A. INTRODUCTION

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern that could pose a hazard to workers and others and/or the environment associated with the Proposed Action. The Proposed Action would include installing streetscape improvements such as benches, lighting, new paving, riparian trees and vegetation, and the widening of existing sidewalks.

CATHERINE SLIP

The project site currently consists of an approximately 400-foot-long section of asphalt road with two vegetated center malls. Environmental conditions resulting from previous and existing uses, both onsite and in the surrounding area, were assessed by review of *Phase I Environmental Site Assessment Report – Catherine Slip* (AKRF, Inc., February 2007).

RUTGERS SLIP

The project site currently consists of an asphalt road. Environmental conditions resulting from previous and existing uses, both onsite and in the surrounding area, were assessed by review of *Phase I Environmental Site Assessment Report – Rutgers Slip* (AKRF, Inc., February 2007).

MONTGOMERY SLIP

The project site currently consists of an approximately 1,000-foot-long section of asphalt road. Environmental conditions resulting from previous and existing uses, both onsite and in the surrounding area, were assessed by review of *Phase I Environmental Site Assessment Report – Montgomery Street* (AKRF, Inc., February 2007).

B. EXISTING CONDITIONS

CATHERINE SLIP

SUBSURFACE CONDITIONS

The project site is located at approximately five feet above mean sea level. Groundwater is estimated to be approximately five feet below grade and would be expected to flow in a generally southerly direction, toward East River, but flow may be affected by past filling activities, underground utilities and other subsurface openings or obstructions, tidal fluctuations, and other factors beyond the scope of the study. Bedrock is expected approximately 100 feet below grade. Groundwater in Manhattan is not used as a source of drinking water.

PHASE I STUDY

The Phase I reviewed a variety of information sources including: Sanborn™ Fire Insurance maps; environmental regulatory agency databases identifying state and/or federally listed sites; and city databases and records (Department of Buildings and Fire Department) to assist in identifying prior uses. In addition, the Phase I included reconnaissance of the site and surrounding neighborhood. The Phase I research indicated that the subject site was developed prior to 1892 with a road and two center malls occupied by two one-story buildings housing a market. The center malls and buildings were demolished by 1923, and new center malls were constructed by 2006. The remainder of the site remained a road until the present time.

The Phase I identified potential sources of contamination adjacent to the site or in the surrounding area, including underground transformer vaults and buried gasoline tanks.

RUTGERS SLIP

SUBSURFACE CONDITIONS

The project site is located at approximately five to ten feet above mean sea level, sloping down from north to south. Groundwater is estimated to be approximately five to ten feet below grade and would be expected to flow in a generally southerly direction, toward East River, but flow may be affected by past filling activities, tidal fluctuations, underground utilities and other subsurface openings or obstructions, such as the subway tunnel running north to south beneath Rutgers Park. Bedrock is expected approximately 100 feet below grade. As noted above, groundwater in Manhattan is not used as a source of drinking water.

PHASE I STUDY

The Phase I reviewed a variety of information sources including: Sanborn™ Fire Insurance maps; environmental regulatory agency databases identifying state and/or federally listed sites; and city databases and records (Department of Buildings and Fire Department) to assist in identifying prior uses. In addition, the Phase I included reconnaissance of the site and surrounding neighborhood. The Phase I research indicated that the subject site was a road since prior to 1894. By 2006, a subway tunnel (F) passed beneath the east-adjacent park.

The Phase I identified potential sources of contamination on- and off-site, including a potential on-site petroleum spill containing xylenes and lead; a potential on-site spill of an unknown petroleum; an adjacent transformer vault; a transformer substation in close proximity to the site; a historically adjacent manufactory of oil and gas stoves, and historical properties with buried gas tanks in the surrounding area.

MONTGOMERY SLIP

SUBSURFACE CONDITIONS

The project site is located at approximately 10 to 30 feet above mean sea level, sloping down from north to south. Groundwater is estimated to be approximately 10 to 30 feet below grade and would be expected to flow in a generally southerly direction, toward East River, but flow may be affected by past filling activities, underground utilities and other subsurface openings or obstructions, tidal fluctuations, and other factors beyond the scope of the study. Bedrock is

expected approximately 60 feet below grade. As noted above, groundwater in Manhattan is not used as a source of drinking water.

