TECHNICAL MEMORANDUM

Pier 57 Redevelopment Project (CEQR No. 11HRP001M)

December 8, 2015

A. INTRODUCTION

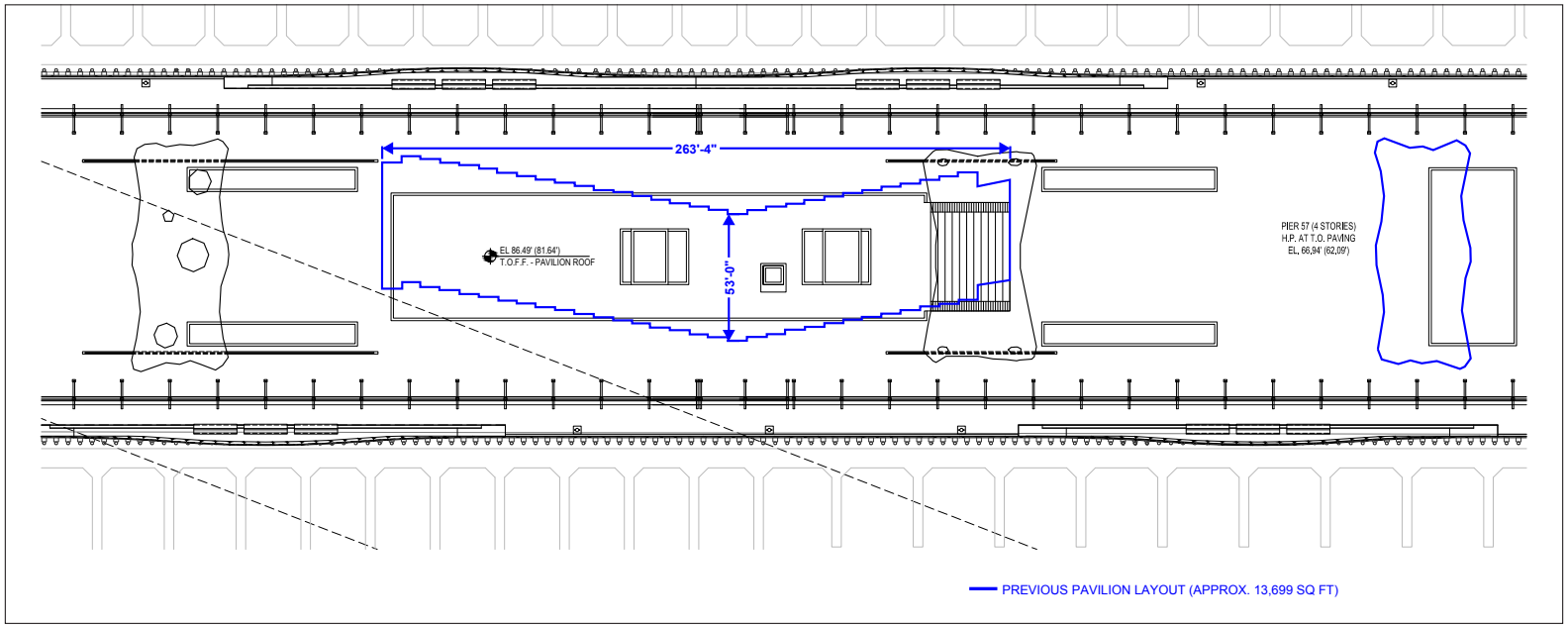
The Hudson River Park Trust (HRPT) issued a Notice of Completion for the Pier 57 Redevelopment Project Final Environmental Impact Statement (FEIS) on February 22, 2013. The Pier 57 Redevelopment Project, which was subsequently approved by the City Planning Commission (CPC) and City Council on March 6, 2013 and April 9, 2013, respectively, is referred to in this memorandum as "the previously-analyzed project." The approvals granted by the CPC and City Council for the previously-analyzed project are described below. Under the previously-analyzed project, the historic Pier 57 site, which is located within Hudson River Park at approximately West 15th Street (the "project site"), would be rehabilitated and redeveloped with approximately 428,000 gross square feet (gsf) of retail, restaurant and other commercial uses and educational and cultural uses, as well as a marina and public open space.

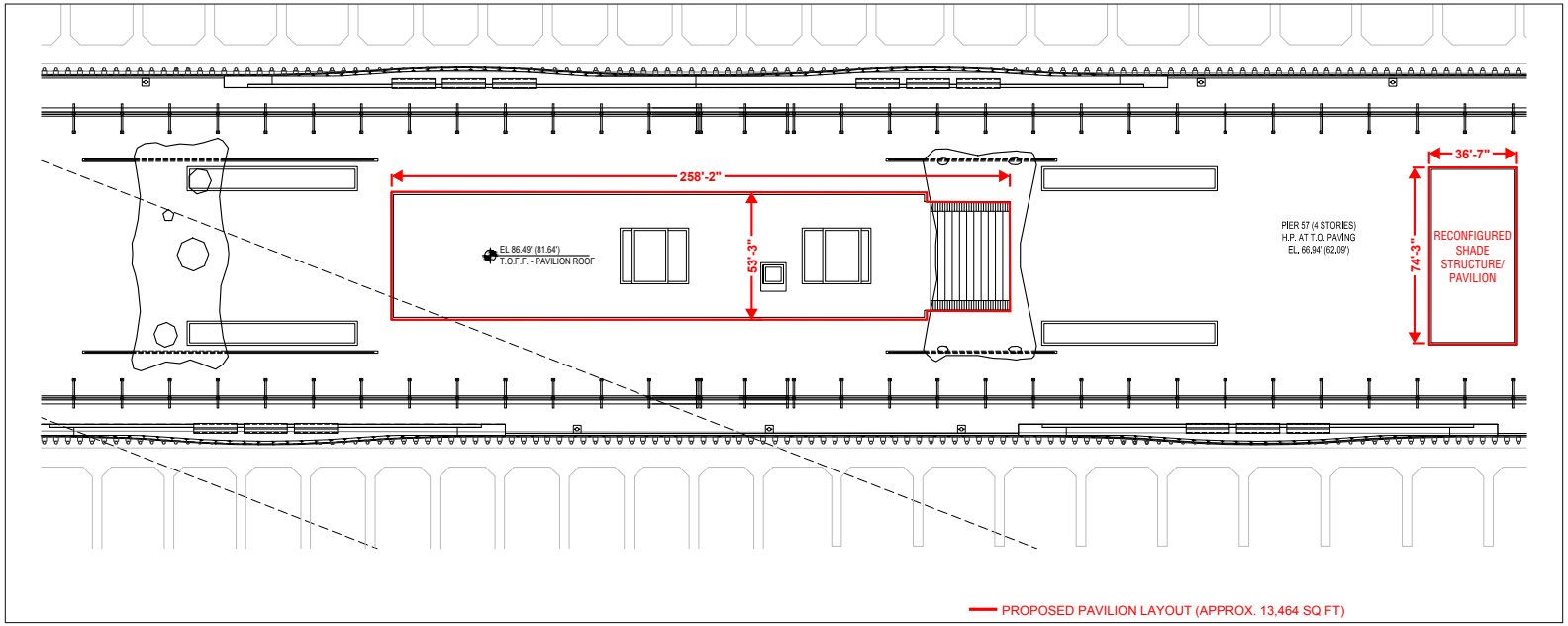
As discussed below, the developers, Young Woo & Associates (YWA) along with RXR Realty, are now proposing modifications to the previously-approved program for the previously-analyzed project. The proposed modifications would involve the introduction of commercial office use in place of a portion of the retail uses previously approved. These modifications would require changes to the proposed interior configuration of the pier structure as well as minor changes to the exterior design and would extend the anticipated first year of operation for the project from 2015 to 2017. The proposed exterior design changes involve (i) reconfiguring the proposed rooftop pavilion to be more rectilinear in its massing and have a smaller footprint, reflecting the evolution of project design and improvements to planned public pedestrian circulation areas; and (ii) reconfiguring a shade structure on the eastern end of the pier rooftop as a pavilion that encloses public bathrooms and mechanical equipment and will be open through the center, which will be smaller in size and lower in elevation than the original shade structure (see **Figure 1**). While the proposed rooftop changes will not affect the amount of open space provided, they will require approval from the CPC.

In addition, HRPT must still undertake its mandatory "significant action" process including a public hearing and comment period before it could consider modifying its General Project Plan to reflect the Pier 57 program and approving a lease with the proposed developer.

The approvals required by the CPC are modifications to the original CPC actions as follows:

- Application No. C 130301 ZSM permitting the modification of the use regulations applicable to piers and platforms, as well as waterfront yard, height and setback, public access and visual corridor requirements, pursuant to Section 62-834(b)-(c) of the Zoning Resolution (the "Waterfront Zoning Special Permit"). Modification of the Waterfront Zoning Special Permit is being requested to allow for:
    - A shift in the location of the height and setback, building length and spacing, pier use, and visual corridor waivers approved in connection with the change to the shape of a pavilion on the roof of the pier building. The rooftop pavilion in the previously-analyzed project required waivers under the Waterfront Zoning Special Permit for non-compliance with height and setback requirements. The proposed reconfiguration of the rooftop pavilion would result in an aggregate decrease in the degree of bulk non-compliance permitted by the approved special permit;





Roof Plan, FEIS vs. Proposed

Hudson River Park Pier 57

Figure 1

- A shift in the location of the height and setback and pier use waivers approved in connection with a shade structure on the roof of the pier building. The shade structure in the previously-analyzed project required a waiver under the Waterfront Zoning Special Permit for non-compliance with height and setback requirements. The proposed modifications would reconfigure this structure with a smaller footprint and lower elevation, resulting in a reduction in the degree of non-compliance with height and setback regulations permitted by the approved special permit;
- Additional visual corridor waiver area to account for the addition of two mechanical bulkheads behind existing stair bulkheads at the western end of the roof of the pier building. The approved Waterfront Zoning Special Permit allows for a portion of the existing pier building and portions of the vertical enlargement at the southwestern corner of the pier building to encroach upon the 14th Street Visual Corridor. The proposed addition of two mechanical bulkheads on the western end of the roof and the reconfiguration of the rooftop pavilion would result in a slight increase in the degree of encroachment into the 14th Street Visual Corridor; however, this encroachment would occur within an area where the visual corridor is already obstructed by existing stair bulkheads at the same height as the proposed bulkheads;
- The introduction of office uses, to replace some of the previously approved retail uses now that offices are a permissible use under the Hudson River Park Act at Pier 57; and
- An increase in the degree of waiver with respect to waterfront public access area, to account for an increase in the zoning lot area used to calculate public access area requirements. The approved waiver for the previously-analyzed project was based on the pier and platform area within a tax lot measuring ±170,069 sf. However, the correction to the boundary of the tax lot (see below) has increased the pier and platform lot area that is used to calculate the required amount of waterfront public access areas, The increased platform and pier lot area is now 171,188 sf, which results in a required waterfront access area of 34,238 sf. Due to the correction of the pier and platform area, the previously granted waiver (30,022 sf, or 88 percent of the required amount) now reflects only 87.6 percent of the required amount. The applicant therefore seeks an increase in the degree of waiver granted with respect to the waterfront public access areas being provided. The actual amount of waterfront public access areas to be provided would not change, and the project still includes additional public open space beyond that required to satisfy waterfront public access requirements.

- Application No. C 130102 ZSM permitting large retail establishments (Use Group 6 and 10A uses) with no limitation on floor area, pursuant to Section 74-922 of the Zoning Resolution (the "Retail Special Permit"). The applicant is requesting a modification of the Retail Special Permit to allow for the introduction of office uses and a reduction in the amount of floor area dedicated to retail uses, particularly through a reduction in the size of the previously proposed urban public marketplace.

The applications also include a request for a ministerial certification by the Chairperson of the City Planning Commission (the "Chairperson") pursuant to Section 62-811 of the Zoning Resolution that a site plan has been submitted showing compliance, as modified by the Special Permits, with the waterfront public access and visual corridor requirements. This certification would supersede the prior certification for compliance with waterfront regulations (N 130104 ZCM) granted by the Chairperson in connection with the Special Permits. The new certification is required as a result of the increase in floor area within the pier.

The plans for the project have been updated to include certain minor drawing corrections and design coordination updates as follows:

- Correction to the boundary of the tax lot and zoning lot;
- An increase in total floor area (due to added program space and correction to prior calculations), with a corresponding increase in the number of bicycle parking spaces being provided;
- Updates to vertical circulation and mechanical equipment;
- Updates to finished roof elevations;
- Headhouse upper level reductions in building envelope; and
- Correction to listing of existing floor area and depiction of retained structure.

Aside from the requested CPC approvals, no other discretionary approvals by outside agencies are required to implement the proposed modifications to the previously-analyzed project because all such approvals, including permits from the New York State Department of Environmental Conservation and the Army Corps of Engineers, have already been obtained and do not need to be modified. As noted above, HRPT must still undertake its mandatory "significant action" process including a public hearing and comment period before it could consider modifying its General Project Plan to reflect the Pier 57 program and approving a lease with the proposed developer. This Technical Memorandum applies to the SEQRA application for this project, as the project is undergoing coordinated environmental review.

This Technical Memorandum describes the proposed modifications to the program, design, and build year of the project and analyzes whether these changes, as well as any changes to background conditions, would result in any significant adverse environmental impacts that were not previously identified and addressed in the FEIS.

This memorandum concludes that neither the proposed changes to the program and design for the Pier 57 project, nor the changes in background conditions, would result in significant adverse impacts not previously identified and addressed in the FEIS.

BACKGROUND

The following approvals were granted by the CPC and City Council with respect to the previously-analyzed project:

- C 130100 ZMM: An amendment to the Zoning Map, Section No. 8b, that changed the zoning district applicable to the project site from an M2-3 District to an M1-5 District.
- C 130101 ZSM: A special permit pursuant to Section 62-834 of the Zoning Resolution that modified the use regulations of Section 62-241 (Uses on existing piers and platforms), the waterfront yard requirements of Section 62-332 (Rear yards and waterfront yards), the height and setback requirements of Section 62-342 (Developments on piers), the waterfront public access requirements of Section 62-57 (Requirements for Supplemental Public Access Areas), and the visual corridor requirements of Section 62-513 (Permitted obstructions in visual corridors).
- C 130102 ZSM: A special permit pursuant to Section 74-922 of the Zoning Resolution allowing large retail establishments (Use Group 6 and 10A uses) with no limitation on floor area.

- C 130103 ZSM: A special permit pursuant to Section 13-561 of the Zoning Resolution allowing an enclosed attended accessory parking garage with a maximum capacity of 74 spaces.
- N 130104 ZCM: Certification by the Chairperson of the CPC, pursuant to Section 62-811 of the Zoning Resolution for compliance with waterfront public access and visual corridor requirements.

B. DESCRIPTION OF PROPOSED MODIFICATIONS

As detailed in **Table 1** below, the proposed modifications to the project's program would include the creation of approximately 207,000 gsf of commercial office use (including office lobby space and office space in two of the caissons) and a reduction in the following uses: approximately 68,000 gsf of food market and restaurant space; 59,000 gsf of general retail and flexible retail; 33,000 gsf of gallery/spa/storage space; 17,000 gsf of public marketplace space; and 2,000 gsf of restaurant terrace space. The program also has been modified to provide approximately 26,000 gsf of additional circulation space.1 These proposed changes in use would require changes to the planned configuration of the pier's interior spaces as compared to the previously-analyzed project. Specifically, Levels 3 and 4 would no longer have a central circulation core, but instead would be configured as needed by future office tenants. The modified project would also include generally enclosed floors for Levels 3 and 4, whereas in the previously-analyzed project Level 4 was to be configured as a mezzanine level open to Level 3 below. The floor plans for Levels 1 and 2 may also change, subject to the needs of prospective tenants. In addition, the proposed changes in the program would require that some of the telescoping exterior doors would have to remain in a fixed position. As noted, the massing of the proposed rooftop pavilion has also changed somewhat; it is now more rectilinear in its massing and has a smaller footprint, reflecting the evolution of project design and improvements to planned public pedestrian circulation areas. A shade structure on the eastern side of the roof of the pier finger is also being reconfigured as a pavilion containing public restrooms, mechanical equipment and a central open walkway, resulting in a reduction of the size and elevation of the structure (see **Figure 1**). Both interior and exterior changes are part of the project's ongoing review by SHPO and NPS.

[1] The project's application for historic preservation tax credits is currently under review. If required by the New York State Historic Preservation Office (SHPO) and/or the National Park Service (NPS), some changes to interior configurations may be made that could reduce the square footage totals provided above. This technical memorandum considers the square footages provided above for the purposes of a conservative analysis.

Table 1
Totals by Use, Modified Program vs. 2013 FEIS

Use	Location within Pier	FEIS (GSF)	Modified Program (GSF)	Change (GSF)
Public Market[1]	Levels 1 and 2	49,200	31,932	-17,268
Gallery/Spa/Storage/Other	Caisson	40,000	7,467[2]	-32,533
Technical Art School and Ancillary Facilities[3]	N/A	32,700	0	0
Food Market and Restaurants	Levels 1 and 2, Roof	109,400	41,701	-67,699
Restaurant Terrace	Level 3	13,500	11,175	-2,325
Flexible Retail Space[4]	Level 1, Roof	45,200	30,701	-14,499
General Retail	N/A	44,600	0	-44,600
Circulation	Caisson, Levels 1-4	82,400	108,576	26,176
Cultural Use[3]	TBD	11,000	43,700	0
Office	Caisson, Levels 1-4	0	206,269	206,269
Total Commercial/Educational/Cultural		**428,000**	**481, 521**	**53,521**
Public Open Space	Level 1/Roof	110,000	110,000	No change
Marina	Level 1	141 slips[5]	141 slips	No change
Parking	Caisson	Approximately 75 spaces	Approximately 75 spaces	No change

Notes: MEP, loading, and building management square footage not included above.
1 Referred to as Work/Sell Marketplace in FEIS. Anticipated to incorporate repurposed shipping containers.
2 Retail storage.
3 The space formerly characterized as Technical Art School and Ancillary Facilities is now included in the more general Cultural Use category; the total square footage for "Cultural" uses has not changed since the FEIS. The transportation analysis continues to assume a technical art school for trip generation purposes.
4 Includes marina-related retail.
5 The FEIS transportation analysis considered the effects of a 190-slip marina, rather than the 141-slip marina analyzed elsewhere in the FEIS.

The other elements of the modified project—including the site plan, publicly-accessible open space, marina, and accessory parking garage—remain the same as was analyzed in the 2013 FEIS. There would be no new in-water or additional excavation work associated with the proposed changes to the project.

As described in the FEIS, the purpose of the proposed Pier 57 project is to increase public access to the waterfront, provide additional public open space resources and cultural space within Hudson River Park, and include program components that are compatible with park uses and that would generate funds for the operation and maintenance of the park. As project planning and development has evolved since the FEIS, the developers have determined that adding office uses to the project program, with a concomitant reduction in the amount of retail, gallery/spa/storage, public marketplace, and food market/restaurant uses, would best achieve this purpose. The Hudson River Park Act was amended in November 2013 to allow for office use specifically on Pier 57. In addition, the proposed rooftop pavilion is now more rectilinear in its massing and has a smaller footprint, reflecting the evolution of project design as well as improvements to planned public pedestrian circulation areas. Finally, a rooftop shade structure has been reconfigured as a pavilion covering public restrooms and mechanical equipment and an open walkway, resulting in a reduction in size and elevation of the original shade structure.

Since the FEIS, the intended operation of the site access plan for the project has also been modified slightly. As described in more detail below under "Transportation," the site driveway

at Route 9A and West 17th Street is now intended to be a secondary access point during event conditions. At all other times, the West 17th Street access would be closed, and all vehicles would need to access the site at the Route 9A and West 16th Street intersection. In addition, as also described in that section, the project development would now provide for crosswalk widening at three nearby intersections in order to facilitate increased pedestrian circulation to and from the project site.

C. ANALYSIS FRAMEWORK

CHANGES IN BACKGROUND CONDITIONS

In connection with the preparation of this technical memorandum, background conditions and the status of projects anticipated for completion by the project build year have been updated for the FEIS study area. Updates to the No Build list were made through field visits and review of project information provided by the New York City Department of City Planning (DCP) Manhattan office. Since the FEIS was completed in 2013, some projects have been completed in the surrounding area and some have had their development programs modified, and some additional projects have been identified. **Table 2** and **Figure 2** present the no build list used for this technical memorandum. This list contains the same projects that were in the FEIS no build list but has been updated to reflect their current development program, to note projects that have already been completed, and to indicate which new projects are expected to be complete by 2017. As detailed in the table, five projects have been completed since the FEIS, seven new projects have been added, and two projects from the FEIS list are still projected to be complete by the new 2017 build year. The no build projects identified above include the same general mix of uses as the no build projects analyzed in the FEIS.

