A. INTRODUCTION

This chapter summarizes and responds to all substantive comments on the January 2005 Environmental Assessment (January 2005 EA) for the proposed 50th Street facility of the Metropolitan Transportation Authority (MTA) Long Island Rail Road East Side Access Project. MTA prepared the January 2005 EA under the National Environmental Policy Act (NEPA) for the Federal Transit Administration (FTA) as lead federal agency. Public review for the January 2005 EA began with publication and distribution of the document. MTA held a public hearing to receive comments on the document on February 10, 2005, in the fifth floor boardroom at MTA Headquarters, 347 Madison Avenue, New York, NY. The public comment period remained open until March 8, 2005.

The January 2005 EA was circulated to involved and interested agencies and other parties and posted on the MTA's website the week of January 12, 2005. Notice of its availability was also posted on MTA's website at the same time. To advertise the public hearing and to provide notice of the availability of the January 2005 EA, MTA published notices in newspapers of general circulation in the project area the week of January 10, 2005 and January 17, 2005. In addition, information on the public hearing was posted on the MTA's website and a notice of public hearing was mailed on January 11, 2005 to public officials and interested parties in the project area.

In response to the public comments received on the January 2005 EA, a revised supplemental EA has now been prepared for public review and comment. This revised supplemental EA has been circulated in the same manner as the January 2005 EA. The comment period for this document will be open for at least 30 days.

This chapter identifies the organizations and individuals that commented on the January 2005 EA, and then summarizes and responds to their comments. It considers comments made at the public hearing on February 10, 2005, and received through March 8, 2005. Section B, below, lists all individuals and organizations commenting on the January 2005 EA. Following each commenter's name is a list of the comments made, referenced by comment number. Section C contains a summary of all comments made and a response to each of those comments. These summaries convey the spirit of the comments made, but do not quote the comments verbatim. Where similar comments on the same subject matter were made by more than one person, a single comment summarizes all comments on that issue. Following each comment is a list in parentheses of people or organizations that made the comment.

Copies of written comments received are included in Appendix I to this revised supplemental EA.

The comments are organized by subject area, corresponding to the subject areas included in the January 2005 EA, as follows:

- Process and Public Participation
- Purpose and Need/Project Alternatives
- Land Use, Zoning, and Public Policy and Social Conditions
- Socioeconomic Conditions
- Historic and Archaeological Resources
- Traffic and Transportation
- Air Quality
- Noise and Vibration
- Safety and Security
- Construction and Construction Impacts

In addition to the specific comments listed in this document, MTA received a number of phone calls (approximately 15) expressing general opposition to the 50th Street facility. In all cases, the caller was encouraged to provide a written comment so that it could be entered into the official record.

In response to the public comments received on the January 2005 EA, a new preferred alternative, referred to as Preferred Alternative D, has been developed and is described in this revised supplemental EA. In the responses to comments below, where relevant, the differences between Preferred Alternative D and the two alternatives presented in the January 2005 EA—referred to as Alternatives B and C—are described.

B. LIST OF COMMENTERS

AGENCIES

1. Grace Musumeci, United States Environmental Protection Agency, letter dated February 14, 2005 (Comments 1, 151, 192).
2. Gina Santucci, New York City Landmarks Preservation Commission, letter dated January 31, 2005 (Comment 62).
3. Amanda Sutphin, New York City Landmarks Preservation Commission, letter dated January 24, 2005 (Comment 63).

ELECTED OFFICIALS

4. Honorable Johnathan Bing / Honorable Richard Gottfried, New York State Assembly, comments made and written testimony submitted at public hearing, February 10, 2005 (Comments 13, 14, 15, 16, 18, 19, 119, 134, 138, 155).
5. Danielle Bacaro, for the Honorable Christine Quinn, New York City Council, comments made and written testimony submitted at public hearing, February 10, 2005 (Comments 4, 13, 22).
6. Minna Elias, for the Honorable Carolyn B. Maloney, United States House of Representatives, comments made and written testimony submitted at public hearing, February 10, 2005 (Comments 3, 4, 9, 10, 69, 71, 78, 80, 94, 109, 114, 119, 133, 134, 163, 165, 170).

7. Rick Muller, for the Honorable C. Virginia Fields, Manhattan Borough President, comments made at public hearing, February 10, 2005 (Comments 2, 3, 9, 13, 14, 19, 30, 45, 69, 172).
8. Patrick McCandless, for the Honorable Liz Krueger, New York State Senate, comments made and written testimony submitted at public hearing, February 10, 2005 (Comments 4, 5, 33, 59, 163).
9. The Honorable Betsy Gotbaum, New York City Public Advocate, written testimony submitted at public hearing, February 10, 2005 (Comments 4, 9, 16, 22).

ORGANIZATIONS

10. Richard Leland, Kramer Levin Naftalis & Frankel, for the Roman Catholic Archdiocese of New York, comments made at public hearing, February 10, 2005 and letters dated February 17, 2005 and March 7, 2005 (Comments 3, 4, 7, 10, 19, 22, 35, 47, 50, 52, 53, 54, 65, 67, 69, 71, 75, 76, 77, 78, 90, 93, 94, 114, 119, 163, 165, 166, 177, 178, 182).
11. John Herfort, Gibson, Dunn & Crutcher, for the Saint Paul Travelers Insurance Company, comments made at public hearing, February 10, 2005 (Comments 3, 4, 22, 55, 75, 109, 134, 170, 173).
12. Amanda Hiller, Municipal Arts Society, comments made and written testimony submitted at public hearing, February 10, 2005 (Comments 4, 13, 59, 67, 69).
13. Ross Moskowitz, Stroock & Stroock & Lavan, for the Mutual of America Life Insurance Company, comments made at public hearing, February 10, 2005 and letter dated March 7, 2005 (Comments 13, 22, 80, 94, 162).
14. Dr. Bruce Egan, Egan Environmental, for the Mutual of America Life Insurance Company, letter dated March 7, 2005 (Comments 109, 118, 120, 134, 135, 152).
15. Steve Stollman, Local Expression, comments made at public hearing, February 10, 2005 (Comments 4, 16, 17, 18, 22).
16. Steve Lefkowitz, Fried, Frank, Harris, Shriver & Jacobsen, for the Palace Hotel, comments made at public hearing, February 10, 2005 and letter dated March 8, 2005. (Comments 4, 19, 20, 21, 22, 44, 45, 48, 50, 52, 57, 59, 60, 61, 64, 67, 68, 71, 72, 92, 114, 116, 118, 134, 152, 159, 172, 174, 176).
17. Roger Lang, New York Landmarks Conservancy, comments made at public hearing, February 10, 2005 (Comments 19, 45, 59, 66, 90, 171, 172, 175, 177).
18. Brian Corcoran, Cushman Wakefield, for neighboring property owners, comments made at public hearing, February 10, 2005 (Comments 55, 173).
19. George Haikalis, Institute for Rational Urban Mobility, Inc., comments made at public hearing, February 10, 2005 and letter dated March 7, 2005 (Comment 16).
20. Michael Horodniceanu, Urbitran Group, for Alfredo Romano and Fonteselva New York Limited, comments made at public hearing, February 10, 2005 and written comments dated February 17, 2005 (Comments 3, 34, 35, 42, 43, 58, 74, 82, 84, 85, 86, 87, 88, 89, 178, 185).
21. David L. Berkey, Gallet Dreyer & Berkey, for Alfredo Romano and Fonteselva New York Limited (owner of 45 East 49th Street), letter dated February 18, 2005 (Comments 3, 16, 22, 41, 49).
22. Michael Hennessy, Yale Club, comments made at public hearing, February 10, 2005 (Comment 16).
23. Michael Zarin, Zarin & Steinmetz, for 437 Madison Avenue, comments made at public hearing, February 10, 2005 and letter dated March 8, 2005 (Comments 3, 4, 5, 6, 7, 8, 16, 19, 22, 25, 26, 28, 29, 30, 35, 36, 37, 38, 44, 45, 50, 51, 52, 53, 54, 55, 59, 65, 67, 68, 69, 70, 71, 75, 78, 80, 81, 82, 94, 96, 98, 108, 109, 110, 114, 115, 117, 118, 119, 122, 128, 131,

133, 134, 135, 138, 141, 142, 143, 152, 153, 154, 155, 156, 157, 158, 160, 162, 163, 164, 165, 166, 167, 168, 169, 170, 172, 173, 177, 178, 180, 181, 182, 183, 186, 187, 188, 189, 190, 191).

24. Simeon Bankoff, Executive Director, Historic Districts Council, letter dated February 9, 2005 (Comments 22, 59, 69).
25. Bruce Silverblatt, Turtle Bay Association, comments made at public hearing, February 10, 2005 (Comments 13, 19, 39, 40, 45, 57, 69, 133, 172).
26. Joseph Clift, Regional Rail Working Group, comments made at public hearing, February 10, 2005 (Comment 16).
27. Long Island Rail Road Commuter's Council ("LIRRCC"), written comments dated March 8, 2005 (Comments 3, 9, 19, 24, 116, 163).
28. Ambient Group, Inc ("Ambient"), for Zarin & Steinmetz, letter dated March 8, 2005 (Comments 30, 31, 32, 45, 69, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 113, 114, 115, 117, 118, 119, 120, 121, 122, 123, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 152, 154, 161, 177, 193).
29. Valentine Lehr, Lehr Associates, for Zarin & Steinmetz, letter dated February 22, 2005 (Comments 43, 108, 109, 114, 117, 118, 122, 141, 163, 166).
30. Bernard Adler, Adler Consulting, Transportation Planning & Traffic Engineering, PLLC, for Zarin & Steinmetz, letter dated March 3, 2005. (Comments 71, 73, 75, 78, 79, 81, 82, 83, 178, 179, 183, 184).

INDIVIDUALS

31. Ashley Newton, comments made at public hearing, February 10, 2005 (Comments 57, 172).
32. Mr. X, comments made at public hearing, February 10, 2005 (Comments 11, 12, 16).
33. Michael Schabas, comments made at public hearing, February 10, 2005 (Comments 16, 18, 30).
34. Martin Atarian, comments made at public hearing, February 10, 2005 (Comments 11, 12, 16).
35. Alan Kalish, comments made at public hearing, February 10, 2005 (Comments 40, 45, 172).
36. Lyssa Sampson, written comments submitted at public hearing, February 10, 2005 (Comments 49, 56, 173).
37. Elissa Querzé, written comments submitted at public hearing, February 10, 2005 (Comments 90, 163, 170).
38. Jean Albanese, written comments submitted at public hearing, February 10, 2005 (Comments 10, 55, 71, 91).
39. Ann Martha Hickerson, letter dated February 8, 2005 (Comments 91, 163).
40. Frederick Holzer Jr., Esq. / Tatjana A. Zankl, e-mail dated February 5, 2005 (Comments 4, 71, 91, 170).
41. Mia Lancaster, e-mail dated February 6, 2005 (Comments 45, 55, 91, 172, 173).
42. Cheryl Jacobs, e-mail dated February 6, 2005 (Comments 46, 71, 91, 163).
43. Nancy VanDerbeck, e-mail dated February 6, 2005 (Comments 55, 163, 173).
44. Elizabeth Anticaglia, e-mail dated February 6, 2005 (Comment 46).
45. Grace Randolph, e-mail dated February 1, 2005 (Comments 49, 91, 163).
46. Michael Schnitzer, e-mail dated February 7, 2005 (Comment 49).
47. Mary Ellen Whelehan, e-mail dated February 4, 2005 (Comments 91, 163).
48. Enrico David, e-mail dated February 16, 2005 (Comments 45, 172).
49. Michael G. Aptner, letter dated February 11, 2005 (Comments 45, 114).

50. Penelope Biggs, letter dated March 7, 2005 (Comments 19, 114, 170, 178).
51. Susan Snyder, e mail dated February 26, 2005 (Comment 49).
52. Jacqueline Amey, e mail dated February 23, 2005 (Comment 49).
53. Paul Goldberg, e mail dated February 28, 2005 (Comment 49).
54. Ingrid Kaufmann, e mail dated February 18, 2005 (Comment 49).

C. COMMENTS AND RESPONSES

PROCESS AND PUBLIC PARTICIPATION

Comment 1: The United States Environmental Protection Agency (EPA) has reviewed the January 2005 EA and concluded that the 50th Street facility would not result in significant adverse environmental impacts. (Musumeci)

Response: Comment noted.

Comment 2: The January 2005 EA should be reviewed by a disinterested consultant or the EPA to determine its adequacy and completeness. (Fields)

Response: Following the regulations implementing NEPA, the lead federal agency is responsible for reviewing documents prepared under NEPA to determine their adequacy and completeness. FTA, as lead federal agency for the East Side Access Project, has this responsibility for the EA. In addition, EPA, acting as a cooperating agency, has reviewed the January 2005 EA and has concluded that the project would not result in significant adverse impacts (see the previous comment).

Comment 3: The January 2005 EA is inadequate and does not provide enough supporting information to substantiate the conclusion that the proposed project would not have any significant adverse environmental impacts. Without these data, FTA cannot satisfy the NEPA requirement to take a "hard look" at the facility's environmental impacts. Underlying data supporting the conclusions of the January 2005 EA should be provided to the public. (Maloney, Fields, Zarin, Herfort, Horodniceanu, Berkey, Leland, LIRRCC) Supporting studies for the January 2005 EA have been posted to the MTA project website in an ad hoc fashion, or provided belatedly after repeated requests, thereby undermining the public review process required by NEPA. (Leland, Zarin)

Response: The January 2005 EA was prepared in accordance with NEPA; NEPA implementing regulations; and federal, state, and local guidance documents including New York City's *City Environmental Quality Review (CEQR) Technical Manual*, the guidance document that is often used for environmental analysis of projects proposed in New York City. The rationale for the conclusion about project effects is provided in each technical chapter of the January 2005 EA. Certain detailed analyses are not performed in the January

2005 EA because the proposed action would not exceed established thresholds (see, for example, the reasons stated below on why a traffic level-of-service [LOS] analysis is not required). Other analyses are not warranted due to the nature of the project's effects (see, for example, the reasons stated below on why an analysis of emergency smoke conditions is not warranted). As indicated above, these types of analyses would also not be included in an EIS for this project. The potential for adverse impacts to occur as a result of the 50th Street facility has been thoroughly analyzed.

In view of the continued interest that has been expressed in reviewing such materials, environmental studies, plans, and data compilations referenced in the January 2005 EA and relied upon to assess the potential for adverse environmental impacts from construction and operation of the 50th Street facility have been incorporated as appendices into this revised supplemental EA.

Comment 4: A Supplemental Environmental Impact Statement (SEIS) should be prepared to fully evaluate the potential impacts of the proposed facility, and to permit more thorough public review. The 50th Street facility clearly meets the threshold of a proposed change to the East Side Access Project that *may* result in a significant adverse environmental effect not anticipated in the 2001 EIS. It is only when a proposed action will not have a significant effect on the environment that an EIS is not required. CEQ regulations list 10 factors to consider in determining significance. These include the degree to which a proposed action affects public health or safety; the degree to which the project's effects are likely to be highly controversial; the degree to which possible effects are highly uncertain or involve unique or unknown risks; and whether the action threatens a violation of state or local law. All of these factors are present in MTA's proposed facility. CEQ also advises agencies to keep the length of EAs to not more than 10 to 15 pages; noting that the length of an EA is indicative of whether an EIS is necessary. (Maloney, Quinn, Gotbaum, Krueger, Leland, Stollman, Herfort, Hiller, Holzer/Zankl, Lefkowitz, Zarin)

Response: The comments misstate the applicable threshold for conducting an EIS under NEPA. Under that statute and FTA implementing regulations, environmental analyses are performed to determine whether the proposed action is likely to result in significant adverse environmental impacts that would require the identification of mitigation measures. An EA utilizing those analyses can be prepared to assist the agency in deciding whether an Environmental Impact Statement (EIS) should be prepared. Under applicable case law, if the lead agency determines upon reviewing the EA that there is a substantial possibility that the project may have a significant adverse impact, an EIS is prepared. If the lead federal agency determines that the project does not present a substantial possibility of significant adverse impacts, a Finding of No Significant Impact (FONSI) is issued, ending the environmental review for the project.

The January 2005 EA was prepared in accordance with all relevant rules, regulations, and guidance documents. The use of established guidance documents (such as New York City's *CEQR Technical Manual*) provides an added measure of objectivity to the process of evaluating the potential of a proposed action to have significant adverse impacts. The CEQ's NEPA regulations do not contain page limits for EAs or EISs; rather, that information is provided as guidance. Several commenters correctly note that the analyses in the January 2005 EA are far more extensive than typically performed in an EA. However, this does not support the conclusion that an EIS is required. The length and detail presented in the January 2005 EA are a direct response to numerous comments made by the public during preparation of the EA, which have contributed to a significant level of public interest in the proposed facility. The fact that the January 2005 EA includes detailed descriptions of the project and its potential environmental impacts should not lead to a conclusion that the project is likely to have a significant adverse impact. FTA, as lead agency, will consider the environmental effects of the proposed facility, using the analyses provided in the January 2005 EA and this revised supplemental EA, together with the public comments received on these two documents, and make a determination on that basis whether there is a substantial possibility that the project may have a significant adverse impact and, therefore, that an EIS should be prepared.

As noted below in response to Comment 9, public review is an important component of NEPA and the public has been given numerous opportunities to participate in preparation of the January 2005 EA for the 50th Street facility. The public will also have the opportunity to review and comment on this revised supplemental EA, which, as described in the introduction to this chapter, has been circulated in the same manner as the January 2005 EA, and will have a 30-day public comment period.

Comment 5: FTA must make an independent determination of the proposed facility's potential for significant adverse impacts and the need for an SEIS. Based on the January 2005 EA and record, there is no way under applicable legal standards that FTA can find that this facility would not have significant impacts or that the 50th Street site is an appropriate location for the facility. (Zarin, Krueger)

Response: As lead federal agency, FTA will consider the environmental effects of the 50th Street facility, using the analyses provided in the January 2005 EA and this revised supplemental EA, to make a determination as to whether there is a substantial possibility that the project may have significant adverse impacts and whether an EIS should be prepared.

Comment 6: The January 2005 EA fails to discuss relevant New York State legislation enacted in 1903 and revised in 1910 concerning the creation of Grand Central

Terminal, which appears to impact the overall location of the proposed facility, and seems to prohibit its construction. The legislation allows railroads to construct only signals or other apparatus above ground required for the safe operation of the railroad, and only when they do not obstruct roadways or sidewalks. Construction of the East Side Access facility would obstruct roadways or sidewalks, and it is questionable whether the facility is an apparatus necessary for the operation of the railroad. (Zarin)

Response: The January 2005 EA does not address this historic law because its provisions are not applicable to the construction of the 50th Street facility. In 1903, the New York Legislature enacted a law requiring the New York and Harlem Railroad Company and the New York Central and Hudson River Railroad Company to depress the railroad tracks in the vicinity of Grand Central Station (later Grand Central Terminal) to below grade, and to construct viaducts and bridges over these tracks for surface traffic. As part of this undertaking, the 1903 Law allowed the railroad companies to construct and maintain signals or other apparatus on the overlying viaducts and bridges for their train operations below, as long as these facilities did not obstruct the roadways or sidewalks of the viaducts or bridges upon completion. However, the 1903 law was enacted when Grand Central Terminal and connecting rail lines were managed and operated by a private rail carrier. In 1967, the New York State Legislature created MTA as a New York public authority and public benefit corporation and gave MTA broad powers to oversee "the continuance, further development and improvement of commuter transportation and other services related thereto" within New York City and suburban counties. See Public Authorities Law §1263(1). Among other things, MTA's enabling legislation gives MTA broad authority to "establish, effectuate, operate, maintain, renovate, improve, extend or repair any … transportation facility" (Public Authorities Law §1266(2)), with the term "transportation facility" defined to include, among other things, "tracks, extensions, connections, terminals, stations and other related facilities thereof, the devices, appurtenances, and equipment thereof and power plants and other instrumentalities used or useful thereof or in connection therewith." (Public Authorities Law §1261(14).) With respect to the MTA and its statutory authority to manage and operate Grand Central Terminal and other commuter transportation facilities under its jurisdiction, MTA's enabling legislation supercedes and is not limited by the 1903 law cited by the commenter. Moreover, Public Authorities Law §1266(12) expressly authorizes MTA to occupy city streets for any work undertaken in connection with the improvement, construction, reconstruction, or rehabilitation of a transportation facility. This statutory provision allows MTA to utilize, without limitation, a city street for the construction of a transportation facility located adjacent to that street, such as the proposed project. Finally, because the 50th Street facility would be wholly contained within a building located within the street line, it would not, in any event, be constructed so as to obstruct a roadway or sidewalk.

Comment 7: In light of the prior history of inadequate environmental documentation for the proposed project, FTA should direct MTA to prepare an SEIS. (Leland, Zarin)

Response: The history of the environmental review of this project is a history of good faith compliance with applicable regulations and procedures. Whether or not an EIS is required should be determined according to the standard described in the response to Comment 4, above.

Comment 8: The MTA's procedural defaults, lack of timely notice, failure to disclose germane studies, and sudden and unexplained shifts of position all combine to show that the process utilized to obtain approval for the proposed 50th Street facility is so irregular as to be unlawful. Posting documents on the project's website after the January 2005 EA was issued does not satisfy FTA/MTA's obligation to provide such supporting studies and data in the January 2005 EA for public review and comment. (Zarin)

Response: See the response to Comments 5 and 7.

Comment 9: MTA should take the perspective of the community into account in its planning process. The proposed facility and the East Side Access Project as a whole would benefit from an increased atmosphere of collaboration. (Fields, Gotbaum) The public outreach conducted as part of the January 2005 EA has been inadequate. (Maloney, LIRRCC)

Response: MTA has an extensive public outreach program for the East Side Access Project and the 50th Street facility, which is described in Chapter 19 of the January 2005 EA. Consideration of public comments and input is an important component of the NEPA process, and the public outreach for the project has been conducted in compliance with the requirements of that statute. As described in Chapter 19, MTA has been proactive in seeking public input on the 50th Street facility. A public meeting was held in February 2004 prior to preparation of the January 2005 EA, to solicit public input on the studies to be included, and a public hearing was held in February 2005 to review the conclusions of the January 2005 EA and solicit public input on the completed studies. In addition, numerous meetings have been held with representatives of affected properties, elected officials, public agencies, local community boards, and other interested parties to discuss the 50th Street facility. This revised supplemental EA has also been circulated for public review and comment. Public notification for the review of the January 2005 EA and this revised supplemental EA is described in the introduction to this chapter.

Public input has also been critical during development of the project alternatives—the initial alternative adopted by MTA as the preferred alternative for the 50th Street facility, Alternative C, was the result of a suggestion made by a member of the community at the February 2004 public meeting. In addition, in

response to public comments made on the January 2005 EA, a new design for the 50th Street facility has been developed, which substantially modifies the preferred alternative identified in that document. The new Preferred Alternative D relocates a number of the 50th Street facility's functions either below grade, to the concourse, or to an adjacent building. The new facility would be substantially smaller—about half the width and less than half the height. A landscaped public open space would be provided on the remainder of the site (40 feet wide by 60 feet deep). More information on the revised design is included in this revised supplemental EA.

Comment 10: The comment period should be extended beyond February 22, 2005. (Maloney, Leland, Albanese)

Response: The comment period on the January 2005 EA was extended to March 8, 2005. As indicated above, in response to the public comments received, a new design for the 50th Street facility has been developed (Preferred Alternative D), which substantially modifies the preferred alternative in the January 2005 EA (Alternative C). This revised supplemental EA, which responds to the comments received on the January 2005 EA and evaluates Preferred Alternative D, has been prepared for public review and comment. The comment period for this document will be open for 30 days.

Comment 11: I did not receive notification of the public meeting until a few days before the meeting took place. (Mr. X, Atarian) Notice of the public hearing should have been provided one month in advance. (Mr. X)

Response: Notification for the public meeting on the January 2005 EA was made in accordance with NEPA regulations. As described above in the introduction, MTA placed advertisements for the public hearing in newspapers of general circulation in the project area the week of January 10, 2005 and January 17, 2005. In addition, information on the public hearing was posted on the MTA's website; and a notice of the public hearing was mailed on January 11, 2005 to public officials and interested parties in the project area.

Comment 12: The MTA headquarters, fifth floor boardroom at 347 Madison Avenue, where the public hearing on the January 2005 EA was held, is not ideal in terms of space and acoustics. It would be better if public hearings were held at 2 Broadway. (Mr. X, Atarian)

Response: MTA holds many of its public hearings on a variety of different projects in the boardroom at 347 Madison Avenue. Moreover, for the 50th Street facility, 347 Madison Avenue is a more appropriate choice for the public hearing than 2 Broadway, because of 347 Madison Avenue's proximity to the project site. Adequate seating was available for all participants at the hearing on February 10, 2005. In addition, the January 2005 EA was posted on MTA's website and

the comment period was held open until March 8, 2005, for receipt of written comments from the public.

PROJECT PURPOSE AND NEED/PROJECT ALTERNATIVES

Comment 13: East Side Access is an important project for Midtown Manhattan and New York City as a whole, and should be supported. (Hiller, Bing/Gottfried, Quinn, Fields, Moskowitz, Silverblatt)

Response: Comment noted. The East Side Access Project will provide a substantial benefit for Midtown and the region by greatly expanding the transportation accessibility of East Midtown for Long Island commuters. However, this project cannot be constructed without the provision of a ventilation facility in the vicinity of East 50th Street to provide fresh air to the new underground passenger spaces and tunnels.

Comment 14: The financial burden that the East Side Access Project would place on the MTA capital budget and the priority level of East Side Access compared with other transit projects of similar magnitude should be considered. (Bing/Gottfried) The Second Avenue Subway should receive priority over the East Side Access Project. (Fields)

Response: The MTA has allocated funds for both East Side Access and the first phase of Second Avenue Subway in the 2005–2009 Capital Program, and intends to advance both projects simultaneously. Both East Side Access and Second Avenue Subway received highly recommended ratings from the FTA as a result of the New Starts project justification evaluation in 2006. Of all of the projects nationwide that are eligible to receive federal New Starts funds, East Side Access and Second Avenue Subway are the only two to receive that highest rating.

Comment 15: Construction of the East Side Access Project should proceed only if it is coupled with construction of the Second Avenue Subway, in order to avoid overcrowding of the Lexington Avenue subway line. (Bing/Gottfried)

Response: As indicated above, MTA is advancing both East Side Access and the first phase of Second Avenue Subway, which will reduce overcrowding on the Lexington Avenue Line by a greater amount than the increase caused by the East Side Access Project.

Comment 16: The January 2005 EA does not include consideration of the "Upper Level Loop" alternative. MTA rejected this alternative without any formal public review process, in violation of NEPA. An analysis of the viability of this alternative should be conducted and subjected to formal public review. FTA should require

that MTA undertake a thorough review of alternatives to the current deep cavern plan, such as the Upper Level Loop alternative. The review should involve the alternatives' authors and advocates, thereby ensuring a complete and fair review. Use of existing underutilized Metro-North tracks, i.e., the Upper Level Loop alternative, would serve the same purpose as the East Side Access FEIS preferred alternative, at a much lower cost and with reduced environmental impacts. With much less construction, this alternative would significantly reduce the project's construction schedule and cost. This alternative would also eliminate the need for the 50th Street facility. Contrary to MTA's claims, the Upper Level Loop alternative would meet the service level specified in the East Side Access FEIS; would provide more convenient passenger access and eliminate the safety and security problems of a deep cavern; could be completed three years earlier than the FEIS alternative; would avoid the need for ventilating plants on 44th and 50th Streets; would save operating and maintenance cost; could be constructed and operated without significant impact on Metro-North's operations; and would preserve opportunity within Grand Central Terminal for future Metro-North growth. (Bing/Gottfried, Gotbaum, Mr. X, Schabas, Haikalis, Atarian, Stollman, Clift, Hennessy, Zarin, Berkey)

Response: A full evaluation of the Upper Level Loop Alternative can be found in Appendix B, "Upper Level Loop Alternative Analysis," of this revised supplemental EA. This comment addresses decisions made for the East Side Access Project not related to the 50th Street facility. The preferred tunnel and cavern alignment was selected as part of the East Side Access Project's EIS, which was completed in accordance with NEPA in 2001 and the subject of a Record of Decision (ROD) issued by FTA in 2001. The evaluation of alternatives followed FTA's metropolitan transportation planning process as well as the NEPA environmental impact evaluation process, and was subject to formal public review as part of those processes. The alternatives evaluation process for East Side Access began a decade ago, in 1995, when a Notice of Intent to prepare an EIS was published, a public scoping process was undertaken, and a Major Investment Study was prepared under FTA's metropolitan transportation planning process evaluating a wide range of alternatives against project goals and objectives and other criteria. An alternative that introduces new Long Island Rail Road (LIRR) service to Grand Central Terminal via LIRR's main line was selected as the preferred alternative. A Draft EIS was published in May 2000 for the East Side Access Project that analyzed the preferred alternative (with two different engineering options for the Manhattan tunnels and terminal) as well as a no action alternative and a Transportation Systems Management alternative. A public hearing was held on the DEIS. Comments suggesting implementation of an earlier version of the "Upper Level Loop" alternative were made during the public comment period for the DEIS. In 2001, an FEIS was published identifying the deeper tunnel option (referred to as Option 2) as the selected Manhattan engineering option.

FTA issued a ROD on the FEIS in 2001. Subsequent to the ROD, MTA has held public hearings to acquire the subsurface easements in Manhattan required for the project under Option 2, and most of the easements required for the tunnels have already been acquired. In addition, MTA has completed the final design for the Manhattan tunnels and is ready to award the construction contract.

An earlier version of the Upper Level Loop alternative, then known as the Apple Corridor Plan and the Committee for Better Transit alternative, was evaluated during the metropolitan transportation planning process that was completed for the East Side Access Project, in accordance with state and federal requirements governing project development. During this project development process, the region's transportation professionals and tunneling experts from around the world reached consensus on a preferred alternative for the East Side Access Project, which was found to be superior to the Upper Level Loop alternative when cost, operability, constructability, and environmental considerations were taken into account. A summary of that evaluation can be found on page A-22 of Appendix A to the East Side Access Project DEIS and pages 28-12 through 28-14 of the FEIS.

The Upper Level Loop alternative does not meet the purpose and need for the East Side Access Project because it cannot accommodate 24 LIRR trains or the projected 160,000 new LIRR commuters at Grand Central Terminal in the peak hour. In addition, because of the Upper Level Loop alternative would require construction in the narrow "throat" area of the approach tracks to Grand Central Terminal, the impacts to Metro-North's operations both during and after construction would cause a severe degradation of Metro-North service.

The purpose of the January 2005 EA and this revised supplemental EA is to analyze a proposed change in the approved project with respect to placement of certain ancillary facilities, not to evaluate the merits of the greater East Side Access Project, which was already the subject of the separate environmental review process completed in 2001. Furthermore, the Upper Level Loop alternative does not eliminate the need for a ventilation facility at 50th Street, which would be required so that life-safety standards for the East Side Access Project's concourse and caverns can be met. The future LIRR service will increase train activity in the tunnels and terminal by approximately 75 percent and nearly double the number of rail commuters at Grand Central Terminal. This increase in activity could not be accommodated by the existing ventilation system at Grand Central Terminal and the 50th Street facility would still need to be constructed.

Comment 17: With implementation of the less expensive Upper Level Loop alternative, a connection could be built between Penn Station and Grand Central Terminal. Trains would go around Grand Central, exit, and head to New Jersey, greatly improving the regional transportation network. The project as currently

proposed will do nothing but stop that from happening and not help it to happen. (Stollman)

Response: See response to the previous comment regarding the Upper Level Loop alternative. Although a connection between Penn Station and Grand Central Terminal was evaluated as part of the alternatives evaluation conducted for the New Jersey Transit's Access to the Region's Core project, such a connection is no longer included as part of that project. In any case, the commenter is mistaken—the deep alignment that is part of the East Side Access Project will actually facilitate a connection between Penn Station and Grand Central Terminal since there would be no obstacles in the alignment path at that elevation. Extending the Upper Level loop southward, on the other hand, would directly interfere with the mezzanine of the Times Square Shuttle and a number of other obstacles on the way to Penn Station.

Comment 18: The depth of the East Side Access terminal poses a safety risk to passengers because of the extra time required to reach street level. (Bing/Gottfried, Schabas) The extra time required to exit the terminal is time unnecessarily lost for commuters. (Stollman)

Response: This comment addresses decisions made for the East Side Access Project not related to the 50th Street facility (see the response to Comment 16 above). The depth of the East Side Access terminal and safety considerations were fully addressed in the FEIS that was prepared for the East Side Access Project and taken into account in the selection of the deep alignment for East Side Access (see, for example, page 28-21 in the FEIS).

Comment 19: The FEIS design, which dispersed the functions of the proposed facility to many smaller locations, should be reevaluated; this dispersed FEIS design should be implemented. The January 2005 EA does not explain why the no action alternative was rejected. The EA should provide details regarding the original FEIS design's plan to spread its support systems to decentralized locations, since this information is needed to demonstrate the problems with this scheme and evaluate the merits of the proposed alternative. (Leland, Fields, Zarin, Bing/Gottfried, Lang, Lefkowitz, Silverblatt, Biggs, LIRRCC)

Response: The January 2005 EA describes the FEIS design's plan as well as the problems with this scheme in Chapter 1, "Project Purpose and Need" (see pages 1-4 through 1-6) and Chapter 2, "Project Alternatives" (see pages 2-3 through 2-5). As described in the January 2005 EA, the FEIS design raises three issues with respect to ventilation: (1) it would result in compromised performance of station ventilation when both tunnel ventilation and station ventilation operate simultaneously; (2) following completion of the FEIS, greater air flow requirements were identified, triggering the need for sidewalk grates on both sides of both 49th and 50th Streets; and (3) with station ventilation air intakes in

the sidewalk, the FEIS design would not provide as reliable a source of clean, fresh air as the proposed elevated intakes. In addition, the loading dock and cooling tower locations proposed in the FEIS design can no longer be used: the loading dock at Depew Place that serves Grand Central Terminal does not have adequate capacity for East Side Access, and the rooftop location at Grand Central Terminal that was to be used for cooling tower is no longer available (see response to Comment 30 below). Preferred Alternative D for the 50th Street facility disperses the functions required for the East Side Access tunnels and terminal to the extent practicable.

