeasible, there would be no practicable measures available to mitigate the temporary significant adverse impact, and it would be unavoidable.

C. SHADOWS

The analysis in Chapter 6, “Shadows” found that the proposed development program would result in significant adverse shadow impacts on two sun-sensitive resources: the Manhattan Place Plaza and Tudor City open spaces. At Manhattan Place Plaza, the buildings on the 616 First Avenue development parcel would cast incremental shadows from 9:15 AM to 12:30 PM and 1:15 PM to 2:53 PM on the December analysis day. At the Tudor City open spaces, significant adverse impacts would occur on the already partially shadowed open spaces in the winter (December analysis day) when there would be incremental shadows from 8:51 AM to 1:30 PM from the buildings on the 685 and 708 First Avenue parcels.

The *New York City Environmental Quality Review (CEQR) Technical Manual* identifies several different measures that could mitigate significant adverse shadow impacts on open spaces, including: relocating facilities within an open space to avoid sunlight loss; relocating or replacing vegetation; undertaking additional maintenance to reduce the likelihood of species loss; or providing replacement facilities on another nearby site. CEQR guidelines also discuss alternatives that may reduce or eliminate shadow impacts, including reorientation of building bulk or reorientation of the site plan. Therefore, as described below, the potential mitigation measures investigated included: relocating or replacing vegetation; relocating facilities within an open space to avoid sunlight loss; providing replacement facilities on another nearby site; and reducing or eliminating shadow impacts through the reorientation of building bulk or reorientation of the site plan. As detailed below, none of the aforementioned measures, either individually or collectively, would serve as practicable mitigation measures to eliminate the significant adverse impacts.

MANHATTAN PLACE PLAZA

Mitigation options considered, but rejected, for the significant adverse shadow impact on Manhattan Place Plaza included moving the proposed building on the western portion of the 616 First Avenue parcel toward the center of the site, and reducing the height of either of the buildings at 616 First Avenue. The change in the location of the building would cause the shadow increment cast by the building to leave Manhattan Place Plaza slightly earlier on the December analysis day. By moving the building eastward, a publicly accessible open space could be provided on the site’s avenue frontage that could be in sun when Manhattan Place Plaza is in shadow. However, moving the building away from First Avenue would result in only

marginal improvements to shadows and would not meet the project's urban design and land use goals of enlivening the street by providing ground-floor retail along the avenue. Another option considered was maintaining the retail frontage along First Avenue while moving the residential portion of the building away from First Avenue (onto the proposed publicly accessible open space). While this would maintain the new retail presence along First Avenue, it would result in only marginal improvements to shadows and, because it would require a larger amount of the site area for building, would dramatically reduce the amount of new publicly accessible open space on the site. Therefore, it is counter to the project's goal of providing substantial new publicly accessible open spaces for the community.

In order to ameliorate the significant adverse impact, a reduction in the height of either of the proposed 616 First Avenue buildings would have to be substantial enough to remove approximately half of the area of incremental shadow that would be cast on the resource by one of the buildings. That would require either the western building to be reduced to a height of approximately 50 feet, or the tower of the eastern building to be reduced to a height of approximately 75 feet. Reducing the height of one of the buildings in this manner would be inconsistent with the project's goals of developing a mix of high-density uses and a substantial amount of new open space.

A partial mitigation measure considered was providing new seating areas within Manhattan Place Plaza, in the remaining sunlit areas not shadowed by the 616 First Avenue Buildings. However, as shown in Figures 6-17a, 6-18a, 6-19a, 6-20a, and 6-21a in Chapter 6, "Shadows," such new seating possibilities are limited because remaining sunlit areas are small in extent and duration. The incremental shadow would remove much or all of the remaining sunlight for most of the December analysis day. The project sponsor investigated the feasibility of implementing improvements to Manhattan Place Plaza between the Draft and Final SEIS, and did not identify any locations within Manhattan Place Plaza where new seating would provide substantial new opportunity for sunlit recreation during the impacted period.

Overall, there are no reasonable practicable mitigation measures to fully eliminate the significant adverse shadows impact on Manhattan Place Plaza. In addition, there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need of the actions, eliminate the significant adverse impact, and not cause other or similar significant adverse impacts. Therefore, the significant adverse shadows impact on Manhattan Place Plaza is unavoidable.