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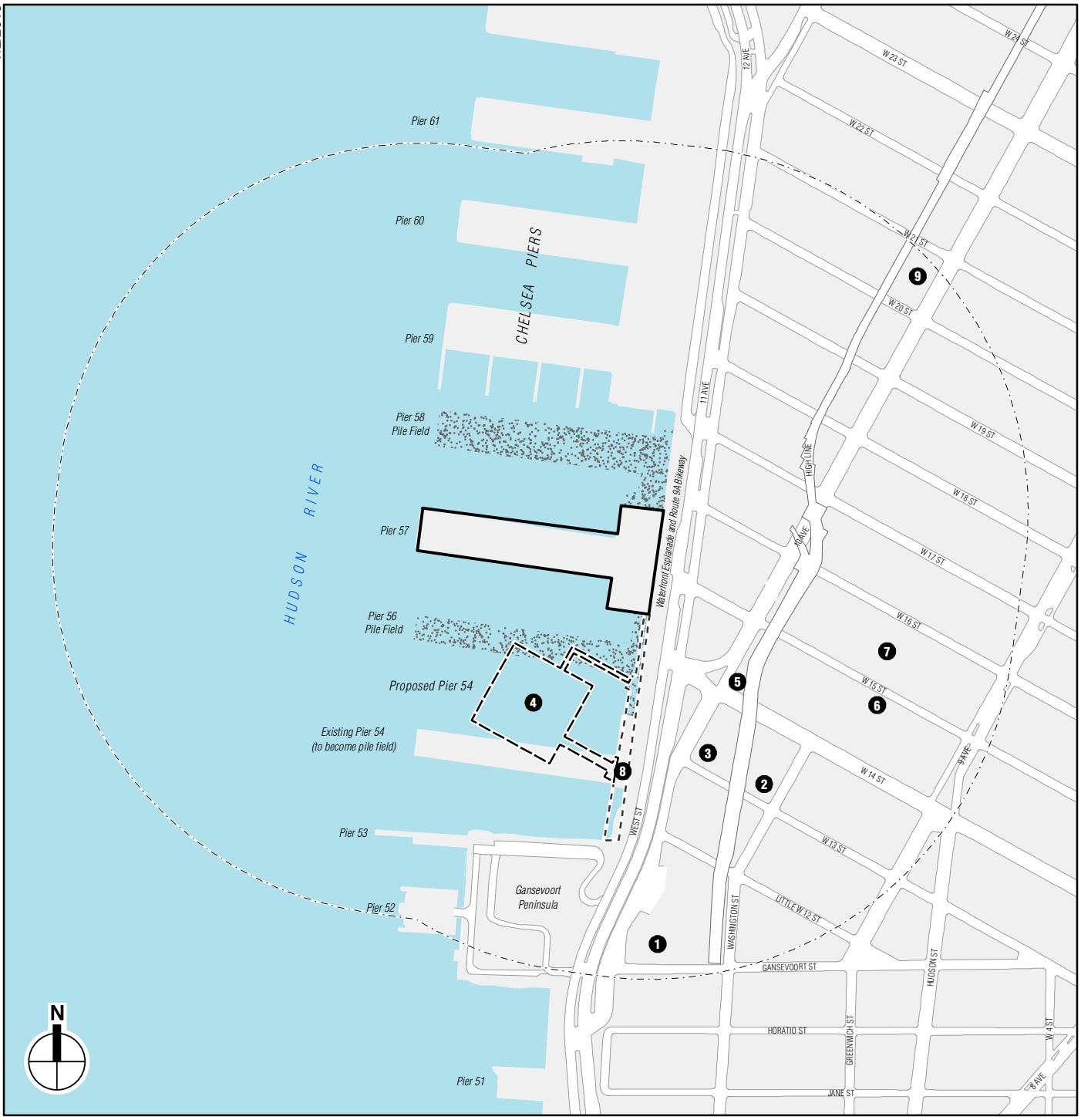

Project Site

Proposed Configuration of Pier 54

Hudson River Park
Future Pedestrian Platform Improvements
(not part of proposed project)

❶ *No Build Projects*

No Build Projects

Hudson River Park Pier 57

Figure 2

Table 2
Projects Planned for Study Area by 2017

Map No.	Project Name	Location / Block & Lot	Future Use	Status	Change Since FEIS
1	Whitney Gansevoort	Washington Street and Gansevoort Street (Block 644/ Lots 5, 10)	New Whitney Museum space; 241,017 sf	2015	No change
2	**860 Washington Street**	**860 Washington Street (Block 646/ Lot 19)**	**New 10-story, 120,413 sf mixed-use building; retail on first and second floors; office on floors 3–10**	**2015**	**New to list**
3	**40-56 Tenth Avenue**	**40-56 Tenth Avenue (Block 646/ Lot 1)**	**New office and retail building with approx. 27,000 gsf retail; 15,000 gsf restaurant; and 107,000 gsf office**	**Planned**	**New to list**
N/A	*402 West 13th Street*	*402 West 13th Street between Ninth Avenue and Washington Street*	*New 5-story building; 2,400 sf retail and 12,950 sf office space.*	*Completed*	*Completed*
N/A	*837 Washington Street*	*837 Washington Street*	*4-story addition to and renovation of existing 2-story industrial building; 51,625 sf commercial space; ground floor retail and office space above.*	*Completed*	*Completed*
N/A	*High Line Building*	*450 W 14th Street between Tenth Avenue and Washington Street*	*10-story addition to and renovation of existing 5-story building; 11,950 sf retail and over 51,300 sf office space. Will span High Line and include an entrance to the High Line Park.*	*Completed*	*Completed*
N/A	*537 West 20th Street*	*537 West 20th Street*	*5-story, 24,289 sf new building; first floor gallery space with offices above*	*Completed*	*Completed*
N/A	*M&O Building*	*820 Washington Street*	*4-story 23,899 sf maintenance and operations building for the High Line; 12,000 sf storage, 11,899 sf commercial space.*	*Completed*	*Completed*
4	**Pier 54 in Hudson River Park**	**Pier 54 (Hudson River Park at approx. West 13th St.) (Block 651/ Lot 7)**	**Redevelopment of pier for public open space and park events for up to 5,000 people**	**2019[1]**	**New to list**
5	**58 Tenth Avenue (Former Mobil Gas Station)**	**58 Tenth Avenue (Block 712/ Lot 6)**	**New 17,000 sf retail building**	**Under Construction**	**New to list**
6	**414 West 15th Street**	**412-414 West 15th Street (Block 712/ Lot 42)**	**New 24-story, 225-room hotel**	**Permits Issued**	**New to list**
7	Chelsea Market Expansion	401 West 15th Street (Block 713/ Lot 1)	Addition to existing building; 290,000 sf office	Completion 2016	Change to program and build date from FEIS
8	**Pier 54 Connector Project/ Route 9A West 13th Street Crosswalk Project**	**Hudson River waterfront esplanade and Route 9A bikeway from Bloomfield Street to West 14th Street, West 13th Street and Route 9A**	**Improved and widened pedestrian platform, improvements to the Route 9A bikeway alignment, new lay-by area for future public bus stop, landscaping, at-grade crosswalk across Route 9A at West 13th Street**	**2017**	**New to list**
9	**500 West 21st Street**	**500 West 21st Street (Block 692/ Lot 30)**	**32 dwelling units, approx. 13,000 gsf retail**	**2015**	**New to list**

Notes: [1]Project has been included, despite being outside 2017 analysis year, because it is within Hudson River Park, proximate to the Pier 57 site. The proposed use of the redeveloped pier would be consistent with its prior use, for recreation and cultural programming.
New projects are noted in bold; *projects completed since the FEIS are italicized.*

Sources: New York City Department of Buildings; New York City Department of City Planning; New York City Board of Standards and Appeals; media coverage; Whitney Museum of American Art—Gansevoort Facility EAS (CEQR No. 07SBS021M); AKRF, Inc. field visits March 2014.

D. TECHNICAL AREAS NOT REQUIRING ANALYSIS

Some technical analyses would not be affected by the proposed modifications to the project or changes in background conditions. These technical areas are discussed briefly below. For all other technical areas, an assessment is provided in Section E to evaluate the potential environmental impacts of the proposed project modifications, as well as changes to background conditions.

The proposed modifications to the project would result in an increase to the anticipated worker population, and a decrease in the anticipated visitor population. As with the previously-analyzed project, the project would not result in a residential population. Therefore, the proposed changes would not have the potential to result in any significant adverse impacts related to community facilities that were not previously identified and addressed in the FEIS.

The proposed changes to the project would not result in any alterations to the bulk and form of the existing pier structure, and no new rooftop additions would be constructed. Therefore, the proposed changes to the project would not have the potential to result in any significant adverse impacts related to shadows, urban design, or visual resources not previously identified and addressed in the FEIS.

There would be no new in-water or additional excavation work associated with the proposed changes to the project. As with the previously-analyzed project, renovation and rehabilitation of the project site would be conducted in accordance with applicable federal, state, and local regulatory requirements. Therefore, the proposed modifications to the project would not result in any significant adverse impacts related to natural resources or hazardous materials not previously identified and addressed in the FEIS.

As shown in **Table 3** below, the proposed modifications to the project's program would result in decreases to the project's projected demand for water and sewer infrastructure and solid waste and sanitation services and a modest increase to the project's projected demand for energy, when compared with the previously-analyzed project. The modified project would not exceed the CEQR thresholds for detailed analysis of water and sewer infrastructure, solid waste and sanitation services, or energy. Therefore, the proposed changes to the project would not result in any significant adverse impacts related to water and sewer infrastructure, solid waste and sanitation services, or energy not previously identified and addressed in the FEIS.

Table 3
Consumption/Generation Totals, Modified Program vs. 2013 FEIS

Generation/Consumption Category	FEIS	Modified Program	Change
Projected Water Consumption (gallons/day)	132,603	89,956	-42,647
Projected Solid Waste Generation (pounds/week)	138,085	74,525	-63,560
Projected Energy Generation (BTUs/year)	93,004 million	104,394 million	11,390 million

In regard to neighborhood character, the FEIS concluded that the previously-analyzed project would not have the potential to result in a significant adverse impact. Because the assessment provided below concludes that the proposed modifications to the project would not have the potential to result in any unmitigated significant adverse impacts in any of the technical areas that contribute to neighborhood character (land use, urban design, visual resources, historic and cultural resources, socioeconomic conditions, shadows, open space, transportation, and noise), the proposed modifications would not result in any significant adverse impacts related to neighborhood character.

The proposed changes would also not result in any unmitigated significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise, and therefore it would not result in any significant adverse impacts related to public health.

E. POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED CHANGES

LAND USE, ZONING, AND PUBLIC POLICY

The proposed modifications to the project's program would include an introduction of approximately 207,000 gsf of commercial office use (including office lobby space and office space in the caissons), and reductions in the following uses: approximately 68,000 gsf of food market and restaurant space; 59,000 gsf of general retail and flexible retail; 33,000 gsf of gallery/spa/storage space, 17,000 gsf of public marketplace space, and 2,000 gsf of restaurant terrace space.[2] The program also has been modified to provide approximately 26,000 gsf of additional circulation space. No new land use actions would be required for the proposed program modifications. The proposed modifications would introduce a commercial office use that was not contemplated in the FEIS; however, as discussed below under "Changes to Background Conditions and Methodology" and "Socioeconomic Conditions," the area surrounding the project site has been experiencing an increase in office space, and this trend would be expected to continue irrespective of the proposed modifications to the project. While these changes will not affect the amount of open space provided, they will require certification by the Chair of the CPC for compliance with waterfront public access area requirements and a modification to the approved ULURP application, as described in greater detail in the Introduction to this memorandum.

The status of projects anticipated for completion by the project build year have been updated for the land use study area (see **Table 2**). Since the FEIS was completed in 2013, five projects have been completed, seven new projects have been added, and two projects from the FEIS list are still projected to be complete by the 2017 build year. The potential no build projects include office, retail, and several mixed-use (office and retail) projects; one hotel; one museum; one residential building with ground-floor retail; and the redevelopment of an adjacent pier (Pier 54). In addition, the Pier 54 Connector and Route 9A West 13th Street Crosswalk Project would result in improvements to the Route 9A bikeway alignment, the pedestrian platform, and east-west crosswalks at West 13th Street. In general, the no build projects include the same general mix of uses as the no build projects analyzed in the FEIS, and are consistent with the area's recent trend toward an increase in office space.

Since the publication of the FEIS, revisions to the New York City Waterfront Revitalization Plan (WRP) were approved by the City Council on October 30, 2013. The revisions are intended to reflect policy elements included in DCP's 2011 *Vision 2020* comprehensive waterfront plan, including incorporation of climate change and sea level rise considerations to increase the resiliency of the waterfront area, promotion of waterfront industrial development and both commercial and recreational water-borne activities, increased restoration of ecologically significant areas, and design of best practices for waterfront open spaces.

[2] See Footnote 1.

The changes still must undergo review and approval by the New York State Department of State and the U.S. Department of Commerce; however, if approved, the WRP revisions are expected to be in effect by the new project build year of 2017. Therefore, the modified project's consistency with the WRP has been assessed using the most recent WRP policies.

The following policy is unchanged, but is evaluated here as consistency with such could potentially be different than presented in the FEIS because of the modified program:

Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

As with the previously-analyzed project, the modified project would introduce a variety of new uses, including commercial (office as well as retail) uses, to a site that has been vacant and underutilized in recent years. These uses would generate funds for the operation and maintenance of Hudson River Park and would be compatible with the surrounding mixed-use neighborhood. Moreover, these uses would be compatible with other trends in the area that include new residential, cultural, retail, and commercial development in place of former industrial and manufacturing uses. The modified project would provide services that support neighboring residential areas. Therefore, the modified project would be consistent with this policy.

The following policies are new and relevant to the modified project:

Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

Policy 2.5: Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.

Policy 6.2: Integrate consideration of the latest New York City projections of climate change and sea level rise (as published by the NPCC, or any successor thereof) into the planning and design of projects in the city's Coastal Zone.

The New York City Panel on Climate Change (NPCC) projects that by the 2080s, sea levels could be between 18 and 38 inches higher than they are today (based on mid-range projections), and may increase by as much as 58 inches (90th percentile projections). As with the previously-analyzed project, the modified project would take into account potential sea level rise due to climate change and would include measures to address resiliency.

In evaluating a building's resiliency for future sea level rise, it is important to understand the resiliency measures incorporated into the New York City Building Code. The Building Code has a long history of leadership in the field of flood resiliency. Starting in 1983, the City adopted standards into the Building Code to ensure that buildings in New York would incorporate nationally-recognized flood-resistant construction methodologies. The City, State and Federal standards for flood resiliency are incorporated into Appendix G of the Building Code, which outlines the flood-resilient construction techniques that are required for buildings in the 100-year floodplain (the area which would potentially flood with a probability of 1 percent in any given year). These requirements include dry flood-proofing to ensure watertight structures, wet flood-proofing, to allow for flood drainage, and elevating structures above the 100-year flood plain level.

More recently, the City has updated the Building Code in response to Hurricane Sandy to improve the resiliency of all new buildings in flood zones. Specifically, an emergency rule was

issued in January 2013 adopting the New York State Building Codes elevation standards, which exceed those required by the National Flood Insurance Program (NFIP) by requiring minimum base flood elevations to exceed the current 100-year floodplain elevations. The City also adopted the new preliminary FEMA flood maps, with flood elevations raised due to the most recent reevaluation of current conditions. Lastly, in response to the recommendations issued by the City's Building Resiliency Task Force and Special Initiative for Rebuilding and Resiliency, the City adopted a series of technical measure in several Local Laws, including elevating critical systems, to further strengthen the New York City Building Code's flood resiliency to current flood conditions.

Because the modified project (like the previously-analyzed project) involves the rehabilitation and reuse of an existing historic structure, the opportunities to incorporate measures to address potential sea level rise are limited. In particular, the project cannot change the elevation of the pier structure, and alterations must preserve the building's historic integrity. Nonetheless, flood protection measures for the historic structure would be implemented, accounting for the projected effects of climate change. Specifically, the project would include provisions for installing flood barriers around the perimeter of the pier on an as needed basis (i.e. before predicted storm events). These flood barriers would be approximately 4 to 5 feet in height. In addition, the project has been designed to locate mechanical space and other critical infrastructure (including chilled water plant, emergency generators, and fuel oil storage tank) on the roof of the headhouse, well above current as well as any anticipated future flood levels. The platform elevations for historic Pier 57 are above the existing 100-year flood elevation by approximately 0.03 feet for a small portion of the headhouse, 3 feet for the remainder of the headhouse, and 2 feet for the platform under the pier shed. Electrical service and the hot water boiler plant would be located inside the headhouse on the fourth floor. Other services would be located in the building above the current and anticipated future flood levels. The three caissons and other components of the pier substructure are below the existing 100-year flood elevation; however, the caissons were expressly designed to be located within water. Projected sea level rise, based on NPCC data, is considered in planning for climate resilience. The lower portions of the Pier 57 platform that are less than 2 feet above the existing 100-year flood plain could be vulnerable to flooding with sea level rise. However, with the 4 to 5 foot flood barriers these and all other portions of the project currently above the water would be resilient to more than 2 feet of sea level rise due to climate change.

Therefore, the modified project would be consistent with these policies.

Policy 5.5: Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.

There would be no new in-water work associated with the proposed changes to the project. The modified project would have the same in-water ecological strategies and best management practices as those described in the FEIS for the proposed project. Stormwater runoff from the pier would continue to be discharged to the Hudson River and would not cause the portion of the Hudson River in the vicinity of the project site to not meet the water quality criterion for Use Class I waters. Therefore, the modified project would be consistent with these policies.

Policy 8.6: Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship. The following principles should be applied as appropriate and to the extent practicable.

No changes to the new and repaired perimeter walkways or rooftop open space are proposed as part of the project modifications. As with the previously-analyzed project, the modified project would meet the following principles:

- Provide opportunities for the public to get to the water's edge;
- Make open spaces and upland connections inviting;
- Connect shoreline path systems;
- Provide a sufficient quantity and variety of seating that complies with ADA regulations;
- Install lighting that is appropriate to the program, site, and context;
- Employ fences and sea rails that are as transparent as possible;
- Incorporate or reference significant historic features or natural conditions associated with the site, where appropriate;
- Design sites that anticipate the effects of climate change, such as sea level rise, storm surges, wave action, erosion, and daily tidal flooding;
- Consider opportunities for connections between land and water, including opportunities for water recreation; and
- Consider water-dependent and water-enhancing uses at the water's edge such as fishing sites, boat launches, and get downs to the water where appropriate.

Therefore, the modified project would be consistent with this policy.

Those WRP policies not discussed above are either not relevant for the modified project, or consistency with such would not be expected to be different compared to the previously-analyzed project.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to land use, zoning and public policy not previously identified and addressed in the FEIS.

SOCIOECONOMIC CONDITIONS

The proposed modifications to the project's program would include the introduction of approximately 207,000 gsf of commercial office use (including office lobby space and office space in the caissons), and reductions to the general and flexible retail, food market and restaurant space, gallery/spa/storage space, public marketplace space, and restaurant terrace space.

The proposed modifications would not result in any direct displacement, and therefore would not alter the analysis or conclusions presented in the FEIS with regards to direct displacement. As the proposed modifications would not include any residential uses, they would not alter the analysis or conclusions presented in the FEIS with regards to indirect residential displacement. Since the proposed modifications would result in an overall reduction in the amount of retail on the project site as compared to the program analyzed in the FEIS, they would not result in any new impacts due to retail market saturation.

The proposed modifications would, however, introduce a commercial office use that was not contemplated in the FEIS, and this commercial use would exceed the 200,000-square-foot CEQR threshold warranting an assessment of potential indirect business displacement due to

increased rents.[3] The objective of the indirect business displacement analysis is to determine whether the proposed project may introduce trends that make it difficult for businesses essential to the local economy, or businesses that are the subject of regulations or publicly adopted plans to preserve, enhance, or otherwise protect them, to remain in the area. In order to determine whether a project would introduce such a trend, the preliminary assessment considers the following:

- Whether the proposed modifications would introduce enough of a new economic activity to alter existing economic patterns;
- Whether the proposed modifications would add to the concentration of a particular sector of the local economy enough to alter or accelerate existing economic patterns; and
- Whether the proposed modifications would indirectly displace residents, workers, or visitors who form the customer base of existing businesses in the area.

There are approximately 3.2 million sf of office space within a ¼-mile study area around the project site, and 6.3 million sf of office space within a ½-mile study area. The Chelsea neighborhood has recently seen an increase in office tenants, specifically in the technology sector. Technology sector companies have been attracted to the area in part due to large loft spaces, which can be converted into modern offices.[4] This trend accelerated when Google bought the 2.95 million-sf office building at 111 Eighth Avenue, three blocks east of the project site, and other tech companies located in or looking for space in Midtown South began to move further west, expanding the larger area that has become known as Silicon Alley.[5] An April 2014 report by the Office of the State Comptroller acknowledges that as the tech industry has grown in Midtown South over the past decade, office rents have risen.

This trend is reflected in employment data for the area. As shown in **Table 4** below, the Information Sector and Professional, Scientific, and Technical Services sector account for the largest proportion of employment in the ¼-mile study area (34.7 percent, combined). Accommodation and food services account for the next-highest percentage of employment (12.1 percent), reflecting the presence of the Chelsea Market, restaurants and bars in the Meatpacking District, and several hotels. Similarly, in the ½-mile study area, the Information sector along with the Professional, Scientific, and Technical Services sector and the Accommodation and Food Services sector collectively account for nearly 40 percent of all employment.

Since the FEIS, several planned projects have been completed in the study area, including approximately 126,700 sf of office space. Planned projects—both those analyzed in the FEIS and new projects that have since been proposed—will add an additional 493,330 sf of office space to the study area by 2017. These include the Chelsea Market expansion, which will add 290,000 sf of office space above the existing Chelsea Market building. With the proposed modifications, the project's office space would represent a 5.5 percent increase office space in the ¼-mile study area, and a 3.0 percent increase in office space in the ½-mile study area.

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[3] Although a commercial retail program was assessed in the FEIS, the proposed modifications would introduce more than 200,000 sf of office space, which was not considered in the FEIS, warranting a preliminary assessment of indirect business displacement.

[4] "New York's Growing High-Tech Industry." Office of the State Comptroller Report 2-2015, April 2014.

[5] "Widening Tech 'Alley' Outgrows Its Name." *The Wall Street Journal* online, April 29, 2014. Accessed June 18, 2014.

