

**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 for the actions, eliminate the impact, and not cause other or similar significant adverse impacts.

As described in Chapter 22, “Mitigation,” a number of the potential impacts identified for the Proposed Project and the Alternative Scenario (the “With Action scenarios”) could be mitigated, and further consultation may be undertaken to consider other mitigation measures between the Draft Environmental Impact Statement (DEIS) and the Final Environmental Impact Statement (FEIS). However, as described below, in some cases, no practicable mitigation has been identified to fully mitigate significant adverse impacts and there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need, eliminate potential impacts, or not cause other or similar significant adverse impacts. Where impacts cannot be fully mitigated, they would constitute an unavoidable significant adverse impact of the Proposed Actions.

**B. SHADOWS**

As detailed in Chapter 6, “Shadows,” the shadows analysis identified that portions of the High Line within and adjacent to the Development Site and the Hudson Yards Public Square and Gardens east-adjacent to the Development Site would receive significant new shadows under both With Action scenarios. Additionally, it should be noted that that incremental shadows that would fall on the High Line and the Hudson Yards Public Square and Garden would occur during some of the hottest days of the year. On such days, open space users tend to utilize seating in shaded areas as a respite from the heat. Further, shaded areas on these open space resources could provide some level of protection to open space users from the sun’s damaging ultraviolet rays. Nevertheless, mitigation for the significant adverse shadow impact to the resources is discussed below.

The shadows on the High Line are consistent with those anticipated from the new towers on the Development Site in the 2009 FEIS; however, the 2009 FEIS accounted for project-generated shadows from the Site 5 development (current Site A), while the current No Action scenario assumes that Site A would not be developed before 2031, resulting in a larger increment of project-generated shadow from Site A. Furthermore, the final design for the portion of the High Line that extends through the Development Site is still in development. It is expected that any final design will take into account the context of the High Line as an open space resource in an area with multiple tall, large-scale

## **Western Rail Yard Modifications**

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buildings. As a city park, jurisdiction of the High Line falls under the purview of the New York City Department of Parks and Recreation (NYC Parks). Friends of the High Line, a nonprofit organization, undertakes maintenance of, and operations at, the High Line in coordination with NYC Parks. The Applicant would coordinate with NYC Parks and Friends of the High Line to ensure that appropriate mitigation for the shadow impact is implemented in connection with the future design, construction, and operation of the High Line on the Development Site.

As detailed in Chapter 21, “Alternatives,” a sensitivity analysis conducted to identify an alternative to avoid significant adverse shadow impacts concluded that development on Site A of virtually any height above the High Line (approximately 30 feet above grade where it abuts Site A) would cast substantial incremental shadows on the High Line, and consequently, the significant adverse impact would be unavoidable.

The Hudson Yards Public Square and Gardens is under the control of the Applicant, and the Applicant could monitor and evaluate plant health to determine if and how project-generated shadow affects existing plantings and vegetation. Should changes to the existing plantings and vegetation be warranted, shade-tolerant plant species that thrive in low-light conditions could be introduced, along with a diverse mix of trees, shrubs, and groundcovers with varying tolerances to create visual interest and ecological resilience.

In the late afternoons of the late spring and summer months, incremental shadow from both With Action scenarios would fall east across Eleventh Avenue into the adjacent Hudson Yards Public Square and Gardens, eliminating the remaining sunlight for two or more hours. Due to the proximity of the open space and the late hour of the day when shadows are longer than at other times, the development resulting from the Proposed Actions would have to be substantially shorter and less bulky than what is currently proposed under the With Action scenarios in order to avoid eliminating the limited areas of remaining sunlight that would otherwise be there in the No Action condition, which would not meet the Applicant’s programmatic needs. Specifically, development on Site A of any height greater than approximately 200 feet would cause significant adverse shadow impacts. Furthermore, the proposed building on Site B in both With Action conditions would be bulkier (extends farther north) compared with the No Action building and the additional bulk, or any non-minimal addition of bulk, would cause significant adverse shadow impacts. Therefore, the significant adverse shadow impact to the Hudson Yards Public Square and Gardens would be unavoidable without compromising the objectives of the Proposed Actions.

## **C. TRANSPORTATION**

As discussed in Chapter 14, “Transportation,” significant adverse transportation-related impacts were identified for the Proposed Project and the Alternative Scenario, and potential measures to mitigate these impacts to the extent practicable are presented in Chapter 22, “Mitigation.” Among the significant adverse impacts, unmitigated impacts were identified for traffic, transit (subway station vertical circulation elements and bus line-haul), and pedestrians (sidewalks, corners, and crosswalks) under both With Action scenarios.