TUDOR CITY OPEN SPACES

Potential mitigation measures considered, but rejected included reorienting the bulk of the building on the 685 First Avenue parcel and/or reducing the heights of the buildings on the 708 and 685 First Avenue Parcels in order to reduce the incremental shadows. Moving the proposed building on the 685 First Avenue parcel away from First Avenue (toward the western portion of the parcel) would not substantially alter the incremental shadows cast on the Tudor City open spaces. In addition, the reconfigured building would block views south from Tudor City Place, and would not provide the opportunity for retail frontage along First Avenue, which is a design and land use objective of the Proposed Actions.

To fully eliminate the significant adverse shadow impact on the Tudor City open spaces, the overall heights of the proposed buildings on the 685 and 708 First Avenue parcels would have to be substantially reduced. The building height at 685 First Avenue would have to be reduced from the proposed 721 feet to a maximum height of 370 feet in order to prevent its shadow

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increment from reaching the Tudor City North Green and the Mary O'Connor Playground. To prevent this building from casting a shadow on the Tudor City South Green and the Tudor Grove Playground, the building would have to be further reduced to a maximum height of 250 feet. Concurrently, the height of the building at 708 First Avenue would have to be reduced from the proposed 688 feet to 340 feet to prevent casting a new shadow on the Tudor City open spaces. By reducing the height of the proposed building at 708 First Avenue to 360 feet, and the height of the proposed building at 685 First Avenue to 320 feet, the adverse shadow impact on the Tudor City open spaces would be eliminated. There would continue to be a shadow increment on the Tudor City South Green and the Tudor Grove Playground, but these height reductions would allow some sunlight to continue to reach both the northern and southern Tudor City open spaces throughout the December analysis day.

These substantial reductions in height of the buildings at 685 and 708 First Avenue were considered, but rejected because they would affect other important development objectives associated with the Proposed Actions. Under the Proposed Actions—which contemplate a 12 FAR development program—the reduction in building height and the corresponding loss in residential floor areas at 685 First Avenue and/or 708 First Avenue would require an increase in footprints and/or heights at one or several of the other proposed residential buildings. These program revisions would run counter to the Proposed Actions' design objectives of developing tall and relatively slender towers that would allow for the provision of large, publicly accessible open spaces. The proposed development program seeks to maximize the provision of open space while distributing the program's bulk relatively evenly among six residential towers; a reconfiguration of bulk within the planned footprints would require increases in other proposed buildings' heights that would be less in scale with the surrounding neighborhood, and could generate new shadows on other sun-sensitive resources. Alternatively, increasing building footprints or the number of residential buildings on the remaining development parcels would reduce the amount of new open space within the proposed development program, particularly the new passive recreational space planned for 700 First Avenue that would provide views from First Avenue to the East River.

The provision of replacement facilities (i.e., benches or other seating areas) at another nearby publicly accessible open spaces is not a feasible mitigation option for the significant adverse impact on Tudor City open spaces. Other publicly accessible open spaces are neither in close proximity to, nor visible from, the Tudor City open spaces. Therefore, feasible mitigation measures considered by the project sponsor instead focused on potential improvements to the attractiveness and usability of the Tudor City open spaces through the reconfiguration and/or addition of seating to portions of the open spaces receiving more sunlight, as well as upgrading the recreational facilities within the Tudor City Tudor Grove and/or Mary O'Connor playgrounds. A meeting was held between representatives of the project sponsor and representatives of Tudor City Greens, Inc. to present the findings of the Draft SEIS shadows analysis and to discuss possible mitigation measures for the significant adverse shadows impact. At that time, representatives of Tudor City Greens, Inc. declined to identify specific improvements to their open spaces which in their opinion would mitigate the significant adverse impact, pending the completion of the CPC review process.

Given that the reconfiguration of the proposed development program's bulk would conflict with other design objectives of the Proposed Actions, the significant adverse shadow impact on the Tudor City open spaces during the winter season would not be fully mitigated. Given that there are no reasonable practicable mitigation measures to fully eliminate the significant adverse shadows impact on Tudor City open spaces, and there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need of the actions, eliminate the significant

adverse impact, and not cause other or similar significant adverse impacts, the significant adverse shadows impact on Tudor City open spaces is unavoidable.