Table 4
2013 Employment by Industry Sector

Industry by Sector	¼-Mile Study Area		½-Mile Study Area	
	Total Employed	Percent of Total Employed	Total Employed	Percent of Total Employed
Agriculture, Forestry, Fishing and Hunting	0	0.0%	11	0.1%
Mining	0	0.0%	0	0.0%
Utilities	0	0.0%	0	0.0%
Construction	232	4.0%	568	3.0%
Manufacturing	235	4.1%	833	4.4%
Wholesale Trade	378	6.6%	776	4.1%
Retail Trade	395	6.9%	1,765	9.4%
Transportation and Warehousing	118	2.1%	593	3.2%
Information	1,000	17.4%	1,915	10.2%
Finance and Insurance	42	0.7%	262	1.4%
Real Estate and Rental and Leasing	187	3.3%	713	3.8%
Professional, Scientific, and Technical Services	995	17.3%	2,936	15.7%
Management of Companies and Enterprises	7	0.1%	24	0.1%
Administrative and Support and Waste Management and Remediation Services	256	4.5%	854	4.6%
Educational Services	19	0.3%	655	3.5%
Health Care and Social Assistance	129	2.2%	1,104	5.9%
Arts, Entertainment, and Recreation	141	2.5%	695	3.7%
Accommodation and Food Services	749	13.1%	2,479	13.2%
Other Services (except Public Administration)	331	5.8%	1,171	6.2%
Public Administration	524	9.1%	1,394	7.4%
Total	**5,738**	**100.0%**	**18,749**	**100.0%**

Sources: ESRI Business Analyst, Inc, Business Summary Report

While the proposed modifications would introduce a new use as compared to the program analyzed in the FEIS, the ¼-mile and ½-mile study areas have been experiencing an increase in office space, and this trend would be expected to continue irrespective of the proposed modifications to the project. Therefore the proposed modifications would not introduce new economic activities to the study area that would alter existing economic patterns, or result in any new adverse effects on specific industries. Consequently, the proposed modifications are not expected to indirectly displace residents, workers, or visitors who form the customer base of existing businesses in the area. Instead, the new office workers introduced by the proposed modifications would be expected to increase the customer base of existing businesses in the study area.

As the new no build projects include the same general mix of uses as the no build projects analyzed in the FEIS, updated background conditions would not alter the conclusions of the FEIS with respect to socioeconomic conditions. As these planned projects do not affect the project site or the proposed project's uses, they would not alter the analysis or conclusions presented in the FEIS with regards to direct displacement or indirect residential displacement.

The additional background projects contain a mix of residential, retail, and office space, and would continue the trends described in the FEIS and above regarding increasing amounts of office space. Therefore, the additional planned projects would not affect the conclusions of the FEIS with respect to indirect business displacement due to increased rents. The retail space, office workers, and residential population added by these new planned projects would also not alter the conclusions in the FEIS with respect to retail market saturation. As described in the FEIS, population growth in the future without the project could increase expenditure potential and generate additional demand for retail goods, and new retail projects would expand the retail

inventory. Further, the proposed project modifications described above would decrease the total amount of retail added by the proposed project, and would introduce a new worker population, bringing additional consumer expenditure potential to the area. Therefore, these additional projects would not affect the conclusion that the proposed project would not result significant adverse indirect business displacement impacts due to retail market saturation.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to socioeconomic conditions not previously identified and addressed in the FEIS.

OPEN SPACE

The proposed modifications would result in a larger worker population on the project site than was assumed in the 2013 FEIS. The FEIS projected that the program for Pier 57 would generate approximately 800 new workers; in comparison, the current program is projected to generate approximately 1,214 new workers, an increase of 414 workers.[6] Therefore, an analysis was prepared to determine whether the future worker population of Pier 57 with the proposed modifications could overburden open space resources in the study area. The proposed modifications also would result in a smaller number of visitors to the site in the daytime peak hours than was assumed in the FEIS (1,696 compared to 2,920). The proposed modifications to the project would not change the amount of open space to be created; this would remain at 2.5 acres. While the proposed modifications would not affect the amount of open space provided, they will require certification by the Chair of the CPC for compliance with waterfront public access area requirements and a modification to the approved ULURP application, as described in greater detail in the Introduction to this memorandum.

With the changes in background conditions described above, the future no build population would increase from 42,367 to 43,241, and the future passive open space acreage would increase from 16.99 to 19.69. Accounting for these changes in background conditions as well as the proposed modifications to the project, the future build population would increase from 46,087 to 46,149 and the future passive open space acreage would increase from 19.59 to 22.19. The resulting open space ratios would also increase, from 0.40 to 0.46 for the future no build ratio, and from 0.42 to 0.48 for the future with the project (see **Table 5** below). The modified project, like the previously analyzed project, would result in an increase in open space ratios within the study area, and would still far exceed the City's guideline ratio for passive open space.

[6] The ratios used to generate the worker and visitor population figures are the same as used in the FEIS. Office use was not analyzed in the FEIS since it was not proposed at that time. For this technical memorandum, the standard generation ratio for office workers (1 per 250 sf) was used.

Table 5
Open Space Ratios Summary

Future No Build Population w/o Project	Future Population w/Project	Future Passive Open Space Acreage w/o Project	Future Passive Open Space Acreage w/Project	City Guideline Ratio for Passive Open Space	Open Space Ratios (Acres/1,000 Workers)			Incremental Change Future w/o to Future w/ Project
					Existing Conditions	Future w/o Project	Future w/Project	
FEIS Analysis								
42,367	46,087	16.99	19.49	0.15	0.44	0.40	0.42	5.5%
Analysis for Modified Project w/Changes to Background Conditions								
43,241	46,149	19.69	22.19	0.15	0.44	0.46	0.48	5.6%

The no build projects described above would be expected to generate approximately 91 new residents, 2,563 new workers, and 2,800 new visitors; in comparison, the FEIS anticipated that no build projects would generate no new residents and approximately 2,071 new workers, and 2,800 new visitors, for a total a change of 91 residents, 492 workers, and 0 visitors. The Pier 54 project would develop an additional 2.7 acres of open space not accounted for in the FEIS. Pier 54 would resume general park and event uses; consistent with its previous operation, the pier would have a capacity of up to approximately 5,000 attendees at peak events. These anticipated changes to the study area's population and open space resources are accounted for in the analysis presented above under "Description of Proposed Modifications."

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to open space not previously identified and addressed in the FEIS.

HISTORIC AND CULTURAL RESOURCES

The proposed modifications to the project would not result in any changes to the exterior of the historic structure except for some of the telescoping doors, which would have to remain "locked" in the up or down position instead of being operable; to a shade structure on the eastern side of the roof of the pier finger, which is being reconfigured as a pavilion containing public restrooms, mechanical equipment and a central open walkway, resulting in a reduction of the size and elevation of the structure; and to the proposed rooftop pavilion, which would become more rectilinear in its massing and have a slightly smaller footprint. The proposed changes in use also would require changes to the planned configuration of the pier's interior spaces. Specifically, Levels 3 and 4 would no longer have a central circulation core, but instead would be configured as needed by future office tenants. In addition, the modified project would include generally enclosed floors for Levels 3 and 4, whereas in the previously-analyzed project Level 4 was to be configured as a mezzanine level open to Level 3 below. The anticipated floor plans for Levels 1 and 2 may also change, subject to the needs of prospective tenants. Both interior and exterior changes are part of the project's ongoing review by SHPO and NPS. Unrelated to the proposed program modifications, the rooftop shade structures analyzed in the 2013 FEIS are not included in the project's current design.

The developer is still seeking historic preservation tax credits for the project, and thus the modifications to the proposed design are anticipated to comply with the Secretary of the Interior's Standards for Rehabilitation. The New York State Historic Preservation Office (SHPO) has approved the project's Part 2 application for the historic preservation tax credits. The developer submitted an amendment to the Part 2 application for the changes described

above to SHPO on March 3, 2015, and the application is currently under review at NPS. Overall, the proposed changes to the project would not introduce incompatible visual, audible, or atmospheric elements to the setting of the pier or the architectural resources in the surrounding area.

Since the FEIS was completed in 2013, some previously-identified projects have been completed in the surrounding area, others have had their programs modified, and some additional projects have been identified. The no build projects located within the boundaries of the S/NR-listed Gansevoort Market Historic District will change the character of the district's western edge, where there are already multiple modern buildings and additions to historic buildings. Those projects will also add new buildings along the alignment of the High Line.

The proposed Pier 54 project would be a new visual element in the setting of Pier 57, but the pier's historic context has already been altered by the demolition of Pier 56 and the shed on Pier 54 and by the recent construction of modern buildings within the westernmost portion of the S/NR Gansevoort Market Historic District, including the Standard Hotel and the new facility of the Whitney Museum of American Art. While the new Pier 54 would obstruct some views of Pier 57 from some locations along the Hudson River Park bike and pedestrian path from the south, the former Pier 56 structure historically would have obstructed views of the Pier 57 pier shed and southern façade of the headhouse. Views of Pier 57 would continue to be available from its immediate vicinity and from the east side of West Street and Tenth Avenue. In addition, Pier 54 would provide new, publicly accessible views of the historic Pier 57 from elevated vantage points on the new pier itself.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to historic and cultural resources that were not previously identified and addressed in the FEIS.

TRANSPORTATION

SCREENING ANALYSIS

A screening analysis was conducted to consider the comparative trip generation of the modified project, modification of the intended operation of the site access plan, modification to the project improvement plan, and updated build year/No Action developments. Since the analyses for the approved project were based on traffic counts from 2010, the screening analysis also considered changes in background traffic volumes to determine if the modified project would result in any significant impacts not previously identified in the FEIS.

Trip Generation Comparison

Table 6 provides a comparison of the program for the modified and previously-approved project.

The same methods and assumptions described in the FEIS were used to develop the trip generation and trip distribution characteristics of the land uses that were considered as part of the previously-analyzed project and the modified project. Office is a new land use that has been introduced since the FEIS. The trip generation rates for the office use were obtained from Table 16-2 of the *CEQR Technical Manual*. Weekday modal splits were determined based on 2010 Census Reverse Journey-to-Work data for census tracts 79, 83, and 99. Other travel demand factors were obtained from the 2005 *Chelsea Market Expansion EAS*, Table H-1.

Table 6
Program Comparison,
Approved Project vs. Modified Project

Land Use	FEIS	Modified Project	Change
Restaurant	59,214 sf	52,876 sf	-6,338 sf
Quality Restaurant	*24,450 sf*	*33,064 sf*	*+8,614 sf*
Food Counter	*34,764 sf*	*19,812 sf*	*-14,952 sf*
Market (Retail Space)	202,686 sf	62,633 sf	-140,053 sf
Rooftop	110,000 sf	110,000 sf	0 sf
Exhibit Space (caisson level)	40,000 sf	0 sf	-40,000 sf
Cultural Use (Theater)	11,000 sf	11,000 sf	No change
Technical Arts School	32,700 sf	32,700 sf	No change
Marina	190 slips	141 slips	- 49 slips[1]
Potential Water Taxi Landing	Yes	Yes	No change
Office	0 sf	206,269 sf	+206,269 sf

Notes: [1]The FEIS transportation analysis considered the effects of a 190-slip marina, rather than the 141-slip marina analyzed elsewhere in the FEIS. This technical memorandum accounts for the planned 141 slips.

A comparison of the trip generation estimates for the approved project and the modified project, for the typical and pre-event scenarios is summarized in **Table 7**. Complete travel demand factors for the modified project are shown in **Table 8**, and detailed trip generation estimates for the typical and pre-event scenarios are shown in **Tables 9 and 10**. As indicated in these tables for the peak analysis hours, the modified project would generate a similar number or fewer trips than the previously-analyzed project, with the exception of the weekday AM peak hour, due to the addition of the office use.

Since the number of trips generated during the weekday AM peak hour is generally less than the number of trips generated during the other peak hours studied in the FEIS, a weekday AM peak hour analysis is not needed except at locations where more than 50 peak hour vehicle trips would be generated and impacts were identified in the FEIS.

The primary difference in the trip generation between the modified project and the approved project is due to the reduction of the retail use and addition of the office use. Retail uses typically do not generate trips during the weekday AM peak hour, but generate trips with high turn-over during the weekday midday, weekday PM, and Saturday midday peak hours with between 80 and 90 daily trips per 1,000 square feet (sf). In contrast, office uses primarily generate trips during the weekday AM, weekday midday, and weekday PM peak hours with 18 trips per 1,000 sf.

Table 7
Trip Generation Estimates Comparison

Peak Hour	Vehicle Trips (auto/taxi/truck)	Subway Trips	Bus Trips	Pedestrian Trips	Total Walk Trips (includes transit)
APPROVED PROJECT					
Typical Scenario					
Weekday MD	367	846	110	706	1,662
Weekday PM	348	857	112	735	1,704
Saturday MD	549	882	126	970	1,979
Event Scenario					
Weekday EVE	475	1,763	167	1,401	3,332
Saturday EVE	380	1,331	122	1,020	2,473
MODIFIED PROJECT					
Typical Scenario					
Weekday AM	204	456	74	222	752
Weekday MD	258	466	92	757	1,315
Weekday PM	324	729	115	457	1,301
Saturday MD	335	477	79	554	1,110
Event Scenario					
Weekday EVE	346	1,368	119	1,027	2,515
Saturday EVE	330	1,228	106	911	2,245
COMPARISON					
Typical Scenario					
Weekday AM	204	456	74	222	752
Weekday MD	-109	-380	-18	51	-347
Weekday PM	-24	-128	3	-278	-403
Saturday MD	-214	-405	-47	-416	-869
Event Scenario					
Weekday EVE	-129	-395	-48	-374	-817
Saturday EVE	-50	-103	-16	-109	-228

Modified Operation of Site Access Plan

The FEIS accounted for a circulation plan in which vehicles approaching the site from the north would access the site at the intersection of Route 9A and West 16th Street via a southbound right turn. Vehicles approaching the site from the east and south would access the site at the intersection of Route 9A and West 17th Street via a through movement from West 17th Street. Vehicles would egress the site at the intersection of Route 9A and West 14th Street and be able to turn right onto southbound Route 9A, left onto northbound Route 9A, or continue straight across Route 9A to West 14th Street eastbound.

The proposed operation of the site access plan has been refined for the modified project, so that the West 17th Street access would be closed most of the time, except in limited circumstances when a secondary access point might be needed to provide additional curbside loading space or increased entrance capacity, such as during larger events. When closed, all vehicles would access the site at the Route 9A and West 16th Street intersection via a southbound right turn. The Traffic Management Plan described in the EIS, which proposes monitoring and staffing the site frontage during certain time periods, would be unchanged.

To reflect this refinement to the operation of the site access plan, project generated trips at Route 9A and West 17th Street from the east and south, which were analyzed as a westbound through movement during the weekday AM, midday, PM, and Saturday midday peak hours for the

approved project, would instead turn left at this intersection for the modified project. These trips would also be added to the southbound right-turn movement at Route 9A and West 16th Street. No other study locations or peak hours would be affected by the proposed operational changes to the site access plan.

Updated Improvement Program

In conjunction with updated project access planning, to facilitate pedestrian circulation to and from the site, minor widening of the following off-site crosswalks would be implemented as part of the modified project:

- South crosswalk at Washington Street and West 14th Street by 2 feet;
- North crosswalk at Ninth Avenue and West 15th Street by 4 feet; and
- South crosswalk across Ninth Avenue at West 14th Street by 1 foot.

Updated Build Year/No Action Conditions

The build year for the approved project was 2015. Background traffic volumes were developed for the approved project by applying an annual growth rate to existing traffic volumes through 2015 and considering planned No Action developments that would be constructed by 2015. The No Action volumes were revised to account for additional background growth and updated No Action developments through the updated build year of 2017.

The FEIS considered seven No Action developments that would be constructed by the 2015 build year, listed above in **Table 2**. As of 2014, all of the FEIS No Action developments except the Whitney Museum and Chelsea Market Expansion were constructed and occupied/in use. Therefore, it was assumed that the trips generated by these completed FEIS No Action projects would be reflected in any new traffic counts. Five additional No Action developments were identified for 2017 build year, as listed above in **Table 2**.

Table 8
Transportation Demand Factors: Modified Project

		Destination Retail (Market)	Quality Restaurant	Food Counter	Theatre	Technical Arts School	Marina	Rooftop Open Space	Rooftop Exhibit (Museum)	Office	Rooftop Event
Project Component	Size	62,633	33,064	19,812	300	32,700	141	2.49	10,000	206,269	2,500
	Unit	gsf	gsf	gsf	Seats	gsf	slips	acres	gsf	gsf	people
Person Trip Generation Rate		(1)	Weekday (3), Saturday (5)	(16)	(6)	(11)	Weekday (6), Saturday (12)	(1)	(1)	(19)	(6)
	Weekday	78.2	173	173	2.68	30.51	6.23	139	27.0	18.00	2.68
	Saturday	92.5	181	181	2.68	12.47	12.80	196	20.6	3.90	2.68
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person
Truck Generation Rate		(14)	(12)	(12)	(6)	(8)	(12)	(7)	(13)	(19)	(6)
	Weekday	0.35	3.60	3.60	0.01	0.03	0.02	0.00	0.05	0.32	0.01
	Saturday	0.02	3.60	3.60	0.01	0.03	0.02	0.00	0.00	0.01	0.01
	Unit	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per seat	per 1,000 gsf	per slip	per acre	per 1,000 gsf	per 1,000 gsf	per person

		Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday AM/MD	Weekday PM/EVE	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	AM/PM	MD/SAT	Weekday	Saturday
		(2)		(18)		(18)		(9)		(8)		(12)		(7)		(4)		(19)		(9)	
Modal Split	Auto	9.2%	10.5%	25.0%	25.0%	25.0%	25.0%	9.0%	9.0%	7.5%	2.4%	75.0%	75.0%	5.0%	5.0%	19.5%	19.5%	18.6%	2.0%	9.0%	9.0%
	Taxi	5.0%	14.2%	20.0%	20.0%	15.0%	15.0%	2.0%	2.0%	6.3%	3.6%	10.0%	10.0%	1.0%	1.0%	10.0%	10.0%	2.2%	3.0%	2.0%	2.0%
	Subway	40.0%	29.6%	30.0%	30.0%	35.0%	35.0%	49.0%	49.0%	61.6%	59.9%	5.0%	5.0%	3.0%	3.0%	33.0%	33.0%	50.2%	6.0%	49.0%	49.0%
	Bus	4.2%	3.7%	5.0%	5.0%	5.0%	5.0%	3.0%	3.0%	7.5%	8.6%	5.0%	5.0%	4.0%	4.0%	7.0%	7.0%	9.6%	6.0%	3.0%	3.0%
	Walk/Other	41.6%	42.0%	20.0%	20.0%	20.0%	20.0%	37.0%	37.0%	17.1%	25.6%	5.0%	5.0%	87.0%	87.0%	30.5%	30.5%	19.4%	83.0%	37.0%	37.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		(2)		(15)		(15)		Auto (9), Taxi (6)		(8)		(12)		(7)		(4)		(19)		Auto (9), Taxi (6)	
Vehicle Occupancy	Auto	1.86	2.63	2.20	2.20	2.20	2.20	2.90	2.90	1.11	1.11	2.00	2.00	2.80	2.80	2.67	2.67	1.22	1.22	2.90	2.90
	Taxi	1.42	2.13	2.30	2.30	2.30	2.30	2.30	2.30	1.23	1.23	2.00	2.00	2.80	2.80	2.08	2.08	1.40	1.40	2.30	2.30
Linked Trips (10)		20%	20%	20%	20%	25%	25%	20%	20%	20%	20%	0%	0%	20%	20%	20%	20%	0%	0%	20%	20%
		(14)		(5)		(16)		MD and PM (6), EVE (9)		(8)		(12)		(1)		(1)		(19)		(9)	
Temporal Distribution	AM	3.0%		0.9%		8.5%		0.0%		20.0%		2.7%		3.0%		1.0%		12%		0.0%	
	MD (12-1)	9.0%		6.2%		10.6%		0.0%		20.0%		4.6%		5.0%		16.0%		15%		0.0%	
	PM (5-6)	9.0%		8.3%		8.8%		10.0%		20.0%		6.4%		6.0%		13.0%		14%		0.0%	
	EVE (7-8)	8.4%		10.0%		14.5%		32.0%		5.0%		6.4%		3.0%		13.0%		0%		32.0%	
	Sat MD (1-2)	11.0%		11.0%		11.0%		10.0%		5.0%		4.8%		6.0%		17.0%		17%		0.0%	
	Sat EVE (7-8)	1.7%		11.5%		8.9%		32.0%		5.0%		4.8%		3.0%		13.0%		0%		32.0%	
		(14)		(12)		(12)		(6)		(12)		(12)		(7)		(13)		(19)		(6)	
Truck Temporal Distribution	AM	7.7%		6.0%		6.0%		6.0%		6.0%		6.0%		0.0%		9.6%		10.0%		6.0%	
	MD (12-1)	11.0%		6.0%		6.0%		6.0%		6.0%		6.0%		0.0%		11.0%		11.0%		6.0%	
	PM (5-6)	1.0%		1.0%		1.0%		1.0%		1.0%		1.0%		0.0%		2.0%		2.0%		1.0%	
	EVE (7-8)	0.0%		0.0%		0.0%		0.0%		0.0%		1.0%		0.0%		0.0%		0.0%		0.0%	
	Sat MD (1-2)	11.0%		6.0%		6.0%		0.0%		6.0%		1.0%		0.0%		1.0%		11.0%		0.0%	
	Sat EVE (7-8)	1.0%		0.0%		0.0%		0.0%		0.0%		1.0%		0.0%		0.0%		0.0%		0.0%	
		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
		(14)		(5)		(16)		(7,9)		(17)		(12)		(7)		(13)		(19)		(7,9)	
Directional Distribution	AM	50.0%	50.0%	82.0%	18.0%	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	33.3%	66.7%	55.0%	45.0%	50.0%	50.0%	96.0%	4.0%	50.0%	50.0%
	MD (12-1)	55.0%	45.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	63.0%	37.0%	48.0%	52.0%	50.0%	50.0%
	PM (5-6)	48.0%	52.0%	67.0%	33.0%	59.0%	41.0%	75.0%	25.0%	50.0%	50.0%	60.0%	40.0%	45.0%	55.0%	52.0%	48.0%	5.0%	95.0%	75.0%	25.0%
	EVE (7-8)	55.0%	45.0%	62.0%	38.0%	54.0%	46.0%	75.0%	25.0%	50.0%	50.0%	60.0%	40.0%	45.0%	55.0%	34.0%	66.0%	0.0%	0.0%	75.0%	25.0%
	Sat MD (1-2)	71.0%	29.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	57.0%	43.0%	50.0%	50.0%
	Sat EVE (7-8)	40.0%	60.0%	59.0%	41.0%	53.0%	47.0%	75.0%	25.0%	50.0%	50.0%	50.0%	50.0%	45.0%	55.0%	34.0%	66.0%	0.0%	0.0%	75.0%	25.0%
		(1)		(1)		(1)		(1)		(1)		(1)		(1)		(1)		(19)		(1)	
Truck Directional Distribution	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD (12-1)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM (5-6)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD (1-2)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat EVE (7-8)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes
1. CEQR Technical Manual 2012, Table 16-2. For open space, Active Park Space was used; temporal distribution for Weekday EVE assumed to be half of Weekday PM and Sat EVE assumed to be half of Sat MD. For Rooftop Exhibit (Museum), Weekday EVE and Saturday EVE temporal distribution assumed to be same as Weekday PM temporal distribution.
2. Sam Schwartz Engineering survey at Chelsea Market, February 2011.
3. Weekday person trip rate based on Urban Space for Pedestrians (Pushkarev & Zupan, 1975), Table 2.3.
4. PHA Survey of temporary art installation/exhibit at Pier 54, May 2005.
5. ITE Trip Generation, 8th Edition, Land Use Code 931, Quality Restaurant. Weekday PM is same as weekday peak of Adjacent Street Traffic, Weekday EVE is same as weekday PM Peak of Generator, Satruday EVE is same proportion as Saturday Peak of Generator and Daily Saturday trip rate. Saturday MD trip rate based on ITE ratio of Saturday to weekday daily trip generation (see note 3). Temporal and directional
6. Brooklyn Bridge Park FEIS (2005), Table 14-6, Multi-use (Theater) land use. Truck temporal distribution for EVE and Sat EVE assumed to be 0%. Restaurant vehicle occupancies were used for taxi. Marina land use used weekday trip generation rates for Marina.
7. Special West Chelsea District Rezoning and High Line Open Space FEIS, May 2010, Table 16-6, High Line Open Space land use. Saturday mode share and vehicle occupancy assumed to be same as weekday. Weekday EVE temporal distribution assumed to be half of Weekday PM; Sat EVE temporal assumed to be half of Sat MD. Weekday EVE and Sat EVE directional distribution is assumed to be same as
8. Fordham University Lincoln Center Master Plan FEIS, 2009, Table 15-2, for Graduate Students Day/Full-Time. Dorm-based mode share redistributed proportionally among auto, taxi, bus and subway. Shuttle mode share redistributed proportionally among bus and subway. SSE determined Weekday MD and PM temporal distribution based on published class schedules for the Institute of Culinary Education. Weekday
9. Based on Pier 54 movie event survey on 7/9/2009 performed by AKRF. Saturday EVE and Weekday PM temporal distribution and directional distribution assumed to be same as weekday EVE. Assumed no rooftop events for weekday MD and Saturday MD. During these times, open space assumptions were used. Taxi vehicle occupancy did not have good data from the AKRF survey; therefore, the restaurant
10. Assumed 20% linked trips for all uses except Marina, which assumes 0% linked trips.
11. ITE 8th Edition, Land Use Code 540, Junior/Community College
12. Hudson River Park FEIS (1998), Table 11-25. For Marina, Weekday EVE temporal distribution and directional distribution assumed to be same as weekday PM. For Marina, Sat EVE temporal distribution and directional distribution assumed to be same as Sat MD. For Restaurant, assume Saturday MD is the same as Weekday MD and assume Weekday EVE and Saturday EVE are zero.
13. Hudson Yards FGEIS (2004) App S-1, Table 1, "Museum Trip Generation Transportation Planning Assumptions" Memorandum. Saturday EVE directional distribution assumed to be same as Weekday EVE. Saturday MD directional distribution assumed to be 50/50. Saturday EVE temporal distribution assumed to be 0.
14. CEQR Technical Manual 2012, Table 16-2, for MD, PM, Saturday midday.Hudson Yards FGEIS (2004) App S-1, Table 1 and 2, "Destination Retail Trip Generation Transportation Planning Assumptions" Memorandum for Weekday EVE and Saturday EVE. Truck distribution for Sat MD assumed to be same as Weekday MD.
15. Chelsea Piers, FEIS (1993), Table II.F.7. Saturday mode share and vehicle occupancy assumed to be same as weekday.
16. ITE Trip Generation, 8th Edition, Land Use Code 932, High-Turnover (Sit Down) Restaurant. Saturday MD temporal distribution assumed to be same as Destination Retail for Saturday MD.
17. SSE assumptions based on review of class schedules at several technical art schools, including the Institute of Culinary Education in NYC.
18. SSE and NYCDOT Assumptions.
19. Person and truck trip generation rates and temporal distribution based on CEQR Technical Manual 2012. Weekday modal split and vehicle occupancy based on 2010 Census Reverse Journey-to-Work data (tracts 83, 79, 99). Directional split and Saturday modal split and vehicle occupancy based on Chelsea Market Expansion (2005), Table H-1. Assumes Saturday modal split same as MD. Assumes Saturday auto occupancy the same as Weekday. Saturday directional distribution from Western Rail Yards Project f