Comment 20: The no action alternative is intended as a baseline against which the impacts of the project can be evaluated. It should not include any part of the project. The FEIS design should not be considered the no action alternative, since it includes in the baseline the functions to be located in the facility and therefore assumes the impacts it is supposed to be assessing as part of the project. Moreover, by establishing as a baseline a project design that the January 2005 EA deems impracticable, the no action alternative does not provide a realistic assessment of conditions if the proposed facility were not to be constructed, and reduces the impacts that would result from the proposed facility by including some of those impacts in the baseline condition. (Lefkowitz)

Response: The proposed action evaluated in the January 2005 EA is one specific design modification of the East Side Access Project, not the entire project. The purpose of the January 2005 EA and this revised supplemental EA is to evaluate the effects of the design modification to determine whether there is the potential for any significant adverse impacts that would not occur without the design modification. Therefore, the East Side Access Project without the design modification is appropriate as the no action alternative (referred to in this revised supplemental EA as Alternative A).

The impacts of the East Side Access FEIS design were already evaluated in the FEIS and were approved by FTA when the ROD was issued. As the project's design evolved, it became apparent that the FEIS design is no longer the best design for those ancillary elements, and is no longer practicable. Overall, the FEIS design is not infeasible, however, and if the 50th Street facility were not constructed, this alternative would be built. Therefore, it is appropriate to include the East Side Access Project as previously approved in Alternative A.

Comment 21: The January 2005 EA does not consider expected growth in background conditions that were not anticipated in the FEIS, such as from the recently approved Hudson Yards West Side Redevelopment Plan. (Lefkowitz)

Response: The January 2005 EA describes expected growth in background conditions in Chapter 3, "Land Use, Zoning and Public Policy, and Social Conditions." As described there, outside the study area for the proposed project, other projects

are proposed throughout Manhattan. All of these other projects—including the Hudson Yards West Side Redevelopment Plan, the redevelopment of Lower Manhattan, and the rezoning of Consolidated Edison First Avenue Properties between East 35th and East 41st Streets—are located far from the project site and their potential environmental impacts would not overlap with those of the 50th Street facility.

Comment 22: The analysis of alternatives presented in the January 2005 EA is not adequate. A comprehensive investigation and full technical and economic analysis of all practical and feasible alternatives to the proposed facility should be conducted. The January 2005 EA does not contain a discussion of alternative locations for the loading dock, emergency generators, or the diesel fuel storage tank. The January 2005 EA does not explain why there is no alternative location for the centralized facility, or consider other decentralized locations to house some of the functions of the proposed facility. (Quinn, Herfort, Stollman, Zarin, Gotbaum, Bankoff, Lefkowitz, Moskowitz, Berkey, Leland)

Response: A thorough analysis of alternatives to the 50th Street facility, including the original FEIS design (now called Alternative A), is provided in Chapter 2 of the January 2005 EA. As indicated in Chapter 1, the need for the facility is driven by the loading dock and ventilation requirements of East Side Access. As such, the alternative analyses focus on alternate locations that would satisfy these needs. The January 2005 EA includes an analysis of alternative locations for these project elements in Chapter 2.

The January 2005 EA also included an analysis of alternative locations for the cooling tower, but not for the emergency generators or substations. The cooling tower, emergency generators, and substations proposed for the 50th Street facility in the January 2005 EA were proposed to maximize MTA's investment in the property and facilitate efforts related to their maintenance and security. Emergency generators and cooling towers of the size proposed normally do not warrant detailed analyses; for example, both are exempt from air quality permit requirements under both the EPA and New York State Department of Environmental Conservation (NYSDEC) criteria because they normally do not result in adverse impacts.

Since publication of the January 2005 EA, additional study of alternative locations for the cooling tower and emergency generators has been conducted in response to public comments. As a result of those analyses, as described in this revised supplemental EA, the cooling tower has been relocated to the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue, the fuel tank for the emergency generator has been relocated to a site in the concourse, and the fans and emergency generators have been relocated underground. For more information on the new Preferred Alternative D, see the comments below and responses that follow, as well as Chapter 2 of this revised supplemental EA.

An analysis of alternative locations for a centralized facility is also included in the January 2005 EA in Chapter 2. That analysis did not identify any other reasonable locations other than the proposed 50th Street site. Moreover, an alternative location for a centralized facility would pose the same issues at a different site in Midtown Manhattan, and relocating the centralized facility would not eliminate the need for a ventilation facility in the vicinity of 50th Street, where the East Side Access tunnels and station will meet.

Comment 23: Given the safety concerns of localized fuel storage, alternative options should be sought for emergency electricity use in the case of power outages, including remote locations for the generators or supplemental sources of backup electricity. (Egan)

Response: The concerns that have been expressed about the safety of the 6,000- to 8,000-gallon diesel fuel tank are unfounded. MTA representatives met with representatives of the New York City Fire Department (FDNY) three times to review the proposed design of the emergency generators and fuel tank rooms in the 50th Street facility. (These meetings included a specific review of the location of the tank with respect to the exhaust/intake shafts to address Comment 170 as well as a specific review of Preferred Alternative D for 50th Street.) At those meetings, FDNY indicated that the proposed design was safe, appropriate, and consistent with the design of many nearby office buildings that also have emergency generators and fuel tanks. Representatives from the FDNY reiterated that the 50th Street facility and the diesel fuel storage tank, as designed, do not present a significant security or safety risk for the reasons specified in the January 2005 EA (see Chapter 14).

Nonetheless, in response to public concerns about the safety of the fuel tank in the 50th Street facility, additional study has been conducted of alternative locations for the emergency generators and fuel storage since the January 2005 EA was originally published. As a result of this evaluation, the tank has been moved to a location in the East Side Access concourse, and the emergency generators are now located below ground.

Finally, as noted in the January 2005 EA and this revised supplemental EA, the fuel tank would be vaulted and surrounded by a concrete 3-hour rated fire wall with other fire containment measures, and would have containment to prevent leaks. Diesel fuel does not present a large risk of exploding or igniting, since it must be heated to a high temperature before it will burn. The “flash point” for diesel fuel (the point at which it will burn) is between 126º F and 205º F, meaning that the fuel does not give off combustible vapors until it is heated to that temperature. In contrast, gasoline is highly combustible, with a flashpoint of -45º F, indicating that it emits combustible vapors at all times.

Comment 24: The January 2005 EA provides no data to support its findings and does little to address the very real safety concerns related to the change from multiple ventilation sites to a single concentrated site. There are three advantages to maintaining multiple ventilation sites for the tunnel and new terminal: (1) This would lessen the likelihood that the ventilation system will be a terrorist target; (2) If a problem erupts at one of multiple sites, there would be back-up facilities available to provide needed ventilation to the tunnel and terminal; and (3) Dispersing exhaust from multiple sites would moderate the concentration of exhaust at any one street-level location, reducing the overall street-level environmental impact. (LIRRCC)

Response: The commenter is incorrect: the currently proposed action would not result in a change from multiple ventilation sites to a single concentrated site. As described in the January 2005 EA (see Chapter 2), the East Side Access Project's ventilation system will include numerous ventilation structures in Manhattan as well as other ventilation elements in Queens and on Roosevelt Island. The current proposal would replace a ventilation system under the sidewalks of 49th and 50th Street with an above-ground structure on 50th Street. The other ventilation elements of the project would not be affected. Thus, the advantages noted by the commenter of maintaining multiple ventilation sites are advantages that will accrue to the project as proposed.

It would not be feasible to provide multiple and redundant locations for each of the East Side Access Project's separate ventilation elements. Each of the proposed elements would provide ventilation for a different segment of the project's tunnels and station concourse and caverns.

The exhaust that would be emitted at any one of the locations would not result in significant environmental impacts (for more information, see the comments and responses later in this document under the heading, "Air Quality"). Moreover, the 50th Street facility would allow the project to move the ventilation exhausts from the street-level (in sidewalk grates) to elevated locations above street level, resulting in even less adverse effect on localized air quality.

Comment 25: The January 2005 EA states that under the FEIS design, extensive relocation of utilities would be required to install sidewalk ventilation grates. The need to relocate utilities is not a sufficient justification for dismissing the use of sidewalk grates. In addition, supporting documentation demonstrating the need to place sidewalk grates on both sides of 49th and 50th Streets should be provided. (Zarin)

Response: As described in the January 2005 EA (see Chapter 1), there were multiple reasons that led to the ventilation system design change at 50th Street. In addition to requiring substantial utility locations and lane closures during construction on both 49th and 50th Streets, the FEIS design included co-located

tunnel and station ventilation fans and a shared exhaust shaft that would have compromised the station ventilation function when the tunnel fans were in operation. The need to place sidewalk grates on both sides of 49th and 50th Streets under a modified FEIS design relates to the need to separate the station and tunnel exhaust shafts so that the station ventilation function is not compromised when the tunnel fans are operating. In addition, the FEIS design proposed street-level sidewalk grates for the station air intake, but MTA's policy regarding station air intakes post-9/11 has been to elevate those intakes whenever possible, especially for "forced air" ventilation systems. The disruption that would be required to relocate the underground vaults and utilities should not be discounted. This work would involve cut-and-cover construction and lane closures for up to several years. All of these considerations led to the determination that the FEIS design was no longer adequate. The need to address the loading dock requirements for the new service also contributed to the selection of the 50th Street facility as the preferred alternative.

Comment 26: The January 2005 EA does not adequately demonstrate that air intakes in sidewalk grates at street level would not provide as reliable a source of fresh air to the East Side Access terminal as would elevated air intakes, particularly given the concern of "short cycling" of air between the elevated intakes and exhausts. Relevant supporting documentation should be provided. Most of MTA's stations throughout New York City are served by street-level ventilation. (Zarin)

Response: The concern related to "short cycling" of air between the elevated intakes and exhausts is unfounded (see the response to Comment 108 below). As described in Chapter 1 of the January 2005 EA, providing elevated air intakes would increase protection against the possible introduction of harmful substances into the air supply of the new terminal. It would also elevate the air intake above street-level vehicular exhaust, which is a significant source of pollution in New York City. Unlike most MTA New York City Transit (NYCT) subway stations that have "passive" ventilation systems, the new East Side Access terminal will have an "active" or forced air ventilation system, driven by the continuous operation of fan equipment designed to continuously draw in fresh air. The elevated air intake would comply with the New York State Mechanical Code and New York City Building Code requirements, whereas sidewalk grates would not.

Comment 27: Placing the intakes for bringing air into the ventilation system at locations elevated above street level makes the MTA tunnels somewhat less vulnerable to the introduction of harmful substances from street-level sources. This is beneficial from a public safety perspective for passengers in trains or workers in tunnels, but it does not preclude the introduction of toxic agents into the system. (Egan)

Response: Comment noted. As described in the January 2005 EA (see Chapter 1), raising the air intake point from the street level to a point many feet higher would provide cleaner air for the public spaces in the station compared to street-level grates, and providing elevated air intakes would significantly increase protection against the possible introduction of harmful substances into the air supply of the new terminal. There is no completely foolproof system to prevent intentional contamination of a ventilation system, whether MTA's or a private system. However, the security provisions that are included in the design of the 50th Street facility render it superior in this regard to the design of the street-level grates in the FEIS design (now called Alternative A).

Comment 28: The January 2005 EA rejects the alternative of relocating the tunnel ventilation exhaust from the proposed 50th Street facility to the roof of the adjacent building at 300 Park Avenue because of construction and operational difficulties, including the need to seismically restrain the exhaust shaft. Since 300 Park Avenue is not a seismically rated building, this shaft would not have to be seismically restrained. (Zarin)

Response: The fact that 300 Park Avenue is not a seismically rated building is irrelevant to new construction such as the tunnel ventilation shaft. As set forth in the New York City Building Code, if the loading on existing structural members is increased by more than 5 percent, then the affected components would need to be brought into full compliance with current code, which includes seismic restraint. As described in the January 2005 EA (see Chapter 2), the primary reason that the tunnel ventilation exhaust cannot be relocated to the roof of the adjacent building at 300 Park Avenue is the size of the chimney that would be required. A flue with an area of 400 square feet would have to be constructed, rising from the top of the 50th Street facility alongside the adjacent building. In addition, the 50th Street facility would have to be larger in size to accommodate the larger, more powerful fans that would be needed to effectively exhaust air through that chimney.

Note that since publication of the January 2005, a revised design for the 50th Street facility has been developed, which substantially modifies the preferred alternative identified in that document. In the new Preferred Alternative D, the tunnel ventilation intake and exhaust louvers would be on the east side of the 50th Street facility. More information on Preferred Alternative D is provided in Chapter 2 of this revised supplemental EA.

Comment 29: The January 2005 EA does not contain a discussion of the possibility of relocating the ventilation shafts to existing buildings along Park Avenue. The MTA possesses property rights allowing it to use ventilation shafts in such buildings. (Zarin)

Response: As described in Chapter 2 of the January 2005 EA, the East Side Access Project would include five ventilation structures in Manhattan, and would also use additional ventilation shafts in existing buildings (the Roosevelt Hotel at 46th Street and 383 Madison Avenue at 47th Street). These are the only remaining existing shafts suitable for use by the East Side Access Project in Midtown Manhattan. Other existing ventilation shafts are already in use by Metro-North Railroad or do not meet the needs of the project. In addition, a ventilation shaft is present in the Colgate-Palmolive Building at 300 Park Avenue, but this shaft is too narrow for use by the project. The potential to use other shafts not yet constructed is analyzed in the January 2005 EA in Chapter 2 (see "Ventilation Facilities" under "Alternative Locations for Project Elements if not Located in a Centralized Facility").

Comment 30: The alternative of placing the proposed cooling tower on the rooftops of adjacent buildings, or on the roof of Grand Central Terminal or 347 Madison Avenue, should be investigated further. Relocating the proposed cooling tower may be the only way to eliminate visual impacts, air pollution impacts, and health risks associated with cooling tower drift and mist. The January 2005 EA does not provide sufficient explanation of the reasons why these alternative locations for the cooling tower were rejected. No information is provided about Metro-North's ventilation strategy, although it is cited as the reason that the roof of Grand Central is not available. Nor it is clear why it is highly desirable for the cooling tower to be on a building owned by MTA, since the FEIS proposed to locate the tower on the roof of Grand Central, which MTA does not own. No documentation is provided to demonstrate why placing the cooling tower on an adjacent building is not feasible. The need for extensive piping for chilled water is not an adequate reason to dismiss this alternative, since the tower on the roof at the 50th Street facility would also need such piping. The January 2005 EA does not adequately explain why the visual impact of placing the cooling tower on the rooftops of adjacent buildings would be worse than the visual impact of placing the tower on the roof of the proposed facility. (Zarin, Ambient, Fields, Schabas)

Response: As described in Chapter 2, "Project Alternatives," of the January 2005 EA, placing the cooling tower on the roof of Grand Central Terminal, as originally proposed in the FEIS design, is no longer feasible because the space is no longer available. Following completion of the FEIS, Metro-North Railroad completed a simulation modeling effort to address ventilation problems in Grand Central Terminal. As a result of the study, Metro-North is proceeding with a permanent ventilation strategy that will use the North Court roof of Grand Central Terminal, precluding use of this space for East Side Access cooling tower (for more information, see page 2-5 of the January 2005 EA). Placing the cooling tower on adjacent rooftops was also analyzed in the January 2005 EA in Chapter 2 (see page 2-13). Since then, in response to public comment, additional study

has been conducted related to locating the cooling tower elsewhere. This revised supplemental EA includes an expanded discussion of alternative cooling tower locations. In addition, as detailed in Chapter 2 of this revised supplemental EA, the project now proposes to locate the cooling tower on the roof of the Colgate-Palmolive Building at 300 Park Avenue, rather than on the roof of the 50th Street facility.

In response to the comment that MTA does not own Grand Central Terminal, it should be noted that MTA operates and manages Grand Central Terminal under a long-term ground lease from the New Haven and Harlem Railroad Company and the successors of the Penn Central Corporation. The lease term extends to the year 2104, with an automatic extension to the year 2274, and grants MTA an option to purchase the facility approximately 14 years from now. During the lease term, MTA has extensive power to manage and operate the facility in a manner that is comparable to fee ownership.

Comment 31: If the cooling tower was located on the adjacent buildings, heat transfer across the tower may be more efficient due to the absence of heat-trapping obstructions as well as the absence of potentially significant heat sources at the proposed facility (e.g., tunnel and concourse exhaust air). The increased heat-transfer efficiency may offset the increased energy costs for pumping condenser water to the tower. (Ambient)

Response: The heat transfer by the cooling tower is accomplished through transfer of sensible heat (warming of the ambient air) and latent heat (evaporation of the circulating water). During the colder months, approximately half of the heat transfer is through sensible heat. During this period, the ambient air is warmed through the tower and little or no mist is emitted from the tower. During the warmer months, most of the transfer is through evaporation of the circulating water. As such, the cooling tower is sized to reject the highest amount of waste heat during the highest ambient temperatures and high humidity. Cooling tower efficiency is primarily reduced through recirculation of the warm, moist outlet air of the tower. However, recirculation would be very unlikely to occur in the cooling tower at the 50th Street facility in the design analyzed in the January 2005 EA, since the ambient air would be drawn through the tower sides and exhausted from the top using fans. As such, recirculation would be a concern only on very windy days, when the wind could cause the condensed vapor plume to flag on the lee side of the tower. In such cases, the enhanced dispersion of the turbulent winds would serve to rapidly disperse and dissipate the tower exhaust. Furthermore, in that alternative the configuration of the 50th Street facility and the adjacent buildings would not cause heat to be trapped. Rather, the open side of the configuration along 50th Street would provide sufficient ventilation with ambient air to create a chimney effect that would loft and disperse the warmer cooling tower plume. Therefore, it is unlikely the cooling

tower operation would be more efficient on the top of adjacent buildings as compared to the 50th Street facility.

Note that since publication of the January 2005 EA, Preferred Alternative D—which would place the cooling tower on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue—has been developed. The cooling tower was relocated in response to input from the public, including the concerns expressed in this and other comments in this chapter.

Comment 32: MTA should consider contracting with an adjacent property owner to install the tower and sell condenser water to the MTA, thereby relieving the MTA of the cost of capital and the expense of operating and maintaining the tower. (Ambient)

Response: As noted above, in response to input from the public, this revised supplemental EA includes an analysis of alternative locations for the cooling tower, including the rooftops of buildings not owned by MTA. As a result of the analysis, the 50th Street facility's cooling tower is now proposed for the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue. The MTA's arrangements for owning, operating, and maintaining the tower have not yet been finalized. However, regardless of the specific arrangements, MTA will be responsible for ensuring safe operation of the cooling tower.

Comment 33: The justification for the FEIS design of using the Depew Place loading dock for East Side Access truck traffic, without determining if the dock had enough capacity, should be provided. (Krueger)

Response: In the context of a multi-billion dollar transportation project that spans two boroughs, the loading dock requirements for East Side Access and the determination of capacity at Depew Place was beyond the scope of the design completed during preparation of the EIS. As required under NEPA, the FEIS was based on a preliminary design for the East Side Access Project. As engineering advances in such large-scale projects, it is not unusual that additional details are developed that result in modifications to the design.

Comment 34: The conclusions of the January 2005 EA are based on data regarding existing loading dock operations at Depew Place that contradict the findings of the East Side Access FEIS. (Horodniceanu)

Response: Based on the conceptual and preliminary engineering completed at the time of the FEIS, the existing Depew Place loading dock was thought to have adequate capacity to handle the additional trucks generated by the East Side Access Project. As engineering for the East Side Access Project advanced, it became apparent that the existing dock could not accommodate the additional truck trips

generated by East Side Access, and the need for a new loading dock was identified.

Comment 35: The data demonstrating that the Depew Place loading dock does not have the capacity to serve East Side Access truck trips should be provided. (Leland, Horodniceanu, Zarin)

Response: Information about the existing Depew Place loading dock operation has been added to this revised supplemental EA (see Chapter 7) and more detailed information is provided in Appendix D, "Traffic and Transportation," in Appendix D-1, "Loading Dock Requirements Analysis, February 2004."

Comment 36: The January 2005 EA does not provide supporting documentation demonstrating that the feasibility of physically expanding the Depew Place loading dock was investigated from an engineering and architectural standpoint. (Zarin)

Response: Observations at the existing loading dock at Depew Place, together with discussions with the dock staff, indicate that there is no room for expansion. The loading dock is sandwiched between the Graybar Building on the south and the U.S. Post Office (Grand Central Station) on the north. There does not appear to be sufficient room either to the north or south for expansion; there is also no room for expansion to the west into the MetLife Building.

The existing service elevators at the Depew Place loading dock do not have the capacity (weight) to handle greater loads than what exists today. In order to expand the dock's capacity, higher capacity (weight) cabs would have to replace the existing cabs and there would have to be additional elevators added. There does not appear to be room for an additional shaft, given the configuration of the dock.

Even if elevator capacity were added, the dock's staging area does not have capacity to handle the additional deliveries that would occur because of the East Side Access Project. The existing movement of forklift trucks and hand trucks on the dock is near capacity and additional movement within the staging area would significantly affect the ability to move goods through the dock's staging area. The width limitation on Depew Place (tight turning radius) also forces large trucks to be loaded via a forklift and steep ramp; additional capacity would not alleviate this.

With the projected volume expected to be added by the East Side Access Project, handling all the incoming and outgoing deliveries for Grand Central Terminal in one location would be very difficult operationally, given the existing constraints and the dock's location at one end of the terminal. All East Side Access deliveries would have to be moved using the existing service elevators at Depew Place, across a service corridor at Grand Central, down

another elevator to the East Side Access concourse, across public corridors used by passengers, and then to their final destination. This would likely extend the times required for trucks to remain at the dock, as deliveries are transported across Grand Central, further constraining operations at Depew Place. In addition, the need to use public corridors to transport deliveries could pose a safety hazard.

Comment 37: It is suspect that the truck trip generation for the proposed project is too low to require a detailed traffic analysis as per *CEQR Technical Manual* guidelines, while at the same time being too high to be accommodated at the existing Depew Place loading dock. (Zarin)

Response: As described in the January 2005 EA (see Chapter 7), the Depew Place loading dock is currently operating at capacity. For this reason, although the number of trucks expected at the new loading dock is not large, it still results in the need for a new loading dock. The number of trucks predicted for the new dock during the peak hour is much smaller than the threshold for conducting detailed traffic analysis in the *CEQR Technical Manual*, which was developed based on an understanding of the number of vehicles that might result in traffic impacts in New York City.

Comment 38: The January 2005 EA rejects the creation of an additional bay at the existing Bankers Trust loading dock because sharing a loading dock with non-MTA users is not desirable from a security standpoint. This is inconsistent with the fact that the proposed loading dock at the 50th Street facility would accept deliveries from retail users in the East Side Access concourse that are not owned or operated by MTA. (Zarin)

Response: The fact that the loading dock would accept deliveries from vendors that are not owned or operated by MTA is one reason that security at the dock is of such high concern. The security procedures at the loading dock must and will be controlled by MTA, to ensure that trucks entering the dock have appropriate security clearance and that access into the Grand Central Terminal complex via the project's freight elevators can be adequately controlled. Sharing of a loading dock (such as at Bankers Trust) would involve a single control point for all deliveries, and this control point would not be controlled by MTA. This would not allow for the necessary control required by the MTA. In contrast, at the 50th Street facility, MTA would have complete control over the loading dock and would likely have a list of pre-approved vendors and trucking transport companies that it would use in screening deliveries. Moreover, any additional security measures required would be under the supervision of MTA.

Comment 39: Garbage from the new East Side Access terminal should be removed by rail, instead of by truck from the proposed loading dock. (Silverblatt)

Response: Trash removal from the new East Side Access terminal would follow established Metro-North protocols for trash removal at Grand Central Terminal. Namely, certain types of trash—recyclables and non-compactable trash—would be removed via rail to BN Yard in the Bronx for pick-up by a private hauler (for construction debris) or the New York City Department of Sanitation (for recyclables). Only compactable trash from the new terminal and trains would be removed via the 50th Street facility.

Comment 40: The proposed 50th Street facility project site is far from the East Side Access concourse. The only reason it was selected is because the existing buildings are small and easy to acquire and demolish. (Silverblatt, Kalish)

Response: As shown in Figure 1-3 of the January 2005 EA, the 50th Street project site is located directly above the proposed East Side Access concourse, which will extend from 43rd to 50th Street. The project site is located at the interface between the new tunnels and the terminal. It is the only site that meets the locational/siting criteria for the new facility (see Chapter 1 of the January 2005 EA). Minimizing displacement and disruption of residents and businesses is only one of five criteria dictating the location of the new facility. Please note that 50th Street between Park and Madison Avenues was identified as the location for a ventilation facility in the FEIS design as well. The 50th Street site is part of an overall ventilation strategy for the East Side Access Project that is described in the FEIS and the January 2005 EA.

Comment 41: It is clear from the January 2005 EA that there is no justifiable reason to adopt as the preferred alternative the 50th Street facility with the through drive (now referred to as Alternative C). According to the January 2005 EA, both the alternative with a through drive and the alternative without the drive would have negligible effects on traffic. Given the high cost of the East Side Access Project, there is no justification to spend tens of millions of additional dollars on the through-drive alternative. The high cost, combined with the loss to the neighborhood that would arise from destruction of a unique and award-winning building designed by a renowned architect and the loss of a unique commercial facility and many jobs vastly outweighs any "negligible" benefit that might accrue to the MTA from the through drive. (Berkey)

Response: The January 2005 EA and this revised supplemental EA clearly disclose the trade-offs between the alternatives. The through-drive would eliminate truck backing-in maneuvers on East 50th Street and replace them with head-in maneuvers on East 49th Street. This would minimize adverse effects on through traffic on East 50th Street and would be consistent with the New York City Department of Transportation's (NYCDOT) preference for loading dock operations. While neither Alternative C (the 50th Street facility with a through drive) nor Alternative B (the facility without a through drive) would create a

significant adverse traffic impact, the through drive would provide clear benefits to NYCDOT's Thru Streets Program by preserving the existing traffic flow on 50th Street to the maximum extent practicable both during construction and operation of the new facility (see Chapter 7). Given these advantages, the additional cost of Alternative C, the loss of a building of unique design, and the displacement of the building's tenant are an appropriate trade-off.

Comment 42: The January 2005 EA understates the cost of the preferred alternative, as a result of underestimating the cost of acquiring the property at 45 East 49th Street. (Horodniceanu)

Response: The cost estimates provided in the January 2005 EA are preliminary. More detailed estimates will be prepared as the project progresses and these will be further refined during the property acquisition process. The real estate budget for East Side Access has sufficient funds to acquire the real estate interests that are required to build the project.

Comment 43: The ground-floor layout of the proposed facility with a through drive is different than the layout under the alternative without a through drive. This appears to be an error in the January 2005 EA. (Horodniceanu) Our review of the plans and sections in the January 2005 EA appears to show inconsistencies in arrangement and space allocations. Plans supplied for review should be complete and coordinated in order to afford a comprehensive and meaningful review. (Lehr)

Response: As described in the January 2005 EA (see Chapter 2), because of the truck driveway and reconfigured loading dock, the configuration of equipment inside the 50th Street facility with through drive (now referred to as Alternative C) would be different from that of the 50th Street facility without through drive (Alternative B). Preferred Alternative D, which would also include a through drive and is analyzed in this revised supplemental EA, would also have a different internal configuration, because of the relocation of several of the 50th Street facility's functions to locations outside the proposed facility, and the incorporation of a public open space.

Comment 44: The January 2005 EA indicates that using the 50th Street site as a construction staging and access point would help reduce the risk of delays to the project's overall construction schedule. Thus, there is no necessity to use the site as a construction access and staging area and other alternatives should have been considered. The January 2005 EA states that no other staging sites are available, but does not consider the use of available alternative construction staging areas, such as the corner of Park Avenue and 52nd Street. This location is situated above unused tracks, and would provide direct access to the East Side Access concourse, thus eliminating the need for some tunneling. The area above the

unused tracks on the lower level between 50th and 52nd Streets could accommodate ventilation fans and other equipment. (Zarin, Lefkowitz)

Response: As noted in the comment and described in the January 2005 EA, use of the 50th Street site as a construction access point would reduce the risk of delays in the East Side Access Project's construction by providing an additional access point to the project's underground concourse and tunnels, supplementing the access to those underground spaces that would be provided at other locations in Manhattan where project construction would occur for entrances and ventilation facilities. This would expedite completion of this important regional transportation project, bringing its benefits to the region's commuters and to Manhattan's economy as soon as possible. Alternatives to the use of the 50th Street site for construction staging are discussed in Chapter 2 of the January 2005 EA. The purpose of using the 50th Street site as a staging area is to use a shaft that must be constructed in any case for multiple purposes; construction of a new shaft solely for use during construction staging, as suggested in the comment, would result in unnecessary expense and disruption. Use of the 50th Street site for construction staging is proposed since the off-street ventilation and freight elevator shafts that would be constructed for the new facility at that location would also provide ready access to the project's underground tunnels and concourse during the construction of the new terminal. The corner of Park Avenue and 52nd Street suggested in the comment is not a location proposed for an access shaft (e.g., ventilation or entrance/exit point) for the East Side Access tunnels, so any shaft there would be used only for construction and closed once construction is complete. The west side of Park Avenue on the north and south sides of 52nd Street is fully occupied by large buildings (see Figure 20-1). Therefore, a construction shaft at that location could not be off-street, as at the project site. It would require closing all or a portion of the sidewalk and a parking lane for the temporary shaft, disrupting traffic and pedestrian flows. The shaft at that location would also be immediately adjacent to the Racquet and Tennis Club, a historic resource on the north side of 52nd Street.

In response to public comments regarding the length of the construction period and use of the 50th Street site for East Side Access construction access and staging, the construction sequencing for the 50th Street facility has been changed. Access and staging for the new LIRR concourse construction would not occur on the vacant site after demolition of the five buildings on the site. Instead, under Preferred Alternative D, which is presented in detail in Chapter 15, "Construction Impacts," of this revised supplemental EA, the 50th Street facility structure would first be completed, and worker access and deliveries to the underground concourse would be carried out within the enclosed structure using an internal gantry crane. During this time, the 50th Street facility would function similarly to the completed facility, with trucks bringing materials to the loading dock to be delivered to the underground concourse. Once the concourse is complete, some final interior work would be required at 50th Street to install

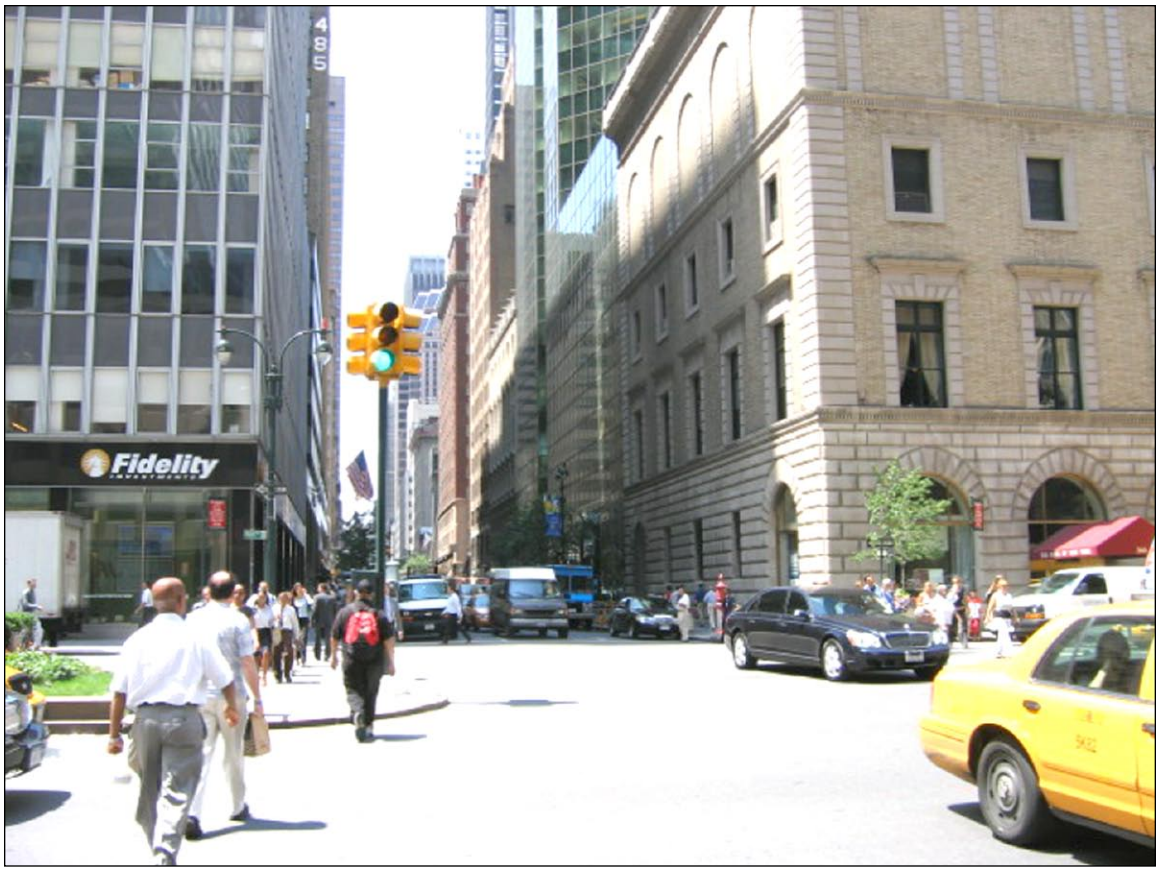

Figure 20-1

View West of Intersection of Park Avenue and 52nd Street

the freight elevator and tunnel ventilation fans. This new construction plan would reduce the time when noticeable construction activities would occur at the site from approximately 6 years to less than 2½ years.

