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## **TECHNICAL MEMORANDUM**

### **Jacob K. Javits Convention Center Expansion and Renovation**

**July 11, 2006**

#### **A. INTRODUCTION**

This memorandum examines the potential environmental effects associated with Proposed Modifications to the expansion and renovation of the Jacob K. Javits Convention Center ("Convention Center") in Manhattan.

The Final Generic Environmental Impact Statement ("FGEIS") for the No. 7 Subway Extension-Hudson Yards Rezoning and Development Program ("Hudson Yards"), certified as complete on November 8, 2004 (CEQR No. 03DCP031M), included as a component of the Proposed Action the renovation and expansion of the Convention Center ("FGEIS-Convention Center expansion"). The purpose of this Technical Memorandum is to examine the Proposed Modifications to the Convention Center expansion ("Proposed Modifications") and changes in background conditions and determine whether such Proposed Modifications would result in any potential significant adverse environmental impacts not previously identified in the FGEIS.

The co-lead agencies that issued the FGEIS, the New York City Planning Commission (CPC) and the Metropolitan Transportation Authority (MTA), have made their findings under the State Environmental Quality Review Act (SEQRA). Therefore, with the concurrence of the prior co-lead agencies, the New York State Urban Development Corporation (UDC), doing business as the Empire State Development Corporation (ESDC), on behalf of its subsidiary, the Convention Center Development Corporation (CCDC), is the lead agency for the environmental review associated with the Proposed Modifications and responsible for the issuance of SEQRA findings respecting any final action regarding those modifications.

As set forth in greater detail below, this memorandum concludes that the Proposed Modifications and changes in background conditions would not result in any significant adverse environmental impacts not previously identified in the FGEIS. Therefore, no Supplemental Environmental Impact Statement is required in connection with ESDC's review and consideration of the Proposed Modifications.

#### **B. BACKGROUND**

The FGEIS analyzed four large-scale planning initiatives for the far West Side of Manhattan: rezoning of a large portion of the Hudson Yards area, extension of the No. 7 Subway line to West 34th Street and Eleventh Avenue, construction of a Multi-Use Facility (MUF) including a stadium for the New York Jets, and expansion of the Jacob K. Javits Convention Center. The CPC and MTA were designated co-lead agencies for the environmental review based on the primary actions associated with rezoning and the subway extension. On November 22, 2004, the CPC approved Application No. N040500(A) ZMM and related actions, which together

provide for the establishment of the Special Hudson Yards District and other rezoning actions on the Far West Side of Midtown Manhattan. The approved actions are largely described as Alternative S, which is analyzed in Chapter 26, "Alternatives," of the FGEIS. Modifications to the actions as described in Alternative S made by the CPC prior to adoption were assessed in a Technical Memorandum dated November 17, 2004. Pursuant to the City's Uniform Land Use Review Procedure, the New York City Council proposed certain additional amendments to the CPC-approved Special Hudson Yards District and related actions. Among other changes, the City Council amendments decreased the total commercial developed permitted in the Special District by approximately 1.4 million gross square feet. These were described and their potential for creating significant adverse environmental impacts not already identified in the FGEIS was assessed in a Technical Memorandum dated January 14, 2005. The analysis concluded that the proposed changes would not result in any significant adverse impacts not already identified in the FGEIS. The changes to the Special Hudson Yards District by CPC and the City Council did not affect the extension of the No. 7 Subway line, Multi-Use Facility, or the FGEIS-Convention Center expansion. Since publication of the FGEIS, the MTA approved the extension of the No. 7 Subway Line and the construction of the Multi-Use Facility. Subsequently, the Public Authorities Control Board approved the No. 7 Subway Extension but disapproved the construction of the Multi-Use Facility. Therefore, construction of the Multi-Use Facility is no longer being considered and other plans or proposals for that site have not been identified at this time.

As the FGEIS analyzed multiple project elements that would be developed or implemented over a period of 20 years or more, two analysis years, 2010 and 2025, were considered in the FGEIS. Construction impacts in the FGEIS were assessed for the estimated peak years of construction for the two phases: 2006 and 2017.

The CCDC as a subsidiary of ESDC was an involved agency for the environmental review because it had specific actions analyzed in the FGEIS and ESDC would make separate findings regarding its own approvals. The actions identified in the FGEIS associated with the FGEIS-Convention Center expansion include:

- Adoption of a GPP by ESDC or CCDC for the Convention Center expansion, including the acquisition of private land, possibly through condemnation between West 40th and West 41st Streets (eastern portion of Block 1089) and acquisition of a small parcel of City-owned land located along Eleventh Avenue between West 39th and 40th Streets (Block 685, Lot 38);
- Approval of financing for the Convention Center expansion by one or more State agencies or public benefit corporations;
- *MTA approval to relocate the MTA New York City Transit (NYCT) Quill Bus Depot ("Quill Bus Depot") as a consequence of the Convention Center expansion;*
- *New York State Department of Environmental Conservation (NYSDEC) stationary source air permits for the relocated Quill Bus Depot and Convention Center expansion; and*
- *Amtrak approval for Convention Center use of a portion of the right-of-way on the westerly side of the Empire Line between approximately West 34th and 40th Streets.*

The latter three actions noted in italics are no longer needed as part of the Proposed Modifications to the FGEIS-Convention Center expansion.

### **C. SUMMARY OF FGEIS-CONVENTION CENTER EXPANSION**

The FGEIS examined plans for expansion and modernization of the Convention Center in two phases that included: approximately one million square feet of new exhibition, meeting, and ballroom space within five Levels (the existing Convention Center contains three Levels); a building with a height of approximately 96 feet; and a 664-foot-tall Convention Center hotel on the west side of Eleventh Avenue between West 41st and West 42nd Streets. Overall, the

FGEIS-Convention Center expansion would result in an expanded Convention Center of approximately 3.989 million gross square-feet (gsf) expanded Convention Center and a hotel of approximately 1,500-rooms. Although Phase II of the FGEIS-Convention Center expansion was not projected to be completed until after 2010, the FGEIS conservatively assumed full completion of both phases of the FGEIS-Convention Center expansion by 2010, since such an assumption represented a more conservative, worst-case scenario. As described in the FGEIS, in Phase I the Convention Center was to expand north to the southerly side of West 40th Street, terminating at the Quill Bus Depot. A hotel was to be built on the west side of Eleventh Avenue between West 41st and West 42nd Streets. As part of Phase I, the existing block west of Eleventh Avenue between West 33rd and West 34th Streets, currently used by the Convention Center for truck and automobile parking and storage of empty return trailers, was to be the site of a multi-level, partially below-grade truck marshalling facility.

In Phase II, to enable the northward expansion of the Convention Center to be completed, the Quill Bus Depot, between West 40th and West 41st Streets and Eleventh and Twelfth Avenues, was to be relocated to a partially below-grade site on the north side of West 30th Street between Tenth and Twelfth Avenues. In addition, in Phase II a truck lane was to be created below-grade adjacent to the Amtrak Empire Line in the limits of a railroad right-of-way to connect the truck marshalling facility with the fully expanded Convention Center. New, passive, publicly accessible open space was to be developed on the roof of the expanded Convention Center and above the partially below-grade marshalling facility located between West 33rd and West 34th Streets.

Some of the key design and circulation issues that were components of the FGEIS-Convention Center expansion, and how they compare with the Proposed Modifications, are outlined below in Table 1.

**Table 1**  
**Comparison of Plan Elements that Affect Environmental Review**

<b>FGEIS-Convention Center Expansion</b>	<b>Proposed Modifications</b>
Streets closed between Eleventh and Twelfth Avenues: West 33rd, West 39th, West 40th Streets, and the easterly portion of West 41st Street	Streets closed between Eleventh and Twelfth Avenues: West 39th Street
Public pedestrian way through building at approximately West 39th Street	No through building passageway because West 40th and 41st Streets remain open to traffic and pedestrians
Truck marshalling partially below grade at West 33/34 block, then via below-grade passage alongside a portion of the Empire Line to Convention Center	Truck marshalling in new multi-story facility along Twelfth Avenue south of West 40th Street
Underground connection through West 33/34 block between Convention Center and MUF; full block open space plaza (above truck marshalling) connected with MUF	West 33/34 block for mixed-use development: office/commercial, residential, public open space, and 500 space parking garage beneath
<b>Phase I:</b> West 33/34th connection, convention center rehabilitation and expansion to 5 levels (with a height of 96 ft) from West 34th to West 40th Streets, truck marshalling facility, hotel, pedestrian bridge over Quill Bus Depot connecting to West 42nd Street hotel	<b>Phase I:</b> West 34th to 39th Streets, new façade and entrance; West 37th to 39th Streets new overbuild (up to 7 levels and a height of approximately 152 ft); West 39th to 40th Streets, new marshalling facility with multi-floor connections; hotel on east side of Eleventh Ave between West 35th to 36th Streets, with connection under Eleventh Avenue viaduct to the Convention Center
<b>Phase II:</b> Quill Bus Depot relocation, Convention Center expansion continues north to West 41st Street, multi-level connection to West 42nd Street hotel	<b>Phase II:</b> Overbuild on existing structure from West 34th to West 37th Streets to tie into Phase I overbuild. No Quill Bus Depot relocation
8.6 acres of publicly accessible passive open space: 5.0 acres rooftop open space and 3.6 acres at West 33/34 plaza	4.45 acres of publicly accessible open space: no rooftop open space, 3.2 acres of passive open space along Eleventh Avenue, West 34th Street, and West 40th Street frontages and 1.25 acres at West 33/34 (including 0.5 acres active open space)

**Table 1 (cont'd)**

**Comparison of Plan Elements that Affect Environmental Review**

FGEIS-Convention Center Expansion	Proposed Modifications
Patron Access: Eleventh Avenue (main entrance between West 35th and 36th Streets) and West 42nd Street via hotel	Patron Access: Eleventh Avenue along new façade and open space; connection under Eleventh Avenue viaduct to hotel
Subway connection at Level 1 (street level)	Hotel subway connection at Level 1 (street level)
High Line and Easement: High Line tie-in via MUF. Easement preserved through open space plaza. Below grade MTA/NYCDOT easement preserved.	High Line and Easement: High Line tie-in with southwestern corner of 33/34 development (at open space). High Line easement preserved through and around uses on 33/34 development. Below grade MTA/NYCDOT easement preserved via new garage entrance along West 33rd Street. Easement for No. 7 Subway Extension future station entrance.
Mitigation for MUF-related pedestrian impacts: pedestrian bridges across Twelfth Avenue at West 33/34 and at West 39th Streets	No pedestrian bridges
<b>Sources:</b> Hudson Yards FGEIS, Rogers Fowle Epstein	

## D. PROPOSED MODIFICATIONS

### PURPOSE AND NEED FOR THE PROPOSED MODIFICATIONS

The Convention Center, as it exists today, contains approximately 760,000 gsf of exhibition space, 30,000 gsf of meeting room space, and approximately 665,000 gsf of pre-function, support, and staging areas. The North Pavilion, a temporary structure erected on the south side of West 39th Street, contains an additional 54,400 gsf of exhibition space.

The Convention Center lacks a sufficient amount of prime exhibition space, including an inadequate amount of contiguous space, to attract the largest conventions and trade shows. The main exhibit hall area ("Level 3") contains the Convention Center's largest prime contiguous exhibit space of approximately 410,000 gsf, with few columns and ceiling heights of at least 33 feet in most of the area. The lower level of exhibit halls (Level 1) has lower ceiling heights of 18 feet and significantly more columns, rendering this space less than prime.

The Convention Center is critically deficient in meeting room space. For a facility of its size, the Convention Center has a very small quantity of meeting room space resulting in the lowest ratio (1:25) of meeting space to exhibit space of all major competing convention centers around the country. In addition, the Convention Center has no ballroom space. Virtually every major convention center has substantial ballroom space to accommodate large numbers of persons in a single venue. Other convention center ratios of meeting and ballroom space to exhibit space typically range from 1:8 to 1:2. This indicates a severe deficiency of meeting and ballroom space relative to exhibit space. This deficiency places the Convention Center at a serious competitive disadvantage.

The existing space is in immediate need of repair and renovation. For example, roof leaks are a persistent problem during heavy rain, and the HVAC system is in significant need of an upgrade. Both problems detrimentally impact operations.

The Convention Center also lacks any sort of significant truck marshalling operations facility. Although the block between Eleventh and Twelfth Avenues and West 33rd and West 34th Streets is used for some truck marshalling and storage, on significant show dates throughout the year the larger tractor trailer trucks actually marshal on the streets surrounding the Convention Center, adding significant traffic congestion.

The Convention Center is currently sixteenth in size relative to the nation's other convention centers. For it to compete for the nation's larger conventions and events, it would need to:

1. Expand the amount of prime exhibition space to create a significant area of contiguous space (over 500,000 square feet), while providing large amounts of additional meeting space.
2. Provide ballroom space.
3. Bring the facility into a state of good repair
4. Create an efficient truck marshalling and loading facility.
5. Provide for a large, directly connected headquarters hotel.

After the FGEIS was completed, the CCDC and ESDC subjected the FGEIS-Convention Center expansion to close financial scrutiny and independent analysis. CCDC and ESDC concluded that the FGEIS-Convention Center expansion could not be constructed with the funds available due to a number of factors, including a clearer understanding of the construction costs associated with the project—specifically, a significant escalation of construction costs since the original cost was estimated; the high cost of the bridge connecting the hotel and the expanded Convention Center; the high cost of acquiring the hotel site through eminent domain; and the high costs associated with the relocation of the Quill Bus Depot, including construction of a new bus depot between Tenth and Twelfth Avenues from West 30th to 31st Streets, demolition of the existing Quill Bus Depot, and construction of the below-grade connection between the marshalling facility on the West 33/34 block and the expanded Convention Center.

Since the Multi-Use Facility is no longer under consideration, it is not clear that a relocation site for the Quill Bus Depot would be available. This uncertainty presented a timing problem for the expansion, and additionally raised the possibility that trucks would continue to queue on City streets for an extended period of time.

CCDC and ESDC's review also raised questions about cost-effectiveness of certain project elements, such as the bridge over the Quill Bus Depot to link the Convention Center to its hotel, the public pedestrian passageway through the building along a line parallel to and slightly south of West 39th Street, and the publicly accessible open space on the roof. In addition, new security requirements raised serious concerns about providing public access to the roof-top open space, and truck marshalling operations that would not contain appropriate space for truck inspections and would be physically separate from the Convention Center.

While the need for the Proposed Modifications arose from these considerations, the intensive redesign effort has provided beneficial opportunities to improve upon the FGEIS-Convention Center expansion in terms of its design, cost-effectiveness, security and access issues, and the avoidance of adverse effects on street closures. The Proposed Modifications reflect an urban sensibility by stacking exhibition halls and ballrooms to more efficiently utilize the site. This reduces the superblock footprint and allows for more efficient access to building services. The taller, denser Convention Center would also allow for sweeping river views and a skyline panorama from the ballroom level.

In summary, the Proposed Modifications to the FGEIS-Convention Center expansion include the following:

- Expand northward only as far as West 40th Street, thus eliminating the need to relocate the Quill Bus Depot or to provide a through-the-building public passageway near West 39th Street.
- Create a facility devoted to truck marshalling, security screening, unloading, loading, queuing, parking and storage located along Twelfth Avenue south of West 40th Street, connecting directly to the expanded Convention Center at each exhibit floor level. Convert Level 1 loading berths into state-of-the-art truck screening facility.

- Provide Phase I new exhibition space by building northward from West 38th Street to West 40th Street; provide ballroom and meeting room space in this expansion structure on two levels above the exhibition space.
- Reorganize the Eleventh Avenue façade of the existing building, eliminating the depressed driveway, to provide space for meeting rooms, a large, glass enclosed entry area, vehicle drop off, and 3.2 acres of public open space, extending from West 34th Street to West 40th Street, including large public plazas at the northern and southern ends.
- While retaining the West 34th Street truck exit, reconfigure the West 34th Street façade to reduce other driveways and provide additional public open space.
- Use the existing plaza site on the east side of Eleventh Avenue between West 35th and West 36th Streets, which the Convention Center owns, and approximately 2,988 square feet of adjacent property to the east (that would be acquired by CCDC from the City) as the site for the Convention Center hotel. Provide connections directly to the Convention Center underneath the Eleventh Avenue viaduct through an existing passage now controlled by the Convention Center.
- Allow development of the block between West 33rd and West 34th Streets from Eleventh to Twelfth Avenues for residential and commercial use at a density and configuration consistent with that of the Special Hudson Yards District. The sale of the West 33/34 block would generate needed revenue to fund the project. Provide 1.25 acres of publicly accessible open space on this site, including 0.5 acres of active open space. Provide parking for 500 vehicles.
- Assume that Phase II would be constructed atop the existing Convention Center and would connect to the Phase I expansion building.

## **PROPOSED MODIFICATIONS TO THE FGEIS-CONVENTION CENTER EXPANSION**

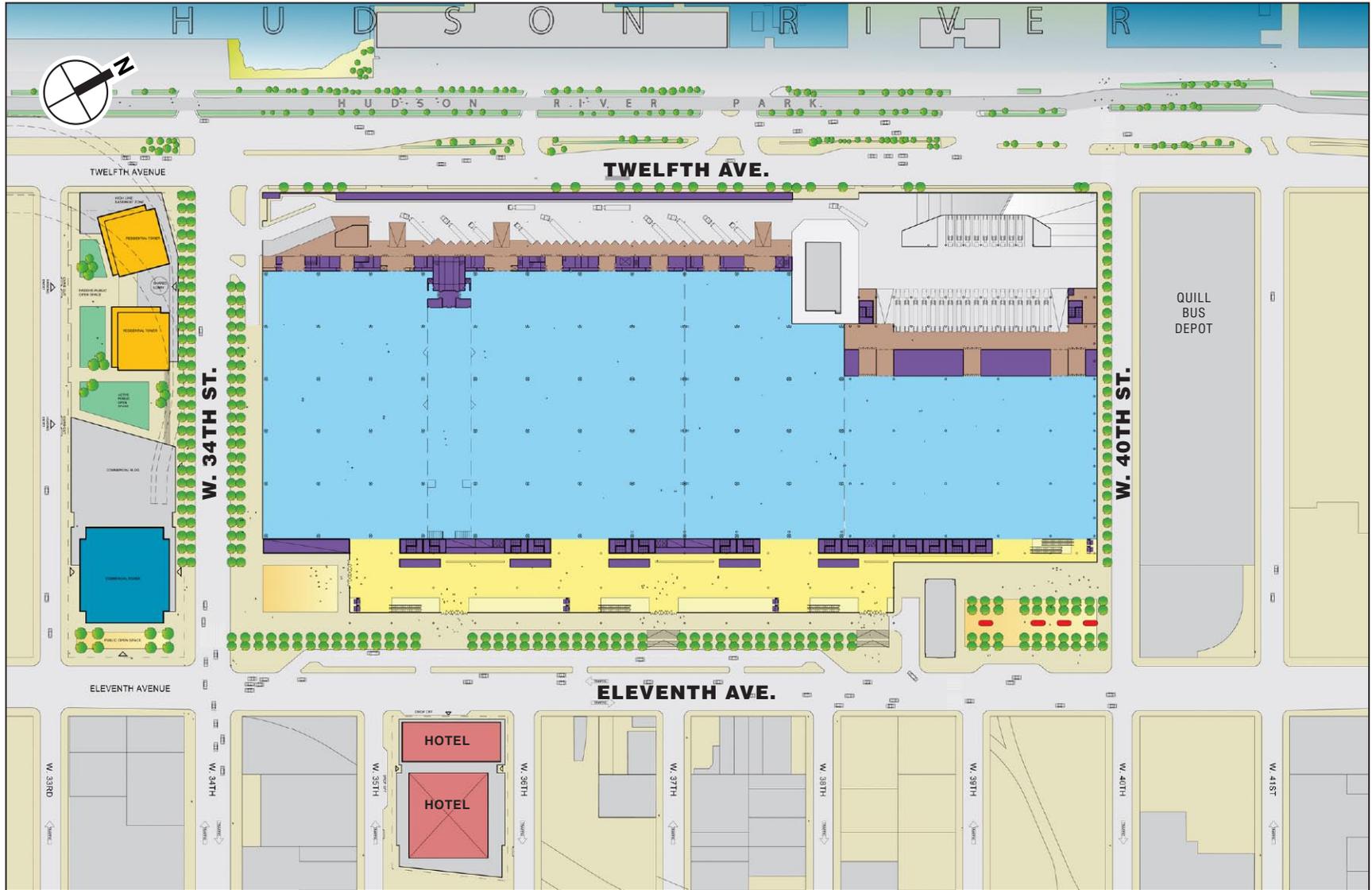
### *PROJECT COMPONENTS*

The Proposed Modifications to Phase I of the FGEIS-Convention Center expansion include refurbishing and renovating existing Convention Center space and constructing approximately 1.335 million gsf of new space. The expanded facility would extend north to West 40th Street (see Figure 1). In addition, a portion of the existing facility between West 37th and West 38th Streets would be demolished to accommodate new construction. The facility would have a total of approximately 3.44 million gsf on completion of Phase I and 3.989 million gsf after completion of Phase II.

### **Convention Space**

The Proposed Modifications would not change the total amount of exhibition, meeting room, ballroom, retail/food court, or support and pre-function space of the FGEIS-Convention Center expansion. In Phase I, a portion of the existing Convention Center space would be demolished and new space would be constructed north to West 39th Street. The Proposed Modifications would add approximately 340,000 square feet of exhibition space, 180,000 square feet of meeting room space, and 990,000 square feet of back of house and core space

Currently, the Convention Center contains exhibition and meeting room space on Levels 1, at elevation +5 (elevation 5 feet above sea level), Level 3 at elevation +32 feet, and Level 4 at elevation +54. The FGEIS-Convention Center expansion proposed extending the existing levels north to West 41st Street and adding a new Level 5 (elevation +92) for additional exhibition, meeting room, and ballroom space. The Proposed Modifications would construct new Levels 5 and 7 (elevation +132) between West 37th and West 39th Streets for Phase I. The Phase II expansion would be accommodated by constructing Level 5 and partial Level 6 above the



existing Convention Center building for additional exhibition, meeting room, and ballroom space and partial Level 8 above the Phase I expansion areas.

The FGEIS-Convention Center expansion included 44,000 square feet of non-destination retail on Level 2. Although this retail space along Eleventh Avenue would not be provided in the Proposed Modifications, the 33/34 Development (see description below) would include retail space.

### ***Hotel***

The Proposed Modifications would construct the Convention Center hotel on the east side of Eleventh Avenue between West 35th and West 36th Streets, instead of the west side of Eleventh Avenue at West 42nd Street in the FGEIS-Convention Center expansion. The hotel would connect to the Convention Center via a connection under the Eleventh Avenue viaduct. The General Project Plan for the Convention Center expansion would override the New York City Zoning Resolution for tower height and setback requirements of the Special Hudson Yards District (ZR 93-42 and ZR-93-50) for the hotel site. However, the final design for the hotel would adhere to all other Special Hudson Yards District requirements, including, but not limited to maximum floor area and sidewalk widening regulations. It is anticipated that the maximum number of rooms would be 1,500—the same as the FGEIS-Convention Center expansion. For analysis purposes, an illustrative plan has been developed for the hotel that is shown on Figures 2 and 3. The illustrative plan contains an approximately 65-story guest room tower along Eleventh Avenue above meeting room and ballroom space on the first five levels, with ballroom space set back to the east of the tower. This hotel site was projected for commercial development pursuant to the Hudson Yards rezoning proposal (Projected Development Site 6) as described under Alternative S in Chapter 26, “Alternatives,” in the FGEIS.

### ***Open Space***

The Proposed Modifications would provide publicly accessible open space along the southern (West 34th Street) and eastern (Eleventh Avenue) and northern (West 40th Street) sides of the expanded Convention Center (see Figure 1) including public plazas areas at the north and south ends of the building on Eleventh Avenue between West 39th and West 40th Streets. The area along Eleventh Avenue, West 34th Street, and West 40th Street would be landscaped with trees and pedestrian amenities. The Proposed Modifications would not include five acres of public open space on the roof of the expanded Convention Center nor the 3.6-acre full-block open space between West 33rd and West 34th Streets, as set forth in the FGEIS. However, open space would be provided on this block as part of the 33/34 Development, which is described in more detail below.

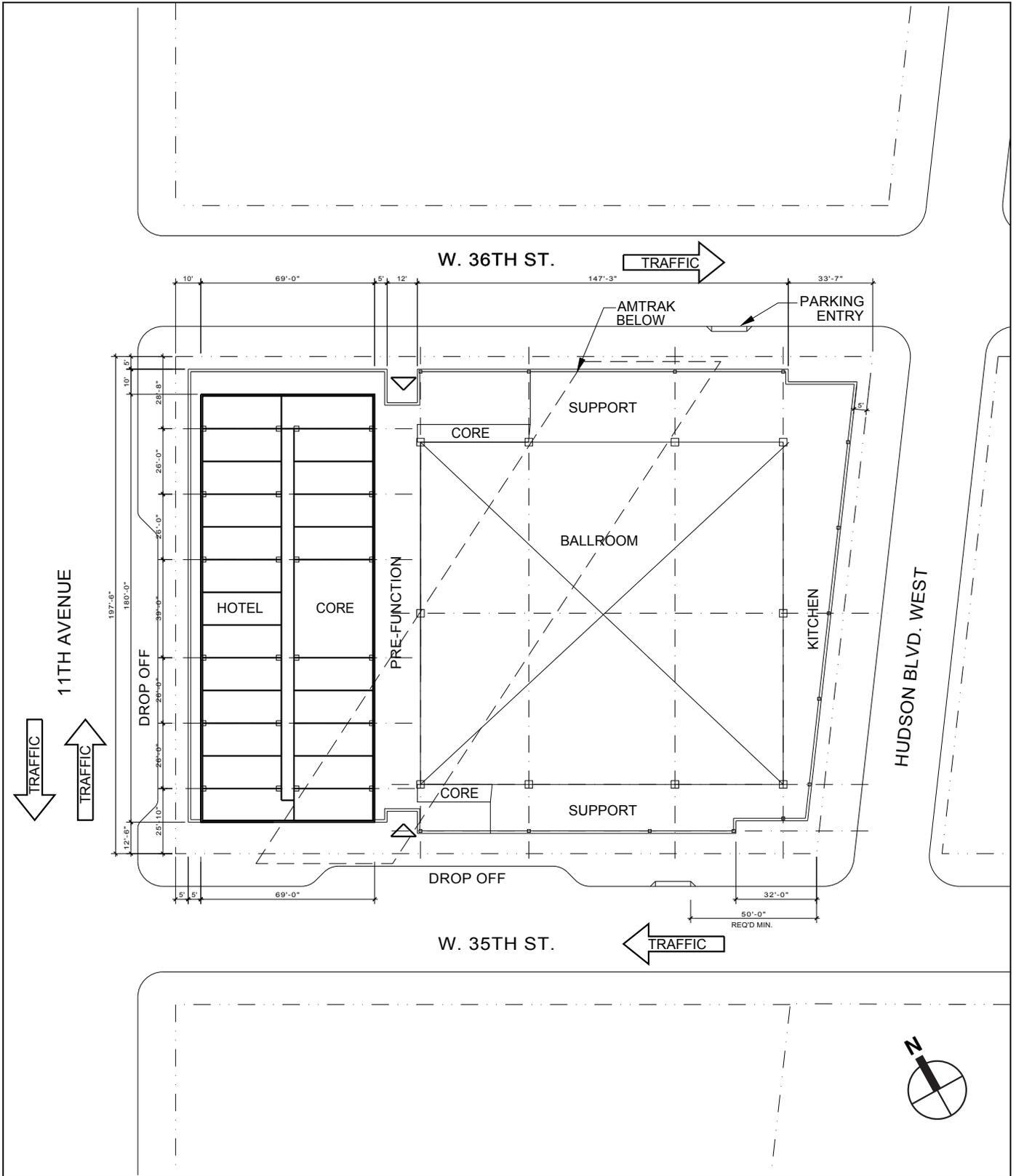
## **ACCESS**

### ***Patron Access***

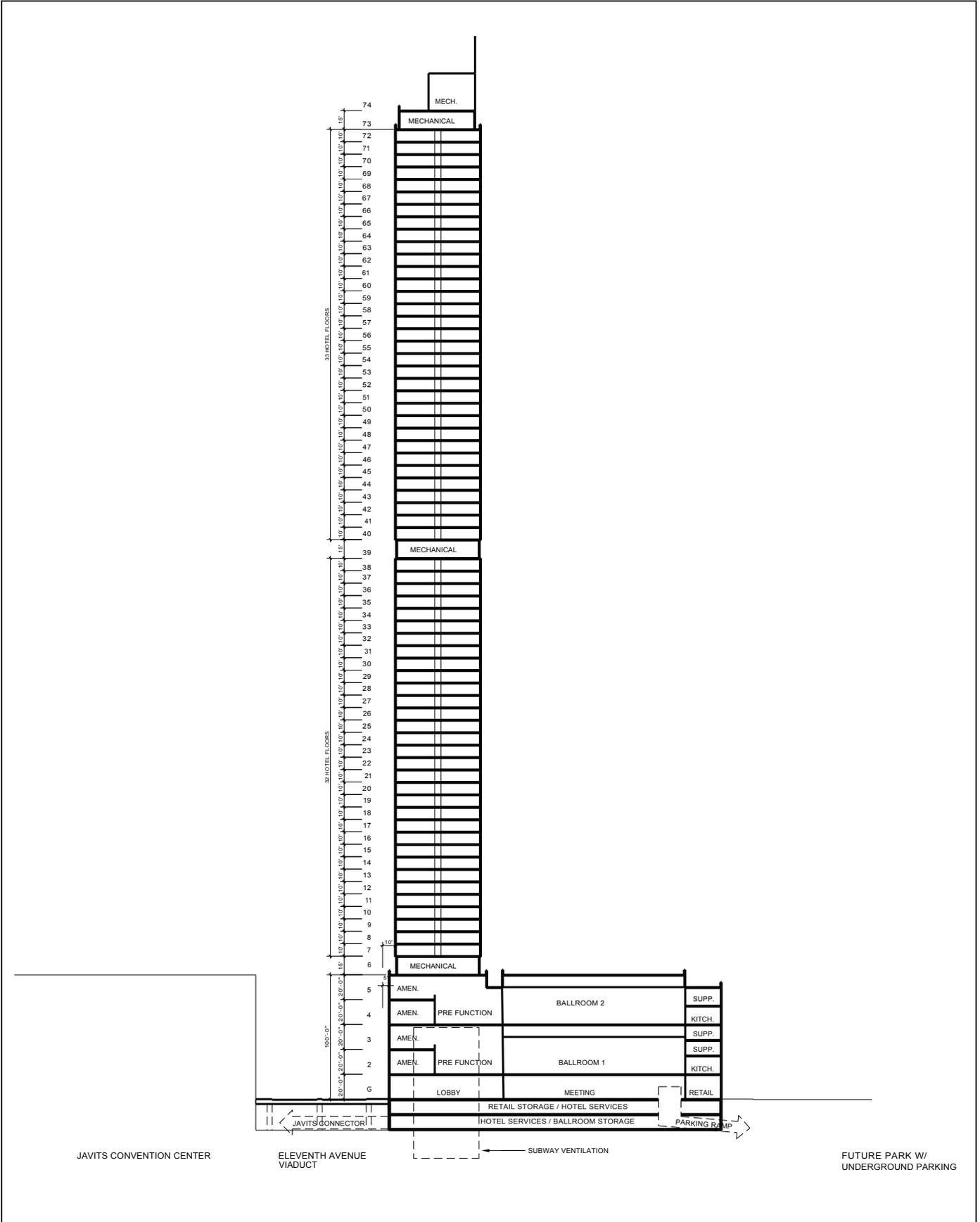
Similar to the FGEIS, the Proposed Modifications would have patrons enter the Convention Center from Eleventh Avenue and West 34th Street. Due to the elevation of Eleventh Avenue at this location, Level 2 at elevation +18 is currently located at street level and serves as a vehicular drop-off area. The Proposed Modifications would build over the vehicle access in this area, enclose this depressed Level 2 for Convention Center space and essentially create a new street-level entrance at Level 3 along the length of Eleventh Avenue from West 34th Street to a point halfway between West 38th and West 39th Streets. Under the Proposed Modifications, only West 39th Street would be closed—the FGEIS-Convention Center expansion proposed to close West 33rd, West 39th, West 40th Streets, and the easterly portion of West 41st Street.

### ***Truck Marshalling***

The Convention Center currently uses the block between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues for truck parking and the storage of empty return trailers. Truck



For illustrative purposes only



FOR ILLUSTRATIVE PURPOSES ONLY

Hotel Section View Looking North from West 35th Street  
**Figure 3**

marshalling currently takes place along Eleventh and Twelfth Avenues, West 34th Street, and nearby City streets. The trucks pull out when they are called, line up on Twelfth Avenue in a standing lane provided for that purpose, and enter the building from its northern end to reach the loading docks.

The Proposed Modifications include the construction of a new above-grade multi-level truck marshalling facility, approximately 580,000 gsf, located along Twelfth Avenue south of West 40th Street. The marshalling facility would contain seven levels, which includes one roof level for the central mechanical plant. Trucks would access from the existing Twelfth Avenue standing lane from West 34th Street to enter the truck screening zone. It is anticipated that trucks would be processed and security-screened on the first level and directed to a large ramp to a specific level. The floors of the truck marshalling facility would connect directly to the expanded Convention Center at each exhibition level. Truck docks would still be located within the existing and expanded Convention Center on the Twelfth Avenue side as well as within the proposed marshalling facility.

This proposed above-grade truck marshalling facility is a change from the FGEIS-Convention Center expansion, which proposed a partially below-grade marshalling facility on the block between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues.

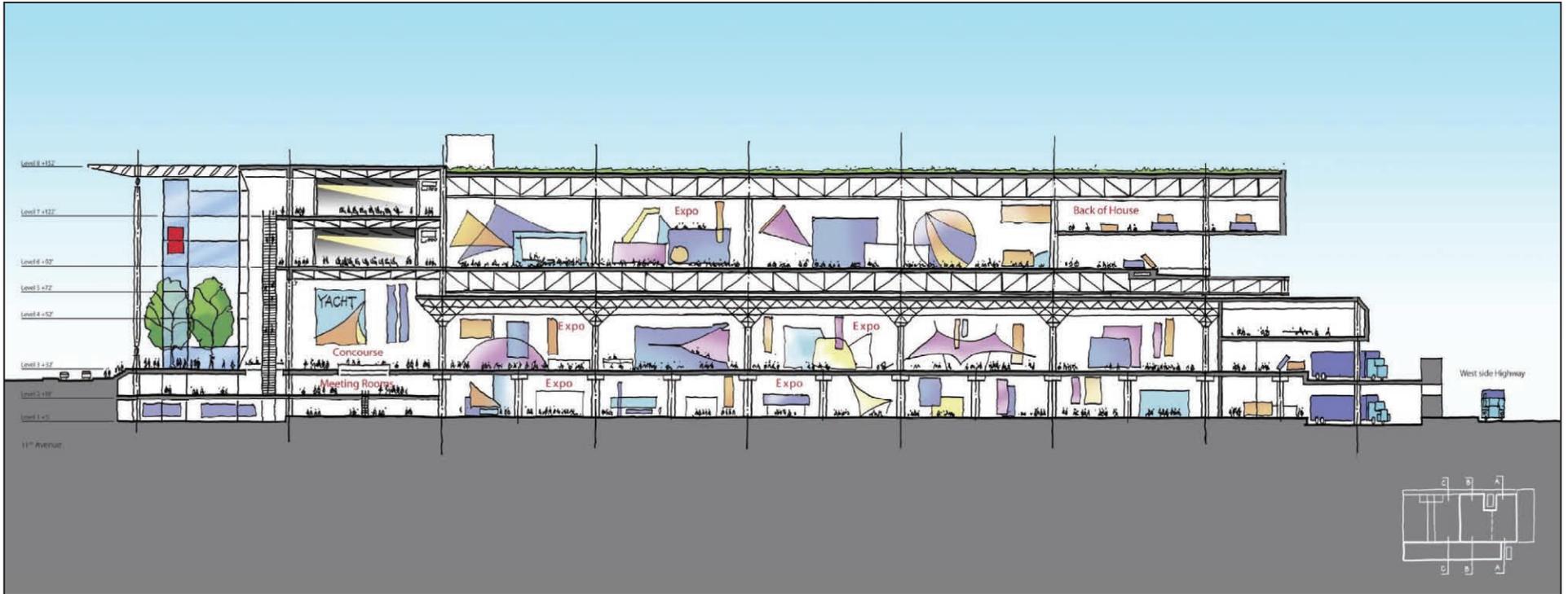
#### *FACILITY PLANNING AND DESIGN*

The tallest component of the Proposed Modifications would be the hotel tower, anticipated to be 65-stories, located along the east side of Eleventh Avenue between West 35th and West 36th Streets (see Figure 3). This is the approximate height of the FGEIS-Convention Center expansion hotel proposed at West 42nd Street. The expanded Convention Center building would include seven levels north of West 37th Street, with a maximum height of approximately 210 feet (see Figure 4)—two additional levels and 56 feet above the FGEIS-Convention Center expansion. The Proposed Modifications would remove the original I.M. Pei-designed atrium. The additional Level 5 that would be developed over the existing building in Phase II would have a maximum height of approximately 92 feet. The Proposed Modifications would develop an expanded Convention Center that would extend approximately 1,487 feet along Eleventh Avenue from West 34th to West 40th Streets.

The Proposed Modifications would construct the new Phase I levels (to maximum height of 152 feet) around the existing Lincoln Tunnel ventilation structures near Twelfth Avenue and West 38th Street and Eleventh Avenue and West 39th Street. The Proposed Modifications would include a 30-foot setback around the ventilation structures.

The proposed transparent façade and new street-level entrance at Level 3, along approximately 1,000 feet of Eleventh Avenue, would provide a new entryway and concourse for the existing and expanded facility. These changes, not previously proposed for the FGEIS-Convention Center expansion, are a critical design element of the Proposed Modifications. Beyond creating a new and more inviting entry, the new Eleventh Avenue section of the building would locate meeting room spaces adjacent to the existing exhibition hall and greatly improve the existing facility's ability to draw a broader convention business. The expanded entry and interior courtyard area in under the Proposed Modifications would provide interior publicly accessible open space during Convention Center events. The transparent glass façade would be animated with people moving horizontally and vertically by means of escalators and elevator towers strategically located to facilitate movement throughout the building. Landscaped open space elements would include trees, benches, and stairs woven together with a colonnade supported by a bris soleil. This area would provide front-of-house reception and registration along with catering and convention support. All floors and internal circulation would be visible from the street. It is intended that this area be furnished with public amenities including seating areas.

6.29.06



Convention Center Section View Looking North Through Building  
**Figure 4**

### *SUSTAINABLE DESIGN*

Although the Proposed Modifications would not include the “green roof” proposed in the FGEIS-Convention Center expansion, the Proposed Modifications would incorporate other sustainable design features. Leadership in Energy and Environmental Design (LEED) Certification by the United States Green Building Council is a design objective for the proposed expansion. While a LEED rating is only obtained after a building is completed, the project would be filed with the USGBC during the design phase to obtain a LEED rating. The possible levels of scoring are Certification, Silver, Gold, and Platinum. The scoring is based on achieving points in six categories: sustainable sites, water efficiency, energy and atmosphere, indoor environmental quality, materials and resources, and innovation. The goal is to obtain, at a minimum, a Silver rating with specific requirements to comply with Optimize Energy Performance credits.

### *LAND ASSEMBLAGE NECESSARY TO ALLOW EXPANSION*

Like the FGEIS-Convention Center expansion, the Proposed Modifications would require the assemblage of land to undertake the expansion, including the right-of-way for West 39th Street. However, the Proposed Modifications would not require the acquisition of the right-of-way for West 33rd, West 40th Streets and the eastern portion of West 41st Street, parcels on the eastern portion of the block bounded by West 41st and West 42nd Streets and Eleventh and Twelfth Avenues (Block 1089, Lot 3), and the Quill Bus Depot, which was necessary for the FGEIS-Convention Center expansion.

Both the FGEIS-Convention Center expansion and Proposed Modifications would require the acquisition of a small parcel of City-owned land located along Eleventh Avenue between West 39th and West 40th Streets (Block 685, Lot 38). The site area to be assembled for the Convention Center hotel as part of the Proposed Modifications would be the same as that for FGEIS Projected Developed Site 6. This includes a small 2,988 square-foot portion of two parcels (Block 707, portions of Lots 13 and 56), that are principally being acquired by the City for the Midblock Garage and Midblock Park and Boulevard.

## **33/34 DEVELOPMENT**

### *PROJECT COMPONENTS*

As described above, the existing block between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues is proposed to be sold by CCDC for purposes of mixed-use development. This area was proposed as open space with a partially below-grade marshalling facility in the FGEIS. The block is zoned M2-3 and is not included in the Special Hudson Yards District.

The General Project Plan for the Proposed Modifications would override the New York City Zoning Resolution for the 33/34 Development, to permit residential and public open space uses, as well as commercial development at a greater density than currently allowed in the M2-3 district. The GPP would contain design guidelines for this site compatible with the adjacent Special Hudson Yards District. These guidelines and the overall site density were developed in coordination with the New York City Department of City Planning. Specifically, the design requirements established for the GPP include the following:

#### *Density*

- Total gross floor area above grade would not exceed 2.45 million gross square feet (gsf)—equivalent to approximately 2.2 million zoning square feet (zsf).
- Commercial gross floor area above grade is allowed up to 1.45 million gsf—equivalent to approximately 1.24 million zsf.
- Residential gross floor area above grade is allowed up to 1 million gsf—equivalent to approximately 960,000 zsf.

### *Sidewalk Widening and Street Planting*

- Eleventh Avenue – 5 foot sidewalk widening and street trees required.
- West 34th Street – 10 foot sidewalk widening and street trees, double row, required.

### *Open Space*

- Total of 1.25 acres of public open space required, of which 0.5 acres must be designated for active open space.
- Public access must be provided across the site from Eleventh Avenue to Twelfth Avenue.

### *Streetwall and Retail*

- Eleventh Avenue – No required streetwall. Retail must occupy not less than 70 percent of building frontage.
- Twelfth Avenue – Streetwall required for 70 percent of block frontage. All development requires streetwall minimum of 60 feet and maximum of 150 feet
- West 34th Street (beyond 100 feet from Eleventh and Twelfth Avenues) – Streetwall required for 70 percent of block frontage. Commercial streetwall minimum height of 60 feet and maximum height of 150 feet. Residential streetwall minimum height of 60 feet. Retail must occupy no less than 70 percent of building frontage.

### *Tower Setbacks*

- Eleventh Avenue – All development above 150 feet requires a 15 foot setback from the property line.
- Twelfth Avenue – All development above 150 feet requires a 20 foot setback from the property line.
- West 34th Street – No setback required for residential developments. Commercial development above 150 feet requires a 20 foot setback from the property line.
- West 33rd Street – All development above 150 feet requires a 20 foot setback from the property line.

### *Tower Controls*

- Commercial – Above 150 feet, tower length in east-west direction is limited to 250 feet
- Residential – Above 150 feet, tower length in north-south direction is limited to 140 feet. Maximum tower size not to exceed 11,000 square feet. Top 100 feet of tower must be no greater than 85 percent of typical floor size. Total gross square footage of any residential tower above 150 feet cannot exceed 350,000 square feet.

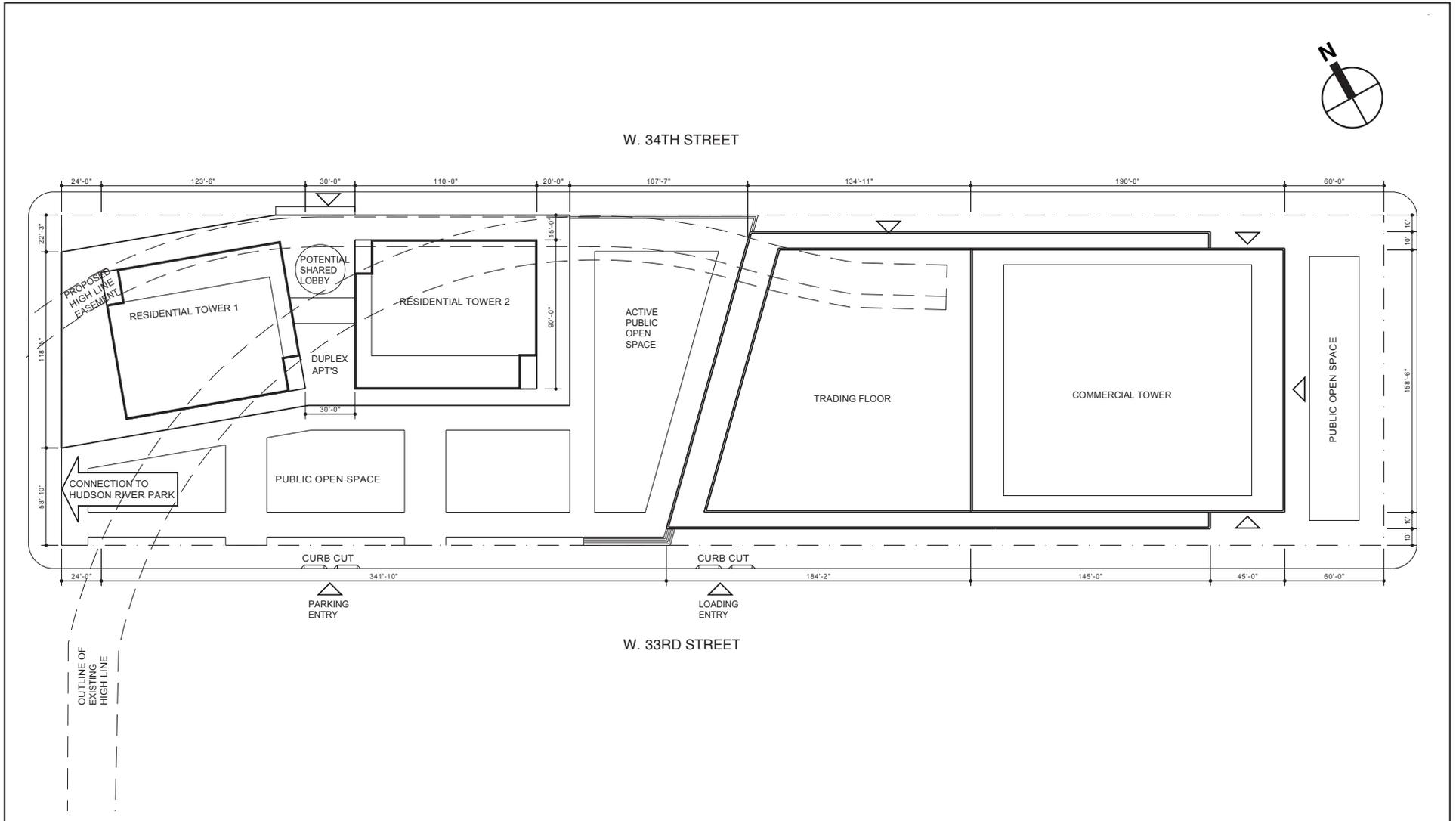
### *Curbcuts*

- Eleventh Avenue and West 34th Street – No curbcuts allowed.

### *Parking*

- Total number of spaces on-site cannot exceed 500 spaces.

The 33/34 Development would conform to the design guidelines established for the GPP, with the final program and design to be determined after the site is sold by CCDC. For analysis purposes, an illustrative plan has been developed for the 33/34 Development that is shown on Figure 5. The illustrative plan contains a total of approximately 2.45 million gsf above grade at the 33/34 Development comprising 1.0 million gsf of residential use (1,000 units) in two towers,



*For illustrative purposes only*

1.45 million gsf of above grade commercial use in a tower and low-rise building, and approximately 1.25 acres of public open space.

The block also currently contains a portion of the High Line (S/NR-eligible), which was relocated and rebuilt in 1986 as part of the original Convention Center construction. The High Line is an unused, freight railroad viaduct on the west side of Manhattan. Just south of the 33/34 Development, the High Line runs in a loop track around Caemmerer Yard from West 30th Street and Twelfth Avenue, and then runs north, crossing over West 33rd Street, at which point it declines on a ramp that curves eastward to parallel West 34th Street. The rail line eventually runs at-grade on an embankment and then proceeds below-grade to Eleventh Avenue, which it passes under to connect to a north-bound rail cut that runs between Eleventh and Tenth Avenues.

### ***Residential***

The illustrative plan for the 33/34 Development contains two residential towers with a total of 1,000 residential units, anticipated to be market-rate units, developed along the northwest portion of the block, fronting on West 34th Street (see Figures 5 and 6). The two towers would be setback approximately 15 feet from West 34th Street. Residential Tower 1 would be located further west and rise approximately 45 stories (435 feet). Residential Tower 2 would be located to the east of Tower 1 and rise approximately 50 stories (485 feet). The towers would contain retail on the ground or first floors per the design guidelines established for the GPP.

### ***Commercial***

The illustrative plan for the 33/34 Development contains commercial space comprised of office, retail and trading floor area for a total of approximately 1.45 million gross square feet. Most of the office space would be developed in a 46-story tower (569 feet) along Eleventh Avenue (see Figures 5 and 6). To the west of the office tower would be a low-rise (125 feet) building containing trading floor area. Retail would be provided in the base of the trading floor building as well as the residential towers.

### ***Parking and Loading***

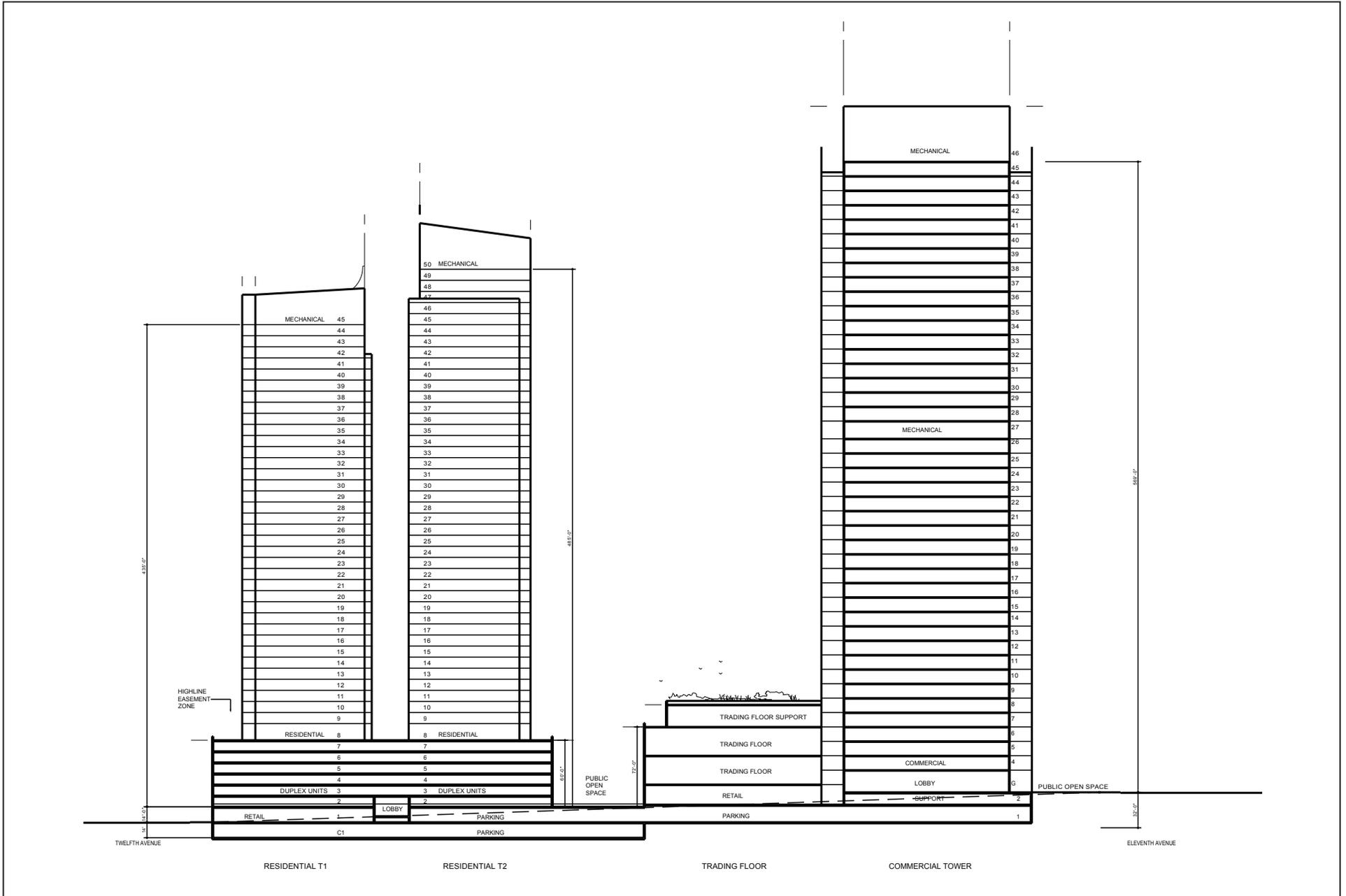
As set forth in the design guidelines established for the GPP, parking for the 33/34 Development would be provided to accommodate a maximum of 500 vehicles. It is anticipated that parking would be provided in three levels, including two levels below-grade. Access to the parking and loading areas are proposed at new curb cuts along West 33rd Street, in the western portion of the block and midblock, respectively (see Figure 5).

### ***Open Space***

Public open space would be directly accessible from street-level and would be located midblock between the commercial and residential developments and along Eleventh Avenue in front of the commercial tower (see Figure 5). It is anticipated that plantings would be arranged in conjunction with seating areas to provide a variety of areas for passive and active open space uses. It is anticipated that the area for active open space would contain lawn areas suitable for such uses as playing fields or play areas or tot lots. This active open space would not include any fenced court areas. In total, there would be approximately 1.25 acres of open space associated with the 33/34 Development, including a designated active open space area of approximately 0.5 acres.

### ***EASEMENTS***

As set forth in the design guidelines established for the GPP, three easements would be required for the 33/34 Development. As described above, the High Line is located on the 33/34 Development block. The City is planning for the conversion of the High Line into an elevated open space and recreation trail through the federal "rail banking" program. Under this program,



FOR ILLUSTRATIVE PURPOSES ONLY

rail companies may voluntarily turn over unused lines to a managing agency for recreation uses, while retaining the obligation to return the line to rail use at a later date under certain circumstances. The proposed 33/34 Development would require the removal of the High Line, but a permanent easement must be reserved to allow potential future connection to the national rail system. It is anticipated that the easement could be located in the approximate location of the existing High Line or relocated elsewhere on the block (see Figure 5). The buildings on the 33/34 Development site would be designed to maintain the integrity of the easement with the core of each building located outside the easement.

Eleventh Avenue is a viaduct from West 37th Street to West 30th Street that carries Eleventh Avenue over Caemmerer Yard under the jurisdiction of the New York City Department of Transportation (NYCDOT). The MTA plans to develop ventilation buildings associated with the No. 7 Subway Extension below the viaduct. Therefore, the MTA, NYCDOT, and Amtrak (the Empire Line crosses under the viaduct), collectively, would share a permanent easement on the 33/34 Development site for a roadway leading to their respective infrastructure under Eleventh Avenue.

The MTA and City have designed the 34th Street Station for the No. 7 Subway Extension to accommodate a future subway entrance on the west side of Eleventh Avenue. Specifically, it is anticipated that this entrance would be located along the Eleventh Avenue frontage of the 33/34 Development site. Therefore, an easement will be preserved along Eleventh Avenue on the 33/34 Development site for this station entrance.

## **TRANSPORTATION IMPROVEMENTS**

Some traffic and pedestrian improvements have been included as part of the Proposed Modifications. These improvements would occur at five intersections and are described in detail in the Traffic and Parking analysis under Section E. By 2010, improvements would be made at the intersections of Twelfth Avenue with West 33rd, West 34th, and West 39th Streets. By 2025, additional improvements would be made at the intersections of Eleventh Avenue with West 33rd and West 42nd Streets. Specifically, these improvements include:

- Twelfth Avenue and West 33rd Street (2010 and 2025): Install a new signal to control northbound and westbound traffic. This signal would facilitate westbound turns from West 33rd Street onto Twelfth Avenue. Southbound Twelfth Avenue would not be controlled by this signal.
- Twelfth Avenue and West 34th Street (2010 and 2025): Minor signal timing changes would be made at this intersection.
- Twelfth Avenue and West 39th Street (2010 and 2025): The existing median would be modified to construct a second northbound left turn only lane. In addition, minor signal timing modifications would be made at this intersection. Pedestrians would be prohibited from crossing at this intersection and would cross one block north at West 40th Street.
- Eleventh Avenue at West 33rd Street (2025): Daylighting would be provided on westbound West 33rd Street during the PM peak hour.
- Eleventh Avenue and West 42nd Street (2025): Minor signal timing changes would be made at this intersection.

## **OTHER CHANGES TO FGEIS-CONVENTION CENTER EXPANSION AREA**

The Proposed Modifications would not result in the construction of a hotel at West 42nd Street and Eleventh Avenue. Instead, this site is anticipated to be redeveloped as the River Place II residential project. River Place II was analyzed in the FGEIS as a residential development in the future without the proposed action in 2010. However, in the future with the proposed action, this residential project would not have moved forward since it would have been the site of the

Convention Center hotel. As a result of the Proposed Modifications, it is anticipated that the River Place II project would be developed in both the 2010 no build and build cases.

As described above, one of the components of the Hudson Yards project was the construction of a Multi-Use Facility including a stadium for the New York Jets over the western portion of the Caemmerer Yard between West 30th and West 33rd Streets, Eleventh and Twelfth Avenues. Since publication of the FGEIS, construction of the MUF is no longer being considered and other plans or proposals for that site have not been identified at this time. The proposed design of the MUF allowed for its conversion from a 75,000-seat stadium to a smaller-scale, exposition hall configuration containing approximately 180,000 square feet of exhibition floor space, or to a plenary meeting hall able to accommodate 40,000 persons. The MUF also proposed to contain 18,000 square feet of meeting room space that would have been available for use in both the stadium and exposition hall configuration. This exposition and meeting space in the MUF was in addition to the Convention Center expansion (not considered part of the 3.989 million gross square feet total development for the FGEIS-expanded Convention Center). Without the Multi-Use Facility, this program would not be built.

### **ACTIONS AND APPROVALS**

Based on the Proposed Modifications, the actions and approvals identified in the FGEIS necessary for the Convention Center expansion would also change. The Proposed Modifications would only extend as far north as West 40th Street, which would not require the relocation of the Quill Bus Depot. Therefore, the Proposed Modifications would not require the actions associated with the Quill Bus Depot relocation, namely the MTA approval to relocate the Quill Bus Depot and New York State Department of Environmental Conservation (NYSDEC) stationary source air permits for the relocated Quill Bus Depot. Since the Proposed Modifications would provide truck marshalling above-ground along Twelfth Avenue south of West 40th Street, Amtrak approval for the FGEIS-Convention Center expansion proposed use of a portion of the existing rail right-of-way next to the Empire Line would not be required. The provisions of the 2004 New York State legislation (Chapter 3 of the Laws of 2004) authorizing CCDC's use of West 39th Street would be the same as those under the FGEIS-Convention Center expansion. Such provisions would no longer be required for West 40th and West 41st Streets.