### *TRAFFIC*

As detailed in Chapter 20, “Mitigation,” potential improvement measures were explored to mitigate the identified significant adverse traffic impacts to the extent practicable. While implementing these measures was found to be effective to fully mitigate certain impacts, some impacts could not be mitigated with feasible improvement measures. Accordingly, unmitigated impacts would constitute unavoidable significant adverse impacts of the Proposed Actions. For the Proposed Project, unavoidable significant adverse traffic impacts were identified for 10 of the 30 impacted intersections during the weekday AM peak hour, 13 of the 33 impacted intersections during the weekday midday peak hour, 25 of the 41 impacted intersections during the weekday PM peak hour, 14 of the 30 impacted intersections during the weekday evening peak hour, 17 of the 39 impacted intersections during the Saturday midday/afternoon peak hour, and 17 of the 32 impacted intersections during the Saturday evening peak hour. Regarding the Alternative Scenario, unavoidable significant adverse traffic impacts were identified for 12 of the 29 impacted intersections during the weekday AM peak hour, 4 of the 19 impacted intersections during the weekday midday peak hour, 21 of the 40 impacted intersections during the weekday PM peak hour, 4 of the 20 impacted intersections during the weekday evening peak hour, 5 of the 14 impacted intersections during the Saturday midday/afternoon peak hour, and 7 of the 27 impacted intersections during the Saturday evening peak hour.

### *TRANSIT*

While no significant adverse impacts are anticipated for line-haul conditions on the No. 7 subway line, the Proposed Project and the Alternative Scenario may potentially result in significant adverse impacts on bus line-haul conditions and vertical circulation elements at the 34th Street-Hudson Yards subway station. For bus line-haul impacts to the M23 and M34 Select Bus Service (SBS) routes, service improvements have been identified and could be implemented by New York City Transit (NYCT). As standard practice, NYCT routinely conducts periodic ridership counts and adjusts bus frequency to meet its service criteria, within fiscal and operating constraints, which would mitigate these impacts. In the absence of the bus frequency improvements, the identified impacts on bus service would constitute unavoidable significant adverse impacts of the Proposed Actions. For the identified subway station impacts, including those to four escalators and two platform stairways, reversing escalator flow directions and redirecting passenger flow via wayfinding signage or widening existing stairways have been identified as potential mitigation measures. With the full implementation of these measures, there could still be escalator impacts under the Alternative Scenario. If some or all of the identified mitigation measures were deemed infeasible, then the corresponding impacts to vertical station elements at the 34th Street-Hudson Yards subway station would additionally remain unmitigated and constitute unavoidable significant adverse impacts of the Proposed Actions.

### *PEDESTRIANS*

Similar to traffic, potential improvement measures were explored to mitigate the identified significant adverse pedestrian impacts to the extent practicable. While implementing these measures was found to be effective to fully mitigate certain impacts, some impacts could be only partially mitigated or there are others for which no feasible measures could be identified. Accordingly, partially mitigated and unmitigated impacts would constitute

## Western Rail Yard Modifications

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an unavoidable significant adverse impact of the Proposed Actions. For the Proposed Project, unavoidable significant adverse pedestrian impacts were identified for:

- Two of the three impacted sidewalks, both impacted corners, and three of the six impacted crosswalks during the weekday AM peak hour;
- All three impacted sidewalks and four of the nine impacted crosswalks during the weekday midday peak hour;
- Seven of the eight impacted sidewalks, two of the four impacted corners, and two of the 10 impacted crosswalks during the weekday PM peak hour;
- All four impacted sidewalks and five of the seven impacted crosswalks during the weekday evening peak hour;
- All five impacted sidewalks and five of the six impacted crosswalks during the Saturday midday/afternoon peak hour; and
- All six impacted sidewalks, one of the two impacted corners, and five of the seven impacted crosswalks during the Saturday evening peak hour.

Regarding the Alternative Scenario, unavoidable significant adverse pedestrian impacts were identified for:

- Three of the four impacted sidewalks, all three impacted corners, and two of the 10 impacted crosswalks during the weekday AM peak hour
- All five impacted sidewalks and six of the 16 impacted crosswalks during the weekday midday peak hour;
- Nine of the 10 impacted sidewalks, five of the six impacted corners, and 11 of the 16 impacted crosswalks during the weekday PM peak hour;
- All three impacted sidewalks and one of the four impacted crosswalks during the weekday evening peak hour;
- Both impacted sidewalks and both impacted crosswalks during the Saturday midday/afternoon peak hour; and
- All seven impacted sidewalks, the one impacted corner, and six of the seven impacted crosswalks during the Saturday evening peak hour.