LAND USE, ZONING AND PUBLIC POLICY, AND SOCIAL CONDITIONS

Comment 45: Operation of the proposed project would adversely affect the surrounding area, the character of 50th Street, and neighborhood character in the vicinity of the proposed facility. The January 2005 EA's claim that there would be no significant adverse impacts on neighborhood character ignores the existence of numerous historic resources within a one-block radius of the proposed site. The proposed facility is out of scale and inconsistent with the commercial, residential, and landmark uses in the surrounding neighborhood. (Ambient, Lancaster, Fields, Silverblatt, Lang, David, Zarin, Kalish, Lefkowitz, Aptner)

Response: The January 2005 EA and this revised supplemental EA include a full evaluation of the project's effects on the character of the surrounding neighborhood in Chapter 3. This is based on the analyses of the different environmental issues that can contribute to neighborhood character, including land use and social conditions (Chapter 3), socioeconomic conditions (Chapter 4), visual character and urban design (Chapter 5), historic resources (see Chapter 6), traffic (Chapter 7), air quality (Chapter 8), and noise and vibration (Chapter 9). The analyses in the January 2005 EA and this revised supplemental EA were conducted following the guidance of New York City's *CEQR Technical Manual*. That document sets forth recommended procedures to be used in analysis to identify significant adverse effects of projects proposed in New York City. Each of those analyses concludes that the 50th Street facility with any of the three build alternatives (Alternative B, C, or Preferred Alternative D) would not result in significant adverse impacts to the surrounding area. The January 2005 EA and this revised supplemental EA conclude that the 50th Street facility would not result in adverse effects to the character of 50th Street or the surrounding area.

The 50th Street facility with or without a through drive would be consistent with the character of the surrounding area and would not result in adverse impacts on the character of the block or surrounding area (see pages 3-8 and 3-9). Preferred Alternative D, which has been developed in response to public comments on the January 2005 EA, substantially reduces the size of the 50th Street facility—to about half the width and less than half the height—and provides a landscaped public open space on the remainder of the site (40 feet wide by 60 feet deep). Chapter 3 of this revised supplemental EA includes a full evaluation of Preferred Alternative D's effects on the character of the surrounding neighborhood, and concludes that it also would not result in adverse effects to the character of 50th Street or the surrounding area. The new public open space

would provide an urban amenity in an area where public open spaces are scarce, and would serve the many office workers and visitors in the area.

Comment 46: The proposed facility would adversely affect the quality of life in Manhattan. (Jacobs, Anticaglia)

Response: The 50th Street facility under any of the build alternatives would not have adverse effects on the character of the surrounding area (see Chapter 3 of this revised supplemental EA and the response to the comment above). Preferred Alternative D, which would provide a public open space on East 50th Street, would create a new urban amenity. In terms of the project's effects on all of Manhattan, please note that by facilitating the East Side Access Project and improving the region's transportation system, the 50th Street facility would contribute to a project that would improve the quality of life in Manhattan and the surrounding region.

Comment 47: The proposed facility has the potential to adversely affect St. Patrick's Cathedral, which is the heart of Catholic life in New York City. (Leland)

Response: As described in response to Comment 45 above, the January 2005 EA and this revised supplemental EA include detailed analyses of the project's effects on the character of the surrounding neighborhood as well as the project's effects on the different issues that contribute to neighborhood character, such as land use, visual resources, historic resources, traffic, air quality, and noise and vibration. Each of those analyses concludes that the proposed 50th Street facility would not result in significant adverse impacts to the surrounding area, including the St. Patrick's Cathedral complex. Furthermore, in Preferred Alternative D, the height and massing of the 50th Street facility would be comparable to that of the existing buildings that would be demolished, and the materials used for the facility would be similar to those used on other buildings on East 50th Street. In addition, Preferred Alternative D would provide a 40- by 60-foot public open space that would serve as an amenity to the surrounding neighborhood. As such, the 50th Street facility would not substantially alter the existing character of East 50th Street.

Comment 48: The proposed project would have a detrimental impact on the Palace Hotel as a first-class luxury hotel. The noise, trash, vibration, and congestion caused by the facility would have a long-term, significant adverse effect on the hotel, which functions like a residential building with more than 2,000 guests per night. (Lefkowitz)

Response: As noted above, the January 2005 EA and this revised supplemental EA include an analysis of the effect of the new building on the character of the block, as well as specific analyses of noise, vibration, and traffic congestion. Each of those analyses concludes that the project under any of the build alternatives

would not result in significant adverse impacts to the character of the block or to surrounding land uses. Moreover, as described above in response to Comment 47, Preferred Alternative D would bring a new urban amenity to the project site, replacing the four existing buildings with a new structure of similar height and massing and a new public open space.

Comment 49: The proposed facility should not be built on 50th Street. The facility does not belong in a highly populated commercial and residential area; it belongs in an industrial area. (Schnitzer, Randolph, Snyder, Amey, Goldberg, Kaufmann, Berkey) The proposed facility should be located closer to the water where there would be more open space. (Sampson)

Response: The 50th Street facility's location is dictated by the overall ventilation system requirements for the East Side Access Project. (50th Street was identified in the FEIS as the location for a project ventilation facility.) The 50th Street facility must be located in close proximity to the underground East Side Access Project spaces it is intended to serve. As described in Chapter 1 of the January 2005 EA (see pages 1-6 and 1-7), the 50th Street project site is the only site that meets all of the siting criteria for the proposed facility.

The project's compatibility with surrounding land uses is described in Chapter 3 of the January 2005 EA and this revised supplemental EA ("Land Use, Zoning and Public Policy, and Social Conditions"). As described there, the 50th Street facility would be generally compatible in use with the densely developed commercial area surrounding the project site, and Preferred Alternative D would create a new public amenity in that area.

Contrary to the comment, the 50th Street facility is not an industrial facility: it contains mechanical equipment that is commonly found in office buildings throughout the surrounding area. Cooling and ventilation equipment, emergency generators, and loading docks are all common elements of commercial office buildings in Midtown Manhattan. Moreover, ventilation buildings, including those to support New York City's vast underground transportation network, are located throughout the city, including Midtown. The activities occurring within the building would not result in significant noise levels or air quality impacts outside the building. The air exhausted from the building's vent louvers would be the ambient air from the East Side Access spaces at Grand Central Terminal.

Finally, in response to public comments made on the January 2005 EA, Preferred Alternative D has been developed. This alternative relocates a number of the 50th Street facility's functions either below grade, to the concourse, or to an adjacent building, thereby reducing the amount of mechanical equipment that would be housed in the facility. The 50th Street facility would also be substantially smaller than the facility evaluated in the January 2005 EA—about half the width and less than half the height—and would be comparable in size to the existing buildings that would be demolished. In addition, a landscaped

public open space would be provided on the remainder of the site (40 feet wide by 60 feet deep), which would increase the amount of open space available to employees in the area, and would augment the space provided by the existing plaza in front of 437 Madison Avenue.

Comment 50: The January 2005 EA fails to recognize that while the functions of the proposed facility are accessory elements in some commercial office buildings in the city, the proposed facility is a wholly industrial facility consisting only of these accessory functions, intended to service the East Side Access Project's underground concourse, caverns and tunnels. These functions would be of a far greater scope, and result in much greater impacts, than similar functions in a standard commercial office building. (Zarin, Leland, Lefkowitz)

Response: If the commenters are referring to an industrial use such as a power plant or factory, they are mistaken. The 50th Street facility would be an accessory use to a transportation facility, a type of use common throughout New York City. As described throughout the January 2005 EA, the functions located in the 50th Street facility would not result in significant adverse impacts. Their effects would generally be similar to—or in the case of the loading dock, less than—the effects of the same project elements when located in an office building.

The 50th Street facility would have approximately three to four trucks (this is equivalent to seven truck "trips," when each arrival and departure is counted as a separate trip) in the peak hour, with a total of 23 trucks over a typical 24-hour day. With use of a through drive on the site, these trucks would enter on 49th Street and would remain fully within the 50th Street facility until they exit from the driveway on 50th Street. Most office buildings in Midtown have loading docks, including several on the same block as the 50th Street facility, and some (such as 437 Madison Avenue) also have underground parking garages that generate additional vehicular activity.

Most of the other elements of the 50th Street facility are also common in commercial buildings and would have similar effects at the new facility. Midtown office buildings typically have rooftop cooling towers and multiple floors of mechanical space housing ventilation and mechanical equipment. For example, the new Bear Stearns building at 383 Madison Avenue has five floors of mechanical space, as well as rooftop mechanical equipment. Rooftop cooling towers are normal on Midtown office buildings; the proposed cooling tower at 50th Street would be located on the top of the office building at 300 Park Avenue and would meet the requirements of the New York State Mechanical Code, including those governing the location of the cooling tower with respect to neighboring buildings. Emergency generators and associated fuel storage tanks are also a common element in Midtown office buildings. As noted in the January 2005 EA (see Chapter 14), within two blocks of the proposed 50th Street site, there are at least eight fuel tanks registered on the NYSDEC's

Petroleum Bulk Storage List, of which half are equal to or greater in size than the tanks proposed to support the emergency generator at 50th Street. Among these are a 10,000-gallon above-ground fuel tank and a 6,500-gallon above-ground fuel tank. As noted in this revised supplemental EA, the fuel storage tanks for the 50th Street facility are now proposed to be located at a site within the East Side Access concourse rather than in the 50th Street facility, and the emergency generator would be located below ground. In the new design, the facility's substations have also been relocated from the building site to the concourse.

The station and tunnel ventilation functions proposed for the 50th Street facility are not common elements of Midtown office buildings, although new office buildings in Midtown do have ventilation intake and exhaust louvers. As noted in the January 2005 EA and in the response to the following comment (Comment 51), however, tunnel and station vents are located throughout New York City, wherever underground transportation systems are present, including throughout the Grand Central Terminal area. No significant impacts would result from the presence of the ventilation equipment.

Comment 51: The January 2005 EA states on page 3-7 that "ventilation buildings—including those to support New York City's vast underground transportation network—are located throughout the city, including Midtown." The January 2005 EA cites the presence of such other ventilation buildings as evidence that the facility would not have significant potential socioeconomic impacts on the surrounding community. The January 2005 EA should disclose information on the ventilation buildings it analyzed for its comparative analysis in order to meaningfully evaluate this conclusion. The January 2005 EA should provide information about these existing ventilation buildings, including their precise locations, descriptions of the equipment they house, the existing impacts at those locations, and the design and dates of such vent buildings (i.e., whether they were constructed before or after 9/11). (Zarin)

Response: The precise locations and descriptions of other ventilation buildings in Midtown are not relevant to the evaluation of the 50th Street facility. The point of the statements in the January 2005 EA is that ventilation buildings are a common part of the urban streetscape and do not adversely affect the character of the surrounding area.

Ventilation elements for the city's transit system are common in New York City. Usually, these are sidewalk grates that draw air in and exhaust air from the subway tunnels below, but some of the ventilation elements are above-ground structures. The above-ground facilities that ventilate NYCT tunnels are no different in terms of potential air quality impacts than the sidewalk grates that are common throughout the city, including the Grand Central Terminal area. The ventilation facility located at 63rd Street and Second Avenue, for example,

was constructed in the 1970s along with the ventilation facility on Roosevelt Island to ventilate the upper level of the 63rd Street Tunnel. Both of these buildings are directly adjacent to residential and commercial properties. It is estimated that the fans in either facility have been activated for emergency purposes no more than four times in their 35-year history. The emergency events that triggered the fans to be operated were small electrical fires that lasted less than 20 minutes. In all probability, the smoke dispersed prior to reaching the sidewalk, as no complaints were logged regarding these incidents.

Ventilation facilities are sized to meet life-safety standards—to protect the lives of commuters and employees in the event of a worst-case emergency such as a train fully engulfed with flames. There is no documentation that such an event has occurred in NYCT's or LIRR's history of operating trains in New York. Most fires in the tunnels are either trash fires or small electrical fires that last typically no more than 20 minutes. It is estimated that less than 1 percent of NYCT tunnel fires are large enough to trigger the operation of the tunnel ventilation fans.

Lastly, there is no documentation to support that air quality levels in the vicinity of ventilation facilities (above-ground buildings or sidewalk grates) during non-emergency conditions (or normal operations) are worse than ambient air quality levels in New York City. There is evidence, however, to support the assertion that MTA's public transportation system supports the region's clean air goals by attracting commuters who would otherwise drive to work. The East Side Access Project, for example, will remove approximately 21,000 cars from the regional roadway network per day in 2025 and reduce traffic in Midtown Manhattan by about 2 percent, while at the same time supporting economic growth in the region.

Comment 52: Pursuant to the New York City Zoning Resolution, a use is only allowed if it is explicitly listed as a permitted use. The January 2005 EA notes that because of the proposed facility's unique nature, it is not permitted in the site's C5-2.5 zoning district or in any other zoning district. The proposed facility is therefore not permitted as of right on the site, and is therefore, by definition, not deemed to be compatible with surrounding uses. Although the January 2005 EA doesn't say so, MTA can only construct the proposed facility by exercising its authority to override local land use regulations.

The January 2005 EA states that the building's use is consistent with those permitted by the site's zoning and that the 50th Street facility would be compatible in terms of use with the surrounding uses. This is incorrect: the facility's industrial nature is inconsistent with the commercial zoning district. Commercial zoning districts are intended to protect local retail development and nearby residences from fire, explosions, toxic and noxious matter, and against offensive noise, vibration, smoke, dust, etc. None of the proposed functions

within the facility are permitted as-of-right in the site's C5-2.5 zoning district. A finding of no adverse impact is incredible on its face. The proposed facility is similar to a public transit, railroad, or electric utility substation or railroad appurtenances or facilities or services used or required in railroad operations, both found in Use Group 17 in the New York City Zoning Resolution. These uses are only permitted in manufacturing districts, and are required to meet certain performance standards. The EA should address each of these standards to determine whether the 50th Street facility would meet the applicable requirements and to disclose the impact on conforming uses, and particularly the Palace Hotel. The analysis must consider that the Hotel, while a Use Group 5 commercial use, functions more like a typical residential building. (Lefkowitz, Leland, Zarin)

Response: The fact that MTA will exercise its authority to override local land use regulations is stated clearly in the January 2005 EA. The January 2005 EA explains in Chapter 3 that MTA as a public authority of New York State is exempt from local zoning regulations but that the building would be consistent with zoning requirements to the extent possible. Inconsistencies with zoning requirements do not automatically equate with land use incompatibilities. An evaluation of land use can be conducted independently of a zoning analysis, and such an evaluation was included in the January 2005 EA (see Chapter 3).

The fact that a facility is not listed as a permitted use in one of the Zoning Resolution's defined Use Groups does not mean that "by definition" it is not compatible with surrounding uses. The Zoning Resolution defines specific Use Groups, which include uses that have been determined in advance as appropriate in certain zoning districts. Other uses are also defined as potentially appropriate, subject to review and issuance of a special permit from the Board of Standards and Appeals or City Planning Commission. For example, railroad substations are such a use: railroad-related substations on lots of not more than 40,000 square feet are permitted in all residential and commercial zoning districts by special permit from the Board of Standards and Appeals (ZR §73-16) or City Planning Commission (ZR §74-61). Because the Zoning Resolution could not possibly define every potential use, the law also provides the possibility of appealing to the Board of Standards and Appeals (BSA) for an interpretation of the Zoning Resolution's terms, and for variances where a use is not permitted as of right. The BSA then decides on a case-by-case basis, among other things, whether a use is appropriate to the neighborhood. Moreover, the site's zoning explicitly permits public service establishments such as utility stations, water pumping stations, and electric substations. Off-street loading docks are also permitted, as a means of reducing traffic congestion on Midtown streets.

With the exception of the substations, the uses included in the proposed building can all be considered "accessory" uses in the Zoning Resolution, and are permitted when located on the same lot as the principal permitted use (see ZR

§12-10); loading docks, however, can be on a separate lot. The Zoning Resolution defines an accessory use as a use "which is clearly incidental to, and customarily found in connection with, such principal uses" and "is either in the same ownership as such principal use, or is operated and maintained on the same zoning lot substantially for the benefit or convenience of the owners, occupants, employees, customers, or visitors of the principal use" (ZR §12-10). Loading docks and freight elevators, cooling towers, emergency generators, and ventilation equipment are common accessory uses in office buildings and are therefore not specifically called out in the Zoning Resolution as defined principal uses under any Use Group. For the 50th Street facility, these uses would be accessory to the railroad terminal located beneath the site. Railroad passenger stations are permitted in all zoning districts, as a special permit use from the City Planning Commission (ZR §74-62).

As noted in this revised supplemental EA, several of the elements that were included in the two build alternatives analyzed in the January 2005 EA have been relocated in the new Preferred Alternative D. Specifically, the fuel storage tanks and substations would no longer be included in the 50th Street facility, the emergency generators would be located below-ground, and the generator exhaust and cooling tower units would be on the roof of the adjacent building at 300 Park Avenue.

In contrast, Use Group 17, cited by the commenters, is for heavy-duty railroad uses not associated with railroad stations. As set forth in the Zoning Resolution (ZR §42-14), this use group "consists primarily of manufacturing uses which: (1) can conform to high performance standards by controlling objectionable influences; and (2) in so doing, can limit their impact on adjacent residential areas; and 3) normally generate a great deal of traffic, both pedestrian and freight." Use Group 17 specifically includes "public transit, railroad, or electric utility substations, open or enclosed, with no limitation as to size" (in contrast to the lot size limit of 40,000 square feet for substations permitted in residential and commercial districts), and "railroads, including rights-of-way, freight terminals, yards or appurtenances, or facilities or services used or required in railroad operations, but not including passenger stations" (ZR §42-14).

Comment 53: The proposed facility is not compatible with the goals and objectives of the Special Midtown Zoning District. The building would undermine the purpose of the district, which is to strengthen the business core of Midtown by improving the working and living environments and to preserve the historic architectural character of development along certain streets and avenues. Following the bulk requirements does not mean the facility meets the district's goals. (Zarin, Leland)

Response: The January 2005 EA includes a full discussion of the 50th Street facility's compatibility with the goals and objectives of the Special Midtown Zoning

District in Chapter 3, "Land Use, Zoning and Public Policy, and Social Conditions" (see pages 3-7 through 3-9). As described in the January 2005 EA, although MTA as a state authority is exempt from local requirements, including zoning regulations, the proposed facility has been designed to be consistent with zoning requirements to the extent practicable. The discussion of compatibility with the zoning district has been expanded in this revised supplemental EA. As described there, the 50th Street facility would be consistent with the goals of the Special Midtown District, including not only the bulk requirements, but also the other goals, which are related to pedestrian circulation, economic development, historic architectural character, and neighborhood character. In addition, the 50th Street facility is needed to support the East Side Access Project, which would strengthen the Midtown core by improving transportation access to East Midtown.

Comment 54: The extent of the proposed facility's incompatibility with the site's zoning and the goals and objectives of the Special Midtown Zoning District constitutes a significant adverse impact under NEPA, since the regulatory definition of "significant" includes as a relevant factor the proposed facility's violation of any other federal, state, or local law. MTA's exemption from local zoning regulations is irrelevant when evaluating zoning impacts and impacts to neighborhood character. The lead agency must consider whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment. (Zarin, Leland)

Response: As described above in responses to previous comments, the proposed facility is not incompatible with the site's zoning or the goals and objectives of the Special Midtown Zoning District. Please also note that the January 2005 EA includes a full evaluation of impacts to neighborhood character that is independent of the discussion of zoning, and concludes that the proposed facility would not adversely affect neighborhood character.

As noted above, Preferred Alternative D, which was developed in response to public comments made on the January 2005 EA, relocates a number of the 50th Street facility's functions either below grade, to the concourse, or to an adjacent building, reduces the size of the new facility to about half the width and less than half the height of the original design presented in the January 2005 EA, and provides a landscaped public open space on the remainder of the site (40 feet wide by 60 feet deep). As such, Preferred Alternative D represents a substantially improved design from the point of view of addressing community concerns. It eliminates certain aspects of the 50th Street facility that, while not resulting in significant adverse environmental impacts, have been the subject of public concern.

SOCIOECONOMIC CONDITIONS

Comment 55: Operation of the proposed facility would adversely affect property values in the surrounding area. The project would lead to lower rents, lower lease renewal probability, longer down time between leases, increased concession packages, and increased operating expenses to monitor the impact of the exhaust from the proposed facility. The proposed facility would also have a negative indirect impact on city tax revenues, because neighboring property owners would file for city tax reductions to compensate for the above losses. The January 2005 EA unduly focuses on 50th Street's "commercial setting" and the fact that other buildings in the area have similar loading docks. The issue is not simply a loading dock, but a proposed facility of huge size coupled with other features that create significant air quality and public safety hazards, which are exacerbated by the inclusion of a loading dock coupled with various shafts leading deep underground. The January 2005 EA discounts the real and perceived expected environmental impacts of the facility such as air pollution, security risks, heavy traffic congestion, and noise, and the effects they would have on property values and business investment in the area. These socioeconomic effects are recognized impacts under established NEPA law, and must be studied as part of an SEIS. (Corcoran, Lancaster, VanDerbeck, Herfort, Zarin, Albanese)

Response: As described above and in Chapter 3 ("Land Use, Zoning and Public Policy, and Social Conditions") and Chapter 4 ("Socioeconomic Conditions") of the January 2005 EA, the presence and operation of the completed proposed facility is not expected to adversely affect the neighborhood character of the surrounding area.

Most of the elements of the 50th Street facility analyzed in the January 2005 EA—including the ventilation louvers, cooling tower, substations, freight elevator, and emergency generators, as well as the loading dock—are normal accessory uses in a commercial building and common uses throughout Midtown. Ventilation facilities for underground transit systems are also common throughout New York City. The facility with or without the through drive would be consistent in appearance with a modern commercial office building. As described in the January 2005 EA, the 50th Street facility would not result in significant adverse environmental impacts, including those cited in the comment (air pollution, security risks, traffic congestion, and noise). It is therefore not anticipated that the facility would have a significant adverse impact on property values or rental income and ultimately tax revenues. Chapter 4 of the January 2005 EA addresses the potential for effects of the 50th Street facility on surrounding businesses and concludes that it would not adversely affect the businesses in the immediate area.

Preferred Alternative D, which was developed in response to public comments made on the January 2005 EA and is analyzed in this revised supplemental EA,

relocates a number of the 50th Street facility's functions either below grade, to the concourse, or to an adjacent building and provides a landscaped public open space on the site. Preferred Alternative D represents a substantially improved design from the point of view of addressing community concerns. It eliminates certain aspects of the 50th Street facility that, while not resulting in significant adverse environmental impacts, have been the subject of public concern.

Comment 56: The project would adversely affect tourism, as well as the attraction and retention of businesses, in the vicinity of the proposed facility. (Sampson)

Response: Chapter 3 of the January 2005 EA and this revised supplemental EA describes why the 50th Street facility would not adversely affect the character of the block or that of the surrounding area. As noted there, the 50th Street facility in Alternatives B and C would be similar in character to other buildings on the block, and its modern glass and metal design would be consistent with nearby modern office buildings. Furthermore, the 50th Street facility in Preferred Alternative D would be no taller than the existing buildings to be demolished, and half of the area currently occupied by these existing buildings would be replaced by a new landscaped public open space that would be constructed as part of the proposed project. The 50th Street facility would not adversely affect views from the surrounding area, including from the tourist attractions on Park or Fifth Avenue. Overall, the facility's design would not adversely affect the character of the project block or of the premier office and tourist district in the surrounding area. For more information, see Chapter 3 of this revised supplemental EA.

Comment 57: Operation of the proposed project would negatively affect the existing restaurants on 50th Street and their employees, as well as the Palace Hotel. This issue is not adequately addressed in the January 2005 EA. (Silverblatt, Newton, Lefkowitz) Likely impacts to the Palace Hotel would include blocking vehicular and pedestrian traffic seeking access to the hotel main entrance and parking garage, as well as generation of noise, dirt, odors and a general high level of activity resulting from trash removal, congestion, and operation of the ventilation equipment that would disturb hotel guests, leading to a loss of clientele. If the hotel's business is adversely affected, these negative impacts could also result in a loss of jobs for some of the hotel's 1,000 workers. (Lefkowitz)

Response: The potential effects of operation of the 50th Street facility on the hotel and restaurant are evaluated in Chapter 4 of the January 2005 EA and this revised supplemental EA ("Socioeconomic Conditions"). The analysis concludes that the presence of the 50th Street facility would not adversely affect the Palace Hotel or the ground-floor restaurant on the north side of 50th Street. As noted above, the proposed facility would not adversely affect the character of the

block. The 50th Street block currently has a busy commercial setting, with numerous different parking and loading bays on both sides of the street, including adjacent to the restaurant. The new facility would introduce a new loading dock, limited truck traffic, and other project elements that are common accessory uses in commercial buildings. It would also include tunnel and station ventilation; ventilation facilities for underground transit systems are common throughout New York City, including in the Grand Central Terminal area and elsewhere in Midtown. The 50th Street facility would attract an estimated three to four trucks per hour, and no significant adverse impacts to traffic conditions would occur, so deliveries and drop-offs at the hotel and restaurant across the street would not be adversely affected. The new trash compactor in the 50th Street facility would be emptied several times per week and cleaned periodically so that it does not develop odors. Garbage pick-up from compactors is usually scheduled during night operations, between 1 AM and 2 AM when other deliveries are slow. This is consistent with the practice at loading docks at commercial buildings throughout Midtown, including the loading docks serving 437 Madison Avenue and 320 Park Avenue on the project block, as well as those serving the Palace Hotel itself. Moreover, the restaurant's location in a central Midtown location adjacent to a major hotel and several large office buildings would continue to provide the visibility needed to sustain a service business.

Comment 58: The January 2005 EA fails to consider several costs related to the acquisition of 45 East 49th Street, including: direct relocation costs; lost real estate tax revenues in perpetuity; lost jobs; lost employee expenditures and tax payments (15 full-time positions). (Horodniceanu)

Response: Chapter 4 of the January 2005 EA describes the relocation assistance that would be provided to directly affected businesses. In terms of lost real estate taxes, these would be minor relative to the benefits brought by the East Side Access Project. As noted in the response to Comment 41, the January 2005 EA clearly discloses the trade-offs between the alternatives, including the benefits to traffic flows that would result from a through drive vs. the loss of the building at 45 East 49th Street.

HISTORIC AND ARCHAEOLOGICAL RESOURCES

Comment 59: The proposed facility would adversely affect the important historic resources in the surrounding area, which include some of the city's most cherished and heavily used historic buildings. The facility would generate air pollutants, dust, noise, and vibration during routine operation, and there is the risk of an accident leading to a fire or explosion. The January 2005 EA is inadequate in evaluating, mitigating, and avoiding adverse effects on nearby historic resources. It does not fully disclose the potential impact on historic properties, including the Villard

Houses, and the measures that will be taken to protect them. The January 2005 EA does not provide sufficient information demonstrating that the Villard Houses would not be adversely impacted by construction of the proposed facility. Measures to protect Villard Houses are described only briefly and the Construction Protection Plan was not provided. (Lefkowitz, Lang, Hiller, Bankoff, Zarin, Krueger)

Response: Chapter 6, "Historic Resources," of the January 2005 EA assesses the project's potential physical and contextual impacts on historic resources in the surrounding area. The analysis was conducted in accordance with Section 106 of the National Historic Preservation Act, in consultation with the State Historic Preservation Office (SHPO) and the New York State Office of Parks, Recreation and Historic Preservation. SHPO and the New York City Landmarks Preservation Commission (LPC) have reviewed and concurred with the analysis in the January 2005 EA. As described in the January 2005 EA, no significant adverse impacts would occur to historic resources. Historic resources in the vicinity of the project site would be protected during construction by the project's Construction Protection Plan, which was approved by both SHPO and LPC. The protection measures outlined in the Construction Protection Plan pertain to historic properties located within 200 feet of project elements associated with the East Side Access Project and include measures for pre-construction inspections, surveys and documentation; and settlement, movement, and vibration monitoring. Specific to 50th Street, one historic resource, the Villard Houses, falls within the 200-foot-area of potential effect for the facility, and would be protected as outlined in the Construction Protection Plan. The Construction Protection Plan is included in the appendices that accompany this revised supplemental EA.

As described on pages 6-10 through 6-12 of the January 2005 EA and pages 6-10 through 6-13 of this revised supplemental EA, the proposed 50th Street facility is not anticipated to result in any significant adverse contextual impacts. It would not alter or obstruct views to historic resources. With any of the build alternatives, the 50th Street facility's height and design with a glass and metal façade would be comparable to and fit in with the surrounding Midtown Manhattan urban design context. Furthermore, with Preferred Alternative D, the 50th Street facility would be no taller than the existing buildings to be demolished.

The January 2005 EA and this supplemental EA include an analysis of air pollution, and noise and vibration effects from the proposed facility in Chapter 8, "Air Quality," and Chapter 9, "Noise and Vibration." They also include an analysis of air quality (including dust) and noise during construction in Chapter 15, "Construction Impacts." Those analyses conclude that operation and construction of the proposed project would not result in any significant adverse air quality, noise, or vibration impacts.

The commenter is also incorrect with respect to the potential for an accident at the proposed facility leading to a fire or explosion. Chapter 14 of the January 2005 EA and this revised supplemental EA, and the responses later in this chapter to comments related to safety and security address the security measures that would be implemented in the facility to protect the building, including the numerous fire protection measures used for fuel storage tanks. Finally, under Preferred Alternative D, the fuel storage tanks have been removed from the 50th Street facility and relocated to a site in the East Side Access concourse.

Comment 60: The January 2005 EA's cursory statement that the facility would not result in any significant adverse impacts to the Villard Houses because there are no views to the site from its courtyard ignores the obvious fact that appreciation of the Villard Houses' historic character is not generated by views from the courtyard alone, but by views from 50th Street as well. These views would be adversely affected by the dirt and mist emitted from the proposed facility's exhaust vents, cooling tower, and emergency generators. (Lefkowitz)

Response: The statement referred to in the comment is part of a larger analysis of the project's potential for effects to Villard Houses. As described in Chapter 6, the analysis concludes that under any of the build alternatives, the 50th Street facility's modern glass and metal design would be consistent with nearby modern office buildings, similar in massing to other buildings in the immediate area, and would retain the pattern of shorter buildings on midblocks adjacent to taller buildings on the avenues. The 50th Street facility would appear as part of the typical Midtown Manhattan streetscape, similar to views of the site today. With Preferred Alternative D, the 50th Street facility would be similar in height and massing to the existing buildings on the site today. Consequently, the facility would not alter or obstruct views to nearby historic resources. In addition to this analysis, a much more detailed analysis of the visual effects of the facility is provided in Chapter 5 of the January 2005 EA and this revised supplemental EA ("Visual and Aesthetic Considerations").

The statement that views would be adversely affected by "dirt and mist emitted from the facility's exhaust vents, cooling tower, and emergency generator" is incorrect. During normal operation, the exhaust vents would emit only ambient air from the underground station and tunnels. The emergency generators would not be operated under normal conditions, other than a brief monthly test to ensure they remain in working condition. Furthermore, in Preferred Alternative D, the emergency generators have been relocated underground, while their exhaust has been relocated to the roof of the Colgate-Palmolive Building at 300 Park Avenue. As described in the January 2005 EA and this revised supplemental EA, an analysis was conducted of the visible mist from the cooling tower on the roof of the proposed 50th Street facility. That analysis concluded that visible mist from the rooftop cooling tower would normally be confined to the region immediately above or beside the cooling tower, and for a

small number of hours per year, would extend to or beyond the proposed building's property line. This mist would not adversely affect views of the Villard Houses on 50th Street. Since publication of the January 2005 EA, the cooling tower has been relocated to the roof of the Colgate-Palmolive Building at 300 Park Avenue, as part of the new Preferred Alternative D.

Comment 61: The LPC requested that the documents controlling construction of the proposed facility be more explicit as to whether the archaeological monitor will have the authority to direct the contractors they are monitoring, because this has been an issue with other MTA projects. This indicates that insufficient information has been provided in the January 2005 EA. (Lefkowitz)

Response: The commenter is incorrect. The January 2005 EA includes sufficient information related to archaeological resources. The LPC's request, cited in the comment, was made in November 2004 during review of the preliminary EA and related materials and is not a comment on the EA published in January 2005. It was included as part of Appendix A to the January 2005 EA (and in Appendix C, "Historic and Archaeological Resources," to this revised supplemental EA in Appendix C-1, "Project Correspondence") to demonstrate that LPC has been involved in ongoing review for the East Side Access Project. The comments are a normal part of the consultation process under Section 106 of the National Historic Preservation Act. LPC's comments were not on the January 2005 EA, but on the project's Programmatic Agreement, which was executed in January 2001. The information requested by LPC is included in the project's Construction Protection Plan, which was developed in 2004 pursuant to the 2001 Programmatic Agreement.

LPC indicated in comments that were included in the January 2005 EA that the analyses of historic resources included in the January 2005 EA were acceptable to LPC. Additional comments were provided in January 2005 indicating that the analyses of both historic and archaeological resources included in the January 2005 EA are acceptable to LPC (see the following comments).

Comment 62: The LPC has reviewed the January 2005 EA and concluded that the chapter on historic resources is acceptable. (Santucci)

Response: Comment noted.

Comment 63: The LPC concurs with the conclusions of the January 2005 EA related to archaeological resources. (Sutphin)

Response: Comment noted.

Comment 64: Pursuant to the National Historic Preservation Act, because the East Side Access Project was determined to have an adverse effect on the qualities of

properties that qualify them for inclusion in the National Register, a Programmatic Agreement was executed. (Lefkowitz)

Response: Please note that the FEIS for the East Side Access Project concluded that the project would *not* have adverse effects on any historic resources listed on or eligible for the National Register. The Programmatic Agreement was executed to establish an ongoing consultation process for the project with respect to the design of project elements that could affect historic resources.

Comment 65: The East Side Access Programmatic Agreement for historic and archaeological resources only addresses issues related to construction of the FEIS preferred alternative; it does not address issues related to the proposed 50th Street facility. (Leland, Zarin)

Response: Under Section 106 of the National Historic Preservation Act, programmatic agreements are used to govern the implementation of a particular program or the resolution of adverse effects from certain complex project situations. They are appropriate when the effects on historic properties cannot be fully determined prior to the approval of an undertaking (see 36 CFR 800, § 800.14(b)). A Programmatic Agreement was developed and executed for the East Side Access Project specifically because the project design was not yet final, and there was a possibility that as project design evolved, additional analysis or evaluation of potential effects on historic resources would be conducted.