Based on the Proposed Modifications, the GPP for the Convention Center expansion would override the New York City Zoning Resolution for the 33/34 Development and the Convention Center hotel on the east side of Eleventh Avenue between West 35th and West 36th Streets, which were not identified as actions in the FGEIS. The overrides for the 33/34 Development would permit residential and public open space uses, as well as commercial development at a greater density than currently allowed in the M2-3 district. The design guidelines established for the GPP for the 33/34 Development would be compatible with those of the adjacent Special Hudson Yards District. These guidelines and the overall site density were developed in coordination with the New York City Department of City Planning. The Convention Center hotel would require overrides for tower height and setback requirements. However, the hotel would adhere to all other Special Hudson Yards District requirements including, but not limited to, maximum floor area and sidewalk widening regulations.

As with the FGEIS, the Proposed Modifications would also require the acquisition of a small parcel of City-owned land located along Eleventh Avenue between West 39th and West 40th Streets (Block 685, Lot 38). In addition, approximately 2,988 square feet of land adjacent to the existing Convention Center public plaza (Block 707, portions of Lots 13 and 56) would be acquired from the City by CCDC for the proposed Convention Center hotel.

## **E. POTENTIAL FOR SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS FROM PROPOSED MODIFICATIONS**

The purpose of this Technical Memorandum is to examine the Proposed Modifications and changes to background conditions and determine whether the changes would result in any significant adverse environmental impacts not already identified in the FGEIS. The following analyses address each of the technical areas contained in the FGEIS, comparing the impacts of the Proposed Modifications with those of the FGEIS-Convention Center expansion.

### **FRAMEWORK FOR ANALYSIS**

The framework for analysis in this Technical Memorandum follows the FGEIS in that it applies the same analysis years and methodologies. It also contains the same timing assumptions for relevant program elements that are the same in both documents. As described above, the approved actions are largely described as Alternative S of the FGEIS. Changes were made to the Special Hudson Yards District after completion of the FGEIS by both CPC and the City Council. Among other changes, the City Council amendments decreased the total commercial development permitted in the Special District by approximately 1.4 million gross square feet. However, for analysis purposes, this Technical Memorandum conservatively compares the incremental difference posed by the Proposed Modifications to the Build conditions analyzed for Alternative S in the FGEIS. The similarities and differences of the specific framework are as follows:

#### *ANALYSIS FRAMEWORK RELATED TO PROJECT MODIFICATIONS*

- The FGEIS considered two analysis years for completion of the project components: 2010, when the Convention Center, the MUF, the extension of the No. 7 Subway, and a relatively small amount of office and residential space would be built, and 2025, when all of the long-term development predicted for the Hudson Yards area would be built. The analyses in this technical memorandum maintain the same two analysis years. In this way, this Technical Memorandum can isolate and examine the incremental differences arising from the Proposed Modifications to the FGEIS-Convention Center expansion and provide a clear analysis of the differences in impacts, if any, from the proposed changes. Although it is possible that one or more project components of the Hudson Yards project assumed for completion in 2010 could be delayed by a year or two, this analysis year still provides an effective benchmark since the potential effects from a short term delay would be temporary and would likely be in tandem with other elements (i.e., rezoning-generated development will likely fall in line with completion of the new transit service). Further, all components of the Hudson Yards project are ultimately examined as part of the 2025 analysis year. The potential slippage of one or more project components past the 2010 analysis year is not considered significant under SEQRA.
- Although the Convention Center expansion has always been presented in two phases, the FGEIS actually examined the impacts of the FGEIS-Convention Center expansion as if both phases would have been completed by 2010 (with the exception of the below-grade connection between the marshalling facility and the Phase II expanded Convention Center, which was analyzed in 2025). This was a conservative assumption in the FGEIS and reflected the possibility of an accelerated schedule for the expansion. Although the year is now 2006, and only the first phase of the expansion is currently scheduled for completion by the end of 2010, for comparison purposes this Technical Memorandum assumes full completion of both phases of the Convention Center expansion by 2010.
- Since the Proposed Modifications would not change the total development for the Convention Center expansion from that analyzed in the FGEIS—3.989 million square

feet with a 1,500 room hotel—the analyses in this Technical Memorandum assume the same total development (in size) as the FGEIS. However, the analyses consider the design effects from the Proposed Modifications such as a taller expanded Convention Center, an above-grade marshalling facility, and a hotel on the east side of Eleventh Avenue between West 35th and West 36th Streets. The amount of publicly accessible open space to be provided pursuant to the Proposed Modifications would be less than what was to be provided in the FGEIS, Convention Center Expansion, however accessibility and quality of the publicly accessible open space is improved by providing it at grade, rather than as rooftop space. In addition, West 40th and West 41st Streets would remain open under the modifications and the analysis accounts for this. As noted above, these are assumed to be completed by 2010.

- The 33/34 Development was not considered in the FGEIS, which proposed a publicly accessible plaza on that block, with truck marshalling and other circulation for both the Multi-Use Facility and the Convention Center beneath. The Technical Memorandum assumes that at the 33/34 Development, the 500-space parking garage, and one residential building containing approximately 500 market-rate units, would be completed by approximately 2010, along with all of the new proposed open space. Also built by 2010 would be River Place II, with 1,349 units; this development did not exist in the proposed action scenarios of the FGEIS (but was considered as a No Build project with 532 units<sup>1</sup>). It is anticipated that approximately 314 units of the River Place II units would be affordable.
- The Multi-Use Facility, which was slated to be complete by 2010, is no longer being considered and other plans or proposals for that site have not been identified at this time. Therefore the MUF is not included in the Technical Memorandum Analyses. Currently, there is no proposal for the development of the western portion of Caemmerer Yard. The City of New York has offered to purchase the western portion of Caemmerer Yard from the MTA. If that offer is accepted, the City would embark on a public planning process similar to that undertaken for the Hudson Yards Rezoning for the purpose of formulating a proposal for the rezoning and eventual development of the western portion of Caemmerer Yard. The City has further indicated that any such rezoning and development plan would be subject to review under the Uniform Land Use Review Procedure and would also be the subject of a supplemental environmental impact statement. Such reviews would have to consider the proposed Convention Center. The MUF generated considerable activity—in particular traffic and pedestrian volumes—primarily during time periods (Sunday afternoon and Monday night) not relevant to the Convention Center analysis. However the MUF did propose 180,000 square feet of exhibition space, which could be turned into a plenary hall with 40,000 seats, plus meeting room space. These program elements, which were not part of the FGEIS-Convention Center expansion, generated activity during the analysis periods relevant to the Convention Center analysis. Therefore, the traffic, pedestrian and transit analyses of this Technical Memorandum account for the removal of this activity.
- The assessment of the Proposed Modifications also consider conditions with West 33rd Street, as well as West 40th and West 41st Streets, remaining open, and without the two pedestrian bridges (at West 33rd and West 39th Streets) across Twelfth Avenue that were proposed primarily to accommodate anticipated large volumes of pedestrians going to and from the New York Waterways ferry terminal and the MUF when it was in stadium configuration.

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<sup>1</sup> The FGEIS considered 532 units for River Place II based on a square foot per unit factor applied to the total zoning floor area available at the site. Since that time, a project of 1,349 total units with various sizes has been defined by the developer for River Place II.

- In the FGEIS, truck marshalling was planned on the existing block west of Eleventh Avenue between West 33rd and West 34th Streets; these trucks would have used an area adjacent to the below-grade Empire Line to connect the truck marshalling facility with the Convention Center. The Proposed Modifications include an above-ground, multi-story truck marshalling facility along the western side of the Convention Center. This plan would not have a tunnel access option; instead trucks would enter and queue the marshalling facility at a new entrance roughly equivalent to West 35th Street along Twelfth Avenue. As with the FGEIS and current operations, trucks would exit the facility onto West 34th Street just east of Twelfth Avenue.
- With the Proposed Modifications, the Quill Bus Depot would not be relocated.<sup>2</sup> This Technical Memorandum is predicated upon the Quill Bus Depot remaining at its current location, which is different from what was considered in the FGEIS. The affected analyses are primarily traffic and air quality.
- As it was in the FGEIS, the 2025 analysis year is assumed to be the time of full completion of all reasonably anticipated development, although it is acknowledged that the actual timing of individual elements could vary and completion could come somewhat earlier or later than the specific year. To maintain consistency between the Technical Memorandum analyses and those in the FGEIS, the build out of the Convention Center expansion and hotel plus the residential and commercial development on the 33/34 block are analyzed and compared to the 2025 analysis in the FGEIS, with project-specific assumptions, as follows.
  - In 2025, the net increase in residential units, compared to the proposed action in the FGEIS would be 2,349 units. This includes the program assumed for River Place II plus the two residential buildings proposed for the 33/34 Development site. For residential use, the analyses focus on land use, zoning, and public policy, socioeconomic conditions, community facilities, open space, transportation, air quality, and noise.
  - In 2025, the office tower assumed for Projected Development Site 6 (the currently proposed location of the hotel) would not be built. This tower was anticipated to contain 1.66 million gross square feet of office space and 18,240 square feet of ground-floor retail. Instead, the Technical Memorandum addresses a similar tower on the 33/34 Development. Although this tower would be smaller (1.45 million gross square feet), to be conservative for analysis purposes the floor area is considered to be equivalent to the 1.675 million square feet analyzed in the FGEIS for Projected Development Site 6. The differences would arise from its location on the west side of Eleventh Avenue on the south side of West 34th Street, closer to both Hudson River Park and the park proposed above the eastern portion of Caemmerer Yard. The analyses consider the design and site specific effects from the 33/34 Development such as its height, amount of open space, and site-generated traffic on surrounding intersections.

### *STUDY AREAS AND BACKGROUND CONDITIONS*

Study areas in this Technical Memorandum vary depending on the impact analysis in question. In many cases (e.g., open space, community facilities) the study areas are the same as those of the FGEIS. Where the anticipated changes in program, siting or design are local, the areas of study focus on the locations that would be incrementally affected. Thus, the study areas for such analyses as traffic, pedestrian flows or transit are focused more specifically in the western portion of the FGEIS study area, where the Proposed Modifications would potentially have an

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<sup>2</sup> The design does not preclude a future northward expansion of the Convention Center.

effect. Changes in background conditions include the development of River Place II in the future both without and with the project and with a greater number of units (see discussion above).

## **LAND USE, ZONING AND PUBLIC POLICY**

### *2010*

The Proposed Modifications do not alter the basic conclusions of the FGEIS that the overall Proposed Action would greatly improve conditions in the Hudson Yards project area and would not result in significant adverse impacts to land use and zoning, and would be consistent with public policies affecting the project area.

Nonetheless, by 2010 the Proposed Modifications do result in several variations of development patterns compared with those projected in the FGEIS. This includes the relocation of the Convention Center hotel from its original site on West 42nd Street and Eleventh Avenue to its new proposed location on the east side of Eleventh Avenue between West 35th and West 36th Streets. The FGEIS examined this site as a 1.67 million square foot commercial development (Projected Development Site 6). On the original hotel site, it is now anticipated that the River Place II residential project would be built, with approximately 1,349 units.

The Proposed Modifications would change the land use in the Convention Center corridor of Hudson Yards, described in the FGEIS as extending from West 29th to West 41st Streets, between Eleventh and Twelfth Avenues. By 2010, the entire corridor would have been transformed with the completion of the FGEIS-Convention Center expansion and the Multi-Use Facility, demolition and relocation of the Quill Bus Depot, and construction of the relocated Department of Sanitation of the City of New York (DSNY) and New York City Police Department (NYPD) Tow Pound facility. The predominant land use would have been commercial and entertainment and the area would have contained approximately 12 acres of new open space (including 3.6 acres on the full block active recreation park between West 29th and 30th Streets and Eleventh and Twelfth Avenues and the 3.6 acres of surface plaza publicly accessible open space associated with the MUF between West 33rd and West 34th Streets). Transportation uses would have remained generally below grade from West 30th to West 34th Streets, however, this use would have no longer predominated in the corridor. With the Proposed Modifications, the predominant land uses in the Convention Center corridor would be commercial, with residential and 7.85 acres of new open space. In addition, portions of the corridor would not be redeveloped as described in the FGEIS. The full-block transportation use associated with the western portion of Caemmerer Yard would remain visible and unchanged without the development of the Multi-Use Facility—entertainment uses would not be located in its place. Similarly, the full-block transportation use associated with the Quill Bus Depot would remain unchanged in the corridor.

The most substantial change in land use would occur on the existing Convention Center marshalling yard site (the block between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues). In the FGEIS, this site was projected to include a surface plaza area of publicly accessible open space associated with the MUF as well as partially sub-grade marshalling, parking, and MUF facility space. With the Proposed Modifications, this area would become a new development site allowing for approximately 2.45 million gross square feet of new mixed-use development (approximately 1,000 residential units and 1.45 million gross square feet of commercial and retail development), a 500 space parking garage, and 1.25 acres of new publicly accessible open space, as described above. By 2010 it is anticipated that the first of two residential towers would be completed (with about 500 apartments) as well as the parking garage and open space components.

While this block is located outside of the boundaries of the Special Hudson Yards District, the proposed 33/34 Development is in keeping with the overarching goal of providing for commercial and residential development opportunities in this area. Specifically, a commercial

anchor on the southwest corner of West 34th Street and Eleventh Avenue is an appropriate land use complement in the effort to capitalize on the location of the new No. 7 Subway station. The commercial development at the 33/34 Development site is the approximate equivalent of what was originally anticipated on Projected Development Site 6 (now the proposed site of the Convention Center hotel) and thus represents a shifting of development in the immediate area but not an incremental increase in overall commercial development potential as analyzed in the FGEIS.

The Proposed Modifications would introduce residential development west of Eleventh Avenue at West 34th Street for the 33/34 Development and would allow construction at West 42nd Street of River Place II. Specifically, residential uses would front on Twelfth Avenue at the 33/34 Development—similar to West 42nd Street and Twelfth Avenue. Although residential land uses west of Eleventh Avenue were not proposed in the FGEIS, such development is comparable to the mixed-use developments projected east of Eleventh Avenue and along both the 34th Street corridor and east and west of Eleventh Avenue along the 42nd Street corridor.

As described above, the 33/34 Development site was projected to include a surface plaza area of publicly accessible open space associated with the Multi-Use Facility. The plaza's location enhanced open space connectivity to new open space resources in Hudson Yards (even though it was not physically attached to these resources) by promoting pedestrian access and flow through the eastern portion of Caemmerer Yard, the Midblock Park and Boulevard System, the proposed High Line linear park, and the adjacent areas of the Hudson River Park. The Proposed Modifications would substantially preserve this connectivity by providing a through block open space resource. The proposed open space at this block will include lawn and play areas for active recreational uses as compared to the passive use-only plaza adjacent to the MUF proposed in the FGEIS.

The Proposed Modifications would result in an overall increase of about 2,349 residential units compared with the FGEIS, including the 1,000 units proposed for the 33/34 Development site and the 1,349 units associated with River Place II which was not in the FGEIS Future With the Proposed Action. The additional residential development is consistent with the Hudson Yards Development program and responsive to the acknowledged demand for new housing in the area and in New York City as a whole (as set forth in the FGEIS Chapter 1, "Purpose and Need"). Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to land use and public policy in 2010.

### ***Required Zoning Overrides***

To implement the GPP for the Convention Center expansion, and allow for construction of the mixed-use development on the existing marshalling yard and the proposed Convention Center hotel, ESDC would exercise its override power with respect to certain provisions of the New York City Zoning Resolution. The proposed mixed-use development and the hotel, while overriding site-specific zoning requirements, would not conflict with the overall zoning goals for the area. Therefore, the proposed change from that examined in the FGEIS is not expected to result in a significant adverse impact on zoning.

### ***33/34 Development Site***

This block is not included in the Special Hudson Yards District and is currently zoned M2-3 which permits a maximum of 2.0 FAR for manufacturing and commercial development while residential uses are not permitted. ESDC would exercise its override powers with respect to the New York City Zoning Resolution to allow for a mixed-use development including residential and open space on the 33/34 Development Site, as well as commercial uses at a higher density than that permitted under the M2-3 zoning. Although the override would introduce residential development in a manufacturing district, this block, much like Hudson Yards prior to the establishment of the Special Hudson Yards District, does not contain manufacturing uses and no longer serves the original purpose for the area's zoning (manufacturing and trade along the

Hudson River). The majority of Hudson Yards located to the east, specifically between Tenth and Eleventh Avenues and West 33rd and West 41st Streets, was previously zoned manufacturing (M1 districts) and rezoned to allow mixed-use development, including residential uses, in the Special Hudson Yards District. The mixed-use development proposed for the 33/34 Development is compatible with the Special Hudson Yards District to the east and the goals of the special district to transform the area into a vital, 24-hour neighborhood containing a mix of commercial, residential, retail, open space, and recreational uses.

Design guidelines established for the GPP in coordination with the City would ensure that the development permitted within the 33/34 Development site is consistent and coordinated with the adjacent Hudson Yards. Overall, it is anticipated that the 33/34 Development would provide a total of approximately 2.45 million gsf (equivalent to approximately 2.2 million zsf) on the roughly 3.67 acre parcel. This density would be compatible with the density in the Special Hudson Yards District and less than the density allowed in the adjacent Hudson Yards Large Scale Plan subdistrict.

#### *Convention Center Hotel Site*

The proposed design of the Convention Center hotel on the east side of Eleventh Avenue between West 35th and West 36th Streets is consistent with the overall design guidelines established by the Hudson Yards rezoning. The illustrative design envisions a building with a 100-foot two- to three-story base housing the core lobby functions and ballrooms. The hotel rooms would be located in a tall tower above the building base. The design of the building requires the integration of non-hotel infrastructure, primarily new ventilation structures for the No. 7 Subway extension and access to the public garage proposed for the midblock as part of the larger Hudson Yards infrastructure development. As a result of these design conditions, the tower's design is constrained in such a manner that to achieve the proposed number of hotel rooms, certain zoning overrides would be required. These include overrides of the tower height and setback requirements of the Special Hudson Yards District (Zoning Resolution Sections 93-42 and 93-50). However, the final design would adhere to all other Special Hudson Yards District requirements, including, but not limited to, maximum floor area and sidewalk widening regulations. Therefore, the hotel would not adversely effect integration with the surrounding new Hudson Yards projected development sites and no significant adverse impacts on zoning are expected from the Proposed Modifications. In addition, the zoning override would incorporate the obligations of the site's current E-designation for hazardous materials, noise, and air quality. The hazardous materials E-designation requires additional sub-surface investigation and a health and safety plan as part of the site's redevelopment. Since the site is now part of the overall Convention Center expansion plan, such obligations would be incorporated into the project's Construction Environmental Protection Programs as part of the GPP, which would be consistent with the requirements set forth in the E-designation (see also the Hazardous Materials analysis under Section E). The GPP would also include building noise attenuation and HVAC design requirements consistent with the E-designation (see also the Air Quality and Noise analyses under Section E, respectively). Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on zoning in 2010.

#### *2025*

As analyzed in the FGEIS, the changes to the Convention Center corridor by 2025 would have been the same as that in 2010. For the Proposed Modifications, the full-block transportation uses associated with the Quill Bus Depot and the western portion of Caemmerer Yard would remain the same as described above for 2010 and the Phase II expansion of the Convention Center under the Proposed Modifications would occur within the envelope of the expanded Convention Center described above for 2010. By 2025 the 33/34 Development site would be expected to be fully complete and operational with the second residential tower of 500 units and the commercial development of approximately 1.45 million gross square feet. Land use patterns facilitated by the Special Hudson Yards District would have been firmly established by 2010,

and the incremental addition of the completed development would not result in any new or additional land use, zoning or public policy significant adverse impacts. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on land use, zoning and public policy in 2025

## **SOCIOECONOMIC CONDITIONS**

### *2010*

The FGEIS stated that the Convention Center expansion would result in the displacement of approximately four businesses with 102 employees located on Block 685 (i.e., the Yale Trucking block) and the public parking lot on Block 1089, Lot 1 (for the hotel). Although Block 1089, Lot 1 no longer contains the public parking lot, the Proposed Modifications still consider using Block 685 for the Convention Center expansion. Therefore, these changes would have the same direct displacement effects as those in the FGEIS. The Proposed Modifications would not affect assumptions for Convention Center employment and visitors analyzed in the FGEIS.

There is no displacement associated with the Proposed Modifications associated with the 33/34 Development on the current marshalling block, and no new impacts would be anticipated as a result of the change in program for this block.

The net addition of approximately 1,849 residential units (1,349 from River Place II and 500 units from the 33/34 Development), would not be expected to alter the FGEIS conclusion that the overall Proposed Action does not result in a significant adverse impact from indirect residential displacement. The new units associated with the Proposed Modifications would be in keeping with the expanded housing capacity associated with Hudson Yards and the socioeconomic character of the new population would not differ from the current and projected population in the area. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to socioeconomic conditions in the study area in 2010.

### *2025*

Like the 2010 analysis year, the incremental addition of approximately 500 residential units (the second residential tower anticipated as part of the 33/34 Development), with the Proposed Modifications would not be expected to alter the FGEIS conclusion that the introduction of nearly 13,000 new residential units would not result in a significant adverse socioeconomic impact from indirect residential displacement.

No incremental change in indirect business or institutional displacement would be expected from the Proposed Modifications, including the commercial development proposed for the 33/34 Development site. This commercial development is in keeping with the Hudson Yards development plan and, in fact, represents no net new commercial development potential but a shift of projected development from the east side of Eleventh Avenue (from FGEIS Projected Development Site 6 which is now proposed as the hotel site under the Proposed Modifications) to this new location. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to socioeconomic conditions in the study area in 2025.

## **COMMUNITY FACILITIES AND SERVICES**

The FGEIS analyses of community facilities included police and fire services, public schools, libraries, public health care, and public daycare services for the 2010 and 2025 analysis years. The combination of large scale growth attributed to both the Hudson Yards and West Chelsea rezonings adds a substantial population to the general area and significant adverse impacts were identified for fire services, public schools, and public daycare. Police services and library services were not anticipated to have significant adverse impacts. The Proposed Modifications could affect community services as a result of the net increment of up to 2,349 housing units that were not previously considered. This includes 1,000 market rate units at the 33/34

Development site and 1,349 units (with an estimated 314 affordable units) at River Place II. The Proposed Modifications would not result in any new or additional significant adverse impacts to community facilities in the study area by 2010 or 2025.

2010

### **Police Services**

The Proposed Modifications would not change the FGEIS conclusion of no significant adverse impacts to police services. The incremental change in residential units associated with the Proposed Modifications would not displace existing police facilities and, as set forth in the *CEQR Technical Manual*, NYPD would continue to evaluate its staffing needs and assign personnel based on population growth, area coverage, crime levels, and other local factors. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to police services in 2010.

### **Fire Services**

While there was no specific displacement of existing FDNY facilities, the FGEIS found that the combination of substantial growth in population from West Chelsea and Hudson Yards development, along with the street closings between Eleventh and Twelfth Avenues on West 33rd, West 39th, West 40th, and West 41st Streets could significantly impact the ability to provide fire and emergency services. The net increase of over 1,400 residents and 11,000 workers associated with the projected development for the Special Hudson Yards District, as described under Alternative S in the FGEIS, could increase the demand for fire department services by 2010. While no specific impacts or mitigation were identified, the FGEIS specified that FDNY would monitor growth and development to determine the need for additional resources to continue to provide adequate fire protection service.

The Proposed Modifications would substantially improve circulation by eliminating three of the four proposed street closures thereby addressing FDNY concerns as stated in the FGEIS. The new residential development generated by the Proposed Modifications, a net increase of approximately 3,900 residents from River Place II and the 33/34 Development, would not generate a significant change in overall demand for fire and emergency services beyond that already established in the FGEIS. In addition, the Proposed Modifications would not displace existing emergency service facilities. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to fire services in 2010.

### **Public Schools**

The completion of the River Place II project (1,349 units with an estimated 314 affordable units) and the first 500-unit residential tower on the 33/34 Development site can be expected to add an additional 300 students with 198 elementary, 40 middle school, and 62 high school students (see Table 2).

**Table 2**

**2010 Public School Students Projected for Proposed Modifications**

	Housing Units	Elementary School Students	Middle School Students	High School Students	Total
<b>Market-Rate</b>	1,535	154	31	46	231
<b>Low-Income Units</b>	314	44	9	16	59
<b>Total</b>	1,849	198	40	62	300
<b>Sources:</b> Student generation rates according to the New York City Department of Education, Division of School Facilities, and New York City Department of City Planning, as presented in Table 3C-2 of the <i>CEQR Technical Manual</i> .					

The additional increment of the new enrollment from the Proposed Modifications would increase the shortfall expected in Community School District (CSD) 2 from 1,725 to 1,923 for elementary schools and from approximately 692 to 732 for intermediate schools, and in CSD's Region 3 from 1,031 to 1,229 for elementary schools and from 141 to 181 for intermediate schools for a total of 238 elementary and intermediate school seats (see Table 3).

**Table 3**  
**2010 School Enrollment**

Public School Resource	Capacity	Alternative S		Proposed Increase	Total Projected Enrollment	Available Seats in Program	
		Enrollment	Available Seats				
<b>Elementary Schools</b>	Total Region 3	2,572	3,603	(1,031)	198	3,801	(1,229)
	Total CSD 2	15,185	16,910	(1,725)	198	17,108	(1,923)
<b>Intermediate Schools</b>	Total Region 3	273	414	(141)	40	454	(181)
	Total CSD 2	6,659	7,351	(692)	40	7,391	(732)
<b>High Schools</b>	Manhattan	55,129	60,364	(5,235)	62	60,426	(5,297)

**Source:** Hudson Yards FGEIS, Chapter 26, "Alternatives," Table 26-26

As set forth in the FGEIS, the combination of the West Chelsea and Hudson Yards rezonings is expected to add substantial numbers of new students resulting in a shortfall in school capacities throughout the district and the significant impact would be mitigated by construction of a new 630-seat elementary/intermediate school, a 110-seat addition to PS/IS 51, and other capacity adjustments as necessary. In addition to the mitigation specified in the Hudson Yards FGEIS, the New York City Department of Education (DOE) expects to locate one of its planned leased elementary/intermediate schools, currently in the 2005-2009 Adopted 5-Year Capital Plan, with an estimated 504 school seats, within the study area by 2010 (see Appendix C, DOE Correspondence). With the FGEIS mitigation in place and the planned DOE leased elementary/intermediate school, the additional increment of the new enrollment would be accommodated and no additional significant adverse impacts or mitigation from the Proposed Modifications would be required in 2010.

### ***Public Health and Libraries***

As presented in the FGEIS, the incremental change in residential units associated with the Proposed Modifications would not generate any new or additional significant adverse impacts on public health or library services in 2010. No change from the FGEIS conclusions would be expected.

### ***Public Day Care***

The River Place II project is estimated to add up to 314 units of affordable housing. This could add approximately 38 school aged children to publicly assisted day care programs. As set forth in the FGEIS, these programs in the Hudson Yards project area would experience considerable shortfalls in the 2010 Future With the Proposed Action. The additional minor demand generated by the Proposed Modifications would not alter the mitigation specified in the FGEIS of providing additional capacity based on a monitoring of need by the Administration for Children Services. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to public day care in 2010.

2025

### ***Police Services***

By 2025 with the completion of the second residential tower and the commercial building on the 33/34 Development site, the Proposed Modifications would not change the FGEIS conclusion of no significant adverse impacts to police services. The incremental change in residential units associated with the Proposed Modifications would not displace existing police facilities and, as

set forth in the *CEQR Technical Manual*, NYPD would continue to evaluate its staffing needs and assign personnel based on population growth, area coverage, crime levels, and other local factors. The commercial development associated with the Proposed Modifications is considered to have been fully evaluated as part of the FGEIS. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to police services in 2025.

### **Fire Services**

The projected development for the Special Hudson Yards District by 2025, as described under Alternative S in the FGEIS, would result in a net increase of over 18,760 residents and 105,000 workers. The new residential development generated by the Proposed Modifications, a net increase of approximately 4,805 residents from River Place II and the 33/34 Development, would not generate a significant change in overall demand for fire and emergency services beyond that already established in the FGEIS. The FGEIS specified as mitigation a new fire house to be built in or around 2025 to accommodate future needs for the 48-block area of Hudson Yards. The Proposed Modifications would not displace existing emergency services facilities in 2025. With the FGEIS mitigation in place and the benefit of fewer street closures, the Proposed Modifications would not result in any new or additional significant adverse impacts to fire services in 2025.

### **Public Schools**

Completion of the second residential tower on the 33/34 Development site would add about 50 elementary school, 10 middle school, and 15 high school students for a total (inclusive of 2010) 2025 net increase of 248 elementary students, 50 middle school, and 77 high school students (see Table 4). This would add to the large overall growth in population associated with the Hudson Yards and West Chelsea rezonings.

**Table 4**  
**2025 Public School Students Projected for Proposed Modifications**

	Housing Units	Elementary School Students	Middle School Students	High School Students	Total
<b>Market-Rate</b>	2,035	204	41	61	306
<b>Low-Income Units</b>	314	44	9	16	69
<b>Total</b>	<b>2,349</b>	<b>248</b>	<b>50</b>	<b>77</b>	<b>375</b>
<b>Sources:</b> Student generation rates according to the New York City Department of Education, Division of School Facilities, and New York City Department of City Planning, as presented in Table 3C-2 of the <i>CEQR Technical Manual</i> .					

The additional increment of the new enrollment from the Proposed Modifications would increase the shortfall expected in Community School District (CSD) 2 from 2,943 to 3,191 for elementary schools and from approximately 1,497 to 1,547 for intermediate schools and in CSD's Region 3 from 2,258 to 2,506 for elementary schools and from 414 to 464 for intermediate schools for a total of 298 elementary and intermediate school seats (see Table 5).

**Table 5**  
**2025 School Enrollment**

Public School Resource	Capacity	Alternative S		Proposed Increase	Total Projected Enrollment	Available Seats in Program	
		Enrollment	Available Seats				
<b>Elementary Schools</b>	Total Region 3	2,572	4,830	(2,258)	248	5,078	(2,506)
	Total CSD 2	15,185	18,128	(2,943)	248	18,376	(3,191)
<b>Intermediate Schools</b>	Total Region 3	273	687	(414)	50	737	(464)
	Total CSD 2	6,659	8,156	(1,497)	50	8,206	(1,547)
<b>High Schools</b>	Manhattan	55,129	57,564	(2,435)	77	57,641	(2,512)
<b>Source:</b> Hudson Yards FGEIS, Chapter 26, "Alternatives," Table 26-26							

As set forth in the FGEIS, the mitigation for the combination of the West Chelsea and Hudson Yards rezonings would likely include an additional K-8 elementary/intermediate school based on future needs as determined by the Department of Education. With the Proposed Modifications, DOE would continue to monitor trends in demand for school seats in the area. DOE's response to demand could take place in stages and include administrative actions and/or enlargement of existing schools, followed by the later construction or lease of new school facilities at an appropriate time. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to public schools in 2025.

### ***Public Health and Libraries***

Like the FGEIS, the incremental change in residential units associated with the Proposed Modifications would not generate any new or additional significant adverse impacts on public health or library services in 2025. No change from the FGEIS conclusions would be expected.

### ***Public Day Care***

By 2025 the additional 500 residential units on the 33/34 Development site are considered to be all market rate units and would not generate demand for publicly assisted day care and would not affect overall demand for such services. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to public day care in 2025.

## **OPEN SPACE AND RECREATION**

As described earlier, since the detailed design process has begun, several issues have arisen that call for changes to the preliminary plans studied in the FGEIS for the Convention Center expansion. Detailed design review raised questions about cost-effectiveness and security of the publicly accessible open space on the roof and forced planners to rethink public access to this roof-top open space. As a result, the Proposed Modifications would include several changes to the public open space as described in the FGEIS. The Proposed Modifications would not include 5 acres of roof-top open space at the expanded Convention Center or a full-block plaza between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues. The Proposed Modifications would provide 3.2 acres of passive open space along the Eleventh Avenue and West 34th and West 40th Street frontages of the expanded Convention Center and 1.25 acres of public open space (including 0.5 acres of active open space) at the 33/34 Development site.

### *2010*

In terms of changes to the proposed non-residential daily users and new residential populations, the open space calculations presented below include the removal of visitor estimates for the Multi-Use Facility as well as the addition of new residents associated with the River Place II development (1,349 units) and the first tower of the 33/34 Development (500 units).

Table 6 presents the open space ratio analysis for the Proposed Modifications (with the additional changes noted above). As with the FGEIS, the addition of future 2010 open spaces anticipated with the overall Hudson Yards program uniformly results in open space ratios that are larger than what would be expected in the No Build condition.

Although the Proposed Modifications would result in the loss of a certain amount of publicly accessible rooftop open space as that proposed by the FGEIS-Convention Center expansion, the open space proposed around the Convention Center under the Proposed Modifications would create more open space that would be readily accessible to the public than the proposed rooftop open space under the FGEIS-Convention Center expansion. In addition, the expanded entry and interior courtyard under the Proposed Modifications would provide interior as well as covered publicly accessible open space during Convention Center events.

**Table 6**  
**2010 Open Space Ratios Summary Projected from Proposed Modifications**

Study Area	Open Space Category	Open Space Ratio		
		No Build	Alternative S <sup>1</sup>	Proposed Modifications
<b>Non-Residential Study Area</b>	Passive/non-residents	0.115	0.149	0.149
	Passive/total population	0.088	0.118	0.115
<b>Residential Study Area</b>	Total/residents	0.642	0.811	0.757
	Passive/residents	0.449	0.583	0.535
	Active/residents	0.193	0.228	0.221
	Passive/total population	0.084	0.102	0.100

**Note:** 1. As modified by CPC and the City Council

In the FGEIS, the 33/34 Development site was projected to include a surface plaza area of publicly accessible open space associated with the MUF. This plaza was proposed to have pathways which would terrace up toward the MUF and provide views of the Hudson River. While not physically attached to other open space resources, the plaza would have enhanced open space connectivity by promoting access to the new open spaces in Hudson Yards to the east, the proposed High Line linear park to the south, and Hudson River Park to the west. Although the Proposed Modifications would not contain a full-block plaza, this connectivity would be substantially preserved by providing open space and access through the block from Eleventh and Twelfth Avenues and along West 33rd and 34th Streets. The proposed open space at this block would include lawn and play areas at grade for active recreational uses, which are more similar in form and use to the existing and proposed open spaces in the area, as compared to the terraced plaza area associated with the MUF in the FGEIS. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to open space resources in 2010.

### 2025

By 2025, the open space calculations take into consideration the second residential tower of the 33/34 Development (500 units) which would add new residents to the study area. The non-residential population remains unchanged since the commercial development anticipated for the 33/34 Development site was originally considered as 2025 Projected Development Site 6.

As shown in Table 7, with the combination of a net decrease in open space provided by the Convention Center expansion (from 8.6 acres in the FGEIS to 4.45 acres with the Proposed Modifications) and the slightly larger residential population resulting from residential development not anticipated in the FGEIS, the Proposed Modifications would be expected to generate a slight reduction in the open space ratio compared with the 2025 No Build baseline (-4.7 percent for passive, non-resident population and -6.3 percent in the active residential study area). This is in comparison to the FGEIS which showed a modest gain in open space ratio for non-residential ratio (3.6 percent) and a decline for the active residential ratio (-3.8 percent).

**Table 7**  
**2025 Open Space Ratios Summary Projected from Proposed Modifications**

Study Area	Open Space Category	Open Space Ratio		
		No Build	Alternative S <sup>1</sup>	Proposed Modifications
<b>Non-Residential Study Area</b>	Passive/non-residents	0.111	0.115	0.106
	Passive/total population	0.084	0.092	0.083
<b>Residential Study Area</b>	Total/residents	0.602	0.666	0.602
	Passive/residents	0.421	0.492	0.432
	Active/residents	0.181	0.174	0.170
	Passive/total population	0.081	0.086	0.080

**Note:** 1. As modified by CPC and the City Council

In accordance with *CEQR Technical Manual* guidelines, a decrease in the open space ratio that approaches or exceeds 5 percent generally warrants more detailed analysis. Therefore, a detailed open space analysis has been conducted because the Proposed Modifications would result in a 6.3 percent decrease in the active open space ratio in 2025. Demographic data presented in the FGEIS were used to identify potential open space users (residents and non-residents) within the residential and non-residential study areas. The age distribution of the residential population is important because children and elderly residents are typically more dependent on local open space resources (Table 8).

**Table 8**  
**Existing Populations in the Non-Residential and Residential Use Study Areas**

Non-Residential Study Area			Manhattan
Age	Number of Residents	Percentage of Total Population	Percentage of Total Population
Under 5	1,429	2.8	5.0
5 to 9	1,210	2.4	4.8
10 to 14	1,139	2.3	4.5
15 to 19	1,736	3.4	4.9
20 to 64	38,872	77.0	68.7
65 and over	6,097	12.1	12.2
Residential Study Area			
Under 5	2,084	2.7	5.0
5 to 9	1,664	2.2	4.8
10 to 14	1,603	2.1	4.5
15 to 19	2,498	3.3	4.9
20 to 64	60,052	78.9	68.7
65 and over	8,210	10.8	12.2
<b>Source:</b> Hudson Yards FGEIS, Chapter 7, "Open Space and Recreation," Table 7-3			

According to 2000 Census data, approximately 77 percent of the non-residential study area residential population is between 20 and 64 years old (see Table 8), which is higher than the approximately 69 percent figure for Manhattan as a whole. Children and teenagers account for only approximately 11 percent of the entire residential population in the non-residential study area, while persons 65 and over account for approximately 12 percent of the residential population. Therefore, it is not expected that young children or the elderly—two populations that typically would not travel beyond a ¼-mile radius of their residences—would place a disproportionately heavy burden on the ¼-mile study area, as these populations are relatively low within the study area.

As in the non-residential study area, persons within the residential study area between the ages of 20 and 64 constitute the highest percentage (approximately 78.9 percent) of the residential population (see Table 8). Among residents, the number of children and teenagers is only approximately 10.3 percent of the combined age groups. The smallest population concentration is, again, persons between the ages of 10 and 14. The 65 and Over population accounts for approximately 11 percent of the residential study area population.

By 2025, the future condition with the Proposed Modifications would result in a net increase of 18.53 acres of new open space, 14.43 acres of passive space and 4.1 acres of active space, as compared to the No Build condition. Alternative S, as modified by the CPC, would have resulted in a net increase of 22.68 acres of new open space.

Thus, in comparison with the FGEIS, the difference is a modest decline in open space ratios for one element—the passive non-residential ratio—and a further decline in the active residential ratio. However, it is noted that the Proposed Modifications, while providing for less total acreage (4.45 acres instead of the 8.6 acres in the FGEIS), provide for a greater diversity of open space resources than those originally proposed. In particular, all open spaces would be at grade level compared to the FGEIS-Convention Center expansion proposed rooftop passive open space of

five acres which, while open to the public, required secure passage to and from the open space and the exterior of the Convention Center.

Some of the new residential developments projected for Hudson Yards would also contain privately-owned, publicly-accessible open space areas—both passive urban plazas and active open space play areas—that would further serve the new residential population generated by the Proposed Modifications. The residential population on the 33/34 Development site would be directly served by the open space on that block. The River Place II population would be served by the open space required on that block by the terms of the CPC restrictive declaration for that project. In addition, there are other “destination parks,” such as DeWitt Clinton and Hudson River Parks, located beyond the study area that would serve as additional resources for residential populations associated with the River Place II and 33/34 Development. It is also anticipated that new residential developments projected for Hudson Yards, including the 33/34 Development and River Place II, would contain recreational amenities, such as resident-only health clubs and passive open space areas (such as roof decks or common gathering spaces) that would further serve the new residential population generated by the Proposed Modifications.

Thus, based on the characteristics of the new development combined with the demographic profile of existing and future residents of the study area, the Proposed Modifications would not result in any new or additional significant adverse impacts to open space resources in 2025.

## **SHADOWS**

The FGEIS identified significant adverse shadow impacts on two historic resources: the Eighth Avenue façade of the Farley Building and St. Raphael’s RC Church. The Proposed Modifications do not alter the type or extent of impact on these resources and, as a result, would not result in any new or additional significant adverse impacts on these resources.

Although shadows would also be cast on open spaces, the FGEIS concluded that most open space resources are either currently in shadow or would be in shadow under No Build conditions, and that additional shadows would not be significant. Specifically, this included open space resources associated with the Hudson River Park, where the FGEIS concluded that the planned active and passive activities may be undertaken in both sunlit and shaded conditions. The FGEIS also concluded that the duration of the shadows would not be significant enough to reduce the park’s usability. Nonetheless, as set forth in the FGEIS, the existing and proposed buildings on the far west side generate morning shadows that extend westward over Twelfth Avenue and into existing and future areas of Hudson River Park.

Similarly, although shadows would also be cast upon the Hudson River, the FGEIS concluded that these shadows would be short-lived and diffuse. Diffuse shadows are not considered a significant change to habitat conditions, as they are temporary and unlikely to change the habitat condition. In addition, the aquatic life of the Hudson River is continuously carried by strong river and tidal currents and would be exposed to these shadows for short periods of time and would not create significant adverse impacts to fish and wildlife species within the river. Therefore, the FGEIS concluded that shadows on the Hudson River would not result in any significant adverse impacts on aquatic resources.

To ascertain if the Proposed Modifications could alter the conclusion of the FGEIS, this Technical Memorandum examines the incremental shadows from the Proposed Modifications on Hudson River Park and the Hudson River. Since this involves the westward cast of shadows, the analysis only addresses shadows from the Proposed Modifications during the morning when shadows would reach Hudson River Park and the Hudson River. The morning time period is examined for up to three peak conditions over four analysis days: March 21—the vernal equinox, which is the equivalent of September 21, the autumnal equinox; May 6—the midpoint between the vernal equinox and the longest day of the year, which is the equivalent to August 6—the midpoint

between the equinox and the shortest day of the year; June 21—the longest day of the year; and December 21—the shortest day of the year.

#### *2010*

Figures A-1 through A-9 in Appendix A present the nine specific shadow increments where the Proposed Modifications could add shadows into Hudson River Park and the Hudson River within the context of the 2010 Hudson Yards FGEIS Future With the Proposed Action. The figures are based on the FGEIS composite shadow diagrams but are modified to a) account for the bulk shadow increment of the MUF which is no longer a project and b) highlight the incremental change associated with the new Proposed Modifications. As shown in these renderings, the Proposed Modifications add only marginally to the overall extent and duration of shadows across Twelfth Avenue into Hudson River Park and the Hudson River. Therefore, the Proposed Modifications would not result in any new or additional significant adverse shadow impacts in 2010.

#### *2025*

Figures A-10 through A-18 in Appendix A, present the nine specific shadow increments for the Proposed Modifications within the context of the 2025 Hudson Yards FGEIS Proposed Action. The figures illustrate that by 2025 the Proposed Modifications add marginally to the overall shadow coverage of Hudson River Park and the Hudson River. Therefore, the Proposed Modifications would not result in any new or additional significant adverse shadow impacts in 2025.

### **HISTORIC RESOURCES**

#### *2010*

The FGEIS concluded that the Convention Center expansion would have adverse indirect effects—but no significant adverse impacts—on the Lincoln Tunnel ventilation structure at 491 Eleventh Avenue and the ventilation structure on the southeast corner of West 39th Street and Twelfth Avenue by altering these resources' visual prominence. These findings would be largely the same with the Proposed Modifications. However, it is noted that the Proposed Modifications provide for an improved contextual setting for the Eleventh Avenue ventilation structure. As opposed to the FGEIS-Convention Center expansion which surrounded the structure on all but the east side, the Proposed Modifications retain the ventilation structure as a stand-alone element. It is offset from the Convention Center building and is integrated into the proposed plaza area between West 39th and 40th Streets.

The FGEIS concluded that partial removal of sections of the High Line viaduct north of West 30th Street and between Tenth and Twelfth Avenues would constitute a significant adverse impact. In the FGEIS, this significant impact was attributed to construction of the deck for the western portion of Caemmerer Yard associated with the Multi-Use Facility as well as the deck for the eastern portion of Caemmerer Yard in anticipation of new development and/or the proposed relocation of the Quill Bus Depot to that site. A Letter of Resolution (LOR) between ESDC and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) did not consider removal of the section of the High Line between West 33rd and West 34th Streets for expansion of the Convention Center to be an adverse impact, because that section of the structure was completely reconstructed in the 1980s. Therefore, the LOR stipulated mitigation for the removal of the High Line between Eleventh and Twelfth Avenues, from West 30th to West 33rd Streets. The stipulated mitigation measures for the adverse impacts to the High Line included photographic documentation and salvage. A separate LOR was entered into between the MTA and OPRHP for removal of the High Line above the eastern portion of Caemmerer Yard. The Proposed Modifications would not change the need to remove the High

Line above the eastern portion of Caemmerer Yard or the associated LOR between the MTA and OPRHP.

Since the Proposed Modifications would only result in the removal of the portion of the High Line reconstructed in the 1980s between West 33rd and 34th Streets, the Proposed Modifications would have no significant adverse impacts on historic resources. OPHRP has reviewed the Proposed Modifications, and in a letter dated March 16, 2006, stated that Proposed Modifications would have no adverse impact from removal of the High Line section between West 34th and 33rd Streets (see Appendix C, Correspondence”).

The FGEIS concluded that there are no potential archaeological resources in the area, and, therefore, no new or additional significant adverse impacts would be associated with the Proposed Modifications.

#### *2025*

The addition of the remaining developments on the 33/34 Development site would not add or incrementally change the potential for historic or archeological impacts. Therefore, the Proposed Modifications would not result in any new or additional significant adverse historic or archeological impacts in 2025.

### **URBAN DESIGN AND VISUAL RESOURCES**

#### *2010*

As set forth in the FGEIS, the Convention Center expansion was determined to be a critical benefit in altering and substantially improving the urban design, form and character of the Convention Center corridor of the Hudson Yards project area. No significant adverse impacts on urban design were identified and this would continue to be the case with the Proposed Modifications.

By 2010, it is expected that the Convention Center and hotel would be complete as well as the River Place II residential development and the open space and first residential tower on the 33/34 Development site. The 33/34 Development site is different than analyzed in the FGEIS, which considered the block an open space plaza associated with the Multi-Use Facility. However, as indicated in the FGEIS, the key urban design improvement is the elimination of below grade blocks and the blank walls that surround the elevated road structures with uses that enliven and improve the streetscape and level of activity in the Convention Center corridor. This continues to be the case with the Proposed Modifications (see Figures 1 and 4).

As described earlier, design guidelines established for the GPP for the 33/34 Development would be compatible with those of the adjacent Special Hudson Yards District. By 2010, residential development is anticipated to occur at the first tower along the western portion of the block, as well as all of the public open space. The building bulk, use, and type of this residential development would be consistent with the residential development projected to the east of Eleventh Avenue in the Special Hudson Yards District.

In the FGEIS, the 33/34 Development site was projected to include a surface plaza area that was proposed to have pathways which would terrace up toward the Multi-Use Facility and provide views of the Hudson River. With the proposed large open space over the eastern portion of Caemmerer Yard and the Midblock Park and Boulevard System, the plaza, while not physically attached, would have enhanced open space connectivity by promoting access to the new open spaces in Hudson Yards to the east, the proposed High Line linear park to the south, and Hudson River Park to the west. Although the Proposed Modifications would not contain a full-block plaza, this connectivity would be preserved by providing open space and access across the block from Eleventh and Twelfth Avenues between West 33rd and 34th Streets.

In the FGEIS, the Convention Center hotel site under the Proposed Modifications—Projected Development Site 6—was projected to contain a commercial building. The building bulk for the hotel under the Proposed Modifications would be consistent with that for Projected Development Site 6. The hotel rooms are anticipated to be located in a tall tower set back from the street wall of the base structure (see Figure 3). The design of the building requires the integration of non-hotel infrastructure, primarily new ventilation structures for the No. 7 Subway extension and access to the below-grade public parking garage proposed for the midblock as part of the larger Hudson Yards infrastructure development. As a result of the described design constraints, the hotel tower's design is constrained in such a manner that to achieve the proposed number of hotel rooms, zoning overrides of the tower height and setback requirements of the Special Hudson Yards District would be required. However, the final design for the hotel would adhere to all of the other Special Hudson Yards District requirements, including, but not limited to, those for sidewalk widenings and maximum density.

The FGEIS indicated that the FGEIS-Convention Center expansion with its uniform design and enlivened Eleventh Avenue frontage would create an improved urban form even though it was considerably longer than the existing structure, extending from West 34th Street northward to West 41st Street, including closure of West 39th, West 40th, and West 41st Streets between Eleventh and Twelfth Avenues. With the FGEIS program including the Multi-Use Facility, West 33rd Street was also closed between Eleventh and Twelfth Avenues. The Proposed Modifications would achieve an even greater urban design compatibility by creating a slightly higher overall structure but also a more compact and urban structure. Its tall clear glass street wall, covered arcade, and enhanced pedestrian and open space features would emphasize the structure's connection with Eleventh Avenue and the adjacent areas of Hudson Yards to the east of Eleventh Avenue (see Figure 4).

The Proposed Modifications would completely reorganize the Eleventh Avenue façade of the existing building. The depressed driveway would be eliminated to provide substantial additional space for meeting rooms, a large, glass enclosed entry area, vehicle drop off, and 3.2 acres of public open space, extending from West 34th Street to West 40th Street, including a large public plazas at the northern and southern ends. These changes are a critical design element and serve to revitalize the existing Convention Center. The transparent glass façade would tie the Convention Center to street activities, and create a new visual environment along the west side of Eleventh Avenue. This is a change from the FGEIS-Convention Center expansion that would have a positive effect on urban design and visual resources character.

The FGEIS found no significant adverse impacts associated with the overall proposed project's effect on existing visual resources or important views from public or publicly accessible locations within or near the Hudson Yards project area. The FGEIS does indicate that the northerly expansion of the Convention Center from West 39th to West 41st Streets (and with the hotel, to West 42nd Street) would have blocked some existing views of the Hudson River from Eleventh Avenue along the cross streets that were to be closed and incorporated into the new Convention Center structure. It is noted that the Proposed Modifications substantially alleviate this issue in that only West 39th Street is closed to through-views, keeping both West 40th and 41st Streets open. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to urban design or visual resources in 2010.

## 2025

In 2025, the commercial development and the second residential tower would be complete and the full 33/34 Development site would be an active urban space with an urban design context compatible with the Hudson Yards to the east and the Convention Center to the north. The design guidelines for the 33/34 Development would set an overall maximum development density for the site, as well as maximum commercial and residential densities. The density proposed for the 33/34 Development would be generally equivalent to projected development to the east that would contain residential development along the Midblock Park and Boulevard

System and commercial development along Eleventh Avenue. The design guidelines for the 33/34 Development would also dictate such urban design features as sidewalk widenings, streetwall, retail, tower setbacks, and curbcuts for the 33/34 Development site. The sidewalk widening requirements for Eleventh Avenue and West 34th Street would be consistent with those for the east side of Eleventh Avenue and West 34th Street. Similarly, the streetwall, retail, and tower requirements would be generally consistent with those for the Special Hudson Yards District to the east.

No additional or incremental impacts would be anticipated from completion of the 33/34 Development site. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to urban design or visual resources in 2025.

## **NEIGHBORHOOD CHARACTER**

### *2010*

As set forth in the FGEIS, the creation of a new urban neighborhood with a dense mix of commercial, residential, and public uses was determined to be an important improvement to overall neighborhood character. The expanded activity of the Convention Center and a more lively connection with the new Hudson Yards neighborhoods was identified as a beneficial outcome of the project. The Proposed Modifications, including the mixed-use development on the 33/34 Development site, are fully in keeping with the conclusion of no significant adverse impact on neighborhood character.

The Proposed Modifications would also reorganize the Eleventh Avenue façade of the existing building, eliminating the depressed driveway, to provide substantial additional space for meeting rooms, a large, glass enclosed entry area, vehicle drop off, and 3.2 acres of public open space, extending from West 34th Street to West 40th Street, including a large public plaza at the northern and southern ends. These changes serve to revitalize the existing Convention Center, tie the Convention Center to street activities, and create a new pedestrian and visual environment along the west side of Eleventh Avenue. This is a change from the FGEIS-Convention Center expansion that would have a positive effect on neighborhood character.

The Proposed Modifications would also provide a chain of public open spaces that wind along Eleventh Avenue down to West 34th Street, anchored by a new plaza at the corner of Eleventh and West 40th Street. In the FGEIS, the 33/34 Development site was projected to include a surface plaza area of publicly accessible open space associated with the MUF. This plaza was proposed to have pathways which would terrace up toward the MUF and provide views of the Hudson River. With the proposed large open space over the eastern portion of Caemmerer Yard and the Midblock Park and Boulevard System, the plaza, while not physically attached, would have enhanced open space connectivity by promoting access to the new open spaces in Hudson Yards to the east, the proposed High Line linear park to the south, and Hudson River Park to the west. Although the Proposed Modifications would not contain a full-block plaza, this connectivity would be preserved by providing open space and access across the block from Eleventh and Twelfth Avenues.

The proposed mixed-use development at the 33/34 Development site is in keeping with the overarching goal of providing for commercial and residential development opportunities in the Hudson Yards area and would be beneficial in extending this neighborhood further to the west. A commercial anchor on the southwest corner of West 34th Street and Eleventh Avenue would complement the effort to capitalize on the location of the new No. 7 Subway station. The Proposed Modifications would also introduce residential development west of Eleventh Avenue at West 34th Street for the 33/34 Development and at West 42nd Street for River Place II. This would also strengthen the existing residential character along the West 42nd and West 34th Street corridors.

Within this overall context, the FGEIS described the long linear expanse of the Multi-Use Facility and Convention Center and identified street closures on West 33rd, West 39th, West 40th, and West 41st Streets as an adverse impact (although not considered a significant adverse impact as part of the analyses' principal conclusions). The impact results from limited pedestrian and vehicular access to these through streets between the new Hudson Yards neighborhoods and the Hudson River and Hudson River Park. In this regard, the Proposed Modifications (along with the absence of the Multi-Use Facility) avoid this adverse impact since only one of the four streets (West 39th Street) would be closed to through pedestrian or vehicular traffic. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to neighborhood character in 2010.

2025

With completion of the mixed-use development on the 33/34 Development site, the Proposed Modifications would continue to contribute to the overall creation of a new and vibrant neighborhood along Eleventh Avenue. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to neighborhood character in 2025.

## **NATURAL RESOURCES**

2010

The FGEIS estimated that the overall Proposed Action analyzed for Hudson Yards would increase effluent flow by about 1.5 million gallons per day (gpd) to the North River Water Pollution Control Plant (WPCP) by 2010. This increase in flow, along with the potential discharge from combined sewer outfalls (CSO) was determined to have an insignificant effect on water quality and on aquatic biota. The analysis conservatively examined conditions without the benefit of amended drainage plans currently being implemented by the New York City Department of Environmental Protection that would reduce CSO occurrences in the drainage area.

The Proposed Modifications would result in essentially the same amount of usable space and would accommodate the same amount of convention events and visitors as the FGEIS-Convention Center expansion. Thus, there would be no incremental change when compared to the analysis of the FGEIS.

By 2010, the primary difference would be with the incremental increase in residential units anticipated to be built in the drainage area. Based on the assumptions utilized in the FGEIS and in conformance with the *CEQR Technical Manual*, the potential increase of 1,849 residential units (500 on 33/34 Development site and 1,349 at River Place II) would add water usage and sewage demand of approximately 436,800 gpd. No incremental demand would be associated with the Convention Center hotel, as the maximum number of rooms is unchanged from FGEIS assumptions. This represents a modest increase in overall flows to the North River WPCP of about 0.25 percent over the estimated flow in the FGEIS of 137.0 million gpd, which is well below the permitted capacity of 170 million gpd. Similarly, the FGEIS finding of non-detectable changes in CSO events would remain the same and the Proposed Modifications would have no significant adverse impacts on water quality or aquatic biota.

As with the FGEIS, there are no anticipated significant adverse impacts due to minor incremental changes with shadows extending over the Hudson River from the 33/34 Development site or the Convention Center hotel under the Proposed Modifications. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to natural resources in 2010.

*2025*

The FGEIS estimated that the overall Proposed Action analyzed for Hudson Yards would increase effluent flow by about 8.6 million gallons per day (gpd) to the North River Water WPCP by 2025. In 2025, the potential increase in sewage flows reaches about 538,160 gpd from the additional 500 units of residential housing (a total 2,349 housing units). No additional demand would be expected from the new commercial building to be completed at the 33/34 Development site by 2025 as this is considered the equivalent to the Projected Development Site 6 commercial development examined in the FGEIS. In all, the Proposed Modifications would result in a small increment of just 0.36 percent over the FGEIS-anticipated future 2025 flow to the North River WPCP of 150 million gpd, which is below the permitted capacity of 170 million gpd. Therefore, the Proposed Modifications would have an insignificant effect on water quality and aquatic biota. Similarly, the FGEIS analyses indicating no significant impacts from a 4.5 percent increase in CSO events with the full build-out of Hudson Yards would have little or no change based on the increment of the Proposed Modifications. The modest increment generated by the Proposed Modifications is largely indistinguishable from the 2025 Hudson Yards condition. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to natural resources in 2025.

**HAZARDOUS MATERIALS***2010*

As identified in the FGEIS, the lands for the Convention Center expansion have an urban, manufacturing, and rail yard history. Phase II testing on the existing marshalling yards, the Convention Center itself, and the proposed marshalling garage indicate soil and groundwater conditions typical of urban fill with Semi-Volatile Organic Compounds (SVOCs) and metals. The FGEIS established that proper management and the creation and implementation of a Construction Environmental Protection Programs (CEPP) would eliminate the potential for any significant adverse hazardous materials impacts during the operational phases of the Convention Center and other development elements in the Convention Center corridor.

The site for the Convention Center hotel under the Proposed Modifications is on the east side of Eleventh Avenue between West 35th and West 36th Streets. In the FGEIS this is Projected Development Site 6 and the hazardous materials screening conducted as part of the FGEIS indicates that the long term history of the site included auto repair and rail right-of-way uses and therefore has the potential for petroleum-based contamination. As a result, it was an E-designated parcel as part of the Hudson Yards rezoning. The E-designation requires additional sub-surface investigation and a health and safety plan as part of the site's redevelopment. With the Proposed Modifications, this site is now part of the overall General Project Plan, which would require that such obligations be incorporated into the project's CEPP as part of the zoning override, which would be consistent with and no less restrictive than the requirements set forth in the E-designation. The conclusions of the FGEIS remain unchanged and the Proposed Modifications would not result in any new or additional significant adverse impacts from hazardous materials in 2010.

*2025*

The completion of the 33/34 Development site would have no additional change or impact compared with the 2010 analysis and would be completed in conformance with the CEPP identified above. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts from hazardous materials in 2025.