Table 9
Modified Project, Typical Scenario

Person Trips		Destination Retail (Market)	Quality Restaurant	Food Counter	Theatre	Technical Arts School	Marina	Rooftop Open Space	Rooftop Exhibit (Museum)	Office	TOTAL
Daily Trips	Weekday	3,918	4,576	2,571	643	798	878	277	216	3,713	**17,591**
	Saturday	4,635	4,800	2,697	643	326	1,805	391	165	804	**16,266**
Peak Hour Trips	AM	118	41	219	0	160	24	8	2	438	**1,009**
	MD (12-1)	353	283	274	0	160	40	14	35	530	**1,606**
	PM (5-6)	353	381	225	64	160	56	17	28	509	**1,793**
	EVE (7-8)	329	459	374	208	40	56	8	28	0	**1,500**
	Sat MD (1-2)	510	528	297	64	16	97	23	28	137	**1,690**
	Sat EVE (7-8)	78	560	241	208	16	97	12	21	0	**1,212**

		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
AM	Auto	5	5	8	2	30	25	0	0	6	6	6	12	0	0	0	0	78	3	**135**	**53**	**188**
	Taxi	3	3	7	1	18	15	0	0	5	5	1	2	0	0	0	0	9	0	**43**	**26**	**69**
	Subway	24	24	10	2	42	34	0	0	49	49	0	1	0	0	0	0	211	9	**337**	**119**	**456**
	Bus	2	2	2	0	6	5	0	0	6	6	0	1	0	0	0	0	40	2	**57**	**16**	**74**
	Walk/Other	24	24	7	1	24	20	0	0	14	14	0	1	4	3	0	0	81	3	**155**	**67**	**222**
	Total	58	58	34	6	120	99	0	0	80	80	7	17	4	3	0	0	419	17	**727**	**281**	**1008**
MD	Auto	18	15	35	35	34	34	0	0	6	6	15	15	0	0	4	2	5	6	**118**	**114**	**232**
	Taxi	10	8	28	28	21	21	0	0	5	5	2	2	0	0	2	1	8	8	**76**	**74**	**149**
	Subway	78	63	43	43	48	48	0	0	49	49	1	1	0	0	7	4	16	17	**241**	**225**	**466**
	Bus	8	7	7	7	7	7	0	0	6	6	1	1	0	0	2	1	18	17	**46**	**46**	**92**
	Walk/Other	81	66	28	28	27	27	0	0	14	14	1	1	8	8	7	4	214	232	**378**	**379**	**757**
	Total	195	159	141	141	137	137	0	0	80	80	20	20	14	8	22	12	259	280	**859**	**838**	**1697**
PM	Auto	16	17	64	31	33	23	4	1	2	2	25	17	0	0	3	3	5	90	**152**	**185**	**337**
	Taxi	9	9	51	25	20	14	1	0	3	3	2	2	0	0	1	1	1	11	**89**	**66**	**154**
	Subway	68	73	77	38	47	32	24	8	48	48	2	1	0	0	5	4	13	243	**282**	**448**	**729**
	Bus	7	8	13	6	7	5	1	0	7	7	2	1	0	0	1	1	2	46	**40**	**75**	**115**
	Walk/Other	70	76	51	25	27	18	18	6	20	20	2	1	7	8	4	4	6	94	**204**	**253**	**457**
	Total	169	183	256	125	134	92	48	15	80	80	34	22	7	8	14	13	26	484	**767**	**1027**	**1794**
EVE	Auto	17	14	71	44	50	43	14	5	0	0	25	17	0	0	2	4	0	0	**180**	**126**	**306**
	Taxi	9	7	57	35	30	26	3	1	1	1	3	2	0	0	1	2	0	0	**104**	**74**	**178**
	Subway	72	59	85	52	71	60	76	25	12	12	2	1	0	0	3	8	0	0	**321**	**216**	**537**
	Bus	8	6	14	9	10	9	5	2	2	2	2	1	0	0	1	1	0	0	**41**	**29**	**70**
	Walk/Other	75	62	57	35	40	34	57	19	5	5	2	1	3	4	3	6	0	0	**243**	**166**	**408**
	Total	181	148	284	175	201	172	155	52	20	20	34	22	3	4	10	19	0	0	**889**	**611**	**1500**
Sat MD	Auto	38	16	66	66	37	37	3	3	0	0	32	32	1	1	3	3	2	1	**182**	**159**	**340**
	Taxi	61	21	53	53	22	22	1	1	0	0	4	4	0	0	1	1	2	2	**136**	**105**	**240**
	Subway	107	44	79	79	52	52	16	16	5	5	2	2	0	0	5	5	5	4	**271**	**206**	**477**
	Bus	13	5	13	13	7	7	1	1	1	1	2	2	0	0	1	1	5	4	**44**	**35**	**79**
	Walk/Other	153	62	53	53	30	30	12	12	2	2	2	2	10	10	4	4	65	49	**330**	**224**	**554**
	Total	361	148	264	264	148	148	33	33	8	8	42	42	11	11	14	14	78	60	**963**	**729**	**1692**
Sat EVE	Auto	3	5	81	56	32	28	14	5	0	0	32	32	0	0	1	3	0	0	**165**	**130**	**295**
	Taxi	4	7	65	45	19	17	3	1	0	0	4	4	0	0	1	1	0	0	**97**	**76**	**173**
	Subway	9	14	97	68	45	40	76	25	5	5	2	2	0	0	2	5	0	0	**237**	**158**	**395**
	Bus	1	2	16	11	6	6	1	1	1	1	2	2	0	0	1	1	0	0	**32**	**24**	**56**
	Walk/Other	13	20	65	45	26	23	57	19	2	2	2	2	5	6	2	4	0	0	**172**	**121**	**293**
	Total	30	48	324	225	128	114	155	52	8	8	42	42	5	6	7	14	0	0	**783**	**509**	**1212**

Vehicle Trips		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
AM	Auto	3	3	4	1	14	11	0	0	5	5	3	6	0	0	0	0	64	3	**93**	**29**	**122**
	Taxi	2	2	3	1	8	6	0	0	4	4	0	1	0	0	0	0	7	0	**24**	**14**	**38**
	Taxi (Balanced)[1]	**3**	**3**	**3**	**3**	**11**	**11**	**0**	**0**	**6**	**6**	**1**	**1**	**0**	**0**	**0**	**0**	**7**	**7**	**31**	**31**	**63**
	Truck	1	1	4	4	2	2	0	0	0	0	0	0	0	0	0	0	3	3	**10**	**10**	**20**
	Total	7	7	11	8	27	24	0	0	11	11	4	7	0	0	0	0	74	13	**134**	**70**	**204**
MD	Auto	10	8	16	16	16	16	0	0	5	5	8	8	0	0	2	1	4	5	**60**	**58**	**118**
	Taxi	7	6	12	12	9	9	0	0	4	4	1	1	0	0	1	1	6	6	**40**	**39**	**78**
	Taxi (Balanced)[1]	**10**	**10**	**18**	**18**	**13**	**13**	**0**	**0**	**6**	**6**	**2**	**2**	**0**	**0**	**1**	**1**	**9**	**9**	**59**	**59**	**119**
	Truck	1	1	4	4	2	2	0	0	0	0	0	0	0	0	0	0	4	4	**11**	**11**	**22**
	Total	21	19	38	38	31	31	0	0	11	11	10	10	0	0	3	2	17	18	**130**	**128**	**258**
PM	Auto	9	9	29	14	15	11	1	0	2	2	13	8	0	0	1	1	4	74	**73**	**119**	**193**
	Taxi	6	6	22	11	9	6	0	0	2	2	2	1	0	0	1	1	0	8	**42**	**35**	**78**
	Taxi (Balanced)[1]	**9**	**9**	**28**	**28**	**12**	**12**	**0**	**0**	**3**	**3**	**2**	**2**	**0**	**0**	**1**	**1**	**8**	**8**	**64**	**64**	**128**
	Truck	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	**2**	**2**	**4**
	Total	17	18	59	43	27	23	1	0	5	5	15	10	0	0	2	2	13	83	**139**	**185**	**324**
EVE	Auto	9	7	32	20	23	20	5	2	0	0	13	8	0	0	1	1	0	0	**83**	**59**	**141**
	Taxi	6	4	25	16	13	12	1	0	1	1	2	1	0	0	0	1	0	0	**48**	**34**	**83**
	Taxi (Balanced)[1]	**8**	**8**	**33**	**33**	**19**	**19**	**2**	**2**	**1**	**1**	**2**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**66**	**66**	**131**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
	Total	17	15	65	53	42	39	7	4	1	1	15	10	0	0	2	2	0	0	**140**	**125**	**274**
Sat MD	Auto	14	8	30	30	17	17	1	1	0	0	16	16	0	0	1	1	1	1	**81**	**72**	**154**
	Taxi	24	10	23	23	10	10	0	0	0	0	2	2	0	0	1	1	2	1	**62**	**47**	**109**
	Taxi (Balanced)[1]	**29**	**29**	**34**	**34**	**15**	**15**	**0**	**0**	**0**	**0**	**3**	**3**	**0**	**0**	**1**	**1**	**2**	**2**	**85**	**85**	**171**
	Truck	0	0	4	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	**6**	**6**	**12**
	Total	43	25	69	69	34	34	1	1	0	0	19	19	0	0	2	2	3	3	**172**	**163**	**335**
Sat EVE	Auto	1	2	37	26	15	13	5	2	0	0	16	16	0	0	1	1	0	0	**75**	**60**	**134**
	Taxi	2	3	28	20	8	7	1	0	0	0	2	2	0	0	0	1	0	0	**43**	**34**	**77**
	Taxi (Balanced)[1]	**4**	**4**	**38**	**38**	**12**	**12**	**2**	**2**	**0**	**0**	**3**	**3**	**0**	**0**	**1**	**1**	**0**	**0**	**60**	**60**	**120**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
	Total	5	6	75	64	27	25	7	4	0	0	19	19	0	0	2	2	0	0	**135**	**120**	**255**

Notes:
1. A 50% taxi overlap rate was assumed (i.e., 50% of inbound full taxis are assumed to be available for outbound demand), based on the CEQR 2012 Technical Manual.

Total Walk Trips		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
AM	Total Walk Trips[1]	58	58	19	4	72	59	0	0	69	69	1	2	4	4	1	1	333	14	**549**	**203**	**752**
MD	Total Walk Trips[1]	166	136	78	78	82	82	0	0	69	69	3	3	7	7	15	9	245	266	**666**	**649**	**1,315**
PM	Total Walk Trips[1]	145	157	140	69	90	55	43	14	75	75	5	3	7	9	10	10	20	393	**526**	**775**	**1,301**
EVE	Total Walk Trips[1]	155	127	156	96	121	103	137	46	19	19	5	3	4	4	7	13	0	0	**604**	**411**	**1,016**
SAT MD	Total Walk Trips[1]	273	111	145	145	89	89	29	29	8	8	6	6	11	11	10	10	74	56	**645**	**465**	**1,110**
SAT EVE	Total Walk Trips[1]	24	36	179	124	77	68	137	46	8	8	6	6	5	6	5	10	0	0	**441**	**304**	**744**

Notes:
1. Total walk trips includes all trips via transit plus walk only trips.

Table 10
Modified Project, Event Scenario

Person Trips		Destination Retail (Market)	Quality Restaurant	Food Counter	Theatre	Technical Arts School	Marina	Office	Rooftop Event (2)	TOTAL
Daily Trips	Weekday	3,918	4,576	2,571	643	798	878	3,713	5,360	18,745
	Saturday	4,635	4,800	2,697	643	326	1,805	804	5,360	20,266
Peak Hour Trips	MD (12-1)	353	283	274	0	160	40	538	0	1,110
	PM (5-6)	353	381	225	64	160	56	509	0	1,239
	EVE (7-8)	329	459	374	206	40	56	0	1,715	3,179
	Sat MD (1-2)	510	528	297	64	16	87	137	0	1,502
	Sat EVE (7-8)	79	550	241	206	16	87	0	1,715	2,894

		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
MD	Auto	18	15	35	35	34	34	0	0	6	6	15	15	5	6	0	0	114	111	225
	Taxi	10	8	28	28	21	21	0	0	5	5	2	2	8	8	0	0	73	72	146
	Subway	78	63	43	43	48	48	0	0	49	49	1	1	16	17	0	0	234	221	454
	Bus	8	7	7	7	7	7	0	0	6	6	1	1	16	17	0	0	45	44	89
	Walk/Other	81	66	28	28	27	27	0	0	14	14	1	1	214	232	0	0	366	369	734
	Total	195	159	141	141	137	137	0	0	80	80	20	20	259	280	0	0	832	817	1649
PM	Auto	16	17	64	31	33	23	4	1	2	2	25	17	5	90	0	0	149	182	331
	Taxi	8	9	51	25	20	14	1	0	3	3	3	2	1	11	0	0	87	64	151
	Subway	68	73	77	38	47	32	24	8	48	48	2	1	13	243	0	0	277	443	720
	Bus	7	8	13	6	7	5	1	0	7	7	2	1	2	46	0	0	39	74	112
	Walk/Other	70	76	51	25	27	18	18	6	20	20	2	1	5	94	0	0	193	241	434
	Total	169	183	256	125	134	92	48	15	80	80	34	22	26	484	0	0	745	1004	1749
EVE	Auto	17	14	71	44	50	43	14	5	0	0	25	17	0	0	116	39	294	161	454
	Taxi	9	7	57	35	30	26	3	1	1	1	3	2	0	0	26	9	129	81	210
	Subway	72	59	85	52	71	60	76	25	12	12	2	1	0	0	630	210	948	420	1,368
	Bus	8	6	14	9	10	9	5	2	2	2	2	1	0	0	39	13	79	41	119
	Walk/Other	75	62	57	35	40	34	57	19	5	5	2	1	0	0	476	159	712	315	1,027
	Total	181	148	284	175	201	172	155	52	20	20	34	22	0	0	1287	430	2162	1018	3180
Sat MD	Auto	38	16	66	66	37	37	3	3	0	0	32	32	2	1	0	0	178	155	334
	Taxi	51	21	53	53	22	22	1	1	0	0	4	4	2	2	0	0	134	103	237
	Subway	107	44	79	79	52	52	16	16	5	5	2	2	5	4	0	0	266	201	467
	Bus	13	5	13	13	7	7	1	1	1	1	2	2	5	4	0	0	43	33	76
	Walk/Other	152	62	53	53	30	30	12	12	2	2	2	2	65	49	0	0	315	210	525
	Total	361	148	264	264	148	148	33	33	8	8	42	42	79	60	0	0	936	702	1638
Sat EVE	Auto	3	5	81	56	32	28	14	5	0	0	32	32	0	0	116	39	279	166	444
	Taxi	4	7	65	45	19	17	3	1	0	0	4	4	0	0	26	9	122	83	205
	Subway	9	14	97	68	45	40	76	25	5	5	2	2	0	0	630	210	865	364	1,228
	Bus	1	2	16	11	6	6	5	2	1	1	2	2	0	0	39	13	70	36	106
	Walk/Other	13	20	65	45	26	23	57	19	2	2	2	2	0	0	476	159	641	270	911
	Total	30	48	324	225	128	114	155	52	8	8	42	42	0	0	1287	430	1977	919	2896

Vehicle Trips		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
MD	Auto	10	8	16	16	16	16	0	0	5	5	8	8	4	5	0	0	58	57	115
	Taxi	7	6	12	12	9	9	0	0	4	4	1	1	6	6	0	0	39	38	77
	Taxi (Balanced)[1]	**10**	**10**	**18**	**18**	**13**	**13**	**0**	**0**	**6**	**6**	**2**	**2**	**9**	**9**	**0**	**0**	**58**	**58**	**115**
	Truck	1	1	4	4	2	2	0	0	0	0	0	0	4	4	0	0	11	11	22
	Total	21	19	38	38	31	31	0	0	11	11	10	10	17	18	0	0	127	126	253
PM	Auto	8	9	29	14	15	11	1	0	2	2	13	8	4	74	0	0	72	118	190
	Taxi	6	6	22	11	9	6	0	0	2	2	2	1	0	8	0	0	42	35	76
	Taxi (Balanced)[1]	**9**	**9**	**28**	**28**	**12**	**12**	**0**	**0**	**3**	**3**	**2**	**2**	**8**	**8**	**0**	**0**	**59**	**59**	**118**
	Truck	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	2	2	4
	Total	17	18	58	43	27	23	1	0	5	5	15	10	13	83	0	0	133	179	312
EVE	Auto	9	7	32	20	23	20	5	2	0	0	13	8	0	0	40	13	122	70	192
	Taxi	6	4	25	16	13	12	1	0	1	1	2	1	0	0	11	3	59	37	96
	Taxi (Balanced)[1]	**8**	**8**	**33**	**33**	**19**	**19**	**2**	**2**	**1**	**1**	**2**	**2**	**0**	**0**	**13**	**13**	**77**	**77**	**155**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	17	15	65	53	42	39	7	4	1	1	15	10	0	0	53	26	199	147	346
Sat MD	Auto	14	6	30	30	17	17	1	1	0	0	16	16	1	1	0	0	80	71	151
	Taxi	24	10	23	23	10	10	0	0	0	0	2	2	2	1	0	0	61	46	108
	Taxi (Balanced)[1]	**29**	**29**	**34**	**34**	**15**	**15**	**0**	**0**	**0**	**0**	**3**	**3**	**2**	**2**	**0**	**0**	**84**	**84**	**169**
	Truck	0	0	4	4	2	2	0	0	0	0	0	0	0	0	0	0	6	6	12
	Total	43	35	68	68	34	34	1	1	0	0	19	19	3	3	0	0	170	161	331
Sat EVE	Auto	1	2	37	26	15	13	5	2	0	0	16	16	0	0	40	13	114	72	186
	Taxi	2	3	28	20	8	7	1	0	0	0	2	2	0	0	11	4	54	37	91
	Taxi (Balanced)[1]	**4**	**4**	**38**	**38**	**12**	**12**	**2**	**2**	**0**	**0**	**3**	**3**	**0**	**0**	**13**	**13**	**72**	**72**	**144**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	5	6	75	64	27	25	7	4	0	0	19	19	0	0	53	26	186	144	330

Notes
1. A 50% taxi overlap rate was assumed (i.e., 50% of inbound full taxis are assumed to be available for outbound demand), based on the CEQR 2012 Technical Manual.
2. It was assumed that there would be no rooftop events during the Weekday MD and Saturday MD peaks. During those times, the rooftop trip generation would match the Weekday MD and Saturday MD for the Typical Scenario (ie, open space).;

Total Walk Trips		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
MD	Total Walk Trips	166	136	78	78	82	82	0	0	69	69	3	3	245	266	0	0	644	634	1,278
PM	Total Walk Trips	145	157	140	69	80	55	43	14	75	75	5	3	20	383	0	0	509	757	1,266
EVE	Total Walk Trips	155	127	156	96	121	103	137	46	19	19	5	3	0	0	1,145	382	1,739	776	2,515
SAT MD	Total Walk Trips[1]	273	111	145	145	89	89	29	29	8	8	6	6	74	56	0	0	624	444	1,068
SAT EVE	Total Walk Trips[1]	24	36	179	124	77	68	137	46	8	8	6	6	0	0	1,145	382	1,575	669	2,245

Notes
1. Total walk trips includes all trips via transit plus walk only trips.