As noted in the January 2005 EA (see Chapter 6), upon incorporation of the 50th Street facility into the East Side Access Project, the historic resources identified as within the Area of Potential Effect for the 50th Street facility would be considered resources that may be affected by the East Side Access Project, and therefore would be subject to the Programmatic Agreement. SHPO has confirmed that the stipulations of the Programmatic Agreement cover the FEIS and additional new project elements. During preparation of the January 2005 EA for the 50th Street facility, these stipulations were adhered to as follows.

As per II.A of the Programmatic Agreement, a Construction Protection Plan has been prepared. The Construction Protection Plan covers historic properties located within 200 feet of the proposed East Side Access Project elements (above and beyond the 75 feet specified in the Programmatic Agreement based on subsequent engineering studies), including historic properties located within 200 feet of the proposed 50th Street facility site. As per II.B of the Programmatic Agreement, MTA will continue to consult with SHPO on the design of project elements, including the 50th Street facility, within visual range of historic properties as the project's design progresses.

An archaeological resources evaluation was prepared for the 50th Street site and submitted to and accepted by SHPO. As per I.B. of the Programmatic Agreement, the site will be field tested to determine if there are archaeological

resources present as identified in the archaeology report. The protocol for field testing is contained in the Construction Protection Plan, which was approved by SHPO and LPC. If significant archaeological resources are found on the site, they will be properly mitigated as outlined in the Programmatic Agreement.

Comment 66: The East Side Access Programmatic Agreement for historic and archaeological resources and the approval of site clearance for the proposed 50th Street facility by SHPO do not provide adequate protection for the historic resources in the vicinity of the proposed project. (Lang)

Response: Among other things, the project's Programmatic Agreement stipulates development of a project-specific construction protection plan that identifies measures to protect nearby historic resources during construction of the East Side Access Project. Accordingly, a Construction Protection Plan was submitted to and approved by SHPO and LPC that lists measures that will be undertaken to protect surrounding historic structures during project construction. This document was provided to the Municipal Arts Society, New York Landmarks Conservancy, and Historic Districts Council on March 1, 2005 and is now included in the appendices to this revised supplemental EA (see Appendix C-2, "MTA/LIRR East Side Access Construction Protection Plan, April 2004").

Comment 67: Rock blasting and dust generation during construction of the proposed facility may adversely affect nearby historic structures. Mitigation measures should be identified and made public before the project is approved. The construction protection plan for the proposed project should also be provided. (Hiller, Leland, Lefkowitz, Zarin)

Response: The Construction Protection Plan to be implemented for the project (see previous comment) lists measures that will be undertaken to avoid impacts to historic structures during construction. As stipulated in the Construction Protection Plan, detailed pre-construction inspections will be made at historic structures within the 200-foot designated influence zone for construction activities. Once construction begins, structures that could potentially be affected will be monitored for movement, settlement, rotation, and construction-induced vibrations. If any data exceed established threshold values, an immediate review of construction work methods will take place. Measures to reduce dust will also be undertaken at the site, including the construction of a concrete surface (e.g., no soil/gravel surface), and washing tires prior to vehicles exiting the construction site. Measures to be used to control dust during construction are described in the January 2005 EA and this revised supplemental EA in Chapter 15, "Construction Impacts."

A copy of the Construction Protection Plan was provided to the Municipal Arts Society, New York Landmarks Conservancy, and Historic Districts Council on

March 1, 2005 and the document is now included in the appendices to this revised supplemental EA.

Comment 68: It appears that MTA has not consulted with the federal Advisory Council on Historic Preservation (ACHP) and that MTA's consultation with SHPO is incomplete. It is not clear from the January 2005 EA whether MTA even contacted ACHP to permit it an opportunity to mitigate the adverse effects on historic resources and/or regarding the execution of the Programmatic Agreement. The November 29, 2004, letter from SHPO states that the "general design discussed in the January 2005 EA appears appropriate" and that SHPO "would like to review the design and specification for the 50th Street facility." Thus, MTA must further consult with SHPO once the design for the proposed facility is finalized, including, commitments to the specific equipment that would be located there. (Zarin, Lefkowitz)

Response: The Programmatic Agreement clearly states in its second paragraph, "the FTA has consulted with the Advisory Council on Historic Preservation." Consultation with the Advisory Council is required under Section 106 whenever a Programmatic Agreement is developed. The MTA's consultation with SHPO regarding the East Side Access Project is ongoing, and will continue throughout the design and construction of the project. This is consistent with the protocols established in the Programmatic Agreement, and is precisely the reason for developing a Programmatic Agreement. SHPO will review the design for all East Side Access Project elements that are located in proximity to historic resources as the project's design advances. SHPO's comment in no way indicates that the analyses included in the January 2005 EA were not adequate. In fact, SHPO's comment letter (which was included in Appendix A to the January 2005 EA and is included in Appendix C to this revised supplemental EA) states that SHPO agrees with the documentation provided for the 50th Street facility in the January 2005 EA and that SHPO would like to review the design and specifications in accordance with the terms of the Programmatic Agreement, and such a review will take place as the project goes forward.

Comment 69: The moisture and water treatment chemicals in the mist from the proposed cooling tower may affect nearby historic buildings, causing damage to their facades, e.g., algal growth and rime. The impact of the "cavity effect" on mist dispersion should be considered. (Hiller, Maloney, Bankoff, Fields, Silverblatt, Leland, Zarin, Ambient)

Response: The mechanics and assessment of the mist from the cooling tower that was proposed on the rooftop of the 50th Street facility in the two build alternatives included in the January 2005 EA (referred to as Alternatives B and C in this revised supplemental EA) are described in the January 2005 EA and in this revised supplemental EA in Chapter 8, "Air Quality." As noted there, a detailed

dispersion analysis was conducted to determine how the mist from the cooling tower would be dispersed. The analysis concluded that during most hours of the year, the mist from the tower would be confined to the region immediately above or beside the cooling tower.

Algae require a continuously moist environment to develop, and such an environment could only be generated if the facade of a nearby building were continuously in contact with the mist from the proposed cooling tower. As illustrated in Figures 3 through 8 of the mist dispersion analysis documentation included in the appendices to this revised supplemental EA, the frequency with which cooling tower mist would extend to the nearest historic structure, the Villard Houses located at the northeast corner of Madison Avenue and East 50th Street, is very small—less than 100 hours per year. The frequency is lower for historic structures located farther away, and as noted in the response to Comment 133, cooling tower mist would extend to 300 Park Avenue and 437 Madison Avenue—the two buildings closest to the 50th Street facility—for an average of only 100 hours and 200 hours per year, respectively. Based on the very limited number of hours per year that mist from the proposed cooling tower would reach nearby buildings, including historic structures, it would not lead to the formation of algae on the facades of these buildings.

Formation of rime (a coating of ice) could only occur if the facades of nearby buildings were located within the densest portion of the cooling tower mist, and only during very cold weather. As described in Chapter 8, "Air Quality," of the January 2005 EA and further demonstrated by cooling tower mist dispersion analysis documentation included in the appendices to this revised supplemental EA, the densest portion of the mist would be confined to the region immediately above or beside the cooling tower, and would not extend to adjacent buildings. Therefore, rime (ice) formation on adjacent structures is very unlikely to occur. Furthermore, during cold weather, the cooling tower load would be substantially reduced, or the cooling tower would be completely turned off, because the East Side Access terminal would be cooled with cold ambient air, as part of the energy-saving efficiency cycle incorporated into the project design. In such cases, the volume of cooling tower mist would be minimal to nonexistent.

Cooling tower drift (liquid circulating water droplets entrained in the outlet exhaust) would be minimized using high-efficiency drift eliminators. Any drift would be confined to an area close to the tower and contain slightly concentrated minerals normally found in New York City drinking water. Such minerals are predominately calcium carbonate, which is neutral to mildly alkaline in pH and will not promote corrosion on nearby surfaces. As with cooling tower systems for most buildings in New York City, the water circulating between condensers and the cooling tower would be treated with standard water treatment additives to prevent formation of bacteria. Use of these additives would follow industry-accepted best practices. The small amount of

drift from the tower could include trace amounts of water treatment chemicals added to prevent development of bacteria, similar to the drift emitted by other cooling towers throughout New York City. In response to numerous public comments on this topic, an analysis was conducted of the impact associated with these water treatment chemicals. This analysis, which is summarized in Chapter 8 of this revised supplemental EA, concludes that no significant impact would occur.

As noted elsewhere in this chapter as well as in Chapter 2 of this revised supplemental EA, since publication of the January 2005 EA, the proposed cooling tower has been relocated from the roof of the 50th Street facility to the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue. Since no significant adverse impact was predicted for the cooling tower on the 50th Street facility, no impact would occur in the new location either.

Comment 70: The January 2005 EA states that no Section 4(f) determination is required because no significant adverse impacts—including direct effects and adverse contextual effects—would occur to historic resources under either project alternative. To the contrary, the proposed facility would result in significant adverse air quality, homeland security, public safety, traffic, community character, and noise impacts on historic resources surrounding the proposed site. The EA must include a Section 4(f) determination demonstrating that there are no prudent or feasible alternatives that would avoid these impacts (Zarin)

Response: Despite the assertions made by the commenter, the January 2005 EA concludes that the 50th Street facility would not result in significant adverse impacts to any historic resources. Both LPC and SHPO agreed with this conclusion. Analyses pursuant to Section 4(f) are required when "use" of a historic property is proposed. Use occurs if there is a direct (i.e., alteration or demolition) or indirect (i.e., contextual) significant adverse effect to a historic property. Since no significant adverse impact would occur to any historic resources, no use would occur and no Section 4(f) determination is required.

TRAFFIC AND TRANSPORTATION

Comment 71: The proposed project would undermine the effectiveness of 50th Street as a Thru Street and worsen traffic congestion in the surrounding area. (Maloney, Holzer/Zankl, Jacobs, Lefkowitz, Leland, Albanese) This is demonstrated by the increased travel times and reduced speeds predicted by the traffic simulation model (CORSIM) conducted for East 49th Street and East 50th Street as a result of the proposed project. (Zarin, Adler, Lefkowitz) These increased travel times and reduced speeds defeat the entire purpose of the Thru Street program and may cause a change in travel patterns as motorists seek to avoid them. (Adler)

Response: The January 2005 EA and the revised supplemental EA include an evaluation of the project's effects on traffic conditions on 50th Street and the surrounding area in Chapter 7, "Traffic and Transportation." That analysis concludes that the 50th Street facility would not result in a large enough number of trips to create a significant adverse impact on traffic flow on 50th Street.

While East 50th Street between Madison and Park Avenues is designated as a thru street, its current operations allow for the consistent use of only one or two through travel lanes. The full functionality of the Thru Streets Program is being compromised by curbside activities on the block that are prevalent throughout the day. The north curb lane is used primarily for vehicle staging and local deliveries, with frequent double-parking related to pick-ups and drop-offs at the Palace Hotel. Activities along the south curb lane, which is a designated bus lane, are somewhat less pronounced. Currently, trucks serving the buildings on the project site as well as trucks serving other buildings on the block use the south curb/bus lane as a staging area. By eliminating the staging area in front of the project site, the project would contribute to improving conditions on the block, and the small number of additional trucks traveling to the project site would not result in significant adverse traffic impacts. The project would bring 23 trucks per day to the project site. During the peak hour, only 3 or 4 trucks would enter and then leave the site; during other times of day, the project would add similar or fewer trucks per hour. Under Alternative C and the Preferred Alternative D, these would enter on 49th Street and leave from the project site on 50th Street. Overall, this number of truck trips would not adversely affect 50th Street's function as a Thru Street.

Comment 72: According to the January 2005 EA, traffic on 50th Street includes movements to and from driveways and curbside activities that can limit the traffic on the street to one effective moving lane. The Palace Hotel is concerned that traffic, including trucks maneuvering out of the 50th Street facility's loading dock and proposed lane closures during construction, will impede vehicular access to the hotel's principal entrance on 50th Street as well as to the parking garage located next to the entrance. (Lefkowitz)

Response: Although parking regulations on the block of 50th Street between Madison and Park Avenues are intended to preserve at least two moving lanes during the morning, curbside activities are prevalent along both sides of the street during most of the day, reducing the number of travel lanes. Field observations showed that the roadway segment operates mostly with one moving lane in the morning due to this existing curbside activity. Often, activities in front of or attributed to the Palace Hotel restrict how traffic enters and flows through the block. Because of this, when bottlenecks occur, they are usually at the western end of the block near Madison Avenue.

As stated in the January 2005 EA, the nominal increase in truck activities at the proposed loading dock would not have perceptible effects on traffic flow on 50th Street, particularly with use of a through drive allowing project-related trucks to enter at 49th Street and exit at 50th Street. With a through drive, no additional project-related traffic would pass through the block's bottleneck in front of the Palace Hotel. Furthermore, the project would eliminate curbside activities associated with the existing businesses in the buildings on the project site.

Regarding lane closure during construction, the project team has continued to work with NYCDOT to develop a viable Maintenance and Protection of Traffic (MPT) Plan to minimize disruptions of traffic flow. Please see the response to Comment 178 below.

Comment 73: Any trucks traveling to or from the proposed project site would be especially detrimental to street operations and neighborhood character since they would be traveling on streets that are not designated truck routes. The closest avenues that are designated "Local Truck Routes" by NYCDOT are Eighth Avenue, Third Avenue, and Lexington Avenue. The nearest cross streets designated as truck routes are 42nd Street and 57th Streets. In addition, all trucks are subject to the special restrictions for traveling in the Midtown Core. (Adler)

Response: The truck routes designated by NYCDOT serve as arterial through routes for trucks. At some point, however, all trucks must leave those designated truck routes and travel on local streets to reach their destinations. Particularly in the Midtown core, where businesses are densely situated, truck travel on local streets is essential to maintaining the transport of supplies and the disposal of refuse. Along 50th Street between Madison and Park Avenues, there are three existing truck loading docks. Loading and unloading activities also take place along the north and south curbs of the block. The truck traffic generated by the proposed project would be a minor addition to the existing truck traffic on this segment of East 50th Street and would not adversely affect street operations or the character of the surrounding neighborhood.

Comment 74: The traffic analysis in the January 2005 EA is inadequate because the PM peak period was not analyzed. Observations conducted by the Urbitran Group of the Depew Place loading dock indicate about the same number of trucks accessing the loading dock during the PM peak period as in the AM peak period. (Horodniceanu)

Response: As stated in the January 2005 EA in Chapter 7, "Traffic and Transportation," based on existing patterns at the Depew Place loading dock, the majority of truck trips associated with the proposed facility would occur during the main 8-hour delivery period from 6 AM to 2 PM, and no more than 15 percent of the daily total would occur during any one peak hour.

Conclusions about existing truck activity patterns at Depew Place are based on 10 months of observations. These observations confirm that the majority of deliveries occur during the AM hours. The existing loading dock operations at Depew Place are further documented in the loading dock requirements analysis included in the appendices to this revised supplemental EA.

Because no more than 15 percent of the daily truck total would occur during any one hour, trip generation associated with the proposed facility would be below the CEQR threshold of 50 passenger car trips during any peak hour, including the PM peak loading dock hour. The proposed facility does not have the potential to result in significant adverse traffic impacts, and no additional analysis is required.

Comment 75: The supporting data for the truck trip generation at the proposed loading dock, and how it relates to the increase in concourse area and train volumes due to the East Side Access Project, should be provided. The statement made in the January 2005 EA that the existing number of trucks servicing Grand Central Terminal would increase by 35 percent as a result of the East Side Access Project is unsupported. The EA should provide a breakdown of the uses or types of the existing truck fleet and information regarding the type and amount of new retail space. The supporting data for truck trip generation at the proposed loading dock that has been posted to the MTA project website states that retail space in Grand Central Terminal would increase by 11 percent. This is contradicted by the statement in the January 2005 EA that retail space would increase by 28 percent. (Adler, Herfort, Zarin, Leland)

Response: As indicated in the January 2005 EA (see Chapter 7), projections of the East Side Access truck volumes were made based on the existing operations at the Depew Place loading dock. The number of trucks associated with each existing activity in Grand Central Terminal (e.g., retail, Metro-North storeroom, garbage, etc.) was increased proportionally to account for how that type of space would be increased by the East Side Access Project. The resulting increase in projected total trucks is 35 percent higher than the number of trucks currently using the Depew Place loading dock. Additional information on the existing and future trucking activities has been added to this revised supplemental EA (see Chapter 7) and the study of existing operations at Depew Place has been provided in an appendix to this revised supplemental EA (see Appendix D-1).

The overall 35 percent increase in the number of trucks currently using the Depew Place loading dock would result from the increases in component activities listed below.

- *Retail space*—Deliveries associated with retail space at Grand Central would increase 28 percent, based on an increase in retail floor area at Grand Central of 28 percent.

- *MTA general storeroom*—Increase of 62 percent, based on an increase in overall floor area at Grand Central of 62 percent.
- *MTA general deliveries*—Increase of 62 percent, based on an increase in overall floor area at Grand Central of 62 percent.
- *MTA garbage*—Increase of 76 percent, based on an increase in train service at Grand Central of 76 percent.
- *MTA other*—Increase of 62 percent, based on an increase in overall floor area at Grand Central of 62 percent.

The specific retail program for the East Side Access concourse has not yet been finalized. The 11 percent increase in retail space cited in the loading dock requirements analysis reflects an estimate of the minimum amount of retail space (approximately 20,000 square feet) that would be included in the concourse, and demonstrates that even with the minimum amount of retail space, the project would result in the need for new loading dock space serving Grand Central Terminal. However, the final retail plan for the East Side Access concourse will depend on demand. For this reason, a reasonable worst-case build-out of retail space—approximately 49,500 square feet of retail space, representing a 28 percent increase in retail space at Grand Central Terminal—was used for the impact assessment.

Comment 76: The supporting data for truck trip generation at the proposed loading dock does not include analysis of truck trips or traffic impacts. It merely projects the number of loading dock bays that will be needed due to anticipated future growth. (Leland)

Response: Analysis of the potential traffic impacts associated with truck trips generated by the proposed project is presented in Chapter 7 of the January 2005 EA. The loading dock requirements analysis included in Appendix D-1 to this revised supplemental EA was performed as part of an "Industrial Engineering Analysis of Grand Central Terminal Maintenance Operations." (Industrial engineering is a field of engineering that analyzes systems and processes so as to make them more efficient or effective.) The scope of that study was to determine whether facilities in Grand Central Terminal were adequate to effectively support maintenance of the expanded terminal once East Side Access-related improvements were complete. This study was not intended to analyze the traffic impacts of new trucks associated with East Side Access.

Comment 77: The January 2005 EA does not provide information on how the MTA proposes to enforce restricted delivery times to the 50th Street facility in order to avoid disruption in Midtown traffic. (Leland)

Response: Delivery times for the proposed loading dock would not be restricted. Truck activity at the Depew Place loading dock is also not restricted. For this reason, the existing truck delivery activity at the Depew Place was used to determine

when truck activity would occur. It is assumed that deliveries at the new loading dock would follow a pattern similar to that of the existing loading dock at Depew Place, with the majority of truck trips occurring from 6 AM to 2 PM.

As described in the January 2005 EA, the potential for the proposed project to result in impacts to Midtown traffic was assessed using the conservative assumption that up to 15 percent of the 46 project-generated truck trips would occur during a single peak hour. Based on this conservative assumption, the proposed project would not meet the *CEQR Technical Manual* threshold for quantified traffic analysis and would not have the potential to result in any significant adverse traffic impacts.

Comment 78: The January 2005 EA breaks down the proposed facility into individual components so as to minimize them, which constitutes segmentation under NEPA. Failure to extend the FEIS traffic study area to include the proposed facility constitutes segmentation. The traffic study conducted for the East Side Access FEIS stopped at 48th Street, because the project did not include the 50th Street facility at that time. If the vent facility had been included, the study area would have extended to 50th Street. The same detailed traffic study that was previously performed in the 2001 FEIS must also be conducted with respect to the 50th Street facility so as not to illegally segment the facility from the remainder of the project. The vent building should be considered part of the overall East Side Access Project, and not a stand-alone component. For the EA, the FEIS traffic study area should be extended to include 49th and 50th Streets from Third Avenue to Fifth Avenue. The traffic study should also analyze potential impacts on public buses, parking, and pedestrians in this expanded area. (Zarin, Adler, Maloney) The January 2005 EA discusses truck trip generation for the entire Grand Central Terminal complex, then states that truck traffic for just the 50th Street facility does not meet the CEQR threshold for a quantified traffic impact analysis. Since the trip generation is performed for the entire Grand Central Terminal complex, the impacts of the entire project should be considered. This constitutes segmentation of the project's potential traffic impacts. (Leland, Adler)

Response: The traffic study area for the FEIS included all locations where there was the potential for traffic impacts under the FEIS design. In developing the study area, the traffic analysts considered a broad area and selected those intersections where the project would generate enough new trips to have the potential for a significant adverse impact. That study area extended as far north as 48th Street, since the East Side Access Project's northernmost entrance/exit will be constructed at 48th Street. Some localized impacts were predicted to occur due to an increased number of taxi trips at the station entrance/exit locations. Standard mitigation measures (e.g., signal timing changes) for these impacts were identified in the FEIS. At most intersections analyzed, traffic conditions were predicted to improve as a result of the project, because the East Side

Access Project was predicted to reduce overall traffic volumes in the vicinity of Grand Central Terminal by an estimated 2 percent. This is because fewer Long Islanders will drive to Midtown once East Side Access is in place, removing more than 20,000 cars per day from the East River crossings, and because fewer LIRR commuters will take taxis from Penn Station to their destinations on the East Side of Manhattan.

As noted in the January 2005 EA in Chapter 7, the 50th Street facility would generate a maximum of 16 trips (in passenger car equivalents) during the peak hour. Trips to and from the facility would be dispersed among different routes, and at intersections farther from the 50th Street project site, there would be fewer trips in the peak hour. The facility would not generate enough trips during the peak hour at intersections closest to the site to cause a noticeable change in traffic conditions; at intersections farther away, where other trips from the East Side Access Project might also occur, the facility would not generate enough trips to change the conclusions of the analysis already conducted for the East Side Access FEIS.

In response to this comment, an intersection level of service analysis was conducted using the *Highway Capacity Manual* (HCM) methodology to analyze the combined effect of trucks generated by the 50th Street facility and other trips generated by the East Side Access Project that were analyzed in the FEIS. The HCM analysis was conducted for the four intersections where the truck volumes associated with the proposed 50th Street facility would be highest: the intersections of 49th and 50th Streets with Park and Madison Avenues. The HCM analysis was also conducted for some of the intersections previously analyzed in the FEIS, i.e., those that would now also be traversed by trucks generated by the 50th Street facility. This was done to determine if any new significant adverse impacts not identified in the FEIS would result from the addition of the truck trips associated with the 50th Street facility. At these FEIS intersections, the truck trips that would be generated by the 50th Street facility were added to the taxi trips that will be generated by the East Side Access Project (and which were previously analyzed in the FEIS.) The results of the analysis are included in Chapter 7 of this revised supplemental EA. As demonstrated there, the combination of East Side Access taxi trips and truck trips would not result in any significant adverse impacts at the 49th and 50th Street intersections, and would not result in any additional significant adverse impacts at the other 13 intersections, beyond those already identified in the FEIS. Based on the above information, it can also be concluded that the small number of trucks generated by the 50th Street facility would not change the conclusions of the East Side Access FEIS with respect to public buses, parking, and pedestrians in the entire FEIS traffic study area. An analysis of the proposed 50th Street facility's effects on transit, parking, and pedestrians in the immediate vicinity of the project site is included in Chapter 7 of this revised supplemental EA.

The comment related to possible segmentation of Grand Central Terminal trip generation is mistaken. To identify the increase in truck trips at Grand Central Terminal that would result from the East Side Access Project, the January 2005 EA used a study of the existing Grand Central Terminal loading dock at Depew Place (see response to Comments 75 and 76). That study projected the total number of new truck trips that would occur because of the East Side Access Project. However, it is important to note that with a new 50th Street facility in place, *none* of those new East Side Access trips would occur at Depew Place. All East Side Access-related trips would occur at the 50th Street facility, and the traffic impact assessment for the January 2005 EA accounted for all those new truck trips. No other truck trips would occur at Grand Central Terminal because of East Side Access and therefore no segmentation has occurred.

Comment 79: Baseline traffic data has been collected only for the FEIS traffic study area. Intersection turning movement count data should be collected, following the procedures outlined in the *CEQR Technical Manual*, for the streets affected by the proposed project, including 49th Street, 50th Street, and the surrounding street network. (Adler)

Response: Baseline traffic data were collected at the intersections of 49th and 50th Streets with Park and Madison Avenues for the January 2005 EA. These data, which included traffic volumes, vehicle classifications, and turning movements, were used for the CORSIM traffic simulation modeling presented in the January 2005 EA as well as the HCM analysis presented in this revised supplemental EA. This information is provided in Appendix D-2, "Traffic Data Collection Summaries," in Appendix D.

Comment 80: The January 2005 EA adheres to guidance provided by the *CEQR Technical Manual* in order to minimize the scope of review for certain impacts while ignoring the *Manual*'s guidance to perform more rigorous analysis for other areas. (Zarin) The traffic analysis conducted for the January 2005 EA is inadequate. Intersection capacity analysis should be conducted for the intersections affected by the proposed project. (Maloney, Zarin, Moskowitz) The *CEQR Technical Manual* indicates that proposed actions affecting congested intersections have at times been found to create significant traffic impacts when their trip generation is fewer than 50 vehicles per hour. The purpose of that language is precisely to account for situations where, as here, significant traffic impacts would occur even when trip generation levels are low. (Zarin)

Response: The January 2005 EA follows the guidance of the *CEQR Technical Manual* for all analyses where no guidance is available from FTA. In all analyses for which the *CEQR Technical Manual* was used for methodology, the appropriate methodology recommended in the *Manual* was followed. The *Manual* provides

guidance on when detailed analyses are appropriate and when a screening-level analysis is adequate, and that guidance was followed when preparing the January 2005 EA. Accordingly, the traffic analysis conducted for the January 2005 EA did not include intersection capacity analysis because the proposed facility is expected to result in fewer than 50 passenger car equivalents (PCEs) during its peak hour of trip generation. For purposes of traffic impact analysis, one heavy truck is equivalent to two passenger cars (1 truck = 2 PCEs).

As described in the January 2005 EA, combining employee, merchandise delivery, and trash disposal trips, the equivalent of up to only 16 PCEs (8 arriving and 8 departing) would be generated by the proposed facility during the peak hour. The net increase in trips would actually be smaller, since deliveries to the existing businesses on the site today would no longer occur. This level of project trip generation is well below the threshold of 50 passenger car trips per hour specified in the *CEQR Technical Manual* as warranting detailed analysis. The *CEQR Technical Manual* notes that "proposed actions affecting congested intersections have at times been found to create significant traffic impacts when their trip generation is fewer than 50 vehicles in the peak hour. This is especially true for proposed actions that generate a significant volume of trucks and/or buses, since trucks and buses are considered to be 'equivalent' to more than one car" (see page 3O-2 in the *Manual*). The proposed 50th Street facility would result in far fewer than 50 trips in the peak hour, even after converting all truck trips to passenger car equivalents. The number of trips generated by the project through any one intersection in the peak hour is not large enough to cause a noticeable change or a significant impact at the intersection. Therefore, a detailed analysis of intersection level of service (LOS) was not warranted.

Nonetheless, in light of the numerous comments received on this matter, a level of service analysis was conducted for the intersections nearest the project site using the Highway Capacity Manual methodology. As discussed in response to Comment 78 above, this analysis indicated that the 50th Street facility would not result in any new significant traffic impacts. Information on this analysis has been added to Chapter 7 of this revised supplemental EA.

Comment 81: MTA did not obtain NYCDOT's concurrence for using CORSIM instead of HCM to analyze the potential effects the proposed project would have on area traffic, as recommended by the *CEQR Technical Manual.* (Zarin, Adler) Use of the CORSIM model instead of HCM is inappropriate because the CORSIM model does not provide information concerning the operation of intersections, but rather estimates changes in travel time along a one-block section. (Adler)

Response: As stated in the January 2005 EA, because concerns were expressed by members of the community regarding potential traffic disruptions due to truck activity at the proposed loading dock, a CORSIM (CORridor SIMulation) traffic simulation was conducted. CORSIM is a state-of-the-art traffic simulation

model that realistically simulates traffic flows and has been used on many NYCDOT projects. It was employed for this project because of its ability to model short-term traffic blockages, such as those that would result when trucks enter and leave the proposed loading dock. HCM is not capable of modeling these types of mid-block blockages.

As described in response to Comment 78, above, an HCM analysis of the potential traffic impacts associated with the 50th Street facility has been performed for this revised supplemental EA and is included in Chapter 7.

Comment 82: The ability of the CORSIM traffic model to simulate the effect on traffic flows of trucks backing up to enter the proposed loading dock on 50th Street is questionable. (Horodniceanu) A copy of the CORSIM data files should be provided. (Horodniceanu, Zarin, Adler)

Response: The traffic blockages created by trucks backing into a loading dock can be effectively simulated in CORSIM through the use of short-term events. A short-term event in CORSIM is a traffic blockage that can last a specified amount of time and that prevents traffic from moving for that length of time. Observations of blockage times caused by trucks backing into existing loading docks were made in the field and implemented into the CORSIM simulation. The CORSIM input and output files are included in Appendix D-3 to this revised supplemental EA.

Comment 83: The February 2002 Technical Memorandum states that the proposed structure would contain a small amount of office space, but does not provide the square footage. This information should be provided and a trip generation analysis completed. The January 2005 EA states that there would be seven employees at the proposed facility, then states that there would be no more than two passenger car trips generated during any peak hour, but does not provide documentation, only a reference to unsubstantiated "journey to work" characteristics. The basis for the employee trip generation estimates should be provided. (Adler)

Response: The 50th Street facility with any of the build alternatives would not include any office space. The only trips that would be generated by the 50th Street facility would be those associated with the loading dock, and those of the estimated seven employees who would be stationed there. The seven employees projected for the facility would generate negligible vehicular trips. Nevertheless, employee-related vehicular trips were conservatively estimated and added to peak hour project-generated loading dock trips. Based on journey-to-work statistics, approximately 13 percent of commuter trips made to the immediate area encompassing the project site are by auto. This level of auto share would translate to less than one vehicle trip per day generated by the employees of the proposed facility. However, the analysis conservatively accounted for two auto

trips, occurring during the same peak hour as the loading dock truck trips. In reality, it is unlikely that employee vehicular trips would coincide with peak hour loading dock truck trips.

Comment 84: The January 2005 EA is biased in favor of the through drive alternative. A 40-foot-long truck was the design vehicle in the 50th Street facility (page 2-1), while a 30-foot-long truck was used in the through drive alternative. As a result, the truck backing up assessment on East 50th Street was overestimated and the impacts of truck maneuvering and access on East 49th Street are underestimated. Moreover, the use of the 30-foot-long truck is not consistent with truck lengths observed at Depew Place. (Horodniceanu)

Response: Contrary to the commenter's assertions, both alternatives were analyzed assuming 30-foot trucks. The only mention of 40-foot trucks in the January 2005 EA occurs in Chapter 2, "Project Alternatives," page 2-1, and refers to the 2002 Interim Design, which has been replaced by the build alternatives analyzed in the January 2005 EA and this revised supplemental EA. At the existing Depew Place loading dock, truck length is limited to 25 feet.

Comment 85: The January 2005 EA does not adequately substantiate the benefits of the 50th Street facility with a through drive relative to the 50th Street facility without a through drive. (Horodniceanu)

Response: As described in Chapter 7, "Traffic and Transportation," of the January 2005 EA and this revised supplemental EA, with a through drive incorporated into the proposed facility, project-generated trucks would not have to conduct "back-in" maneuvers into the loading dock, thus minimizing the amount of time site activities would interfere with through traffic. As part of the January 2005 EA's traffic analysis, a traffic simulation analysis was conducted, which demonstrated the benefit of the through drive in terms of travel time on the block (see pages 7-7 through 7-9). As demonstrated in Tables 7-3 and 7-4, the through drive would result in smaller increases in average travel time on East 50th Street as compared to the alternative without a through drive.

As described in Chapter 2, "Project Alternatives," and Chapter 15, "Construction Impacts," the through drive would also provide benefits during the construction period relative to the alternative without a through drive (referred to as Alternative B in this revised supplemental EA). These benefits would include additional space for truck loading and unloading, as well as smoother flow of construction vehicles into and out of the project site.

Comment 86: The January 2005 EA does not consider certain differences in operational characteristics between East 50th Street and East 49th Street that are relevant to the provision of a through drive on East 49th Street. Specifically, East 49th Street is more transit-oriented than East 50th Street since the East 49th Street

north curb lane is designated as a bus-only lane. Additional truck traffic on East 49th Street generated by the proposed facility would exacerbate the already unacceptable vehicular and bus traffic conditions. (Horodniceanu)

Response: Both 49th and 50th Streets have one lane designated for buses only. On 49th Street, the north curb lane is designated a bus-only lane, while on 50th Street, the south curb lane is striped as a bus lane. Therefore, the operational characteristics of the two streets with respect to bus service are similar. Existing traffic volumes on the two streets are also similar, as demonstrated in Tables 7-1 and 7-2 in Chapter 7, "Traffic and Transportation" of the January 2005 EA. The main feature that distinguishes the two streets, making East 50th Street in general more congested than East 49th Street, is the high level of vehicular activity and conflicts on the north curb of East 50th Street associated with standing and double parking related to the Palace Hotel. The text in Chapter 7 of this revised supplemental EA has been updated to more clearly describe both streets' function as bus routes.

The through drive (included in Alternative C, as well as in the new Preferred Alternative D) would eliminate truck backing-in maneuvers on East 50th Street, and replace them with head-in maneuvers on East 49th Street. This would minimize adverse effects on through traffic on East 50th Street and would be consistent with NYCDOT's preference for loading dock operations. East 49th Street, which as mentioned above is generally less congested than East 50th Street, would not be adversely affected by the addition of up to 3 or 4 project-generated trucks during the peak hour. Finally, as documented on pages 7-8 through 7-10 of this revised supplemental EA, neither Alternative C nor Preferred Alternative D would result in any significant adverse traffic impacts on either East 49th Street or East 50th Street.