## **WATERFRONT REVITALIZATION PROGRAM**

As presented in the FGEIS, the general area of the FGEIS-Convention Center expansion west of Eleventh Avenue is subject to New York City's Local Waterfront Revitalization Program (LWRP). The overall principal conclusion of the FGEIS was that the entire Proposed Action (including the FGEIS-Convention Center expansion) is consistent with the goals and policies of the LWRP in that it provides for appropriate expansion of commercial and residential activity that enlivens the waterfront and provides improved access to the waterfront.

The assessment of Convention Center elements is specifically addressed in Coastal Zone Policy 8: "Provide public access to and along New York City's coastal waters." While the analysis of the FGEIS is generally applicable to the Proposed Modifications, the following elements are different:

- The Multi-Use Facility is no longer a component of the overall Proposed Action. Without the MUF, the pedestrian bridges at West 33rd and West 39th Streets are not included as mitigation measures specifically associated with significant adverse MUF pedestrian impacts. With the elimination of the heavy pedestrian movements across Twelfth Avenue associated with MUF events that severely affected pedestrian movements to and from the waterfront, general pedestrian access to the waterfront is not adversely affected. In addition, although not the same configuration as the originally proposed full block plaza, the Proposed Modifications incorporate the continued benefit of open space linkages that continue to facilitate the connectivity of waterfront open spaces to the interior of Hudson Yards.
- While the FGEIS-Convention Center expansion would have eliminated West 40th and West 41st Streets between Eleventh and Twelfth Avenues as through pedestrian streets, these streets would remain open under the Proposed Modifications. This constitutes a clear benefit to pedestrian access to the waterfront.
- The FGEIS identifies the FGEIS-Convention Center expansion proposed rooftop open space as a benefit in terms of publicly accessible visual access to waterfront. This public rooftop open space is not part of the Proposed Modifications so it is no longer considered a benefit in terms of enhancing public access to the waterfront. However, the Proposed Modifications would create grade level access plazas and public open space on Eleventh Avenue and West 34th Street that would improve pedestrian conditions and therefore access to Hudson River Park and the waterfront.
- By providing the mixed-use development with commercial, residential and open space uses on the 33/34 Development site, the Proposed Modifications would create an enlivened and direct interconnection along West 34th Street between the waterfront and the larger Hudson Yards neighborhood to the east of Eleventh Avenue.
- Similarly, the improved truck marshalling plan would reduce truck traffic on local streets around the Convention Center thereby facilitating pedestrian movements to and from the waterfront.

The FGEIS concluded that the overall Proposed Action was consistent with the policies of the LWRP. The Proposed Modifications would affirm and actually enhance the project's overall consistency with the LWRP. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts to the waterfront revitalization program.

## INFRASTRUCTURE

### 2010

The FGEIS analyses indicates that planned improvements to water delivery infrastructure and amendments to the area drainage plan will ensure that the new demand generated by Hudson Yards development can be met with no significant adverse impacts.

Compared with the FGEIS analysis, the Proposed Modifications would result in no change for water and sewer demand at the Convention Center or hotel. The Proposed Modifications do create an expansion of residential development by 2010; with 1,849 new units of housing on both the River Place II site (1,349 units on the FGEIS-Convention Center expansion hotel site) and the 33/34 Development site (500 units in the first of two residential towers). These units would add a demand of approximate 436,800 gpd which is a marginal increment in terms of water utilization in New York City or sewage treatment and would have no effect on the FGEIS conclusion of no significant adverse impact. As indicated in the *CEQR Technical Manual*, small incremental demands in infrastructure typically do not require detailed assessment of actions. The amount of impervious material in the areas associated with the Proposed Modifications (33/34 Development Site, hotel site on east side of Eleventh Avenue, and the Convention Center expansion area north to West 40th Street) would be the same as that proposed in the FGEIS. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on infrastructure in 2010.

### 2025

By 2025, a small incremental increase in demand would be generated by completion of the second 500-unit residential tower on the 33/34 Development site. This would bring the total new incremental demand generated by the Proposed Modifications to about 538,160 gpd. The commercial development on the mixed-use development site is considered to be within the overall demand estimates prepared for the FGEIS and would not change. As with the 2010 increment, this modest growth in demand would not alter the FGEIS conclusion of no significant adverse impact on infrastructure. The amount of impervious material in the areas associated with completion of the 33/34 Development site would be the same as that proposed in the FGEIS. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on infrastructure in 2025.

## SOLID WASTE AND SANITATION SERVICES

### 2010

The Convention Center would continue to privately handle its solid waste. Since there is no change in overall programming or activity associated with the Proposed Modifications, there is no change in the estimate of solid waste generation. Thus, there is no change in the impact assessment as set forth in the FGEIS.

By 2010, there is expected to be an overall increase of approximately 1,849 residential units generated by the Proposed Modifications as compared to the FGEIS analyses. It is assumed that these residential uses would be served by municipal sanitation services through the Department of Sanitation (DSNY). Based on the *CEQR Technical Manual*, it is estimated that these units would generate approximately 38 tons of waste per week (tpw). This would generate about three truck trips per week in addition to the six trips generated by the overall Hudson Yards residential demand in 2010. As established in the FGEIS, DSNY has indicated sufficient capacity to absorb the additional demand generated by the Hudson Yards, and the additional small increment generated by the Proposed Modifications is not expected to change the conclusion of no significant adverse impact. Therefore, the Proposed Modifications would not

result in any new or additional significant adverse impacts on solid waste and sanitation services in 2010.

#### *2025*

The second residential tower with 500 residential units could be expected to add another 10 tpw or less than one truck per week. This would add slightly to the overall increase of 21 truck trips per week estimated for the full residential build-out in the FGEIS and would not alter the conclusion of no significant adverse impact.

The commercial development on the 33/34 Development site is already considered in the total solid waste generation estimates of the FGEIS. As with that analysis, the commercial development would be handled by private carters and no impact on DSNY services would be expected. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on solid waste and sanitation services in 2025.

### **ENERGY**

#### *2010*

The FGEIS analyses indicate the overall Proposed Action would not result in significant adverse impacts to energy. The Convention Center itself would remain unchanged in terms of energy demand since the overall space provided in the revised plans is the same as with the FGEIS-Convention Center expansion. The Proposed Modifications do create an expansion of residential development by 2010, with 1,849 new units of housing on the River Place II site (1,349 units on the FGEIS-Convention Center expansion hotel site) and 500 units on the 33/34 Development site. These units would create an energy demand of about 218,250 million BTUs of energy per year which is very small compared with the existing energy demands of New York City and would not be expected to overburden the energy generation, transmission, and distribution system. As indicated in the FGEIS, it is anticipated that the Hudson Yards demand, along with concurrent normal growth in demand can be handled by the power system. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on energy in 2010.

#### *2025*

By 2025, a small incremental increase in demand of approximately 72,750 million BTUs per year would be generated by completion of the second 500-unit residential tower on the 33/34 Development site. The commercial development on the mixed-use development site is considered to be within the overall demand estimates prepared for the FGEIS and would not change.

As noted in the FGEIS, Con Edison anticipates that as a result of the overall growth in demand from Hudson Yards and other developments, a new substation and transmission substation are likely to be required by 2013, and a second substation by 2021. Such provisions were incorporated into the Special Hudson Yards District as an allowable use. With the enhancements in place, the small incremental change associated with the completion of the residential component of the 33/34 Development site would continue to reflect the FGEIS conclusion of no significant adverse impact. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts on energy in 2025.

### **TRAFFIC AND PARKING**

#### *OVERVIEW*

The Proposed Modifications and alterations in background conditions would create marginal changes to traffic in the area closest to the Convention Center. Some of the changes (see Table

1 above under Section C), such as the elimination of the Multi-Use Facility's convention-oriented facilities, would reduce traffic; some, such as the introduction of additional residential uses at the 33/34 Development and the change in use of the FGEIS hotel site to the River Place II residential development, would increase traffic; others, such as the shift of office use from the east side of Eleventh Avenue (West 35th to West 36th Streets) to the west side of Eleventh Avenue (West 33rd to West 34th Streets) would shift traffic in those locations. In addition, the change in traffic flow from the difference in street patterns between the FGEIS and the Proposed Modifications would alter conditions at intersections in the vicinity of the Convention Center.

As described in more detail below, the FGEIS examined a very large study area in great detail and found traffic impacts requiring specified traffic mitigation at a number of intersections. Given the local nature of the Proposed Modifications and the relatively small traffic increments that might accrue due to the Proposed Modifications, a traffic analysis was conducted to determine whether conditions with the Proposed Modifications would be materially different from those described in the FGEIS. As described above, the City Council amendments to the Special Hudson Yards District decreased the total commercial development permitted in the Special District by approximately 1.4 million gross square feet. However, the traffic analysis conservatively compares the incremental difference posed by the Proposed Modifications to the Build conditions analyzed for Alternative S in the FGEIS. The following discussion summarizes the information provided in Appendix B, the traffic technical appendix. Overall, the Proposed Modifications would not result in any new or additional significant adverse impacts to traffic and parking in the study area by 2010 or 2025 and the mitigation measures specified in the FGEIS, with minor modifications, would provide the maximum practicable mitigation of the significant adverse traffic impacts. The methodology, proposed project improvements, and analysis results were reviewed and approved by the New York City Department of Transportation (NYCDOT) and the New York State Department of Transportation (NYSDOT) (See Appendix C, Correspondence).

#### *ANALYSIS METHODOLOGY*

Based on the description of the Proposed Modifications summarized in Section C of this Technical Memorandum, a review of trip-making characteristics associated with each component of the Proposed Modifications was conducted to determine the level of required analysis and the appropriate study area. By and large, this review showed that an overall incremental decrease in peak hour trips would result from the Proposed Modifications. While there would be an increase in residential development, the Proposed Modifications would also result in a 350,000 gsf decrease in office space and more notably the elimination of the MUF and its associated Convention Center activity, which was projected in the FGEIS to generate a substantial number of trips during peak hours. The study area for the traffic analysis comprises a portion of the larger FGEIS study area. Intersections to be studied were selected based on the following criteria:

- Locations most likely to be influenced by the Proposed Modifications.
- Locations affected by changes in street openings/closings and traffic flow.
- Particularly sensitive locations (i.e., those with higher project-generated volumes in the FGEIS).

Based on the changes in the development program and the area's traffic network, which would include keeping the cross streets at West 33rd, West 40th and West 41st Streets between Eleventh and Twelfth Avenues open, a study area for analysis was defined. This study area would include intersections surrounding the Convention Center and its nearby development sites. As outlined below, the most critical and sensitive intersections that would be affected,

namely Eleventh and Twelfth Avenues at West 33rd, West 34th and West 42nd Streets, have been included in this analysis.

The study area for the traffic analysis includes the following intersections:

- Twelfth Avenue at West 33rd Street
- Twelfth Avenue at West 34th Street
- Twelfth Avenue at West 35th Street
- Twelfth Avenue at West 36th Street
- Twelfth Avenue at West 39th Street
- Twelfth Avenue at West 40th Street
- Twelfth Avenue at West 41st Street
- Twelfth Avenue at West 42nd Street
- Eleventh Avenue at West 33rd Street
- Eleventh Avenue at West 34th Street
- Eleventh Avenue at West 39th Street
- Eleventh Avenue at West 41st Street
- Eleventh Avenue at West 42nd Street

The analysis has two major components: the first is to understand the change in trip-making caused by the Proposed Modifications; the second is to identify sensitive intersections and screen them for potential impacts. Vehicle trips were reassigned to the street network (from the patterns used in the FGEIS) based on the relocation of land uses and the opening of streets that were proposed to be closed in the FGEIS. New vehicle trips (i.e., from the new residential uses) were estimated using the trip generation rates in the FGEIS. These vehicle trips plus the reassigned trips were assigned to the street network based on the patterns assumed in the FGEIS. Vehicle trips that had been routed around streets that were closed in the FGEIS (West 33rd, West 39th, West 40th, and West 41st Streets) were rerouted and redistributed through the network.

To determine potential impacts at study area intersections, a screening process was developed. The worst performing intersections were identified—intersections operating at an LOS D, E, or F in the FGEIS's mitigated Build condition. This allowed the analysis to eliminate those intersections that needed no further study (i.e., all but the worst-performing intersections). In addition, locations where volumes with the Proposed Modifications would either be reduced or remain the same were eliminated.

At intersections predicted in the FGEIS to operate at congested levels in the mitigated Build condition, the addition of vehicle trips resulting from the Proposed Modifications was reviewed in greater detail to determine if the volume increases could be accommodated without significant changes to the mitigation specified in the FGEIS.

## *ANALYSIS RESULTS*

### **2010**

#### *FGEIS Conclusions*

In 2010, the FGEIS found significant traffic impacts at the following study area locations:

- Eleventh Avenue and West 34th Street
- Eleventh Avenue and West 36th Street
- Eleventh Avenue and West 39th Street
- Twelfth Avenue and West 34th Street

- Twelfth Avenue and West 39th Street
- Twelfth Avenue and West 41st Street
- Twelfth Avenue and West 42nd Street

Mitigation for these impacts included:

- Modification of signal phasing and/or timing
- Elimination of on-street parking within 150 feet of an intersection (“daylighting”)
- Enforcement of parking regulations
- Channelization and lane designation changes
- Restriction on turn movements
- Installation of traffic signals at unsignalized intersections

#### *Conditions with Proposed Modifications*

The analysis found that the Proposed Modifications would not materially worsen conditions at the following study intersections:

- Eleventh Avenue at West 33rd Street
- Eleventh Avenue at West 34th Street
- Eleventh Avenue at West 35th Street
- Eleventh Avenue at West 36th Street
- Eleventh Avenue at West 39th Street
- Eleventh Avenue at West 41st Street
- Eleventh Avenue at West 42nd Street
- Twelfth Avenue at West 40th Street
- Twelfth Avenue at West 41st Street
- Twelfth Avenue at West 42nd Street

The Proposed Modifications would include project improvements, specified in the GPP and approved by NYCDOT and NYSDOT, at the remaining three intersections, as described below:

- Twelfth Avenue at West 33rd Street: The westbound right-turning movement at this intersection which is currently stop controlled, operates at unacceptable levels. The Proposed Modifications would include a traffic signal controlling the northbound and westbound approaches (the southbound approach, separated from the other two movements by a raised median, would remain a free movement) to improve overall operations.
- Twelfth Avenue at West 34th Street: Minor modifications to the traffic signal timings at this intersection during the AM and Midday peak hours would accommodate the changes in the traffic circulation patterns.
- Twelfth Avenue at West 39th Street: The Proposed Modifications would shift the proposed northbound double left turn lanes one lane to the west to accommodate the queuing area along the eastern edge of Twelfth Avenue for Convention Center truck marshalling activities (see Schematics in Appendix B). The Proposed Modifications would also include an actuated signal to control the westbound approach, due to the infrequent and exclusive Convention Center truck volumes anticipated on the east side of this intersection. Minor modifications to the traffic signal timings at this intersection during the AM and PM peak hours would accommodate the changes in the traffic circulation patterns.

Overall, the Proposed Modifications, combined with the elimination of MUF weekday traffic, would have little effect on 2010 traffic conditions as described in the FGEIS. The small amounts of additional traffic at specific locations would either not affect levels of service or could be accommodated with minor changes to traffic signal timing. Therefore, the Proposed Modifications would not change the conclusions of the FGEIS traffic analysis and would not result in any new or additional significant adverse impacts not previously identified in the FGEIS.

## **2025**

### *FGEIS Conclusions*

In 2025, the FGEIS found significant traffic impacts at the following seven study area locations:

- Eleventh Avenue and West 34th Street
- Eleventh Avenue and West 36th Street
- Eleventh Avenue and West 39th Street
- Twelfth Avenue and West 34th Street
- Twelfth Avenue and West 39th Street
- Twelfth Avenue and West 41st Street
- Twelfth Avenue and West 42nd Street

Mitigation for these impacts included:

- Modification of signal phasing and/or timing
- Elimination of on-street parking within 150 feet of an intersection (“daylighting”)
- Enforcement of parking regulations
- Channelization and lane designation changes
- Restriction on turn movements
- Installation of traffic signals at unsignalized intersections

### *Conditions with Proposed Modifications*

The analysis found that the Proposed Modifications would not materially worsen conditions at the following studied intersections:

- Eleventh Avenue at West 34th Street
- Eleventh Avenue at West 35th Street
- Eleventh Avenue at West 36th Street
- Eleventh Avenue at West 39th Street
- Eleventh Avenue at West 41st Street
- Twelfth Avenue at West 40th Street
- Twelfth Avenue at West 41st Street
- Twelfth Avenue at West 42nd Street

The Proposed Modifications would include project improvements, specified in the GPP and approved by NYCDOT and NYSDOT, at the remaining five intersections, as described below:

- Eleventh Avenue at West 33rd Street: Providing daylighting on westbound West 33rd Street during the PM peak hour at this intersection would accommodate the changes in the traffic circulation patterns.
- Eleventh Avenue at West 42nd Street: Minor modifications to the traffic signal timings at this intersection during the PM peak hour would accommodate the changes in the traffic circulation patterns.

- Twelfth Avenue at West 33rd Street: The westbound right-turning movement at this intersection which is currently stop controlled, operates at unacceptable levels. The Proposed Modifications would include a traffic signal controlling the northbound and westbound approaches (the southbound approach, separated from the other two movements by a raised median, would remain a free movement) to improve overall operations.
- Twelfth Avenue at West 34th Street: Minor modifications to the traffic signal timings at this intersection during the PM peak hour would accommodate the changes in the traffic circulation patterns.
- Twelfth Avenue at West 39th Street: The Proposed Modifications would shift the proposed northbound double left turn lanes one lane to the west to accommodate the queuing area along the eastern edge of Twelfth Avenue for Convention Center vehicle marshalling activities. The Proposed Modifications would also include an actuated signal to control the westbound approach, due to the infrequent and exclusive Convention Center truck volumes anticipated on the east side of this intersection. Minor modifications to the traffic signal timings at this intersection during the AM and PM peak hours would accommodate the changes in the traffic circulation patterns.

In addition, without the MUF, it is assumed that the two Twelfth Avenue pedestrian bridges (at West 34th and West 39th Streets) would not be built since they were identified specifically as mitigation for MUF-generated pedestrian impacts. Since the Proposed Modifications do not include the through pedestrian corridor at West 39th Street but does leave West 40th Street open, the pedestrian crossing at West 39th Street across Twelfth Avenue would no longer be necessary and is recommended to be eliminated to enhance safety and reduce pedestrian truck conflicts at the driveway to the proposed truck marshalling facility on the east side of the intersection. With regard to the minor signal timing modifications identified above, it should be noted that they are not considered significant changes as they fall within the NYCDOT's future examination of optional signal timing based on actual network changes over time. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts not previously identified in the FGEIS.

## **TRANSIT AND PEDESTRIANS**

2010

As set forth in the FGEIS transit and pedestrian analyses, the area in and around the Convention Center is characterized by light pedestrian volumes and moderate transit demand. The incremental change by 2010 largely indicates that pedestrian and transit demand would remain relatively low in the Convention Center corridor with the exception of conditions with the Multi-Use Facility events in place. The FGEIS identified adequate service levels for subway elements and the need for additional bus service during peak periods under 2010 conditions. Such need would be addressed by NYCT's general policy of monitoring bus ridership growth and providing the necessary service to meet the actual demand. The required increase in bus service during typical commuter peak periods would fall within the reasonable range of service adjustments implemented by NYCT while the required supply needed for the weeknight and Sunday special event peak hours would be substantial. However, because the Multi-Use Facility is no longer being considered, the substantial increases in bus service necessary to meet projected demand would no longer be required for the weeknight and Sunday special event peak hours.

The Proposed Modifications do not substantially change the transit or pedestrian demand and no change from the FGEIS would be anticipated. The incremental addition of 1,849 housing units (1,349 on 42nd Street at River Place II and 500 units in the first tower constructed on the 33/34 Development site) would add new pedestrians to a local network that is not currently

congested and the new activity would not be expected to substantially diminish pedestrian conditions and no incremental impacts would be anticipated. The incremental increase on bus ridership attributed to these residential uses is expected to be nominal, and when offset by trips that would no longer be present because the Multi-Use Facility is no longer being considered, no perceptible changes from the FGEIS projections on the overall bus ridership demand are anticipated. Therefore, the Proposed Modifications would not result in any new or additional significant adverse transit or pedestrian impacts in 2010.

## 2025

In 2025, the FGEIS projected considerably more activities along the Convention Center corridor. The increase in transit and pedestrian demand would be largely attributed to the anticipated completion of numerous development parcels east of Eleventh Avenue. Along with trips generated by the Multi-Use Facility (for the weeknight and Sunday special event peak hours), which is no longer being considered, the FGEIS identified bus impacts for the several routes serving the area and crosswalk impacts along the east side of Eleventh Avenue. Subway access, however, would remain adequate. The incremental change in pedestrian and transit demand by 2025 from the Proposed Modifications is generated by the additional 500 residential units associated with the second tower on the 33/34 Development site, resulting in a total incremental demand of 1,000 new residential units on the 33/34 Development site, and the 1,349 units built on West 42nd Street (River Place II). Since these are two separate development sites with very different circulation routes to and from Midtown and from available transit resources, there is little cumulative effect of the total change in residentially generated transit and pedestrian demand.

With the completion of the commercial development component of the 33/34 Development Site there would likely be some shifting of pedestrian flow in and around Eleventh Avenue between West 33rd and West 35th Streets. Pedestrians associated with the proposed commercial building at the 33/34 Development site arriving or departing the new 34th Street station of the No. 7 Subway Extension or from points further to the east would not concentrate along the northerly subway entrance at West 35th Street or along the east side of Eleventh Avenue, thereby alleviating some of the crosswalk impacts identified by the FGEIS for that side of the street. As described earlier, the 33/34 Development site would preserve a subway station access easement. The ability to create a direct connection at this location to the new station's mezzanine level was also identified in the FGEIS.

As a result, the movements of workers to and from the commercial building to the subway station would be more dispersed than as determined in the FGEIS, reducing the likelihood that the shift from Projected Development Site 6 to the 33/34 Development site would create new pedestrian patterns that could create additional or different significant adverse impacts. In particular, the anticipated increase in sidewalk and crosswalk pedestrian demand surrounding the 33/34 Development site, including trips made to and from the proposed residential towers, is not expected to result in significant adverse operating conditions at the Eleventh Avenue intersections with West 33rd and West 34th Streets since subway bound pedestrians, which represent a substantial portion of the total demand generated by the residential and office uses on the site, would not have to cross Eleventh Avenue.

With regard to bus service, the overall demand from the Proposed Modifications is likely to be similar to what was projected in the FGEIS. The relocation of Project Development Site 6 to the 33/34 Development site would not result in any new demand while trips attributed to the increased residential development are expected to be largely offset by the elimination of the Multi-Use Facility, such that any differences in projected bus service demand fall within the reasonable range of service adjustments that NYCT would make as part of its future mitigation plan to increase bus service to West Midtown. Therefore, the Proposed Modifications would not result in any new or additional significant adverse impacts transit or pedestrian impacts in 2025.

## AIR QUALITY

The FGEIS air quality analyses provided a comprehensive examination of potential air quality impacts associated with the overall Proposed Actions of the Hudson Yards FGEIS.

As set forth in the FGEIS, the Proposed Actions are not anticipated to result in any significant adverse air quality impacts due to vehicular mobile sources. The Proposed Modifications, including the proposed mixed use development on the 33/34 Development site, would not alter the conclusions of the FGEIS regarding mobile sources because the incremental change in traffic volumes, as described above, would not significantly worsen the Build conditions analyzed in the FGEIS.

The Proposed Modifications could affect the conclusions of FGEIS stationary and industrial source analyses for which many sensitive sites and potential impacts were evaluated. Based on the close proximity of new buildings to each other, and to existing buildings, many of the Projected Development Sites of the FGEIS required E-designations that required certain design standards to ensure no air quality violations. In this context, the Proposed Modifications to the Convention Center have been examined in this Technical Memorandum to evaluate if conclusions of the FGEIS remain valid or any new or additional significant adverse air quality impacts might be identified.

### *QUILL BUS DEPOT*

In the Hudson Yards FGEIS, the Quill Bus Depot would be relocated from its present site on West 41st Street between Eleventh and Twelfth Avenue to a below-grade site on West 30th Street between Tenth and Twelfth Avenues, underneath the previously proposed Multi-Use Facility and new development projected above the eastern portion of Caemmerer Yard. The FGEIS assumed the relocation would occur after 2010 (the Convention Center expansion scenario) but prior to the 2025 full build-out.

Air quality analyses in the FGEIS were conducted on the Quill Bus Depot which considered the following:

- Emissions associated with the parking at the relocated Quill Bus Depot, DSNY Maintenance Garage, and NYPD Tow Pound facilities;
- Emissions from heating, ventilation and air conditioning (HVAC) systems at both the existing (2010) and new location (2025); and
- Emissions of air toxics compounds at both the existing (2010) and new location (2025).

The 2010 analyses determined that the Quill Bus Depot could potentially impact the Convention Center hotel, which was proposed to be constructed directly north of the site, due to emission of sulfur dioxide (SO<sub>2</sub>). Potential measures to be undertaken by MTA to reduce impacts of this pollutant were proposed. The 2010 air toxics analysis indicated there would be no significant adverse air quality impact at the Convention Center hotel.

The 2025 analyses determined that there could be exceedances of the NAAQS for SO<sub>2</sub> (24-hour standard) in the proposed West Chelsea rezoning area from the relocated Quill Bus Depot's HVAC emissions. However, those measures described for reducing SO<sub>2</sub> concentrations in 2010 for the existing facility would also be implemented in 2025 for the relocated facility. The results of the air toxics modeling analysis in 2025 with the relocated Quill Bus Depot indicated that there could be significant adverse air quality impacts in the vicinity of the relocated facility and projected developments in the West Chelsea Rezoning. To avoid potential impacts due to air toxics, the FGEIS stated that the relocated Quill Bus Depot facility would need to obtain a new air permit from NYSDEC, and as part of that permit, New York City Transit would commit to measures that would avoid exceedance of the guidance criteria, thus eliminating any significant adverse air quality impact from such emission.

Under the Proposed Modifications, the Quill Bus Depot would not be relocated and a residential development would be built north of the depot instead of the Convention Center hotel as analyzed in the FGEIS. The FGEIS also examined the potential for a significant adverse impact on the FGEIS-Convention Center expansion hotel (2010, Phase I expansion only) from the Quill Bus Depot remaining. A hotel and a residential building are both considered sensitive uses under CEQR. Therefore, in terms of the air quality analyses of the Quill Bus Depot remaining, there would be no difference in the analysis or conclusions between the FGEIS and the Proposed Modifications. In addition, since the Quill Bus Depot would not be relocated under the Proposed Modifications, the potential impacts associated with emissions of air toxics compounds would no longer occur on those properties identified in the FGEIS near the relocated facility.

By 2025, mixed-use developments would be developed directly adjacent to the present Quill Bus Depot, on the eastern side of Eleventh Avenue between West 39th and West 41st Streets. The potential impacts from the Quill Bus Depot on these sites were not quantitatively analyzed in the FGEIS since the Quill Bus Depot was to have been relocated by 2025. However, the measures identified in the FGEIS relative to FGEIS-Convention Center expansion hotel on West 42nd Street (a residential building under the Proposed Modifications) would also eliminate any potential significant impact due to emissions of SO<sub>2</sub> on the developments on the eastern side of Eleventh Avenue. Therefore, the Proposed Modifications would not result in any new or additional significant adverse air quality impacts at these mixed-use developments.

#### *TRUCK MARSHALLING FACILITY*

In the FGEIS, the Convention Center truck marshalling facility was to be rebuilt at its present location between Eleventh and Twelfth Avenues and West 33rd and West 34th Streets as a multi-level, enclosed parking facility with a mechanical ventilation system that would take in the fresh air from the Eleventh Avenue side of the building and exhaust facility air from the Twelfth Avenue (Route 9A). Concentrations of carbon monoxide (CO) and particulate matter with an aerodynamic diameter of less than 10 microns (PM<sub>10</sub>) were estimated and the predicted impacts from the marshalling facility emissions were added to the FGEIS traffic impacts. The resultant total concentrations were predicted to be below the appropriate NAAQS.

Under the Proposed Modifications, the truck marshalling facility would be moved from its present location to a new garage facility along Twelfth Avenues south of West 40th Street. The garage would be an above-ground multi-tiered facility with a mechanically ventilated design. The new truck marshalling facility greatly improves truck circulation, staging, and street-side queuing of idling trucks compared with current conditions and compared with the FGEIS-Convention Center expansion.

The Hudson Yards FGEIS assumed a worst-case analysis that estimated cumulative impacts of future traffic along Route 9A and the mechanical ventilation system referenced above. The pollutant concentrations from the truck marshalling facility in the Proposed Modifications would not be significantly different than the mechanically ventilated design analyzed in the Hudson Yards FGEIS. Although pollutant concentrations from traffic on Route 9A adjacent to the proposed relocated marshalling facility were not analyzed in the Hudson Yards FGEIS, they are anticipated to be similar to the locations analyzed, in particular Route 9A and West 34th Street. Since total concentrations of pollutants from the background traffic and the relocated marshalling facility would be anticipated to be similar to those determined in the Hudson Yards FGEIS, there would be no substantial changes in analysis results. In summary, the truck marshalling facility under the Proposed Modifications would not result in any new or additional significant adverse air quality impacts.

It should also be noted that the relocation of the marshalling facility would eliminate the need to utilize the rail tunnel right-of-way considered for use in the FGEIS as a truck marshalling path

connecting the marshalling facility and the Convention Center loading docks located along Route 9A inside the property line.

#### *EXPANDED CONVENTION CENTER*

The FGEIS analyzed air quality impacts from the Convention Center expansion, as well as the impacts on the expanded Convention Center's proposed roof garden. Sources identified and analyzed with a potential to impact the Convention Center's sensitive receptors included the Lincoln Tunnel Ventilation Building and the Quill Bus Depot. No significant adverse air quality impacts, either due to the expanded Convention Center, or on the Convention Center's sensitive receptors, were identified.

The Proposed Modifications would expand the Convention Center north to West 40th Street instead of to West 42nd Street. In addition, it would eliminate the rooftop garden as well as other open spaces. No significant adverse impacts to air quality would occur as a result of these changes. However, due to the addition of a proposed new mixed-use development on the 33/34 Development site, potential impacts from the expanded Convention Center were evaluated.

In the FGEIS, a new central refrigeration and heating plant, located along the Route 9A side of the Convention Center (near the truck loading docks), was proposed for the Convention Center, Plenary Conference Hall, and the Convention hotel. The plant was analyzed using both No. 2 fuel oil and natural gas. The screening analysis showed that firing either fuel would not produce a significant adverse air quality impact on the proposed hotel, an existing residential building on West 41st Street and Route 9A, or on the proposed developments along Eleventh Avenue between West 34th and West 42nd Streets.

Although the HVAC design for the Proposed Modifications is not yet developed, it is anticipated that no significant adverse air quality impacts would occur on the existing and proposed developments analyzed in the FGEIS, since the proposed heating plant would be similar or smaller in size. As with the FGEIS analyses, no additional impacts would be anticipated if the new HVAC system were also to serve the Convention Center hotel should such an option be pursued.

With respect to the 33/34th Development, a worst-case screening analysis was performed using the methodology described in the *CEQR Technical Manual*. The CEQR methodology determines the threshold of development size below which the action would not have a significant impact. The screening procedures utilize information regarding the type of fuel to be burned, the maximum development size, and the HVAC exhaust stack height, to evaluate whether a significant impact is likely. Based on the distance from the development to the nearest building of similar or greater height, if the maximum development size is greater than the threshold size in the *CEQR Technical Manual*, there is the potential for significant air quality impacts, and a refined dispersion modeling analysis would be required. Otherwise, the source passes the screening analysis, and no further analysis is required.

The results of the analysis determined the minimum distance to avoid potential significant adverse air quality impacts. As reflected in the GPP, no significant adverse air quality impacts would occur since HVAC stacks for the expanded Convention Center would be placed at least 400 feet from the proposed mixed-use development.

#### *CONVENTION CENTER HOTEL*

The Convention Center hotel under the Proposed Modifications would be constructed along Eleventh Avenue between West 35th and West 36th Streets. This site was analyzed as a commercial development pursuant to the Hudson Yards rezoning proposal in the FGEIS as Projected Development Site 6. The FGEIS disclosed in the HVAC source impact analysis that Site 6 has the potential for significant impacts when firing No. 2 fuel due to its proximity to Projected Development Site 4 (along the east side of Eleventh Avenue between West 34th and

35th Streets). An E-designation was developed based on the results of the analysis which required that the HVAC stack be located at least 20 feet from the edge of the building roof, or fire natural gas.

To incorporate the requirements of the E-designation, the GPP specifies that the HVAC stack for the proposed Convention Center hotel shall be at least 20 feet from the edge of the building roof, or shall fire natural gas. As a result, like the FGEIS, there would be no significant adverse air quality impact from the hotel's HVAC systems.

The industrial source air quality analyses presented in the FGEIS assessed the potential impact from nearby industrial sources on Projected and Potential Development sites that contain residential/or mixed uses. This analysis included Projected Development Site 6 which was projected as a mixed-use building under the original rezoning plan (but was considered an all-commercial building in the adopted Alternative S rezoning plan). The FGEIS finding of no significant adverse air quality impacts from industrial sources at this site would remain the same for development of the Convention Center hotel under the Proposed Modifications.

### *33/34 DEVELOPMENT SITE*

Under the Proposed Modifications, a new mixed-use development would be developed directly south of the Convention Center between West 33rd and West 34th Streets. The site is currently used as truck and automobile parking and storage of empty return trailers by the Convention Center, and in the FGEIS, it was analyzed as the site of the multi-level Convention Center truck marshalling facility. Under the Proposed Modifications, the Convention Center marshalling facility would be moved from its present location to a new garage facility along Twelfth Avenues south of West 40th Street. The block would be developed as a mixed use parcel with a commercial development on the eastern portion of the block and a residential development on the western portion of the block. A 500-space underground parking garage would be constructed to provide parking for the development site's residential and commercial uses.

As discussed earlier, the proposed mixed use development on the 33/34 Development site would not alter the conclusions of the FGEIS regarding mobile sources since the incremental change in traffic volumes would not significantly worsen the Build conditions analyzed in the FGEIS. Concentrations of CO and PM<sub>10</sub> from the truck marshalling facility analyzed in the FGEIS were predicted to be below the appropriate NAAQS. Impacts of pollutants from the mechanically ventilated proposed underground parking facility would not be significantly different from the similarly ventilated multi-level truck marshalling facility analyzed in the FGEIS. Therefore, the 33/34 Development Site would not result in any significant adverse air quality impacts from mobile sources.

A screening analysis was performed to assess air quality impacts associated with emissions from the HVAC system of the mixed-use development. In addition, since the proposed mixed use development would include a sensitive use, potential impacts from industrial sources in the area were evaluated.

### ***HVAC Impact Analysis***

The methodology described in the *CEQR Technical Manual* was used for the analysis and considered impacts as described earlier. A description of the potential HVAC impacts due to each aspect of the mixed-use development follows.

#### *Commercial Development*

The commercial space within the mixed use development is anticipated to be comprised of a 46-story tower with an adjacent low-rise building to be used for trading floor space. The tower would be taller than the adjacent residential towers at the mixed-use development, and any existing or planned developments with sensitive receptors (residential or community facilities) within 400 feet of the site. Therefore, this distance was chosen for the analysis in accordance

with the guidance provided in the *CEQR Technical Manual*. The commercial development was assumed to use either No. 2 fuel oil or natural gas, consistent with the methodology used in the Hudson Yards FGEIS. Burning fuel oil or natural gas would not result in any significant stationary source air quality impacts because the proposed development is below the maximum permitted size shown in Figures 3Q-8 and 3Q-10 of the *CEQR Technical Manual* for No. 2 oil and natural gas, respectively. Therefore, the construction of the proposed commercial portion of the 33/34 Development would not result in any significant adverse stationary source air quality impacts.

### *Residential Development*

Based on the design guidelines established for the GPP for the 33/34 Development and the illustrative development scenario used in this analysis, the residential development is anticipated to be comprised of two towers of approximately 45 and 50 stories and are likely to be built in two phases. As a conservative worst-case analysis, it was assumed that the shorter tower would be constructed initially, and that the HVAC systems for both buildings would be vented to the roof of this first building. As presented in the illustrative plan, the minimum distance between the two towers at the roof elevation is approximately 73 feet. At this distance, the analysis found that the later and taller residential tower would exceed the threshold screening levels using No. 2 fuel oil or natural gas.

As a result of this analysis, the design guidelines established for the GPP identify the following restrictive measures for the 33/34 Development site, any of which fully avoid the potential for significant adverse air quality impacts. The guidelines are also established to provide flexibility in the final configuration of the development program and are not specific to the illustrative scenario presented above.

- If a central HVAC system is proposed, the development would be phased to construct the tallest tower initially; and/or
- The HVAC stacks would be designed to discharge at an elevation above the tallest residential floor on the 33/34 Development; and/or
- The minimum distance from any HVAC stacks would be 200 feet from any buildings of a similar or greater height containing residential uses if firing No. 2 oil, or 150 feet, if firing natural gas.

By employing any of the restrictive measures described above, the residential portion of the 33/34 Development would not result in any significant adverse air quality impacts.

### ***Industrial Source Analysis***

The residential portion of the 33/34 Development would be far enough away from any potential industrial sources of air pollution. As shown in Figure 21-2 of the FGEIS, the nearest industrial sources which could impact the site are on Eleventh Avenue between West 29th and West 30th Streets, and Tenth Avenue between West 33rd and West 34th Streets. These sites are much further than 400 feet from the residential towers at the 33/34 Development site. Consequently, no significant adverse air quality impacts are predicted from industrial source emissions.

Overall the Proposed Modifications would not result in any new or additional significant adverse air quality impacts not previously identified in the FGEIS.

## **NOISE**

### *2010*

In the context of the analyses and conclusions of the FGEIS noise analyses, the Proposed Modifications would result in only a modest change in likely effects and would not result in any new or additional significant adverse noise impacts not previously identified in the FGEIS.

As presented above, the net change in vehicular trips at any given intersection as a result of the Proposed Modifications is either a reduction in volume or a relatively low increase. Therefore, there would be no doubling of traffic volumes and noise increases would be below 3 dBA, which represents a significant change perceptible to humans.

Like much of the study area, and much of Manhattan, the buildings on the 33/34 Development site would be located in an area with currently high noise levels. The design guidelines established for the GPP would incorporate provisions consistent with the noise E-designations utilized in the Hudson Yards rezoning. This would require that the new buildings provide a closed window condition with minimum attenuation of 40dBA window-wall attenuation on all facades in order to maintain an interior noise level of 45 dBA. This is the acceptable interior noise level as defined by the City Noise Exposure Guidelines.

The Convention Center hotel under the Proposed Modifications would be constructed along Eleventh Avenue between West 35th and West 36th Streets. This site was analyzed as a commercial development pursuant to the Hudson Yards rezoning proposal in the FGEIS as Projected Development Site 6. The FGEIS disclosed in the noise analysis that Site 6 has the potential for significant adverse noise impacts. An E-designation was developed based on the results of the analysis which required that the new buildings provide a closed window condition with minimum attenuation of 40dBA window-wall attenuation on all facades in order to maintain an interior noise level of 45 dBA. The GPP specifies the noise attenuation requirements consistent with the E-designation.

Based on the marginal change in vehicular trips on the immediate traffic network and the required noise attenuation, the Proposed Modifications would not result in any new or additional significant adverse noise impacts in 2010.

With no changes to the construction or operation of the No. 7 Subway extension, the Proposed Modifications do not alter the FGEIS conclusion that there would be no significant adverse impacts due to vibration.

## 2025

As with 2010, the analysis of incremental changes in network vehicular traffic indicates that there would be no new, greater, or different significant noise impacts generated by the Proposed Modifications than compared with the FGEIS. The second 500-unit residential tower on the 33/34 Development site is assumed to require the same noise attenuation as the first tower as set forth in the design guidelines established for the GPP. This would require that the new buildings incorporate attenuation measures in order to provide for noise levels of 45 dBA (the acceptable interior noise level as defined by the City Noise Exposure Guidelines). Therefore, the Proposed Modifications would not result in any new or additional significant adverse noise impacts in 2025.

## **CONSTRUCTION**

Construction activities associated with the Proposed Modifications are anticipated to be substantially less complicated and intrusive compared to the FGEIS-Convention Center expansion (particularly considering that there would be no concurrent construction activity associated with the Multi-Use Facility). This primarily is based on the more compact design of the building that extends from West 34th Street to West 39th Street, and the new marshalling facility along Twelfth Avenue south of West 40th Street. The Proposed Modifications for both Phase I and II expansion efforts do not include the demolition and relocation of the Quill Bus Depot, or the construction of a pedestrian bridge connecting to the former hotel site on West 42nd Street. As a result, there are no new or additional significant adverse impacts generated by construction activities associated with the Proposed Modifications in comparison with the FGEIS.

During the first phase of construction this is evident in that the existing marshalling yard on the 33/34 Development site remains in its current operational mode while the new marshalling facility along Twelfth Avenue south of West 40th Street is constructed. The demolition of the existing Yale trucking and other structures on this block can proceed with minimal disruption to ongoing Convention Center activities and can primarily be staged on site and on West 39th Street once closed to through traffic. With the new marshalling facility in place, all future operational truck marshalling and storage requirements of the Phase I and II expansion plans would be accommodated in the new facility, using only the existing truck staging lane along the east side of Twelfth Avenue. At that time the 33/34 Development site can serve as a construction staging area for other construction activities as well as be readied for the new residential and commercial development. There would be no additional construction activities associated with the preparation of the FGEIS-Convention Center expansion proposed truck marshalling route utilizing the existing railroad right-of-way.

Phase II of the Convention Center expansion under the Proposed Modifications would also limit the potential for disturbance in the study area as compared to the FGEIS-Convention Center expansion by maintaining the existing structure. The Phase II expansion would develop new space above the existing facility, and therefore limit expansion of the footprint. The new level of exhibition and meeting room space in Phase II would span over the existing structure and connect into the Eleventh Avenue wing of the Phase I building. Overall, the Phase II expansion under the Proposed Modifications would equal the total development as identified in the FGEIS, but within a smaller overall footprint.

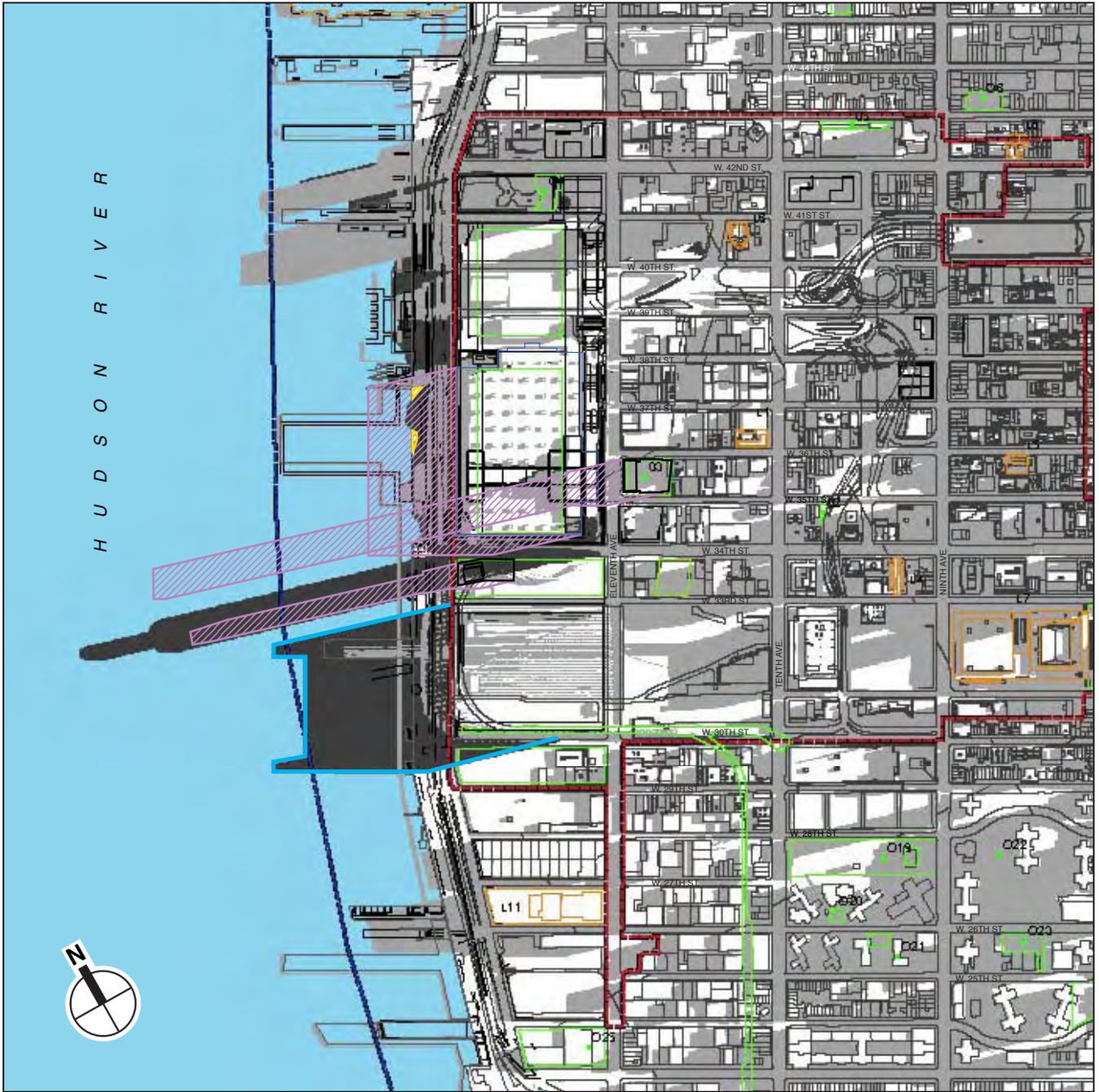
As specified in the GPP, all construction activities would adhere to the mitigation measures identified in the FGEIS, most notably the use of Ultra-Low Sulfur Diesel (ULSD) and adherence to the applicable provisions of the New York City Noise Control Code and good engineering practices.

## **F. CONCLUSIONS**

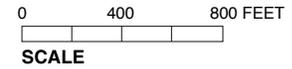
As a result of the analyses detailed above, this memorandum concludes that the Proposed Modifications and changes in background conditions would not result in any significant adverse environmental impacts not previously identified in the FGEIS. Therefore, no Supplemental Environmental Impact Statement is required in connection with ESDC's review and consideration of the Proposed Modifications. \*

# **Appendix A**

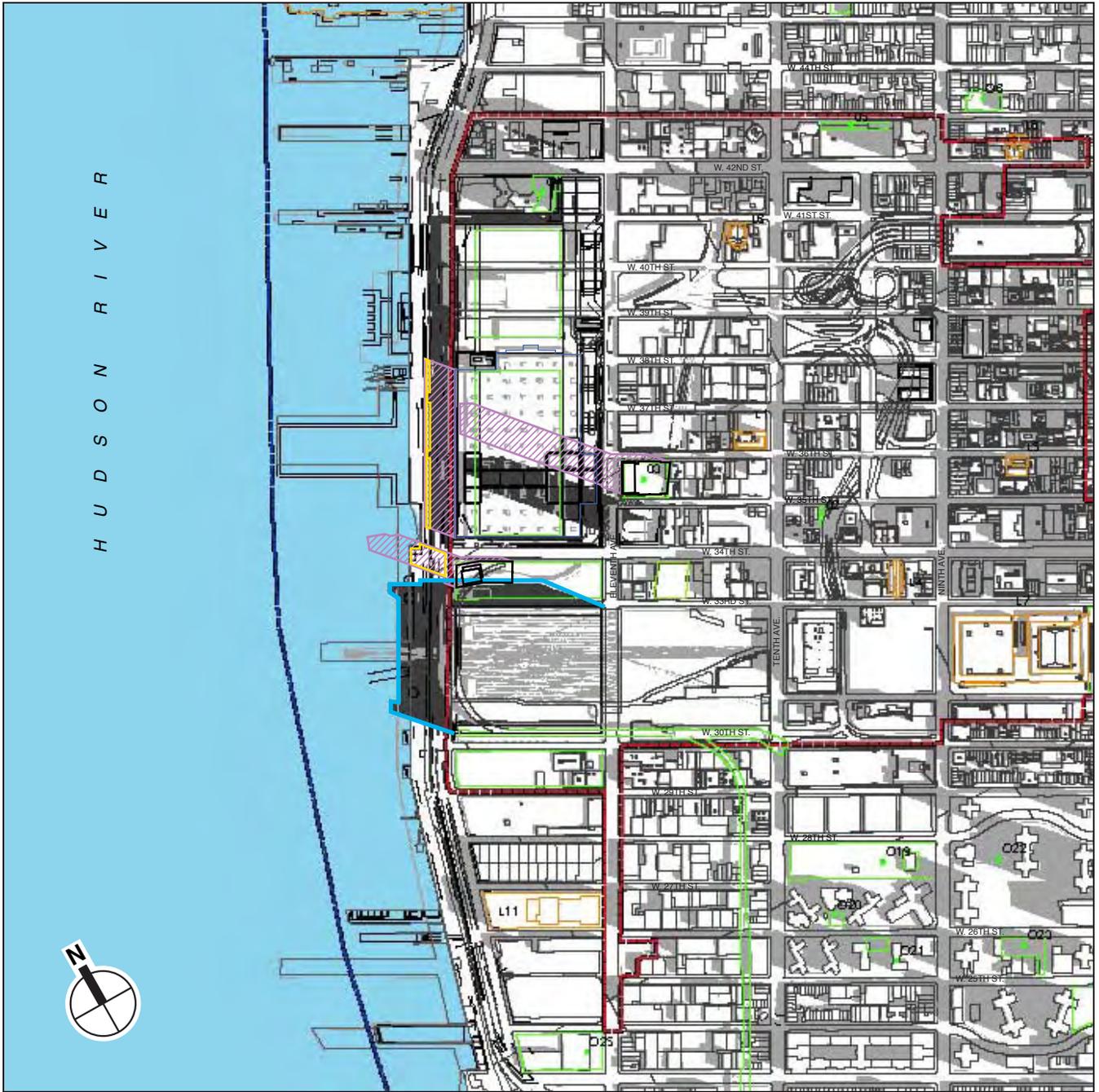
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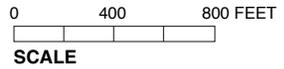
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-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



March 21 7:26 AM  
Shadow Analysis  
2010 Build Conditions  
**Figure A-1**



-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



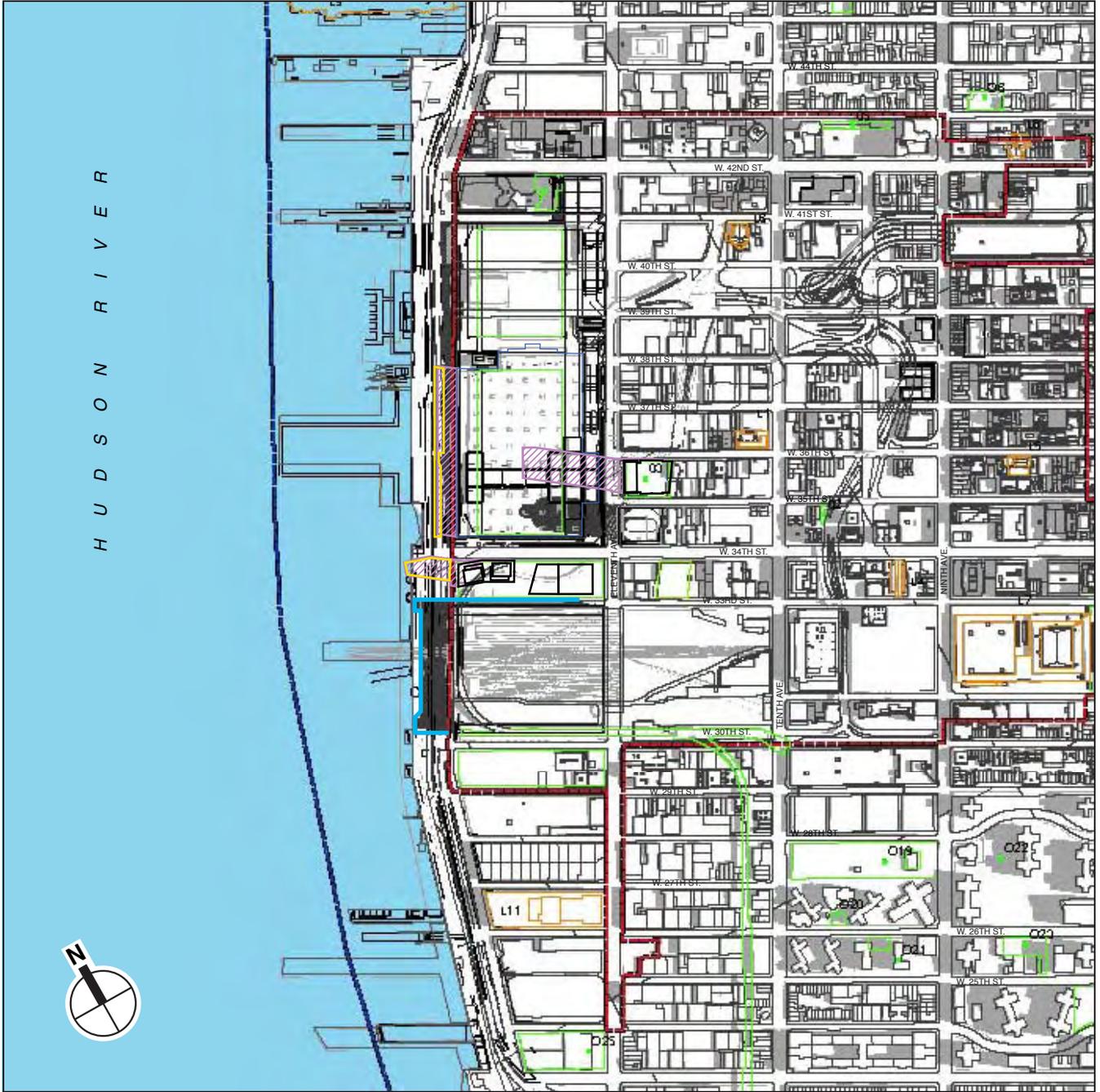
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 Shadow Analysis  
 2010 Build Conditions  
**Figure A-2**



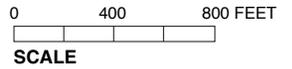
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-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area

0 400 800 FEET  
SCALE

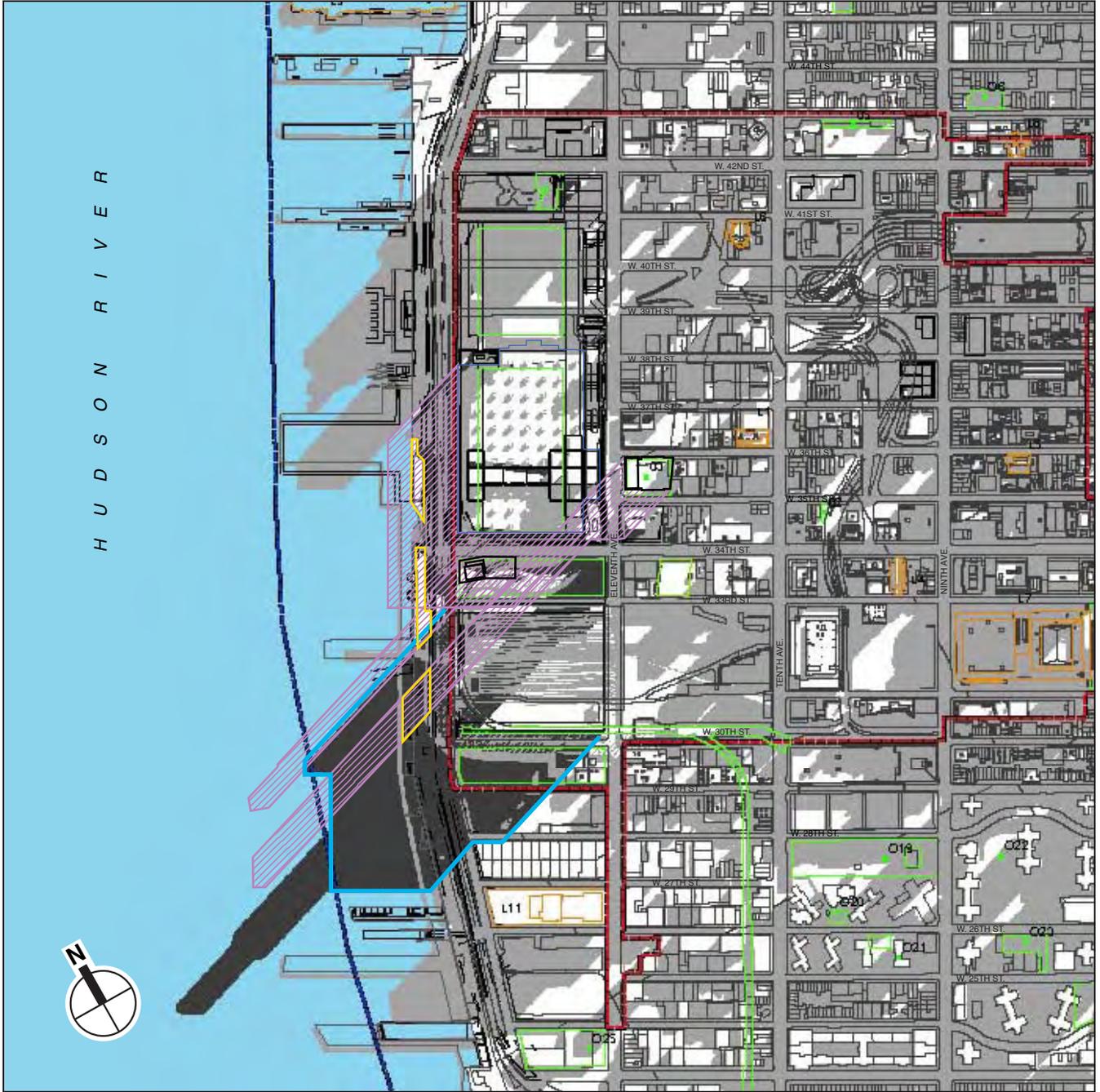
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Shadow Analysis  
2010 Build Conditions  
**Figure A-3**



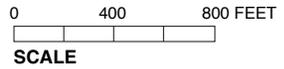
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-  *Incremental Shadow*
-  *Shadow Cast from Multi-Use Facility*
-  *Existing and No Build Conditions*
-  *Incremental Shadow from Hudson Yard Rezoning*
-  *Open Space Resource*
-  *Historic Resource*
-  *Hudson Yards Project Area*