## D. AIR QUALITY – MOBILE SOURCE

As described in Chapter 15, “Air Quality,” mobile source annual  $PM_{2.5}$  increments are predicted to potentially exceed the *de minimis* criterion of  $0.1 \mu g/m^3$  for the annual averaging period at Eleventh Avenue and West 33rd Street, Eleventh Avenue and West 30th Street, and Tenth Avenue and West 30th Street for the Proposed Project, and at Eleventh Avenue and West 30th Street for the Alternative Scenario. Therefore, at these locations, the Proposed Actions would result in a significant adverse mobile source air quality impact. Between the DEIS and FEIS, additional review and evaluation will be performed, which is expected to determine that the identified significant adverse impact related to the mobile source annual  $PM_{2.5}$  increments will be avoided. The additional review is expected to include additional modeling of  $PM_{2.5}$  concentrations (Grid Analysis) using more refined or comprehensive analysis procedures to determine the magnitude and extent of neighborhood-scale  $PM_{2.5}$  impacts from mobile sources. It is expected that these additional measures will reduce  $PM_{2.5}$  concentrations below the annual *de minimis* criterion threshold. However, if the additional review and evaluation determines that there would still be a significant adverse mobile source air quality impact at one or more of the

analyzed locations and there is no feasible or practical mitigation for these impacts, then they would constitute an unavoidable adverse impact of the Proposed Actions.

## **E. CONSTRUCTION**

### **TRANSPORTATION**

As described in Chapter 20, “Construction,” construction of the Proposed Project or the Alternative Scenario would result in temporary significant adverse traffic impacts during the peak construction periods. The same or similar traffic mitigation measures identified to mitigate the operational impacts could be implemented early at the discretion of the New York City Department of Transportation (DOT) to mitigate the temporary traffic impacts during construction; however, as discussed in Chapter 22, “Mitigation,” some of these temporary impacts could remain unmitigated, thereby constituting unavoidable significant adverse impacts of the Proposed Actions.

### **NOISE**

The detailed analysis of construction noise in Chapter 20, “Construction” concluded that construction under both With Action scenarios has the potential to result in noise levels that would exceed the *CEQR Technical Manual* construction noise impact criteria for an extended period of time at receptors surrounding the proposed construction work areas, including residential buildings and open spaces. Construction noise levels of this magnitude and duration would constitute a significant adverse impact. Possible mitigation measures would be explored by the Applicants in more detail between the DEIS and FEIS in consultation with the lead agency, but could include, at building façades that are predicted to experience impacts, the offer to make available at no cost for purchase and installation of storm windows for façades that do not already have insulated glass windows and/or one window air conditioner per living room and bedroom at residences that do not already have alternative means of ventilation. Even with these measures or at buildings that already have insulated glass windows and/or alternate means of ventilation, interior  $L_{10(1)}$  values would, at times during the construction period, exceed the 45 dBA guideline recommended for residential and community spaces according to CEQR noise exposure guidelines. The potential mitigations will be explored to determine if there are feasible and practicable measures that could minimize, avoid, or mitigate the potential construction noise impacts listed above. Source or path controls beyond those already identified for the construction of the With Action scenarios would not be effective in fully mitigating the predicted construction noise impacts at these receptors. Because these impacts cannot be fully mitigated, the impacts would constitute an unavoidable significant adverse impact of the Proposed Actions.

For the open space areas where significant adverse construction noise impacts are predicted to occur (i.e., The High Line north of West 30th Street, Hudson Yards Public Square and Gardens and the Vessel, Hudson River Park between West 26th Street and West 30th Street, and Bella Abzug Park), noise levels near construction activities would increase above the construction noise impact criteria and would result in significant adverse noise impacts on these locations. Noise levels at these open space areas are currently above the recommended *CEQR Technical Manual* noise level for outdoor areas and proposed construction activities would exacerbate these exceedances of the

## **Western Rail Yard Modifications**

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recommended level. No practical and feasible mitigation measures have been identified that could be implemented to reduce noise levels below threshold. Therefore, at these receptors, the significant adverse construction noise impact would be unavoidable during periods of time when construction is occurring. \*