Comment 87: The alternative with a through drive would not eliminate project-generated truck traffic from East 50th Street, since trucks originating from the north and west would still use East 50th Street to access the East 49th Street entrance. (Horodniceanu)

Response: Truck traffic generated by the 50th Street facility is expected to traverse numerous roadways in the area. Trucks originating from the north and west could take any number of routes to preferred alternative's entrance on 49th Street. These might include numerous westbound streets north of 50th Street, as well as 50th Street. The through drive would eliminate the need for trucks to back into the loading area from 50th Street, however. Maintaining head-in/head-out operations for truck delivery activities would minimize adverse effects on through traffic on East 50th Street, and would be consistent with the NYCDOT's preference for loading dock operations.

Comment 88: The January 2005 EA does not consider existing midblock pedestrian-vehicle conflict issues as they relate to the provision of a through drive on East 49th Street. Additional truck traffic on East 49th Street generated by the proposed facility would exacerbate the existing pedestrian-vehicle conflicts. (Horodniceanu)

Response: The additional pedestrian-vehicle conflicts created by up to three or four project-generated trucks during the peak hour would not result in unacceptable pedestrian flow on East 49th Street. The main source of existing pedestrian-vehicle conflicts on the block of 49th Street between Park and Madison Avenues is the high level of vehicular activity at the entrance/exit to the 437 Madison Avenue parking garage, which is located on the north side of East 49th Street, near the Madison Avenue intersection. This would continue to be the main source of such conflicts, even in the presence of the proposed project, which as stated above, will only add three to four trucks during the peak hour.

Comment 89: With a clear distance at the entrance of the 45 East 49th Street property of 14 feet and a resulting effective width of 12 feet (with 1 foot lateral clearance on either side), 30-foot trucks cannot safely accommodate the minimum swept path width even if the turn were made from the south curb lane. (Horodniceanu)

Response: A 30-foot single-unit truck can make the turn from the through lane on 49th Street without occupying the parking lane on the south side of the street, allowing for 1-foot lateral clearance on each side of the driveway.

AIR QUALITY

GENERAL

Comment 90: The proposed facility may lead to the formation of acid rain. (Querzé, Lang, Leland)

Response: The primary source of acid rain is emissions of nitrogen oxides (NO_x) and sulfur dioxide (SO_2) from large power plants. These compounds react with other pollutants on a regional scale and lead to dry and wet deposition of acidic compounds, often hundreds of miles from the source. The EPA has developed an acid rain program to reduce emissions of these pollutants from power plants. In addition, New York State has developed regulations that require even further reductions. There is no basis to believe that the 50th Street facility would contribute to formation of acid rain.

The only source of NO_x and SO_2 emissions from the 50th Street facility would be the proposed emergency generators. However, the quantities of NO_x and SO_2 emitted by these emergency generators would be several orders of magnitude lower than those emitted by a typical power plant. This is due to the small power generating capacity of the generators compared to a typical power plant,

and to the fact that they would be operated only during emergency power outages and for monthly 30-minute tests, as described in Chapter 8, "Air Quality" of the January 2005 EA. Emergency generators are exempt from permit requirements under both EPA and NYSDEC criteria, indicating that they are not significant sources of pollution. As also described in the January 2005 EA, MTA intends to use low-sulfur diesel fuel oil to power the generators, which would significantly reduce their emissions. Note that under the new Preferred Alternative D, which is analyzed in this revised supplemental EA, the exhaust for the emergency generators would be located on the rooftop of the adjacent office building at 300 Park Avenue.

Comment 91: The proposed facility would be a source of air pollution and adversely impact neighborhood air quality. (Hickerson, Holzer/Zankl, Lancaster, Jacobs, Randolph, Whelehan, Albanese)

Response: The proposed project's air quality impacts were evaluated in Chapter 8, "Air Quality," of the January 2005 EA. On the basis of the analysis presented in Chapter 8, the 50th Street facility would not result in any significant adverse mobile source or stationary source air quality impacts.

As described in Chapter 8, the air exhausted from the facility would be ambient air from the East Side Access terminal, and would not contain PCBs, creosote, or other hazardous air pollutants. All trains using the East Side Access tunnels and station area would be powered by electricity, so the 50th Street facility would not emit any exhaust from diesel locomotives. As also described in Chapter 8, the facility would not include any stationary fuel combustion sources that would operate continuously, because under normal operating conditions electricity supplied by Consolidated Edison (Con Edison) would be used to power the equipment housed within it. Note that since publication of the January 2005 EA, Preferred Alternative D has been developed and is described and analyzed in this revised supplemental EA. This alternative relocates a number of the elements of the 50th Street facility. In this new alternative, the 50th Street facility is approximately half the width and less than half the height of the facility presented in the January 2005 EA, with the exhaust louvers for the tunnel air relocated to the eastern façade of the facility and the exhaust louvers for the station relocated to the front (north) façade. The facility's cooling tower and the exhaust for the emergency generators have been relocated to the rooftop of the adjacent building at 300 Park Avenue.

Comment 92: The traffic generated, or adversely affected, by the proposed facility would affect air quality in the area, which is already recognized to be in non-attainment of the National Ambient Air Quality Standards (NAAQS) for ozone, respirable particulate matter, and fine respirable particulate matter. Reduced levels of service at the 50th Street intersections with Park and Madison Avenues, and other intersections affected by the proposed project, would exacerbate this

problem and likely create statutory violations of air quality standards. (Lefkowitz)

Response: While all of Manhattan is designated as non-attainment for ozone, PM_{10}, and $PM_{2.5}$, this does not preclude construction and operation of the proposed project. In terms of localized (microscale) impacts, as addressed in the January 2005 EA and further described in response to comments below, the proposed project would not result in any localized significant adverse mobile source air quality impacts or exceedances of air quality standards. As described in this revised supplemental EA, the addition of project-generated truck trips to taxi trips generated by the greater East Side Access Project would not result in significant adverse impacts on localized air quality. The project, including the truck trips associated with the 50th Street facility and the taxi trips generated by East Side Access, also would not result in regional (mesoscale) air quality impacts. On a regional basis, the East Side Access Project overall is expected to reduce the number of vehicle miles traveled daily and annually, and would result in an overall benefit to the region's air quality. The addition of project-related truck trips at 50th Street would not change that conclusion. The proposed 50th Street facility, which would relocate certain decentralized components of the East Side Access Project into a centralized facility, would not introduce any new air pollution sources or change the regional air quality benefits of the improved transit service created by the East Side Access Project. As such, and as stated in the January 2005 EA, the proposed 50th Street facility would not alter the conclusions of the FEIS with respect to air quality.

Comment 93: The CEQR threshold for detailed mobile source air quality analysis of 100 project-generated trips that is quoted in the January 2005 EA is incorrect. The correct threshold for areas in Manhattan between 30th and 61st Streets is 75 project-generated trips. (Leland)

Response: Comment noted. This revised supplemental EA has been updated to reflect the correct threshold. The project would generate an estimated 16 trips in the peak hour, which is far less than the 75-trip threshold.

Comment 94: The air quality analysis presented in the January 2005 EA is inadequate. Most environmental impact analyses provide much more detailed information. Especially lacking are quantitative estimates of potential emissions from the ventilation system, emergency power generation, and cooling tower. There are also no flow analyses that address how the effluent will interact with air intake vents of neighboring structures. Computational fluid dynamics and wind tunnel studies should be performed to analyze potential air quality impacts from the proposed project. These are basic air quality analysis techniques which are normally performed for such projects. (Maloney, Zarin, Leland, Ambient) These studies are necessary because the exhaust rates of the proposed facility are much

higher than those of a comparably sized conventional office building and because the presence of existing taller buildings adjacent to the proposed facility may create systematic circulatory air flows that would increase the likelihood of facility exhaust entering nearby building air intakes. (Egan, Ambient, Moskowitz)

Response: The proposed project's air quality impacts were thoroughly evaluated in Chapter 8 of the January 2005 EA, following all relevant NEPA regulations and federal, state, and local guidance, including the *CEQR Technical Manual*. No additional studies are necessary to demonstrate that the proposed project does not have the potential to result in any significant adverse stationary source or mobile source air quality impacts.

As noted in Chapter 8, all trains using the East Side Access tunnels and station area would be powered by electricity, so the proposed facility would not emit any exhaust from diesel locomotives. The air exhausted from the proposed facility would be ambient air from the East Side Access terminal, and would not contain PCBs, creosote, or other hazardous air pollutants (also see response to the following comment). The 50th Street facility would not include any stationary fuel combustion sources that would operate continuously, because under normal operating conditions electricity supplied by Con Edison would be used to power the equipment housed within it. For a list of stationary sources that typically require modeling, please see the *CEQR Technical Manual*, page 3Q-27.

As described later in response to Comments 108, 109, 111, and 154, the ventilation system, cooling tower, and emergency generators were designed to be consistent with the New York City and State codes, which specify the location of exhausts and cooling towers relative to nearby intakes, and are designed to prevent exhaust from being drawn into neighboring intakes. Regarding the use of computational fluid dynamics and wind tunnel studies, the commenters incorrectly characterize these advanced analysis tools as basic techniques that are normally used to analyze air quality impacts for projects similar to the 50th Street facility. Such advanced tools are sometimes employed when analyses with more basic regulatory air quality models indicate the potential for significant adverse air quality impacts (see *CEQR Technical Manual*, page 3Q-37). They are not warranted for the facility, which would not include any continuously operating stationary fuel combustion sources and therefore does not have the potential to result in air quality impacts related to stationary sources.

For more information on each of the specific project elements and their potential effect on air quality, please see the responses to the comments below.

Comment 95: Air dispersion simulations should be developed to show pollutant pathways, thermal gradients, humidity gradients and air flow currents under atmospheric

conditions. Answers should be provided to the following questions: (1) How is the cubic volume of the "canyon" surrounding the proposed facility affected by the operations of the facility? (2) How many times is the entire volume of this area filled by the cooling tower exhaust alone? (3) How much when the exhaust fans are running? (4) Will the demand for fresh air supply for the East Side Access concourse starve the fresh air supply for the surrounding buildings? (5) What effect will heat exhausted from the proposed facility have on the cooling costs of 437 Madison Ave? (6) How does all this air mix and where does it go after it is exhausted? (7) Where does the fresh outside air come from when one or more of these systems are in operation? (8) What are the consequences of reusing moist stagnant air from the depths of Manhattan train tunnels? (9) What is the effect of atmospheric inversions on the "canyon" microclimate? (10) What is the effect of wind and temperature on the micro-climate surrounding the proposed facility? (Ambient)

Response: The cooling tower analysis conducted to support the January 2005 EA for cooling tower units on the roof of the 50th Street facility identified in rigorous detail the plume pathways, thermal gradients, and humidity gradients associated with the air flow currents based on over 40,000 hours of mathematically modeled atmospheric conditions. As discussed in the response to Comment 135, the rooftop cooling tower in the two build alternatives analyzed in the January 2005 EA (referred to as Alternatives B and C in this revised supplemental EA) would not emit criteria air pollutants in any significant quantity. As noted earlier in this chapter, Preferred Alternative D, which was developed in response to public comments on the January 2005 EA and is analyzed in this revised supplemental EA, places the cooling tower on the roof of the adjacent office building at 300 Park Avenue. Since no adverse impacts were predicted from the cooling tower on the roof of the 50th Street facility, no adverse impacts would be expected from the cooling tower in its new location either. Specific answers to the 10 questions listed in the comment about Alternatives B and C are as follows.

(1) The volume of air within the "canyon" bounded by the top of the 50th Street facility to the top of the shortest adjacent building and an open vertical plane along 50th Street is approximately 1.5 million cubic feet. This "canyon" is open to the north along 50th Street, which provides ventilation of the "canyon." The volume of the cooling tower plume within this "canyon" would be approximately 125,000 cubic feet under normal operation, or approximately 8 percent of the total volume. Therefore the cooling tower would have minimal effects on this "canyon" volume of air.

(2) The cooling tower plume would never fill the entire volume of the "canyon" due to the open sides, which would provide adequate ventilation and rapid turnover of the volume through vertical and horizontal turbulence.

(3) The tunnel exhaust would be emitted at the front of the facility and would not fill the canyon above the facility, either alone or in combination with the cooling tower plume, due to the open sides providing adequate ventilation and rapid turnover through turbulence. As noted in response to Comment 115, the tunnel exhaust fans would only operate as necessary to exhaust heat from the tunnels and would not operate most days of the year.

(4) The demand for fresh air for the East Side Access concourse would not "starve" the air supply for the surrounding buildings. The intake for the concourse would be located on the front of the 50th Street facility. This intake would not be within the "canyon" of concern to the commenters. The separation between the facility's intake louvers and the intake louvers on nearby buildings would be equal to or greater than the minimum separation required by the New York State Mechanical and New York City Building codes. Accordingly, operation of the facility's fresh air intakes would not interfere with the supply of fresh air to any nearby buildings.

(5) The waste heat rejected by the cooling tower was rigorously examined in the January 2005 EA and has been assessed to provide no more than a few degrees increase on average. As noted in the cooling tower study included in Appendix E, "Air Quality," to this revised supplemental EA, on average, the temperature would not increase by more than 4° F beyond the edge of the 50th Street facility, and generally less than 1° F within 150 feet. The greatest temperature increase would occur during colder months, when it would have little to no effect on the cooling load of adjacent buildings. Overall, it is anticipated that this minimal amount of temperature increase relative to the total volume of air used by the heating, ventilation, and air conditioning (HVAC) equipment at 437 Madison Avenue would add no discernable increase to the operating costs for either heating or cooling.

(6) The waste heat from the cooling tower would be dissipated through evaporation of water and warming of the ambient air. As such, the exhaust plume would typically be warmer than the ambient air and would be mechanically exhausted vertically, where, being buoyant, it would rise and dissipate through both atmospheric diffusion and dispersion. The increased moisture of the plume would mix with the ambient moisture in the air.

(7) The fresh outside air for the East Side Access concourse and tunnels would be drawn through intakes on the front of the 50th Street facility.

(8) A portion of the return air from the East Side Access station and concourse (approximately 25 percent of the total) would be exhausted through the louvers on the front of the 50th Street facility. The rest of the return air would be exhausted at 44th, 45th, 47th, and 48th Streets. These exhaust louvers would be located a sufficient distance from the intake louvers at the 50th Street facility to comply with the New York State Mechanical Code. This would minimize any circulation of the exhaust air with the fresh inlet air. In addition, the exhaust

louvers would be more than the minimum distance specified by the New York State Mechanical Code from any air intakes on neighboring buildings, so that the exhaust would not be drawn into those intakes.

(9) Atmospheric inversions occur when the atmosphere is stable, with cool air layered below warm air. This phenomenon is very rare in major cities due to the heat retention and generation by buildings, underground steam lines, subway lines, and other heat-producing activities that make the urban surfaces warmer than the surrounding air. The urban area substantially enhances the surface heat flux and hence the vertical component of turbulence. The enhanced urban vertical turbulence intensifies extending through the urban boundary layer, resulting in stronger entrainment through the urban inversion as compared to a rural inversion. This, in turn, results in enhanced vertical fluxes of temperature and humidity through the urban inversion, effectively mixing and dissipating the urban inversion. Consequently, urban inversions are extremely rare and should have little to no effect on the local urban micro-climate.

(10) The synoptic or prevailing wind flow is influenced by buildings and structures that turn and channel the wind direction along the street canyons. The increased heat flux of the city buildings and infrastructure can increase the regional average ambient temperature. This phenomenon is known as a "heat island" effect. Collectively, the urban influences on the regional atmosphere may be referred to as creating "urban micro-climate." Essentially, the question is not the effect of wind and temperature on the micro-climate, but rather how the urban environment changes the wind and temperature to create a micro-climate. The micro-climate effects were accounted for, to the extent possible, in the cooling tower plume analysis.

Comment 96: The January 2005 EA indicates that the cavity above the site will not trap air contaminants and water vapor from the cooling tower but, rather, will break up water vapor due to increased turbulence. This statement is unsupported in the January 2005 EA and requires further study to substantiate it. As stated in the *CEQR Technical Manual*, provides that "under certain meteorological conditions, the exhaust from a stack on top of or proximate to a structure may be entrapped for short periods in the cavity regions adjacent to the structure. (Zarin, Ambient)

Response: As presented in the January 2005 EA, the cavity effects from the cooling tower on the roof of the 50th Street facility were evaluated in the detailed cooling tower analysis. The conclusion was that cavity conditions did not represent the worst-case scenario for the cooling tower, since turbulence from the cavity would disperse the plume and reduce overall plume visibility. Therefore, cavity conditions were conservatively excluded from the cooling tower plume visibility analysis, to determine the maximum annual frequency that a visible plume could potentially occur. Also note that since completion of the January 2005 EA, the

location proposed for the cooling tower has been revised; the tower is now proposed to be located on the roof of the Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and analyzed in this revised supplemental EA.

Comment 97: It does not appear that the dispersion modeling conducted for the proposed cooling tower mist addressed potential cumulative effects of emissions from the tunnel and concourse exhaust systems, specifically, how those emissions may affect the formation and dispersion of cooling tower mist above the proposed facility. (Ambient)

Response: The exhaust air from the tunnel, concourse, and caverns would be blown from the 50th Street facility by exhaust fans. In the alternatives that place the cooling tower on the roof of the 50th Street facility, when the tunnel, concourse, and cavern exhaust air are warmer than the ambient air (e.g., during cool weather), the warm exhaust would result in increased turbulence and a lofting of the cooling tower plume that would aid the dispersion and evaporation of the cooling tower plume. When the tunnel, concourse, and cavern exhaust air at or cooler than the ambient air temperature (e.g., during warm weather), the exhaust air would mix with the ambient air with little or no effect on the cooling tower plume. Thus, in all cases, the exhaust air would either increase the dispersion of the cooling tower plume or have no effect. The exhaust vents from the tunnel and concourse would emit only forced warm air, and not "mist," so there would be no cumulative mist effects from these vents with the cooling tower plume. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised; the tower is now proposed to be located on the roof of the Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and analyzed in this revised supplemental EA.

Comment 98: The January 2005 EA does not consider the "piston effect" that train traffic through the tunnels would have on air pressure, thereby making it very difficult to control air movement within the tunnels, as well as between the tunnels and station. (Zarin, Ambient)

Response: Unlike the shallower MTA NYCT subway system, the East Side Access Project's tunnel ventilation system does not have a "natural" venting function, whereby the piston-action motion of moving trains would exchange air between the tunnel and the outside air environment. All of the venting functions of the 50th Street tunnel ventilation fans are "mechanized," or "forced," ventilation modes—meaning that they involve fan operations to achieve the desired effect in the tunnel. The piston effect of moving trains was considered in the design of the 50th Street tunnel ventilation system (which includes both the equipment within the facility and the vent shaft/dampers that connect to the train tunnels)

so that the airflow into/out of the 50th Street building's tunnel vent system louvers would not "pulse" when trains passed beneath it. The transfer of piston effect airflows between the tunnels and the new LIRR terminal at Grand Central are internal to the respective ventilation system designs, and thus, should not alter the outside air environment at 50th Street.

Comment 99: The January 2005 EA underestimates the health risks that would result from chronic exposure of the public to elevated levels of hazardous agents that would be generated from within the proposed facility (i.e., cooling tower, generators, batteries, and exhausts). Exposure of the public to these hazardous agents would occur through: aerosol dispersion onto the streets, sidewalks and sensitive properties surrounding the facility; entrainment of these agents into nearby air intakes and operable windows, as well as the ventilation facility itself; and acute exposures during the proposed construction activities. The health risks are broadly characterized as: microbiological exposure to bacteria, fungi, protozoa and viruses; chemical exposure to criteria pollutants, non-criteria pollutants and odors; particulate exposure to the constituents of PM_{10} and $PM_{2.5}$ including pathogens, metals, allergens and respiratory irritants; and noise exposure. (Ambient)

Response: As discussed in the January 2005 EA, the quantity of any pollutant emissions from each of the sources referenced in the comment would negligible. All of these emission sources are classified as exempt or "trivial activities" with respect to NYSDEC's permitting regulations, because they do not have a potential for significant impacts. For more information on specific elements of the proposed building, please see the responses to comments that follow in this section of the chapter.

Comment 100: The January 2005 EA misinterprets or misrepresents the air quality analysis guidance provided by the *CEQR Technical Manual*. The January 2005 EA may be relying on an outdated version of the manual. (Ambient)

Response: The comment is incorrect and unsupported. The January 2005 EA does not misinterpret or misrepresent any aspect of the air quality analysis guidance provided by the *CEQR Technical Manual.* The January 2005 EA relies on the most recent *CEQR Technical Manual*, dated October 2001.

Comment 101: Following the methodologies set forth in the *CEQR Technical Manual*, detailed analysis of air quality should be conducted for stationary sources related to the project. Following the *Manual*, the proposed project should be considered a stationary source because it is similar to an industrial processing facility and because it would create a large emission source, similar to those defined in the *CEQR Technical Manual*—solid waste and medical incinerators, cogeneration facilities, asphalt and concrete plants, and power generating plants. (Ambient)

Response: Emissions from the 50th Street facility cannot be compared to those from an incinerator, cogeneration plant, asphalt plant, or power generating plant. As noted in the response to Comment 99 above, the components of the 50th Street facility are classified as exempt or trivial activities that do not require air permits from NYSDEC, indicating that they do not have the potential for significant adverse impacts. The *CEQR Technical Manual* outlines examples of sources that require a more detailed analysis for potential air quality impacts to the environment. These are classified as "large emission sources," as referenced in the comment above. The types of facilities identified as large emission sources are classified as such due to their potential for generating major quantities of regulated pollutant emissions (e.g., criteria and air toxic compounds) and their potential for air quality impacts over a large area. As discussed in January 2005 EA and this revised supplemental EA, the proposed project would not be a major source of regulated air pollutant emissions and clearly would not be defined as a large emission source as per the *CEQR Technical Manual*.

Comment 102: Following the methodologies set forth in the *CEQR Technical Manual*, detailed analysis of air quality should be conducted for mobile sources related to the project. Following the *Manual*, the project should also be considered a mobile source because it is a railway station. (Ambient).

Response: The *CEQR Technical Manual* indicates that analyses of mobile source air quality should be conducted for actions that "increase or cause a redistribution of traffic, create any other mobile sources of pollutants (such as diesel trains, helicopters, etc.), or add new uses near mobile sources" (see page 3Q-9 of the Manual). "Other" mobile sources are further defined as "a sizable number of mobile sources of pollution, such as a new heliport, new railroad terminal, or trucking." However, the railroad terminal (the new LIRR terminal at Grand Central Terminal) would not result in *any* mobile source pollutants, since the trains operating in the terminal would be electric trains, not diesel trains. As described in Chapter 8 of the January 2005 EA and this revised supplemental EA, project-generated traffic would not result in significant adverse mobile source air quality impacts.

Comment 103: The methodology section in the air quality chapter of the January 2005 EA is inadequate. It contains a discussion of national and state air quality standards but no discussion of methods to be used for analysis. It should discuss methods for determining the concentration of radiological hazards present in caverns and tunnels; methods to determine estimated pollutant loads emitted from the facility; and modeling methods used to determine environmental impacts of smoke emergencies on the surrounding buildings and public. (Ambient)

Response: Chapter 8 of this revised supplemental EA includes a discussion of all relevant screening thresholds for mobile source and stationary source air quality analyses recommended by the *CEQR Technical Manual*. Methodologies for conducting detailed analyses are not discussed, because no screening thresholds requiring detailed analysis are triggered. Likewise, methods for estimating pollutant loads are not discussed because no detailed analyses that would employ these methods are required. Finally, the environmental impacts of smoke emergencies or other emergencies are not required to be examined in an EA as per the *CEQR Technical Manual*, and no radiological hazards are anticipated.

Comment 104: The NAAQS criteria pollutants are not the only pollutants of concern for a project of this magnitude; there are numerous other airborne chemical, biological, and radiological agents specific to the East Side Access Project that are regulated by federal, state, and local laws, and addressed in guidance documents issued by government agencies such as the Centers for Disease Control and Protection (CDC) and the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) and professional groups such as the American Industrial Hygiene Association (AIHA) and the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE). The NYSDEC Air Guide (DAR-1) also addresses such pollutants, and this document should have been consulted in the course of preparing the January 2005 EA. The proposed facility could result in increased chemical and particulate exposure from the station and tunnel exhausts during normal operation, and from water treatment additives present in cooling tower drift. Standards and guidelines that may apply to these pollutants include: NAAQS for PM_{10}, $PM_{2.5}$ and ozone; EPA-regulated hazardous airborne pollutants (HAPs); EPA National Emission Standards for Hazardous Air Pollutants (NESHAP); NYSDEC *Guidelines for the Control of Toxic Ambient Air Contaminants*, DAR-1, 1991 Edition. Increased chemical and particulate exposure from the station and tunnel exhausts during emergency operation would add nitrates, sulfates and combustion by-products to the list of pollutants of concern. Increased chemical and particulate exposure from the station and tunnel exhausts during generator operation could involve regulated and non-criteria pollutants that should be examined under the DAR 1-hour guidelines. (Ambient)

Response: The proposed project would comply with all applicable environmental laws and regulations, including national and state ambient air quality standards. In addition, the proposed project would comply with applicable industry standards and codes covering the design, construction, and operation of the cooling tower, ventilation system, emergency generators, and other systems. As described in the January 2005 EA and this revised supplemental EA, the station and tunnel exhaust emitted during normal operations would consist only of ambient air from the East Side Access terminal at Grand Central Terminal, and therefore would be the same type of exhaust as currently is emitted from street-level

grates throughout the Grand Central Terminal area. The cooling tower would be operated in accordance with best management practices, and would not pose a threat to public health or safety (for more information, see the response to cooling tower comments below, including Comment 135).

Exhausting smoke to street level from the terminal's underground spaces during an emergency is unavoidable, regardless of the design or location of the ventilation system. The 50th Street facility is superior to the FEIS design in this respect, since it would exhaust smoke from elevated louvers rather than from sidewalk vents, thereby minimizing adverse impacts to others as much as possible.

For more information on the air quality effects of each of the different components proposed for the 50th Street facility, see responses to the comments below.

Comment 105: The proposed project's air emissions should be evaluated in light of the EPA's list of 21 mobile air toxics. (Ambient)

Response: The proposed project would generate an insignificant number of additional vehicles at intersections in the vicinity of the project site, well below the *CEQR Technical Manual* threshold of 75 vehicle trips.

Comment 106: The January 2005 EA does not include information describing how the air used by the retail and food vending facilities will be vented from the Grand Central Terminal complex. (Ambient)

Response: The January 2005 EA clearly states (see Chapter 2) that the 50th Street facility would work in combination with the facility at 44th Street to provide ventilation to the East Side Access concourse area at Grand Central Terminal. This includes any retail space in the concourse area. Note that there would be no retail establishments with kitchen facilities in the new East Side Access concourse. The retail strategy for Grand Central Terminal is to group all such vendors into one common food area at the existing lower level Dining Concourse. As a result, the East Side Access concourse design has no provision for kitchens in the retail spaces.

Comment 107: The discussion of existing conditions in Chapter 8 of the January 2005 EA does not adequately represent the localized conditions near the project site. The table of monitored air quality data does not present historic air quality data collected from the 48th Street and Madison Avenue station, which would represent ambient pollutant concentrations in the vicinity of the proposed project better than the school locations in remote sections of Queens and 59th Street that are presented in the January 2005 EA. MTA should try to obtain data from the 48th Street and Madison station from NYSDEC or conduct its own air sampling at

the project site, in a manner acceptable to NYSDEC. The *CEQR Technical Manual* states that it is inappropriate to use regional air quality data for most pollutants, which should be analyzed on a localized or microscale basis. Further, although the January 2005 EA states that New York City is in nonattainment for certain air quality standards, the maximum concentrations presented in Table 8-2 in the January 2005 EA are below the standards. Table 8-2 in Chapter 8 of the January 2005 EA distills thousands of data points into a few meaningless numbers. The distribution of the data over time and a statistical measure of its variability should be provided. The January 2005 EA provides no empirical or modeling data to support the claim that the proposed facility would not trigger any air monitoring requirements. (Ambient)

Response: Table 8-2 of the January 2005 EA presents NYSDEC's reported summary values of monitored concentrations at the nearest monitoring locations from 2001 to 2003. These include available data from monitoring sites in Manhattan. While the monitoring site at Madison Avenue and 48th Street is much closer to the project site, the monitoring station was shut down in 1999 and has not operated since. Pollutant levels measured at the Madison Avenue location in 1999 and earlier are not representative of existing conditions in the project area. Furthermore, there is no requirement or necessity to conduct monitoring at the proposed site to characterize existing air quality. The data presented in Table 8-2 of the January 2005 EA are considered representative of background concentrations in the project area. The information presented in the January 2005 EA is consistent with the guidance of the *CEQR Technical Manual* and with the standard practices for air quality analyses conducted for projects proposed in New York City. See page 3Q-24 of the 2001 *CEQR Technical Manual*, which describes the procedures for conducting an analysis of mobile source air quality, and page 3Q-38, which provides instructions for conducting analyses of stationary source air quality. On page 3Q-24, the *Manual* states, "Future year background concentrations of CO are based on measured CO levels at the nearest DEC monitoring stations. . ."; on page 3Q-38, the *Manual* states, "Summaries of suggested background levels for these pollutants at various DEC monitoring locations throughout New York City can be obtained from DEP. . . . To determine annual average background levels, the highest annual averages measured over the latest available 3-year period should be used." Please note that Table 8-2 has been updated in this revised supplemental EA to include the most recent monitoring data, released by NYSDEC and USEPA after the January 2005 EA was published.

PLACEMENT OF INTAKES AND EXHAUSTS

Comment 108: The exhaust and intake vents are too close together on the proposed facility and would lead to "short cycling," in which exhausted air from the tunnels would be re-entrained into the station air intakes, resulting in increased levels of CO_2 and

other pollutants of concern inside the East Side Access terminal. (Zarin, Ambient, Lehr)

Response: The minimum separation between the 50th Street facility's air intakes and its nearest exhaust louvers would be 30 feet, which exceeds the New York State Mechanical Code requirement of 10 feet (§401.5.1). The New York City Building Code does not mandate minimum separation between exhaust and intakes, except in the case of "air drawn from hospital operating rooms…" (§27-254(e)(3)).

Comment 109: The proposed facility's exhausts are too close to air intakes for nearby buildings and exhaust from the proposed facility would adversely affect these nearby air intakes. The ambient air being exhausted from the concourse is not appropriate as a suitable fresh air supply for other buildings. (Maloney, Herfort, Zarin, Lehr, Egan) The project would violate the New York City Building Code because it would discharge exhaust air and cooling tower drift directly into operable windows and outside air intakes located within the 50-foot requirement. The station and tunnel exhaust vents would directly face the second-floor clean air intakes and operable windows on the east side of 437 Madison Avenue and would be closer than the Building Code requirement of 50 feet away. (Zarin, Ambient) Moreover, the minimum distance to nearby intakes specified by the New York City Building Code is not applicable to the proposed facility because its exhaust vents would serve an underground volume that is much larger than the facility itself. (Egan, Zarin, Lehr)

Response: As stated in Chapter 2, "Project Alternatives," and Chapter 8, "Air Quality," of the January 2005 EA and this revised supplemental EA, all exhaust louvers on the 50th Street facility would be separated from fresh air intakes on adjacent buildings by at least the minimum separation required by the New York State Mechanical Code, which requires a 10-foot separation between exhausts and intakes, and the New York City Building Code, which requires a 10-foot separation between exhausts and windows (except for combustion sources and hazardous exhausts, such as infectious medical waste, which require a 25-foot separation). With respect to tunnel, station, and emergency generator exhausts, these codes do not specify different distances depending on exhaust rates, and the exhaust rates during normal operation of the proposed facility are not unusual when compared to other large office buildings in the area. The 50-foot requirement cited in the comment is incorrect.

There are three sets of air intakes on 437 Madison Avenue: air intakes and operable windows below the fifth floor on the east side of 437 Madison Avenue, air intakes on the 14th floor (just above the building's setback), and air intakes on the 39th floor. In every instance, for each exhaust element and each air intake on 437 Madison Avenue, the distance requirement specified in the New York City Building Code and New York State Mechanical Code would be easily met

by the 50th Street facility with all build alternatives. With respect to Preferred Alternative D, for example, the tunnel exhausts, directed east away from 437 Madison Avenue, would be a minimum of 55 feet from the nearest air intake at 300 Park Avenue, 42 feet from the nearest air intake at 437 Madison Avenue, and 35 feet from the nearest window at 437 Madison Avenue. The combined station and emergency generator room spill air exhausts would be directed out the front of the 50th Street facility (see the discussion of these locations in Chapter 2 of this revised supplemental EA). These exhausts would be more than 80 feet from the southern façade of the Palace Hotel, 45 feet from the nearest operable window at 437 Madison Avenue, and 30 feet from its nearest fixed window. In all cases, the distance between the exhaust louvers and air intakes of other buildings exceeds by at least three times the distance required by the New York City Building Code and New York State Mechanical Code.

Comment 110: The January 2005 EA incorrectly states that "[a]ll air exhausts are now on the front of the building" on page 2-2. (Zarin)

Response: The January 2005 EA's description of the exhaust vents is not incorrect. The locations of the station and tunnel exhaust vents for the alternatives analyzed in that document are shown in Figures 2-5 and 2-7, respectively. As shown in those figures, all intakes and exhausts would be in the front portion of the 50th Street facility, with the tunnel intake, tunnel exhaust, and station intake on the 50th Street façade and the station exhaust on the northwest corner of the building in front of the 437 Madison Avenue building. Note that since publication of the January 2005 EA, Preferred Alternative D has been developed with the station exhaust vents on the 50th Street façade of the facility and the tunnel exhaust vents on the east side of the facility. Preferred Alternative D is described in greater detail and analyzed in this revised supplemental EA.

Comment 111: The drawing of 437 Madison provided in the January 2005 EA indicates the presence of "vent louvers" at the approximate 17th floor of the building. If these louvers provide outside air for 437 Madison, they appear to be located within 20 feet vertically and 50 feet horizontally of the proposed cooling tower. (Ambient)

Response: There is no requirement in the New York City or State Building Code for minimum distances between cooling towers and air intakes. However, the New York State Mechanical Code requires a 20-foot horizontal separation whenever the tower cannot be located 5 feet above air intakes. This requirement is intended to prevent vapors from entering the building through windows, doors, and intake openings. The horizontal distance between the cooling tower on the roof of the 50th Street facility and the nearest air intake would be 60 feet—three times the separation specified in the state code. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the Colgate-

Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and analyzed in this revised supplemental EA.

