CHAPTER 24: UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Unavoidable 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 Action that would meet the purpose and need of the action, eliminate the impact, and not cause other or similar significant adverse impacts.

Potential significant adverse impacts identified for the Proposed Action could all be mitigated, as described in Chapter 22, "Mitigation," except for shadows impacts as described in Chapter 7, "Shadows," certain traffic impacts as discussed in Chapter 13A, "Traffic and Parking," and impacts at a number of pedestrian crosswalks as discussed in Chapter 13B, "Transit and Pedestrians." The impacts in each of these technical areas are discussed briefly below.

24.1 SHADOWS

While both the Twin Towers and the Proposed Action would produce considerable shadows, the Twin Towers cast larger incremental shadow to the west and the Proposed Action would cast larger shadow increments to the east, due to shifting the bulk of development to the east in the Proposed Action in order to reserve the southwest quadrant of the WTC Site, where the original Towers stood, for a Memorial. In the winter Freedom Tower and Tower Two would cast a large incremental shadow on the already heavily shadowed Washington Market Park. In the late spring through the summer, the Towers Two through Five would cast additional shadows on the already heavily shadowed open spaces directly to the east of the WTC and Southern Sites. These significant adverse shadows impacts are unavoidable, given the unique requirements of the Proposed Action which seeks to create a "critical mass" of mixed-use development to help restore Lower Manhattan as a vibrant central business district that attracts and retains businesses, residents, and visitors. Given the prominence of these new buildings within the Manhattan office market, their exceptional accessibility, and state-of-the-art systems, the additional office space would make the area more attractive to retain existing and attract new businesses, and help to strengthen Lower Manhattan's reputation as a major international economic center.

24.2 TRAFFIC

The Proposed Action would have significant adverse traffic impacts at up to 18 of the 40 locations analyzed for 2009 conditions and up to 25 of the 40 locations in 2015. The vast majority of locations significantly affected by the Proposed Action could be mitigated with standard traffic capacity measures and engineering improvements, as described in Chapter 22, "Mitigation." However, in both 2009 and 2015 several intersections would be only partially mitigated or would remain unmitigated.

Partially mitigated or unmitigated intersections in the 2009 analysis year as a result of the Proposed Action are located at Route 9A and Vesey Street, Route 9A and the entrance to the

Brooklyn-Battery Tunnel, Route 9A and Chambers Street, and Canal and Hudson Streets. In 2015, a total of 9 intersections are unmitigatable or would remain partially mitigated after implementation of standard traffic capacity measures. These include the four intersections mentioned above for 2009, in addition to several more along Route 9A and along Broadway.

In order to fully mitigate those impacts that could only be partially mitigated under the standard traffic capacity improvement measures and in order to mitigate those impacts that are considered unmitigated, additional areawide traffic management and improvement strategies are considered, as described in Chapter 22, "Mitigation." Therefore, it is possible that one or more of the intersections identified as unmitigated or only partially mitigated could be significantly improved via these types of measures. However, it is assumed that several of these intersections would still remain unmitigated or only partially mitigated in the future as a result of the Proposed Action. These significant adverse traffic impacts are unavoidable given the unique requirements of the Proposed Action, which is located in a densely developed, urban setting.

24.3 PEDESTRIANS

A number of crosswalks were identified with impacts in both 2009 and 2015 as a result of the Proposed Action. Of the 10 crosswalks identified with impacts in 2009, four could be mitigated by widening the crosswalks. The other six crosswalks could not be fully mitigated but would be widened to a maximum of 20 feet to minimize the effect of the Proposed Action. Similarly, of the 17 crosswalks identified with impacts in 2015, eight could be mitigated by widening the crosswalks. The other nine crosswalks that could not be fully mitigated would be widened to a maximum of 20 feet. However, even with these unmitigatable crosswalk impacts, pedestrians would be able to cross streets at the impacted crosswalk locations with slightly more congested conditions with little or no appreciable change in crossing time. These significant adverse pedestrian impacts are unavoidable given the unique requirements of the Proposed Action.

The Memorial and museum by themselves would attract millions of visitors annually, substantially increasing pedestrian activity at the Project Site and on surrounding streets. These visitors combined with new office workers, area residents, and additional users of the new cultural and open space amenities and retail shops developed as part of the Proposed Action, would help to meet one of the main purposes of the Proposed Action—to create a more lively environment and reestablish Lower Manhattan as a vibrant central business district.

24.4 CONSTRUCTION NOISE

As a result of the ongoing construction activities from various projects during the peak construction year in 2006, significant noise impacts are unavoidable at receptor locations in the immediate vicinity of the Project Site. Due to the proximity of the Project Site to sensitive land uses (including residential land uses, parks and the Memorial) the concurrent construction of several large-scale projects within a small geographic area (WTC Memorial and Redevelopment, permanent WTC PATH Terminal, Route 9A, and Fulton Street Transit Center) and the extended duration of many construction activities, significant noise impacts during construction will be unavoidable. These impacts would occur for a considerable period of time—several years for the construction of the Memorial and Freedom Tower, and up to 10 years for the Towers 2, 3, 4, and 5 at the Project Site.

Chapter 22, "Mitigation," presents information on potential measures considered to mitigate noise impacts. It should be noted that at several locations, existing ambient noise levels prior to

September 11 were already above those specified in CEQR, FTA, and HUD impact criteria and continue to be so under existing conditions. Consequently, reducing construction noise to below such impact criteria levels would not be practicable because the construction noise would still be exceeded by the ambient noise levels. Finally, the dense urban setting with mixed uses makes developing and implementing cost-effective feasible mitigation measures a challenge.

Various mitigation strategies are being developed by LMDC in coordination with other sponsors of the other major Lower Manhattan Projects, including the Port Authority, MTA, and NYSDOT, the Net Lessee and key agencies, including HUD, FTA, NYSDEC, NYCDOT, NYCDEP, and Community Board 1. The basis for the strategies being developed is formed by the Sustainable Design Guidelines and the Environmental Performance Commitments (EPCs). Both provide measures for the Proposed Action that are designed to avoid, minimize and mitigate potential impacts.