PARTIAL MITIGATION FOR TUDOR CITY OPEN SPACE AND MANHATTAN PLACE PLAZA

The restrictive declaration for the project will include a statement that the project sponsor has agreed with DPR to provide funding annually at a level of \$10,000 per year for a period of six years for the planting of shade-tolerant species, and monitoring of such plantings at Tudor Grove and Mary O'Connor playgrounds, St. Vartan Park, and Trygve Lie Plaza. While these funds would be used to enhance the quality of the affected resources, they would not reduce the incremental shadows cast by the project buildings. Therefore, the significant adverse shadows impact to Tudor City and Manhattan Place Plaza open spaces would only be partially mitigated by these measures.

D. TRAFFIC

As discussed in Chapter 15, “Traffic and Parking,” the proposed development program would result in significant adverse traffic impacts at locations within the traffic study areas analyzed in the SEIS pursuant to the methodologies contained within the *CEQR Technical Manual*. Most of the locations that would be significantly affected could be mitigated through the introduction of traffic improvements such as signal phasing and/or timing changes, parking regulation changes, modifications to street pavement markings or via posted traffic regulations, strict enforcement of posted traffic and parking regulations, channelization improvements, or the implementation of stricter enforcement and traffic operations improvements.

Under the proposed development program, 27 intersections in Manhattan would experience unmitigatable impacts by the 2014 analysis year (but not all in the same peak hours); of these, two intersections could be partially mitigated. The 25 intersections without partial mitigation include the FDR Drive Service Road at 34th, 35th, and 37th Streets; First Avenue at 34th, 37th, 40th, 42nd, 49th, 52nd, and 53rd Streets; Second Avenue at 34th, 36th, 42nd, and 59th Streets and at the approach to Second Avenue from the lower level of the Queensboro Bridge between 59th and 60th Streets; the QMT Exit Street at 34th and 37th Streets; 42nd Street at Third, Park, Sixth, Eighth, and Madison Avenues and Broadway; 34th Street and Park Avenue; and the intersection of Sixth Avenue, Broadway and 34th Street at Herald Square.

The two intersections where significant adverse impacts could be partially mitigated include Eighth Avenue at 34th Street and 42nd Street at Lexington Avenue. At these intersections, traffic improvements would be able to mitigate one or more—but not all—approaches that would be significantly impacted. Specific peak hours affected are described in detail in Chapter 23, “Mitigation.”

At most of the locations with unmitigatable or partially mitigatable impacts, congestion typifies conditions even under existing conditions and would be exacerbated under future conditions in year 2014 without the proposed project. Project-generated traffic would generally add 1 to 5 percent additional traffic to prevailing traffic volumes generated by all of Midtown and regional traffic through the locations on Second Avenue at the Queensboro Bridge and at 59th Street, on First Avenue at 49th Street and points north, on the QMT Exit Street at 37th Street, on 34th Street at the QMT Exit Street and points west, on Second Avenue at 34th and 36th Streets, on Third Avenue at 42nd Street, and on 42nd Street at Madison Avenue and points west. At the intersection of First Avenue and 34th Street, and Park Avenue at 42nd Street, the project-

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generated traffic increment would add approximately 4 to 8 percent more traffic to the total volumes through the intersection during the peak analysis periods. On the FDR Drive Service Road at 34th, 35th, and 37th Streets, and First Avenue at 37th, 40th, and 42nd Streets, the project-generated increment would add approximately 8 to 20 percent more traffic to the total volumes through the intersection during the peak analysis periods.