Comment 112: Rooftop exhausts for the tunnel and station ventilation would be preferred from an air dispersion perspective, to minimize the potential entrainment of exhausted air into the neighboring buildings. (Egan)

Response: As described in response to other comments in this chapter, the proposed tunnel and station exhaust would be separated from neighboring buildings' intakes by substantially greater than the separation distances required by the New York State Mechanical Code and therefore would not be expected to adversely affect those intakes. As discussed in Chapter 2 of the January 2005 EA and this revised supplemental EA, the station and tunnel exhaust cannot be moved to the rooftop.

Comment 113: The January 2005 EA states that there will be four possible stationary sources of air emissions: exhaust vents for air from the tunnels during normal and emergency conditions, exhaust vents for ambient air from the cavern and concourse during normal operations only; the rooftop cooling tower; and two emergency generators. This description is misleading and confusing. It is our understanding that the facility will house two separate ventilation systems. (Ambient)

Response: The 50th Street facility would house two separate ventilation systems: one for intake and exhaust of ambient air from the concourse and caverns, and one for intake and exhaust of ambient and emergency air from a portion of the tunnels. These are possible sources of air emissions that should be considered in an evaluation of air quality, as noted in the January 2005 EA. In addition to these two sources, the rooftop cooling tower and emergency generators are also possible sources of air emissions. All four of these project elements were considered in the air quality analysis included in Chapter 8 of the January 2005 EA and this revised supplemental EA. Also, please note that under Preferred Alternative D, the cooling tower and emergency generator exhaust have been moved to the rooftop of the adjacent Colgate-Palmolive building at 300 Park Avenue.

NORMAL EXHAUST

Comment 114: Ambient air from the underground terminal that is ventilated by the exhausts of the proposed facility may have elevated levels of various pollutants. The January 2005 EA does not provide any supporting evidence for the claim that the normal exhaust air would not include hazardous pollutants. These could include: carbon monoxide; carbon dioxide; particulate matter; volatile organic compounds; radon; manganese, chromium and iron present in steel dust;

building material emission byproducts; pesticides; cleaning and maintenance chemicals; pathogenic bacteria and viruses (such as SARS virus and tuberculosis); human odors; human dander such as dry skin and scale; perfumes and fragrances; animal byproducts from roaches, mice and rats; and cooking odors from food vendors located in the East Side Access concourse. Train braking, rail welding, and fuel spills all cause pollutant emissions that may pollute this ambient air. The January 2005 EA did not consider that the criteria pollutant ozone would be generated by electrical arcing, which is common on electrified railroads. The station exhaust will include particulate matter and other pollutants that may cause exceedances of the NAAQS in the micro-region surrounding the proposed facility, or at least result in non-compliance with ASHRAE 62 outdoor air specifications. The January 2005 EA should have provided typical air quality data from other station and tunnel areas, in order to provide an indication as to what pollutants such ambient air will contain. Dispersion modeling should have been conducted for the ambient air exhausted from the proposed facility. (Maloney, Lefkowitz, Zarin, Ambient, Lehr, Biggs, Aptner, Leland)

Response: Chapter 8 ("Air Quality") of the January 2005 EA and this revised supplemental EA describes the air that would be ventilated by the 50th Street facility from the tunnel and station areas. As noted there, no diesel trains would use the East Side Access tunnels or station area; all trains would be electric (LIRR's new M-7 fleet). Since the 50th Street facility would not function as an exhaust vent for any combustion sources, the air ventilated from the terminal and the tunnels would not be expected to contain elevated levels of carbon monoxide or carbon dioxide. Apart from the occasional use of paints or solvents, there would be no sources of volatile organic compounds either, and that occasional use would not lead to anything approaching a significant emission. The amount of ozone generated by electrical arcing would be insignificant, and the amount of ventilation provided by the proposed 50th Street facility would result in highly diluted concentrations of ozone. Therefore, no significant adverse impacts from ozone emissions are predicted.

Please note that there is no reason to believe that the East Side Access Project's underground station or tunnel area will have high levels of radon. The New York State Department of Health has prepared maps for each county in New York State showing the estimated percentage of homes with indoor radon levels greater than 4 picoCuries of radon per liter of air (pCi/L), the level at which EPA recommends that action be taken. Manhattan has among the lowest levels of any county in New York State (see the maps at www.health.state.ny.us/ nysdoh/radon/data.htm).

Particulate matter generated by abrasion of rails, wheels, and braking systems is not regulated by EPA. There has been only one study of this issue for underground transit systems in New York City. This study, recently conducted

by Columbia and Harvard Universities[1], concluded that levels of these metals present in the New York City underground subway system are substantially lower than federally established 8-hour exposure limits for workers. The subway system is used by many more trains per day than the LIRR terminal at Grand Central would be, and is a much older system, so the levels in the new terminal would likely be lower.

The station air exhausted from the 50th Street facility during normal conditions would consist only of the ambient air from the station area, and would not be a source of significant pollutant levels.

Based on the above, no significant impact on air quality would be expected from the air exhausted from the proposed facility.

Comment 115: The tunnel air exhaust louvers would discharge air at high velocity into the operating windows of the Palace Hotel and onto the street. The dirty air being exhausted from the west side louvers, which directly face 437 Madison Avenue, would adversely affect the operable windows on the east side of 437 Madison Avenue. (Ambient, Zarin)

Response: As noted above in response to previous comments, the air emitted from the tunnel exhaust louvers during normal operation would not be dirty air. It would be normal ambient air from the tunnel spaces, similar to what is already emitted today from the numerous sidewalk grates in the Grand Central Terminal area. As described in the January 2005 EA (see Chapter 8), most of the time no tunnel exhaust would be emitted from the 50th Street facility. The tunnel exhaust function at 50th Street would be used to bring exhaust warm air from the tunnels on very hot days. On days when the ambient temperature is 89° F or higher, the fans would operate at one-fourth capacity, providing a ventilation rate of 200,000 cubic feet per minute. On such days at times when the tunnels are congested with train traffic, the fans would operate at half capacity, with a ventilation rate of 400,000 cubic feet per minute. At 400,000 cubic feet per minute, the exhaust air would be moving at a velocity of 5.5 miles per hour when it is 6 inches from the exhaust louvers, which does not constitute "high velocity." The likelihood of the tunnel fans ever operating at full capacity (800,000 cubic feet per minute, or cfm) in the event of a tunnel fire is described in response to Comment 118. In that condition, air would be moving at a velocity of 11 miles per hour at a distance of 6 inches from the exhaust louvers. The normal operating conditions would not be significantly different in terms of exhaust rates and proximity to air intakes than the no action condition, which would rely on sidewalk grates on 50th Street for tunnel exhaust. Note that since

[1] Chillrud, S. et al, "Elevated Airborne Exposures of Teenagers to Manganese, Chromium, and Iron from Steel Dust and New York City's Subway System," *Environmental Science and Technology*; February 1, 2004.

completion of the January 2005 EA, Preferred Alternative D has been developed. This alternative places the tunnel exhaust louvers on the east façade of the 50th Street facility away from the Palace Hotel.

The exhaust louvers that were placed at the front portion of the west façade of the 50th Street facility in the designs evaluated in the January 2005 EA were exhaust for station air, which is also not dirty air. For more information on station air, please see response to Comment 114. Also note that Preferred Alternative D places the station exhaust louvers on the front (north) façade of the 50th Street facility.

Comment 116: The proposed design would concentrate the emissions at the site, rather than dispersing them over multiple locations. This could adversely affect the Palace Hotel. (Lefkowitz, LIRRCC)

Response: As noted in the January 2005 EA and above, the air emitted from the 50th Street facility during normal conditions would consist only of the ambient air from the station and tunnels below. No adverse air quality effect would occur from the exhaust of this air. Also note that all emissions would not be concentrated at the 50th Street site. The 50th Street facility is but one element in a much larger ventilation system that also includes air-handling fans throughout the concourse and multiple station and tunnel ventilation facilities in Manhattan and Queens.

EMERGENCY EXHAUST

Comment 117: The January 2005 EA describes the ventilation pathways for the station as dependent on whether there is a known emergency or not. The implementation depends on an alert system to detect fires and/or contaminants and a control system to implement ventilation route changes. This system should be described in the EA. There is no modeling of how the ventilation would actually work. The January 2005 EA provides conflicting information about whether smoke would or would not be exhausted from the facility in an emergency (see pages 2-7 and 8-7 versus page 8-6). (Egan, Zarin, Ambient, Lehr)

Response: The design of emergency ventilation for East Side Access includes a SCADA (Supervisory Control and Data Acquisition) system that will be located in the Central Control Room (which will govern train operations in the new East Side Access tunnels and terminal). In the event of a fire on the tracks or trains, the train conductor would notify the Central Control Room of its location. This information would be entered into the SCADA model, which would determine the appropriate response mode for the ventilation system based on a number of different factors such as the location of the fire in relation to the emergency exit that would be used by emergency response personnel. Thus, depending on the location of a fire between 50th and 55th Streets, the 50th Street facility could be operated in intake or exhaust mode. The SCADA system remotely and

electronically controls the ventilation plants via local elements called Programmable Logic Controllers. As clearly and consistently described on pages 2-7, 8-6, and 8-7 of the January 2005 EA, in some modes, the 50th Street tunnel vent fans would operate in exhaust mode, causing smoke to be exhausted from the 50th Street facility; in some modes, the 50th Street tunnel vent fans would operate in supply mode, with no smoke being exhausted from the 50th Street facility; and in some modes, the tunnel fans at 50th Street would not operate at all, again with no smoke being exhausted from the 50th Street facility. During the course of the event, it is possible that a change in the emergency ventilation response mode could be enacted; this change would most likely come at the request of the emergency responders to enable access for rescue or firefighting. Such a change in the emergency vent mode may be enacted by the incident command center, or via the handover of the fan control function from the remote command center to the local fan controllers.

Comment 118: The January 2005 EA's statement that emergencies such as fires in the train tunnels are extremely rare and of very short duration does not eliminate the potential for significant environmental impact. There is no support for a conclusion that an underground event would not involve lethal toxins, and there is no documentation to support the January 2005 EA's conclusion that smoke exhausted from the facility would be diluted by outside air to safe concentrations at adjacent building intakes, including the Palace Hotel and 437 Madison Avenue, and at the street level below. Moreover, train tunnel fires in the New York City subway system, which averaged four per day in 2004, are not a rare occurrence. (Lefkowitz, Zarin, Ambient, Lehr, Egan)

Response: As indicated in response to Comment 51 above, the typical train tunnel fire in the New York City subway system is a short event—a trash or electrical fire—that would not trigger the operation of the tunnel ventilation fans or cause noticeable smoke at the ventilation louvers on the building or at the grates in the sidewalk. Unlike catastrophic tunnel fires in recent history (such as the fire in the Mont Blanc Tunnel in the Alps in 1999, the Tauern tunnel in Austria in 1996, and the Channel Tunnel in 1996), which all involved transport of flammable materials, East Side Access trains will be electric trains carrying passengers only—there will be no freight service in the new tunnels and no explosive materials permitted.

While there have been a small number of fires in tunnels serving commuter rail in New York City that have disrupted the daily commute and resulted in noticeable smoke effects above ground (such as the electrical fire in Amtrak's East River Tunnel in September 2004), these fires started small and were exacerbated by the time it took emergency personnel to reach the fire—a direct result of an antiquated system that does not meet current fire-life safety standards. Amtrak is currently addressing safety concerns in the East River Tunnels by adding ventilation components and emergency exits to its existing

above-ground shafts that are located at First Avenue and 33rd Street, directly adjacent to the NYU Medical Center and the Emergency Room building, and by constructing an above-ground facility in Long Island City.

The East Side Access tunnels, by contrast, will be all new construction built in accordance with National Fire Protection Association (NFPA) standards, which are the federal design standards for transportation projects. Among these is NFPA 130, which is specifically intended to provide fire safety in underground passenger rail systems. NFPA 130 addresses safe evacuation and prompt action by emergency response personnel through a combination of emergency exits, smoke ventilation, and prompt detection and suppression of fires. The new construction will use the latest available fire-retardant materials and sophisticated fire-life safety equipment. Fire-resistant construction will include a cable protection system to keep electrical parts under their failure temperatures. Sophisticated signal systems will allow the third rail to be shut down instantaneously to permit a rapid response by the fire department. The communication system will permit effective and timely emergency notification. As a result, the probability of fires occurring in the new tunnels cannot be compared to the probability of fires occurring in systems that are more than 100 years old. The new above-ground ventilation facilities constructed as part of the 63rd Street Tunnel connector project in 1996 have never been used for emergency purposes.

The possibility of a tunnel fire that would trigger use of the 50th Street facility and likely create a smoke condition that would be potentially hazardous is truly a remote event. This would involve a train fully engulfed in flames—an event that has not occurred in LIRR's 150-year history. Emergency operating procedures would direct such a train, if at all possible, to proceed to the platforms where passengers could be safely discharged and an undercar deluge system would be available to extinguish the fire. As noted above in response to the previous comment, based on the reported nature and location of the incident, the command center would activate one of many emergency ventilation response modes, of which some would exhaust smoke from 50th Street and others would not. For fires that occur in the southern portion of the Manhattan approach tunnels, the smoke would be exhausted at 50th Street approximately half the time; for the other half, the 50th Street facility would be used for intake.

In the rare event of such a tunnel fire with smoke being exhausted at the 50th Street facility, the January 2005 EA and this revised supplemental EA do not claim that the smoke would not contain harmful substances. The January 2005 EA and this revised supplemental EA do indicate (see Chapter 8) that smoke emitted from the 50th Street facility would be diluted by outside air more quickly than in the No Action condition, which would exhaust the smoke through sidewalk grates. Exhausting smoke to street level from the terminal's underground spaces during an emergency is unavoidable, regardless of the

design or location of the ventilation system. The 50th Street facility is superior to the FEIS design in this respect, since it would exhaust smoke from elevated louvers rather than from sidewalk vents, thereby minimizing adverse impacts to others as much as possible. As noted above in response to Comment 109, in all build alternatives, the tunnel and station exhaust louvers would be separated from the nearest buildings' air intakes by at least three times the distance required by the New York State Mechanical Code. In Preferred Alternative D, the station spill air exhaust louvers would be on the front (50th Street) façade of the 50th Street facility and the tunnel exhaust louvers would be on the east side of the facility, directed away from the nearest building's air intakes at 437 Madison Avenue. Smoke from an emergency condition by nature would contain a variety of substances, including potentially toxic substances, and the most important consideration would be to remove those substances as quickly as possible from the confined underground spaces to outside air, where the smoke could be diluted, to protect the safety of people in the terminal. Given that the proposed facility would be superior to the FEIS design; that neither design would *result* in a fire, but rather would assist in addressing the fire; and that the probability of this event is remote and any such fire would likely be of short duration, smoke exhaust from the 50th Street facility in an emergency condition was not considered to be a significant adverse impact.

Comment 119: The January 2005 EA does not provide details regarding the makeup of emergency exhaust from a tunnel fire. (Leland, Zarin) Smoke can contain numerous toxic compounds. Our concerns would be in the production and exhausting at high velocity of four general categories of pollutants based on the differing toxic mechanisms of the possible compounds and data accumulated from Downtown Manhattan during the last few months of 2001. These are (1) polycyclic aromatic hydrocarbons (PAHs); (2) dioxin-like compounds such as polychlorinated and polybrominated dioxins/furans, polychlorinated biphenyls (PCBs), and polybrominated diphenyl ethers (PBDEs); (3) metal fumes; and (4) respiratory irritants such as aldehydes and ketones. The PCBs of concern are any of the 120 congeners of PCBs that can be formed as a byproduct of combustion and not the few manufactured Arcolors that are referenced in the January 2005 EA. (Ambient) The January 2005 EA does not adequately discuss the impact of PCB emissions in the event of a tunnel fire. (Maloney, Bing/Gottfried)

Response: As noted in the response to the previous comment, in the rare event of a tunnel fire with combustion products (smoke) being exhausted at the 50th Street facility, a variety of substances could be released. Most important among these substances, since it is most frequently associated with acute adverse effects, is carbon monoxide, followed by hydrogen cyanide, inorganic acids and depleted levels of oxygen. It should be noted that, while the four categories of pollutants mentioned in the comment could be created in a tunnel fire (or for that matter, in

a fire in any residential or commercial building), these contaminants would be less likely to be associated with acute adverse effects. In any event, for all combustion products potentially generated in a tunnel fire, the most important consideration would be to remove these gases as quickly as possible from the confined underground spaces to outside air, where they could be diluted, to protect the safety of people in the terminal. In the event of a tunnel fire, the tunnel ventilation exhaust louvers would exhaust at approximately 11 miles per hour when measured 6 inches from the louvers, causing the smoke and combustion gases emitted to be greatly diluted upon mixing with the outside air.

COOLING TOWER

Comment 120: The January 2005 EA does not mention the model used to simulate the dispersion of cooling tower mist or the assumptions and meteorological data incorporated therein. In order to evaluate the applicability of the non-proprietary and proprietary models used to model cooling tower mist dispersion, the MTA should provide documentation—including input and output files, boundary conditions, model algorithms, and receptor locations—showing that the models apply to existing cooling towers located in similar situations. (Ambient, Egan)

Response: The cooling tower analysis in the January 2005 EA includes all the items mentioned in this comment and is fully described in Chapter 8 of the January 2005 EA. The analysis used a EPA-developed air dispersion simulation model, ISCST3, which is recommended for assessing dispersion in urban environments. The January 2005 EA describes that five years of hourly meteorological data recorded at LaGuardia Airport, a station recognized by both NYSDEC and the New York City Department of Environmental Protection (NYCDEP) as being representative of the wind conditions, temperature, and humidity for New York City. The cooling tower psychrometric parameters were rigorous calculated hour-by-hour using well known psychrometric equations published by ASHRAE, concurrent with the meteorological conditions used by the dispersion model and the tower plume conditions. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and analyzed in this revised supplemental EA.

Comment 121: The visible plume model referenced in the January 2005 EA is irrelevant because it does not account for any of the pollutants, airflow conditions, or physical parameters related to the proposed cooling tower that could cause health or environmental impacts. (Ambient)

Response: The goal of the cooling tower analysis was to address the frequency and extent of visibility of the condensed vapor plume from the cooling tower (referred to in

the January 2005 EA and this revised supplemental EA as mist). The cooling tower would not emit any criteria pollutants or hazardous air pollutants in any significant quantity (see the response to Comments 134 and 135 below).

Comment 122: The cooling tower mist dispersion analysis used an improper modeling technique that failed to account for the turbulence and recirculation that would be caused by the taller abutting buildings. The statement on page 8-9 of the January 2005 EA that the effect of the cavity formed by these taller adjacent buildings would be to break up the mist through the increased turbulence that is normally present in such cavities is unsupported and incorrect. (Zarin, Ambient, Lehr) At a minimum, a detailed computational fluid dynamics (CFD) simulation with a psychrometric overlay is needed to see what happens at the cooling tower discharge and its effects on adjacent buildings. (Lehr)

Response: The ISCST3 model incorporates enhanced atmospheric turbulence in its dispersion calculations for an urban environment. Building wake effects are well known by atmospheric scientists to result in increased turbulence in the lee of the structure. Indeed, one such method incorporated into the ISCST3 model increases the dispersion coefficients based on height and widths of the adjacent structures. Such increased dispersion effects serve to spread out the vapor plume (referred to in the January 2005 EA and this revised supplemental EA as mist), effectively simulating its increased dispersion. The visible plume analysis included in the January 2005 EA conservatively estimated the plume from the cooling tower proposed on the roof of the 50th Street facility without such enhanced dispersion effects caused by the building, but only included the wake effect of the cooling tower itself, thereby overstating the potential number of visible plumes and the downwind extent of any plumes. While computational fluid dynamics simulation shows promise as an analytical tool for assessing urban cooling towers, it essentially examines only one meteorological dispersion scenario at a time. The goal of the cooling tower visible plume assessment was to examine a very large database of meteorological data—over 40,000 hours—and overlay the cooling tower psychrometric conditions that correspond to each changing meteorological condition and determine the overall frequency of visible plumes, which were decidedly few in number. In as much as CFD would incorporate additional dispersion effects, i.e., wake effects, corner effects, downwash, etc., it is expected that a numerical CFD analysis would result in the same conclusions, and likely indicate even fewer plumes than the conservative Gaussian modeling approach used by ISCST3. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and evaluated in this revised supplemental EA. At this new location, the cooling tower plume would not be

subject to any of the cavity or recirculation effects that are the subject of the comment.

Comment 123: The cooling tower mist dispersion analysis has three fatal flaws: (1) the technique that was used (as embodied in the ISC software) is not applicable within 100 meters of the source, (2) the technique is not appropriate for scenarios where the source is tucked into the wake of a building or buildings, where excess turbulence and recirculation can be anticipated, and (3) the technique will not model wakes that develop around the sides of buildings nor will it accurately model wakes developed by groups of buildings. Other analysis techniques are much better suited to the task and will provide accurate results. The ISC software is not intended for use on a localized scale and is best used on a fairly large scale, say 1 Km to 50 Km. (Ambient)

Response: The ability of the ISCST3 model to calculate the dispersion effects of the cooling tower was considered and determined entirely appropriate for the following reasons: (1) The ISCST3 version allows receptors within 1 meter of the source. Indeed, the ISCST3 model allows for a dense receptor grid to accurately assess the potential plume (mist) impacts entirely at the adjacent buildings. (2) As discussed in the January 2005 EA, the model was run without incorporating building wake effects, which provided conservative estimates of the potential plume formations. As discussed in the January 2005 EA and previous responses, excess turbulence and chaotic flow within the building cavity region would disperse the plume (mist). Enhancing the dispersion of the plume causes increased mixing with ambient air, resulting in evaporation and dissipation of the condensed plume droplets. (3) The ISCST3 model was developed by EPA to accurately assess dispersion effects at distances well within 1 kilometer, and typically within a distance of only a few hundred meters. This is the range within which the model was used to estimate the number of visible plumes. (4) EPA recommends the ISCST3 model for simulating atmospheric dispersion in urban environments since it incorporates urban dispersion parameters accounting for the larger turbulence effects within urban areas. (5) The ISCST3 unit concentration results are ideally suited for providing an overlay with hourly psychrometric values for the cooling tower.

Comment 124: The mist dispersion analysis conducted for the proposed cooling tower should have been performed using the Seasonal Annual Cooling Tower Impacts (SACTI) model. In addition to mist visibility, this model can also analyze contaminant drift issues. (Egan)

Response: The SACTI model was initially considered for this analysis and dismissed as inappropriate for numerous reasons: (1) SACTI does not assess plume impacts on elevated receptors. (2) SACTI is based only on statistical summaries of binned meteorological conditions and cannot perform an hour-by-hour plume

dispersion analysis using an overlay of specific psychrometric conditions of the tower for each specific hour. (3) SACTI does not allow discrete receptors to be assessed and only builds a polar grid based on 12 30-degree sectors for its calculations. This is a major shortcoming of SACTI for use in this particular analysis, since a dense field of elevated discrete receptors was required to accurately calculate both the height and downwind extent of potential plumes and the potential plume impacts on adjacent buildings. (4) The minimum distance allowed by SACTI for contaminant drift deposition calculations is 100 meters, so if drift were an issue for the proposed tower, ISCST3 could be used to assess this, since it allows deposition calculations at distances as close as 1 meter. (5) SACTI was designed for assessing large electric utility sized cooling towers (such as for nuclear power plants, with 100,000-ton towers) with hundreds of megawatts (thermal) of heat being rejected. The size of the proposed cooling tower at 50th Street, with maximum heat rejection rate of about 10 megawatts (thermal), is considerably smaller than a utility cooling tower and operates in a range below many of the thermodynamic assumptions used in the SACTI plume algorithms.

Comment 125: The study seems to focus exclusively on visible plumes. The actual humidity of the plume is the most important aspect. The ISC software will likely estimate lower humidity and temperatures than reality. Table 3 of the cooling tower mist dispersion analysis report shows that most of the mist formation occurs during hours of operation of 437 Madison and the surrounding buildings' HVAC systems. This table does not account for "non-visible" plumes that are at or near 100 percent relative humidity. Additionally, velocity-pressure coupling as the vapors accelerate into the intakes can cause the plume to begin to condense. (Ambient)

Response: The primary focus of the cooling tower study included in the January 2005 EA for the cooling tower proposed on the roof of the 50th Street facility was to determine the frequency and duration of potential visible plumes (referred to in the January 2005 EA and this revised supplemental EA as mist) resulting from the tower. The study also addressed the potential for icing and increased plume humidity and temperature. The ISCST3 model was chosen as having the ability to accurately simulate plume dispersion from an elevated point source. EPA, as well as atmospheric dispersion modelers in general, recognize that ISCST3 likely over-predicts plume concentrations; therefore, ISCST3 will have likely estimated higher humidity and temperature. Plumes below 100 percent relative humidity are not visible, and thus were not tabulated as "visible" plumes. The phenomenon of having vapor condense to form a cloud can occur when the air pressure is rapidly reduced in air that is near saturation. This is often seen on the leading edges of aircraft wings and in the vortices shed by wing tips of aircraft landing in humid air. In such cases, the air is moving over the wing at well over 100 miles per hour (150 feet per second). HVAC inlet velocities at 437 Madison

Avenue and any surrounding buildings using properly sized fans for efficient energy consumption would be less than 50 feet per second, and well below the speed necessary to achieve a low-pressure zone sufficient to cause the inlet air to become saturated and to condense. Thus the cooling tower would not result in adverse effects on the HVAC systems of adjacent buildings. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and evaluated in this revised supplemental EA. At this new location, the cooling tower would be located far from the HVAC intakes of the buildings mentioned in the comment, and would have no effect on their operation.

Comment 126: The January 2005 EA underestimates the proposed facility's impact on the operational costs of adjacent buildings due to local increases in temperature and humidity. (Ambient) The cooling tower mist dispersion analysis report dismisses an increase of 75 percent absolute humidity due to the cooling tower, which could be considered significant by other affected parties, especially when averaged over many hours throughout the year. (Ambient)

Response: Based on the cooling tower analysis summarized in the January 2005 EA, the relatively minor increase in the temperature contribution of the HVAC cooling tower and the slightly elevated humidity level at the HVAC inlets would not result in discernable increased operating costs. This is especially apparent when averaged over the entire year. Indeed, the greatest temperature increase would occur during the cooler months, which would serve to reduce the heating costs by providing somewhat warmer air. See also the response to the previous comment. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and evaluated in this revised supplemental EA. At this new location, the cooling tower would be located far from the HVAC intakes of the buildings mentioned in the comment, and would have no effect on their operation.

Comment 127: We have doubts that you can use "cloud" data and observations to judge the optical density of plumes. Clouds at elevation in the sky where temperatures are usually very cold will hold less water vapor and therefore will produce a visible vapor cloud more readily than at sea level. (Ambient)

Response: The cloud data presented in January 2005 EA are in units of grams of liquid water content (LWC) per cubic meter. This is a liquid water density, independent of the altitude of the cloud in the atmosphere. The commenter erroneously assumes that because a cloud is colder it will have less water

content. Indeed, the densest clouds occur with cumulus congestus (also, cumulonimbus or thunderstorms) where the LWC could be several grams per cubic meter at an altitude of 35,000 feet. The ambient temperature at such altitudes is well below 0 F°. In the absence of freezing nuclei, water droplets in a cloud can remain a liquid at temperatures as low as -40° F (at which point the droplets freeze spontaneously). The intent of the cloud analogy was to relate the optical density of the cooling tower condensed vapor plume to clouds that are readily observed in nature in order to provide a comparable visual reference.

Comment 128: Moisture and water treatment chemicals in the mist from the proposed cooling tower are a concern for nearby structures. The cooling tower mist dispersion analysis report addresses condensation on the windows of adjacent buildings but appears to understate the potential for condensation to form on other parts of the facade. The analysis does not address the potential for algal growth and ice formation on the building facades, likely to be made worse by the lack of direct sunlight within the cavity formed by the taller buildings adjacent to the proposed facility, or the development of mineral scale or mold under any overhangs or in air intake vents and ducts. Mineral scale is difficult to remove from glass surfaces and promotes corrosion of metallic surfaces, including stainless steel and aluminum. The analysis also ignores the possibility of an abundance of droplets that are mechanically removed from the cooling tower as opposed to being evaporatively removed. This could increase the airborne water concentration considerably and increase the chances of everything from ice formation to mold growth and facade damage. (Ambient, Zarin)

Response: See response to Comment 69, above.

Comment 129: Page 2 of the cooling tower mist dispersion analysis report states an assumption that is most likely incorrect—that when the cooling tower discharge temperature is equal to the ambient temperature, the cooling tower mist would have no rise and would remain level with the tower top. This ignores the momentum effects of the cooling tower fans. (Ambient)

Response: It is true that in the absence of a temperature differential, a modest plume rise may be observed due to momentum only. Normally, the cooling tower outlet temperature is higher than ambient temperature, resulting in a buoyancy-induced plume rise. The ISCST3 model calculates the plume rise associated with both momentum and buoyancy and will use the higher plume rise. In this way, all psychrometric conditions of the cooling tower are accurately simulated by the model.

Comment 130: Figure 7 of the cooling tower mist dispersion analysis report illustrates a significant effect on the mid-rise air intakes at 437 Madison. (Ambient)

Response: An estimated 200 condensed vapor plumes are shown in Figure 7 as potentially affecting the mid-rise air intakes. This number is approximately 2 percent of the total number of hours in a year, which is an insignificant number, especially considering that the ISCST3 model has likely over-predicted the possible number of condensed plumes and that those plumes are essentially distilled water droplets with no contaminants. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and evaluated in this revised supplemental EA. At this new location, the cooling tower would be located far from the air intakes mentioned in the comment, and would have no effect on their operation.

Comment 131: The meteorological data used for the cooling tower mist dispersion analysis was taken from La Guardia Airport and is not representative of the meteorological conditions that prevail in the vicinity of the proposed facility. It is normal practice to employ site-specific data, and the use of data from La Guardia Airport, a location with no resemblance to the air characteristics at issue here, is bizarre. The airport is an open area with no significant buildings nearby to recreate the complex, sometimes perpendicular wind patterns that occur on 50th Street. (Zarin, Ambient)

Response: An analysis was performed using a computer dispersion model to calculate the occurrence and frequency of visible condensed vapor plume (referred to in the January 2005 EA and this revised supplemental EA as mist) from the cooling tower proposed to be located on the roof of the 50th Street facility under Alternatives B and C. The purpose of the cooling tower analysis was to determine how frequently the condensed vapor plume from the cooling tower on the roof of the 50th Street facility could reach the adjacent buildings at 300 Park Avenue and 437 Madison Avenue. The primary factors in visible plume creation and density, which determines the ability of the mist to remain visible for extended distances, are temperature, humidity and degree of atmospheric turbulence which serves to disperse the cooling tower mist. Other factors that are used to determine the plume's overall visibility include whether it is generated during daytime conditions, general weather conditions (cloud cover, precipitation) and the liquid water content of the cooling tower plume.

Dispersion modeling was conducted that utilized LaGuardia Airport meteorological data to determine the conditions that are favorable for creation of visible mist that would extend to nearby buildings. The LaGuardia Airport meteorological station is located approximately eight kilometers northeast of the site. Its proximity to the project site on a meteorological scale, and the lack of any significant terrain features in between, make this station appropriate for use in dispersion modeling. Temperature, humidity, and cloud cover conditions would be very similar at La Guardia Airport and the project site.

The use of nearby airport data is recognized as both appropriate and normal by EPA and air quality modelers in general. The goal of the January 2005 EA was to use a large database of meteorological data that not only represent the general wind direction and speed of the site, but also the temperature and humidity. While it is true that urban air at the site is likely more turbulent than observed at La Guardia Airport, this additional turbulence only serves to disperse any plumes that are formed, as discussed in previous responses. Furthermore, the LaGuardia data were adjusted to represent the wind speeds that may be observed at the elevation of the cooling tower site on the roof of the proposed 50th Street facility, effectively accounting for site-specific wind conditions.

The direction of the wind also affects how frequently visible mist would extend to the adjacent buildings at 300 Park Avenue and 437 Madison Avenue. In order to account for the channeling of winds along 50th Street, the wind directions recorded at La Guardia within approximately plus and minus 30 degrees of the orientation of 50th Street were aligned with 50th Street. This approach conservatively increases the estimated frequency of winds that may blow toward the northwest and southeast along 50th Street and therefore overestimates the potential number of times that cooling tower mist may extend to the adjacent buildings at 300 Park Avenue and 437 Madison Avenue.

While it is correct that local wind patterns are influenced by the urban terrain, these conditions tend to increase air turbulence, thereby disrupting and dispersing the mist and making it less likely that visible mist would reach nearby buildings. Potential cavity effects due to the presence of taller adjacent buildings would have a similar dispersive effect on the cooling tower mist. Since neither of these air turbulence effects was included in the analysis of the cooling tower mist visibility, the estimate of the number of hours that the mist would potentially reach adjacent buildings is conservatively high.

Comment 132: The January 2005 EA reports the average number of hours that cooling tower mist would reach 437 Madison Avenue; no estimate of the worst-case number of hours of drift impact is provided. (Ambient)

Response: The cooling tower would have high-efficiency drift eliminators so that drift would be minimized and confined to the area immediately around the tower. See the responses to the comments that immediately follow (Comments 133, 134, and 135).