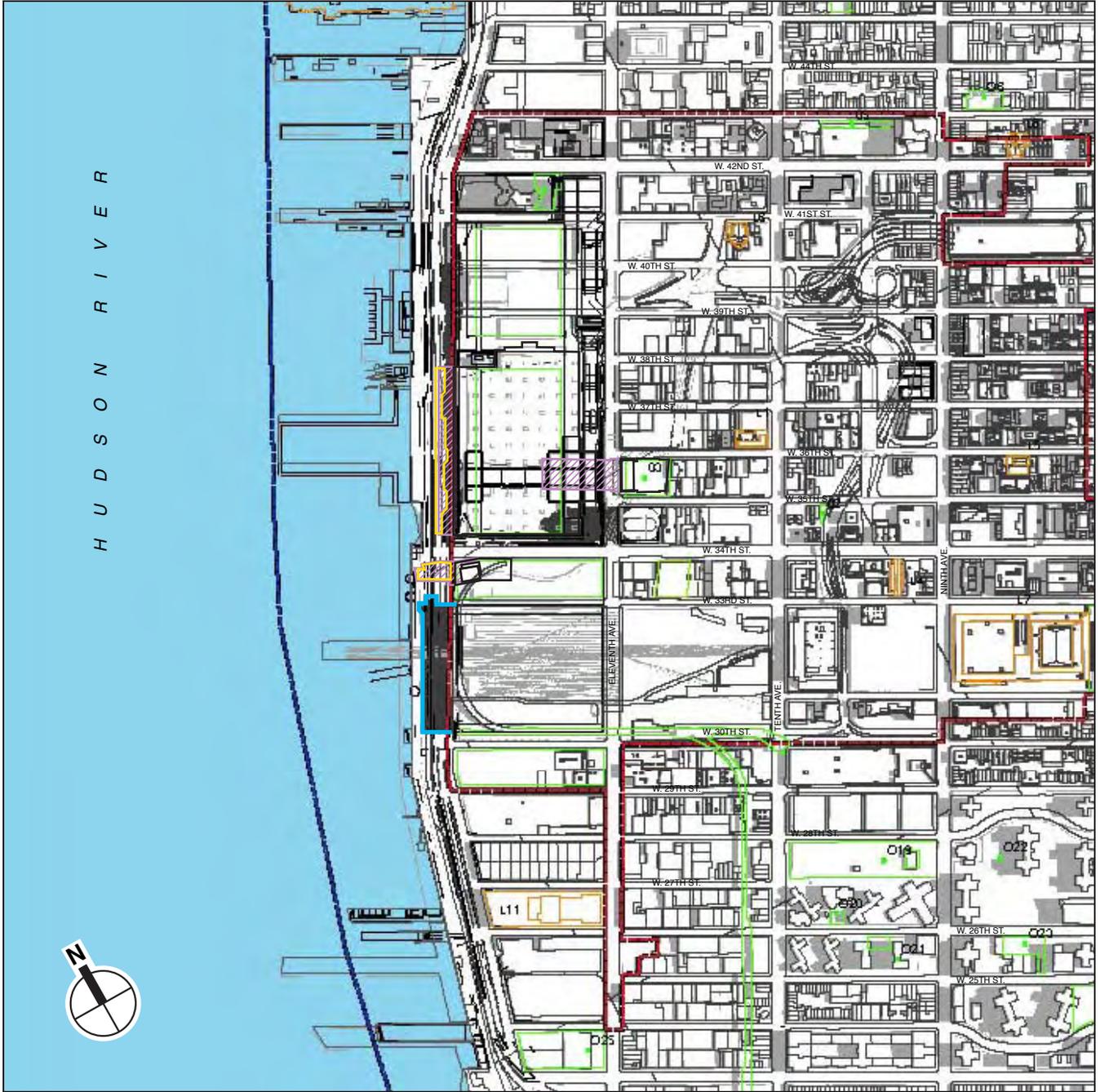
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 2010 Build Conditions  
**Figure A-4**



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-  Shadow Cast from Multi-Use Facility
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-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



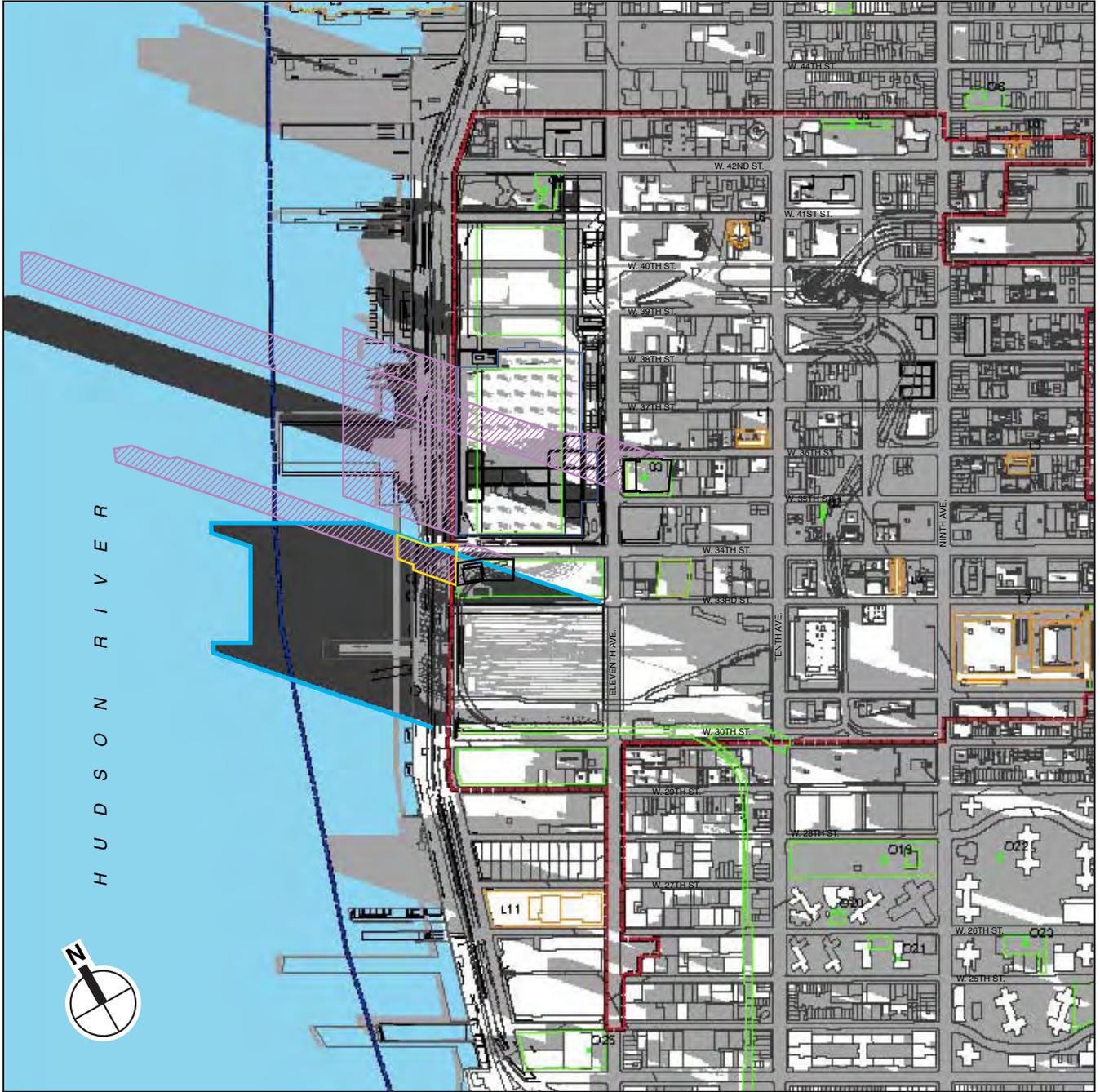
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2010 Build Conditions  
**Figure A-5**



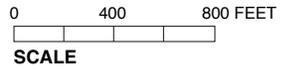
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-  *Incremental Shadow*
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-  *Existing and No Build Conditions*
-  *Incremental Shadow from Hudson Yard Rezoning*
-  *Open Space Resource*
-  *Historic Resource*
-  *Hudson Yards Project Area*

0 400 800 FEET  
SCALE

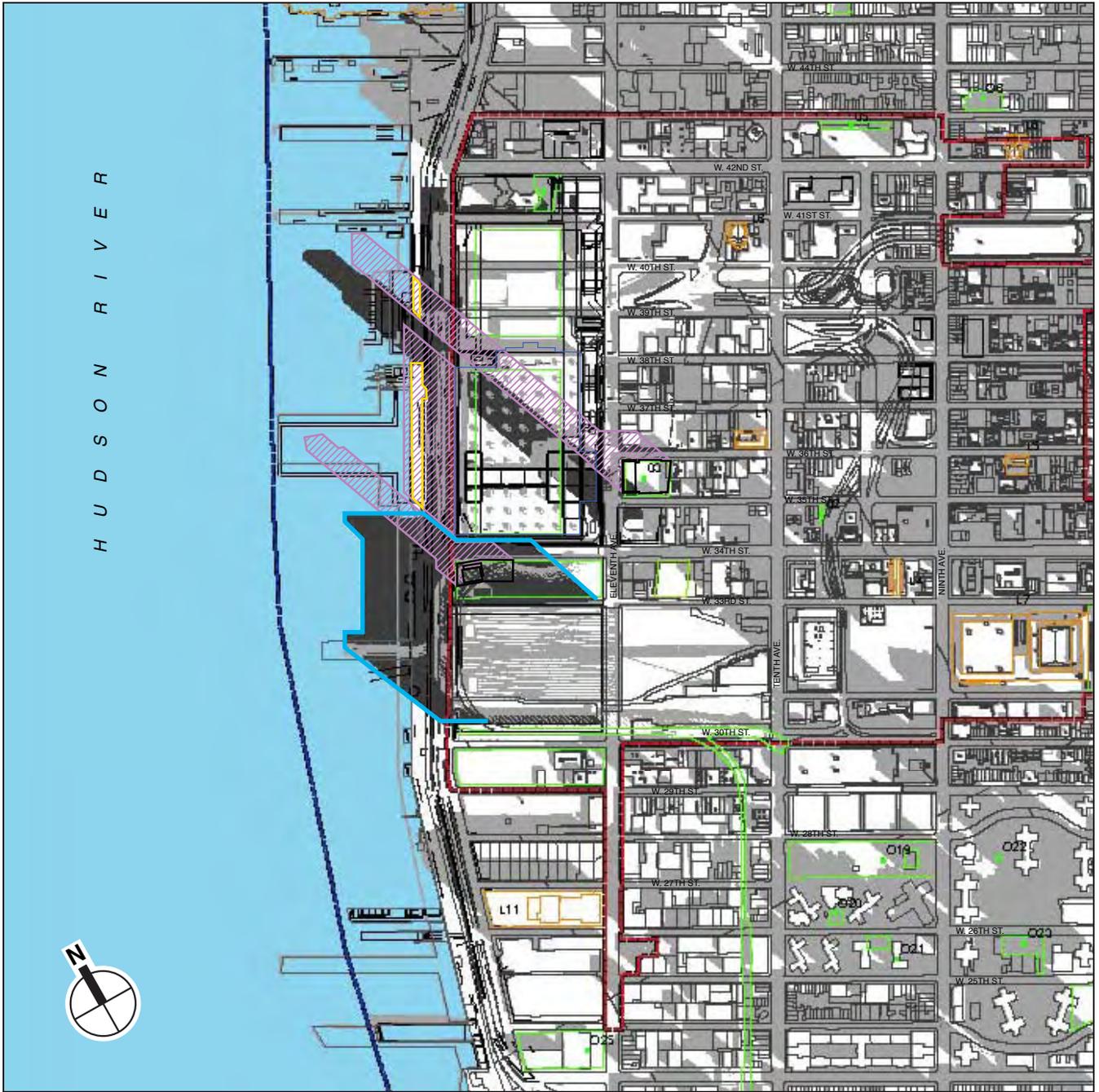
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2010 Build Conditions  
**Figure A-6**



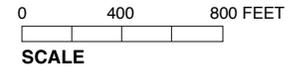
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



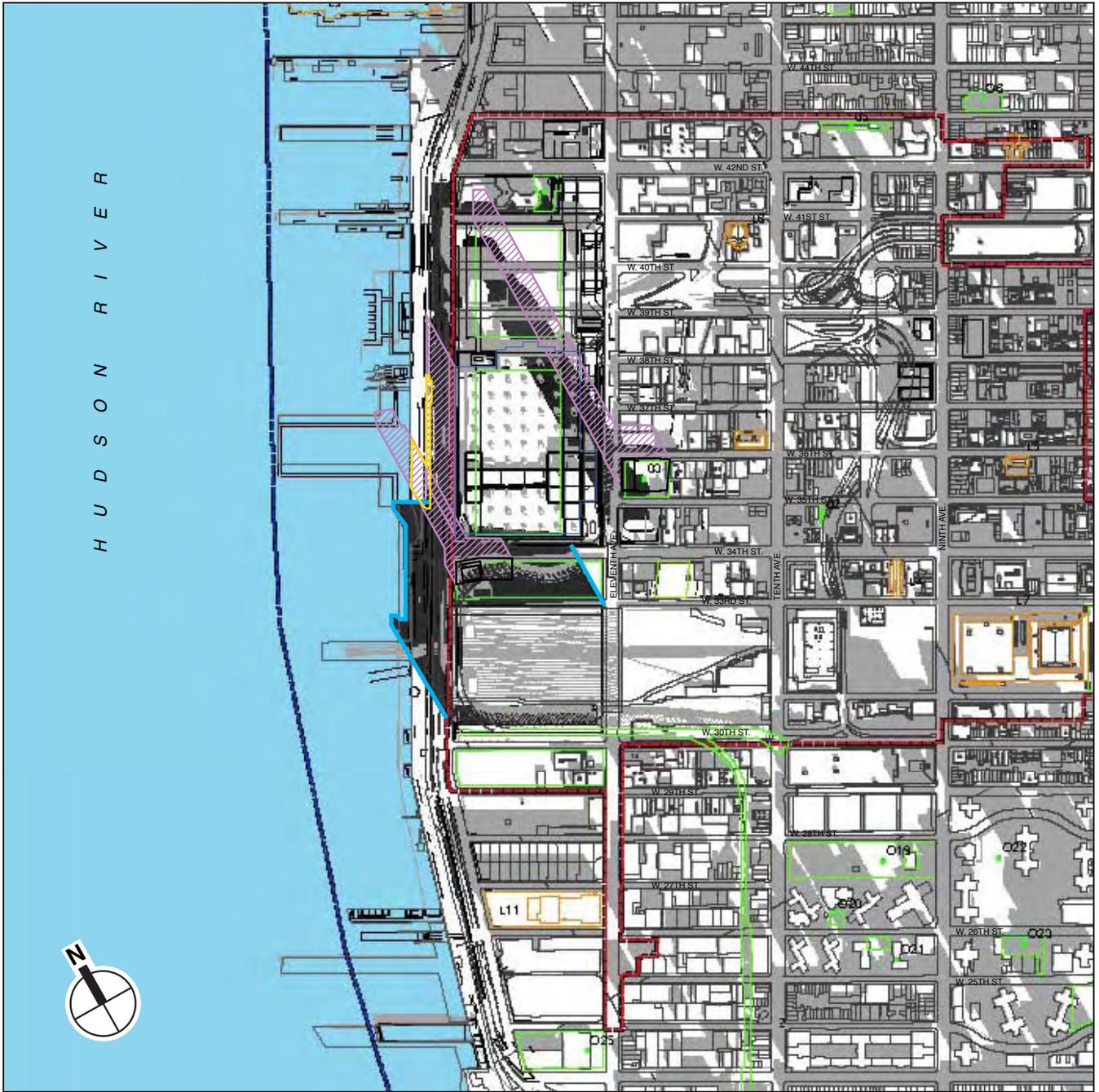
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**Figure A-7**



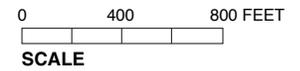
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-  *Incremental Shadow*
-  *Shadow Cast from Multi-Use Facility*
-  *Existing and No Build Conditions*
-  *Incremental Shadow from Hudson Yard Rezoning*
-  *Open Space Resource*
-  *Historic Resource*
-  *Hudson Yards Project Area*



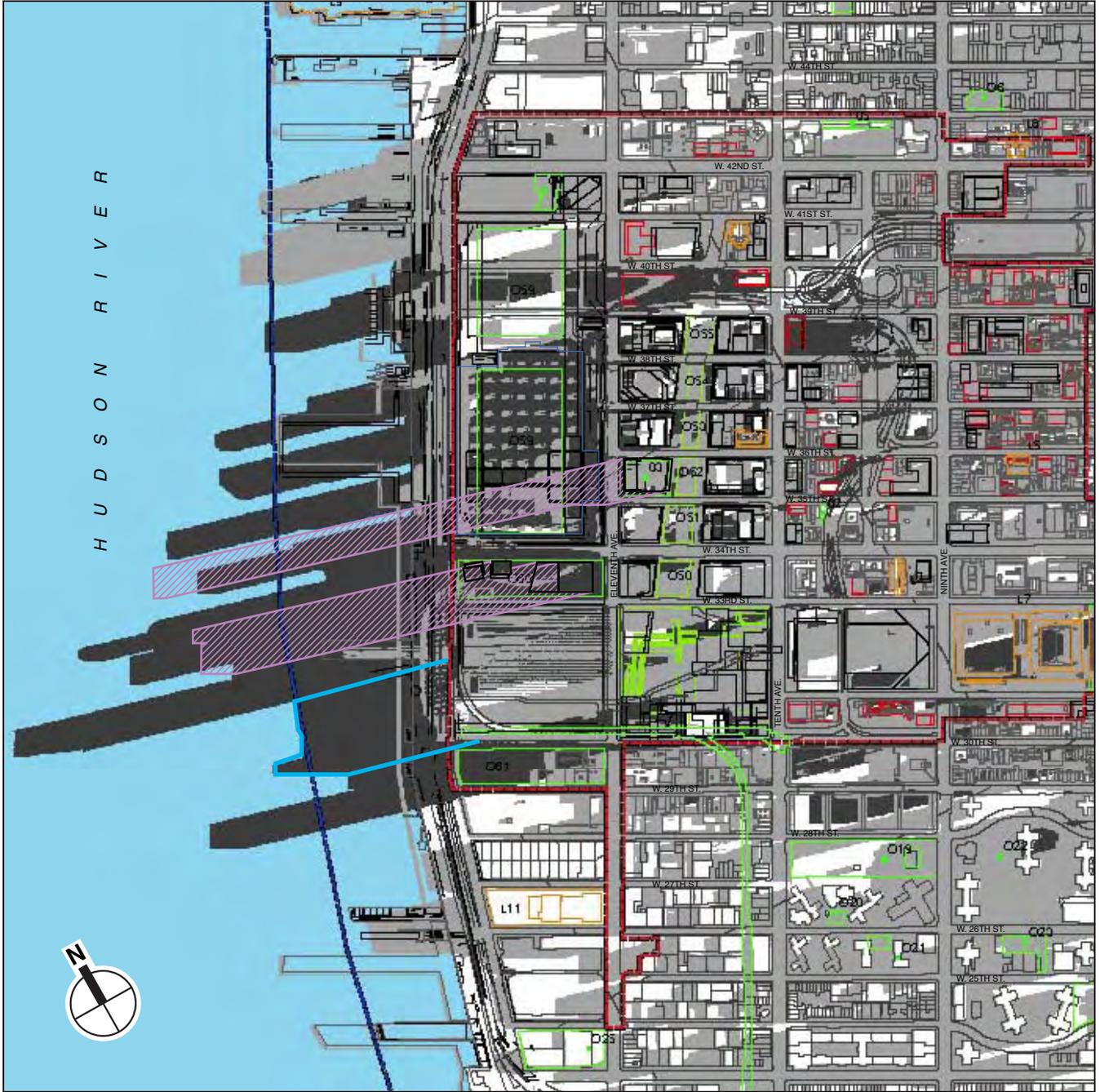
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 2010 Build Conditions  
**Figure A-8**



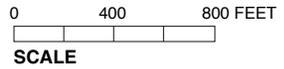
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-  *Incremental Shadow*
-  *Shadow Cast from Multi-Use Facility*
-  *Existing and No Build Conditions*
-  *Incremental Shadow from Hudson Yard Rezoning*
-  *Open Space Resource*
-  *Historic Resource*
-  *Hudson Yards Project Area*



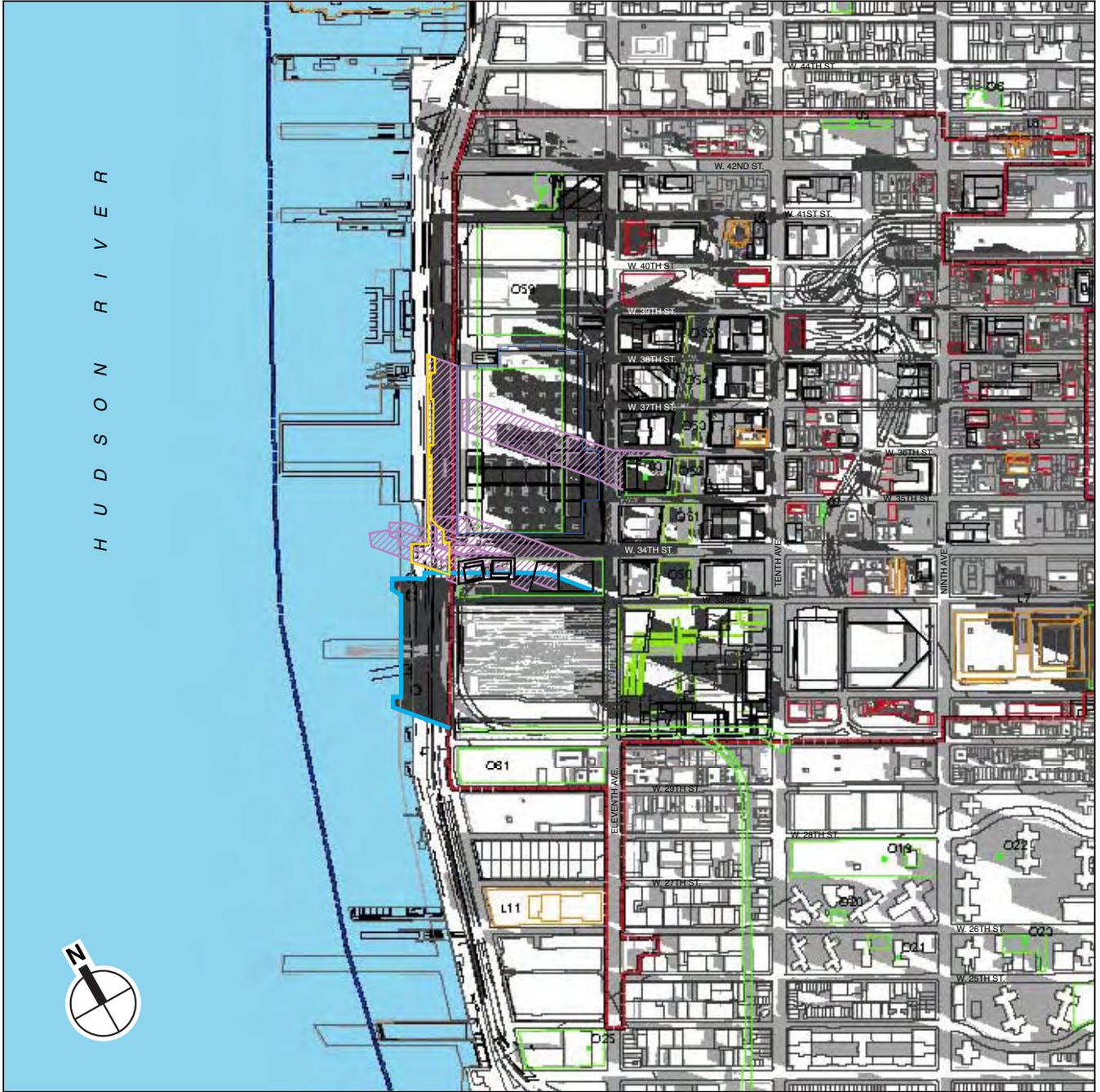
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 2010 Build Conditions  
**Figure A-9**



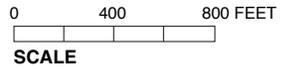
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



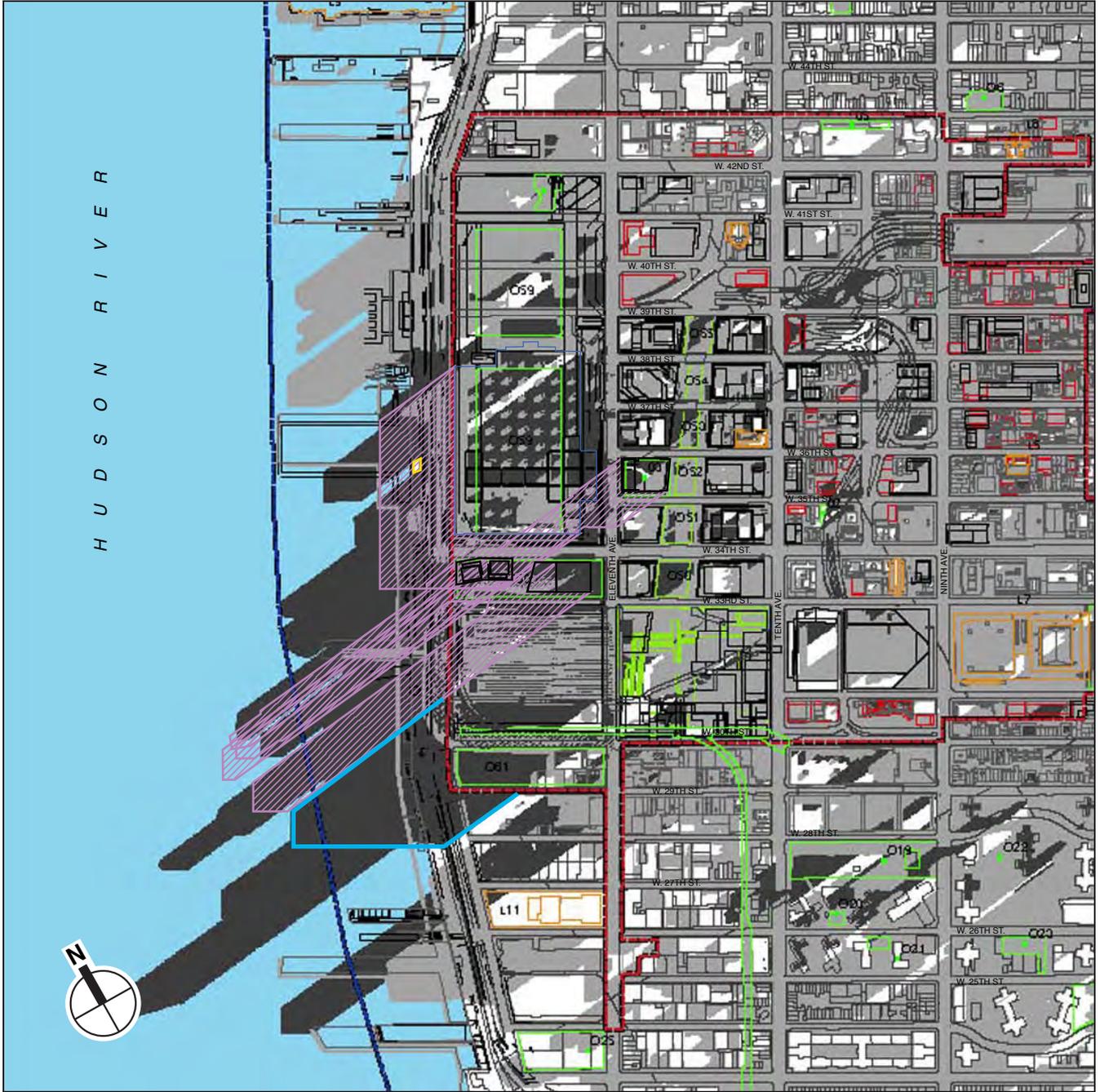
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 2025 Build Conditions  
**Figure A-10**



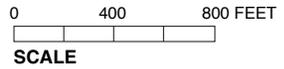
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



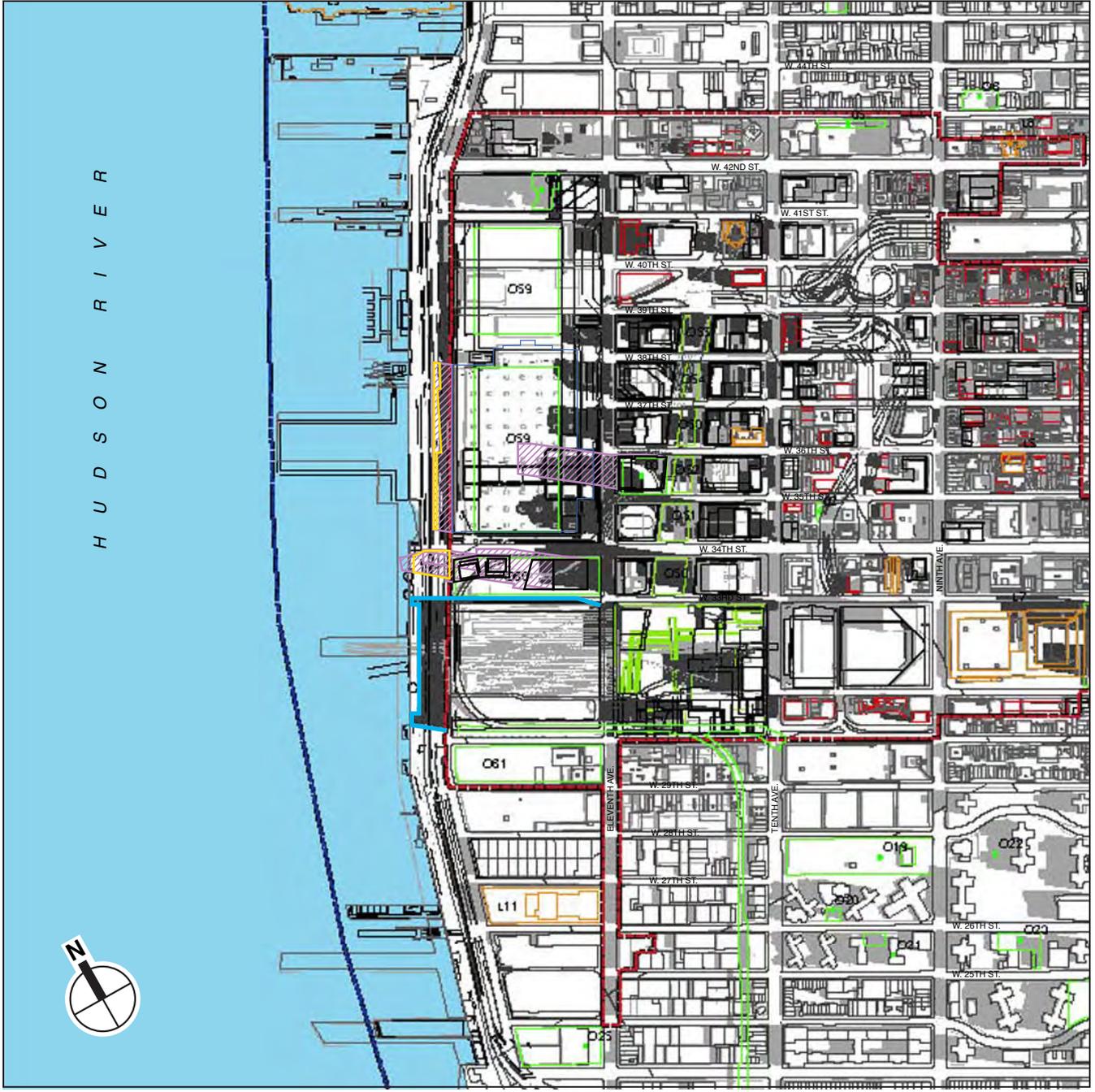
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**Figure A-11**



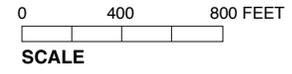
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-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



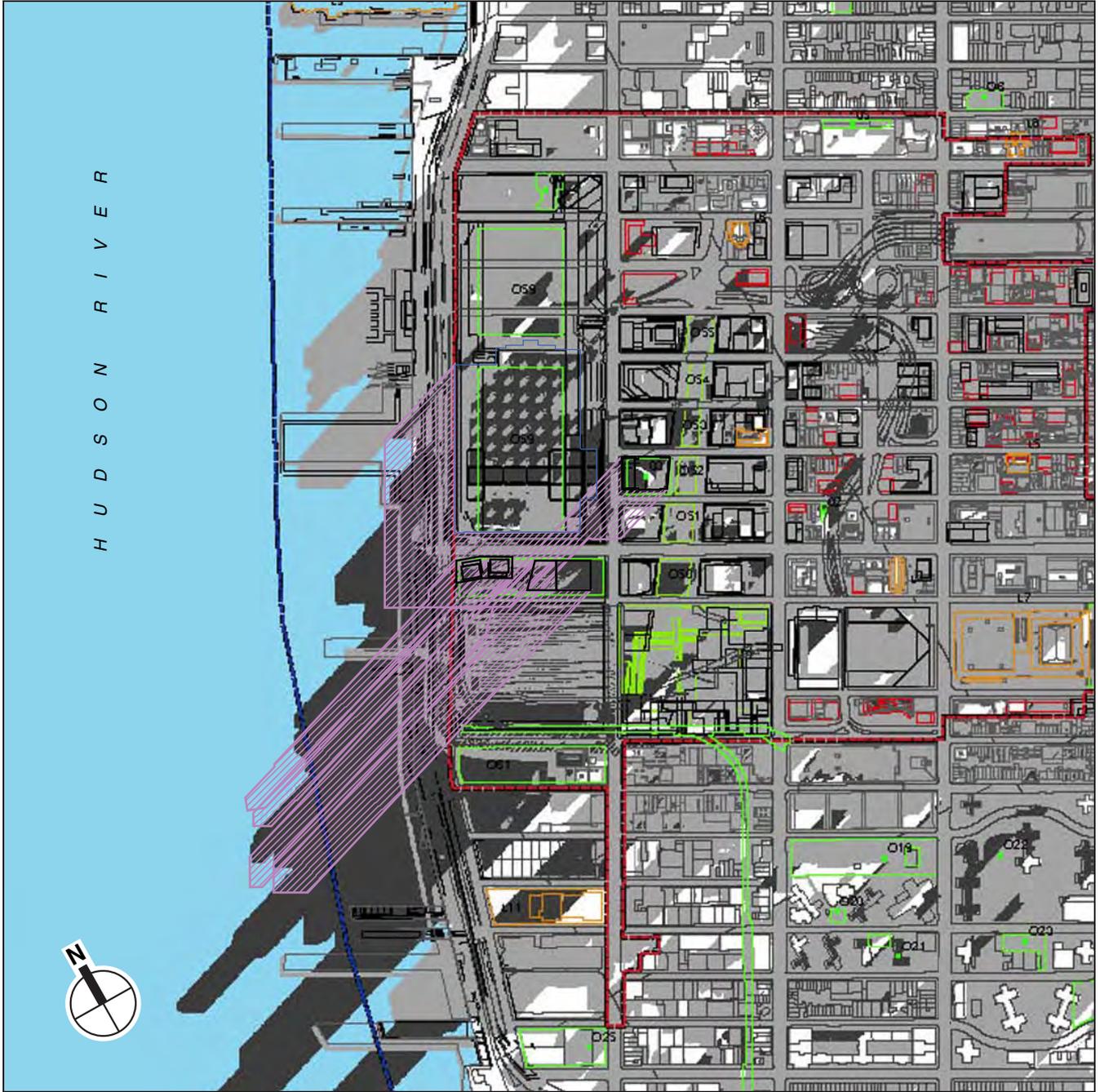
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 2025 Build Conditions  
**Figure A-12**



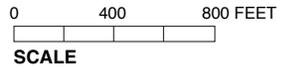
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
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-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



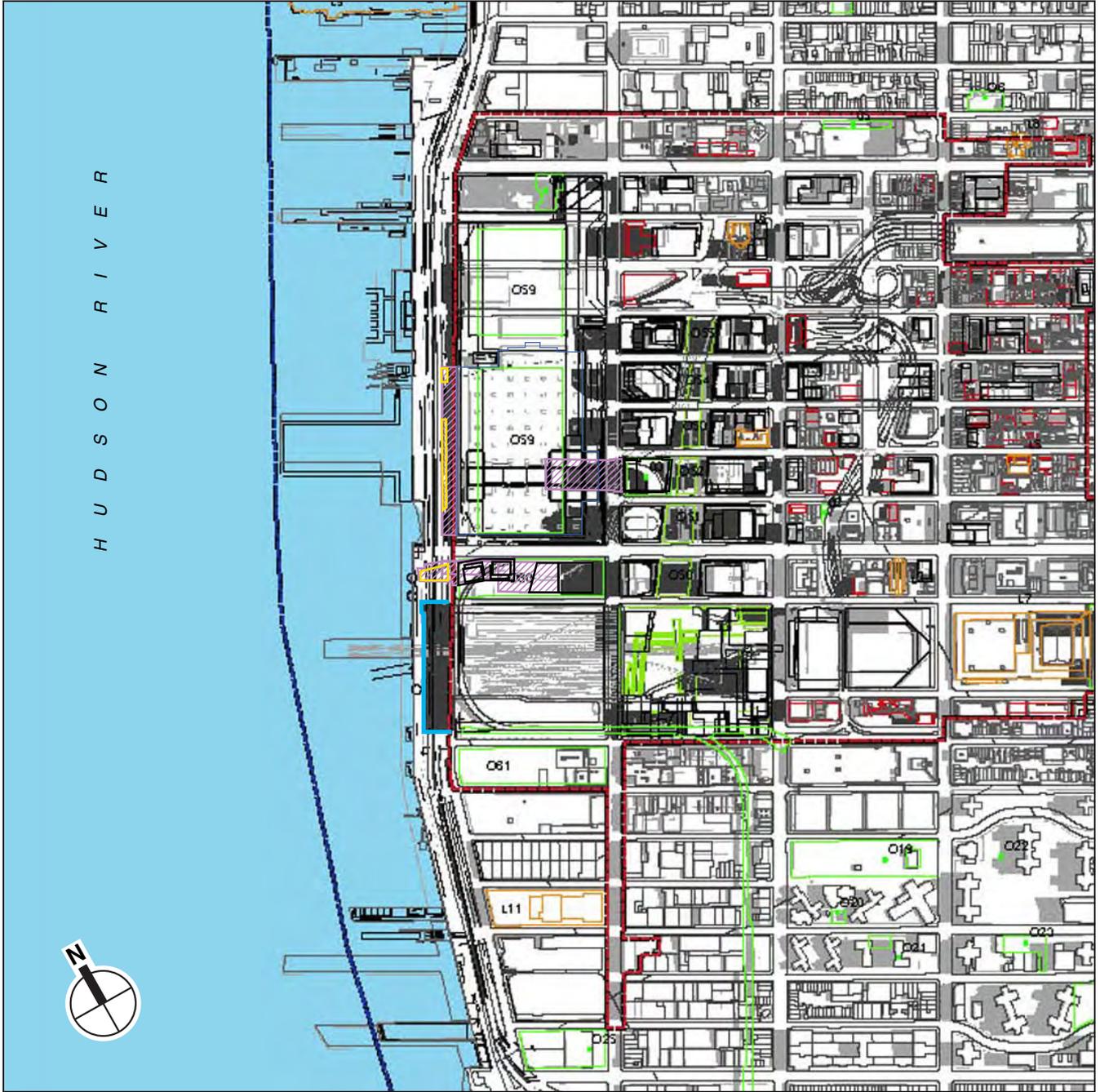
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**Figure A-13**



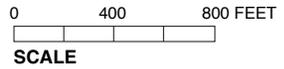
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



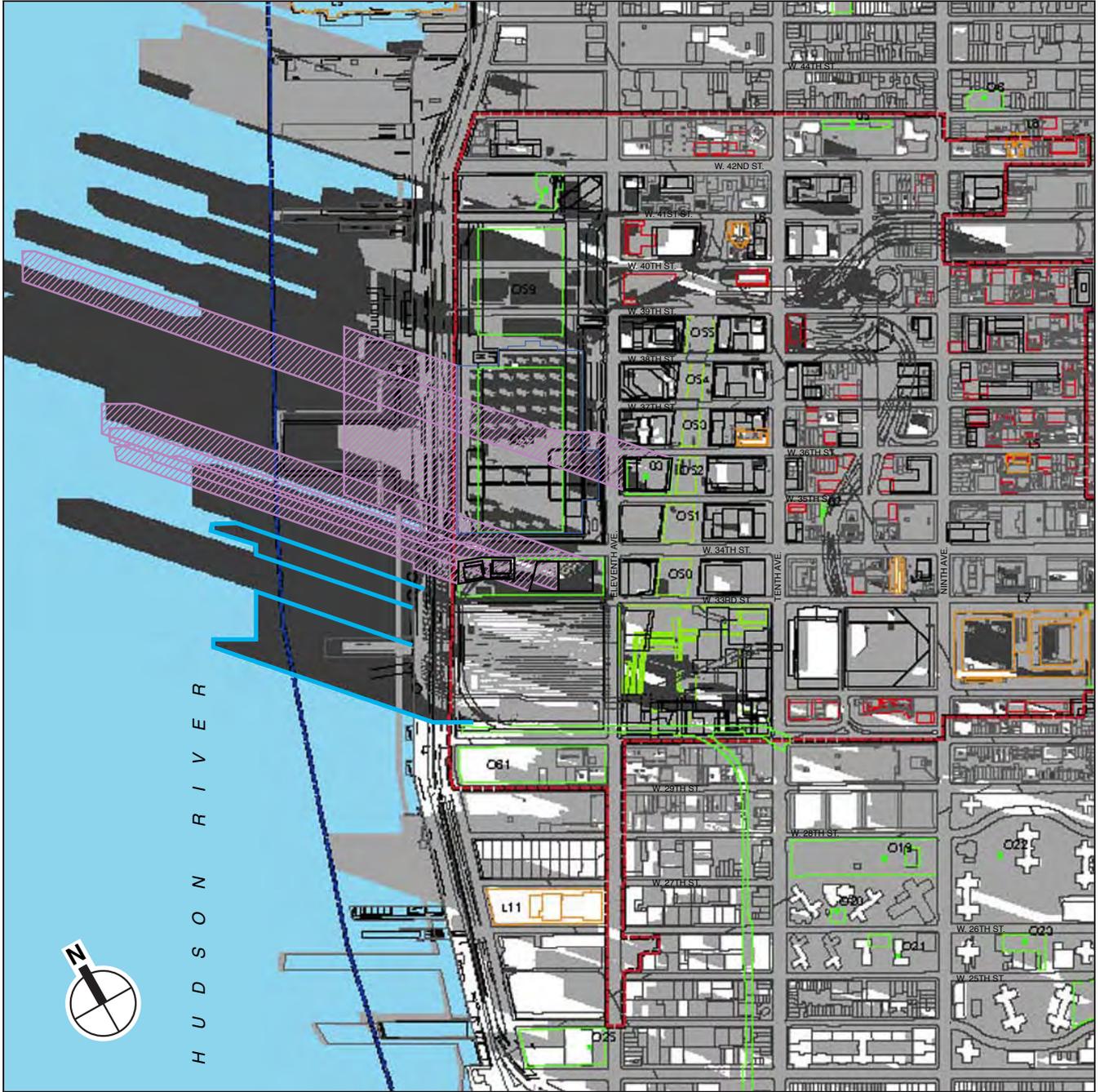
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 2025 Build Conditions  
**Figure A-14**



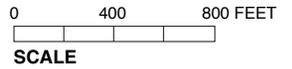
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



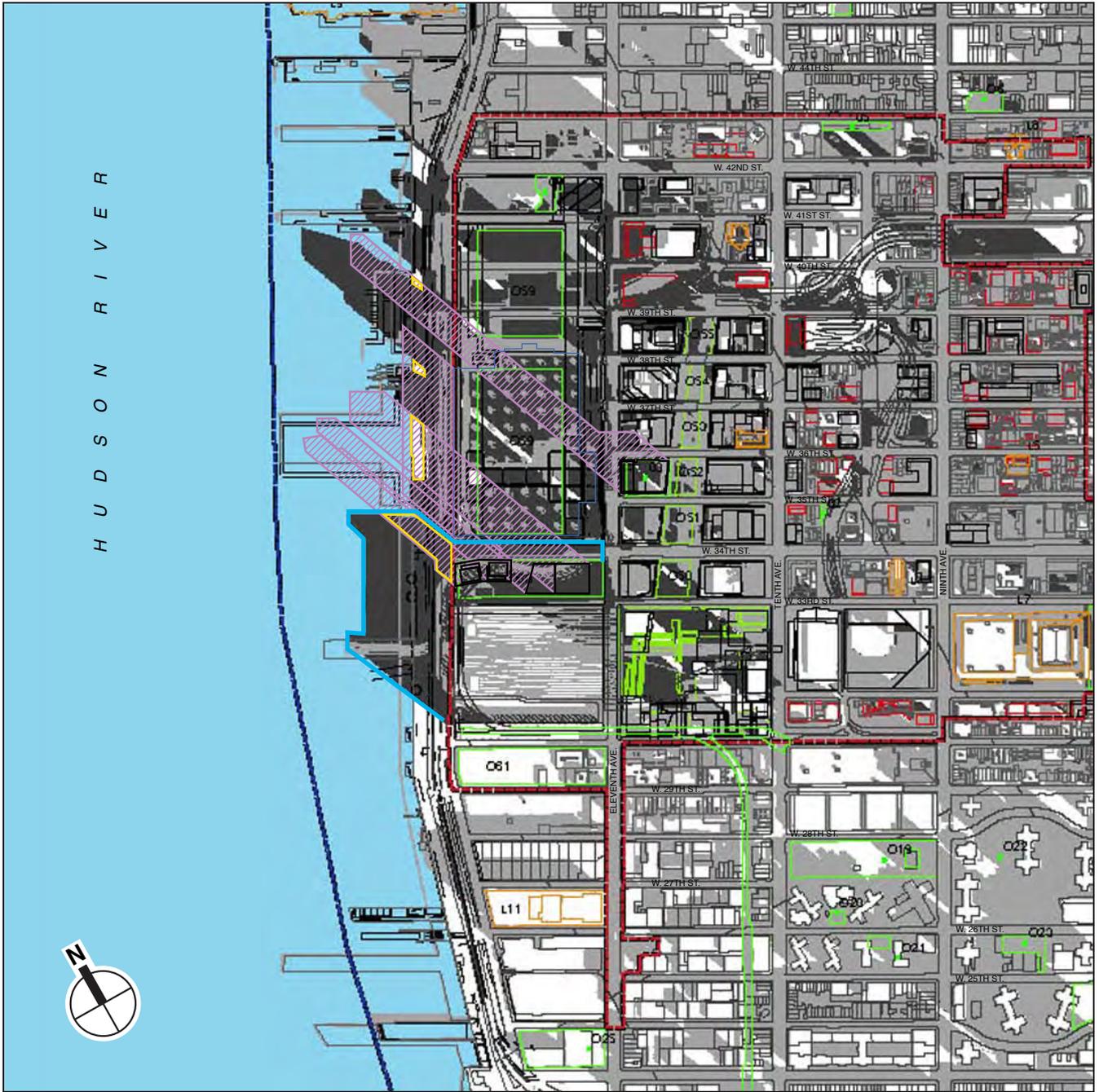
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Shadow Analysis  
2025 Build Conditions  
**Figure A-15**



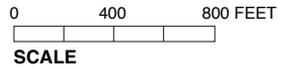
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-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



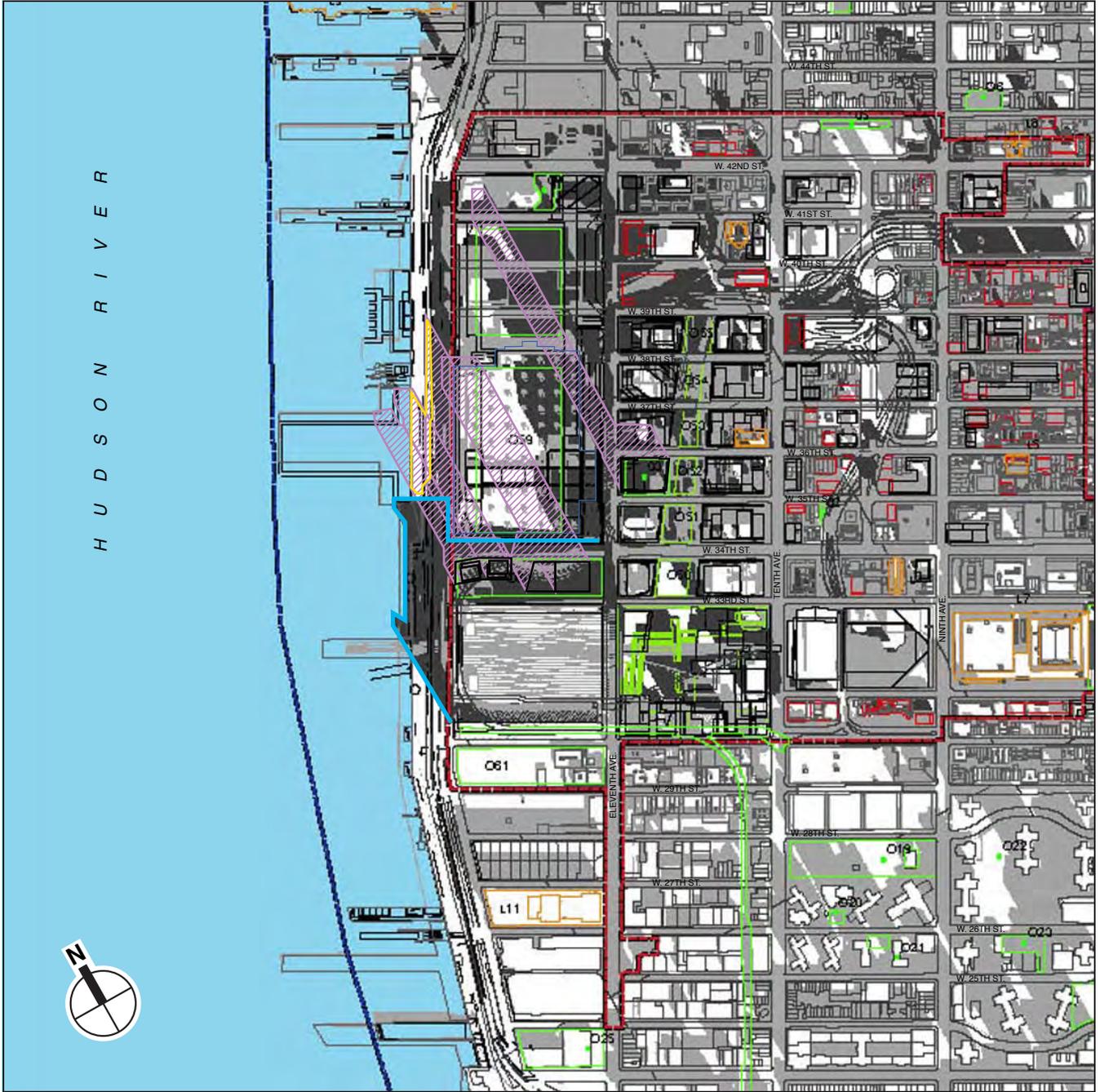
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 Shadow Analysis  
 2025 Build Conditions  
**Figure A-16**



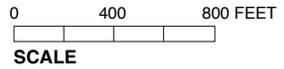
-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



December 21 10:30 AM  
 Shadow Analysis  
 2025 Build Conditions  
**Figure A-17**



-  Shadows Cast from Proposed Project
-  Incremental Shadow
-  Shadow Cast from Multi-Use Facility
-  Existing and No Build Conditions
-  Incremental Shadow from Hudson Yard Rezoning
-  Open Space Resource
-  Historic Resource
-  Hudson Yards Project Area



December 21 11:52 AM  
Shadow Analysis  
2025 Build Conditions  
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# **Appendix B**

## **Traffic**

**Javits Convention Center Expansion  
Traffic Analysis  
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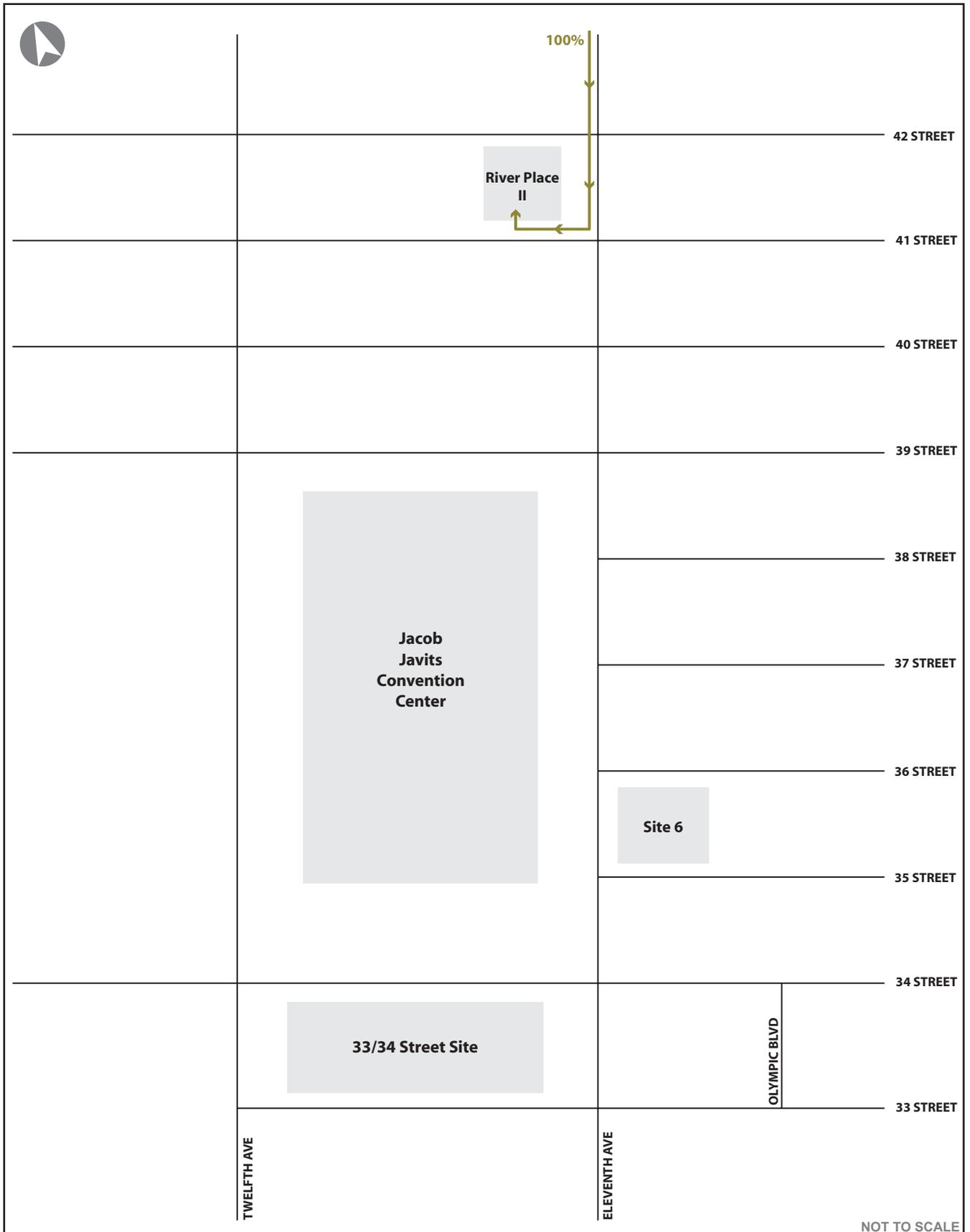
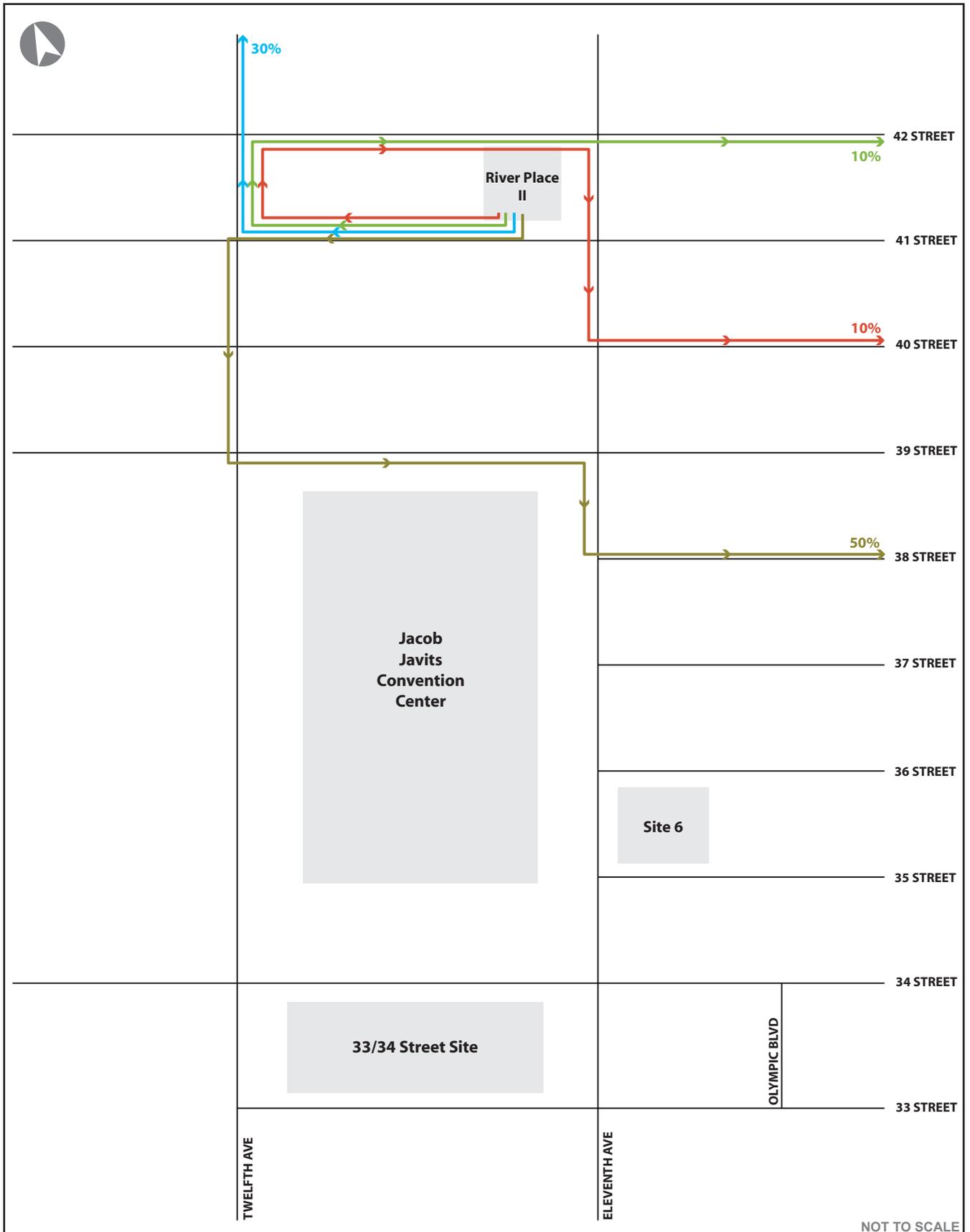


FIGURE 1: RIVER PLACE II - FGEIS AUTO ENTRY ROUTE





NOT TO SCALE

FIGURE 2: RIVER PLACE II - FGEIS AUTO EXIT ROUTE

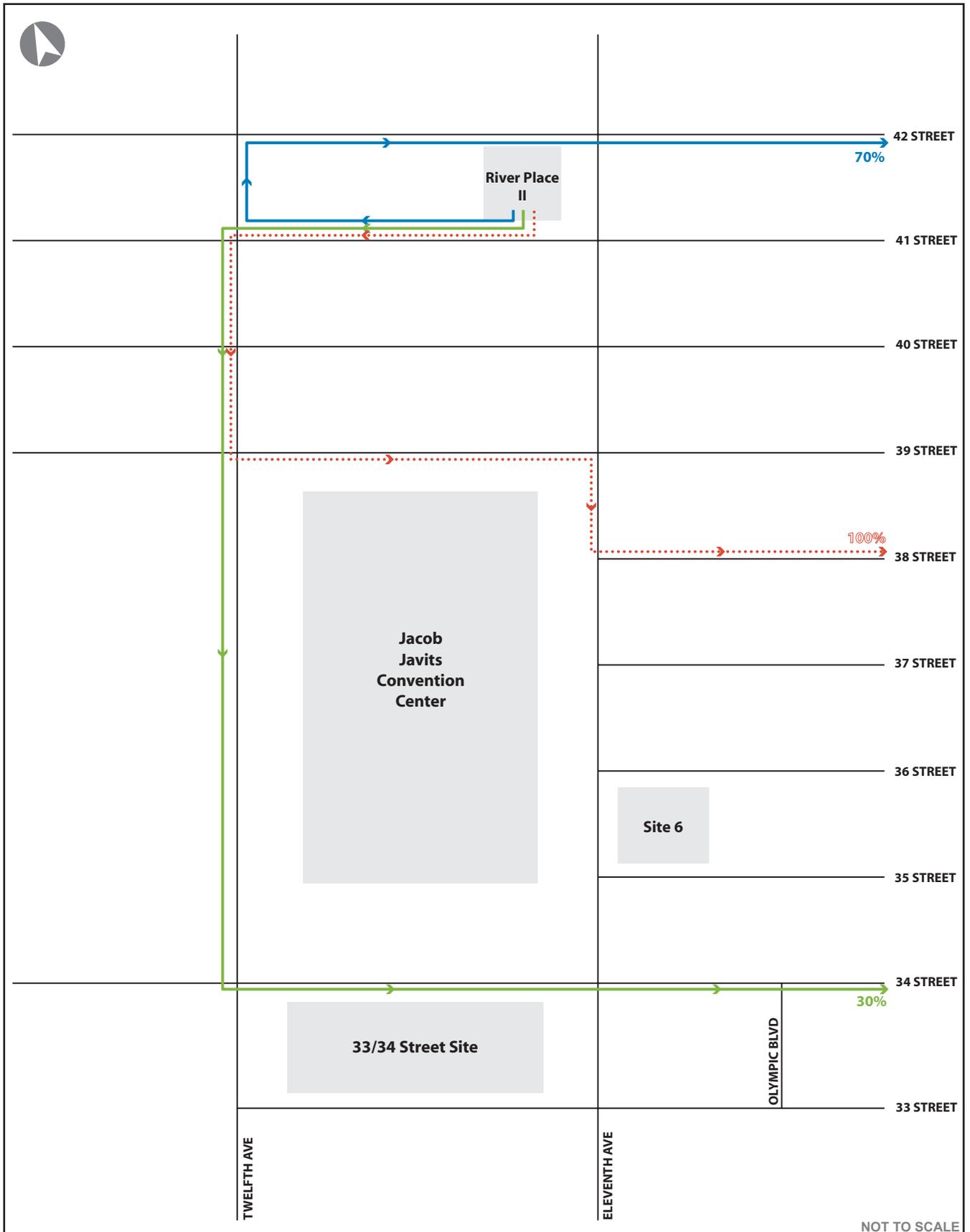




NOT TO SCALE

FIGURE 3: RIVER PLACE II - FGEIS TAXI ENTRY/EXIT ROUTE





NOT TO SCALE

FIGURE 4: RIVER PLACE II - FGEIS & PROPOSED MODIFIED EXIT ROUTE DUE TO CLOSURE OF 39TH STREET

- ..... ORIGINAL MOVEMENT
- NEW MOVEMENT

NOTE: Only Auto trips rerouted that used 39TH Street.