In the Queens Plaza area approach to the Queensboro Bridge, an additional seven intersections could experience unmitigatable impacts by the 2014 analysis year: Queens Plaza North at Crescent Street, approaching the Queensboro Bridge; Queens Plaza North at JFK Commuter Plaza; Queens Plaza North/41st Street at Northern Boulevard; Queens Boulevard/Thomson Avenue and Van Dam Street; Queens Boulevard and Skillman Avenue; Thomson Avenue at the Queensboro Bridge Upper Level Ramp; and the intersection of Thomson and Skillman Avenues. Significant traffic volumes across the Queensboro Bridge under the existing conditions consistently cause congestion along the corridors leading to the upper and lower levels of the bridge. The traffic conditions would persist and likely worsen for the 2014 future analysis year without the proposed project. Project-generated traffic would add approximately 1 percent up to 5 percent additional traffic to the total traffic volumes through the three intersections along Queens Plaza North during the peak analysis periods, approximately 1 to 3 percent through the two intersections on Queens Boulevard, and generally 2 to 3 percent through the two intersections on Thomson Avenue. The traffic improvements cited above and detailed within Chapter 23, "Mitigation," would not be able to mitigate significant adverse impacts at these locations.

One other unmitigatable significant adverse impact was identified in Chapter 23, "Mitigation", for the mainline of the QMT, inbound and outbound in the weekday AM and PM peak hours. These impacts were identified using criteria and data from the *Hudson Yards Rezoning FEIS*. However, with the exception of the outbound direction in the PM peak hour, projected utilization of the tunnel's capacity would still be under 100 percent, so available capacity would remain. Also, QMT conditions are most related to conditions at the intersections on the Manhattan side of the QMT where existing capacities are constrained.

E. TRANSIT AND PEDESTRIANS

As described in Chapter 23, "Mitigation," the S2/S9 stairway at Grand Central Station would need to be widened when the UNDC building is accounted for as a background project. The S2/S9 stairway is located within a privately owned building. Widening the stair would be subject to negotiation with the building's owner. In the event that the proposed widening could not be implemented, it would be considered a significant unmitigated adverse impact. This impact does not occur under the analysis scenario that does not include the UNDC project.

At the intersection of Third Avenue and East 42nd Street, the Proposed Actions' significant adverse impact on the north crosswalk can be only partially mitigated. Thus, this impact is unavoidable.

F. CONSTRUCTION

NOISE

The Draft SEIS identified the potential for significant construction noise impacts at a number of area open spaces and residential buildings. Between Draft and Final SEIS, the Applicant

Chapter 25: Unavoidable Significant Adverse Impacts

analyzed whether any additional measures beyond those assumed in the Draft SEIS analysis could be implemented during construction to reduce the magnitude of, or eliminate, construction noise impacts. As described in Chapter 20, "Construction Impacts," after a review of the construction noise control measures, a number of changes were made (described in Chapter 20) that would reduce construction noise levels by approximately between 3 and 7 dBA at locations where significant noise impacts were predicted to occur in the Draft SEIS. In particular, at Joseph Slifka Park, Corinthian Plaza, Trygve Lie Plaza, and 5 Tudor City Place (a building with neither double-glazed windows nor air conditioning, i.e., alternative ventilation), the additional measures committed to be implemented as part of the Final SEIS analysis would eliminate the significant noise impacts that were predicted to occur in the Draft SEIS at these locations.

With regard to the other residential locations where significant noise impacts are predicted to occur, all of the residential buildings (i.e., Manhattan Place [630 First Avenue], Rivergate [606 First Avenue], Corinthian [345 East 37th Street], Horizon [415 East 37th Street], have double-glazed windows and have some form of alternative ventilation (i.e., central air conditioning or packaged terminal air conditioner [PTAC] units). Consequently, even during warm weather conditions, interior noise levels would be approximately 30-35 dBA less than exterior noise levels. Although these would be considered significant noise impacts based on the CEQR construction noise impact criteria, the double-glazed windows and alternative ventilation at these residential structures would provide a significant amount of sound attenuation, and would result in interior noise levels during much of the time that are below 45 dBA L₁₀. Replacing existing windows at the impacted buildings with windows which would provide a higher level of attenuation would not be a practicable and feasible mitigation measure. The cost and dislocations associated with such mitigation would be disproportionate to the marginal benefit to be realized.

Even with the additional construction noise control measures described in Chapter 20, construction activities associated with the Proposed Actions could result in significant adverse noise impacts at Manhattan Place Plaza during the years 2011 through 2013. At this location, there are no feasible or practicable measures that could be implemented to mitigate project construction impacts. Consequently, this significant adverse impact would remain unmitigated. *