Comment 133: The January 2005 EA fails to address the practical efficiency of proposed drift eliminators. It states that visible mist from the proposed cooling tower would reach 437 Madison Avenue at least 200 hours each year. There is no mention of the model used to conduct the dispersive modeling analysis or the assumptions incorporated therein. Mist from the cooling tower, as well as air exhausted from the proposed facility, would adversely affect the 50th Street plaza of 437

Madison, as well as offices and hotel rooms on the lower floors in nearby buildings. (Maloney, Ambient, Silverblatt, Zarin) This effect would be made worse by the "canyon effect" created by the taller buildings that abut the proposed facility. (Zarin)

Response: The comment confuses the condensed vapor plume (referred to in the January 2005 EA and this revised supplemental EA as mist) and the tower's drift. Drift occurs when the circulating water droplets are ejected from the tower, and this would be minimized to the maximum extent possible using high efficiency drift eliminators. For more information on drift, see the response to Comments 134 and 135 below. The plume analysis assessed the condensed water vapor plume that would form in the saturated cooling tower exhaust. The condensed vapor plume is essentially distilled water containing no contaminants. A detailed dispersion modeling analysis was conducted to determine how the visible plume from the cooling tower would be dispersed. This analysis, which is described in Chapter 8 ("Air Quality") of the January 2005 EA and this revised supplemental EA, concluded that visible mist would extend from the cooling tower as far as the adjacent building at 300 Park Avenue for an *average* of approximately 100 hours per year, and as far as the adjacent building at 437 Madison Avenue for an *average* of approximately 200 hours per year, out of a total of 8,760 hours in the year, for the two build alternatives under which the cooling tower would be located on the roof of the 50th Street facility. These are averages, not minimum values. Most of the time, the visible mist predicted by the dispersion modeling performed would be confined to the region immediately above or beside the cooling tower.

As illustrated in Figures 3 through 8 of the cooling tower condensed vapor plume dispersion analysis documentation included in Appendix E to this revised supplemental EA, the mist would not extend below the cooling tower with any appreciable frequency, and certainly would not affect offices, plaza areas, or hotel rooms on lower floors, under either of the two build alternatives in which the cooling tower would be located on the roof of the 50th Street facility.

As described in the January 2005 EA (see Chapter 8), the air exhausted from the proposed facility would be ambient air from the East Side Access terminal, which would not adversely affect neighboring uses near the 50th Street site (see the January 2005 EA for more information).

The air quality analysis included in Chapter 8 of the January 2005 EA included consideration of the canyon or cavity effect (see pages 8-9 and 8-10). As described in the January 2005 EA, the effect of the "cavity" formed by the taller buildings surrounding the project site would be to break up the condensed vapor plume generated by the cooling tower through the increased turbulence that is normally present in such cavities. This effect was conservatively not included in the dispersion modeling analysis of the cooling tower mist (see response to comment above). The cavity would not trap exhaust from the normal or

emergency ventilation exhaust, because these would not be located on the roof. Both would exhaust horizontally away from the building.

Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and evaluated in this revised supplemental EA. At this new location, the cooling tower would be located even further from the street-level plaza area, offices and hotel rooms mentioned in the comment, than it would have been under the two build alternatives analyzed in the January 2005 EA. As such, the cooling tower under Preferred Alternative D would have no adverse effect on the street-level plaza area, offices or hotel rooms mentioned in the comment.

Comment 134: Mist from the proposed cooling tower could contain *Legionella* or other bacteria, fungi, protozoans, or other types of health-damaging pollutants. The January 2005 EA's statement that standard water treatment additives would be used is an admission that the mist would contain noxious and harmful organisms, which the January 2005 EA never discusses. (Maloney, Bing/Gottfried, Herfort, Lefkowitz, Egan, Zarin, Ambient) Growth of these organisms could occur on the ventilation systems and structural components of surrounding buildings as a result of the added heat and humidity that would be generated by the cooling tower. Many such cooling tower-related outbreaks have been reported in medical and engineering journals. Possible direct exposure pathways to the cooling tower mist include rooftop exposure of staff, operable windows of the surrounding buildings, and precipitation on residents, commuters and tourists. The most critical indirect exposure pathway to nearby occupants is entrainment into nearby building air intakes and dissemination through those buildings' HVAC systems. (Ambient)

Response: The condensed vapor plume above the cooling tower (referred to in the January 2005 EA and this revised supplemental EA as mist) would consist of only distilled water droplets, with no potential to contain either contaminants or water treatment chemicals. Beneath the cooling tower, small droplets of circulating cooling system water would be emitted, referred to as "drift." Drift would be minimized to the maximum extent possible using high efficiency drift eliminators. As stated in Chapter 8 of the January 2005 EA, as with cooling tower systems for most buildings in New York City, to protect public health, the water circulating in the cooling system would be treated with standard water treatment additives to prevent formation of *Legionella* or other bacteria. Use of these additives would follow industry-accepted best practices. Also see the response to Comments 135 and 137, below. In addition, the cooling tower location would meet New York State Mechanical Code requirements with respect to distance from nearby buildings. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised.

The tower is now proposed to be located on the roof of the Colgate-Palmolive Building at 300 Park Avenue, under Preferred Alternative D, which is described and evaluated in this revised supplemental EA. At this new location, the cooling tower would be located far from the buildings and air intakes mentioned in the comment.

Comment 135: The January 2005 EA dismisses the public's concerns about the generation of non-regulated airborne hazards. The January 2005 EA downplays the drift that would reach 437 Madison Avenue and assumes that all unforeseen microbiological and chemical hazards contained within this drift would be controlled with standard water treatment methods. Use of such water treatment chemicals would chronically expose the public to low concentrations of these hazardous compounds over the life of the cooling tower's operation. The January 2005 EA should discuss the chemical composition and treatment effectiveness of the water treatment chemicals to be used in the proposed cooling tower. Gluteraldehyde, chlorine, bromine, molybdenum, zinc, phosphates and ammonia are all chemicals that may be of concern in cooling tower emissions for which DAR-1 provides guideline concentrations, for annual and 1-hour exposures. Corrosion inhibiters are also applied to cooling water. Air pollutant dispersion analysis should be conducted to evaluate potential air quality impacts due to emission of water treatment chemicals by the proposed cooling tower. (Ambient, Zarin, Egan)

Response: The cooling tower at the 50th Street facility would be maintained using industry-accepted best practices as specified by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)'s cooling tower guidelines. These best practices include adding water treatment chemicals to prevent corrosion and scale, and biocides to minimize bacterial and algal growth and to prevent the release of pathogenic bacteria. An analysis was conducted using the ISCST3 model to calculate the maximum concentrations of any trace quantities of treatment chemicals that would be present in the liquid drift. That analysis has been added to this revised supplemental EA in Chapter 8. The analysis concludes that the drift would meet the NYSDEC's short-term guideline concentrations for the water treatment chemicals and therefore that the chemicals would not pose any threat to the adjacent buildings at their air intakes. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, at a much higher elevation and further away from nearby buildings and air intakes.

Comment 136: Cooling towers are typically cleaned on an annual or semi-annual basis using chlorine. During these cleanings, any adjacent air intakes and operable windows must be sealed. (Ambient)

Response: Best management practices would be employed during cleaning cycles and any other maintenance to ensure that adjacent buildings are not adversely affected.

Comment 137: The use of water treatment chemicals is only one component of a best practices approach to cooling tower operation. The January 2005 EA does not mention other techniques such as: minimizing water stagnation; minimizing leaks into the cooling system that provide nutrients for bacteria; maintaining overall system cleanliness; using scale and corrosion inhibitors; using high efficiency mist eliminators; and controlling the overall microbiological population. (Ambient)

Response: ASHRAE has established detailed recommendations for cooling tower maintenance known as *Guideline 12: Minimizing the Risk of Legionellosis Associated with Building Water Systems.* This guideline provides design/control measures for sources where *Legionella* can breed, including potable water systems, cooling towers, heated spas, and architectural fountains. This guideline will be used as a basis for designing and operating the proposed cooling tower.

Comment 138: The proposed cooling tower would generate 1.2 million cubic feet of mist per minute. This is based on the total cooling capacity of the tower, which is 3,000 tons, and the 400 cubic feet of air per minute required for each ton of refrigeration. (Bing/Gottfried, Ambient, Zarin)

Response: The cooling tower would generate a maximum of about 800,000 cubic feet of exhaust per minute, during the peak hour of a peak day. Typically, the cooling tower would generate between 70,000 and 700,000 cubic feet of exhaust per minute depending on the season and the time of day. Generally, this exhaust is ambient air raised in temperature to the equilibrium temperature of the cooling tower basin, and is at saturation. Depending on the ambient atmospheric conditions (temperature and humidity), the exhaust air may condense to form a visible plume (referred to in the January 2005 EA and this revised supplemental EA as mist). As described in the January 2005 EA, no significant adverse impacts would result from the condensed plume associated with the proposed cooling tower (see Chapter 8 of the January 2005 EA).

Comment 139: The proposed cooling tower would add hundreds of gallons of water vapor every hour to the air in the "canyon" above the proposed facility that is formed by the taller adjacent buildings. The increased humidity and temperature that would result, as well as the lack of direct sunlight within this "canyon," would create a favorable environment for the growth of fungi such as mold and other microorganisms on the facades and air intakes of the adjacent buildings. Exposure to mold has been shown to have extensive health implications including asthma and other respiratory disorders. (Ambient)

Response: See response to Comment 69, above. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, which is higher than the nearby buildings and therefore not subject to a canyon effect.

Comment 140: Rooftop exhausts such as waste vents and restaurant exhausts would be drawn into the proposed cooling tower and the contents washed out of the air by the cooling tower. The content of waste and restaurant exhaust air provides nutrients for bacteria growth in the cooling system. This added biological demand increases the need for biocide usage and the potential for *Legionella* amplification. We normally recommend that all exhausts be extended over the top of the cooling tower or directed away from the tower. However, in this case, short circuiting would be inevitable if exhausts were extended upward. (Ambient)

Response: No rooftop exhausts are proposed on the 50th Street facility. Also note that the new LIRR concourse at Grand Central Terminal would not house restaurants or other vendors who prepare cooked food. The retail strategy for Grand Central Terminal is to group all such vendors into one common food area at the existing lower level Dining Concourse. For this reason, the East Side Access Project's concourse design has no provision for kitchens in the retail spaces. Also note that since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, at a much higher elevation than the rooftop of the proposed 50th Street facility.

Comment 141: The January 2005 EA states on page 8-8 that the cooling tower would be at least 20 lateral feet from adjacent buildings, as the New York City Building Code requires. Such code compliance is irrelevant in light of the unusually large cooling capacity of the proposed tower, and the "canyon effect" caused by the taller buildings adjacent to the proposed facility. The January 2005 EA fails to acknowledge that the cooling tower for the proposed facility would be much larger than those required for a comparably sized conventional office building. Assuming one ton of cooling capacity for every 350 square feet, which is typical for commercial office buildings, and a full build-out of 95,000 square feet for the site under the New York City Zoning Code, a cooling capacity of 300 tons would be required. This is ten times lower than the 3,000-ton capacity of the cooling tower for the proposed facility. (Zarin, Lehr, Ambient)

Response: The EA has been revised to state that it is the New York State Mechanical Code (not the New York City Building Code) that specifies a 20-foot horizontal distance between air intakes of adjacent buildings and cooling towers. Neither the state code nor the city code have specific requirements related to the size of

cooling towers or their juxtaposition with respect to adjacent buildings. Also note that the size of the proposed cooling tower (3,000 tons) is not unusual and, in fact, is about the same size as the rooftop cooling tower currently located on the Colgate-Palmolive Building at 300 Park Avenue (which is a 2,700-ton unit). As described in this revised supplemental EA, the new 3,000-ton East Side Access Project cooling tower would replace that Colgate-Palmolive Building tower in the same location, and a new 2,700-ton unit for the Colgate-Palmolive Building would be constructed elsewhere on the rooftop of 300 Park Avenue.

Cooling towers of such size generally do not pose air quality concerns and typically are not analyzed in environmental documents for new office buildings and other structures with rooftop cooling elements. Because of public concerns expressed over the proposed cooling tower and a potential "canyon effect," modeling analyses were conducted for cooling tower emissions for the January 2005 EA, which are summarized in Chapter 8 of the January 2005 EA. The results of those analyses indicate that a new cooling tower location on the roof of the new 50th Street facility would not create significant adverse impacts. Nevertheless, as noted earlier, since completion of the January 2005 EA, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, which is higher than the nearby buildings and therefore not subject to a canyon effect.

Comment 142: The proposed location of the cooling tower in close proximity to nearby clean air intakes in adjoining buildings would allow for direct pathways of exposure to aerosolized contaminated cooling tower drift. Drift eliminators and the use of water treatment chemicals would not solve this problem. According to ASHRAE, contaminated drift water droplets under 5 micrometers in diameter can escape drift eliminators. The data from the investigation of disease outbreaks suggests that transmission to humans occurs when water containing *Legionella* bacteria is aerosolized into respirable droplets 1 micrometer to 5 micrometers in diameter. (Zarin, Ambient)

Response: The cooling tower would be operated in accordance with ASHRAE good operational practices to minimize or eliminate any pathogens in the circulating water. This would include periodic checks throughout the year on the effectiveness of the water treatment. In addition, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue. At this new location, the cooling tower would be located even further from the clean air intakes mentioned in the comment, and would also have no effect on their operation.

Comment 143: The January 2005 EA does not specify the manufacturer and model of the proposed cooling tower, or performance data such as drift factors and cooling water circulation rates. The absence of this data does not permit a complete review of the cooling tower's potential air quality impacts. Typical cooling towers used in New York City still produce substantial amounts of drift. In addition, the use of water treatment additives that contain surfactants, biodispersants, and antifoam agents may increase the drift rate of cooling towers beyond the manufacturer's published data. (Zarin, Ambient, Ambient)

Response: It is anticipated that the cooling tower would be manufactured by one of the following, or an MTA-approved equivalent: Baltimore Aircoil Company, Evapco, Inc., or Marley Tower. Based on typical cooling tower systems, the tower drift factor would be 0.02 percent of the circulation rate, which equates to 18 gallons per minute for the three cells. Note that in response to numerous public comments on this topic, an analysis of the pollutants in the cooling tower drift has been conducted, and the results of that analysis are included in this revised supplemental EA (see the response to Comment 135 above).

Comment 144: An acceptable drift rate should be established for the proposed cooling tower that minimizes risk to adjacent properties and the public. The cooling tower should be selected to meet or exceed this established drift rate. If necessary, after-market drift reducers should be employed. The cooling tower should be tested for drift loss once placed into operation to confirm that they are operating within the specification. (Ambient)

Response: The cooling tower will be designed and tested to meet a drift rate of 0.02 percent of the circulation rate, which equates to 18 gallons per minute for the three cells.

Comment 145: On page 8-9, the January 2005 EA states that wind screens would be used to prevent drift from reaching adjacent buildings. Figure S-5 in the January 2005 EA indicates that the wind screen would extend no more than a few feet above the cooling tower. This configuration reasonably represents the proper height of a wind screen that reduces drift due to windage (wind impingement on or across the cooling tower). A barrier that significantly exceeds the height of the cooling tower increases the potential for short cycling and re-entrainment of cooling tower exhaust into the cooling tower. Inasmuch as design engineers avoid short cycling, the ability of a wind screen to prevent drift above the cooling tower from reaching adjacent buildings is questionable. (Ambient)

Response: The screen surrounding the proposed cooling tower that is shown in Figure S-5 of the January 2005 EA is not a drift eliminator. It is primarily for visual and acoustic purposes, is properly sized, and would not cause short cycling between the cooling tower exhausts and intakes. This visual and acoustic screen would also function as a wind screen, serving to prevent wind from down-drafting the

plume behind the tower to minimize recirculation (short cycling) and increase the cooling tower efficiency. This screen would also prevent debris from blowing into the cooling tower cells. Please note that in Preferred Alternative D, the cooling tower would be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue and would not include a visual screen.

The drift eliminators mentioned in the January 2005 EA would consist of a either a packed fill or blade type drift eliminator (depending upon the vendor of the tower). The drift eliminator in each tower cell would be located immediately beneath the induction fan and would force the air flow to repeatedly change direction, effectively scavenging any entrained water droplets from the exhaust air stream.

Comment 146: The ability to properly maintain and operate the proposed cooling tower is very important in reducing or eliminating the risk of *Legionella*. The track record of MTA's cooling tower designs and the operating history of its existing cooling towers, if any, would help to determine whether MTA is up to the task. At the very least, MTA should provide detailed Standard Operating Procedures (SOPs) for the proposed cooling tower that demonstrate how best practices will be employed. MTA should provide documentation demonstrating that qualified personnel, possessing all necessary training and certifications such as those required by FIFRA and NYSDEC, will maintain and operate the proposed cooling tower. (Ambient)

Response: In terms of its "track record," MTA currently successfully operates several cooling tower units on the roof of Grand Central Terminal and for other buildings, such as 347 Madison Avenue. MTA's practice for these and other cooling towers is to contract with licensed water treatment companies that provide the maintenance for the cooling towers. A licensed water treatment company would be engaged for maintenance of the cooling tower at the 50th Street facility. The cooling tower would be operated in accordance with ASHRAE good operational practices to minimize or eliminate any pathogens in the circulating water. This would include periodic checks throughout the year on the effectiveness of the water treatment. The specific maintenance procedures for the cooling tower would depend on the brand of tower installed at the 50th Street facility (see also the response to Comment 135).

Comment 147: The public is concerned with plume generation and migration on a 24-hour, 7-day basis, not just the normal business hours that are addressed by the cooling tower mist dispersion analysis report. (Ambient)

Response: The mist analysis examined all the conditions when the plume would be formed during 24-hour, 7-day-a-week operation and identified the frequency and occurrence when a condensed vapor plume would be visible to the public, namely the occupants of adjacent buildings and on the street. Please note that in

Preferred Alternative D, the cooling tower would be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, at a much higher elevation than proposed in the January 2005 EA. As a result, the cooling tower plume would be even less visible to people on the street and the occupants of adjacent buildings.

Comment 148: Plume abatement should be investigated to determine which techniques, if any, would reduce the frequency and/or volume of visible plumes to a reasonable degree. (Ambient)

Response: As described in the January 2005 EA, the plume analysis concluded that visible plumes from the cooling tower would occur with low frequency and extent. Nevertheless, the location proposed for the cooling tower has been revised. The tower is now proposed to be located on the roof of the adjacent Colgate-Palmolive Building at 300 Park Avenue, at a much higher elevation than proposed in the January 2005 EA. As a result, the cooling tower plume would be even less visible to people on the street and the occupants of adjacent buildings.

EMERGENCY GENERATORS

Comment 149: The EA should provide specific information on the manufacturer, the emission rates of pollutants, and the expected fuel consumption rate for the two emergency generators. (Egan)

Response: Additional information has been added to this revised supplemental EA about the emergency generators. As described there (see Chapter 2), the 50th Street facility would house two 1.5-megawatt emergency generators. In Preferred Alternative D, these generators would be located below ground. It is anticipated that these units would be of the latest commercial design and would meet the requirements of the National Electric Code as well as all other applicable local codes and regulations. The generator would be manufactured by one of the following, or an equivalent: Oman Corp/Cummins Power Generation, Caterpillar Engine Division, or Kohler Co. Generator Division.

Comment 150: The proposed generators should use ultra-low-sulfur diesel fuel. (Egan)

Response: If available, ultra-low-sulfur diesel fuel would be used in the emergency generators, or, if not available, low-sulfur diesel fuel would be used.

Comment 151: The EPA commends the MTA's commitment to use low-sulfur diesel fuel to reduce emissions from proposed the emergency generators. (Musumeci)

Response: Comment noted.

Comment 152: The proposed emergency generators, which would be tested monthly, would produce harmful exhaust emissions that could adversely affect the Palace Hotel and other adjacent buildings. These emissions would include NO_2, CO, PM, and SO_2. The potential air quality impacts of the proposed generators should be analyzed using air pollution dispersion modeling techniques. (Lefkowitz, Egan, Zarin) NYSDEC DAR-1 provides 1-hour guidelines for air pollutants that would be emitted by the proposed emergency generators, such as NO_2, PM, and SO_2. The January 2005 EA should have considered these guidelines, as well as the potential for the proposed generators to generate diesel fume odors. (Ambient) MTA should be required to provide information on the expected $PM_{2.5}$ emissions when the generators are operating at full load and when being tested. (Egan)

Response: As stated in Chapter 8 of the January 2005 EA, the proposed emergency generators would not be operated continuously and would not constitute significant long-term sources of air pollution. As with the pollutant emissions described above, diesel fume odors would not be generated on a long-term, continuous basis. Any fume odors that may result during monthly testing of the proposed generators, or during an emergency, would be infrequent and of short duration. Moreover, in Preferred Alternative D, the exhaust for the emergency generators has been moved to the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue. In this new location, 280 feet above street level and distant from any windows or air intakes, the exhaust from the monthly testing of the generators would not be noticeable.

Comment 153: In an emergency situation, it is likely that the proposed generators would be used for a 24-hour period, thereby continuously exhausting the combustion byproducts of burning No. 2 fuel oil. The impacts associated with such continuous use were not addressed in the January 2005 EA. (Zarin)

Response: As stated in Chapter 8 of the January 2005 EA and the response to the comment above, the proposed emergency generators would not be operated at all under normal circumstances, except for periodic testing and maintenance, and would therefore not constitute significant long-term sources of air pollution. In the event of an emergency, the generators could operate for a maximum of 24 hours, but in most circumstances would operate for a much shorter time, depending on the duration of the power outage. No. 2 fuel oil would not be used for the emergency generators. Only low-sulfur diesel fuel or ultra-low-sulfur diesel fuel would be used. In addition, in Preferred Alternative D, the exhaust for the emergency generators has been moved to the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue. In this new location, 280 feet above street level and distant from any windows or air intakes, the exhaust from the generators would not be noticeable.

Comment 154: The issue of the potential re-entrainment of insufficiently diluted diesel exhaust from the proposed emergency generators into nearby air intakes was not adequately addressed in the January 2005 EA. The problem of insufficient dilution would be made worse by the "canyon" effect created by the presence of the taller buildings adjacent to the proposed facility. (Zarin, Ambient)

Response: In the build alternatives presented in the January 2005 EA, the emergency generators' exhaust flues would be centered on the north (50th Street) façade of the 50th Street facility, more than three times farther from the nearest air intakes than specified by the New York City Building Code for separation between combustion exhausts and intakes. The exhaust would be directed northward, rather than into the "canyon" above the facility. As described in response to Comment 109, the New York City Building Code specifies a 10-foot separation between non-hazardous exhausts and operable windows/air intakes and a 25-foot separation for hazardous exhausts (e.g., infectious medical waste) and combustion equipment stacks (e.g., emergency generators). The 50-foot requirement cited in the comment is incorrect. In addition, in Preferred Alternative D, the exhaust for the emergency generators has been moved to the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue, approximately 280 feet above street level, outside the "canyon" referred to in the comment, and distant from any windows or air intakes.

NOISE AND VIBRATION

Comment 155: It is not clear whether the noise analysis in the January 2005 EA includes consideration of the noise emitted by the large volumes of air that would be discharged by the proposed cooling tower, as well as the exhaust vents on the front and sides of the proposed building. (Zarin) The exhaust vents on the proposed facility would generate substantial noise levels. (Bing/Gottfried)

Response: The noise that would be emitted by the cooling tower that was previously proposed to be located on the roof of the 50th Street facility, including noise generated by the cooling tower exhaust fans, was explicitly modeled in the January 2005 EA noise analysis. Relevant noise emission levels and calculations are provided in Appendix F, "Noise," to this revised supplemental EA. A revised noise analysis has also been conducted for Preferred Alternative D, and that analysis is also included in Appendix F. Under Preferred Alternative D, the cooling tower has been moved to the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue, approximately 280 feet above street level, and distant from any nearby noise receptors, either at street level or at windows on nearby buildings.

Exhaust vents generate substantial noise levels only when air flow rates are excessively high and air flow ducts and louvers are undersized. In the case of the 50th Street facility, air flow rates would be kept within acceptable levels

through proper sizing of all ventilation ducts and louvers, thereby eliminating the potential for substantial noise emissions from the exhaust louvers. The January 2005 EA and this revised supplemental EA include an analysis of noise from the 50th Street facility, including its exhaust vents, in Chapter 8, "Noise and Vibration." That analysis concluded that the facility with any of the build alternatives would not result in significant adverse noise impacts.

Comment 156: The January 2005 EA does not provide supporting documentation for the operational and construction noise analyses, including a copy of the FTA document titled *Transit Noise and Vibration Impact Assessment* (April 1995), the noise emission data for the equipment to be housed in the proposed facility, and the attenuation characteristics of the acoustical silencers that would be employed. (Zarin)

Response: The noise emission data for the equipment to be housed in the 50th Street facility, and the attenuation characteristics of the acoustical silencers that would be employed, are provided in Appendix F to this revised supplemental EA. Copies of the FTA guidance document, *Transit Noise and Vibration Impact Assessment* (April 1995), and the New York City *CEQR Technical Manual* are not provided in the January 2005 EA because these are commonly used reference documents. FTA's noise manual is available on its website[1], and the *CEQR Technical Manual* is available on New York City's website[2].

Comment 157: The January 2005 EA does not make the commitment that the equipment used in the 50th Street facility would have the same or lower noise emission characteristics as those assumed in the noise analysis. As a result, the actual equipment selected for the facility could be noisier than the equipment analyzed in the January 2005 EA, resulting in significant adverse noise impacts. Objectionable noises that might be emitted by the facility include propeller noise from the ventilation fans, and humming or whining from the cooling tower. The "canyon" effect created by the parallel reflecting surfaces formed by the taller buildings adjacent to the facility would magnify such noises. (Zarin)

Response: Based on the type of equipment to be housed in the 50th Street facility, conservative noise emission levels were used for each piece of equipment to be included, based on data supplied by the equipment manufacturers. Conservative attenuation characteristics for the acoustical silencers and other noise control measures to be employed in the facility were also developed. These noise emission and attenuation characteristics are shown in the calculation spreadsheets included in Appendix F. MTA is committed to using equipment

[1] http://www.fta.dot.gov/transit_data_info/reports_publications/publications/environment/4805_5144_ENG_HTML.htm

[2] http://www.nyc.gov/html/oec/html/ceqr/ceqrpub.shtml

that would have noise emission characteristics that are equal to or lower that those assumed in conducting the noise analysis for the January 2005 EA and this revised supplemental EA. A noise analysis has also been conducted for Preferred Alternative D and is included in Chapter 9 of this revised supplemental EA. Under Preferred Alternative D, the cooling tower would be relocated to the rooftop of the adjacent Colgate-Palmolive Building at 300 Park Avenue, approximately 280 feet above street level, and distant from any nearby noise receptors, either at street level or at windows on nearby buildings.

Comment 158: The January 2005 EA does not indicate whether the operable windows on the east side of 437 Madison Avenue were included as noise receptors. (Zarin)

Response: The operable windows on the east side of 437 Madison Avenue were included as noise receptors. These are clearly listed in the tables in Chapter 9 of the January 2005 EA, which list the receptors modeled. These were included even though the FTA noise analysis methodology does not typically involve modeling noise impacts at office buildings.

Comment 159: The January 2005 EA does not provide information about noise that would be generated by activities at the facility other than the ventilation function, including project-related traffic such as late night or early morning deliveries and garbage pick ups, and which could impact the Palace Hotel. (Lefkowitz)

Response: The noise analysis conducted for the January 2005 EA included all equipment operating at the 50th Street facility. The facility would not generate enough traffic at any time of day to result in noticeable changes to ambient noise levels. As described in the January 2005 EA, an estimated 23 trucks would travel each day to the facility, with most trips occurring between 6 AM and 2 PM and no more than seven trucks occurring in any single hour. During the late night hours, few trucks would arrive at the facility. Garbage trucks would arrive in the late night, between 1 AM and 2 AM, as they do at many other commercial establishments (including office buildings and hotels) throughout Midtown Manhattan. These trucks would be fully contained within the loading dock with the doors shut, limiting the potential for any disruptive noise at the Palace Hotel.

Comment 160: The statement in the January 2005 EA that the proposed project would not result in a doubling of passenger car equivalents (PCEs), and therefore does not require a detailed mobile source noise analysis as per *CEQR Technical Manual* guidance is incorrect. The methodology used to determine PCEs in the January 2005 EA is unreliable and even if project-generated vehicles would not by themselves cause a significant adverse mobile source noise impact, they must be studied as part of the larger project to determine the project's aggregate noise impacts. For example, the decrease in travel speeds expected to occur on 50th

Street according to the CORSIM analysis could lead to increased honking of car horns. (Zarin)

Response: As stated in Chapter 7 of the January 2005 EA and this revised supplemental EA, the proposed project would generate up to seven peak hour truck trips. The statement in the January 2005 EA and this revised supplemental EA that this level of trip generation would not double the noise PCEs on any streets affected by the proposed project is correct. For purposes of evaluating noise, as set forth in the *CEQR Technical Manual*, one heavy truck is equivalent to 47 passenger cars in terms of the noise generated. These noise PCEs are not the same as PCEs used to calculate traffic impacts, described earlier.

Specifically, based on the traffic data presented for East 49th and East 50th Streets in Chapter 7, "Traffic and Transportation," existing traffic volume on each of these streets ranges from 500 to 800 vehicles per hour during weekday daytime hours. Therefore, the proposed project would have to generate 500 to 800 additional vehicles per hour to result in a significant adverse noise impact from mobile sources. Making the conservative assumption that all of the seven peak hour project-generated truck trips would be heavy trucks would result in 329 project-generated noise PCEs. (Please note that the guidance in the *CEQR Technical Manual* for heavy trucks is for trucks larger than 30 feet; since all trucks visiting the proposed facility would be 30 feet or smaller, the noise would actually be lower.) Making the further conservative assumption that the two project-generated employee passenger car trips would occur during the same peak hour as the truck trips brings the total to 331 project-generated PCEs. Finally, using the conservative simplifying assumptions that all existing vehicles on East 49th and East 50th Streets are passenger cars, the proposed project-generated traffic still would not double the number of existing PCEs. Therefore, the traffic generated by the 50th Street facility would not result in any adverse mobile source noise impacts.

Based on the analysis presented in Chapter 9 of the January 2005 EA and this revised supplemental EA, the facility would not result in any significant adverse stationary source noise impacts. Based on the existing and project-generated noise levels presented in the January 2005 EA and this revised supplemental EA, combining project-generated mobile and stationary source noise would also not result in any significant adverse noise impacts at any noise receptor locations.

Comment 161: We are concerned about the noise that would be generated as a result of operation of the proposed facility. (Ambient)

Response: The noise generated by operation of the 50th Street facility was evaluated in detail in the January 2005 EA and this revised supplemental EA (see Chapter 9). That analysis concluded that the facility would not result in any significant adverse noise impacts.

SAFETY AND SECURITY

Comment 162: The January 2005 EA fails to take a hard look at the facility's homeland security and public safety issues. The January 2005 EA does not adequately analyze the potential security impacts of the proposed facility. The January 2005 EA's conclusion that the proposed facility would not result in any significant adverse impacts in the areas of safety and security is arbitrary. (Moskowitz, Zarin)

Response: The January 2005 EA includes a summary of the security evaluations taken by MTA Division of Security for the 50th Street facility in Chapter 14, "Safety and Security." The conclusion that the facility would not result in significant adverse impacts in the areas of safety and security is supported in that chapter. Additional information supporting the conclusion is not being published because security information must remain confidential to be effective. This is in accordance with MTA policy and procedures regarding non-disclosure of security-related information.

Comment 163: The proposed facility is a security risk. Consolidating many functions into one facility makes them more vulnerable to attack, not less vulnerable as claimed in the January 2005 EA. The January 2005 EA does not provide adequate support for the assertion that consolidating functions in a centralized facility would make it easier to protect these functions from a terrorist attack. The proposed facility would be a significant target because it is the implementing tool to make the East Side Access terminal habitable and comfortable, and because disruption to its sensitive equipment (such as substations necessary to power signaling in the tunnels) would severely interfere with railroad operations, causing potential region-wide economic and transportation chaos. (Lehr, Maloney, Krueger, Querzé, Hickerson, Jacobs, VanDerbeck, Randolph, Whelehan, Zarin, LIRRCC, Leland)

Response: The comment is incorrect in its statement that the 50th Street facility is the implementing tool to make the East Side Access terminal habitable and comfortable. The facility is but one element in a much larger ventilation system that also includes air-handling fans throughout the concourse and station ventilation facilities at 44th Street, 55th Street, and 63rd Street; within the Roosevelt Hotel at 46th Street and within the building at 383 Madison Avenue (at 47th Street); on Roosevelt Island; and at multiple locations in Queens. This system is described in Chapter 1 of the January 2005 EA and this revised supplemental EA.

As described in Chapter 14 of the January 2005 EA and this revised supplemental EA, specially designed security measures would be incorporated into the 50th Street facility's design to permit the entire building to function as a security-controlled area. These security measures are being developed in coordination with the MTA Division of Security. Also as described in Chapter

14, consolidation of the different functions to be housed in the facility into one location would make it easier to protect these functions from terrorist attack. While in some cases, consolidating functions makes them more vulnerable to attack, MTA Division of Security believes that for the 50th Street facility this is not true. MTA security experts do not believe that the facility would be a significant target, and the consolidated building would be easier to protect.

Please note that in Preferred Alternative D (the revised project presented in the revised supplemental EA), certain project elements—the cooling tower, fuel oil storage tank, and electrical substations—would be relocated either to the concourse or to an adjacent building. This change was made in response to concerns raised by the public after publication of the 2005 EA related to the safety of the fuel tank in the 50th Street facility's basement as well as concerns about the size of the building and the potential adverse effects associated with the cooling tower on the roof of the 50th Street facility. While Alternatives B and C would centralize a greater number of project elements at the 50th Street site, Preferred Alternative D remains acceptable from a security standpoint. The fuel oil tank and substations would be placed in access-controlled rooms in the service corridor portion of the new East Side Access terminal, which would not be accessible to the public and MTA security personnel would still have control over access and implementation of appropriate security measures. Significant cooperation from the owners of the Colgate-Palmolive Building has made it possible to develop Alternative D and an agreement to build and maintain the cooling tower on the roof of 300 Park Avenue is under development. This agreement will include appropriate security protocols for the cooling tower.

The MTA Division of Security participates in the New York City Joint Terrorism Infrastructure Task Force, which is made up of the New York Police Department, FDNY, the Federal Bureau of Investigation, and the U.S. Department of Homeland Security, in addition to other agencies. Through this task force, and by using outside security experts, the MTA Division of Security is at the forefront of developing strategies to strengthen protections against terrorist threats at New York City's transportation facilities.