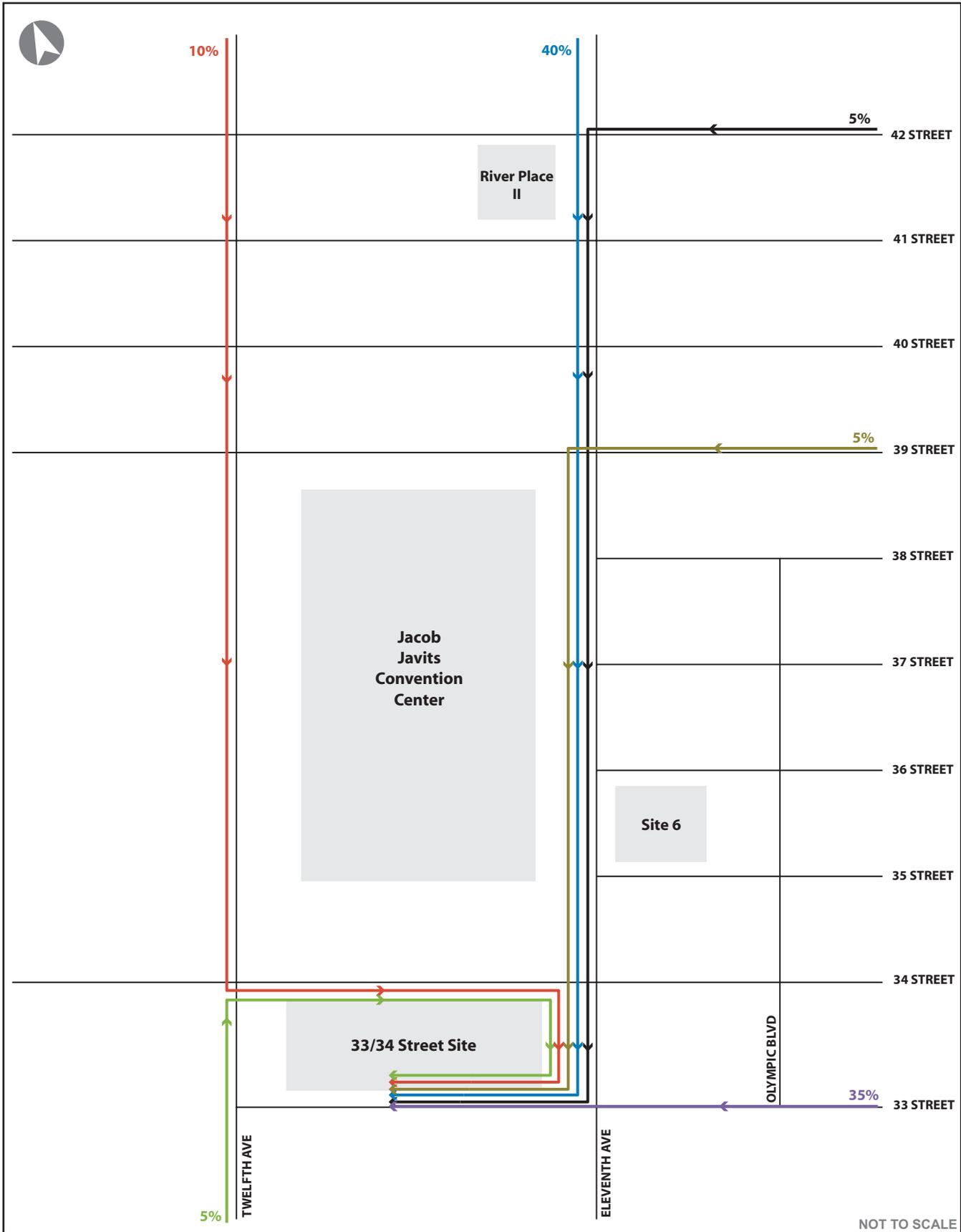


FIGURE 5: 33RD/34TH STREET RESIDENTIAL SITE - ENTRY ROUTE (CARS & TAXIS)



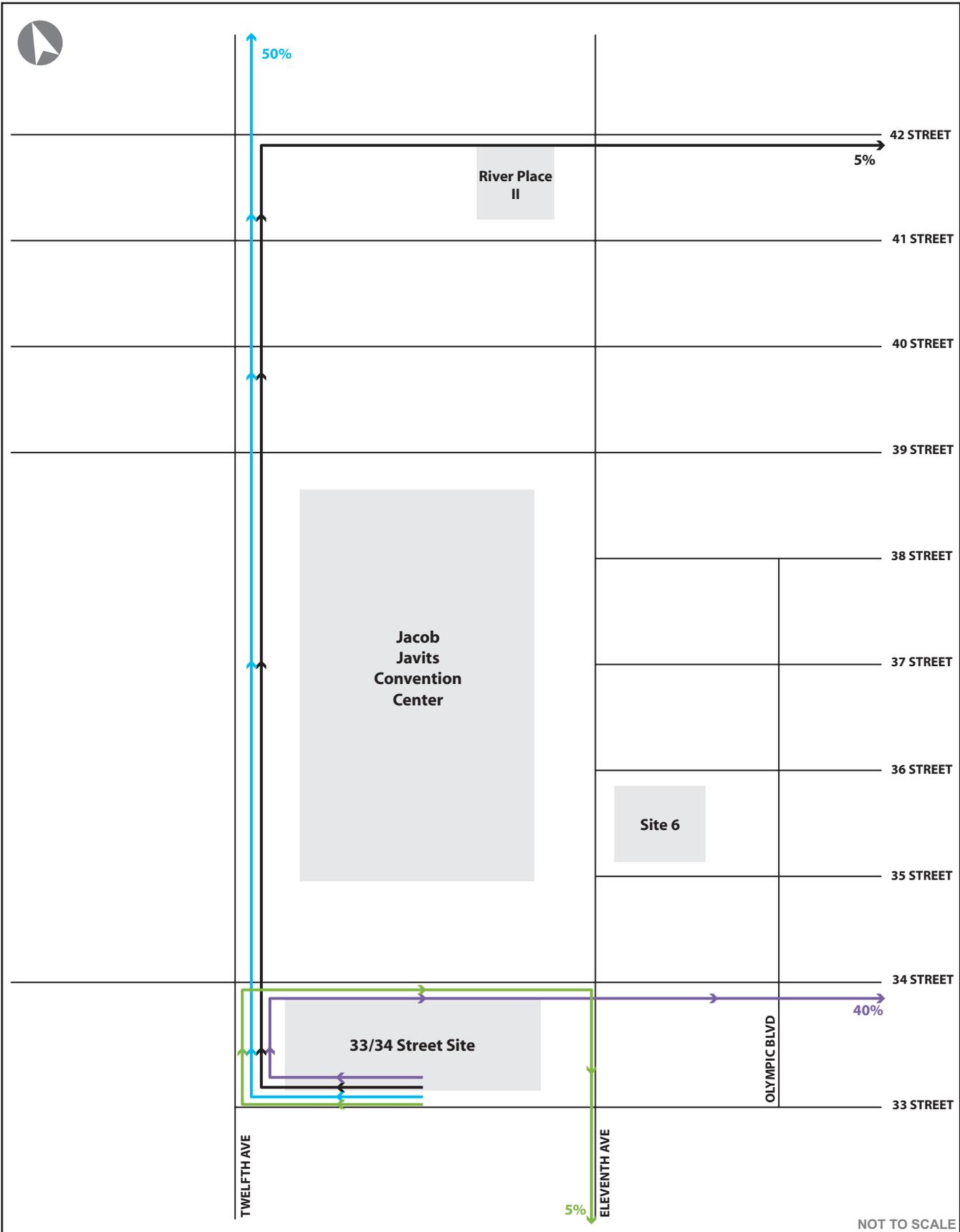


FIGURE 6: 33RD/34TH STREET RESIDENTIAL SITE - EXIT ROUTE (CARS & TAXIS)



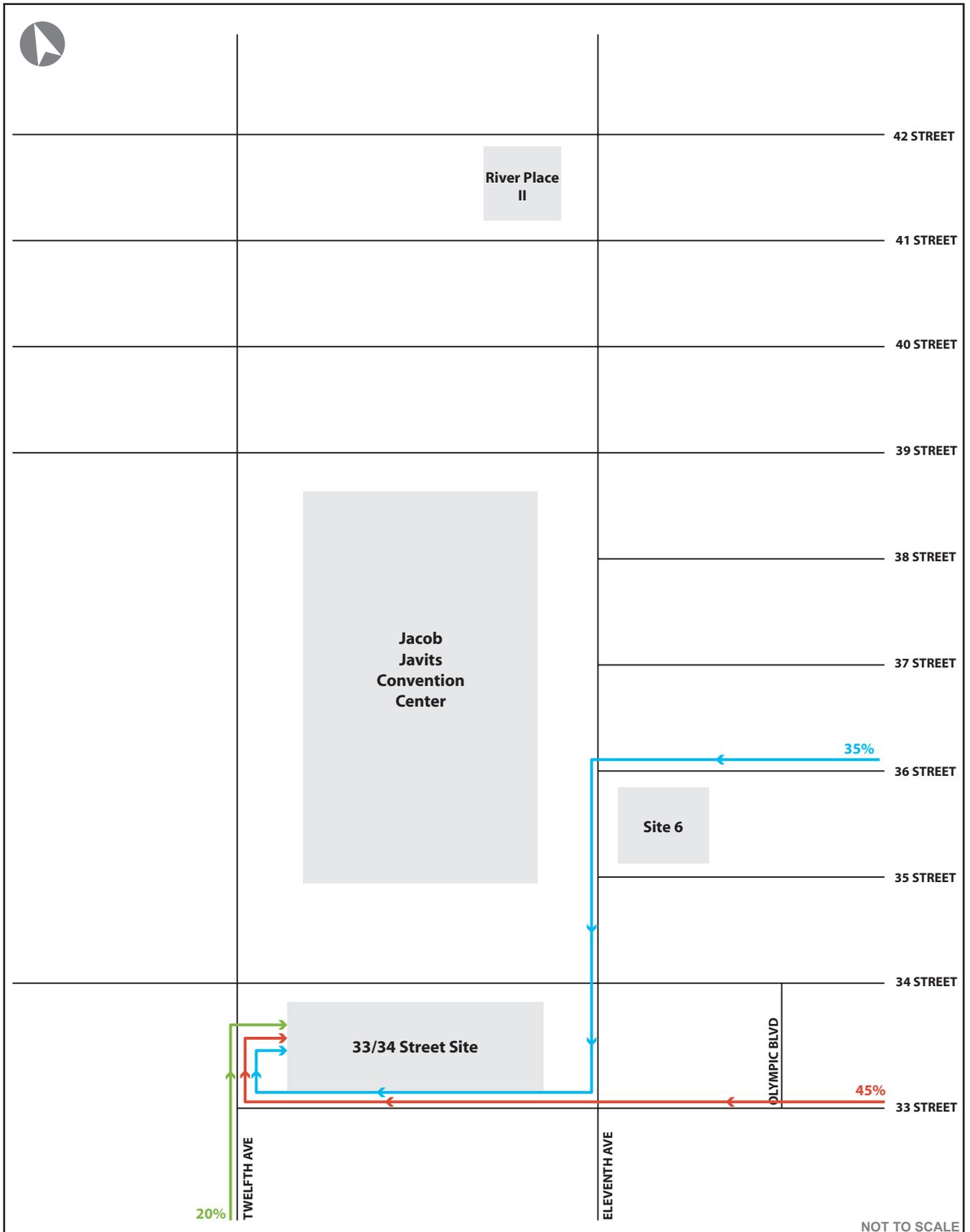


FIGURE 7: CONVENTION CENTER SITE - FGEIS TRUCK ENTRY ROUTE

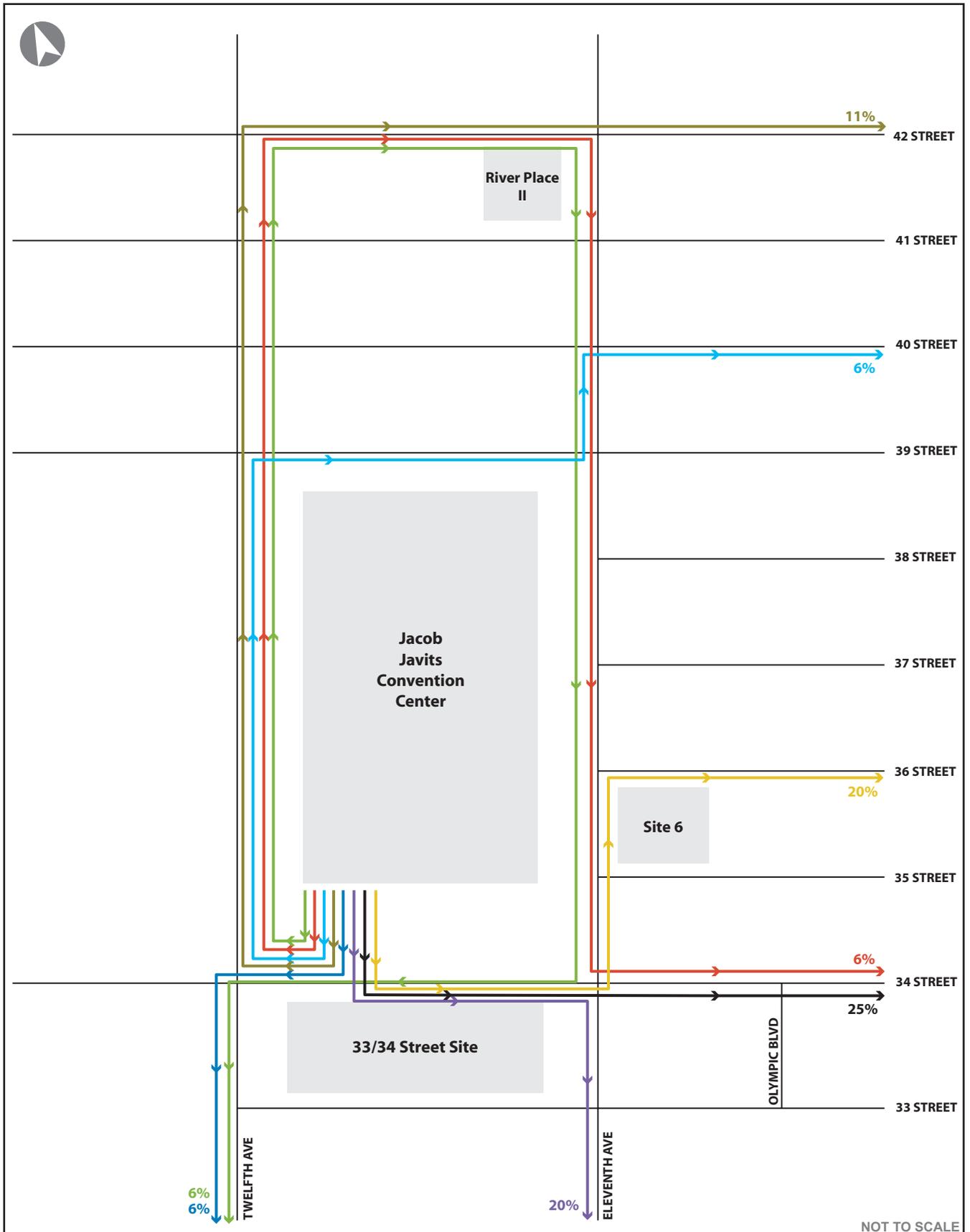


FIGURE 8: CONVENTION CENTER SITE - FGEIS TRUCK EXIT ROUTE



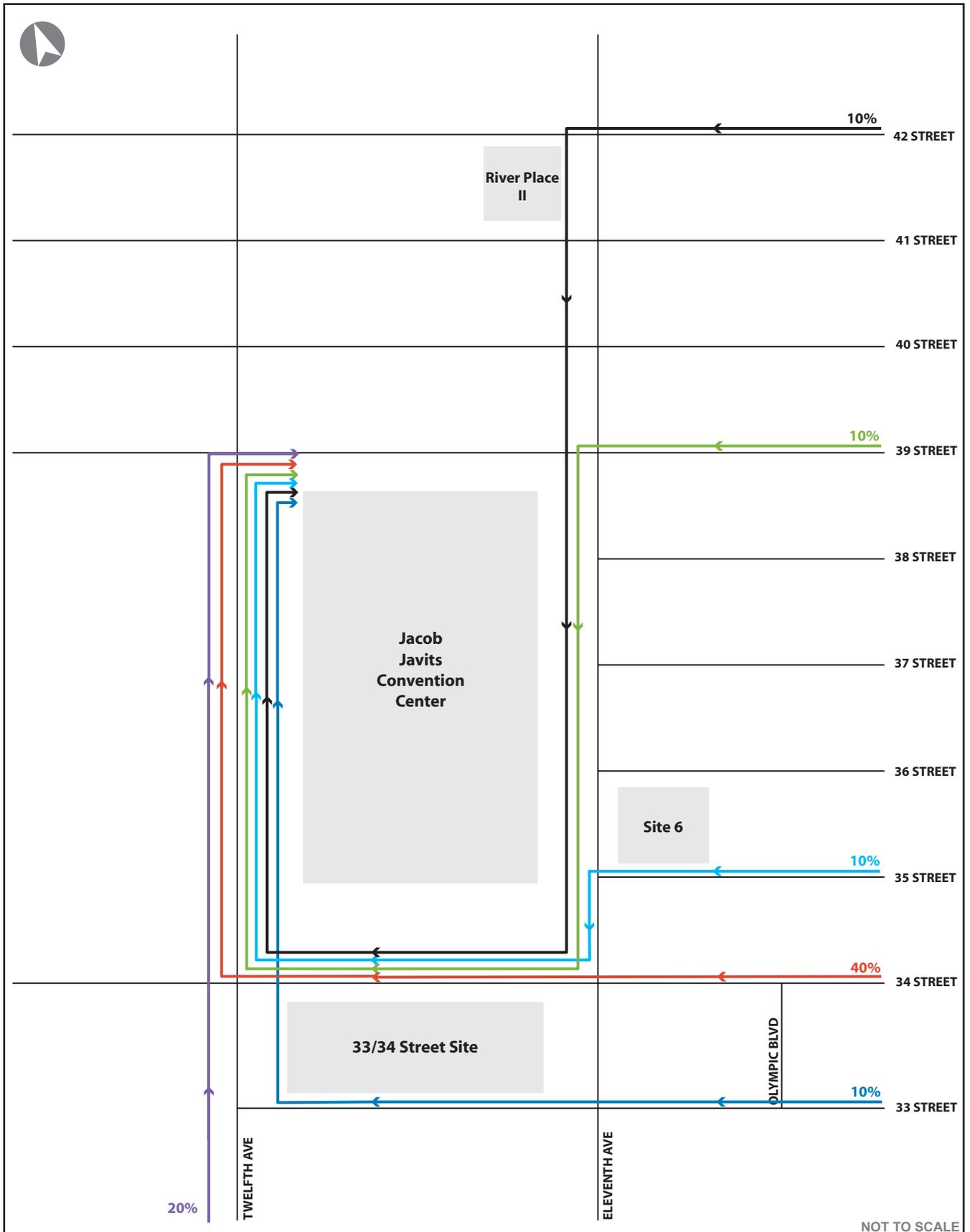


FIGURE 9: CONVENTION CENTER SITE - REROUTED TRUCK ENTRY ROUTE



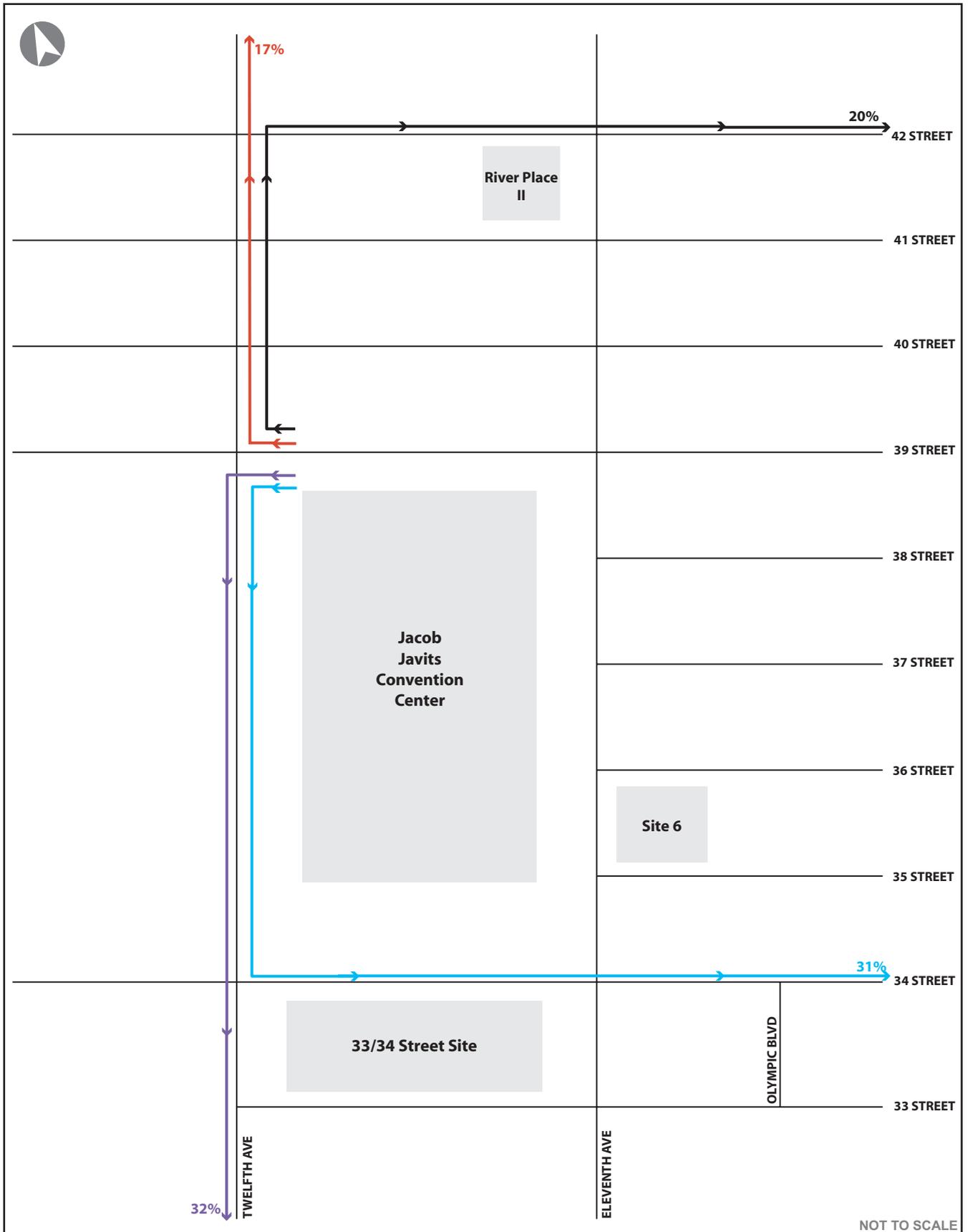


FIGURE 10: CONVENTION CENTER SITE - REROUTED TRUCK EXIT ROUTE



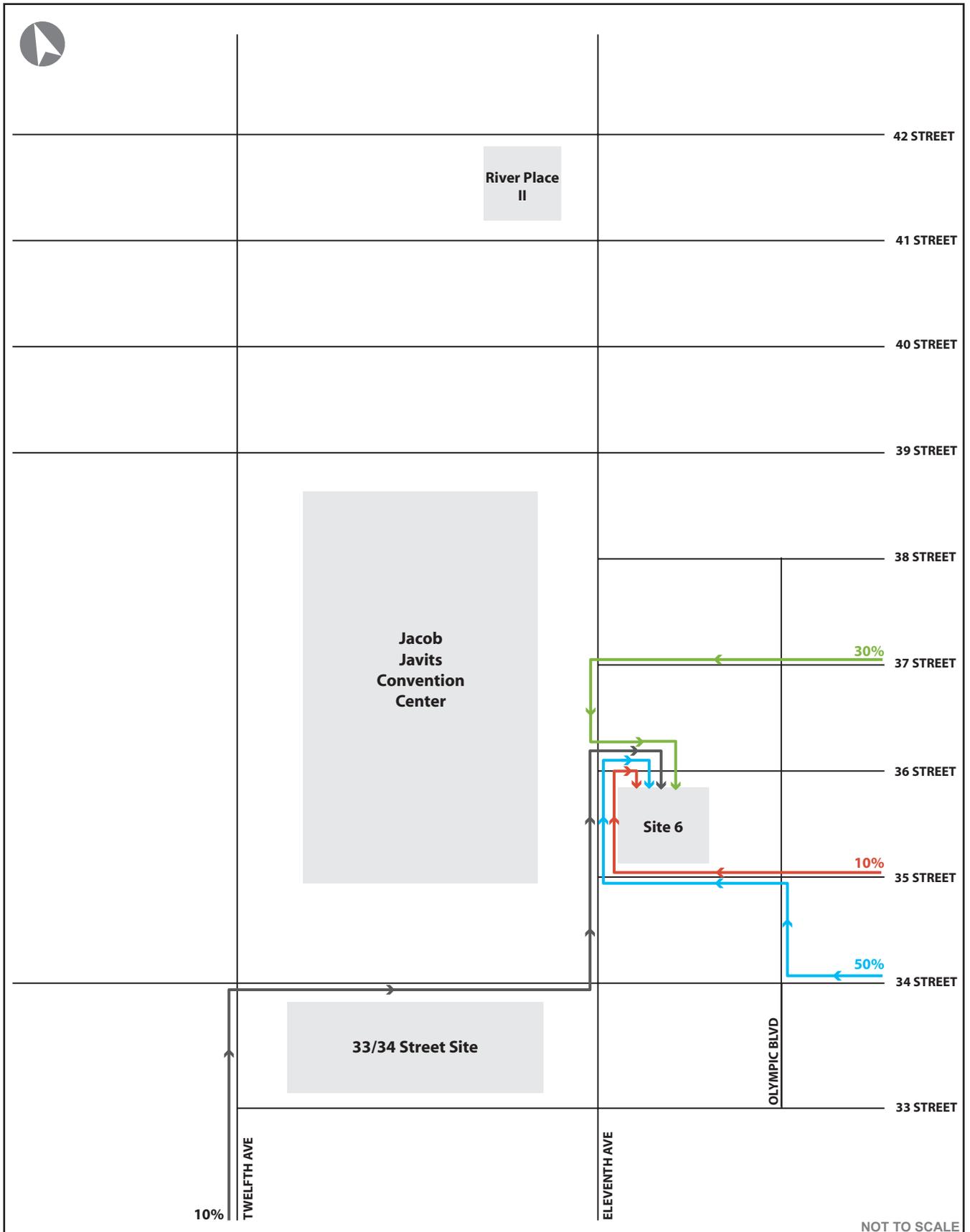


FIGURE 11: SITE 6 - FGEIS TRUCK ENTRY ROUTE



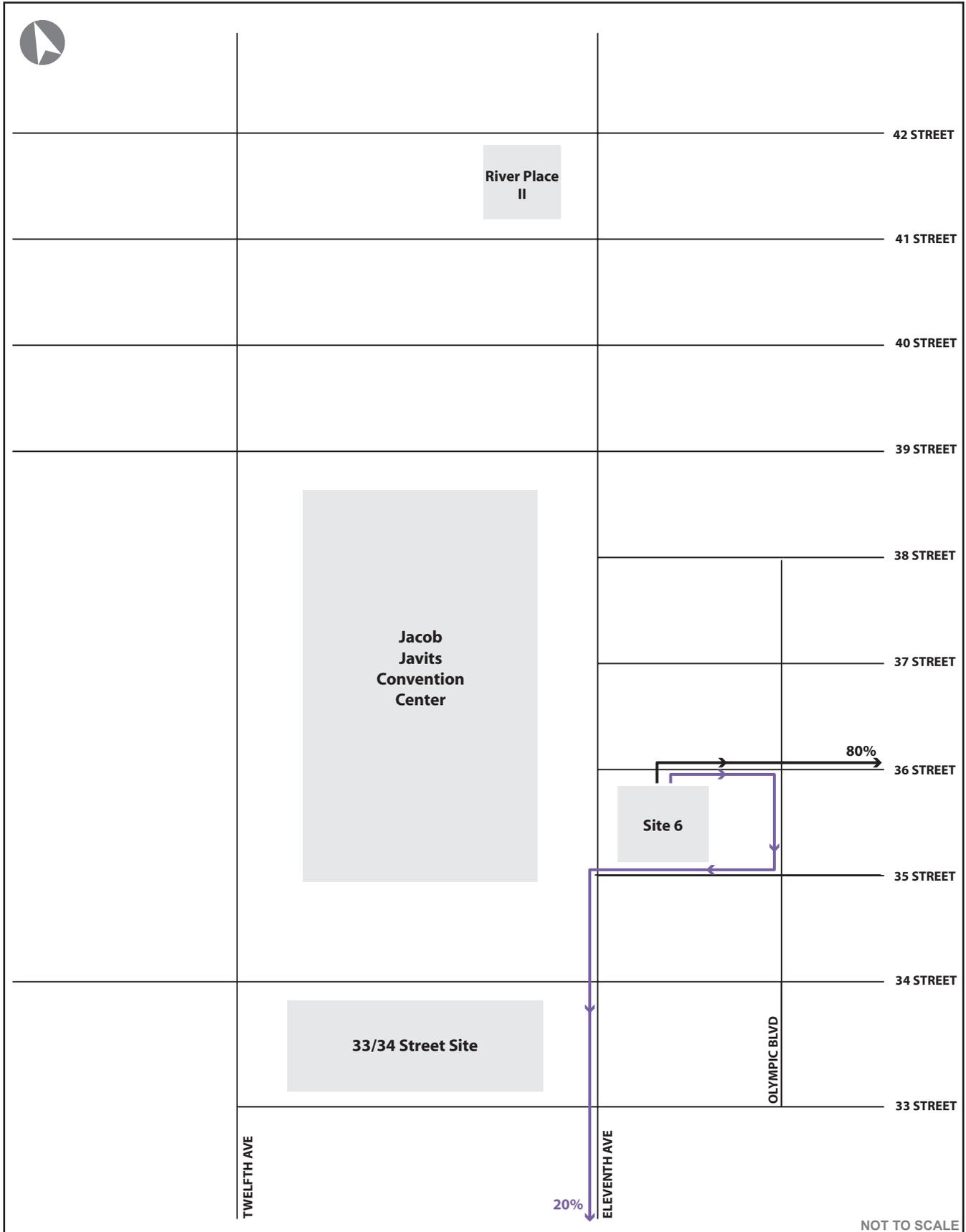


FIGURE 12: SITE 6 - FGEIS TRUCK EXIT ROUTE



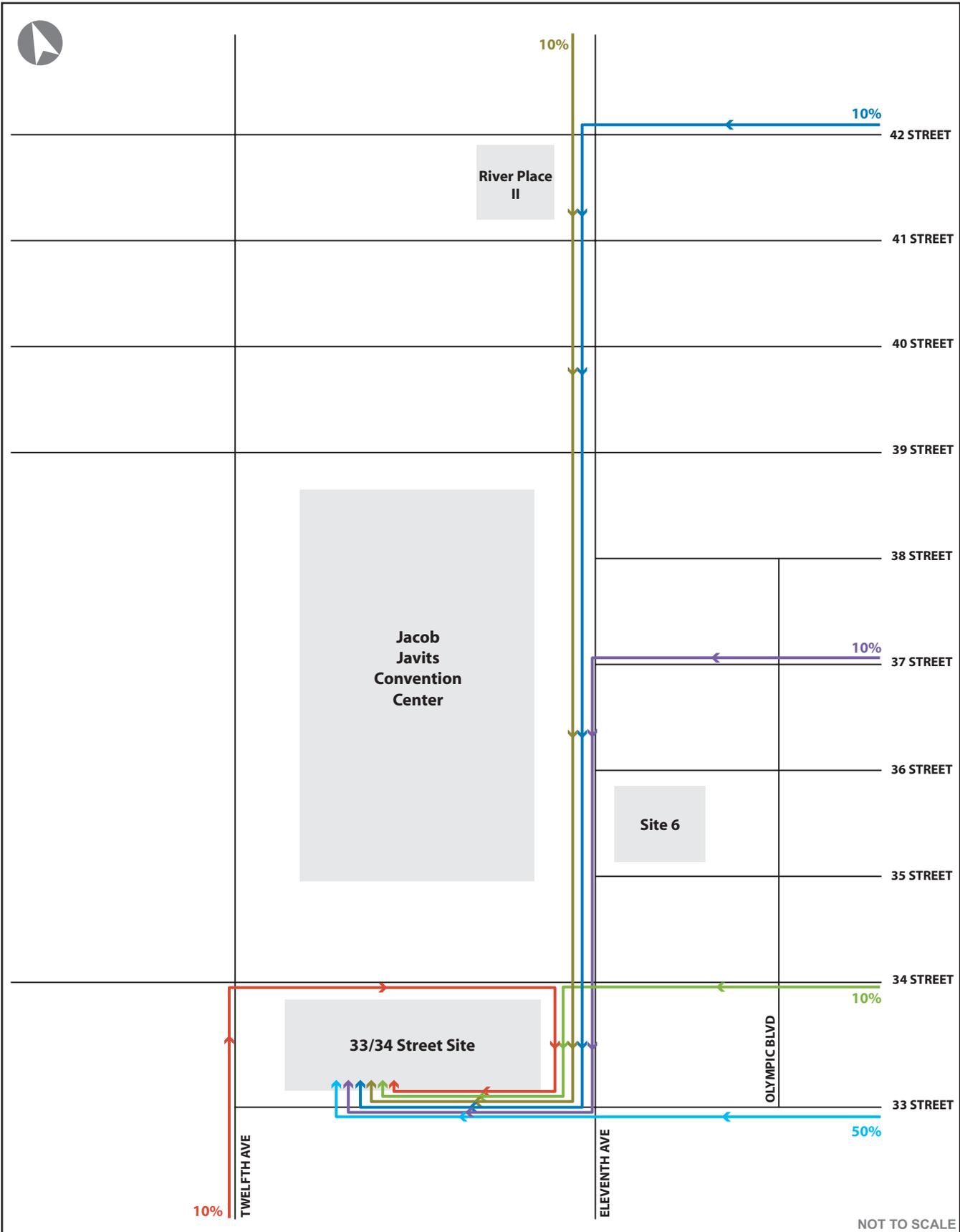
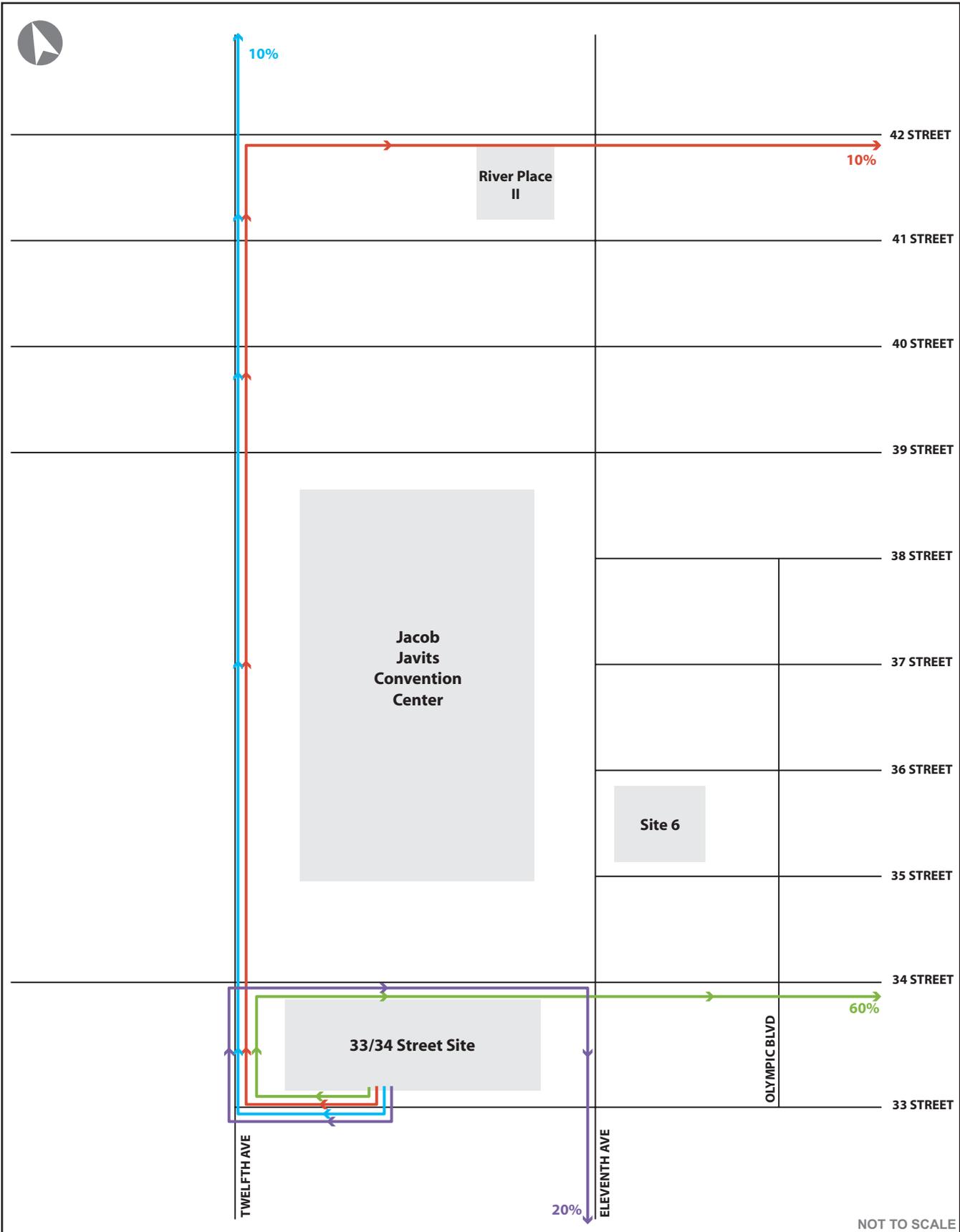