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With the exception of the Pier 54 No Action development, the remainder of the new No Action developments include similar land uses and are located in similar locations to the No Action developments considered in the FEIS. To estimate the changes to the background volumes, the total trip generation for the FEIS No Action and new No Action developments were compared. Adjustment factors by peak hour and by mode were developed and applied to the No Action increment from the FEIS. To account for the Pier 54 No Action development, trip generation was estimated based on travel demand factors from the *Pier 54 Redevelopment EAF* (2015), assuming typical park operation.

Changes in Background Traffic Volumes/Conditions

Vehicular, parking, pedestrian, transit, and safety data used as the basis for the transportation analysis in the FEIS were collected in 2010 and 2011. Given the passage of time and in conformance with the *CEQR Technical Manual*, new traffic, parking, pedestrian, transit, and crash data were collected to determine if there had been substantial changes in background traffic conditions that should be considered in the analysis of the modified project.

Background Count Data: Vehicular

To evaluate changes in background traffic volumes, new Automatic Traffic Recorder (ATR) data were collected in May 2014 at the following six count locations from the FEIS:

- Northbound Route 9A between West 15th and West 16th Streets;
- Southbound Route 9A between West 15th and West 16th Streets;
- Southbound Ninth Avenue between West 15th and West 16th Streets;
- Westbound West 15th Street between Ninth and Tenth Avenues;
- Westbound West 14th Street between Ninth and Tenth Avenues; and
- Eastbound West 14th Street between Ninth and Tenth Avenues.

As shown in **Table 11**, traffic volumes have decreased or remained generally consistent between 2010 and 2014, with an overall decrease in volumes in the study area during each peak hour.

Table 11
Traffic Counts: 2010 to 2014

		NB/SB ATRs - Route 9A (NB & SB) bw W 15th St & W 16th St - SB 9th Ave bw W 15th St & W 16th St			**EB/WB ATRs** - W 14th St (EB & WB) bw 9th Ave & 10th Ave - W 15th St bw 9th Ave & 10th Ave		
Peak Hour	**Time**	**Oct 2010**	**May 2014**	**Diff**	**Oct 2010**	**May 2014**	**Diff**
Weekday AM*	8-9A	6095	6302	207	1053	1004	-49
Weekday MD	12-1P	5015	5234	219	1138	1205	66
Weekday PM	5:30-6:30P	5824	5625	-200	1175	1253	79
Weekday Pre-Event	7-8P	5537	5884	347	1242	1371	129
Saturday MD	12:45-1:45P	5161	5112	-49	1159	1204	46
Saturday Pre-Event	7-8P	5416	5415	-1	1284	1340	56

Background Conditions: Parking

The FEIS assigned project trips to the on-site parking garage and off-site parking facilities. Since the completion of the FEIS, two parking facilities have been eliminated (see **Table 12)**. The No Action trips that were assigned to those parking facilities and the project increment trips for the modified project were reassigned to other parking facilities with availability.

Table 12
Off-Street Parking Facilities

Garage	Location	License Number	Capacity
Icon Parking Systems	W. 15th Street east of Ninth Avenue	1002786	625
MP 17 LLC	W. 16th Street between Ninth and Tenth Avenue	1310036	206
Edison Parking	W. 17th Street west of Tenth Avenue	1298623	320
Edison Parking	W. 20th Street west of Tenth Avenue	1006124	80
Edison Parking	W. 22nd Street west of Tenth Avenue	1040211	49
Chelsea Piers	W. 19th Street west of Eleventh Avenue	1132509	250
Facilities Eliminated Since FEIS			
Park 15 West LLC	W. 15th Street between Ninth and Tenth Avenues	1155053	374
GGMC Parking	W. 21st Street west of Tenth Avenue	1362685	142

Background Count Data: Transit

New subway count data at the West 14th Street/Eighth Avenue station (A/C/E/L) were collected during the weekday PM peak hour in May 2014 at the following five stairway locations from the FEIS for comparison purposes:

- S2 (southwest corner of Eighth Avenue/West 14th Street);
- M2 A/B (southwest corner of Eighth Avenue/West 14th Street);
- S3 (northwest corner of Eighth Avenue/West 15th Street);
- M3 (northwest corner of Eighth Avenue/West 15th Street); and
- P1 A/B (downtown A/C/E platform).

As shown in **Table 13**, background transit volumes have generally increased between 2010 and 2014.

Table 13
Transit Counts 2010-2014

Stair #	Location		Existing 2010	Existing 2014	Existing Δ
M2A/B	8th Ave and 14th St	SW Corner	1,613	2,362	749
S2		SW Corner	1,613	2,362	749
M3	8th Ave and 15th St	NW Corner	1,134	1,069	-65
S3		NW Corner	1,134	1,069	-65
P1A/B	From 14th St to 16th St	Downtown Platform	2,419	2,678	259

Background Count Data: Pedestrian

New pedestrian count data were collected in May 2014 at the following four locations from the FEIS, for comparison purposes:

- West 16th Street and Ninth Avenue (north crosswalk);
- West 15th Street and Route 9A (north crosswalk);
- West 15th Street and Ninth Avenue (north crosswalk); and
- West 14th Street and Ninth Avenue (north crosswalk).

As shown in **Table 14,** background pedestrian volumes have increased between 2010 and 2014.

Table 14
Pedestrian Counts: 2010 to 2014

		Crosswalk Hourly Volumes																	
		Weekday AM			Weekday MD			Weekday PM			Weekday EVE			Saturday MD			Saturday EVE		
		2010	2014	Δ	2010	2014	Δ	2010	2014	Δ	2010	2014	Δ	2010	2014	Δ	2010	2014	Δ
Rt 9A/W 15th St	N xwalk	-	10	-	12	22	+10	13	21	+9	10	14	+5	11	33	+22	16	57	+41
Ninth Ave/W 16th St	N xwalk	-	362	-	321	480	+160	393	733	+341	295	596	+301	361	490	+130	328	698	+370
Ninth Ave/W 15th St	N xwalk	-	504	-	957	1,055	+98	792	1,017	+225	390	705	+316	478	823	+346	465	741	+276
Ninth Ave/W 14th St (west side of intersection)	N xwalk	-	358	-	685	801	+116	757	1,136	+380	741	897	+156	1,371	878	-493	1,005	1,103	+98

Background Data: Safety Assessment

The FEIS analyzed crash data for 2008, 2009, and 2010. Since the completion of the FEIS, crash data for 2011 and 2012 have been released, as shown in **Table 15**. Based on a review of the latest available data, there were six pedestrian/bicycle injury crashes in the consecutive 12-month period of 2011 at the intersection of Ninth Avenue and West 14th Street. According to the *CEQR Technical Manual*, a high crash location is one with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent three-year period for which data are available. Therefore, this intersection would now be identified as a "high pedestrian/bicycle crash location."

Table 15
Crash Data (2010-2012)

	Crashes by Year											
	Total Crashes			Pedestrian			Bicycle			Combined Ped/Bicycle		
Intersection	2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Route 9A/W. 24th St.	7	11	5	0	0	1	0	0	0	0	0	1
Route 9A/11th Ave./W. 22nd St.	5	2	1	1	0	0	0	0	0	2	0	0
Route 9A/W. 18th St.	1	4	6	0	0	0	0	0	0	0	0	0
Route 9A/W. 17th St.	8	2	5	0	0	0	0	0	1	0	0	1
Route 9A/W. 16th St.	0	2	5	0	0	0	0	0	0	0	0	0
Route 9A/W. 15th St.	7	6	3	0	0	0	0	0	0	0	0	0
Route 9A/W. 14th St.	3	18	20	0	0	1	0	0	0	0	0	1
Route 9A/10th Ave.	0	0	0	0	0	0	0	0	0	1	0	0
10th Ave./W. 17th St.	4	2	2	0	1	0	0	0	0	0	1	0
10th Ave./W. 16th St.	2	1	4	1	0	0	0	0	0	1	0	0
10th Ave./W 15th St.	5	6	4	1	1	0	0	0	0	1	1	0
10th Ave./W. 14th St.	3	5	2	0	1	0	0	1	0	0	2	0
9th Ave./W. 17th St.	6	8	6	1	3	4	0	0	0	0	3	4
9th Ave./W. 16th St.	3	2	1	1	0	0	1	0	0	2	0	0
9th Ave./W. 15th St.	6	9	5	3	0	1	1	2	0	3	2	1
9th Ave./W. 14th St.	9	18	5	2	5	3	0	1	0	3	**6**	3
8th Ave./W. 17th St.	4	9	5	0	2	3	1	0	0	1	2	3
8th Ave./W. 14th St.	9	7	13	2	4	4	4	1	3	4	**5**	**7**
W. 14th St./Washington St.	6	3	1	2	0	0	0	0	0	1	0	0

Note: Intersections that are bolded reflect the occurrence of 48 or more total reportable and non-reportable crashes and/or five or more pedestrian/bicyclists injury crashes in a twelve-month period.
Source: NYCDOT January 1, 2010 to December 31, 2012 crash data.

Screening Analysis Conclusions

Based on a review of the comparative trip generation, site access operational modifications, updated build year and No Action developments, and most recent traffic counts, it was

determined that the following analyses were appropriate to determine whether the modified project would result in any significant impacts not previously identified in the FEIS.

Traffic

Given the reduced vehicular trip generation for the modified project and reduced background traffic volumes, the modified project would not have the potential to alter the conclusions presented in the FEIS with the exception of three intersections on Route 9A. Due to the site access operational changes for the modified project during the weekday AM, midday, PM, and Saturday midday peak hours, project-generated traffic at the intersections of Route 9A at West 16th Street and West 17th Street would be rerouted when compared to the FEIS. Therefore, these study intersections were identified for further quantified analysis for the peak hours identified above. In addition, due to the generation of greater than 50 peak hour vehicle trips during the weekday AM peak hour and the fact that traffic impacts were identified in the FEIS, there is sensitivity to the potential for an impact at the intersection of Route 9A and West 15th Street. Therefore, this study intersection was identified for further quantified analysis for the weekday AM peak hour.

Parking

Due to the updated program and parking demands for the modified project and the redevelopment of two of the off-site parking facilities included in the FEIS, the off-site parking assignment and utilization were identified for updated analysis for all peak hours.

Transit

Although the modified project is expected to generate fewer transit trips than the approved project, background transit volumes have increased since 2010. Since no significant adverse transit impacts were identified in the FEIS, only the transit element where the modified project is expected to add more than 200 peak hour trips was identified for further quantified analysis. Transit analyses were conducted for the weekday PM peak hour, which would have the greatest potential for a significant impact because of the net increment of the proposed project combined with the highest background volumes.

Pedestrian

Although the modified project is expected to generate fewer pedestrian trips than the approved project, background pedestrian volumes have increased since 2010. Therefore, pedestrian elements where significant adverse impacts were identified or were close to being identified in the FEIS were identified for further quantified analysis during the weekday midday, weekday PM, weekday evening, Saturday midday, and Saturday PM peak hours. As shown in **Tables 10 and 14** above, the background and project-generated pedestrian trips during the weekday AM peak hour are substantially lower than the remaining five peak hours; therefore, a pedestrian analysis for the weekday AM peak hour was not identified for further quantified analysis.

Safety

Although additional crash data have been made available since the FEIS and the intersection of Ninth Avenue and West 14th Street has been identified as a "high pedestrian/bicycle crash location" since the FEIS, recent safety policies were implemented as part of New York City's Vision Zero agenda. For example, in November 2014, the city-wide speed limit was reduced from 30 to 25 miles per hour (mph) on most City streets including Ninth Avenue and West 14th Street. Additionally, the modified project would be adding substantially fewer vehicle and pedestrian trips to this intersection compared to the approved project. Since the three most recent years of crash data precede the referenced safety improvements that would affect this intersection, no additional safety analysis or improvements are necessary. Therefore, the modified project would not alter the conclusions presented in the FEIS.

TRAFFIC ANALYSIS

The trip generation and assignment estimates for the modified project were prepared for two scenarios, as was done for the FEIS. The "Typical" scenario is the more common condition when the rooftop would be used as public open space. The "Pre-Event" scenario is when the rooftop space would be used for high-attendance evening events. The other project elements would operate the same under both analysis scenarios. To analyze a reasonable worst-case condition, the Pre-Event scenario assumed a 2,500-person event. The Typical scenario was analyzed for the weekday midday, weekday PM, and Saturday midday peak hours. A weekday AM peak hour was added to account for the proposed office use. The Pre-Event scenario was analyzed for the weekday evening and Saturday evening peak hours. The Pre-Event scenarios were not analyzed as part of this Technical Memorandum since the anticipated operation of the site access plan would not change for the weekday evening and Saturday evening peak hours, and because the number of trips generated by the modified project would be less than what was analyzed in the FEIS.

As identified above, vehicular analyses were conducted at two intersections, Route 9A and West 17th Street, and Route 9A and West 16th Street for the weekday AM, midday, PM, and Saturday midday peak hours; vehicular analyses were also conducted at the Route 9A and West 15th Street intersection for the weekday AM peak hour.

Existing Conditions

Existing traffic volumes for the Route 9A and West 17th Street and Route 9A and West 16th Street intersections were based on updated traffic data collected in July 2014 during the weekday AM, weekday midday, weekday PM, and Saturday midday peak periods. Seasonal adjustment factors were calculated for the July 2014 counts based on a comparison of May 2014 and July 2014 ATR data on Route 9A between West 15th and West 16th Streets. Existing traffic volumes for the Route 9A and West 15th Street intersection were based on updated traffic data collected in June 2015 during the weekday AM peak period.

An inventory of the study intersections was performed to confirm and update traffic signal timing, phasing, and cycle length, street and curbside signage, pavement markings, and lane dimensions to be used in the calculation of street capacities. Also, official signal timing data were obtained from the New York City Department of Transportation (DOT) to confirm field observations and for incorporation into the capacity analysis.

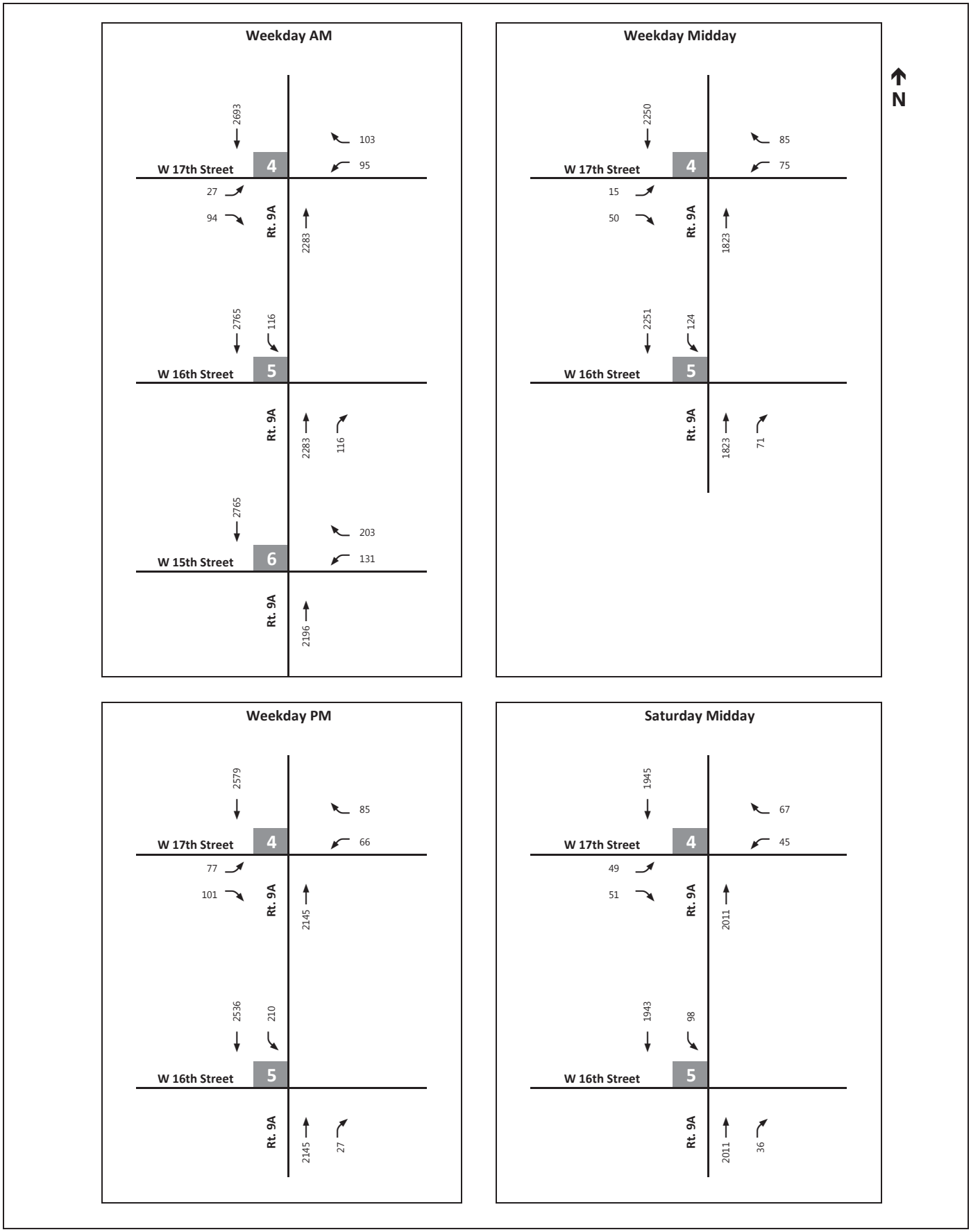
Figure 3 shows the existing conditions traffic volumes for the four peak hours, and **Table 16** presents the capacity analysis results for the three study intersections. With the following exceptions, the analyzed intersection approaches and lane groups operate at an acceptable level of mid-LOS D or better (45.0 seconds of delay) during the four analysis peak hours. The exceptions are as follows:

Route 9A and West 15th Street

- During the weekday AM peak hour, the westbound left-turn movement operates at LOS D with an average delay of 54.4 seconds and a v/c ratio of 0.48. The westbound right-turn movement operates at LOS E with an average delay of 67.9 seconds and a v/c ratio of 0.74.

Route 9A and West 16th Street

- During the weekday AM peak hour, the southbound left-turn movement operates at LOS D with an average delay of 49.8 seconds and v/c ratio of 0.32.
- During the weekday PM peak hour, the southbound left-turn movement operates at LOS E with an average delay of 55.5 seconds and v/c ratio of 0.54.



Existing 2014/2015 Traffic Volumes

Hudson River Park Pier 57

Figure 3

Route 9A and West 17th Street

- During the weekday AM peak hour, the eastbound left-turn movement operates at LOS E with an average delay of 62.6 seconds and a v/c ratio of 0.10. The eastbound left/right-turn lane operates at LOS E with an average delay of 76.9 seconds and a v/c ratio of 0.50. The eastbound right-turn movement operates at LOS E with an average delay of 73.4 seconds and a v/c ration of 0.41. The westbound approach operates at LOS F with an average delay of 141.1 seconds and a v/c ratio of 1.04.
- During the weekday midday peak hour, the westbound approach operates at LOS F with an average delay of 83.2 seconds and a v/c ratio of 0.83.
- During the weekday PM peak hour, the eastbound left-turn movement operates at LOS D with an average delay of 53.3 seconds and a v/c ratio of 0.13. The eastbound left/right-turn lane operates at LOS E with an average delay of 58.0 seconds and a v/c ratio of 0.34. The eastbound right-turn movement operates at LOS E with an average delay of 55.3 seconds and a v/c ration of 0.22. The westbound approach operates at LOS F with an average delay of 101.6 seconds and a v/c ratio of 0.85.
- During the Saturday midday peak hour, the westbound approach operates at LOS E with an average delay of 75.0 seconds and a v/c ratio of 0.71.