It is unfortunately true that all transportation facilities are a potential target for terrorism today. The 50th Street facility is a less likely target than many other transportation facilities, including Grand Central Terminal itself, which is located beneath the entire area from 42nd Street to approximately 50th Street, from Lexington Avenue to Madison Avenue. In the context of all the different potential transportation targets available in New York City, the 50th Street facility is considered a low-threat facility. There is no reason to conclude that the facility would be any more attractive a target than the numerous public attractions and buildings of historic or architectural interest in Midtown Manhattan.

Comment 164: The threat, risk, and vulnerability assessment conducted by MTA for the proposed facility should be reviewed by independent experts with security clearance, as well as by FTA. (Zarin)

Response: The threat, risk, and vulnerability assessment was conducted for MTA by outside security experts. It has been reviewed by FTA.

Comment 165: The January 2005 EA does not consider the potential for a biological or chemical agent being released in the proposed terminal. If biological or chemical agents were to be released in the proposed terminal, they would be diluted only to a limited degree by the emergency ventilation system, and could be exhausted from the proposed facility in concentrations high enough to pose a risk to nearby building air intakes. Air quality modeling should be performed to analyze the effects of such an event. (Egan, Malone, Zarin, Leland) Full dilution of the large volume of contaminated air that would be exhausted from the proposed facility in the event of a biological or chemical attack is impossible given the confines of the "canyon" and 50th Street, especially with adjacent building air intakes so close to the proposed facility. Air impact studies must be conducted to evaluate the air travel paths and degree of dilution once contaminated air is discharged from the facility. An air intake system for an abutting building to the proposed facility would only need 30 seconds to contaminate the entire building. (Zarin)

Response: As described in Chapter 14, the MTA Division of Security has developed a unified methodology to provide a rigorous, rational, and comprehensive method for risk assessment and mitigation prioritization for all of MTA's assets. The potential for a biological or chemical agent being released into the proposed East Side Access terminal is one of the issues being addressed by the MTA Division of Security within this comprehensive framework. Part of that effort includes developing an emergency notification system for the occupants of properties located near MTA facilities.

It would be extremely difficult to model the results of a biological or chemical attack in Grand Central Terminal without making arbitrary and speculative assumptions about the nature and amount of chemicals or biological agents that would be involved and the location of the attack, among other things. Depending on those factors, emissions could affect any number of different locations, including the 50th Street facility as well as many others. The 50th Street facility represents an improvement over the no action condition, since it would elevate the exhaust louvers above street level. As noted above in response to Comment 109, in all build alternatives, the tunnel and station exhaust louvers would be separated from the nearest buildings' air intakes by at least three times the distance required by the New York State Mechanical Code. In Preferred Alternative D, the station spill air exhaust louvers would be on the front (50th Street) façade of the 50th Street facility and the tunnel exhaust louvers would be

on the east side of the facility, directed away from the nearest building's air intakes at 437 Madison Avenue.

Comment 166: The January 2005 EA does not address the issue of how the exhaust vents on the proposed facility could be shut down in the event of a biological or chemical attack, to prevent contamination of air intakes on nearby buildings. Because the technology for detecting biological or chemical agents has not yet been invented, it would in fact be impossible to detect these agents and shut down the proposed facility's exhaust function. The EA should discuss the possibility of toxins being emitted from the exhaust vents in the event of a terrorist attack. (Zarin, Leland, Lehr) Therefore, the apparent design intent for the proposed facility, i.e., to shut down the exhaust function during emergency station conditions and have the facility operate only as an air intake, cannot be realized. The exhaust system would continue to operate after a biological or chemical agent had been released underground, spewing these toxic agents out onto 50th Street and into the air intakes of nearby buildings. (Lehr)

Response: A theoretically possible event of this nature could occur anywhere in the city, at any ventilation facility, including those that provide fresh air for the numerous large office buildings throughout Midtown Manhattan. As described in Chapter 14 of the January 2005 EA and this revised supplemental EA, protocols are being developed to protect all MTA facilities against possible terrorist attacks, including the 50th Street facility. The commenter is incorrect in stating that the design intent of the facility is to shut down the exhaust function in an emergency and operate only as an air intake. Whether the facility would operate in exhaust or intake mode would depend on the nature and location of the emergency, as described earlier in response to Comment 117.

Comment 167: The January 2005 EA's characterization of emergencies as "extremely rare" and of "very short duration" are, respectively, irrelevant and incorrect. A single underground release of biological or chemical agents, which are subsequently exhausted through the facility, would result in catastrophic impacts to the 50th Street corridor and greater Midtown neighborhood. (Zarin)

Response: As is demonstrated in the January 2005 EA and this revised supplemental EA, and reiterated and amplified in the response to these comments, MTA takes the possibility of a terrorist attack on its facilities most seriously and has developed a sophisticated and comprehensive approach to provide maximum security to its facilities, its customers, and the city's residents, workers, and visitors. Moreover, as reflected in Chapter 14 of the January 2005 EA and this revised supplemental EA and in the response to comments on the subject in this chapter, security issues have in fact been taken into account in the NEPA review process. See the response to Comment 165 above.

Comment 168: The January 2005 EA failed to consider the possibility of thwarted or failed terrorist attacks. If, for example, a canister of toxic agent is launched in an attempt to inject the toxin into the air stream to the underground tunnels, but that canister does not achieve its target, it could likely discharge elsewhere and be free to migrate to adjacent buildings or street level. This danger must be assessed in an SEIS. (Zarin)

Response: See the response to Comment 165.

Comment 169: The January 2005 EA does not discuss the recommendations of the FTA guidance document *The Public Transportation System Security and Emergency Preparedness Guide* (January 2003). (Zarin)

Response: As indicated in the January 2005 EA and this revised supplemental EA in Chapter 14, the MTA Division of Security has developed a unified methodology to provide a rigorous, rational, and comprehensive method for risk assessment and mitigation project prioritization of MTA's assets. As a first step in the development of MTA's unified methodology, a review of existing risk assessment methods was conducted. This included review of two FTA documents on risk assessment, including *The Public Transportation System Security and Emergency Preparedness Guide*, January 2003 and *General Security Risk Assessment Guidelines* prepared by ASIS International. In addition to these documents, 17 other sources were used in the development of MTA's unified methodology.

Comment 170: Although other buildings in the vicinity of the proposed project contain diesel fuel storage tanks, these buildings do not serve underground tunnels or concourses. The impact of an explosion of the diesel fuel stored in the proposed facility on the underground terminal spaces as well as the surrounding area should be addressed. The tanks' proximity to the ventilation and freight transport shafts would make them an attractive target for terrorists, potentially trapping thousands of commuters underground. The plans for protecting the proposed diesel fuel storage tanks from rupture, explosion, external fire or terrorist attack should be provided to the public. (Egan, Maloney, Querzé, Holzer/Zankl, Herfort, Zarin, Biggs)

Response: Safety and security concerns related to storage of diesel fuel were addressed in the January 2005 EA and this revised supplemental EA in Chapter 14, "Safety and Security." As described in the January 2005 EA and this revised supplemental EA, the building's fuel tank would be designed in accordance with the New York City Building Code. The fuel tank room would be vaulted and located in the lowest level of the building, constructed in solid bedrock. The fuel tank room would be surrounded by a 3-hour rated fire wall and would have containment to prevent leaks. The entire facility would include state-of-the-art

access controls. The design of the fuel tank and fuel tank room were reviewed and approved by the FDNY (see response to Comment 23).

Nonetheless, in response to public concerns about the safety of the fuel tank in the 50th Street facility, since the January 2005 EA was published, additional study has been conducted of alternative locations for the emergency generators and fuel storage. Additional information on these alternatives has been provided in Chapter 2 of this revised supplemental EA. As a result of this evaluation, the tank has been moved to a location in the East Side Access concourse.

Note that the explosive capacity of diesel fuel is highly dependent on the volume of the surrounding air space, which is represented by the volume of the room in which the tank is located. The tank would be located in a 13-foot by 36-foot by 21-foot-tall space, resulting in a very small explosive potential. Diesel fuel does not present a large risk of exploding or igniting, since it must be heated to a high temperature before it will burn. The "flash point" for diesel fuel (the point at which it will burn) is between 126º F and 205º F, meaning that the fuel does not give off combustible vapors until it is heated to that temperature. In contrast, gasoline is highly combustible, with a flashpoint of -45º F, indicating that it emits combustible vapors at all times.

Comment 171: Activities at the proposed facility could result in accidental fire or explosion. (Lang)

Response: The 50th Street facility would be designed in accordance with the latest fire-safe design principles, which are based on two objectives: (1) to reduce the likelihood of accidents and fires from occurring, and (2) in the event of such incidents, to reduce their consequences. The facility would be constructed of concrete and other fire-safe materials and incorporate state-of-the-art fire prevention and fire suppression mechanisms. While an accidental fire or explosion could occur anywhere, MTA and its operating agencies have effective system safety programs in place to protect the lives of the millions of customers who ride the system every day and the tens of thousands of employees who operate it. Also note that in response to public concerns about inclusion of the fuel tank in the 50th Street facility, the tank has been moved to a location in the East Side Access concourse, under Preferred Alternative D.

CONSTRUCTION AND CONSTRUCTION IMPACTS

GENERAL

Comment 172: Construction of the proposed project would adversely affect the surrounding area, and the character of 50th Street. Contrary to statements in the January 2005 EA, construction of this duration is not typical in Manhattan, and seven years of construction cannot be considered "temporary." Use of the site for a

construction staging area is a dramatic change in the project that would have a long-term adverse impact on the facility's neighbors, including the Palace Hotel. (Lefkowitz, Lancaster, Fields, Silverblatt, Lang, David, Zarin, Kalish)

Response: The January 2005 EA and this revised supplemental EA include a full evaluation of the project's effects on the character of the surrounding neighborhood during construction in Chapter 15 ("Construction Impacts"). This includes analyses of the different environmental issues that can contribute to neighborhood character, including land use and social conditions, socioeconomic conditions, visual character, historic resources, traffic, air quality, and noise and vibration. The analyses in the January 2005 EA and this revised supplemental EA were conducted following the guidance of New York City's *CEQR Technical Manual*. The January 2005 EA and this revised supplemental EA conclude that the 6 (not 7) years of construction activity at the 50th Street facility would not result in adverse effects to the character of 50th Street or the surrounding area. As described in Chapter 15, while construction of the 50th Street facility would result in inconveniences related to increased traffic and noise and access limitations, it would not result in conflicts with the surrounding land uses. Furthermore, the types of construction activities related to the facility would be similar to construction activities occurring throughout the city and would not be expected to alter the character of the neighborhood.

In response to public comments regarding the length of the construction period and use of the 50th Street site for East Side Access construction access and staging, the proposed construction sequencing for the 50th Street facility has been changed as part of Preferred Alternative D. Access and staging for the new LIRR concourse construction would no longer occur on the vacant site after demolition of the five buildings on the site. Under Preferred Alternative D's revised plan, which is presented in detail in Chapter 15 of this revised supplemental EA, construction of the 50th Street facility—including building demolition, street excavation and shaft construction, construction of the new facility, and most of the facility's fit-out—would occur within a period of less than 2½ years. Once the building structure is complete, the facility's loading dock would be used to accept deliveries related to construction activities occurring below for the new LIRR concourse at Grand Central Terminal. Materials would be moved from the dock to the concourse level via cranes within the facility, using the facility's freight elevator shafts and ventilation shafts. Once the concourse is complete, some final interior work would be required at 50th Street to install the freight elevator and tunnel ventilation fans. This new construction plan would reduce the time when noticeable construction activities would occur at the site from approximately 6 years to less than 2½ years.

Comment 173: Construction of the proposed facility would adversely affect property values in the surrounding area. (Corcoran, Lancaster, VanDerbeck, Herfort, Zarin) The

project would adversely affect tourism, as well as the attraction and retention of businesses, in the vicinity of the proposed facility. (Sampson)

Response: Chapter 15 of the January 2005 EA and this revised supplemental EA describe the effects of the project's construction activities on the surrounding area and concludes that the construction activities would not result in significant adverse impacts to neighborhood character or to surrounding businesses. Construction of the project would be similar to any other construction project in Midtown, and would not result in adverse effects to neighborhood character. As described in response to the previous comment, the proposed construction sequencing plan has been revised. In the revised plan, the bulk of the construction activities would occur within a period of less than 2½ years with little noticeable construction activity after that time.

This revised supplemental EA includes a description of the project's Maintenance and Protection of Traffic Plan (MPT). Under this plan, the construction work would be conducted so that no more than one traffic lane would be affected, and two or more lanes of traffic could continue to operate at all times between 7 AM and 7 PM, Mondays through Fridays, on 50th Street. Only partial narrowings (not closures) of the sidewalk would be required during the daytime, and access would be maintained to all adjacent buildings. Therefore, the construction activities are not expected to adversely affect property values or tourism in the area.

Comment 174: Construction activities for the proposed project would negatively affect the existing restaurants on 50th Street and their employees, and result in significant adverse impacts to the Palace Hotel, and possible loss of clientele. This issue is not adequately addressed in the January 2005 EA. The January 2005 EA is defective in not identifying a significant adverse impact on the hotel from construction activities. (Silverblatt, Newton, Lefkowitz)

Response: Effects of construction activities required for the facility are discussed in Chapter 15 ("Construction Impacts") of the January 2005 EA. As noted there, the East Side Access Project would work closely with the Palace Hotel, which is directly across 50th Street from the project site, to limit disturbances to the hotel. Overall, while there may be some inconvenience and disruption associated with construction, this would be similar to construction at any other site in Manhattan. As noted in the January 2005 EA, the nearest businesses—the restaurant across 50th Street and the Palace Hotel—would be subject to some disruption, but access would be maintained to those businesses at all times. Please see the responses to Comments 172 and 173, above. In terms of construction-related effects on traffic, the proposed 50th Street facility would have less effect on 50th Street during construction than the FEIS design.

Comment 175: The facility would generate air pollutants, dust, noise, and vibrations during its construction that would adversely affect nearby historic resources. (Lang)

Response: All construction activities at the project site, as well as operation of the 50th Street facility, would be conducted in accordance with MTA standard operating procedures, which are designed to prevent accidents, promote safety and avoid disturbance to surrounding land uses.

As stated in Chapter 15 of the January 2005 EA and this revised supplemental EA, to avoid accidental damage to the Villard Houses, the only historic structure located within 200 feet of the proposed project, construction activities would be conducted in accordance with the specifications of a Construction Protection Plan developed for the East Side Access Project in coordination with the SHPO and LPC.

Comment 176: The proposed project site would be used for the removal of spoil generated by tunnel and cavern drilling and excavation. (Lefkowitz)

Response: The project site would not be used for removal of spoil from tunnel and cavern excavation. These materials would be removed by rail to the Sunnyside rail complex in Queens. As described in the January 2005 EA and this revised supplemental EA (see Chapter 15), the project site would be used for delivery of consumable hardware supplies and such items as wood, steel, and concrete.

Comment 177: The January 2005 EA does not adequately address geotechnical issues related to construction of the proposed facility. (Lang, Zarin, Leland) The vertical excavation required for the facility presents greater geotechnical risks to nearby historic structures than horizontal tunnel boring. (Zarin) The January 2005 EA impermissibly defers the performance of geotechnical studies until some later unspecified date. All geotechnical studies and analyses necessary to demonstrate that the proposed project would not adversely affect the foundations and structural integrity of nearby buildings should be made part of the EA. In conjunction with the geotechnical feasibility study, the January 2005 EA should also have included an analysis of the conditions of existing buildings following the protocol recommended by the New York City Department of Design Construction. (Leland, Zarin, Ambient)

Response: The East Side Access Project has performed extensive geotechnical investigations and analyses that are reflected in the project's design. In Manhattan alone, more than 200 geotechnical test borings have been performed, augmented by geophysical testing, laboratory testing of samples, and perhaps most significantly by detailed geological mapping of the exposed bedrock beneath 50th Street within the existing Metro-North trainshed area associated with Grand Central Terminal. Detailed geotechnical investigations in the vicinity of the 50th Street facility were conducted as part of the engineering

analysis for the FEIS design, which included ventilation shafts on both 49th and 50th Streets. The East Side Access engineers are thoroughly familiar with the soil and rock conditions, groundwater levels, nearby infrastructure, and all the related concerns associated with rock excavation. These lengthy and detailed studies were an important input to the project's design, but are not customarily included in environmental analyses for FTA projects or for buildings constructed in Midtown Manhattan. Four additional geotechnical borings will be completed at the 50th Street site during the preliminary engineering stage to confirm site conditions.

The East Side Access engineers have been involved with countless similar rock excavation projects that are present throughout Manhattan, including the vertical excavation for the new Bear Stearns building at 383 Madison Avenue three blocks south of 50th Street, vertical excavation immediately adjacent to St. Thomas Church at 53rd Street for the expanded Museum of Modern Art, excavation of rock directly beneath the existing Carnegie Hall for the creation of Zankel Hall, vertical cuts adjacent to all three historic buildings in the Morgan Library Museum complex, vertical rock cuts for the Equitable Tower on 51st Street, and numerous others. (The EISs for these projects also did not provide geotechnical data.) Interesting results from participation on these projects included vibration measurements showing that the vibration from the organ playing at Radio City Music Hall exceeded the vibration for rock excavation across the street, and the vibration from an orchestra playing on the main stage at Carnegie Hall exceeded the vibration from rock excavation in the basement area that is now Zankel Hall. Essentially every major building in Midtown Manhattan has involved rock excavation.

The geotechnical requirements for the 50th Street facility are comparable in terms of complexity to the projects cited above, are extremely well understood, and have been incorporated into the planning and design for the facility.

TRAFFIC

Comment 178: The January 2005 EA does not adequately analyze the potential for traffic impacts during the construction period. Sidewalk and lane closures would occur practically throughout the entire 6- to 7-year construction period. Closure of a sidewalk would have the effect of closing a travel lane, since a temporary sidewalk would be maintained adjacent to the construction zone. Even when no lane or sidewalk closures would occur, as during use of the site for construction staging in Phase 3, the January 2005 EA states that trucks would have to wait in the curb lane, which would effectively close that lane to traffic. According to *CEQR Technical Manual* guidance, a detailed analysis of potential traffic and pedestrian impacts during the proposed construction period must be conducted, because of the long duration and large magnitude of the proposed construction activities, and because the proposed construction activities would impede the

operation of sidewalks and bus stops. Contrary to statements in the January 2005 EA, construction of this duration is not typical in Manhattan. (Horodniceanu, Zarin, Adler, Biggs, Leland)

Response: As described in the Transportation section of Chapter 15, "Construction Impacts," the through drive (included in Alternative C and Preferred Alternative D) would represent a significant benefit in terms of lane and sidewalk closures over the no action alternative. Since the January 2005 EA was published, the project team has continued to work with NYCDOT to develop a Maintenance and Protection of Traffic Plan (MPT). The MPT is now described in this revised supplemental EA (see Chapter 15). As described there, the construction work is being designed so that no more than one lane of traffic would be affected, and two or more lanes would remain unaffected at all times between 7 AM and 7 PM, Mondays through Fridays, to comply with the Thru Streets program. As noted in response to Comment 172, the proposed construction sequencing plan has been revised. In the new plan, demolition and construction activities would occur on the project site for a period of less than 2½ years. Once the 50th Street facility structure is complete, the facility's loading dock would be used to accept deliveries related to construction activities occurring below for the new LIRR concourse at Grand Central Terminal

Only partial sidewalk narrowings (not closures) would be required during the daytime, and access would be maintained to all adjacent buildings. According to pedestrian counts taken on 50th Street (provided in Appendix D-5, "Pedestrian Data," in Appendix D to this revised supplemental EA), the sidewalks along 50th Street do not experience heavy pedestrian volumes, so the sidewalk narrowings would not be expected to result in significant adverse impacts on pedestrian conditions.

Comment 179: Closing lanes for this duration would have a considerable negative impact on bus travel times and the Thru Street program, which was not described in the January 2005 EA. The *CEQR Technical Manual* states "Should any bus stops, subway access points, or bus routes be affected by construction activity, such impacts must be identified and also reviewed with New York City Transit and the New York City Department of Transportation." (Adler)

Response: As noted in the response to the previous comment, MTA has been working with NYCDOT in developing the Maintenance and Protection of Traffic Plan. That plan has been developed to avoid lengthy lane closures and adverse effects on the Thru Street program. No changes are proposed to MTA's bus stop on 50th Street.

Comment 180: The January 2005 EA incorrectly concludes that 49th and 50th Streets' function as Thru Streets would not be significantly affected, since the same condition present today, one moving lane, would remain. The January 2005 EA fails to

consider that existing adverse conditions would be significantly exacerbated by the proposed lane closures. (Zarin)

Response: See the response to the previous comment. With implementation of the project's MPT, the existing adverse conditions would not be exacerbated.

Comment 181: The January 2005 EA does not provide supporting information demonstrating how the construction-period trip generation estimates were derived. (Zarin)

Response: There is no standard trip generation rate typically used to develop estimates of construction trips associated with a particular project; rather, the number of trips is estimated based on the specific type of construction expected. MTA has secured the services of the Bechtel/URS joint venture team (which includes other specialized firms such as Hatch Mott McDonald) to serve as the overall program and construction managers for the East Side Access Project. These firms have worldwide reputations for excellence in the construction management of large and complex undertakings. East Side Access Project team members have been directly involved with projects such as the Third Water Tunnel in New York City, and construction of transit systems in the United States and around the world, including ventilation building construction. The number of trips required during construction was provided by these project team members based on their work experience and a review of the construction scope and schedule associated with the work at 50th Street and construction of the East Side Access Project's Manhattan alignment.

Comment 182: The January 2005 EA does not include the Maintenance and Protection of Traffic Plan or provide information on how MTA would enforce restricted delivery times during the construction period to avoid traffic disruptions. (Leland) Failure to include the Maintenance and Protection Plan for the proposed project in the January 2005 EA constitutes a violation of NEPA. (Zarin)

Response: MPTs are not typically included an EA or an EIS; rather, lane closure information such as that found in Chapter 15 of the January 2005 EA is provided. In response to public comments, since the January 2005 EA was published, the project team has continued to work with NYCDOT to develop an MPT. The MPT is now described in this revised supplemental EA (see Chapter 15).

Comment 183: The EA must analyze the effects of the East Side Access Project's planned simultaneous closure of one or more lanes on four streets (50th, 52nd, 53rd, and 54th Streets), three of which run in the same eastbound direction. Removal of the north wall of Grand Central Terminal to provide access to the Racquet and Tennis Club for necessary underpinning along 52nd Street is expected to take as much as 2 years. A portion of 54th Street is expected to be closed for 3 years,

and the construction on 53rd Street is expected to keep a portion of that street closed for 4 years for the construction of additional ventilation facilities. (Zarin, Adler)

Response: The lane closures referred to in the comment were described in the East Side Access FEIS as impacts associated with an engineering option for the project that was not selected as the preferred option. As described in the FEIS, that option (referred to as Option 1) would have involved a more shallow train terminal that required much more disruptive construction activity. This was one of the primary reasons why Option 1 was rejected. The East Side Access Project's selected design option (referred to as Option 2 in the FEIS) would not require closure of 52nd, 53rd, and 54th Streets during construction.

Comment 184: Any trucks traveling to or from the proposed project site would be especially detrimental to street operations and neighborhood character since they would be traveling on streets that are not designated truck routes. The closest avenues that are designated "Local Truck Routes" by NYCDOT are Eighth Avenue, Third Avenue, and Lexington Avenue. The nearest cross streets designated as truck routes are 42nd Street and 57th Streets. In addition, all trucks are subject to the special restrictions for traveling in the Midtown Core. (Adler)

Response: See the response to Comment 73.

Comment 185: The through drive alternative would not reduce construction traffic effects relative to the alternative without a through drive. The site of the proposed facility would be an open pit during most of the construction period. Trucks would not be able to drive through. (Horodniceanu)

Response: As described in Chapter 15, "Construction Impacts," of the January 2005 EA and this revised supplemental EA, the proposed demolition of the existing building at 45 East 49th Street to create a through drive would provide additional space for truck loading and unloading at the construction site, eliminating the need for a truck staging area on 50th Street. It would also provide for a smoother flow of construction vehicles into and out of the site, by allowing trucks to enter from 49th Street and exit from 50th Street.

The entire site would not be an open pit. As noted in response to Comment 172, the proposed construction sequencing plan has been revised. After the buildings are demolished, the 50th Street facility would be constructed on the site. Once the facility structure is complete, the facility's loading dock would be used to accept deliveries related to construction activities occurring below for the new LIRR concourse at Grand Central Terminal.

NOISE

Comment 186: The January 2005 EA does not adequately analyze the potential for noise impacts during the construction period. The proposed construction activities would result in significant adverse noise impacts. (Zarin) Given the 7-year duration of project construction activities, the construction of the proposed facility cannot reasonably be labeled as temporary and the FTA's construction impact criteria should not be applied. The *CEQR Technical Manual* (page 3R-18) references impact criteria that are lower than those utilized in the January 2005 EA (Zarin)

Response: The analysis of potential noise impacts during the construction period for the proposed project is presented in the "Noise and Vibration" section of Chapter 15, "Construction Impacts," of the January 2005 EA and this revised supplemental EA. The analysis includes consideration of mobile source and stationary source impacts, as was performed in accordance with FTA and CEQR construction noise analysis guidelines. The total construction period described in the January 2005 EA is 6, not 7, years. As noted above in response to Comment 172, the construction sequencing plan has since been revised in response to public comments. The total duration for noticeable the demolition and construction activity on the project site in the revised plan would be less than 2½ years.

The commenter's reference to page 3R-18 of the CEQR Technical Manual is incorrect, because the reference applies to noise impacts from permanent operations. Construction period impacts are addressed on page 3R-1, with the statement "Construction noise is examined separately because, even though the duration of construction activities may be years, it is temporary. The duration of each phase of construction is a factor that should be considered when assessing noise from construction activities."

The potential noise impacts from each phase of the proposed project's construction activities were quantitatively assessed in Chapter 15, "Construction Impacts," of the January 2005 EA and this revised supplemental EA. Based on this analysis, no significant adverse construction noise impacts would result.

Comment 187: Windows fronting the proposed construction site could not be left open during the project's construction period without resulting in an intolerable interference with indoor office activities. The construction noises would readily pass through closed windows as well, with insufficient attenuation to eliminate chronic disturbances of working routines. Communications on street level would also be severely affected during construction. The construction noise would be so overwhelming that it would inhibit the normal use and enjoyment of the 50th Street area. The proposed site and surrounding area would approach the sound

levels of a rock concert for seven years, based on the predicted noise levels contained in the January 2005 EA. (Zarin)

Response: Maximum 1-hour L_{eq} construction noise levels presented in the January 2005 EA vary between 77 and 92 dBA, depending on the affected receptor and the time of day. It is important to note, however, that these are worst-case noise levels, calculated using the conservative assumption that the two noisiest pieces of construction equipment operate simultaneously, in accordance with FTA guidance for conducting a general construction noise assessment. In reality, maximum 1-hour construction noise levels would be lower, because the two noisiest pieces of construction equipment would not likely be operated simultaneously for an entire hour.

Nevertheless, using the worst-case screening levels reported above, and assuming a minimum window attenuation of 35 dBA for a closed-window condition, interior noise levels would vary between 42 and 57 dBA during the short-term periods when worst-case noise levels would result. Regarding outdoor noise levels at street and sidewalk level on 50th Street, the highest noise level that was projected—92 dBA at the sidewalk adjacent to the project site—would be comparable to the noise level generated by a passing heavy truck or bus.

See the response to Comment 172 regarding the duration of construction activities on the project site.

In conclusion, the proposed project's construction period noise impacts are fully analyzed in Chapter 15, "Construction Impacts," of the January 2005 EA and this revised supplemental EA. The potential for construction noise impacts was conservatively assessed using the FTA general noise assessment methodology, as described above. This analysis concluded that the proposed project's construction activities would not result in exceedance of the FTA construction-period noise impact thresholds during any phase of the proposed construction activities. Therefore, no significant adverse construction noise impacts would result.

Comment 188: The statement in the January 2005 EA that the proposed project would not result in a doubling of passenger car equivalents (PCEs) during construction, and therefore does not require a detailed mobile source noise analysis as per *CEQR Technical Manual* guidance, is incorrect. The methodology used to determine PCEs in the January 2005 EA is unreliable and even if project-generated vehicles would not by themselves cause a significant adverse mobile source noise impact, they must be studied as part of the larger project to determine the project's aggregate noise impacts. (Zarin)

Response: As described in Chapter 15 of the January 2005 EA and this revised supplemental EA, the proposed construction activities would generate 20 trucks

per day during Phases 1 and 2 and a portion of Phase 4, up to 50 trucks per day during Phase 3 concrete deliveries, and 10 trucks per day during the rest of the construction period. The statement in the January 2005 EA and this revised supplemental EA that this level of trip generation would not double the PCEs on any streets affected by the proposed construction activities is correct.

See also the response to Comment 160 regarding calculation of noise PCEs. As noted there, for purposes of evaluating noise, as set forth in the *CEQR Technical Manual*, one heavy truck is equivalent to 47 passenger cars in terms of the noise generated. These noise PCEs are not the same as PCEs used to calculate traffic impacts, described earlier. Since the existing traffic volumes on East 49th and 50th Streets range from 500 to 800 vehicles per hour during weekday daytime hours, the project would have to generate an additional 500 to 800 noise PCEs to result in a significant mobile source noise impact on those streets. The highest construction period truck traffic of 50 trucks per day would yield seven to eight trucks during any peak hour, conservatively assuming that 15 percent of the daily truck traffic occurs during a single hour. Making the further conservative assumption that all of these trucks would be heavy trucks would yield a maximum of 329 to 376 project-generated PCEs. Finally, using the conservative simplifying assumption that all existing vehicles on East 49th and East 50th Streets are passenger cars, the proposed construction activities still would not double the number of existing PCEs.

The proposed project's aggregate noise impacts during construction are fully analyzed in Chapter 15, "Construction Impacts." The potential for construction noise impacts was conservatively assessed using the FTA general noise assessment methodology, as described in the response to another comment below. This analysis concluded that the proposed project's construction activities would not result in any significant adverse noise impacts.

Comment 189: The January 2005 EA incorrectly uses 1-hour ($L_{eq(1)}$) project-generated construction noise levels to assess the potential for construction noise impacts. Shorter term noise levels are better representative of the impacts associated with intermittent uses of construction equipment. (Zarin)

Response: The January 2005 EA correctly uses 1-hour ($L_{eq(1)}$) project-generated construction noise levels to assess the potential for construction noise impacts, in accordance with FTA guidance for conducting a general construction noise assessment. As stated in the "Noise" section of Chapter 15 of the January 2005 EA, FTA impact criteria for construction noise would not be exceeded for the proposed project.

Comment 190: The January 2005 EA incorrectly analyzes a scenario in which the two noisiest pieces of construction equipment are assumed to operate simultaneously. A

construction project of this magnitude would have many more pieces of equipment in operation at the same time. (Zarin)

Response: The January 2005 EA correctly analyzes the two noisiest pieces of construction equipment operating simultaneously, in accordance with FTA guidance for conducting a general construction noise assessment. This general assessment is conservative, because in reality the two noisiest pieces of construction equipment would not likely be operated simultaneously for an entire hour. As stated in the Noise section of Chapter 15 of the January 2005 EA, FTA impact criteria for construction noise would not be exceeded for the proposed project.

Comment 191: The January 2005 EA did not include documentation for the noise levels and operating parameters for equipment that would be used during the project's construction, so there is no way for FTA or the public to confirm this information. (Zarin)

Response: Table 15-3 of the January 2005 EA lists construction equipment noise emission levels, as reported in the FTA guidance document *Transit Noise and Vibration Impact Assessment* (April 1995). A representative list of construction equipment that would be used for the proposed project, and the operating parameters on which the FTA construction noise analysis included in the January 2005 EA was based, are included in Appendix F to this revised supplemental EA.

AIR QUALITY

Comment 192: EPA recommends the use of ultra-low-sulfur diesel fuel with diesel oxidation catalysts and/or diesel particulate filters on all construction equipment to minimize emissions. This would support the ongoing efforts to utilize low emissions technology and equipment being used in the reconstruction of Lower Manhattan. (Musumeci)

Response: Ultra-low-sulfur diesel fuel and diesel particulate filters would be used in non-road construction equipment at the 50th Street facility construction site. The East Side Access project as a whole is following the protocols established in the Lower Manhattan reconstruction efforts to protect air quality during construction in both Queens and Manhattan.

Comment 193: The January 2005 EA does not adequately analyze the potential for air quality impacts during the construction period. The January 2005 EA only uses the traffic that will be generated by the project after completion as criteria for compliance with CEQR. During construction, there would be a significant diversion of traffic for 6 years, which is a long-term condition. An air quality analysis should be conducted for this traffic diversion. (Ambient)

Response: The commenter is incorrect. The traffic associated with the project-related construction activities, and the potential for related mobile source air quality effects, are analyzed in the January 2005 EA. The analysis of the completed project is provided in Chapters 7 and 8; a full description of construction activities and related environmental effects is provided separately in Chapter 15. As described in Chapter 15 of the January 2005 EA, the highest truck trip generation during construction of the proposed project would be 100 trips per day (50 arrivals and 50 departures), during the concrete delivery portion of Phase 3. Truck trip generation during other phases of construction would be lower. Assuming 15 percent of these trips arrive during the peak hour would result in 15 truck trips. This level of trip generation is below the 75 peak hour trip threshold cited in New York City's *CEQR Technical Manual* as warranting detailed analysis for potential air quality impacts. It is also below the 21 peak hour truck trip threshold specified by NYCDEP as warranting detailed analysis of potential $PM_{2.5}$ impacts.

While it is true that some traffic diversions can be expected due to the partial lane closures that would be required during the proposed project's construction period, such lane closures would only be required for a total of approximately 2 years, not the entire 6-year construction period. See also the response to Comment 172, regarding the revised construction sequencing plan. The magnitude of traffic diversions would be minimized through implementation of the proposed project's MPT plan, which has been developed in close consultation with NYCDOT.

Based on the above information, and the fact that construction workers reporting to the 50th Street construction site are expected to arrive via public transportation, as discussed in the traffic section of Chapter 15, "Construction Impacts," the proposed project's construction activities are not expected to result in any significant adverse mobile source air quality impacts.

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