FIGURE 13: 33RD/34TH STREET COMMERCIAL SITE - REROUTED TRUCK ENTRY ROUTE





NOT TO SCALE

FIGURE 14: 33RD/34TH STREET COMMERCIAL SITE - REROUTED TRUCK EXIT ROUTE



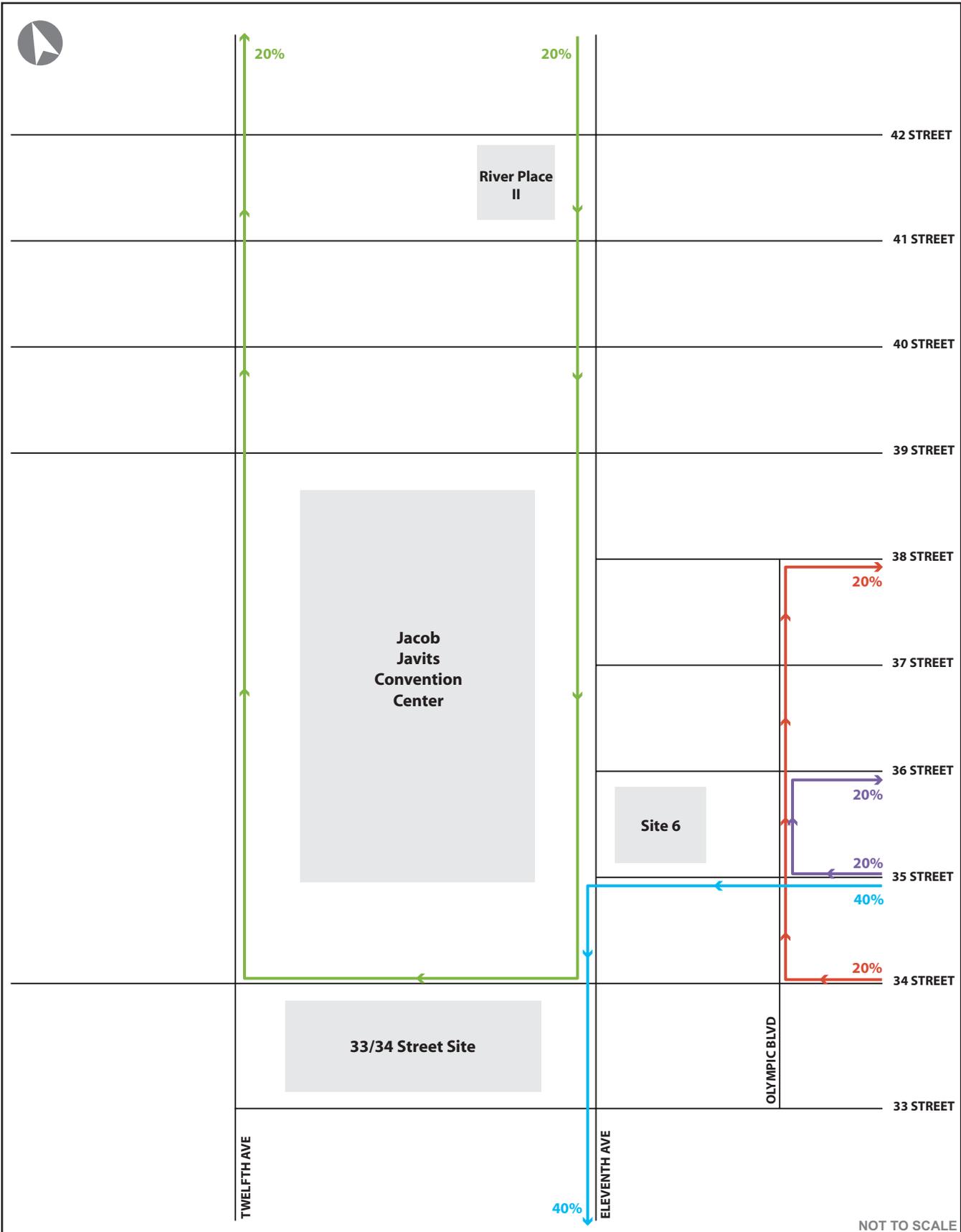


FIGURE 15: SITE 6 - FGEIS TAXI ENTRY/EXIT ROUTE



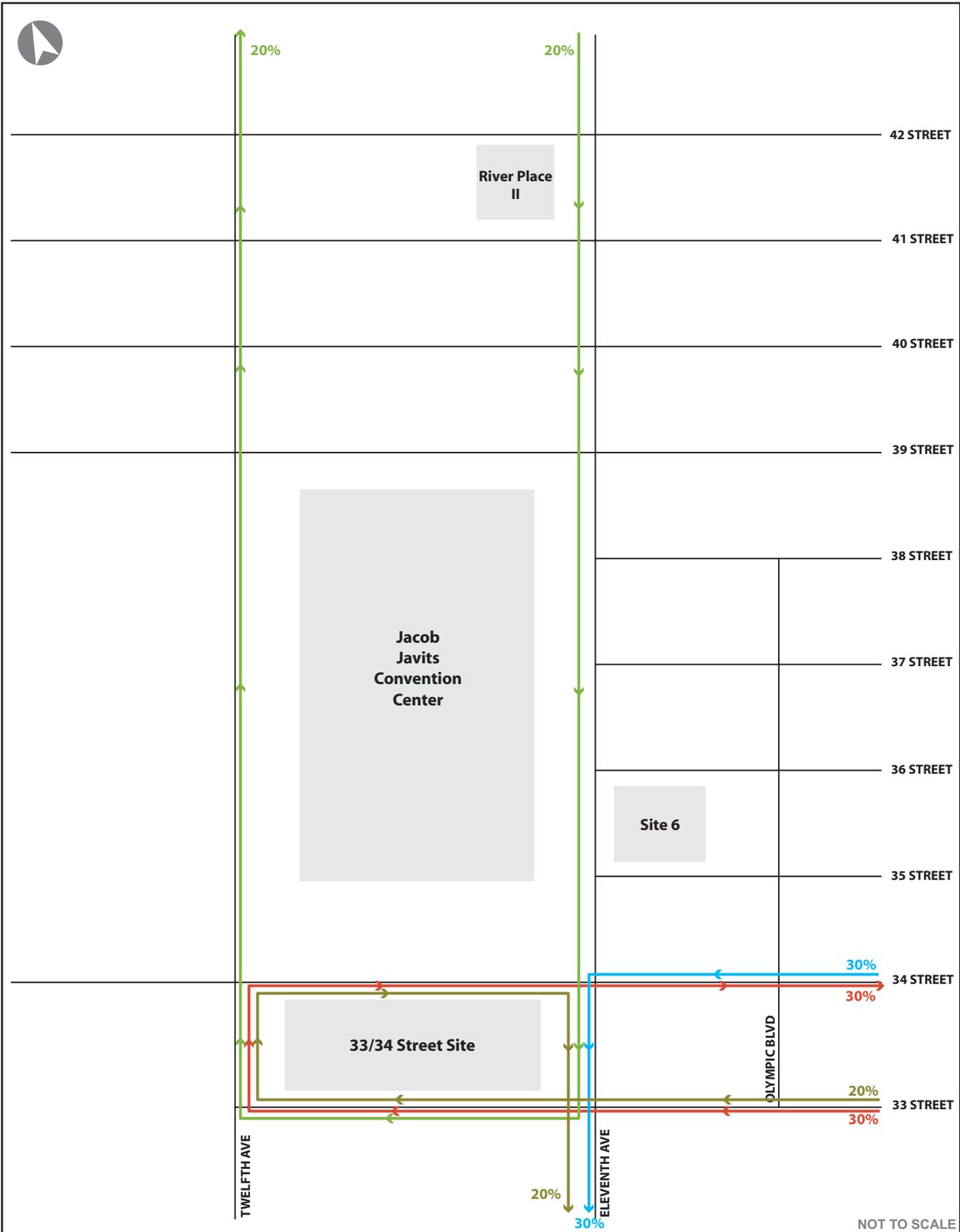


FIGURE 16: 33RD/34TH STREET COMMERCIAL SITE - REROUTED TAXI ENTRY/EXIT ROUTE



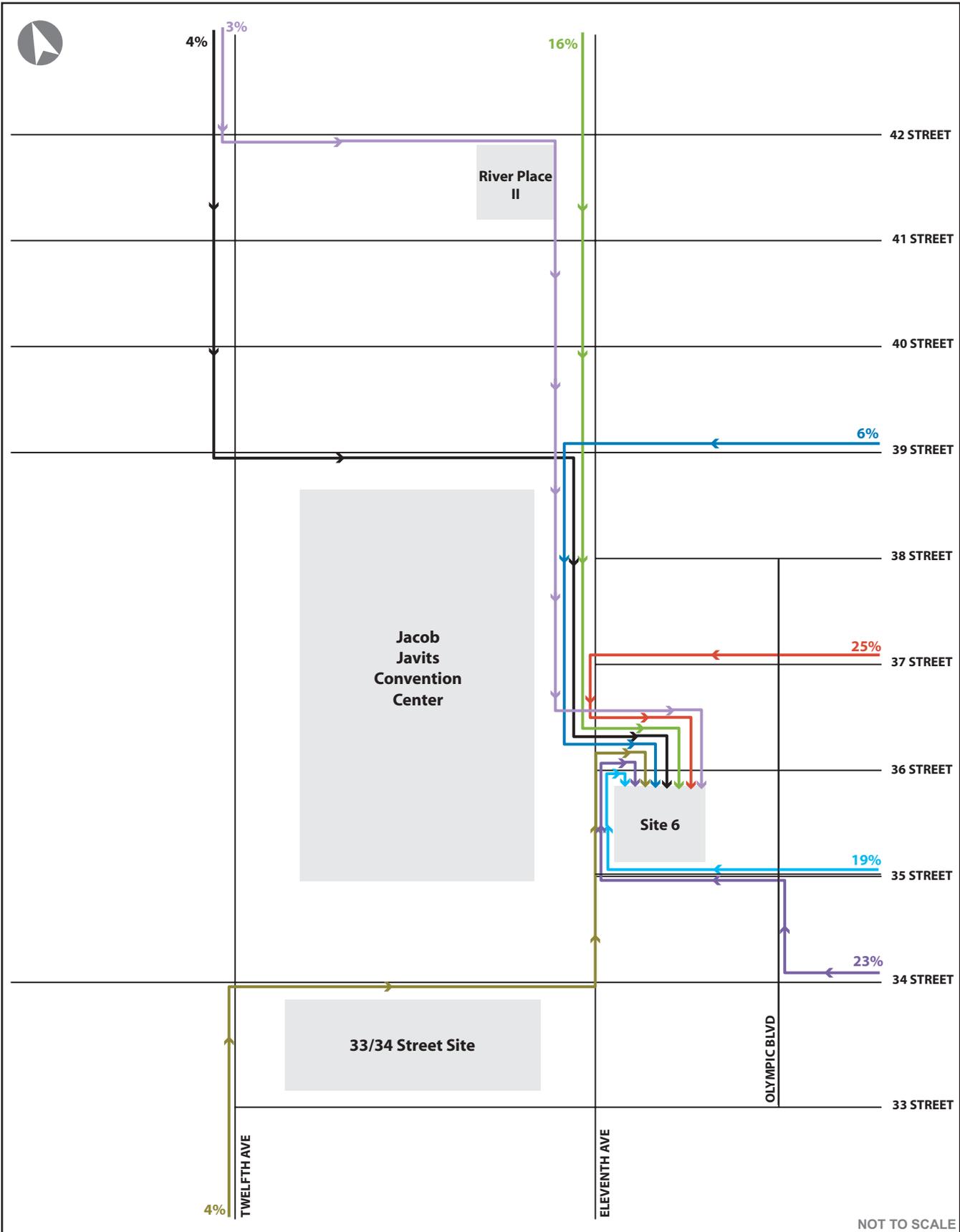


FIGURE 17: SITE 6 - FGEIS AUTO ENTRY ROUTE



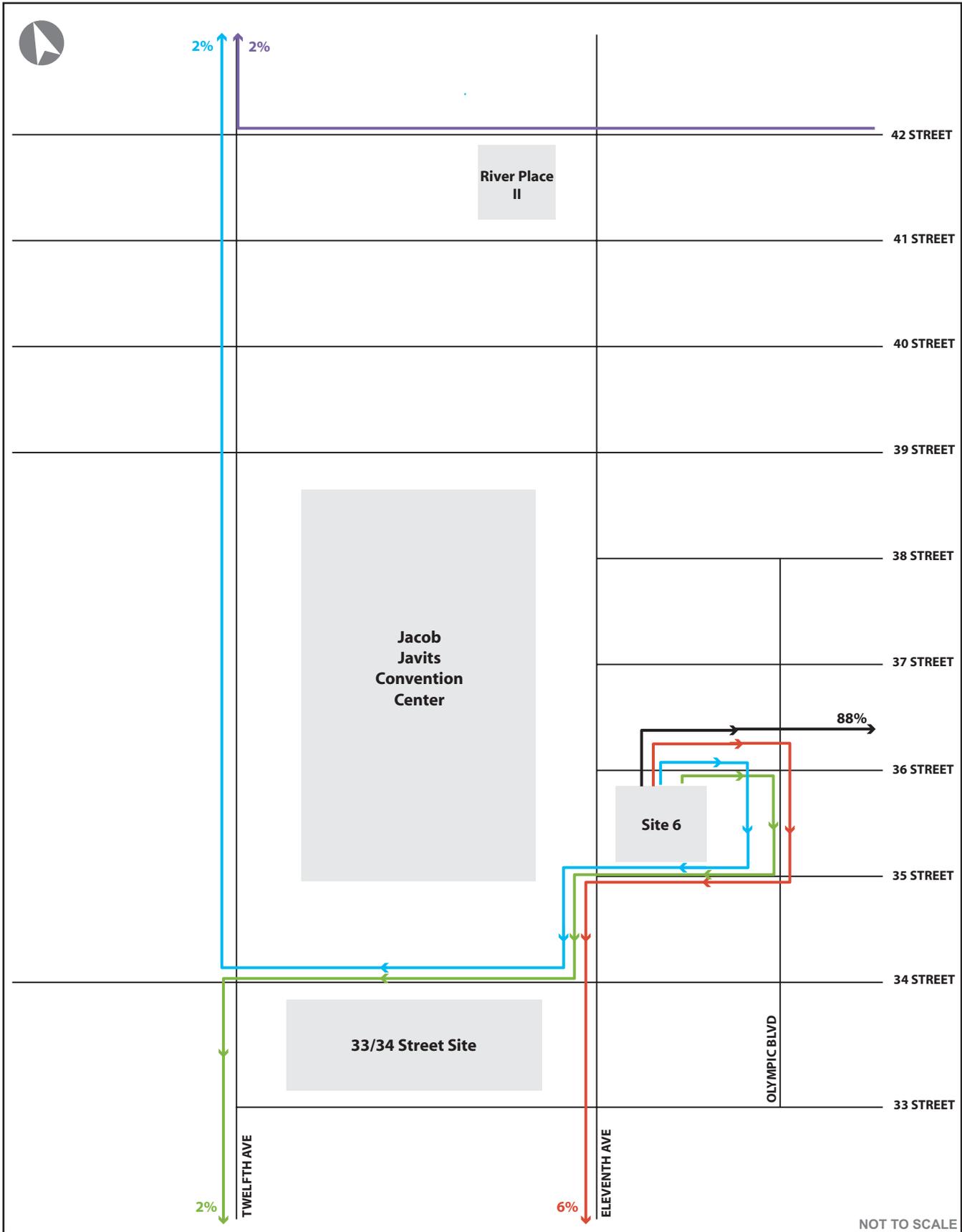


FIGURE 18: SITE 6 - FGEIS AUTO EXIT ROUTE



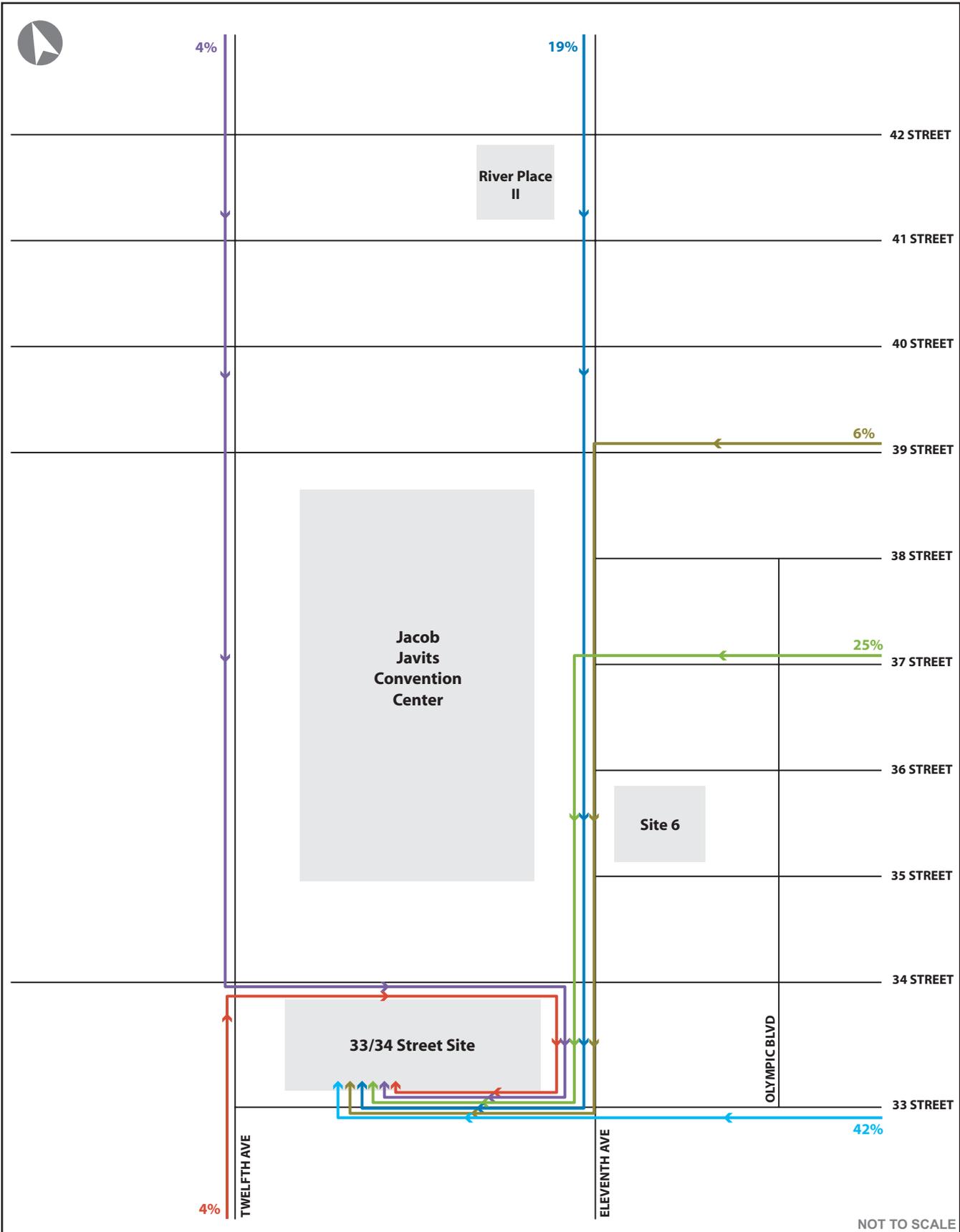


FIGURE 19: 33RD/34TH STREET COMMERCIAL SITE - REROUTED AUTO ENTRY ROUTE



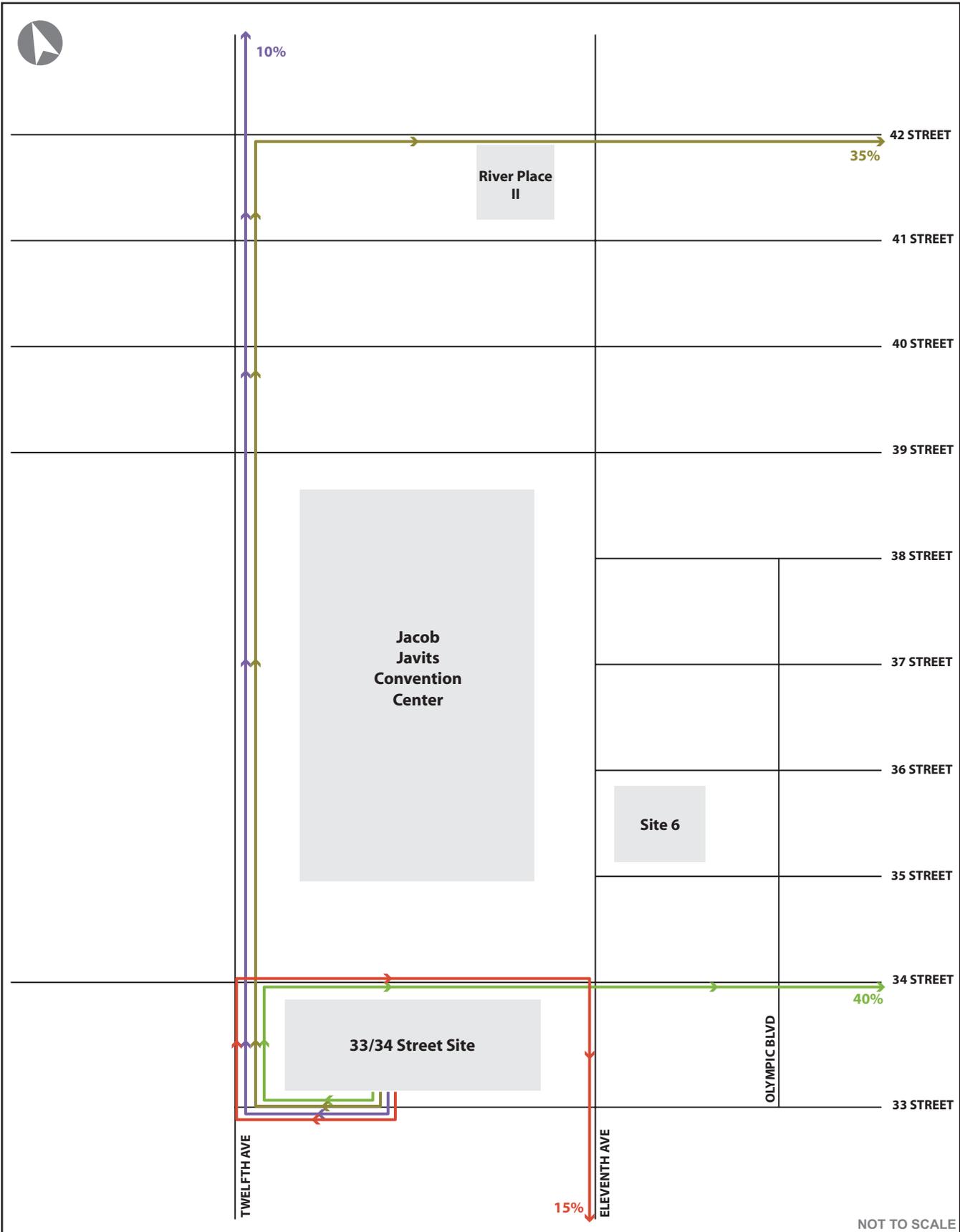


FIGURE 20: 33RD/34TH STREET COMMERCIAL SITE - REROUTED AUTO EXIT ROUTE



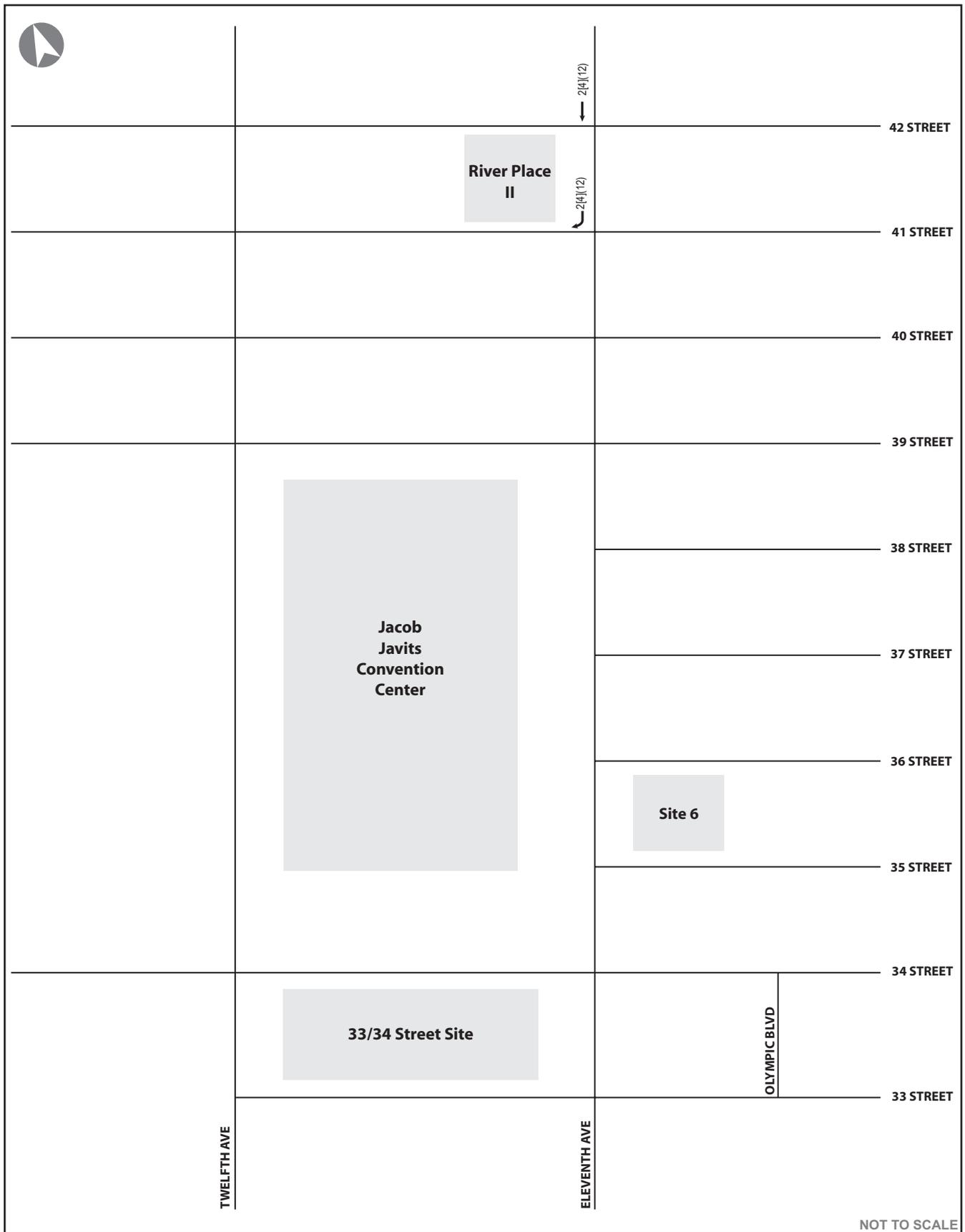


FIGURE 21: 2010 - FGEIS RIVER PLACE II AUTO VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



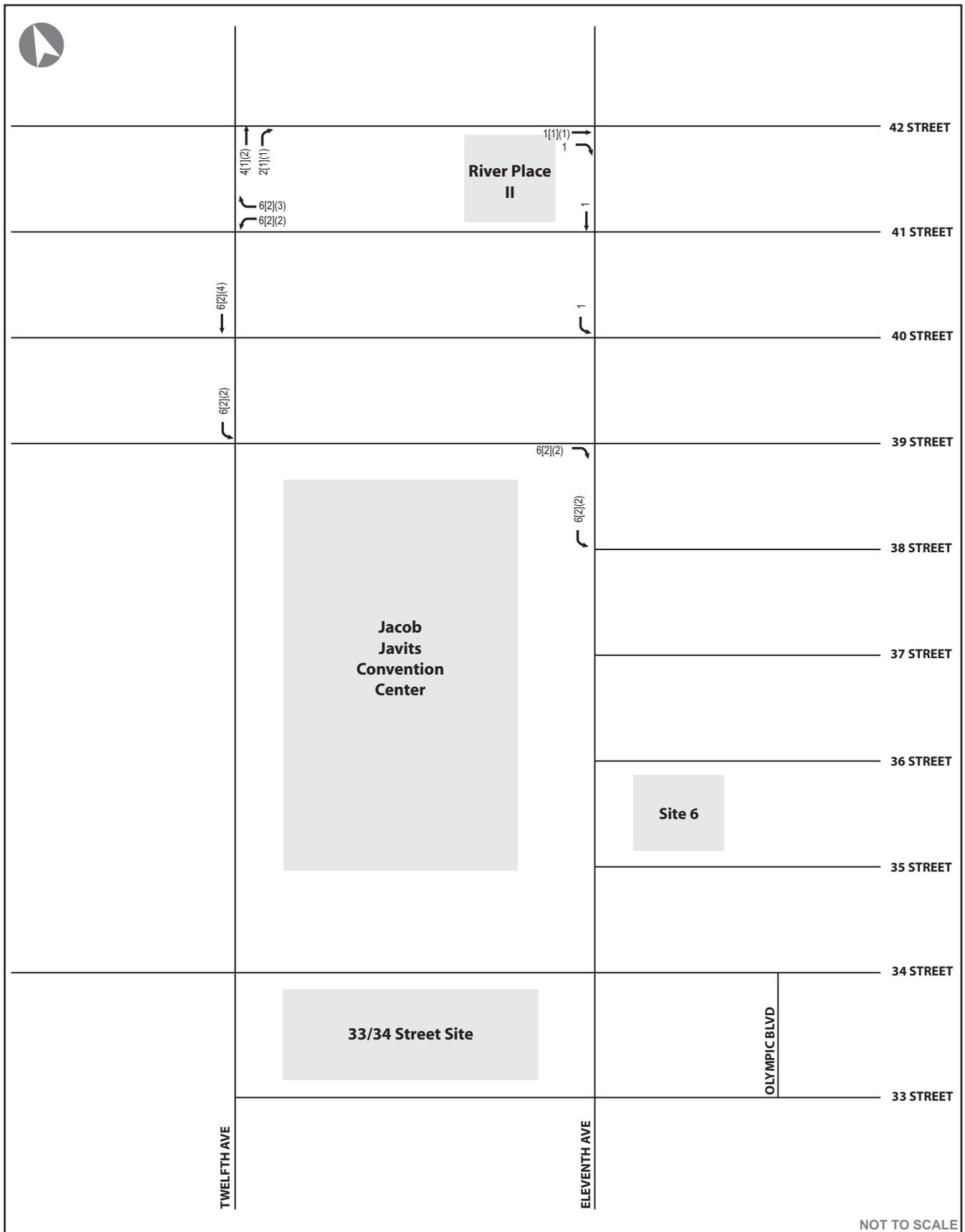


FIGURE 22: 2010 - FGEIS RIVER PLACE II AUTO VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



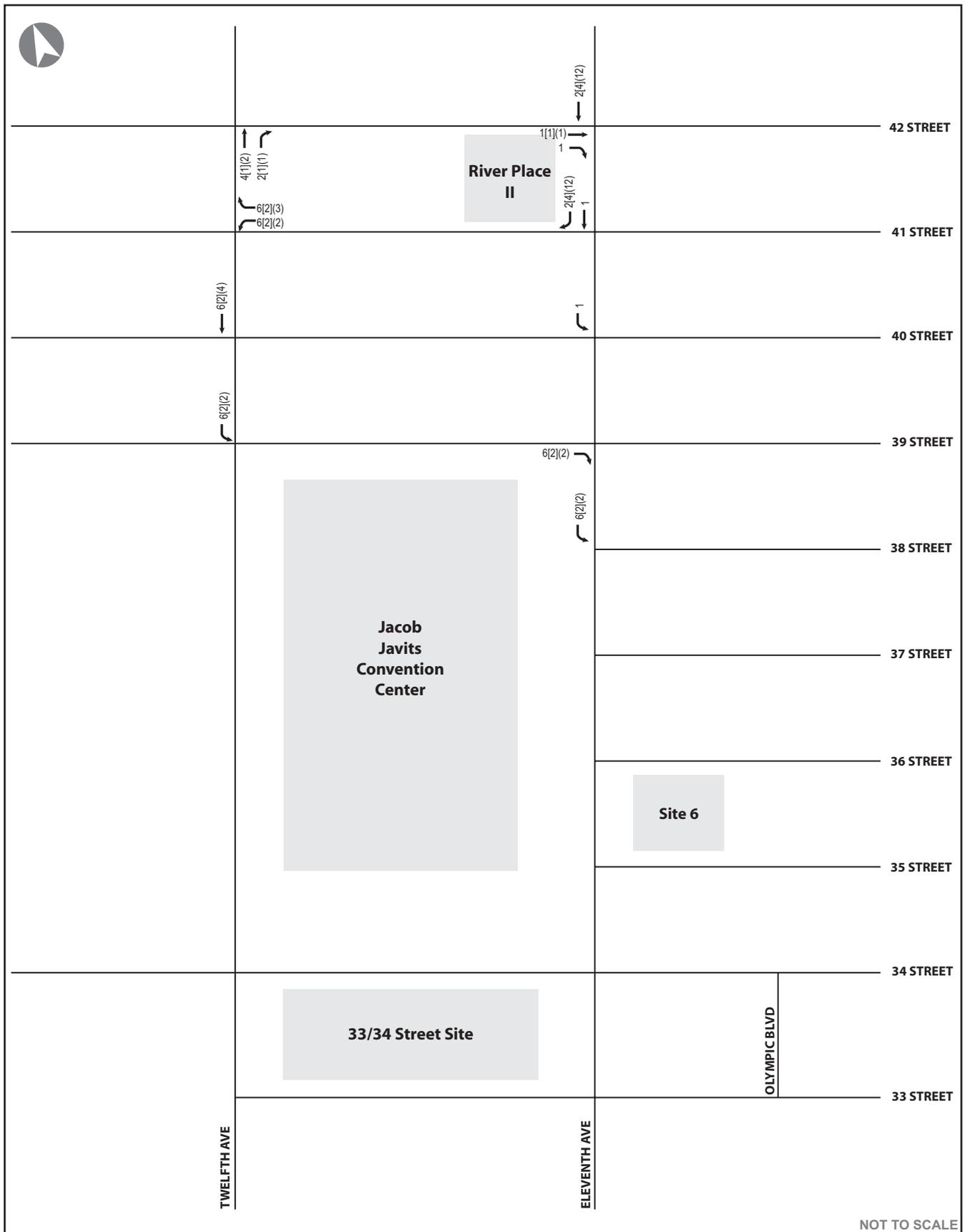


FIGURE 23: 2010 - FGEIS RIVER PLACE II AUTO VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



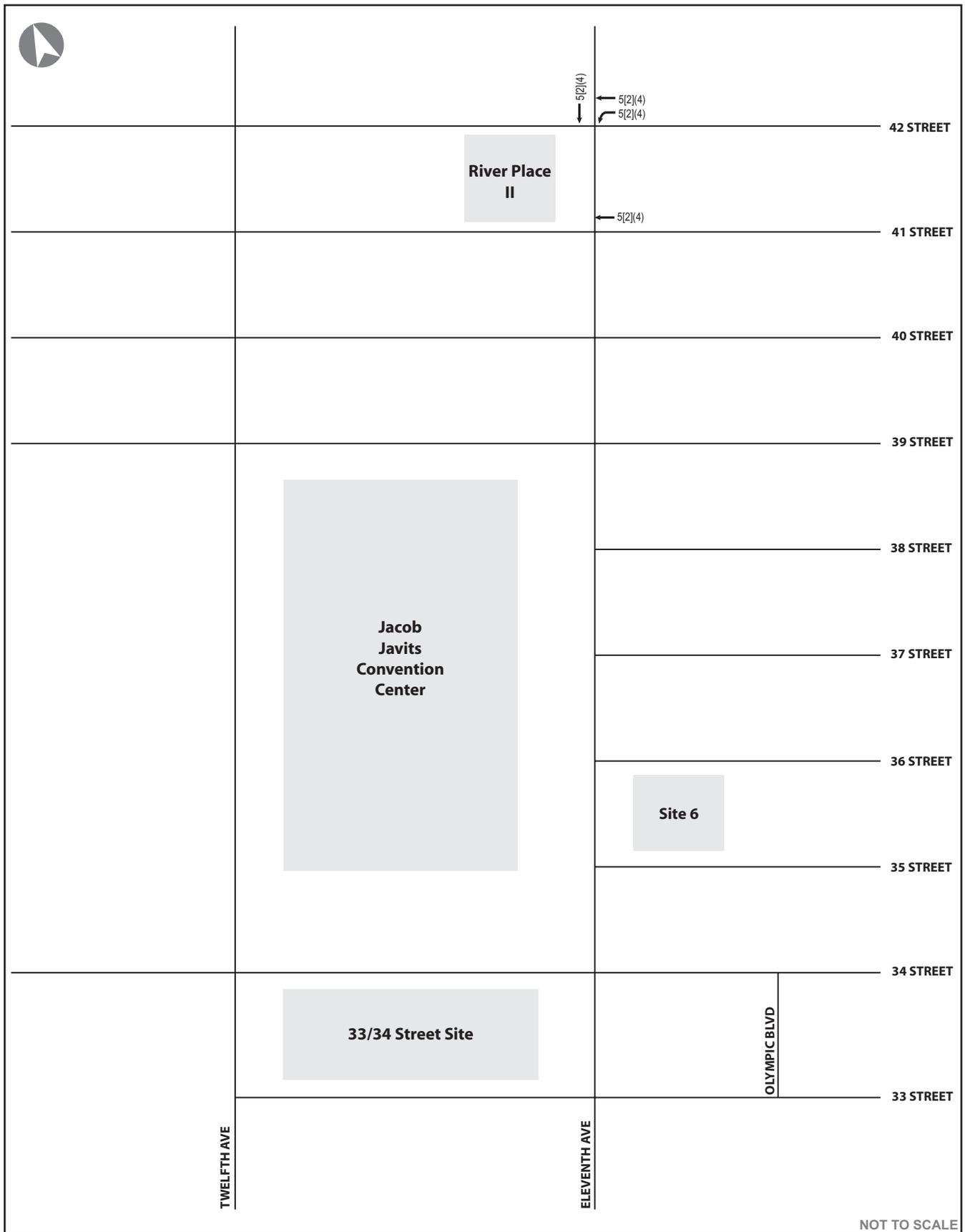


FIGURE 24: 2010 - FGEIS RIVER PLACE II TAXI VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



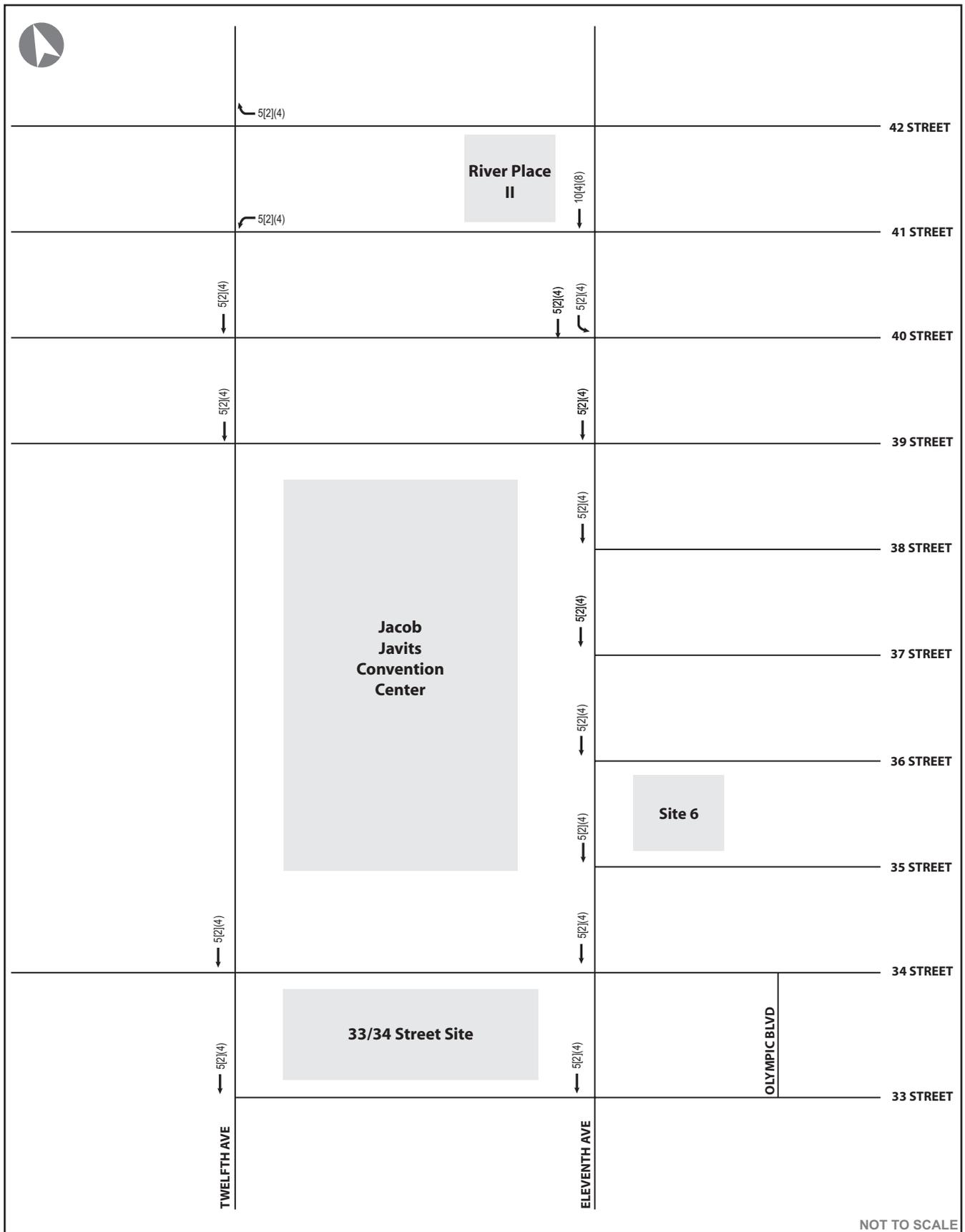
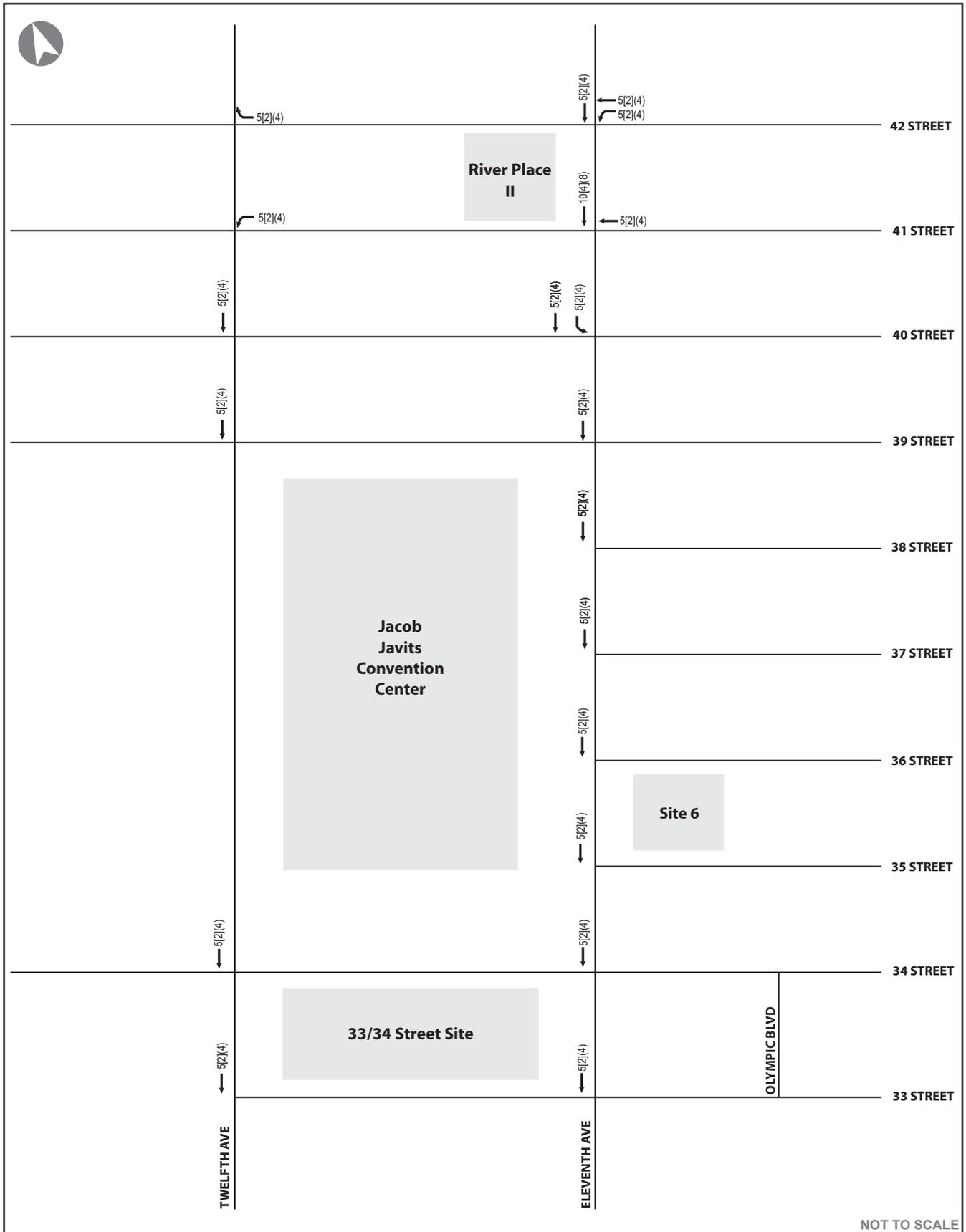


FIGURE 25: 2010 - FGEIS RIVER PLACE II TAXI VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 26: 2010 - FGEIS RIVER PLACE II TAXI VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



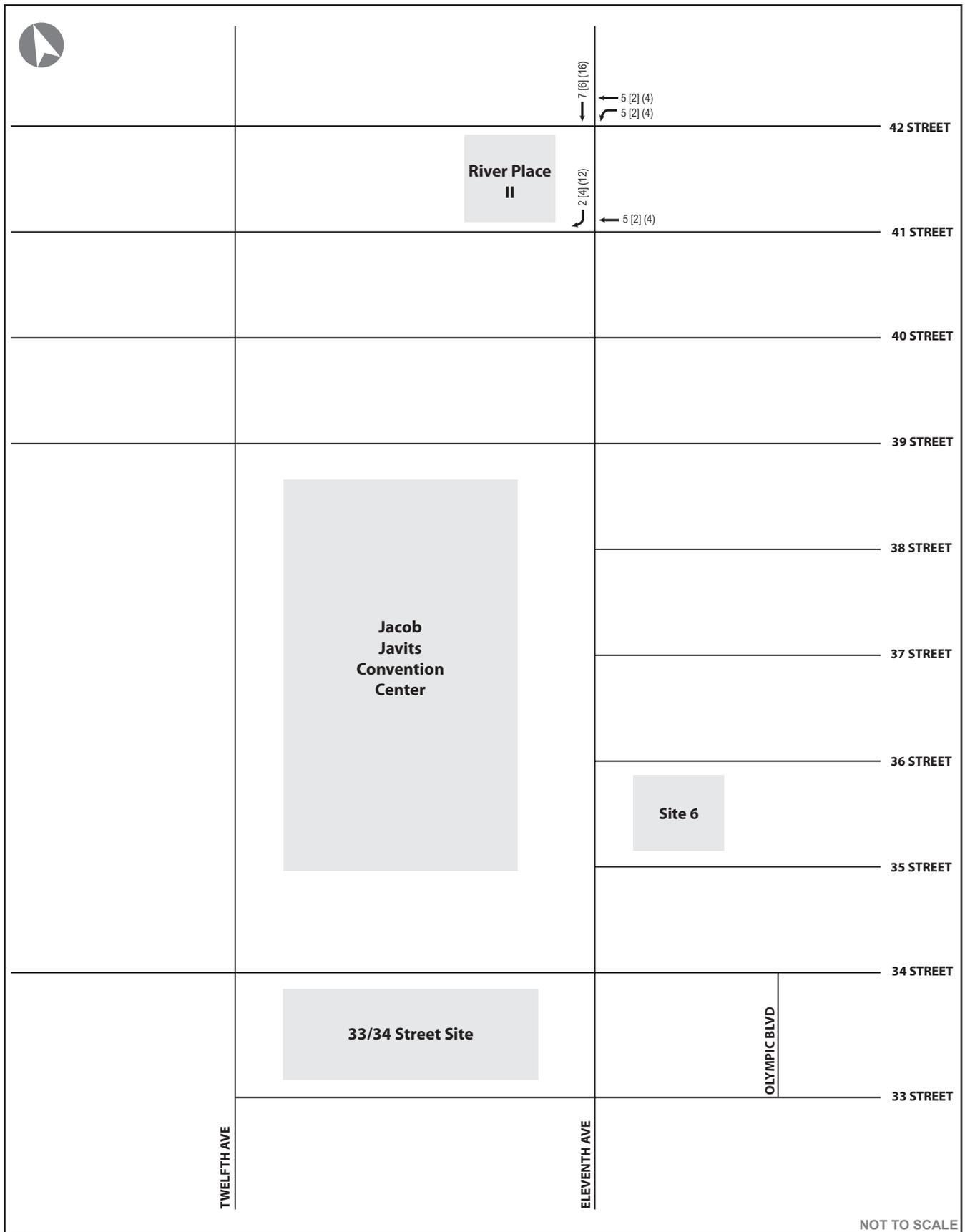
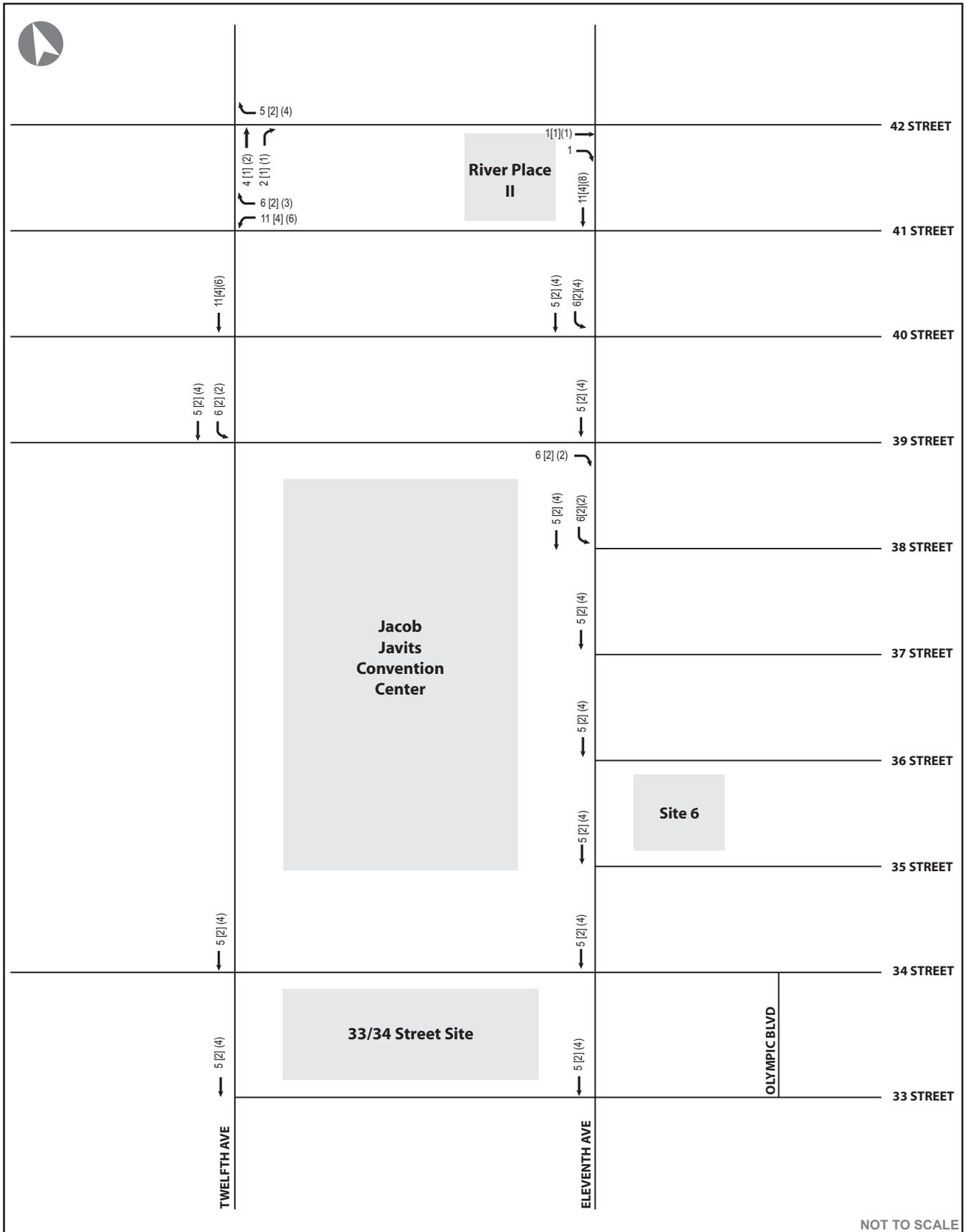


FIGURE 27: 2010 - FGEIS RIVER PLACE II AUTO AND TAXI VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 28: 2010 - FGEIS RIVER PLACE II TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



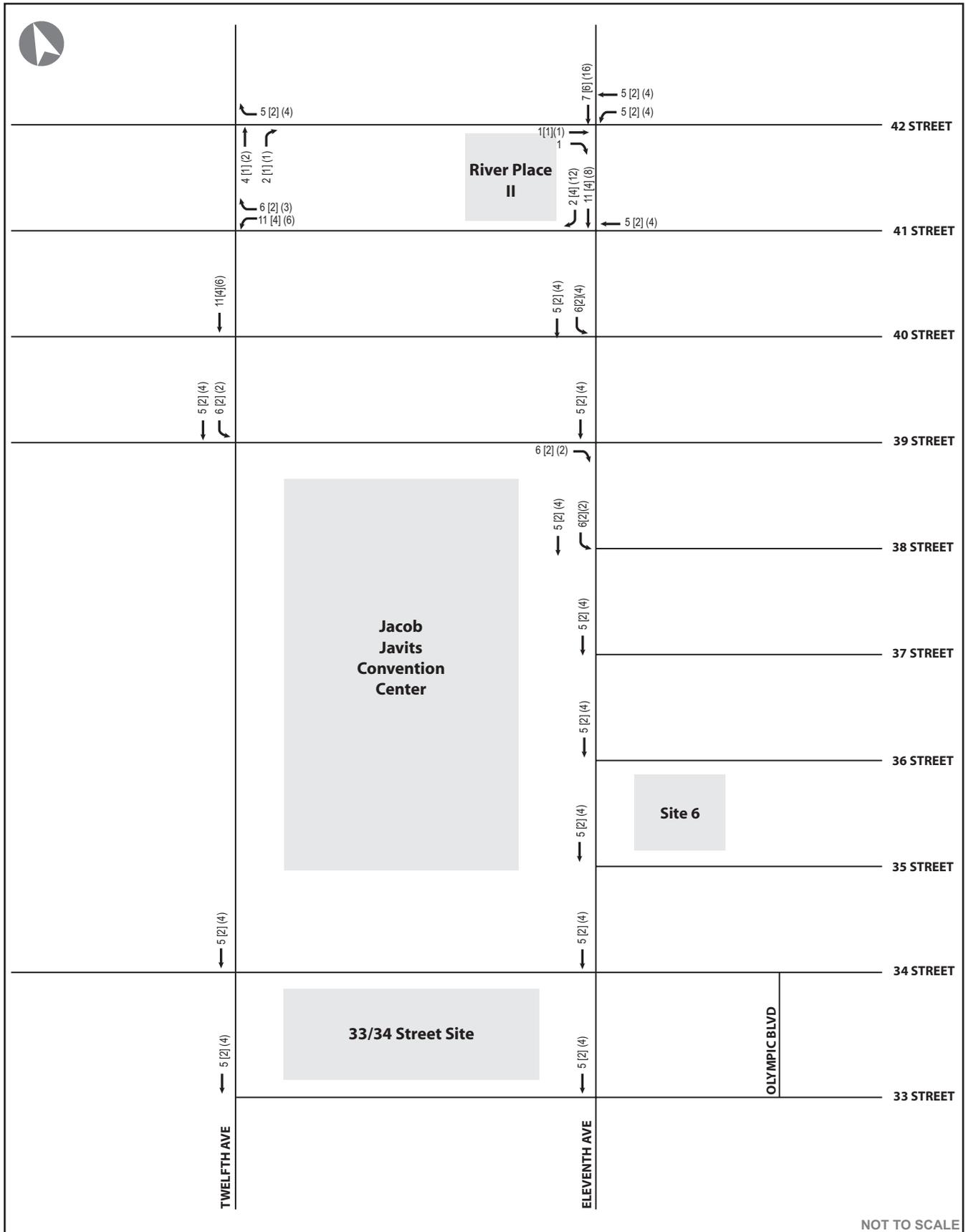


FIGURE 29: 2010 - FGEIS RIVER PLACE II TRAFFIC VOLUMES (TOTAL)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



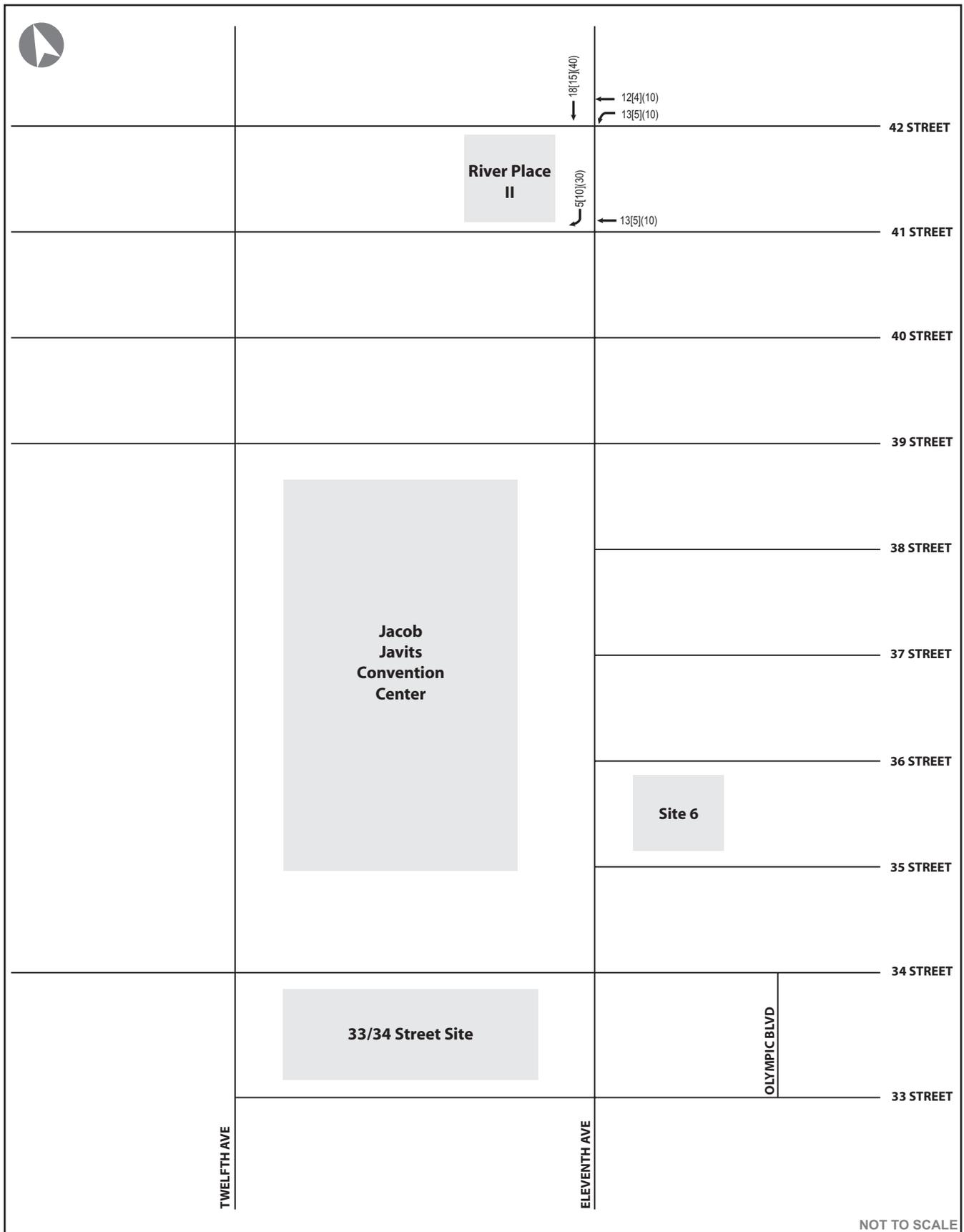


FIGURE 30: 2010 - MODIFIED RIVER PLACE II TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

Note: River Place II volumes rerouted due to assumed closure of 39th Street + 817 more residential units



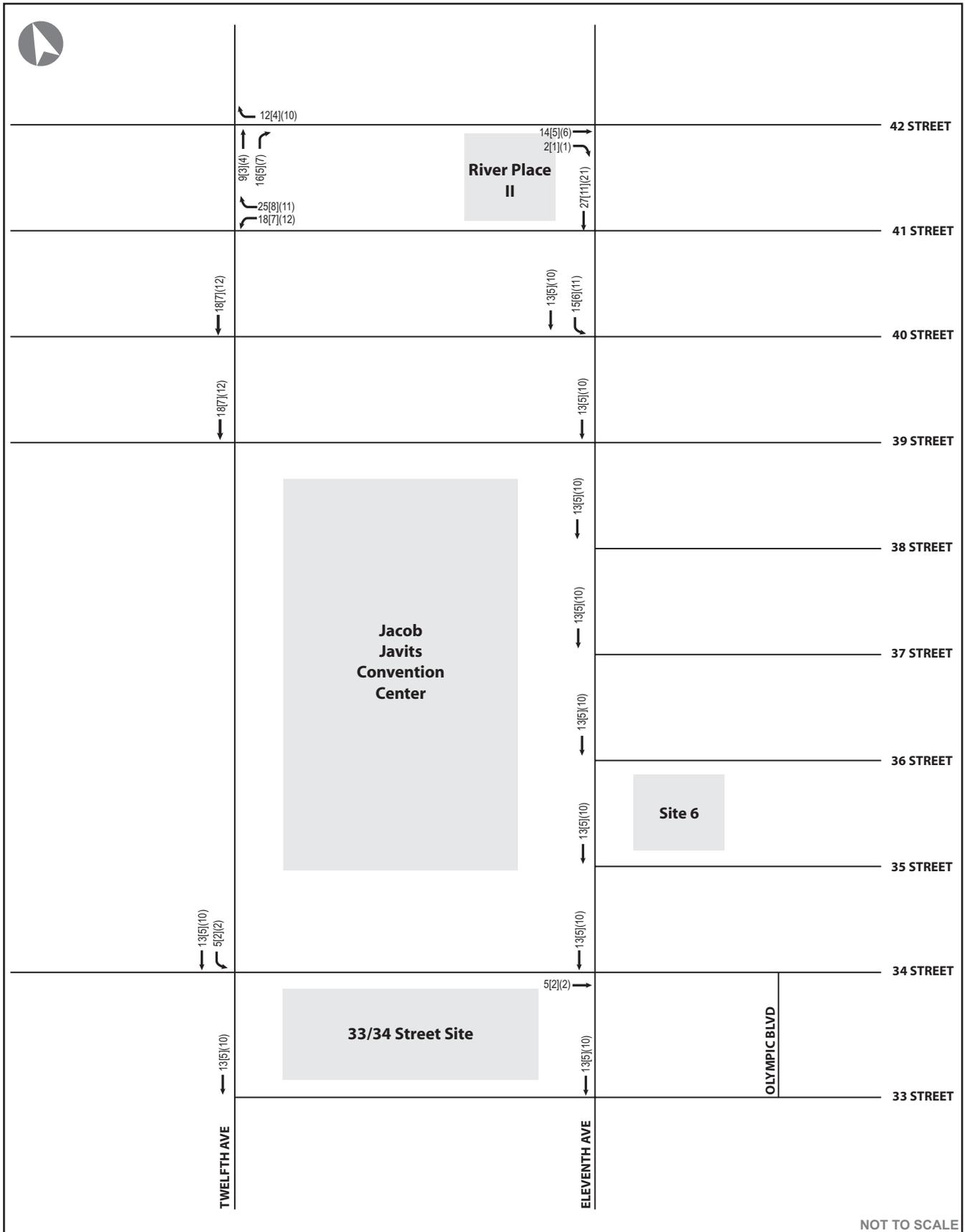


FIGURE 31: 2010 - MODIFIED RIVER PLACE II TRAFFIC VOLUMES (EXIT ONLY)  
Traffic Volume AM[MD](PM)

Note: River Place II volumes rerouted due to assumed closure of 39th Street + 817 more residential units



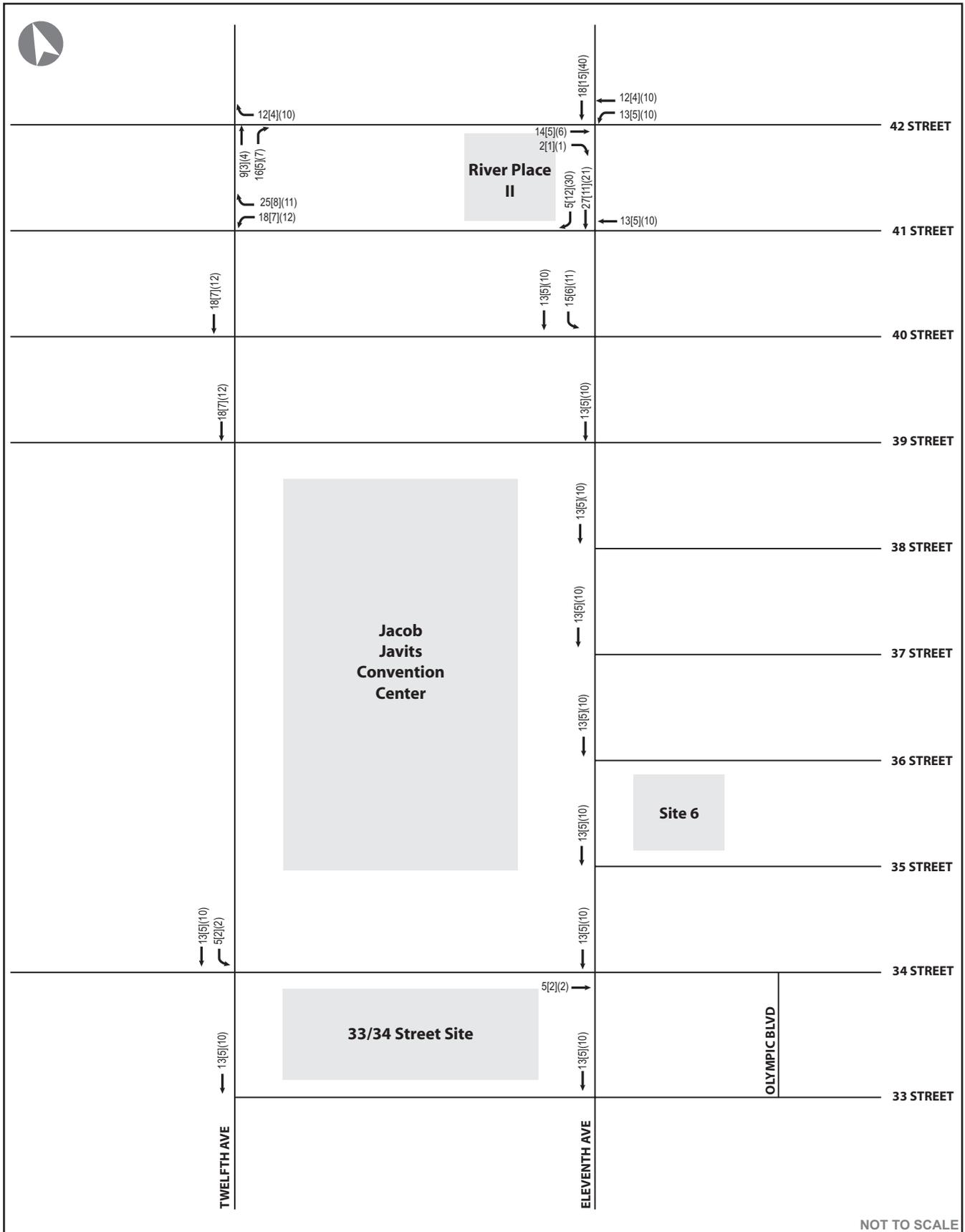
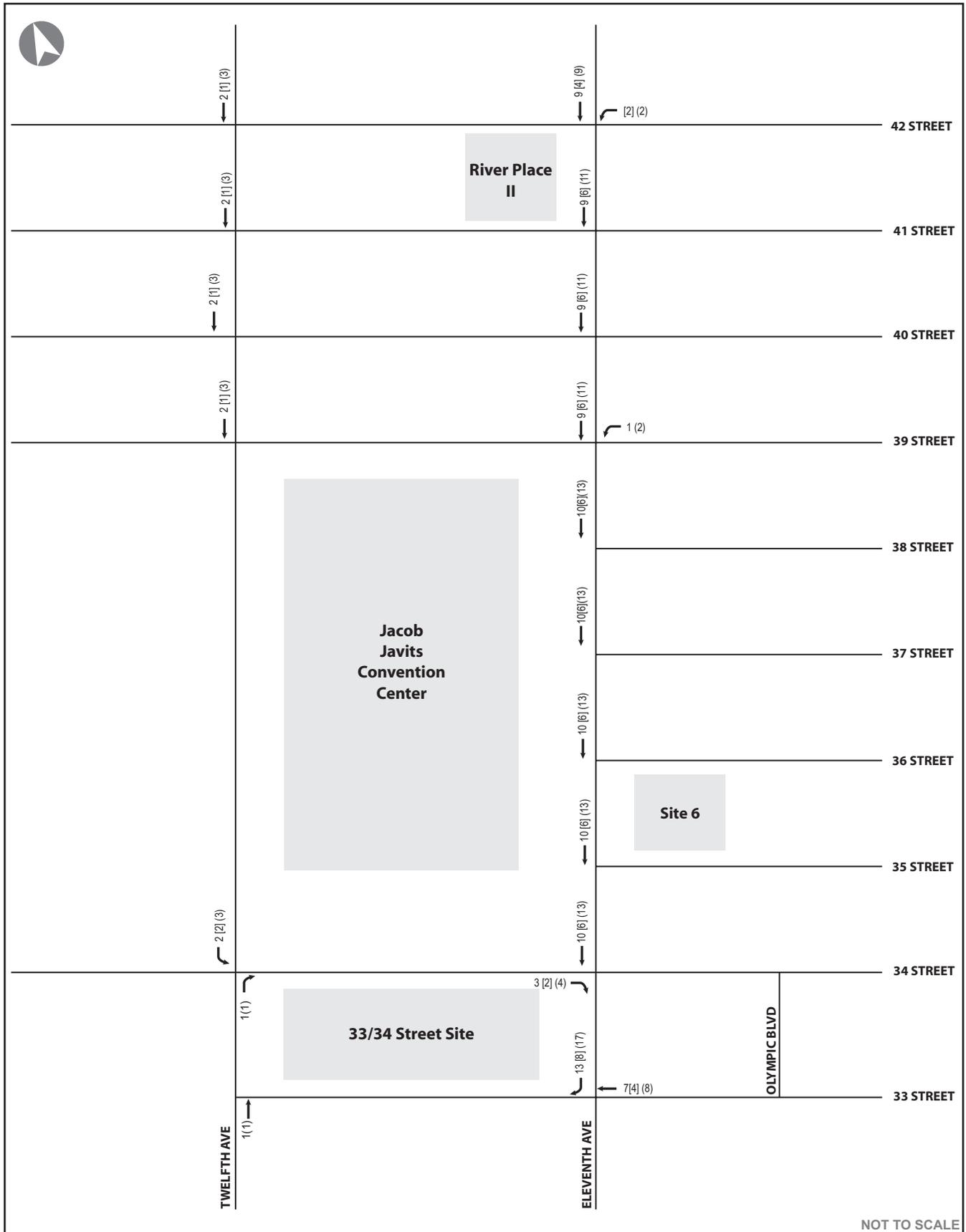


FIGURE 32: 2010 - MODIFIED RIVER PLACE II TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

Note: River Place II volumes rerouted due to assumed closure of 39th Street + 817 more residential units





NOT TO SCALE

FIGURE 33: 2010 - 33RD/34TH STREET RESIDENTIAL BUILDING TRAFFIC VOLUMES (ENTER ONLY)  
Traffic Volume AM[MD](PM)