Table 16
Existing Conditions Level of Service

Intersection & Approach	Weekday AM Peak Hour				Weekday MD Peak Hour				Weekday PM Peak Hour				Saturday MD Peak Hour			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized																
Rt 9A & West 15th Street																
Westbound	L	0.48	54.4	D												
	R	0.74	67.9	E												
Northbound	T	0.72	5.9	A												
Southbound	T	0.88	9.6	A												
	Intersection		11.7	B												
Rt 9A & West 16th Street																
Northbound	TR	0.80	7.2	A	TR	0.68	9.9	A	TR	0.65	5.2	A	TR	0.74	11.0	B
Southbound	L	0.32	49.8	D	L	0.26	33.5	C	L	0.54	55.5	E	L	0.22	33.0	C
	T	0.86	8.7	A	T	0.78	11.9	B	T	0.76	6.4	A	T	0.68	10.0+	B
	Intersection		8.9	A	Intersection		11.6	B	Intersection		7.9	A	Intersection		11.0	B
Rt 9A & West 17th Street																
Eastbound	L	0.10	62.6	E	L	0.03	40.5	D	L	0.13	53.3	D	L	0.06	33.8	C
	LR	0.50	76.9	E	LR	0.14	42.2	D	LR	0.34	58.0	E	LR	0.13	34.7	C
	R	0.41	73.4	E	R	0.11	41.7	D	R	0.22	55.3	E	R	0.07	34.0	C
Westbound	LR	1.04	141.1	F	LR	0.83	83.2	F	LR	0.85	101.6	F	LR	0.71	75.0	E
Northbound	T	0.78	8.7	A	T	0.71	15.1	B	T	0.72	13.0	B	T	0.85	23.9	C
Southbound	T	0.88	11.5	B	T	0.86	19.4	B	T	0.86	17.2	B	T	0.81	22.4	C
	Intersection		16.6	B	Intersection		20.3	C	Intersection		19.3	B	Intersection		24.8	C

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.

No Action Condition

The future without the modified project (the "No Action Condition") builds on the Existing Conditions analysis by incorporating background growth and other nearby projects expected to be completed. The No Action Condition analysis focuses on conditions in 2017, when the modified project is expected to be complete. The No Action Condition serves as the baseline against which the modified project is compared.

In accordance with *CEQR Technical Manual* guidelines (Table 16-4) for projects in Manhattan, the 2017 No Action Condition background traffic volumes were developed by applying a 0.25 percent annual growth rate over a period of three years to the 2014 Existing Condition volumes.

In addition to the background growth, the updated list of No Action developments described above were used to forecast the No Action Condition volumes.

Figure 4 shows the 2017 No Action traffic volumes for the four peak hours. **Table 17** presents a comparison of Existing and No Action conditions for the study intersections. Based on the analysis results, the majority of the approaches/lane-groups would operate at the same LOS in the No Action Condition as in Existing Conditions. At the following locations, the addition of No Action traffic would result in changes in LOS beyond mid-LOS D:

Route 9A and West 15th Street

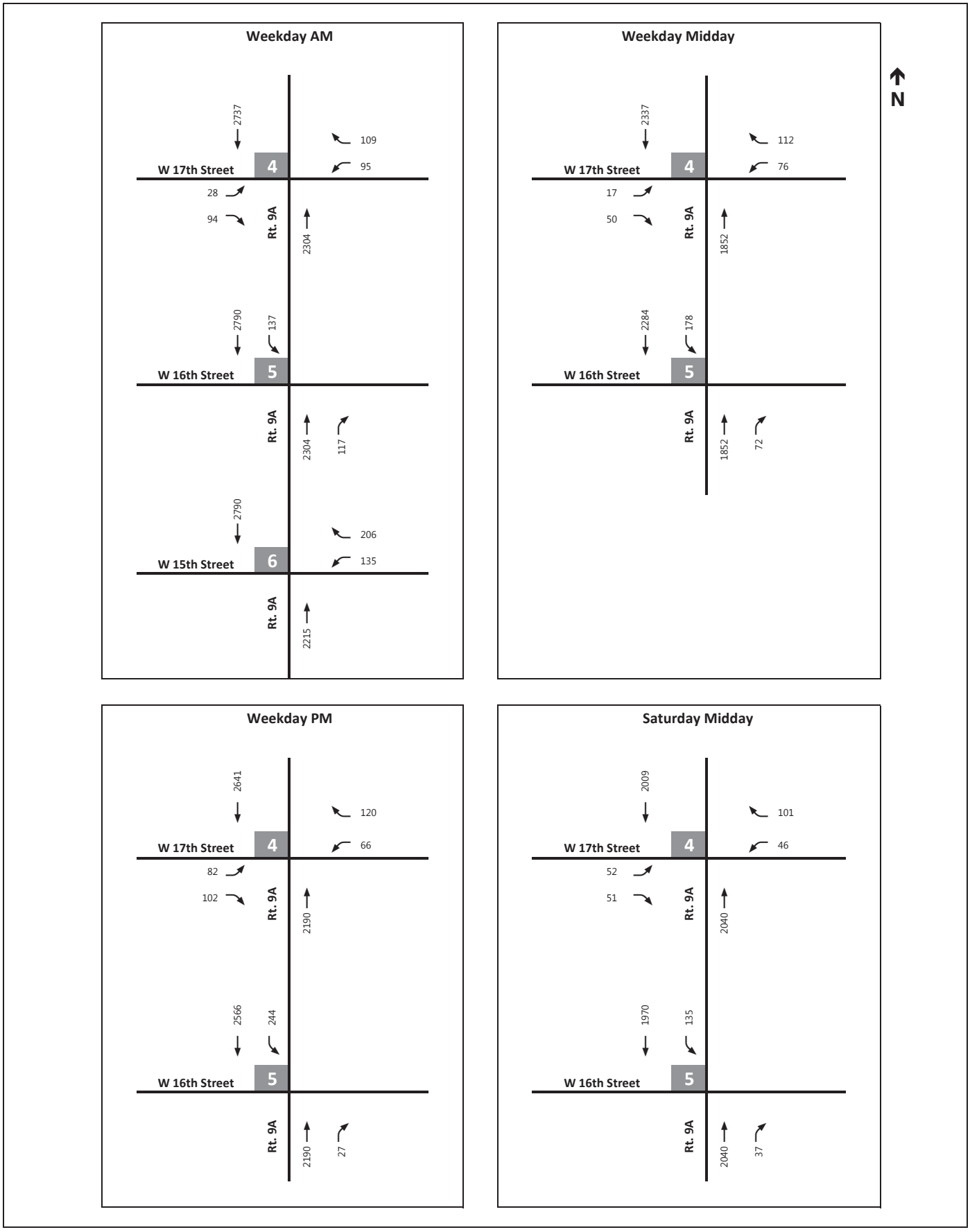
- During the weekday AM peak hour, the westbound left-turn movement would deteriorate within LOS D from an average delay of 54.4 seconds and a v/c ratio of 0.48 to an average delay of 54.9 seconds and a v/c ratio of 0.50. The westbound right-turn movement would deteriorate within LOS E from an average delay of 67.9 seconds and a v/c ratio of 0.74 to an average delay of 68.7 seconds and a v/c ratio of 0.75.

Route 9A and West 16th Street

- During the weekday AM peak hour, the southbound left-turn movement would deteriorate within LOS D from an average delay of 49.8 seconds and v/c ratio of 0.32 to an average delay of 51.1 seconds and a v/c ratio of 0.38.
- During the weekday PM peak hour, the southbound left-turn movement would deteriorate within LOS E from an average delay of 55.5 seconds and v/c ratio of 0.54 to an average delay of 58.7 seconds and a v/c ratio of 0.62.

Route 9A and West 17th Street

- During the weekday AM peak hour, the eastbound left/right-turn lane would deteriorate within LOS E from an average delay of 76.9 seconds and a v/c ratio of 0.50 to an average delay of 77.0 seconds and a v/c ratio of 0.50. The eastbound right-turn lane would determinate within LOS E from an average delay of 73.4 seconds and a v/c ratio of 0.41 to an average delay of 73.6 seconds and a v/c ratio of 0.42. The westbound approach would deteriorate within LOS F from an average delay of 141.1 seconds and a v/c ratio of 1.04 to an average delay of 151.7 seconds and a v/c ratio of 1.08.
- During the weekday midday peak hour, the westbound approach would deteriorate within LOS F from an average delay of 83.2 seconds and a v/c ratio of 0.83 to an average delay of 107.4 seconds and a v/c ratio of 0.96.
- During the weekday PM peak hour, the eastbound left-turn movement would deteriorate within LOS D from an average delay of 53.3 seconds and a v/c ratio of 0.13 to an average delay of 53.5 seconds and a v/c ratio of 0.14. The eastbound left/right-turn lane would deteriorate within LOS E from an average delay of 58.0 seconds and a v/c ratio of 0.34 to an average delay of 58.2 seconds and a v/c ratio of 0.35. The eastbound right-turn movement would deteriorate within LOS E from an average delay of 55.3 seconds and a v/c ratio of 0.22 to an average delay of 55.5 seconds and a v/c ratio of 0.22. The westbound approach would deteriorate within LOS F from an average delay of 101.6 seconds and a v/c ratio of 0.85 to an average delay of 140.9 seconds and a v/c ratio of 1.03.
- During the Saturday midday peak hour, the westbound approach would deteriorate from LOS E with an average delay of 75.0 seconds and a v/c ratio of 0.71 to LOS F with an average delay of 102.5 seconds and a v/c ratio of 0.91.



No Build 2017 Traffic Volumes

Hudson River Park Pier 57

Figure 4

Table 17
2017 No Action Conditions Level of Service

Intersection & Approach	Weekday AM Peak Hour							
	Existing				No Action 2017			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Rt. 9A & West 15th Street							
Westbound	L	0.48	54.4	D	L	0.50	54.9	D
	R	0.74	67.9	E	R	0.75	68.7	E
Northbound	T	0.72	5.9	A	T	0.73	6.0	A
Southbound	T	0.88	9.6	A	T	0.89	9.9	A
	Intersection		11.7	B	Intersection		12.0	B
	Rt. 9A & West 16th Street							
Northbound	TR	0.80	7.2	A	TR	0.80	7.4	A
Southbound	L	0.32	49.8	D	L	0.38	51.1	D
	T	0.86	8.7	A	T	0.87	9.0	A
	Intersection		8.9	A	Intersection		9.3	A
	Rt. 9A & West 17th Street							
Eastbound	L	0.10	62.6	E	L	0.10	62.6	E
	LR	0.50	76.9	E	LR	0.50	77.0	E
	R	0.41	73.4	E	R	0.42	73.6	E
Westbound	LR	1.04	141.1	F	LR	1.08	151.7	F
Northbound	T	0.78	8.7	A	T	0.79	8.9	A
Southbound	T	0.88	11.5	B	T	0.90	12.2	B
	Intersection		16.6	B	Intersection		17.5	B
	Weekday Midday Peak Hour							
	Existing				No Action 2017			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Rt. 9A & West 16th Street							
Northbound	TR	0.68	9.9	A	TR	0.69	10.1	B
Southbound	L	0.26	33.5	C	L	0.37	35.5	D
	T	0.78	11.9	B	T	0.79	12.1	B
	Intersection		11.6	B	Intersection		12.2	B
	Rt. 9A & West 17th Street							
Eastbound	L	0.03	40.5	D	L	0.04	40.6	D
	LR	0.14	42.2	D	LR	0.14	42.4	D
	R	0.11	41.7	D	R	0.11	41.7	D
Westbound	LR	0.83	83.2	F	LR	0.96	107.4	F
Northbound	T	0.71	15.1	B	T	0.72	15.4	B
Southbound	T	0.86	19.4	B	T	0.89	21.0	C
	Intersection		20.3	C	Intersection		22.6	C
	Weekday PM Peak Hour							
	Existing				No Action 2017			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Rt. 9A & West 16th Street							
Northbound	TR	0.65	5.2	A	TR	0.67	5.3	A
Southbound	L	0.54	55.5	E	L	0.62	58.7	E
	T	0.76	6.4	A	T	0.77	6.5	A
	Intersection		7.9	A	Intersection		8.5	A
	Rt. 9A & West 17th Street							
Eastbound	L	0.13	53.3	D	L	0.14	53.5	D
	LR	0.34	58.0	E	LR	0.35	58.2	E
	R	0.22	55.3	E	R	0.22	55.5	E
Westbound	LR	0.85	101.6	F	LR	1.03	140.9	F
Northbound	T	0.72	13.0	B	T	0.73	13.3	B
Southbound	T	0.86	17.2	B	T	0.88	18.2	B
	Intersection		19.3	B	Intersection		21.9	C

Table 17 (cont'd)
2017 No Action Conditions Level of Service

	Saturday Midday Peak Hour							
	Existing				No Action 2017			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Rt. 9A & West 16th Street							
Northbound	TR	0.74	11.0	B	TR	0.75	11.2	B
Southbound	L	0.22	33.0	C	L	0.31	34.5	C
	T	0.68	10.0+	B	T	0.69	10.1	B
	Intersection		11.0	B	Intersection		11.4	B
	Rt. 9A & West 17th Street							
Eastbound	L	0.06	33.8	C	L	0.06	33.8	C
	LR	0.13	34.7	C	LR	0.13	34.8	C
	R	0.07	34.0	C	R	0.07	34.0	C
Westbound	LR	0.71	75.0	E	LR	0.91	102.5	F
Northbound	T	0.85	23.9	C	T	0.86	24.5	C
Southbound	T	0.81	22.4	C	T	0.84	23.5	C
	Intersection		24.8	C	Intersection		26.9	C

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.

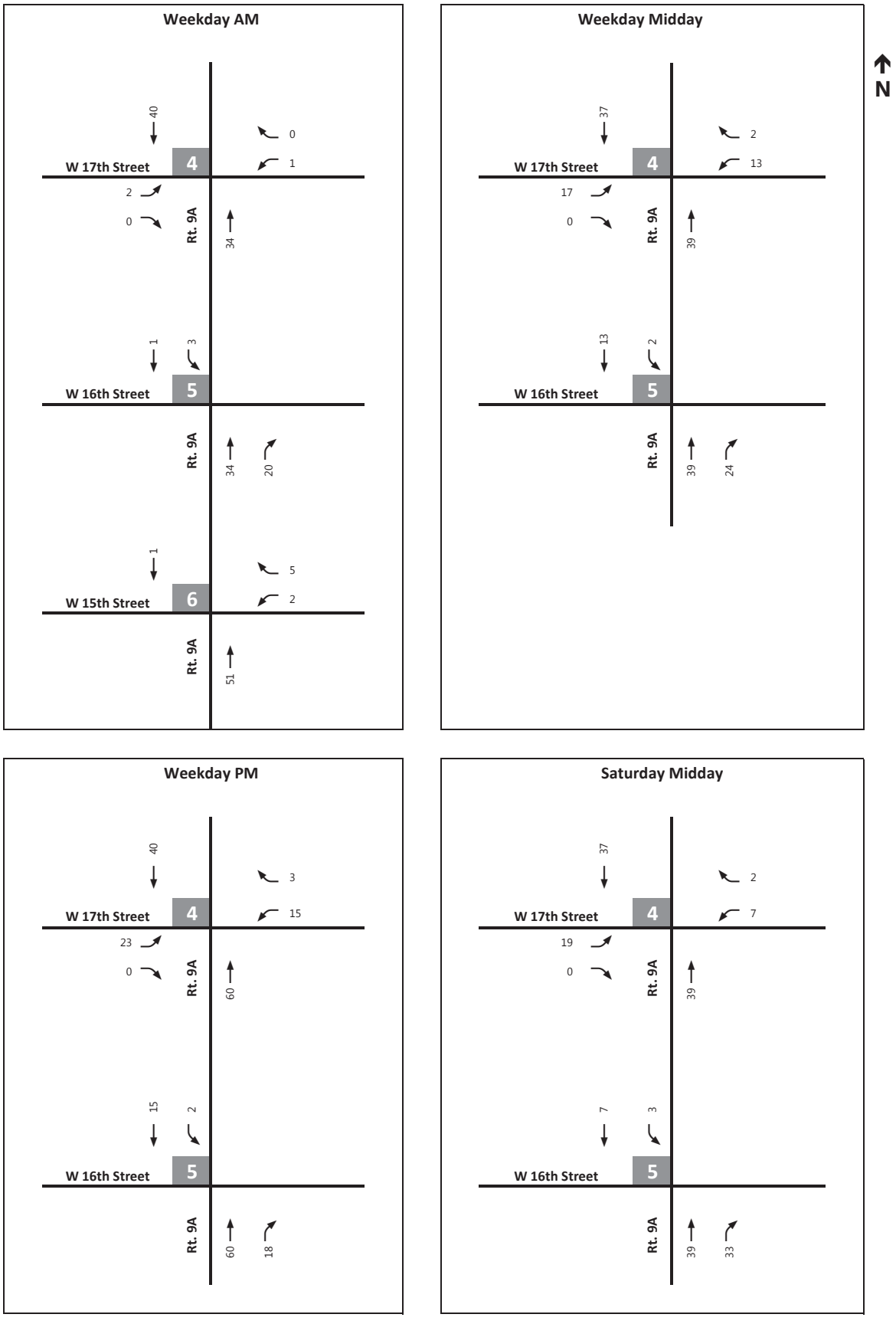
With Action Condition

The No Action Condition analysis forms the future baseline to which projected increments associated with modified project are added to formulate the "With Action Condition." The *CEQR Technical Manual* defines how significant impacts to traffic are to be determined, which are consistent with the significance criteria described in the FEIS.

In addition to the information provided in the FEIS, which assumed construction of an access road adjacent to and west of Route 9A between West 14th and 17th Streets as a project improvement, the following adjustments to the West 15th, West 16th, and West 17th Street intersections would be included as project improvements for the modified project:

- The signal timing at the intersection of Route 9A and West 15th Street would be modified during the AM peak hour by shifting 3 seconds from the north/south phase on Route 9A to the westbound phase on West 15th Street.
- The addition of a signalized southbound right-turn lane on Route 9A at West 16th Street that would operate on the same phase as the southbound left-turn was previously proposed as a project improvement for the approved project. For the modified project, this southbound right-turn lane would also operate during a portion of the signal phase for northbound/southbound Route 9A; and
- The addition of a westbound through movement from West 17th Street to the project access road was previously proposed as a project improvement as part of the approved project. For the modified project, this through movement would be closed most of the time, except in limited circumstances when a secondary access point might be needed to provide additional curbside loading space or increased entrance capacity, such as during larger events.

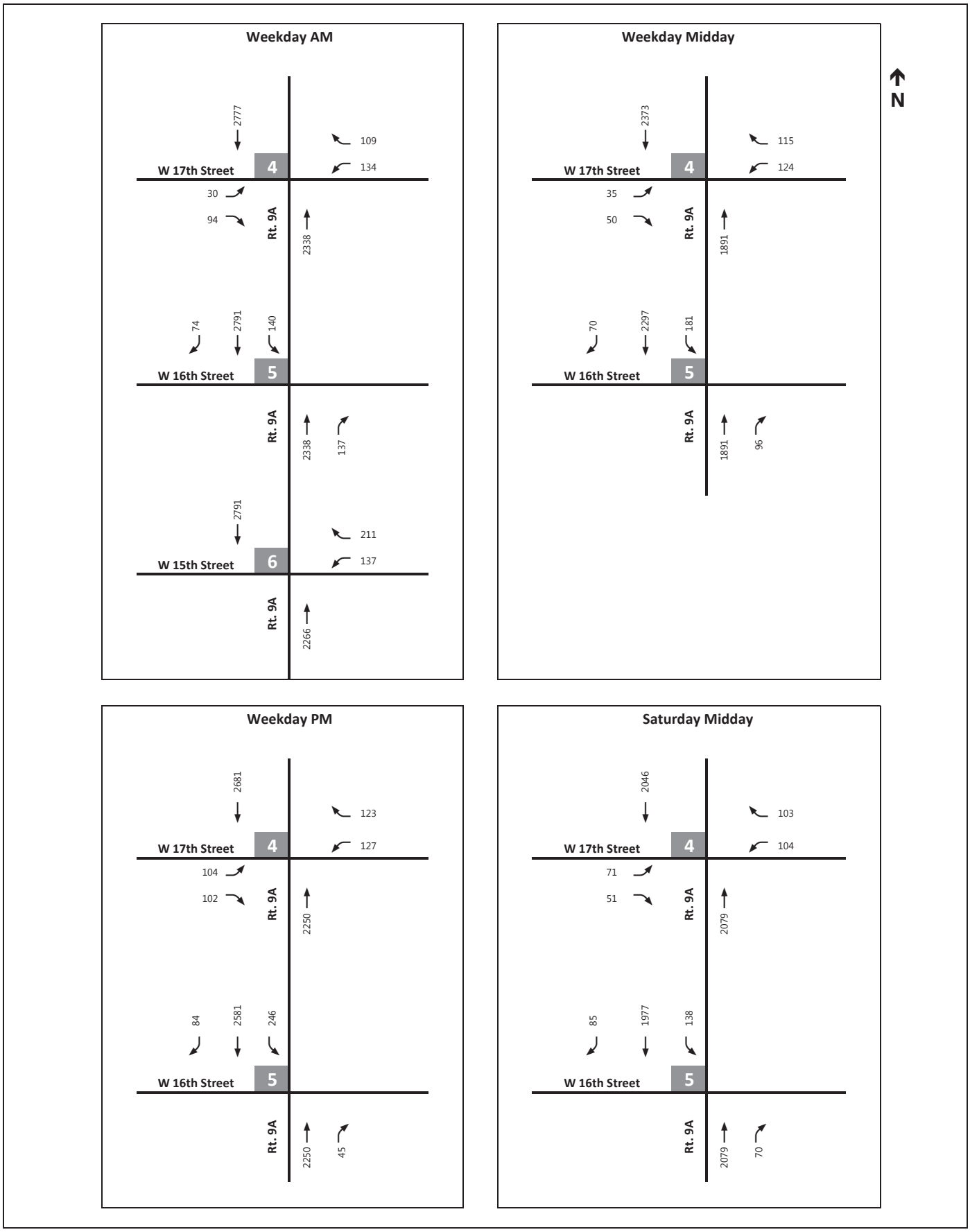
Figure 5 shows the project-generated volumes, and **Figure 6** shows the 2017 With Action Condition traffic volumes for the four peak hours. **Table 18** presents a comparison of No Action and With Action conditions for the study intersections. Based on the implementation of the project improvements listed above, no significant adverse impacts were identified at the study locations. Therefore, there would be no change to the vehicular traffic-related conclusions presented in the FEIS.