PHASE I STUDY

The Phase I reviewed a variety of information sources including: Sanborn™ Fire Insurance maps; environmental regulatory agency databases identifying state and/or federally listed sites; and city databases and records (Department of Buildings and Fire Department) to assist in identifying prior uses. In addition, the Phase I included reconnaissance of the site and surrounding neighborhood. The Phase I research indicated that the western portion of the subject site was developed as a road since prior to 1894. The eastern portion of the site was occupied by commercial and residential buildings prior to 1951. On-site buildings were demolished and the eastern portion of the site became part of the road by 1976.

The Phase I identified potential for contamination from on- and off-site sources, including two adjacent transformer vaults and historically adjacent buried gasoline tanks.

C. THE FUTURE WITHOUT THE PROPOSED ACTION

Absent the proposed project, subsurface disturbance would not occur, and the materials of concern identified above would remain on each of the sites.

D. PROBABLE IMPACTS OF THE PROPOSED ACTION

CATHERINE SLIP

There is little potential for adverse impacts during construction activities resulting from the potential presence of subsurface contamination, as disturbance is anticipated to be limited to, at most, shallow excavation. Although excavation and construction activities could increase pathways for human exposure, impacts would be avoided by performing construction activities in accordance with the following:

- All activities involving disturbance of existing soils would be conducted in accordance with a Health and Safety Plan (HASP) that would detail measures to reduce the potential for exposure (e.g., dust control) and measures to identify and manage known contamination (e.g., contaminated soil) and unexpectedly encountered contamination.
- All material that needs to be disposed of (e.g., both contaminated soil and excess fill including demolition debris) would be properly handled and disposed of off-site in accordance with all applicable federal, state and local regulations.
- If planned construction will create the potential of disturbing on-site electrical manholes, these manholes would be assessed for the presence of asbestos-containing materials (ACMs), lead waste and polychlorinated biphenyls (PCBs) and any such materials would be managed and disposed of in accordance with applicable federal, state and local regulations.

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from construction activities on the project site. Following construction, there would be no potential for the proposed project to have significant adverse impacts.

RUTGERS SLIP

There is little potential for adverse impacts during construction activities resulting from the potential presence of subsurface contamination, because subsurface disturbance for the proposed improvements is anticipated to be limited to, at most, shallow excavation for most of the site**.** Although excavation and construction activities could increase pathways for human exposure, impacts would be avoided by performing construction activities in accordance with the following:

- All activities involving disturbance of existing soils would be conducted in accordance with a Health and Safety Plan (HASP) that would detail measures to reduce the potential for exposure (e.g., dust control) and measures to identify and manage known contamination (e.g., contaminated soil) and unexpectedly encountered contamination.
- All material that needs to be disposed of (e.g., both contaminated soil and excess fill) would be properly handled and disposed of off-site in accordance with all applicable federal, state and local regulations.
- If planned construction will create the potential of disturbing on-site electrical manhole, this manhole would be assessed for the presence of asbestos-containing materials (ACMs), lead waste and polychlorinated biphenyls (PCBs) and any such materials would be managed and disposed of in accordance with applicable federal, state and local regulations.

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from construction activities on the project site. Following construction, there would be no potential for the proposed project to have significant adverse impacts.

MONTGOMERY SLIP

There is little potential for adverse impacts during construction activities resulting from the potential presence of subsurface contamination, because subsurface disturbance for the proposed improvements is anticipated to be limited to, at most, shallow excavation for most of the site. Although excavation and construction activities could increase pathways for human exposure, impacts would be avoided by performing construction activities in accordance with the following:

- All activities involving disturbance of existing soils would be conducted in accordance with a Health and Safety Plan (HASP) that would detail measures to reduce the potential for exposure (e.g., dust control) and measures to identify and manage known contamination (e.g., contaminated soil) and unexpectedly encountered contamination.
- All material that needs to be disposed of (e.g., both contaminated soil and excess fill) would be properly handled and disposed of off-site in accordance with all applicable federal, state and local regulations.
- If planned construction will create the potential of disturbing on-site electrical manholes, these manholes would be assessed for the presence of asbestos-containing materials (ACMs), lead waste and polychlorinated biphenyls (PCBs) and any such materials would be managed and disposed of in accordance with applicable federal, state and local regulations.

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from construction activities on the project site. Following construction, there would be no potential for the proposed project to have significant adverse impacts. ✷