Note: One 500 unit residential building only in 2010



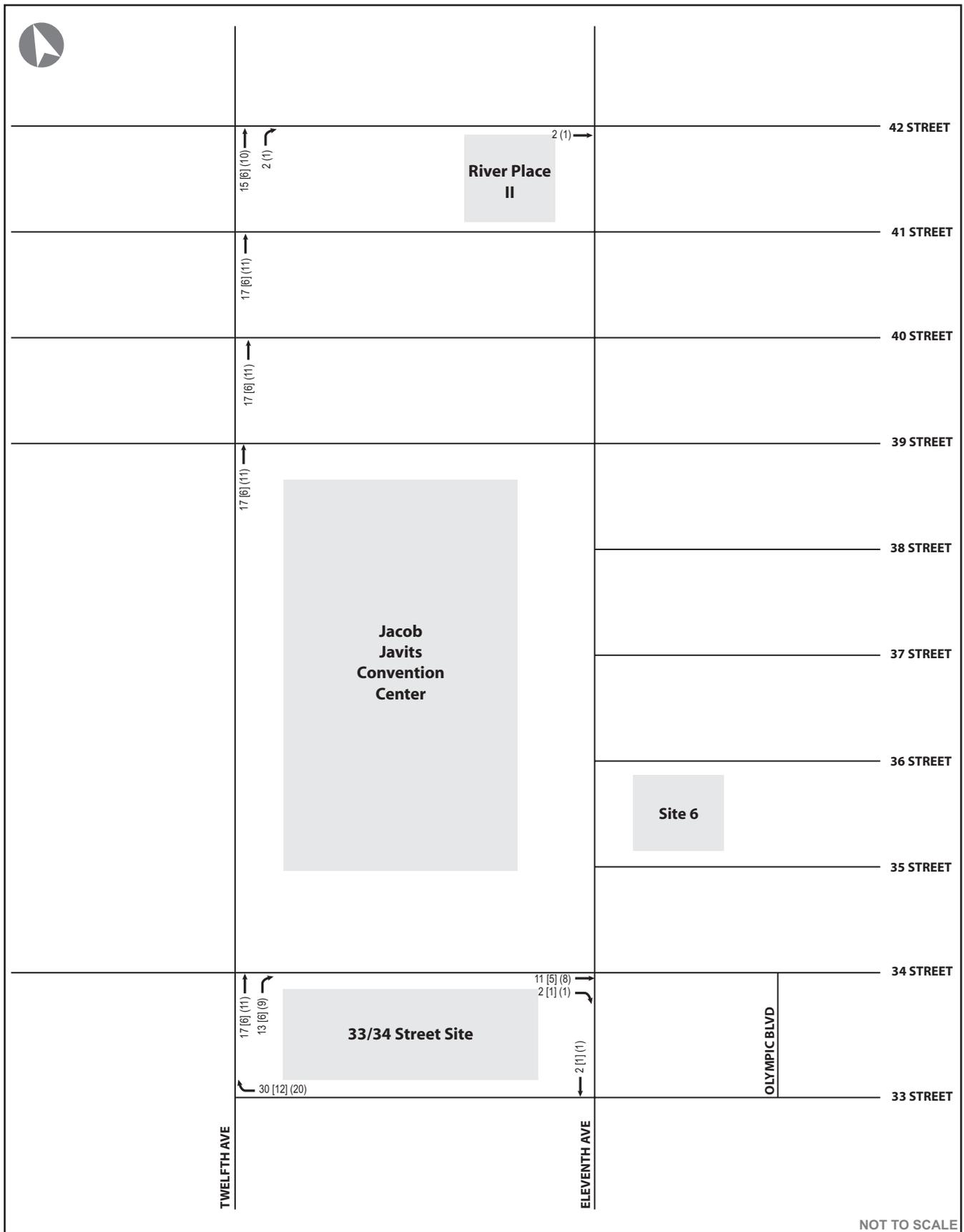
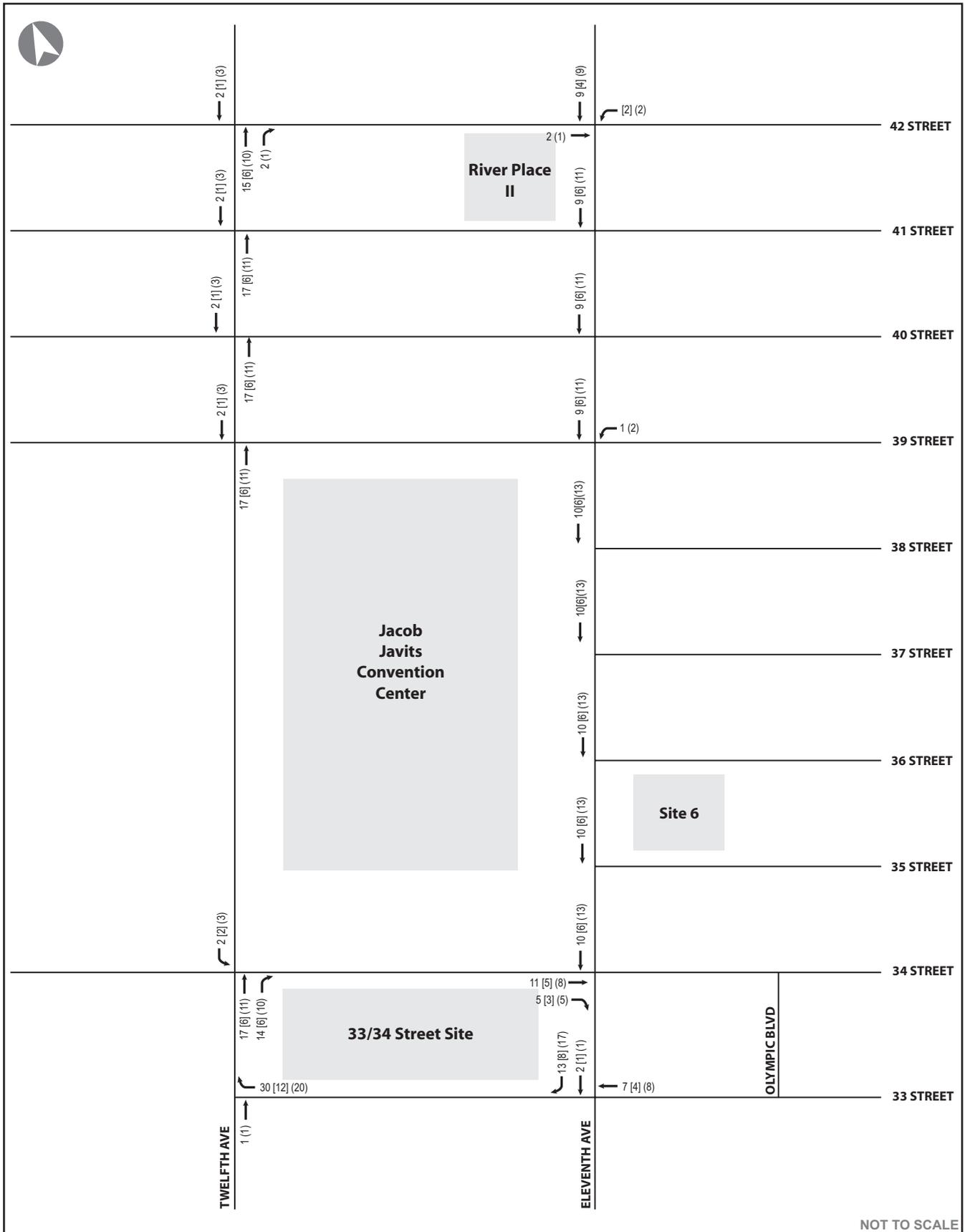


FIGURE 34: 2010 - 33RD/34TH STREET RESIDENTIAL BUILDING TRAFFIC VOLUMES (EXIT ONLY)  
Traffic Volume AM[MD](PM)

Note: One 500 unit residential building only in 2010





NOT TO SCALE

FIGURE 35: 2010 - 33RD/34TH STREET RESIDENTIAL BUILDING TRAFFIC VOLUMES (TOTAL)  
Traffic Volume AM[MD](PM)

Note: One 500 unit residential building only in 2010



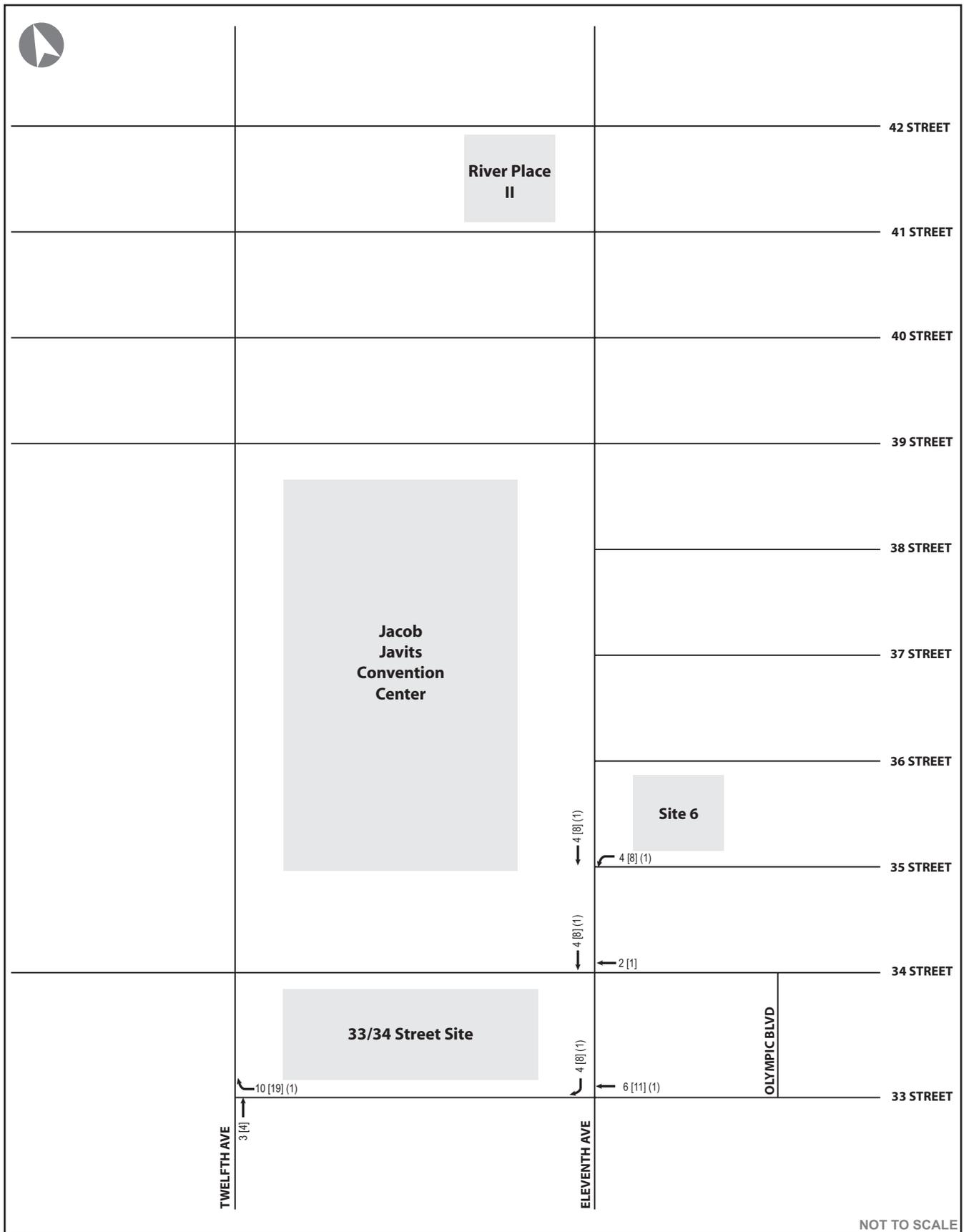
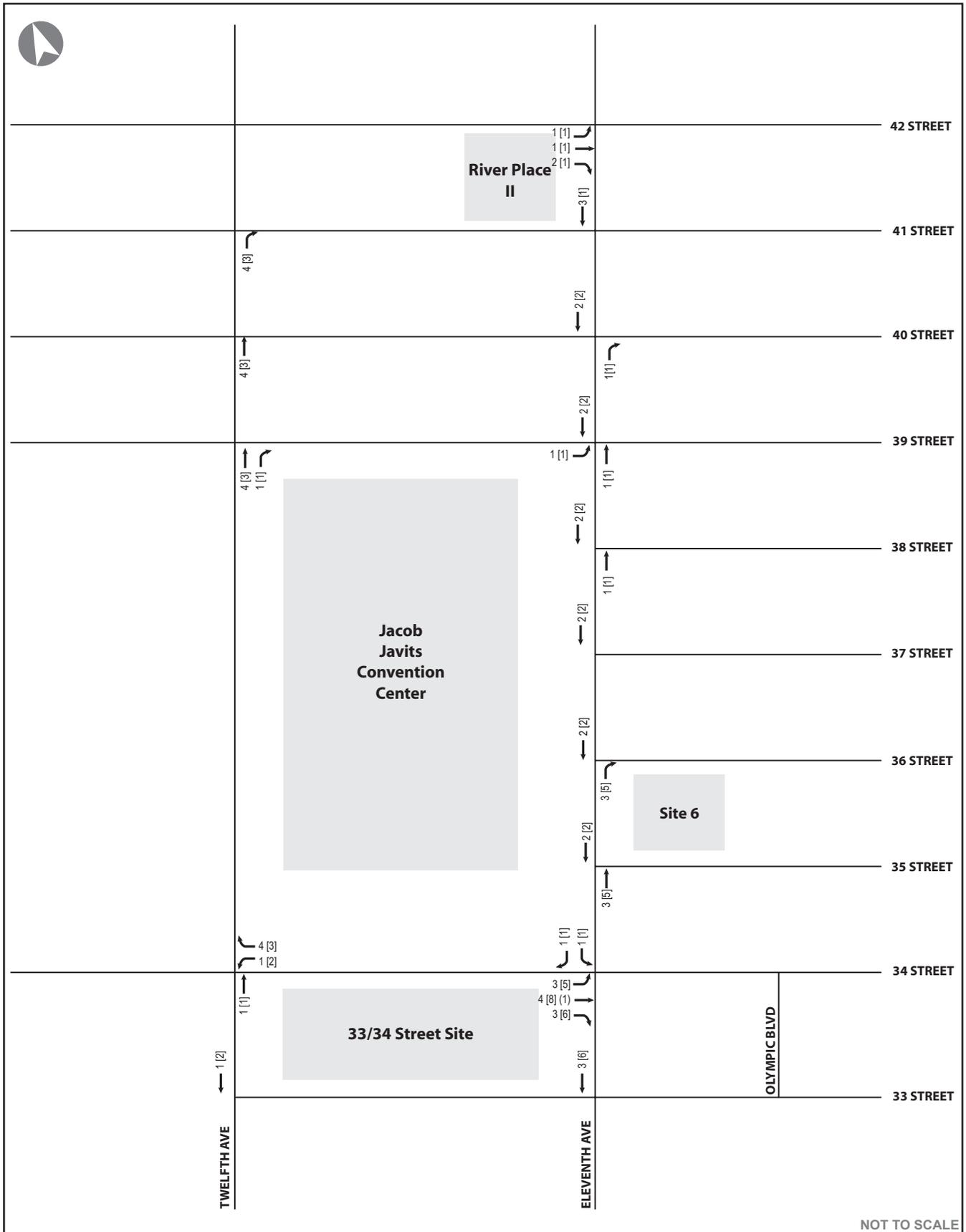


FIGURE 36: 2010 - FGEIS CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



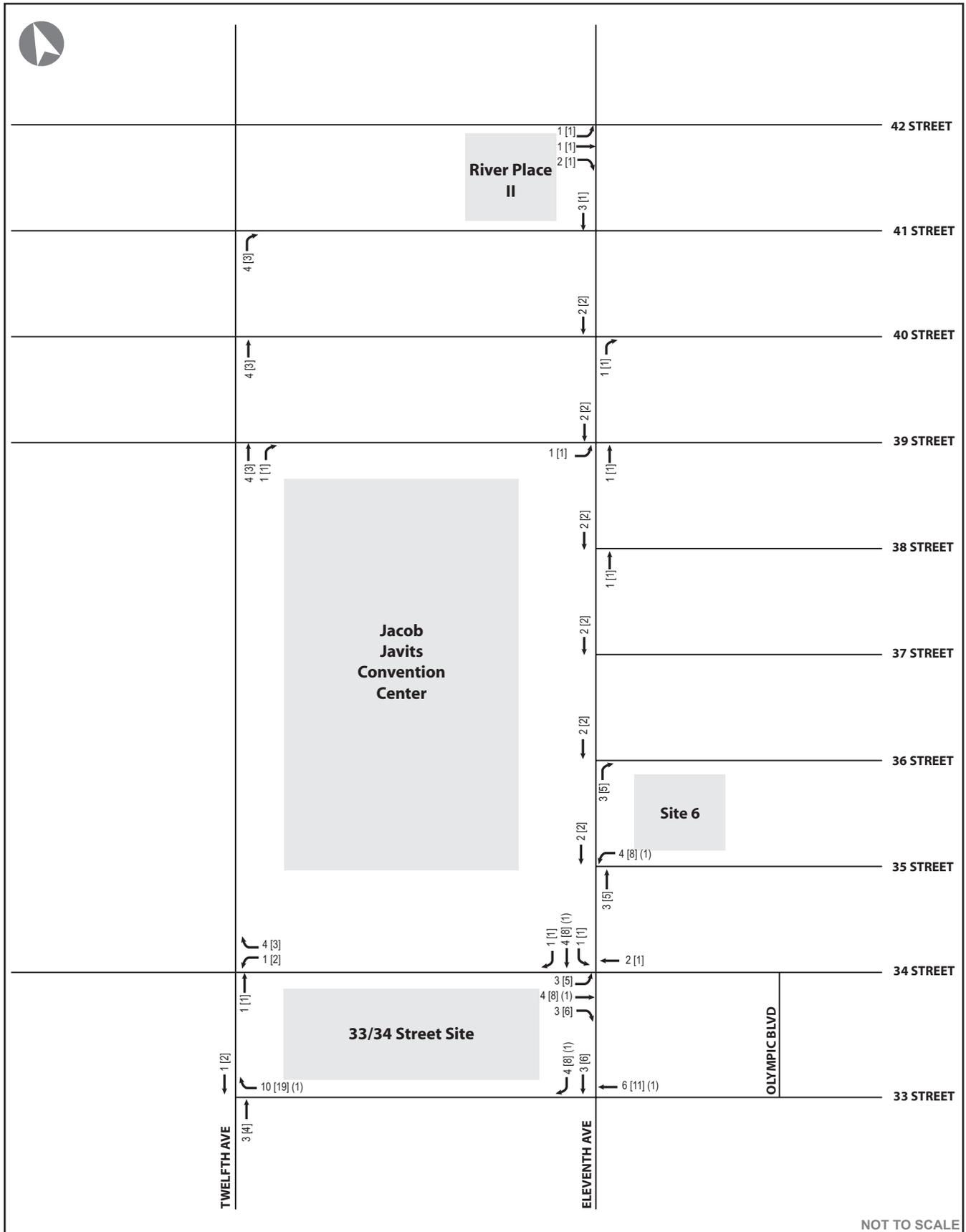


NOT TO SCALE

FIGURE 37: 2010 - FGEIS CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (EXIT ONLY)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



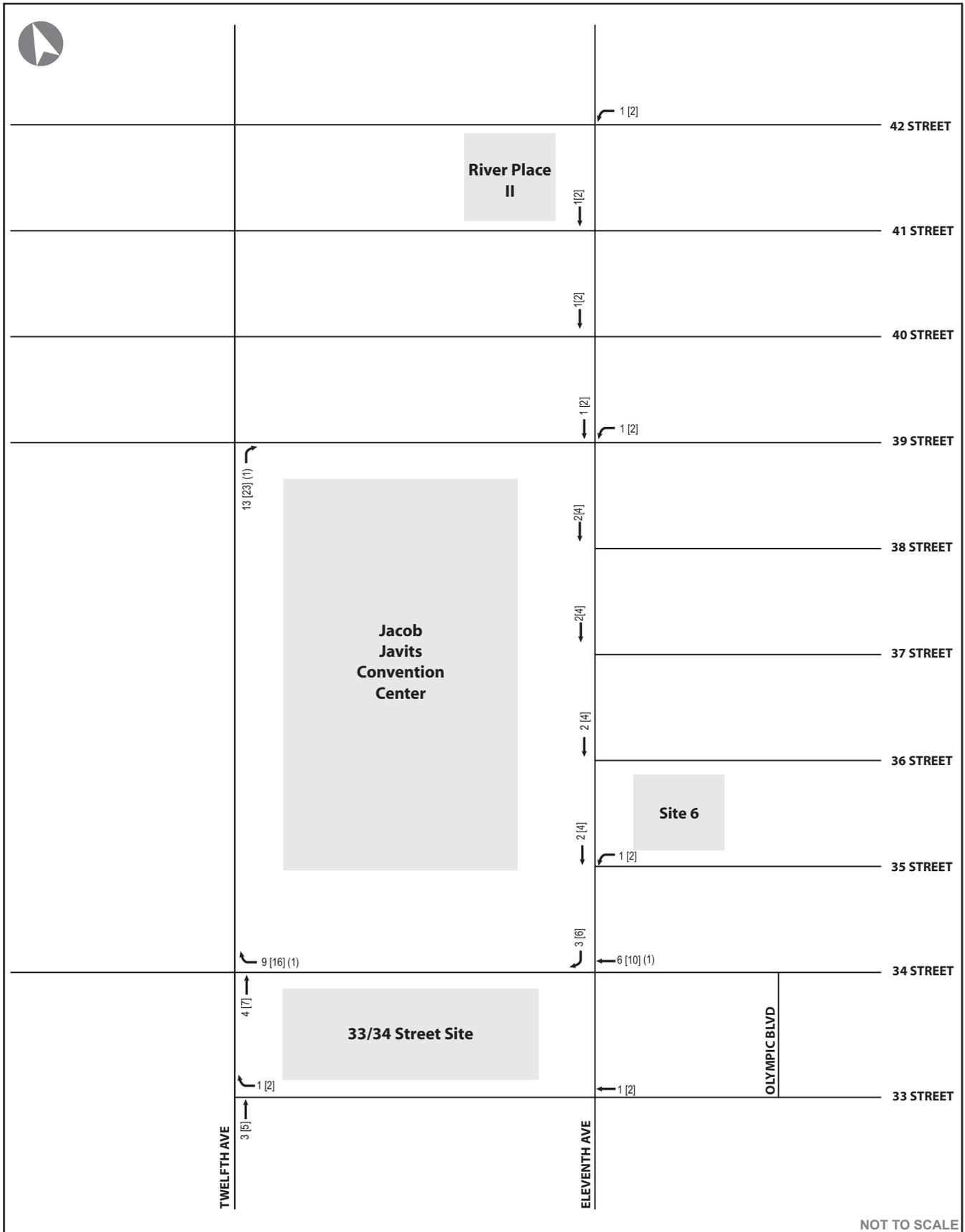


NOT TO SCALE

FIGURE 38: 2010 - FGEIS CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

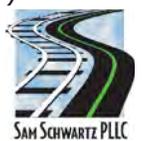
SOURCE: Hudson Yards FGEIS Data - Alt S



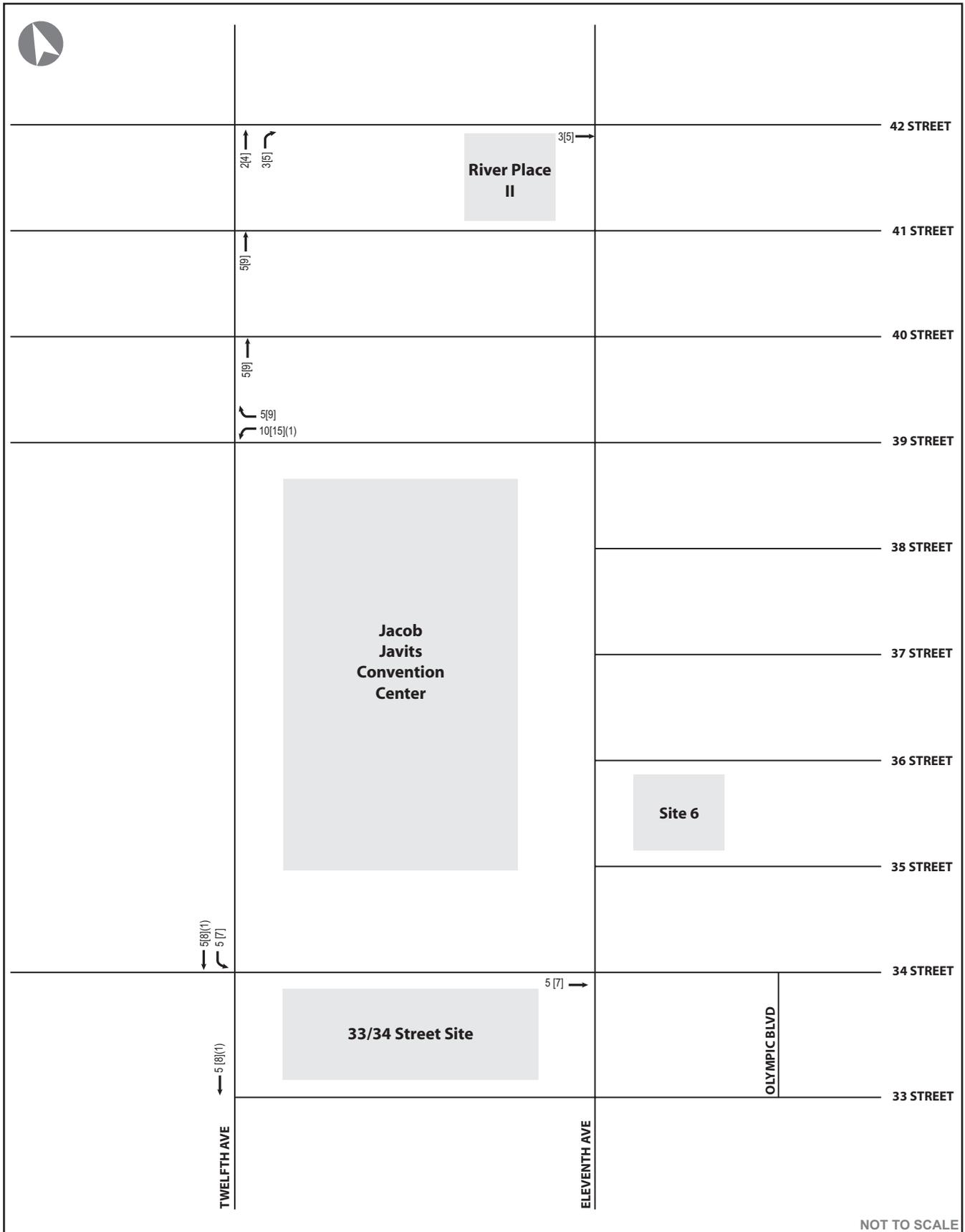


NOT TO SCALE

FIGURE 39: 2010 - REROUTED CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)



Note: Javits trucks rerouted due to marshalling center located along 39th Street

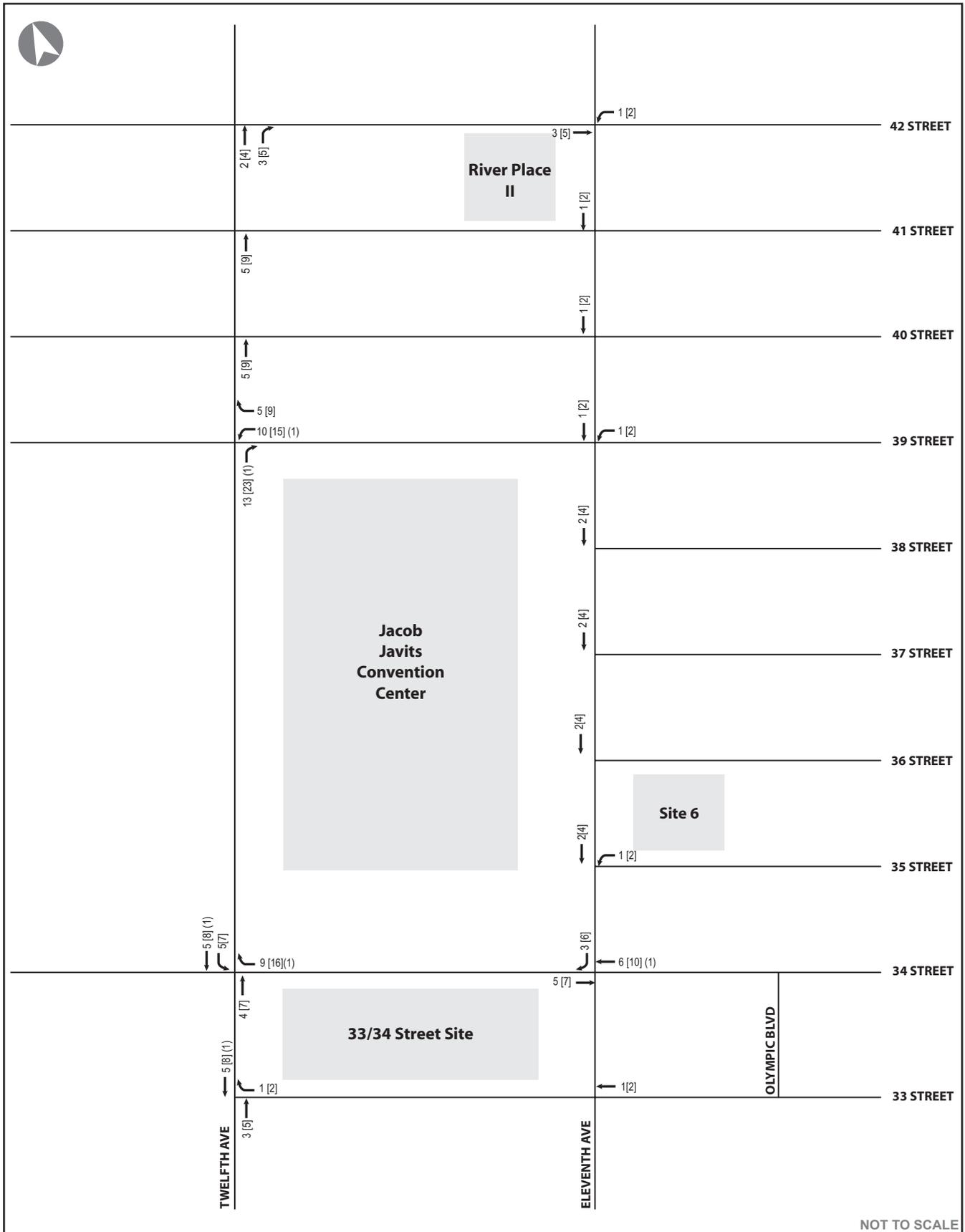


NOT TO SCALE

FIGURE 40 : 2010 - REROUTED CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)



Note: Javits trucks rerouted due to marshalling center located along 39th Street

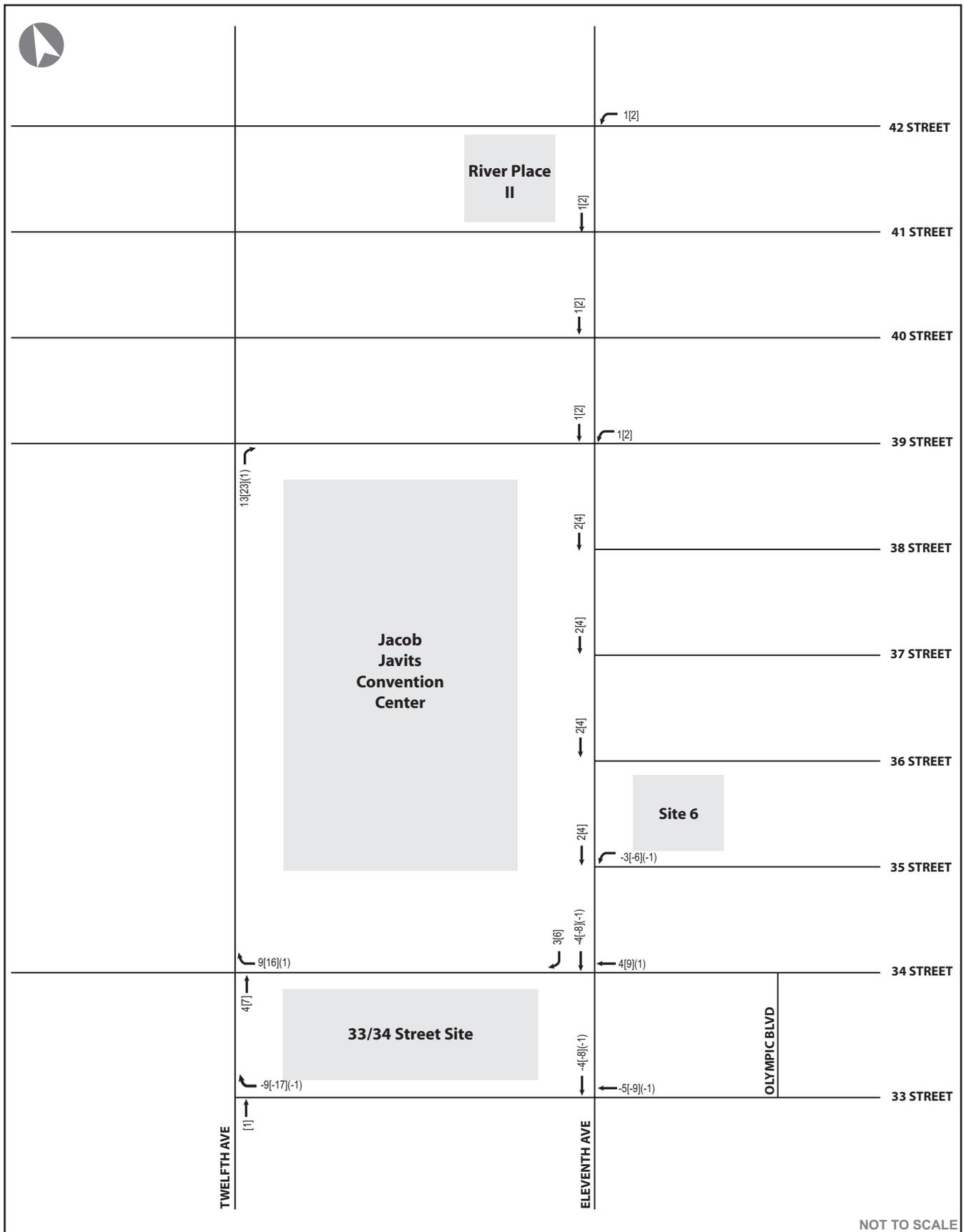


NOT TO SCALE

FIGURE 41: 2010 - REROUTED CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

Note: Javits trucks rerouted due to marshalling center located along 39th Street



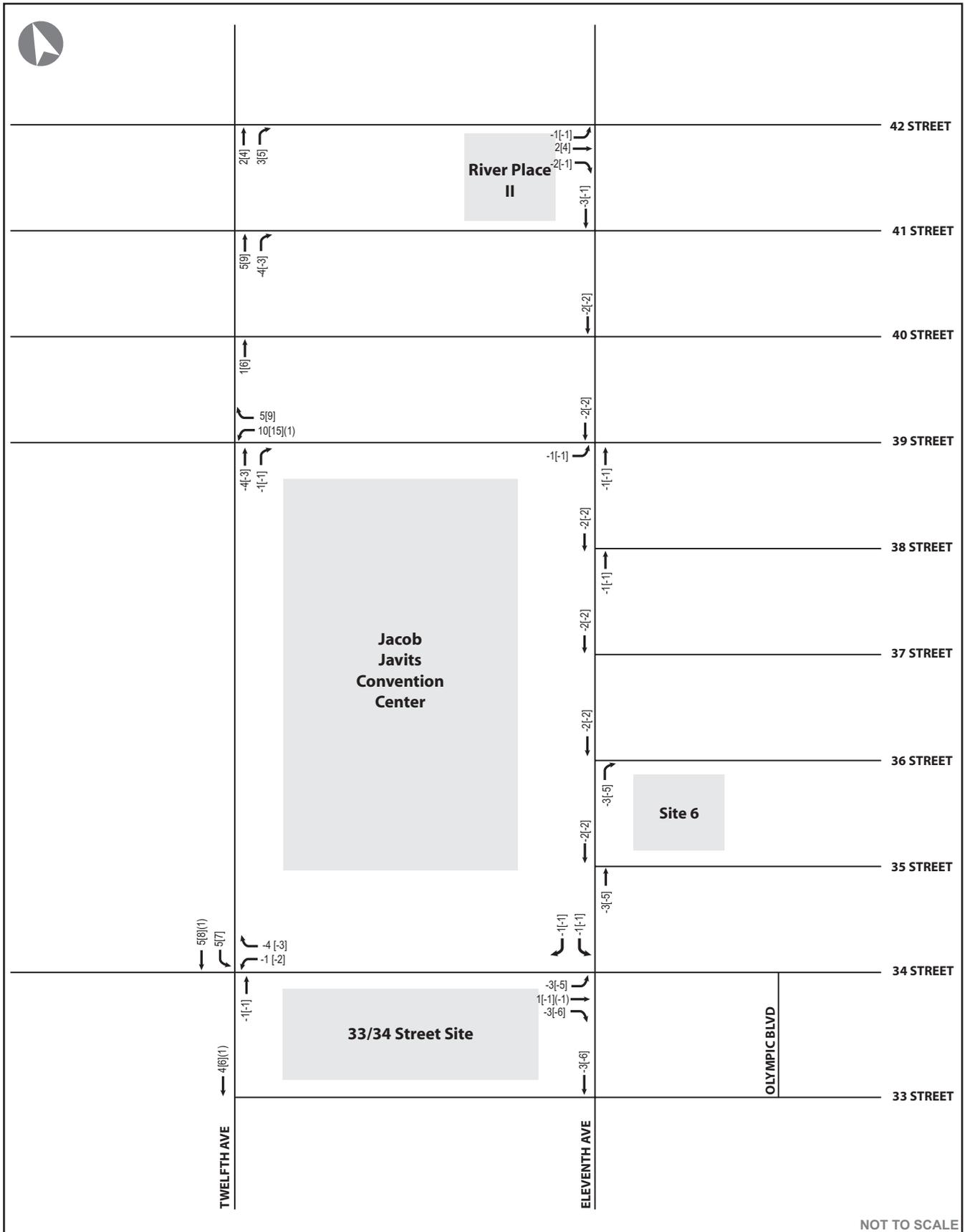


NOT TO SCALE

FIGURE 42: 2010 - NET CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

Note: Rerouted Javits trucks volumes - Original Javits trucks volumes





NOT TO SCALE

FIGURE 43: 2010 - NET CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (EXIT ONLY)  
Traffic Volume AM[MD](PM)

Note: Rerouted Javits trucks volumes - Original Javits trucks volumes



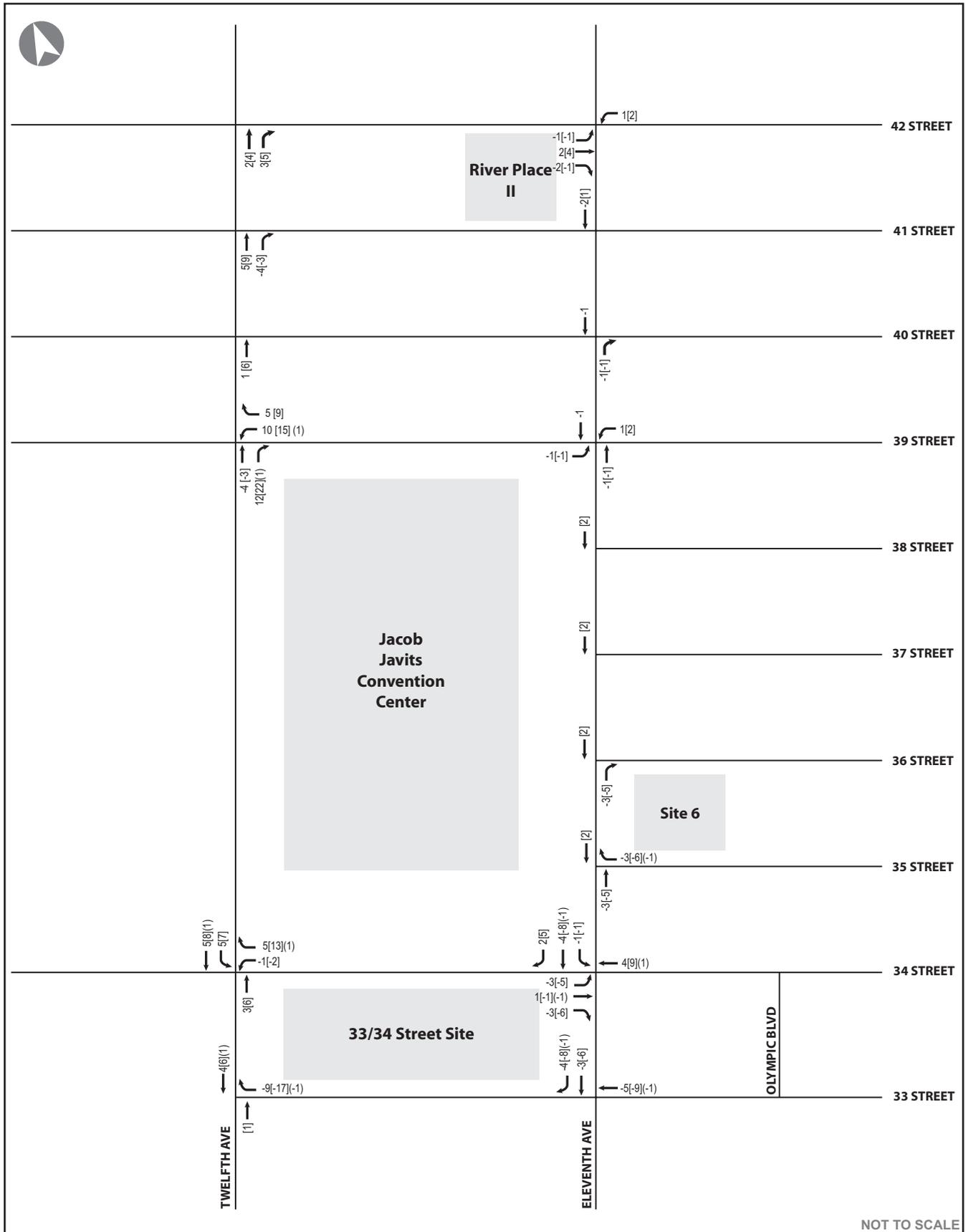
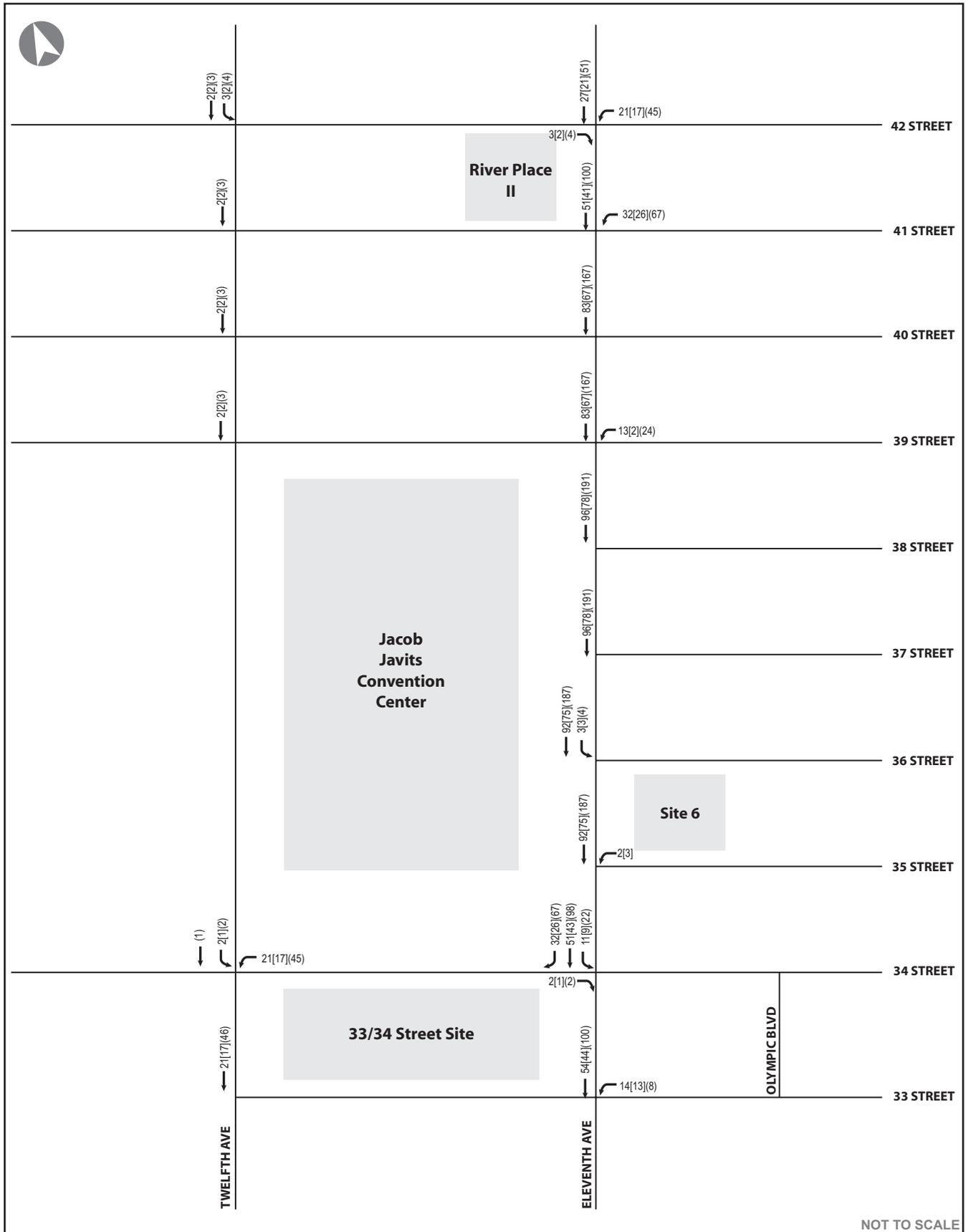


FIGURE 44: 2010 - NET CONVENTION CENTER SITE TRUCKS TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

Note: Rerouted Javits trucks volumes - Original Javits trucks volumes



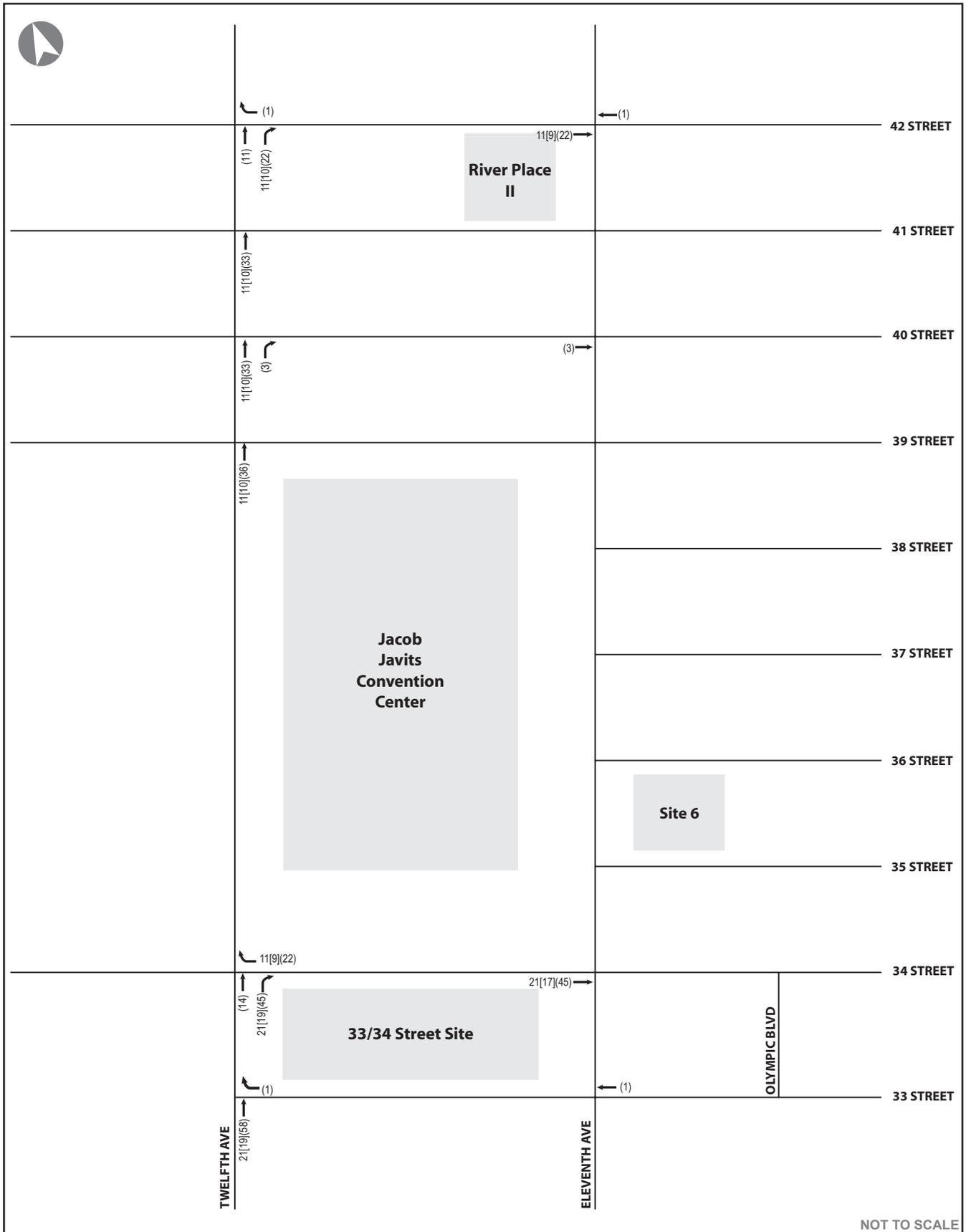


NOT TO SCALE

FIGURE 45: 2010 - FGEIS MULTI USE FACILITY (MUF) TRAFFIC VOLUMES (ENTER ONLY)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



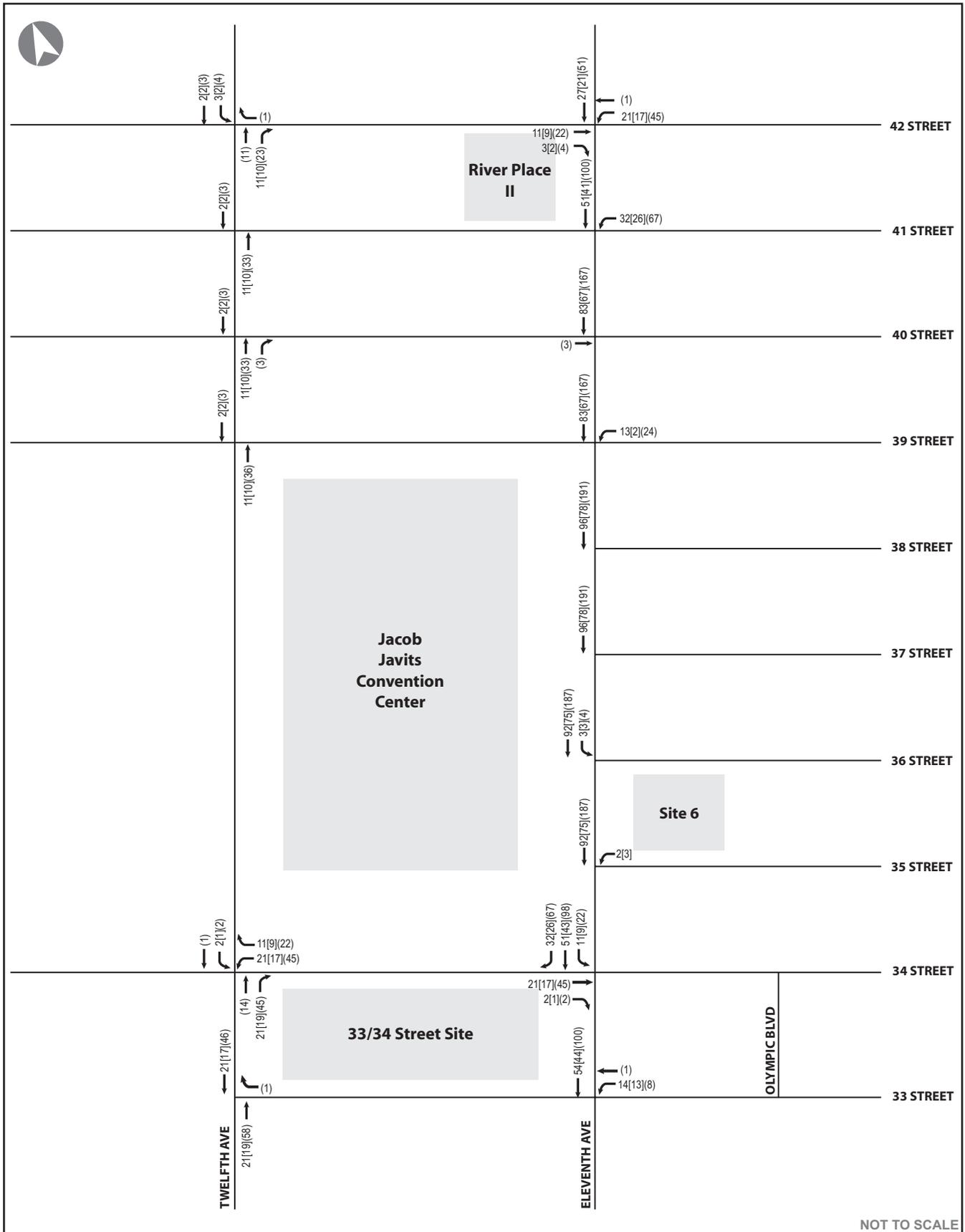


NOT TO SCALE

FIGURE 46: 2010 - FGEIS MULTI USE FACILITY (MUF) TRAFFIC VOLUMES (EXIT ONLY)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



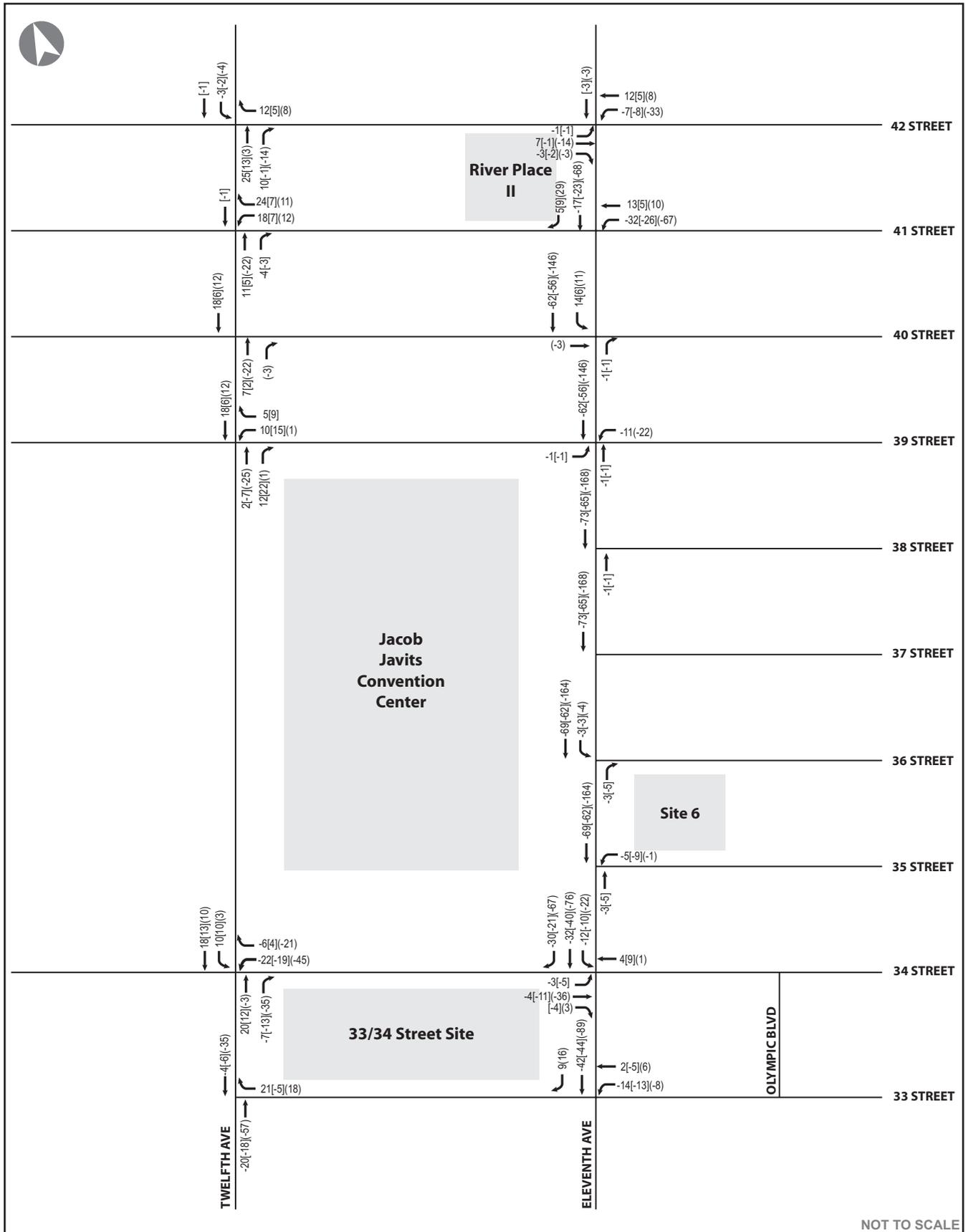


NOT TO SCALE

FIGURE 47: 2010 - FGEIS MULTI USE FACILITY (MUF) TRAFFIC VOLUMES (TOTAL)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 48: 2010 - NET MODIFIED PROJECT GENERATED TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)

Note: 33/34th Street building volumes + New River Place II volumes + Net Javits trucks - MUF



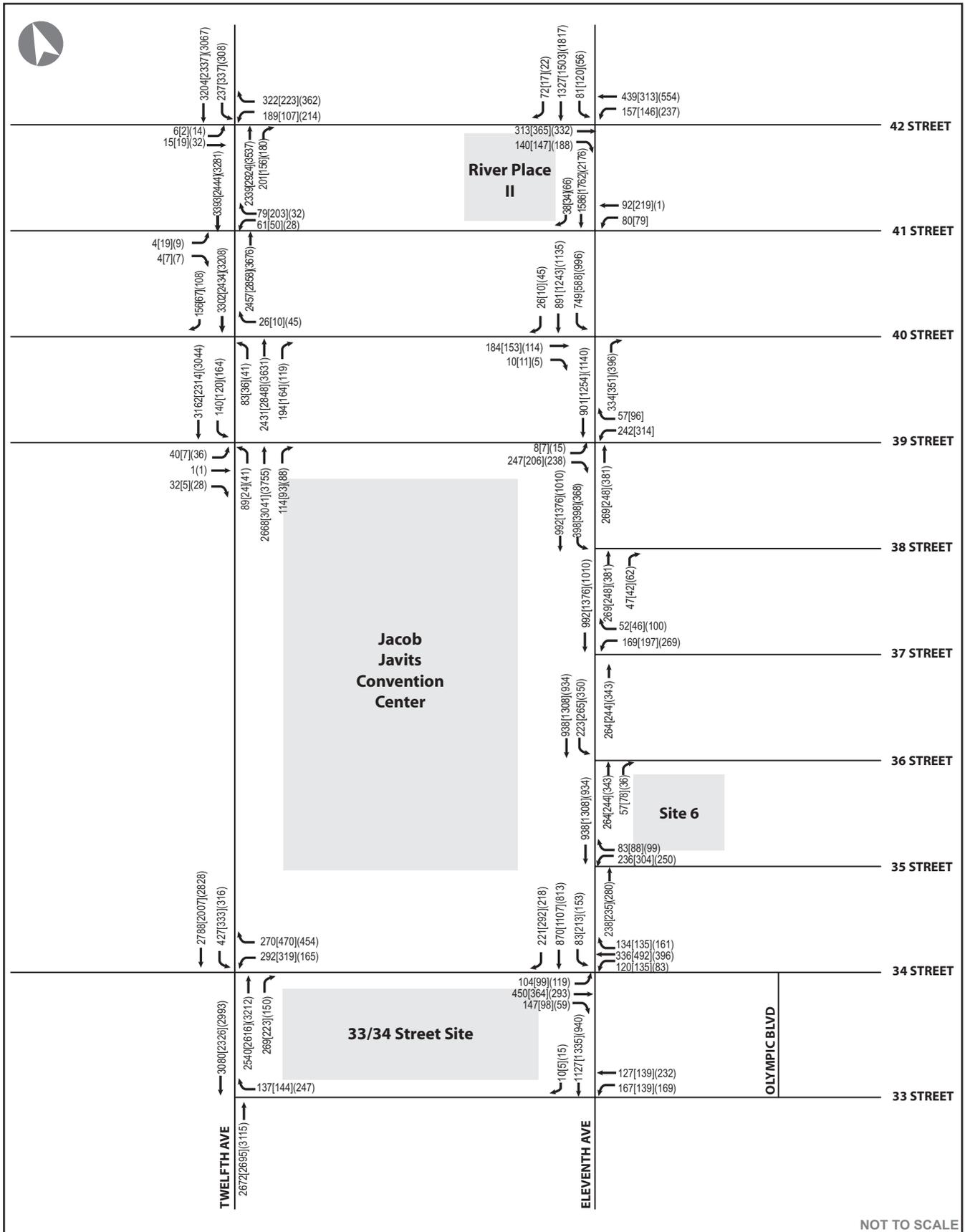


FIGURE 49: 2010 - FGEIS NO BUILD TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