Project Generated Traffic Volumes

Hudson River Park Pier 57

Figure 5



Build 2017 Traffic Volumes

Hudson River Park Pier 57

Figure 6

Table 18
2017 With Action Conditions Level of Service

#	Intersection & Approach	Weekday AM Peak Hour							
		No Action 2017				With Action 2017			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
	Rt. 9A & West 15th Street								
6	Westbound	L	0.50	54.9	D	L	0.51	53.6	D
		R	0.75	68.7	E	R	0.79	71.1	E
	Northbound	T	0.73	6.0	A	T	0.77	8.4	A
	Southbound	T	0.89	9.9	A	T	0.92	13.6	B
		Intersection		12.0	B	Intersection		15.0	B
	Rt. 9A & West 16th Street								
5	Northbound	TR	0.80	7.4	A	TR	0.82	7.1	A
	Southbound	L	0.38	51.1	D	L	0.38	51.3	D
		T	0.87	9.0	A	T	0.62	0.9	A
						R	0.14	33.5	C
		Intersection		9.3	A	Intersection		5.4	A
	Rt. 9A & West 17th Street								
4	Eastbound	L	0.10	62.6	E	L	0.10	62.7	E
		LR	0.50	77.0	E	LR	0.51	77.5	E
		R	0.42	73.6	E	R	0.42	73.6	E
	Westbound	LR	1.08	151.7	F	LT	0.70	81.0	F
						R	0.69	83.7	F
	Northbound	T	0.79	8.9	A	T	0.80	9.1	A
	Southbound	T	0.90	12.2	B	T	0.91	13.0	B
		Intersection		17.5	B	Intersection		15.8	B
		Weekday Midday Peak Hour							
		No Action 2017				**With Action 2017**			
		Lane Group	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**
	Rt. 9A & West 16th Street								
5	Northbound	TR	0.69	10.1	B	TR	0.70	9.7	A
	Southbound	L	0.37	35.5	D	L	0.37	35.7	D
		T	0.79	12.1	B	T	0.51	0.7	A
						R	0.14	23.4	C
		Intersection		12.2	B	Intersection		6.4	A
	Rt. 9A & West 17th Street								
4	Eastbound	L	0.04	40.6	D	L	0.07	41.1	D
		LR	0.14	42.4	D	LR	0.18	43.0	D
		R	0.11	41.7	D	R	0.11	41.7	D
	Westbound	LR	0.96	107.4	F	LT	0.71	71.1	E
						R	0.65	66.9	E
	Northbound	T	0.72	15.4	B	T	0.73	15.7	B
	Southbound	T	0.89	21.0	C	T	0.90	21.9	C
		Intersection		22.6	C	Intersection		22.2	C

Table 18 (cont'd)
2017 With Action Conditions Level of Service

		Weekday PM Peak Hour							
		No Action 2017				With Action 2017			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
5	Rt. 9A & West 16th Street								
	Northbound	TR	0.67	5.3	A	TR	0.69	5.0	A
	Southbound	L	0.62	58.7	E	L	0.63	58.9	E
		T	0.77	6.5	A	T	0.55	0.7	A
						R	0.16	33.8	C
		Intersection		8.5	A	Intersection		5.9	A
4	Rt. 9A & West 17th Street								
	Eastbound	L	0.14	53.5	D	L	0.18	54.1	D
		LR	0.35	58.2	E	LR	0.38	59.0	E
		R	0.22	55.5	E	R	0.22	55.5	E
	Westbound	LR	1.03	140.9	F	LT	0.79	96.8	F
						R	0.75	91.1	F
	Northbound	T	0.73	13.3	B	T	0.75	13.7	B
	Southbound	T	0.88	18.2	B	T	0.90	18.9	B
		Intersection		21.9	C	Intersection		21.7	C
		Saturday Midday Peak Hour							
		No Action 2017				With Action 2017			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
5	Rt. 9A & West 16th Street								
	Northbound	TR	0.75	11.2	B	TR	0.77	10.9	B
	Southbound	L	0.31	34.5	C	L	0.31	34.6	C
		T	0.69	10.1	B	T	0.44	0.6	A
						R	0.16	23.7	C
		Intersection		11.4	B	Intersection		7.2	A
4	Rt. 9A & West 17th Street								
	Eastbound	L	0.06	33.8	C	L	0.09	34.1	C
		LR	0.13	34.8	C	LR	0.15	35.1	D
		R	0.07	34.0	C	R	0.07	34.0	C
	Westbound	LR	0.91	102.5	F	LT	0.78	86.5	F
						R	0.68	73.6	E
	Northbound	T	0.86	24.5	C	T	0.88	25.3	C
	Southbound	T	0.84	23.5	C	T	0.86	24.2	C
		Intersection		26.9	C	Intersection		27.6	C

PARKING ANALYSIS

Existing Conditions

Existing study area on-street parking conditions were reviewed via a field inventory of parking regulations and utilization within a ¼-mile radius of the project site. Based on observations of on-street utilization in this area, it was estimated that on-street parking is generally close to 100 percent utilized, which is consistent with the findings from the FEIS.

Six of the eight off-street public parking garages/surface lots included in the FEIS are still in operation with a combined licensed capacity of 1,530 spaces. The maximum combined parking utilization rate for the parking facilities was observed to be approximately 83 percent during the weekday midday peak hour. The 2014 Existing Condition off-street parking supply and utilization are presented in **Table 19**.

Table 19
2014 Existing Conditions: Off-Street Public Parking Utilization

Map Location	Garage	Location	License Number	Licensed Capacity	Utilization Rate						Utilized Spaces						Available Spaces					
					Weekday				Saturday		Weekday				Saturday		Weekday				Saturday	
					AM	MD	PM	EVE	MD	EVE	AM	MD	PM	EVE	MD	EVE	AM	MD	PM	EVE	MD	EVE
2	Icon Parking Systems	W. 15th Street east of Ninth Avenue	1002786	625	40%	80%	60%	60%	60%	60%	250	500	375	375	375	375	375	125	250	250	250	250
3	MP 17 LLC	W. 16th Street between Ninth and Tenth Avenue	1310036	206	40%	80%	60%	50%	35%	50%	83	165	124	103	73	103	123	41	82	103	133	103
4	Edison Parking	W. 17th Street west of Tenth Avenue	1298623	320	50%	95%	85%	80%	60%	60%	160	304	272	256	192	192	160	16	48	64	128	128
5	Edison Parking	W. 20th Street west of Tenth Avenue	1006124	80	30%	100%	100%	70%	80%	60%	24	80	80	56	64	48	56	0	0	24	16	32
7	Edison Parking	W. 22nd Street west of Tenth Avenue	1040211	49	100%	90%	90%	70%	50%	50%	49	45	45	35	25	25	0	4	4	14	24	24
8	Chelsea Piers1	W. 19th Street west of Eleventh Avenue	1132509	250	30%	70%	70%	70%	50%	90%	75	175	175	175	125	225	175	75	75	75	125	25
Total Existing				**1,530**	**42%**	**83%**	**70%**	**65%**	**56%**	**63%**	**641**	**1,269**	**1,071**	**1,000**	**854**	**968**	**889**	**261**	**459**	**530**	**676**	**562**

Note: 1. Licensed parking capacity at Chelsea Piers is based on public parking on Piers 60 and 61. The valet parking on Pier 59 was not included in the analysis.

No Action Condition

The utilization of off-street parking facilities in the study area is expected to increase in the No Action condition, due to the area's background growth and additional demand generated by other projects. The maximum utilization rate of off-street parking facilities in the study area is estimated to increase to approximately 90 percent during the weekday midday period. **Table 20** shows the No Action condition parking utilization analysis.

With Action Condition

As with the approved project, the modified project would provide approximately 75 on-site accessory parking spaces. Access to the parking garage would be along the adjacent access road via an entry driveway located south of the Route 9A and West 15th Street intersection. Garage egress would occur along the adjacent access road via an exit driveway located north of the Route 9A and West 15th Street intersection.

Table 20
2017 No Action Condition: Off-Street Public Parking Utilization

Map Location	Garage	Location	License Number	Licensed Capacity	Utilization Rate						Utilized Spaces						Available Spaces					
					Weekday				Saturday		Weekday				Saturday		Weekday				Saturday	
					AM	MD	PM	EVE	MD	EVE	AM	MD	PM	EVE	MD	EVE	AM	MD	PM	EVE	MD	EVE
2	Icon Parking Systems	W. 15th Street east of Ninth Avenue	1002786	625	41%	97%	52%	61%	65%	61%	257	605	328	382	404	382	368	20	297	243	221	243
3	MP 17 LLC	W. 16th Street between Ninth and Tenth Avenue	1310036	206	41%	81%	61%	51%	36%	51%	85	167	126	106	75	106	121	39	80	100	131	100
4	Edison Parking	W. 17th Street west of Tenth Avenue	1298623	320	51%	96%	87%	81%	61%	61%	164	308	277	260	196	196	156	12	43	60	124	124
5	Edison Parking	W. 20th Street west of Tenth Avenue	1006124	80	31%	100 %	100 %	71%	81%	61%	25	80	80	57	65	49	55	0	0	23	15	31
7	Edison Parking	W. 22nd Street west of Tenth Avenue	1040211	49	100 %	92%	92%	71%	51%	51%	49	45	45	35	25	25	0	4	4	14	24	24
8	Chelsea Piers[1]	W. 19th Street west of Eleventh Avenue	1132509	250	31%	71%	72%	71%	52%	91%	78	178	179	178	129	228	172	72	71	72	121	22
	Total No Action			**1,530**	**43%**	**90%**	**68%**	**67%**	**58%**	**64%**	**658**	**1,383**	**1,035**	**1,018**	**894**	**986**	**872**	**147**	**495**	**512**	**636**	**544**

Notes: 1. Licensed parking capacity at Chelsea Piers is based on public parking on Piers 60 and 61. The valet parking on Pier 59 was not included in the analysis.

Tables 21 and 22 show the parking accumulation for the modified project for a typical weekday and Saturday for both the Pre-Event and Typical scenarios. Overall, the total demand during a weekday is estimated to peak at 248 spaces at 1:00 PM during the Typical scenario and 246 spaces at 1:00 PM during the Pre-Event scenario. The total demand during a Saturday is estimated to peak at 200 spaces at 2:00 PM during the Typical scenario and 211 spaces at 7:00 PM during the Pre-Event scenario. With a capacity of approximately 75 accessory parking spaces, the full project-generated parking demand cannot be completely accommodated on-site during any of the six peak hours, which is consistent with the findings from the FEIS. The remaining auto trips were assigned to off-site parking facilities.

Table 21
Modified Project Parking Accumulation: Weekday

	Destination Retail (Market)[1]			Quality Restaurant[2]			High Turnover Sit-Down Restaurant[1]			Theatre[3]			Marina[2]			Technical Arts School[5]			Rooftop Open Space[2]			Rooftop Exhibit (Museum)[4]			Office[4]			Rooftop Event[3]			Total with Daytime Exhibit		Total with Evening Event			Daytime Exhibit	Evening Event
Time Starting	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	In	Out		Total Accumulation	Total Accumulation
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0		2	2
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0		4	4
7:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	6	1	5	0	0	0	11	3	11	3		12	12
8:00 AM	3	3	0	4	1	5	14	11	3	0	0	0	3	6	2	5	5	0	0	0	0	0	0	0	64	3	66	0	0	0	92	29	93	29		76	76
9:00 AM	1	1	0	2	0	7	4	4	3	0	0	0	19	4	17	8	2	6	0	0	0	0	0	0	54	6	114	0	0	0	88	17	88	17		147	147
10:00 AM	2	1	1	15	9	13	4	2	5	0	0	0	22	4	35	0	0	6	0	0	0	0	0	0	9	13	110	0	0	0	52	29	52	29		170	170
11:00 AM	10	6	5	35	2	46	8	5	8	0	0	0	22	5	52	0	0	6	0	0	0	1	0	1	2	2	110	0	0	0	78	20	77	20		228	227
12:00 PM	10	8	7	16	16	46	16	16	8	0	0	0	8	8	52	5	5	6	0	0	0	2	1	2	4	5	109	0	0	0	61	58	59	58		230	228
1:00 PM	10	8	9	24	14	56	11	11	8	0	0	0	11	7	56	0	0	6	0	0	0	1	1	2	6	4	111	0	0	0	63	45	62	44		**248**	**246**
2:00 PM	9	9	9	7	36	27	12	12	8	0	0	0	10	13	53	0	0	6	0	0	0	0	0	2	24	15	120	0	0	0	62	85	62	85		225	223
3:00 PM	8	9	8	14	24	17	10	13	5	0	0	0	10	13	50	0	0	6	0	0	0	0	1	1	10	10	120	0	0	0	52	70	52	69		207	206
4:00 PM	9	10	7	15	28	4	13	13	5	0	0	0	9	11	48	0	0	6	0	0	0	1	1	1	7	41	86	0	0	0	54	104	53	103		157	156
5:00 PM	8	9	6	29	14	19	15	11	9	1	0	1	13	8	53	2	2	6	0	0	0	1	1	1	4	74	16	0	0	0	73	119	72	118		111	110
6:00 PM	9	9	6	38	7	50	8	10	7	3	0	4	1	26	28	0	4	2	0	0	0	1	1	1	2	17	1	28	4	24	62	74	89	77		99	122
7:00 PM	9	7	8	32	20	62	23	20	10	5	2	7	13	8	33	0	0	2	0	0	0	1	1	1	0	0	1	40	13	51	83	58	122	70		124	174
8:00 PM	7	9	6	9	36	35	5	6	9	1	3	5	7	21	19	0	0	2	0	0	0	0	1	0	0	0	1	9	21	39	29	76	38	96		77	116
9:00 PM	5	9	2	16	41	10	3	12	0	0	1	4	10	29	0	0	0	2	0	0	0	0	0	0	0	0	1	6	10	35	34	92	40	102		19	54
10:00 PM	0	0	2	2	11	1	0	0	0	0	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	35	0	2	17	2	52		4	4
11:00 PM	0	0	2	0	1	0	0	0	0				0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1		3	3

Table 22
Modified Project Parking Accumulation: Saturday

	Destination Retail (Market)[1]			Quality Restaurant[2]			High Turnover Sit-Down Restaurant[2]			Theatre[3]			Marina[2]			Technical Arts School[5]			Rooftop Open Space[2]			Rooftop Exhibit (Museum)[4]			Office[4]			Rooftop Event[3]			Total with Daytime Exhibit		Total with Evening Event		Daytime Exhibit	Evening Event
Time Starting	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	In	Out	Total Accumulation	Total Accumulation
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	12	0	12	12
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	12	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	12	0	24	24
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	11	10	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	10	11	10	25	25
8:00 AM	0	0	0	3	0	3	0	0	0	0	0	0	10	17	18	2	0	2	0	0	0	0	0	0	2	0	2	0	0	0	17	17	17	17	25	25
9:00 AM	0	0	0	4	0	7	0	0	0	0	0	0	30	15	33	2	0	4	0	0	0	0	0	0	3	0	5	0	0	0	39	15	39	15	49	49
10:00 AM	3	2	1	7	0	14	7	2	5	0	0	0	39	15	57	0	0	4	0	0	0	0	0	0	0	0	5	0	0	0	56	19	56	19	86	86
11:00 AM	9	3	7	12	0	26	16	4	17	0	0	0	36	15	78	0	0	4	0	0	0	1	0	1	0	1	4	0	0	0	74	23	73	23	137	136
12:00 PM	17	7	17	23	8	41	14	8	23	0	0	0	28	15	91	0	0	4	0	0	0	1	1	1	1	1	4	0	0	0	84	40	83	39	181	180
1:00 PM	14	6	25	30	30	41	17	17	23	1	1	0	16	16	91	0	0	4	0	0	0	1	1	1	1	1	4	0	0	0	81	72	79	71	189	188
2:00 PM	16	17	24	24	7	58	20	18	25	0	0	0	22	29	84	0	0	4	0	0	0	0	0	1	0	0	4	0	0	0	82	71	82	71	**200**	199
3:00 PM	12	17	19	14	18	54	19	23	21	0	0	0	19	28	75	0	0	4	0	0	0	1	1	1	0	0	4	0	0	0	65	87	64	86	178	177
4:00 PM	10	16	13	23	35	42	13	23	11	0	0	0	19	22	72	0	0	4	0	0	0	1	1	1	0	1	3	0	0	0	66	98	65	97	146	145
5:00 PM	5	14	4	34	27	49	18	27	2	1	0	1	27	19	80	0	1	3	0	0	0	0	1	0	0	2	1	6	1	5	85	91	91	91	140	145
6:00 PM	2	3	3	32	23	58	13	14	1	3	0	4	22	25	77	0	1	2	0	0	0	0	0	0	0	1	0	22	3	24	72	67	94	70	145	169
7:00 PM	1	2	2	37	26	69	15	13	3	5	2	7	16	16	77	0	0	2	0	0	0	1	1	0	0	0	0	40	13	51	74	60	114	72	160	**211**
8:00 PM	2	1	3	12	45	36	1	2	2	0	3	4	15	57	35	0	2	0	0	0	0	0	0	0	0	0	0	9	21	39	30	110	39	131	80	119
9:00 PM	1	2	2	18	44	10	0	2	0	0	1	3	4	24	15	0	0	0	0	0	0	0	0	0	0	0	0	6	10	35	23	73	29	83	30	65
10:00 PM	0	0	2	0	10	0	0	0	0	0	3	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	0	0	28	0	63	2	2
11:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2

Notes:
1. Hudson Yards FGEIS (2004) App S-1, Table 2, "Destination Retail Trip Generation Transportation Planning Assumptions" Memorandum. Peak hour temporal distribution modified to match trip generation in/outs with SSE assumptions. Some in/out percentages modified by SSE for balancing purposes.
2. Brooklyn Bridge Park FEIS (2005), Table 14-14. For Rooftop open space, Park land use was used. Due to lack of in/out vehicular volume from the Brooklyn Bridge Park FEIS, in/out volumes were adjusted based on SSE assumptions.
3. Based on Pier 54 movie event survey on 7/8/2009 performed by AKRF. Saturday MD peak in/out volumes were adjusted based on SSE assumptions.
4. Hudson Yards FGEIS (2004) App S-1, Table 3, "Office Trip Generation Transportation Planning Assumptions" Memorandum. Peak hour temporal distribution modified to match trip generation in/outs with SSE assumptions. Some in/out percentages modified by SSE for balancing purposes.
5. Peak hour vehicular trips from/to Pier 57 on-site parking garage are based on the ratio of Pier 57 project total parking accumulation to the Pier 57 on-site parking garage parking accumulation.

The utilization of off-street parking facilities in the study area is expected to increase due to the project-generated auto trips. **Table 23** shows the With Action condition parking utilization analysis. The off-site parking facilities would have sufficient capacity to accommodate the project generated demand; therefore, there would be no significant adverse parking impacts associated with the modified project, and no change to the parking-related conclusions presented in the FEIS.

Table 23
2017 With Action Condition: Off-Street Public Parking Utilization

Map Location	Garage	Location	License Number	Licensed Capacity	Utilization Rate						Utilized Spaces						Available Spaces					
					Weekday				Saturday		Weekday				Saturday		Weekday				Saturday	
					AM	MD	PM	EVE	MD	EVE	AM	MD	PM	EVE	MD	EVE	AM	MD	PM	EVE	MD	EVE
2	Icon Parking Systems	W. 15th Street east of Ninth Avenue	1002786	625	42%	97%	52%	63%	65%	63%	262	604	327	393	406	394	363	21	298	232	219	231
3	MP 17 LLC	W. 16th Street between Ninth and Tenth Avenue	1310036	206	50%	81%	56%	54%	37%	52%	102	166	116	111	76	108	104	40	90	95	130	98
4	Edison Parking	W. 17th Street west of Tenth Avenue	1298623	320	54%	96%	87%	82%	62%	63%	171	308	277	264	197	202	149	12	43	56	123	118
5	Edison Parking	W. 20th Street west of Tenth Avenue	1006124	80	31%	100 %	100 %	71%	81%	61%	25	80	80	57	65	49	55	0	0	23	15	31
7	Edison Parking	W. 22nd Street west of Tenth Avenue	1040211	49	100%	92%	92%	71%	51%	51%	49	45	45	35	25	25	0	4	4	14	24	24
8	Chelsea Piers[1]	W. 19th Street west of Eleventh Avenue	1132509	250	40%	72%	68%	73%	53%	93%	99	179	170	183	131	234	151	71	80	67	119	16
	Total With Action			**1,530**	**46%**	**90%**	**66%**	**68%**	**59%**	**66%**	**709**	**1,382**	**1,015**	**1,043**	**900**	**1,012**	**821**	**148**	**515**	**487**	**630**	**518**

Notes: 1. Licensed parking capacity at Chelsea Piers is based on public parking on Piers 60 and 61. The valet parking on Pier 59 was not included in the analysis.

TRANSIT ANALYSIS

Transit analyses were conducted for one subway element: the P2A/B stairway on the uptown A/C/E platform to mezzanine, at the 14th Street/Eighth Avenue station, for the weekday PM peak period. This is the only transit element where the modified project is expected to add more than 200 peak hour trips. Consistent with the FEIS, the transit analyses were only conducted for the Weekday PM peak hour, the period with the greatest potential for a significant impact because of the net increment of the proposed project combined with the highest background volumes.

Existing Conditions

Existing transit volumes were based on data collected in July 2014. Seasonal adjustment factors were calculated for the July 2014 counts based on a comparison counts that were collected at the same pedestrian elements in May 2014 and July 2014. An inventory of the transit element was performed to confirm and update dimensions to be used in the calculation of stairway capacities.

The results of the stairway analyses provided in **Table 24** indicate that the stairway element operates at LOS C during the weekday PM peak period.

Table 24
2014 Existing Conditions: Subway Stairway
14th Street/Eighth Avenue Station (A/C/E/L)

Control Area	Station Location	ID	Type	Location	Width (feet)	Effective Width (feet)	Weekday PM Peak 15 Minute Entering Volume	Weekday PM Peak 15 Minute Exiting Volume	Friction Factor	V/C	LOS
Mezzanine	From 14th St to 16th St	P2A/B	Stairway	Uptown Platform	9.92	8.67	796	160	0.9	0.86	C

No Action Condition

Transit trips associated with general annual background growth of 0.25 percent and the projects planned for 2017 were superimposed onto the existing transit networks to generate peak period transit volumes for the 2017 No Action condition analysis.

The analysis conducted for the subway stairway in the 14th Street/Eighth Avenue A/C/E/L subway station identified in **Table 25** indicates that it is projected to continue to operate at LOS C for the 2017 No Action Condition during the weekday PM peak period.

Table 25
2017 No Action Condition: Subway Stairway
14th Street/Eighth Avenue Station (A/C/E/L)

Control Area	Station Location	ID	Type	Location	Width (feet)	Effective Width (feet)	No Action Weekday PM Peak 15 Minute Entering Volume	No Action Weekday PM Peak 15 Minute Exiting Volume	Friction Factor	V/C	LOS
Mezzanine	From 14th St to 16th St	P2A/B	Stairway	Uptown Platform	9.92	8.67	802	162	0.9	0.98	C

With Action Condition

Transit trips associated with the modified project were superimposed onto the No Action condition transit networks to generate peak period transit volumes for the 2017 With Action condition analysis.

The 2017 With Action Condition analysis results for the subway stairway in the 14th Street/Eighth Avenue A/C/E/L subway station provided in **Table 26** indicate that it is projected to continue to operate at LOS D the Weekday PM peak hour with a v/c ratio greater than 1.00. The required widening to achieve LOS C with a v/c ratio of 1.00 or lower is 0.47 inches, which is less than the *CEQR Technical Manual* Width Increment Threshold (WIT) of 8 inches. Based on this result, the subway stairway would not be significantly impacted by the modified project during this period, and there would be no change to the transit-related conclusions presented in the FEIS.

Table 26
2017 With Action Condition: Subway Stairway
14th Street/Eighth Avenue Station (A/C/E/L)

Control Area	Station Location	ID	Type	Location	Width (feet)	Effective Width (feet)	With Action Weekday PM Peak 15 Minute Entering Volume	With Action Weekday PM Peak 15 Minute Exiting Volume	Friction Factor	V/C	LOS
Mezzanine	From 14th St to 16th St	P2A/B	Stairway	Uptown Platform	9.92	8.67	943	218	0.9	1.05	D

PEDESTRIAN ANALYSIS

Pedestrian analyses were conducted for the following eight crosswalks:

- Route 9A and West 15th Street, north crosswalk;
- Route 9A and West 15th Street, south crosswalk;
- Route 9A and West 14th Street, south crosswalk;
- Washington Street and West 14th Street, south crosswalk;
- Ninth Avenue and West 16th Street, north crosswalk;
- Ninth Avenue and West 15th Street, north crosswalk;
- Ninth Avenue and West 14th Street (west side of intersection), north crosswalk; and
- Ninth Avenue and West 14th Street (west side of intersection), south crosswalk.

These are the pedestrian elements where either significant impacts were identified in the FEIS, or where conditions indicated a sensitivity to potential impacts.

Existing Conditions

Existing pedestrian crosswalk volumes were based on count data collected in July 2014 during the weekday midday, weekday PM, weekday evening pre-event, Saturday midday, and Saturday evening pre-event peak periods. These counts are summarized into 15-minute intervals during each peak period. Seasonal adjustment factors were calculated for the July 2014 counts based on comparison counts that were collected at the same pedestrian elements in May 2014 and July 2014.

An inventory of the crosswalk elements was performed to confirm and update dimensions and signal timing data to be used in the calculation of crosswalk capacities.

The eight crosswalk locations were analyzed using the collected pedestrian data. As presented in **Table 27**, seven of the eight crosswalks operate at a mid-LOS D or better during the five peak periods. The exceptions are as follows, for the north crosswalk at Ninth Avenue and West 15th Street:

- During the weekday midday peak hour, the north crosswalk operates at LOS E with pedestrian space of 10.2 ft^2/p.
- During the weekday PM peak hour, the north crosswalk operates at LOS E with pedestrian space of 11.1 ft^2/p.
- During the weekday evening pre-event peak hour, the north crosswalk operates at LOS D with pedestrian space of 16.2 ft^2/p.

- During the Saturday Midday peak hour, the north crosswalk operates at LOS D with pedestrian space of 15.4 ft^2/p.
- During the Saturday evening pre-event peak hour, the north crosswalk operates at LOS D with pedestrian space of 15.4 ft^2/p.

Table 27
2014 Existing Conditions: Crosswalk Level of Service Analysis

Location	Crosswalk	Cross-walk Length (feet)	Cross-walk Width (feet)	Available Crosswalk Circulation Space (ft2/p)					Crosswalk Circulation LOS				
				Weekday			Saturday		Weekday			Saturday	
				Midday	PM	Evening Pre-Event	Midday	Evening Pre-Event	Midday	PM	Evening Pre-Event	Midday	Evening Pre-Event
Route 9A and West 15th Street	North	121.4	21.0	1130.4	396.0	397.0	328.1	175.4	A	A	A	A	A
	South	88.4	16.0	741.4	364.5	181.5	432.2	339.6	A	A	A	A	A
Route 9A and West 14th Street	South	106.0	14.5	197.1	95.4	74.9	102.4	69.4	A	A	A	A	A
Washington Street and West 14th Street	South	39.3	12.3	55.8	38.1	47.3	38.6	29.2	B	C	B	C	C
Ninth Avenue and West 16th Street	North	57.5	11.0	37.3	25.5	33.9	42.2	33.5	C	C	C	B	C
Ninth Avenue and West 15th Street	North	68.8	9.9	10.2	11.1	16.2	15.4	15.4	E	E	D	D	D
Ninth Avenue and West 14th Street (west side of intersection)	North	21.0	15.4	51.9	37.2	47.6	37.8	33.3	B	C	B	C	C
	South	30.0	12.3	63.5	35.2	42.4	47.4	34.8	A	C	B	B	C

No Action Condition

Pedestrian trips associated with general annual background growth of 0.25 percent and the No Action projects planned for 2017 were superimposed onto the existing pedestrian crosswalk elements to generate No Action condition peak period volumes for analysis during the five peak periods.

Table 28 summarizes the 2017 No Action condition crosswalk analysis. Four crosswalks are projected to operate at mid-LOS D or better during the five peak periods. At the following locations, the addition of No Action pedestrian traffic would result in changes in LOS beyond mid-LOS D:

Ninth Avenue and West 16th Street, North Crosswalk

- During the weekday PM peak hour, the north crosswalk operations would degrade from at LOS C with pedestrian space of 25.5 ft^2/p to LOS D with pedestrian space of 17.9 ft^2/p.

Ninth Avenue and West 15th Street, North Crosswalk

- During the weekday midday peak hour, the north crosswalk operations would degrade within LOS E from pedestrian space of 10.2 ft^2/p to 8.3 ft^2/p.
- During the weekday PM peak hour, the north crosswalk operations would degrade within LOS E from pedestrian space of 11.1 ft^2/p to 8.6 ft^2/p.
- During the weekday evening pre-event peak hour, the north crosswalk operations would degrade within LOS D with pedestrian space of 16.2 ft^2/p to 16.0 ft^2/p.
- During the Saturday midday peak hour, the north crosswalk operations would degrade from LOS D with pedestrian space of 15.4 ft^2/p to LOS E with pedestrian space of 13.8 ft^2/p.
- During the Saturday evening pre-event peak hour, the north crosswalk operations would degrade within LOS D with pedestrian space of 15.4 ft^2/p to 15.2 ft^2/p.

Ninth Avenue and West 14th Street, South Crosswalk, Across Ninth Avenue

- During the weekday PM peak hour, the south crosswalk operations would degrade from LOS C with pedestrian space of 35.2 ft^2/p to LOS D with pedestrian space of 18.8 ft^2/p.

Table 28
2017 No Action Condition: Crosswalk Level of Service Analysis

Location	Cross-walk	Cross-walk Length (feet)	Cross-walk Width (feet)	Available Crosswalk Circulation Space (ft2/p)					Crosswalk Circulation LOS				
				Weekday			Saturday		Weekday			Saturday	
				Midday	PM	Evening Pre-Event	Midday	Evening Pre-Event	Midday	PM	Evening Pre-Event	Midday	Evening Pre-Event
Route 9A and West 15th Street	North	121.4	21.0	226.8	232.9	335.1	198.9	162.9	A	A	A	A	A
	South	88.4	16.0	508.8	266.7	165.6	330.3	311.0	A	A	A	A	A
Route 9A and West 14th Street	South	106.0	14.5	67.0	25.8	72.9	37.6	67.8	A	C	A	C	A
Washington Street and West 14th Street	South	39.3	12.3	47.7	23.2	40.8	21.4	26.5	B	D	B	D	C
Ninth Avenue and West 16th Street	North	57.5	11.0	25.5	17.9	33.3	35.4	33.0	C	D	C	C	C
Ninth Avenue and West 15th Street	North	68.8	9.9	8.3	8.6	16.0	13.8	15.2	E	E	D	E	D
Ninth Avenue and West 14th Street (west side of intersection)	North	21.0	15.4	48.8	33.6	46.9	34.8	32.9	B	C	B	C	C
	South	30.0	12.3	21.0	18.8	37.0	25.0	34.3	D	D	C	C	C

With Action Condition

Pedestrian trips associated with the modified project were superimposed onto the No Action condition pedestrian crosswalk elements to generate the With Action condition peak period 15-minute volumes for analysis during the five peak periods. The With Action analyses account for the implementation of the following modified project pedestrian crosswalk widening improvements, which would be done in conjunction with the proposed project:

- South crosswalk at Washington Street and West 14th Street by 2 feet;
- North crosswalk at Ninth Avenue and West 15th Street by 4 feet; and
- South crosswalk across Ninth Avenue at West 14th Street by 1 foot.

The With Action condition also considers the implementation of police control by deploying traffic enforcement agents (TEAs) during the weekday evening pre-event peak hour before weekday evening events at Pier 57. To facilitate traffic and pedestrian flows, TEAs would override traffic signal operations when necessary and would direct traffic and control vehicular and pedestrian movements. As such, the use of TEAs would manage the conflict between pedestrians crossing Route 9A and vehicles turning from West 15th Street. This is the same mitigation measure as presented for this location in the FEIS.

Table 29 summarizes the 2017 With Action condition crosswalk analysis and shows that there would be no significant adverse pedestrian impacts with the modified project.

Table 29
2017 With Action Condition: Crosswalk Level of Service Analysis

Location	Cross-walk	Cross-walk Length (feet)	Cross-walk Width (feet)	Available Crosswalk Circulation Space (ft2/p)					Crosswalk Circulation LOS				
				Weekday			Saturday		Weekday			Saturday	
				Midday	PM	Evening Pre-Event	Midday	Evening Pre-Event	Midday	PM	Evening Pre-Event	Midday	Evening Pre-Event
Build Conditions													
Route 9A and West 15th Street	North	102.4	23.8	37.3	28.4	19.5	37.2	22.9	C	C	D	C	D
	South	88.4	24.2	62.8	41.3	22.4	64.5	35.9	A	B	D	A	C
Route 9A and West 14th Street	South	106.0	14.5	40.9	20.3	23.0	29.6	28.1	B	D	D	C	C
Washington Street and West 14th Street	South	39.3	14.3	23.2	24.3	29.9	21.8	21.0	D	C	C	D	D
Ninth Avenue and West 16th Street	North	57.5	11.0	22.6	16.4	25.4	31.1	25.9	D	D	C	C	C
Ninth Avenue and West 15th Street	North	68.8	13.9	10.6	10.9	14.7	16.9	14.8	E	E	E	D	E
Ninth Avenue and West 14th Street (west side of intersection)	North	21.0	15.4	36.8	25.3	25.5	28.1	20.9	C	C	C	C	D
	South	30.0	13.3	21.0	18.6	29.5	24.7	28.6	D	D	C	C	C

AIR QUALITY

As discussed above under "Transportation," the proposed modifications would not result in increased daily or peak period traffic as compared to the 2013 FEIS. Therefore, no additional mobile source analysis is required due to the proposed modifications.

Although the proposed modifications would result in a net increase in total floor area, the change would be minor and would not affect the assumptions and data that were used to analyze the project's heating, ventilation and air conditioning (HVAC) systems in the 2013 FEIS. The results of the analysis of natural gas-fired HVAC equipment in the 2013 FEIS would be unchanged, since the open space uses would be identical with the proposed modifications. As with the previously-analyzed project, the distance beyond which there would be no potential for significant air quality impacts from NO_2 emissions would be 43 feet, although a lesser distance may be achieved depending on the height of the HVAC exhaust stack(s) above open space and other sensitive uses. The proposed modifications would not require new or additional analysis of existing or planned emission sources in the area. In addition, the proposed modifications would not result in changes to the proposed marina; consequently, no additional analysis of the marina's emissions is required.

For the analysis of mobile sources of emissions from parking facilities, Section 312.1 of the *CEQR Technical Manual* has been revised to include particulate matter (PM) emissions as a pollutant of concern, in addition to CO. This revision clarifies that an analysis of PM is recommended for all such facilities, including automobile parking facilities such as those examined in the 2013 FEIS. Therefore, an analysis of PM from the proposed parking garage has been prepared.

PM engine emission factors were computed using the USEPA mobile source emissions model, MOVES.[7] Consistent with the assumptions of the 2013 FEIS, the vent was modeled at a height of 10 feet above ground level, along the new access road. The proposed size and number of spaces for the garage are the same as with the previously-analyzed project. Pollutant levels were predicted at the height of the vents at a distance of 15 feet, accounting for the minimum vent to window distance requirements specified by the New York City Mechanical Code. Receptors were also modeled on the access road walkway and Route 9A bikeway locations near the proposed garage entrance.

The maximum predicted 24-hour and annual average $PM_{2.5}$ increments are 0.47 $\mu g/m^3$ and 0.08 $\mu g/m^3$, respectively, which are predicted to occur at the near side sidewalk receptor. The maximum predicted $PM_{2.5}$ increments are well below the respective $PM_{2.5}$ *de minimis* criteria of 4.5 $\mu g/m^3$ on a 24-hour average and 0.3 $\mu g/m^3$ on an annual average.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to air quality that were not previously identified and addressed in the FEIS.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

The project with the proposed modifications would be consistent with the City's greenhouse gas (GHG) emission reduction goal. With the proposed modifications, the developed floor area would increase by approximately 10 percent as compared with the previously-analyzed project.

[7] USEPA, Motor Vehicle Emission Simulator (MOVES), User Guide for MOVES2010b, June 2012.

The energy use and associated GHG emissions would increase by a comparable amount. The number of daily vehicle trips, and associated annual VMT and GHG emissions, would not increase in comparison to the previously-analyzed project.

However, the increase in GHG emissions with the proposed modifications as compared to the program analyzed in the 2013 FEIS would not affect the project's consistency with the City's GHG goal. The modified project, like the previously-analyzed project, would involve the reuse of an existing pier structure rather than new ground-up construction. Like the previously-analyzed project, the modified project would:

- Maximize interior daylighting using telescoping exterior doors, with glass in the panels.
- Maximize opportunities for natural ventilation and passive cooling.
- Incorporate motion sensors and lighting and climate control.
- Use water conserving fixtures that exceed building code requirements.
- Create a partial roof lawn and planting areas, which would remove heat from the air through evapotranspiration, reducing the building energy needs and providing other environmental benefits.

Other measures likely to be part of the design include high-albedo roofing materials, additional window glazing options at the existing pier doors to allow for continued daylighting options. Efficient lighting, elevators and Energy Star appliances would likely be used.

The project with the proposed modifications would maximize daylighting, reducing electricity requirements for lighting, maximize natural ventilation and passive cooling, and likely include high-efficiency heating ventilation and air conditioning (HVAC) systems or generators, overall minimizing the projects energy needs. The HVAC systems would use natural gas; natural gas has lower carbon content per unit of energy than other fuels, and thus reduces GHG emissions. The modified project would also be designed to support alternative transportation (walking and bicycling), through the provision of bicycle storage and the extension of sidewalks to the project site.

The limited construction that would take place would include an air pollutant emissions reduction program including diesel particle filters for large construction engines, clean fuel, diesel equipment reduction, utilization of newer equipment, dust control, and restrictions on vehicle idling. These measures would reduce particulate matter emissions; while particulate matter is not included in the list of standard greenhouse gasses ("Kyoto gases"), recent studies have shown that black carbon—a constituent of particulate matter—may play an important role in climate change. The use of cement replacements, such as slag, fly ash, and calcined clay would be considered and other building materials with recycled content, as well as materials that are extracted and/or manufactured within the region would likely be used. In addition, repurposed-stacked shipping containers would be used in the pier shed. By "upcycling" these containers, which would otherwise be waste materials, the consumption of new raw materials would be reduced. Reducing the use of new raw materials reduces energy use and GHG emissions.

Due to the project's location on the waterfront, the 2013 FEIS discussed sea level rise and measures that would be implemented to make the project resilient to the projected effects of climate change. Since the 2013 FEIS, new projections of the New York City Panel on Climate Change (NPCC) have been issued, indicating a likely sea level rise of 11 to 24 inches above current levels by the end of 2050s. The NPCC projects that by the 2080s, sea levels could be

between 18 and 38 inches higher than they are today (based on mid-range projections), and may increase by as much as 58 inches (90th percentile projections). At the time of the 2013 FEIS, a comparable rise in sea levels was not projected to occur until the end of the century. The "Land Use, Zoning, and Public Policy" section of this Technical Memorandum discusses the revisions to the New York City Waterfront Revitalization Plan (WRP) and measures that would be implemented to make the project resilient to climate change, in light of the new projections.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to greenhouse gas emissions and climate change that were not previously identified and addressed in the FEIS.

NOISE

The proposed modifications to the project would not have the potential to cause a significant noise impact (i.e., it would not result in a doubling of Noise passenger car equivalents [PCEs] which would be necessary to cause a 3 dBA increase in noise levels) and would not result in any changes to the noise associated with the project's rooftop open space. However, ambient noise levels adjacent to the project site are considered in order to address CEQR building attenuation requirements and interior noise exposure guidelines for the Pier 57 building with the proposed modifications to the project.

The FEIS included a building attenuation analysis for the Pier 57 building based on measurements of exterior noise levels at locations adjacent to the building. That analysis concluded that achieving an interior noise level of 50 dBA $L_{10(1)}$ for commercial uses as prescribed by CEQR interior noise level criteria may not be attainable for the façade of this building along Route 9A due to the nature of the proposed project, but that this would not constitute a significant adverse impact because the specific uses included in the proposed project, especially the retail component, would be substantially different from the commercial office or meeting room uses for which the CEQR criteria are intended to apply.

The office use included in the proposed modifications to the project would require sufficient building attenuation to provide an interior $L_{10(1)}$ noise level of 50 dBA or less according to CEQR criteria. As described in the 2013 FEIS, 30 dBA of building attenuation would be necessary for commercial office use, based on an exterior $L_{10(1)}$ noise level of 79.4 dBA. As described above, the proposed project would continue to include the same square footage of "cultural" uses, as analyzed in the 2013 FEIS. The specific location and programming of this use within the Pier 57 building has not yet been determined. If that space would include any classroom uses, the classrooms would need to include sufficient window/wall attenuation to achieve an interior $L_{10(1)}$ noise level of 45 dBA or less, according to CEQR criteria.

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade consists of the wall, glazing, and any vents or louvers for heating, ventilation, and air conditioning (HVAC) units in various ratios of area. The Pier 57 building, with the proposed modifications to the project, would include storm windows at the existing window openings as well as a central air conditioning system (i.e., an alternate means of ventilation) at spaces with a commercial office or cultural use. The building's façades, under the proposed modifications to the project, would be required to provide a composite Outdoor-Indoor Transmission Class

(OITC) rating[8] greater than or equal to 30 for all commercial office space and non-classroom cultural space uses and a composite OITC rating of 35 or greater for classrooms that may be included in the cultural space. The building would also be required to provide an alternate means of ventilation for these uses. HRPT would include these building attenuation requirements in the building lease to ensure that they are met. Based upon the $L_{10(1)}$ noise level measured at the project site, these design measures included in the modified project would be expected to provide sufficient attenuation to achieve the CEQR interior noise level requirements.

The changes to background conditions noted above would not affect the noise analysis.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to noise that were not previously identified and addressed in the FEIS.

CONSTRUCTION

The construction activities required to build the project as currently proposed are anticipated to be substantially similar in scope and duration to what was analyzed in the FEIS. Unlike typical ground-up construction, neither the previously-analyzed project nor the modified project would involve extensive demolition, foundation, or superstructure construction activities, which often generate the highest levels of noise and air emissions. The overall construction duration of the modified project would remain short-term (less than two years), with the majority of the activities occurring within the existing Pier 57 structure. During interior work, the walls of the building would act as barriers to the transport of air pollutants and would provide acoustical shielding for noise sources, thus limiting potential impacts from construction activity.

The Pier 54 and Pier 54 Connector projects are located near the project site, and it is possible that construction of the modified project could overlap with construction of these nearby projects. Based on preliminary construction schedules, peak construction activities (e.g., those activities that generate the most traffic, noise, and/or air emissions) for the proposed project are not expected to overlap with those for the Pier 54 and Pier 54 Connector projects. For example, pile driving activities (typically a noise intrusive construction activity) for the Pier 54 project, which would take place over two pile driving seasons, are not expected to follow those associated with the proposed project. Furthermore, neither the modified project nor the Pier 54 Connector or Pier 54 projects would involve extensive building demolition, excavation, or superstructure construction activities, or subsurface disturbance (i.e., activities that generate the most noise).

Limited construction workers and deliveries would be required for the construction of the Pier 54 or Pier 54 Connector projects. Therefore, the construction traffic associated with these other nearby projects would not substantively affect any traffic increases due to the construction of the modified project. In general, construction managers for projects on adjacent sites would coordinate their activities to avoid delays and inefficiencies. Any esplanade and bikeway narrowing or diversion due to the construction of these projects would be coordinated with and approved by HRPT and NYSDOT.

[8] The OITC classification is defined by ASTM International (ASTM E1332) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise.

In summary, neither the proposed modifications to the previously-analyzed project, nor the changes in background conditions, would result in any significant adverse impacts related to construction that were not previously identified and addressed in the FEIS.

F. CONCLUSION

Neither the proposed changes to the program and design for the Pier 57 project, nor the changes in background conditions, would result in significant adverse impacts not previously identified and addressed in the FEIS. ✷