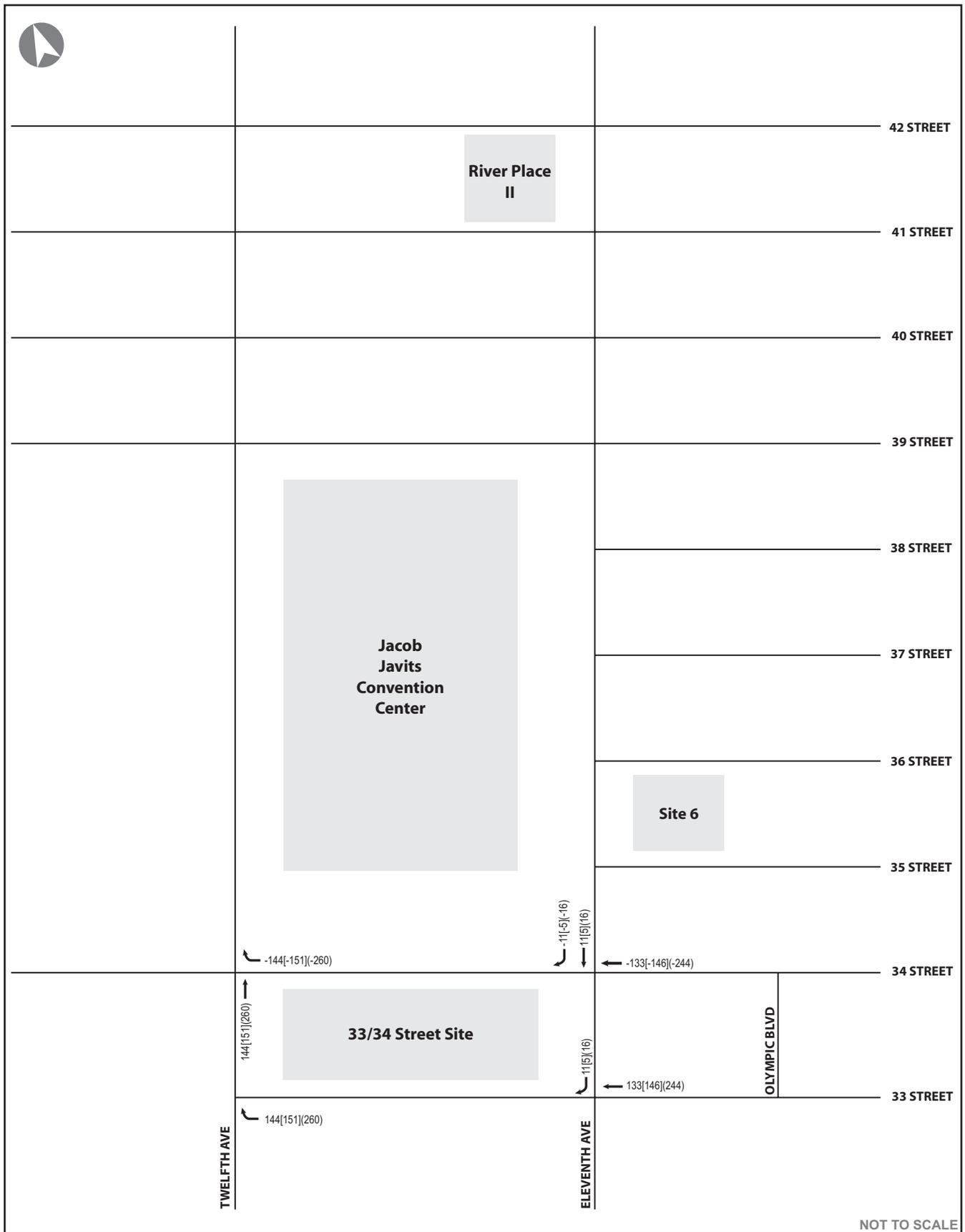
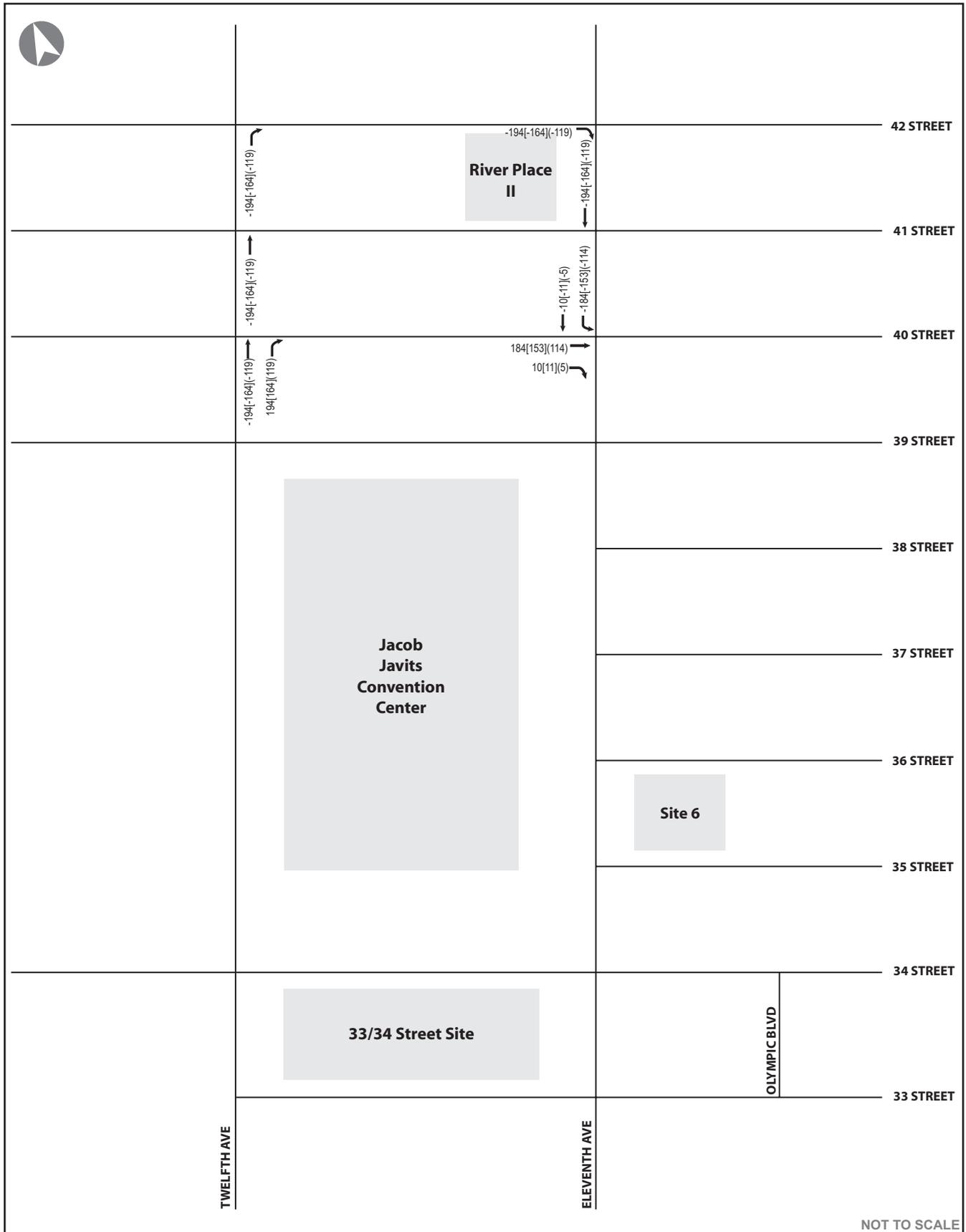


FIGURE 50: 2010 - REROUTED NO BUILD VOLUMES DUE TO 33RD STREET REOPENING  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of 33rd Street





NOT TO SCALE

FIGURE 51: 2010 - REROUTED NO BUILD VOLUMES DUE TO 40TH STREET REOPENING EASTBOUND  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of eastbound 40th Street



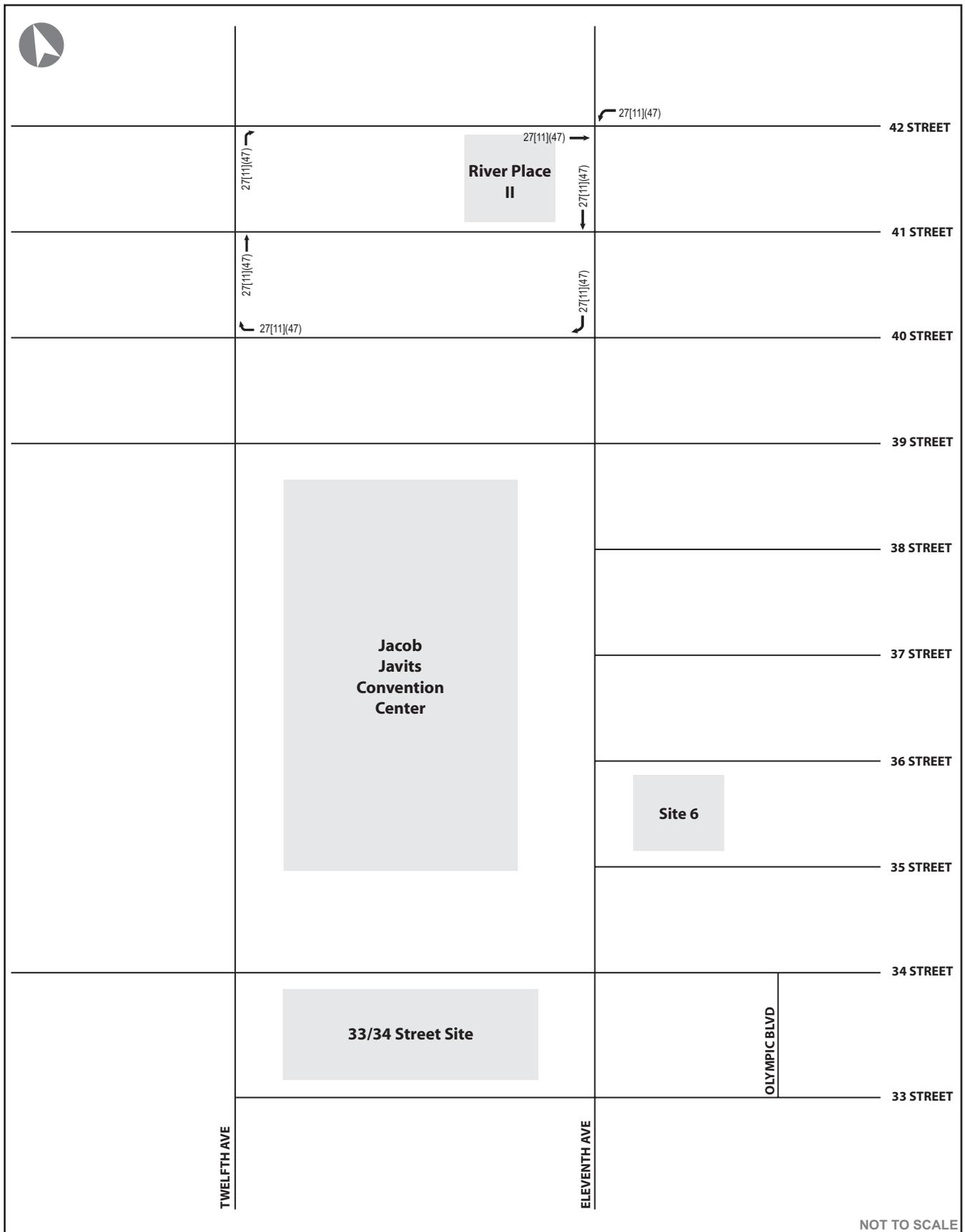


FIGURE 52: 2010 - REROUTED NO BUILD VOLUMES DUE TO 40TH STREET REOPENING WESTBOUND  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of westbound 40th Street



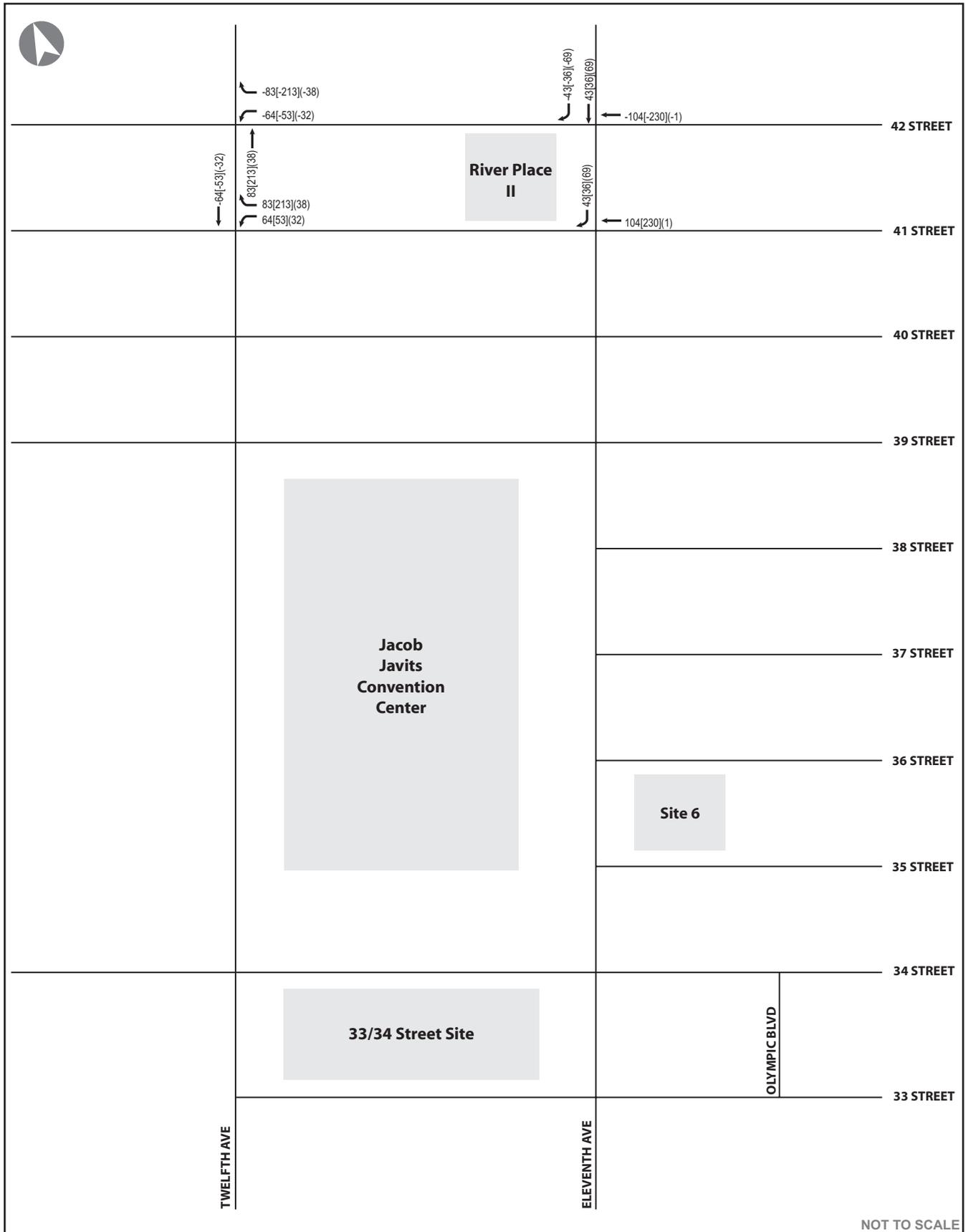
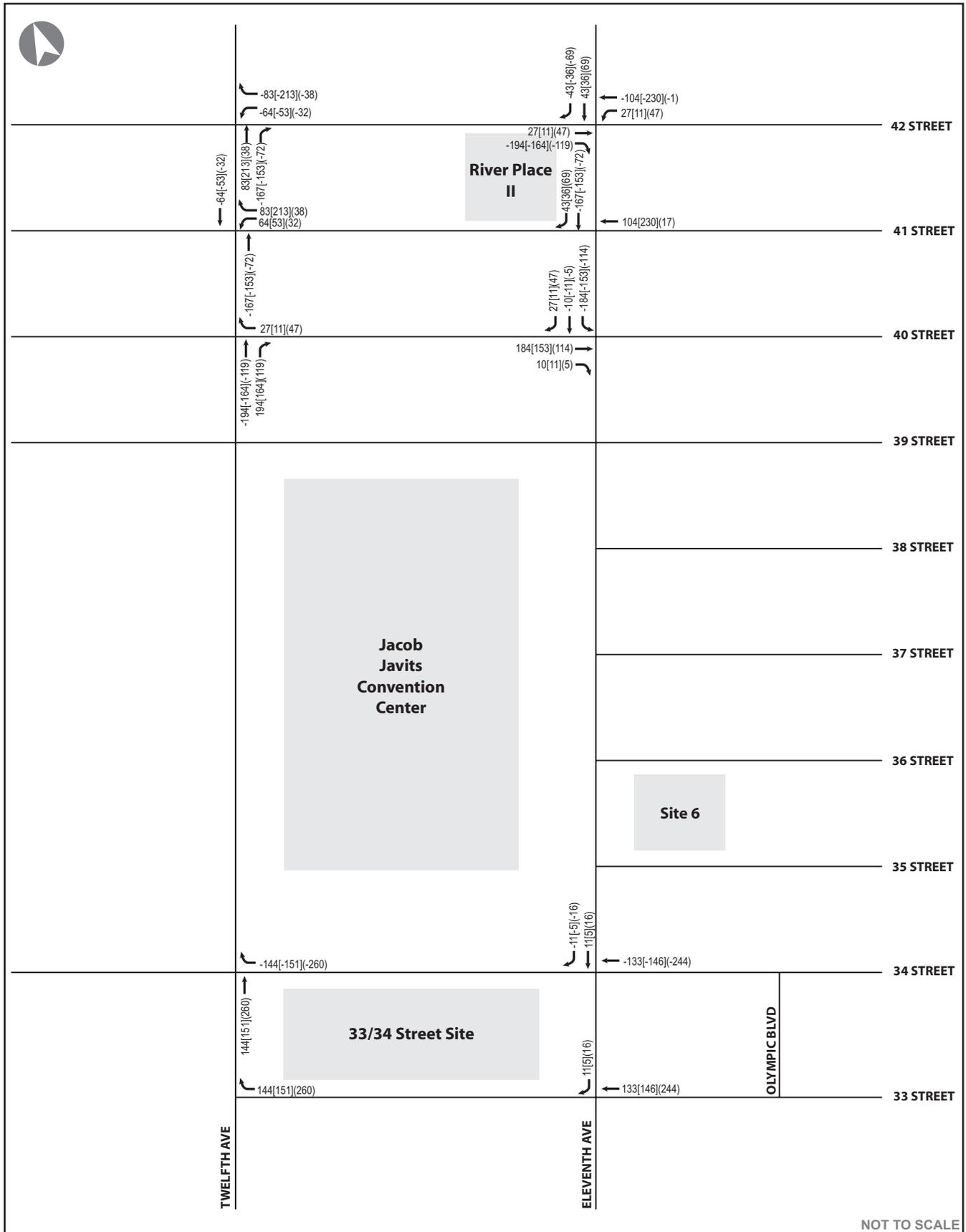


FIGURE 53: 2010 - REROUTED NO BUILD VOLUMES DUE TO 41ST STREET REOPENING  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of 41st Street



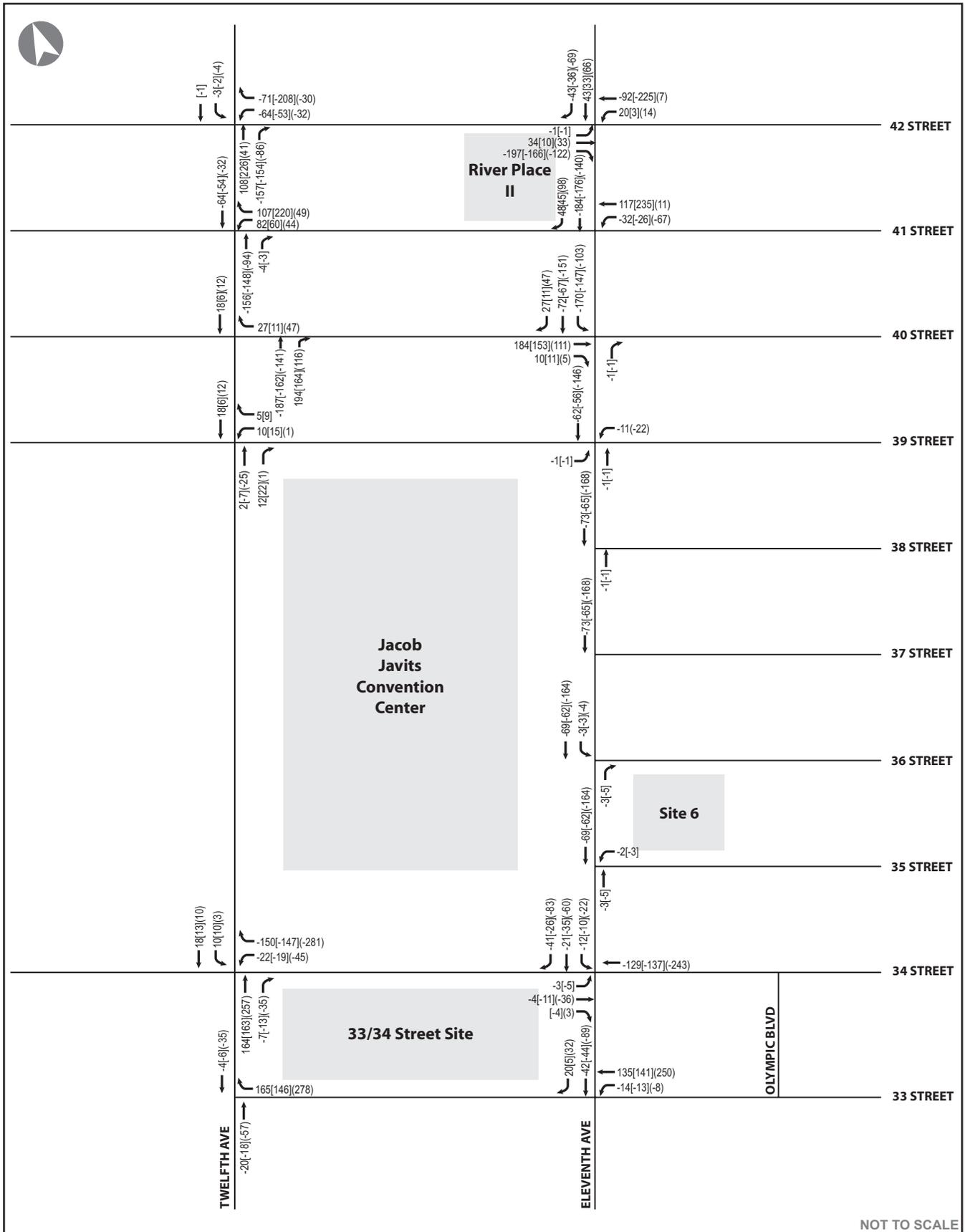


NOT TO SCALE

FIGURE 54: 2010 - NET REROUTED TRAFFIC VOLUMES DUE TO REOPENING OF STREETS  
Traffic Volume AM[MD](PM)

Note: Net rerouted traffic due to reopening of 33rd, eastbound and westbound 40th, and 41st Streets



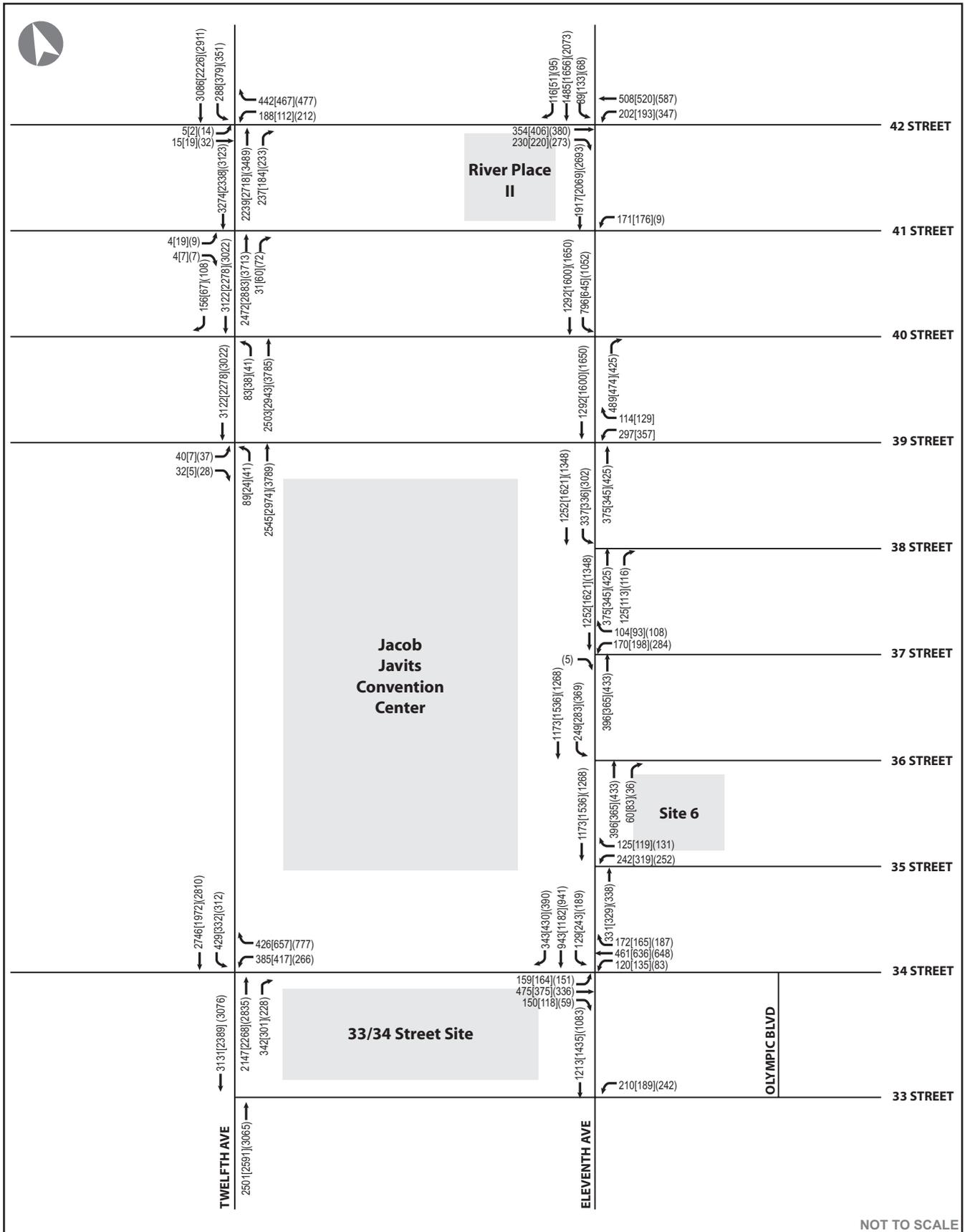


NOT TO SCALE

FIGURE 55: 2010 - NET PROJECT GENERATED & REROUTED NO BUILD TRAFFIC VOLUMES  
 Traffic Volume AM[MD](PM)

Note: 33rd/34th Street building volumes + River Place II building volumes  
 + net Javits trucks- MUF + rerouted volumes due to reopening streets



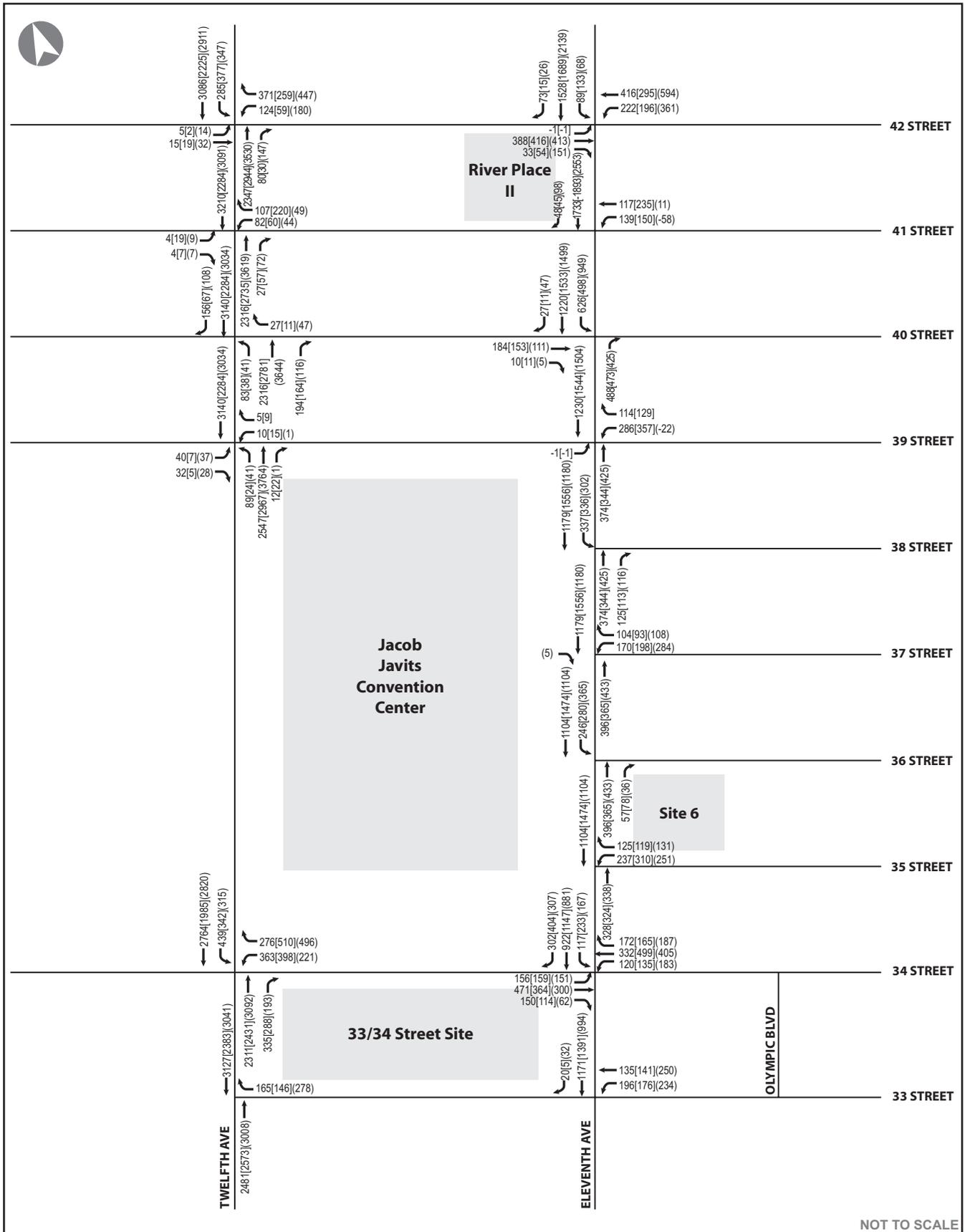


NOT TO SCALE

FIGURE 56: 2010 - FGEIS MITIGATED BUILD TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)

Note: Hudson Yards FGEIS - Alt. S



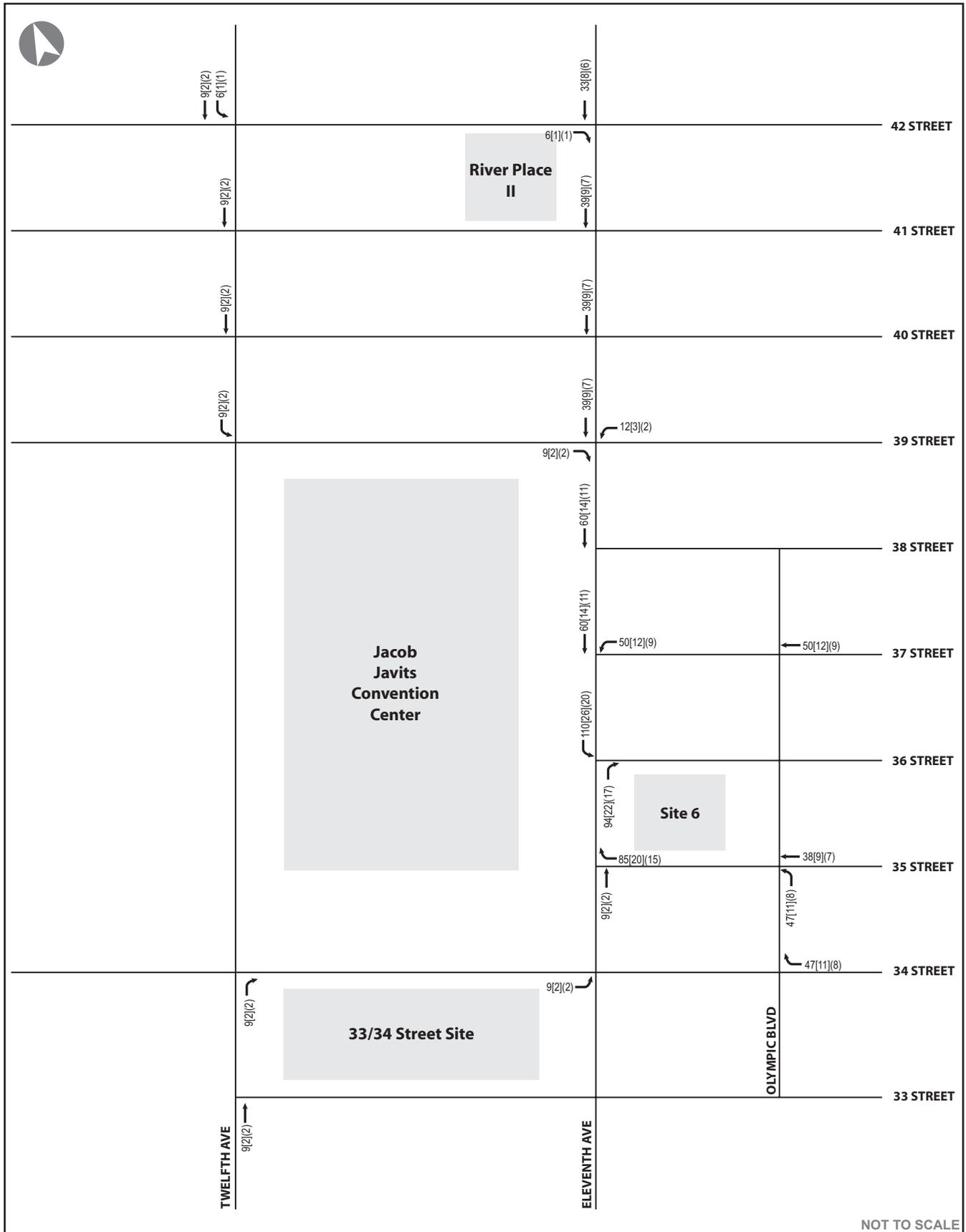


NOT TO SCALE

FIGURE 57: 2010 - PROPOSED MODIFICATIONS BUILD TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)

Note: Hudson Yards FGEIS - Alt. S 2010 mitigated build volumes + 2010 net project generated volumes + 2010 rerouted volumes due to reopening streets





NOT TO SCALE

FIGURE 58: 2025 - FGEIS SITE 6 BUILDING AUTO TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



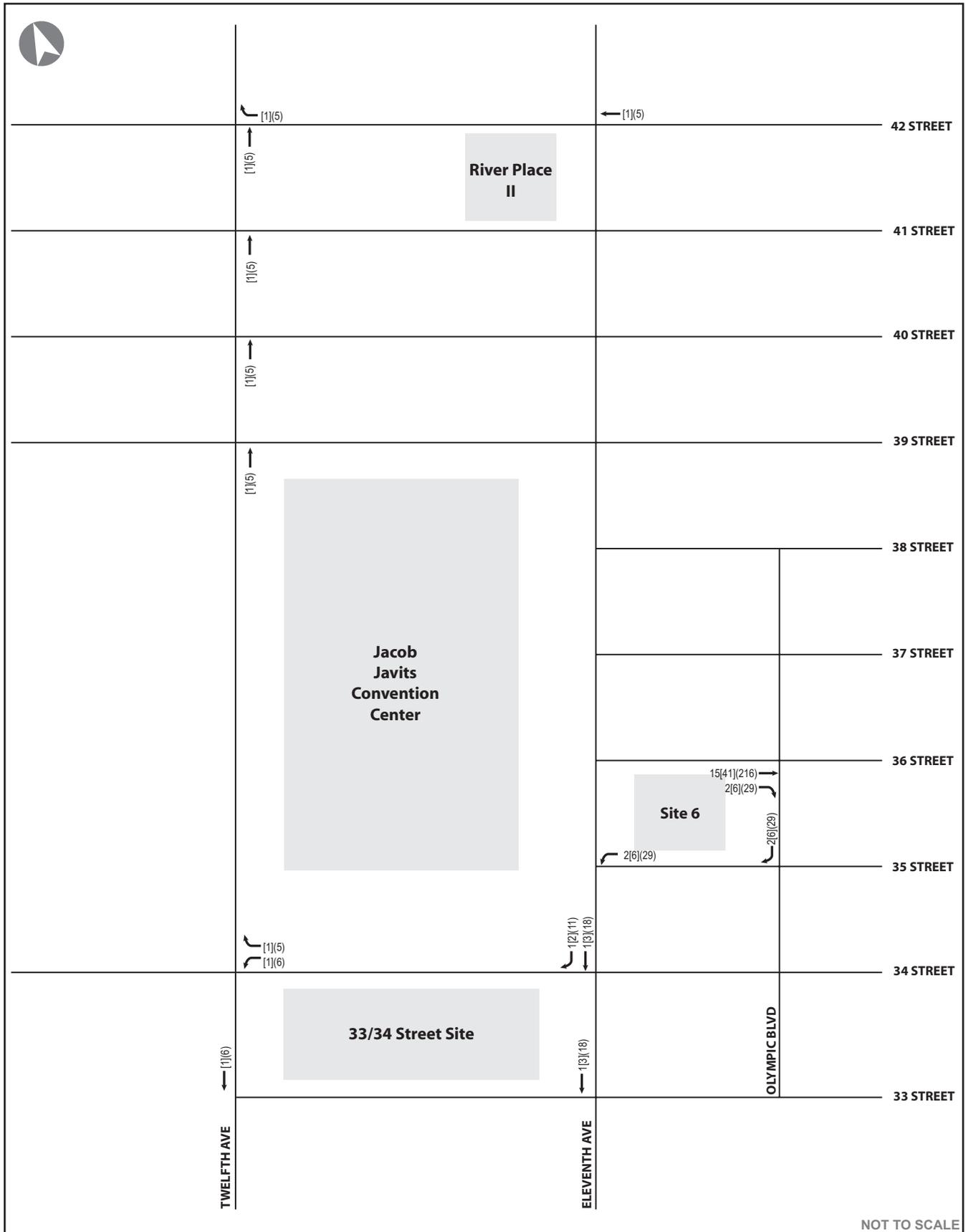
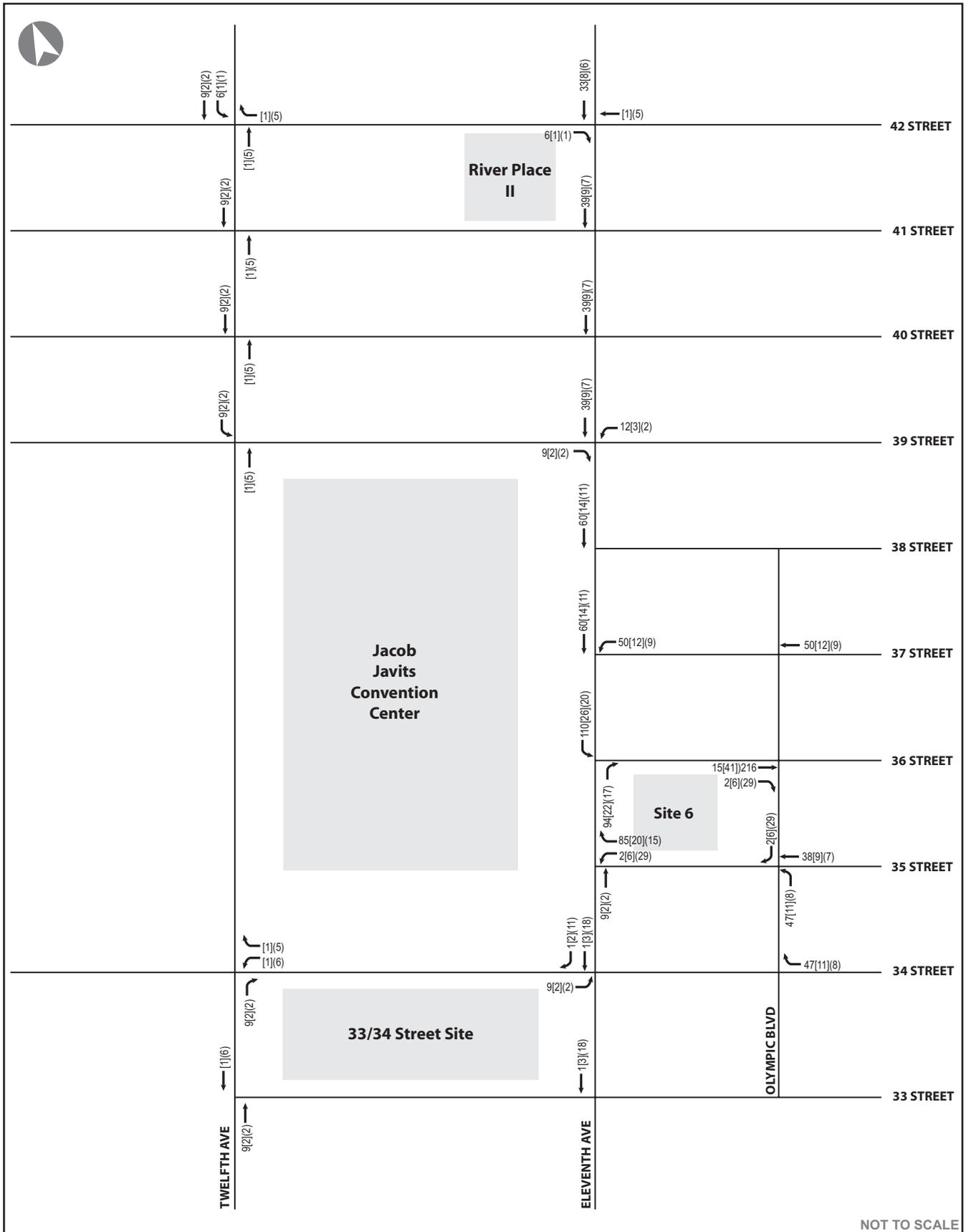


FIGURE 59: 2025 - FGEIS SITE 6 BUILDING AUTO TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



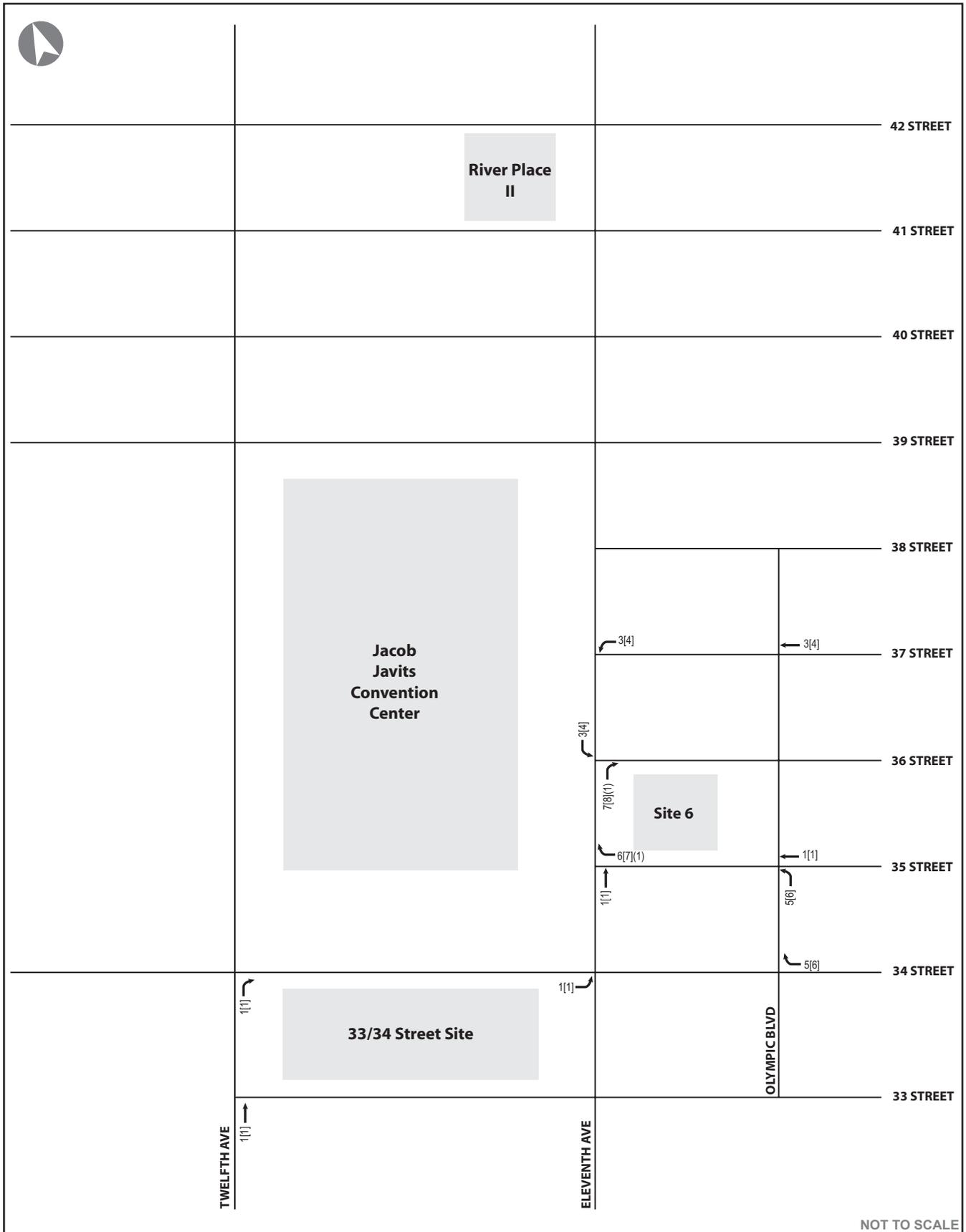


NOT TO SCALE

FIGURE 60: 2025 - FGEIS SITE 6 BUILDING AUTO TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 61: 2025 - FGEIS SITE 6 BUILDING TRUCKS TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)



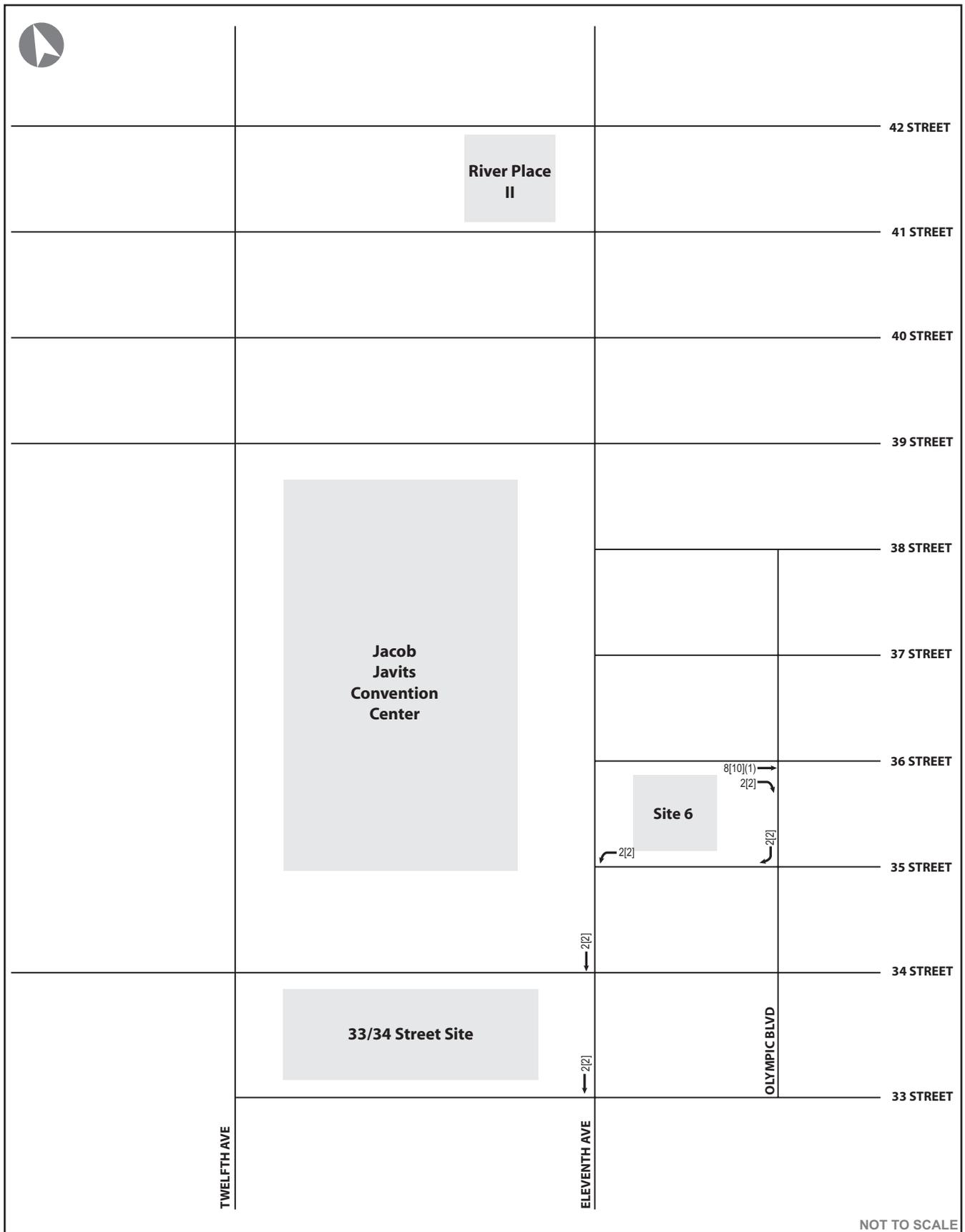
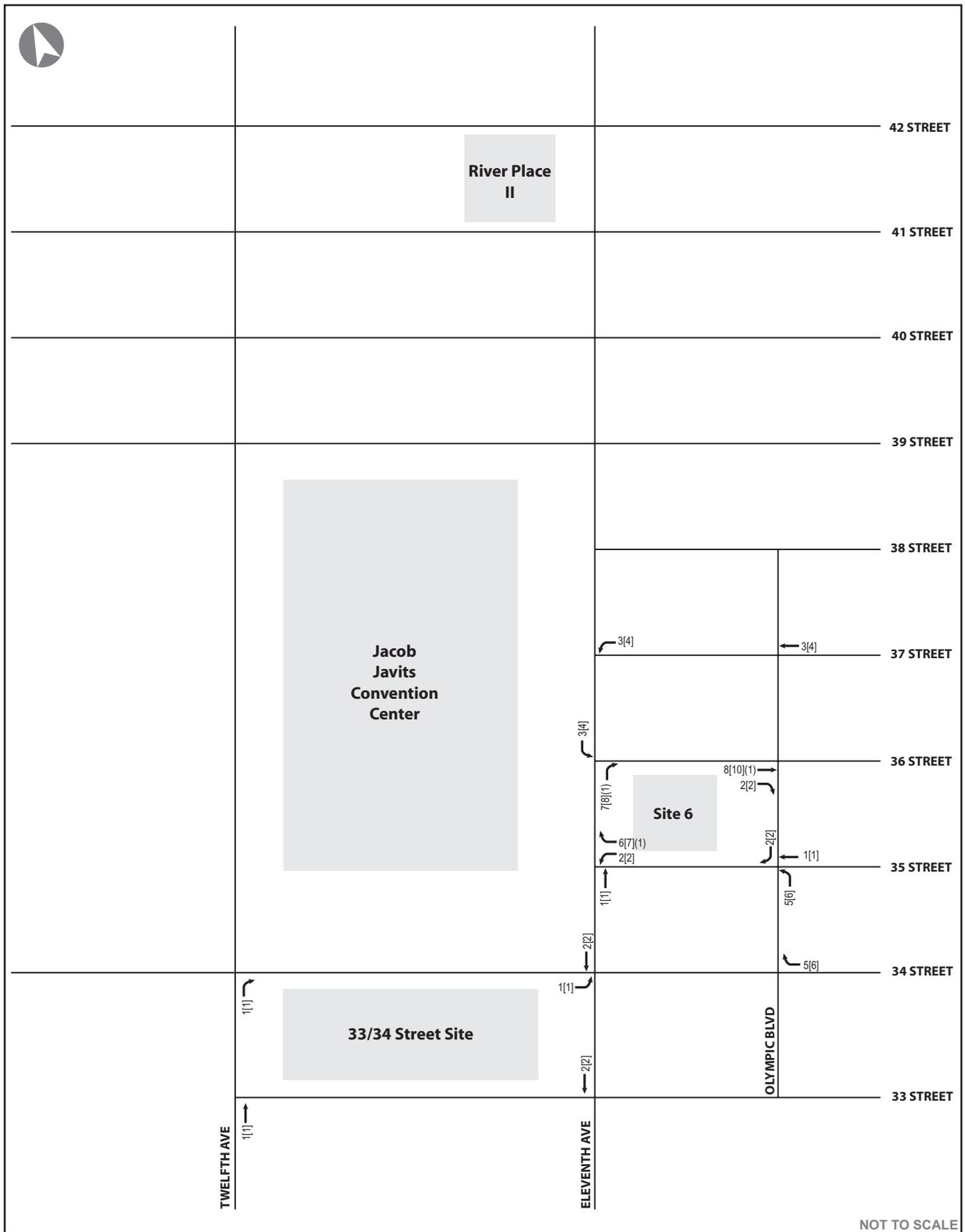


FIGURE 62: 2025 - FGEIS SITE 6 BUILDING TRUCKS TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 63: 2025 - FGEIS SITE 6 BUILDING TRUCKS TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



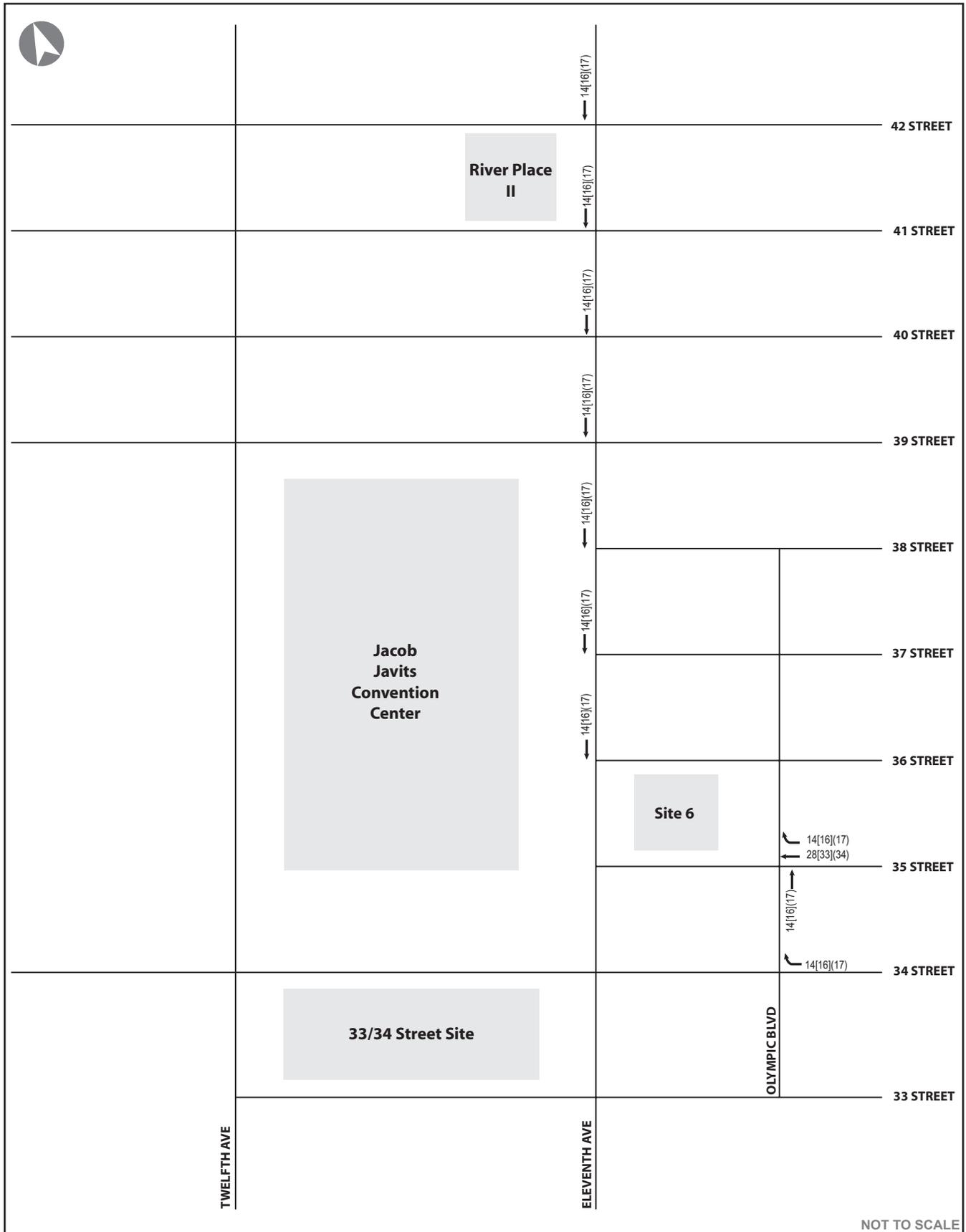
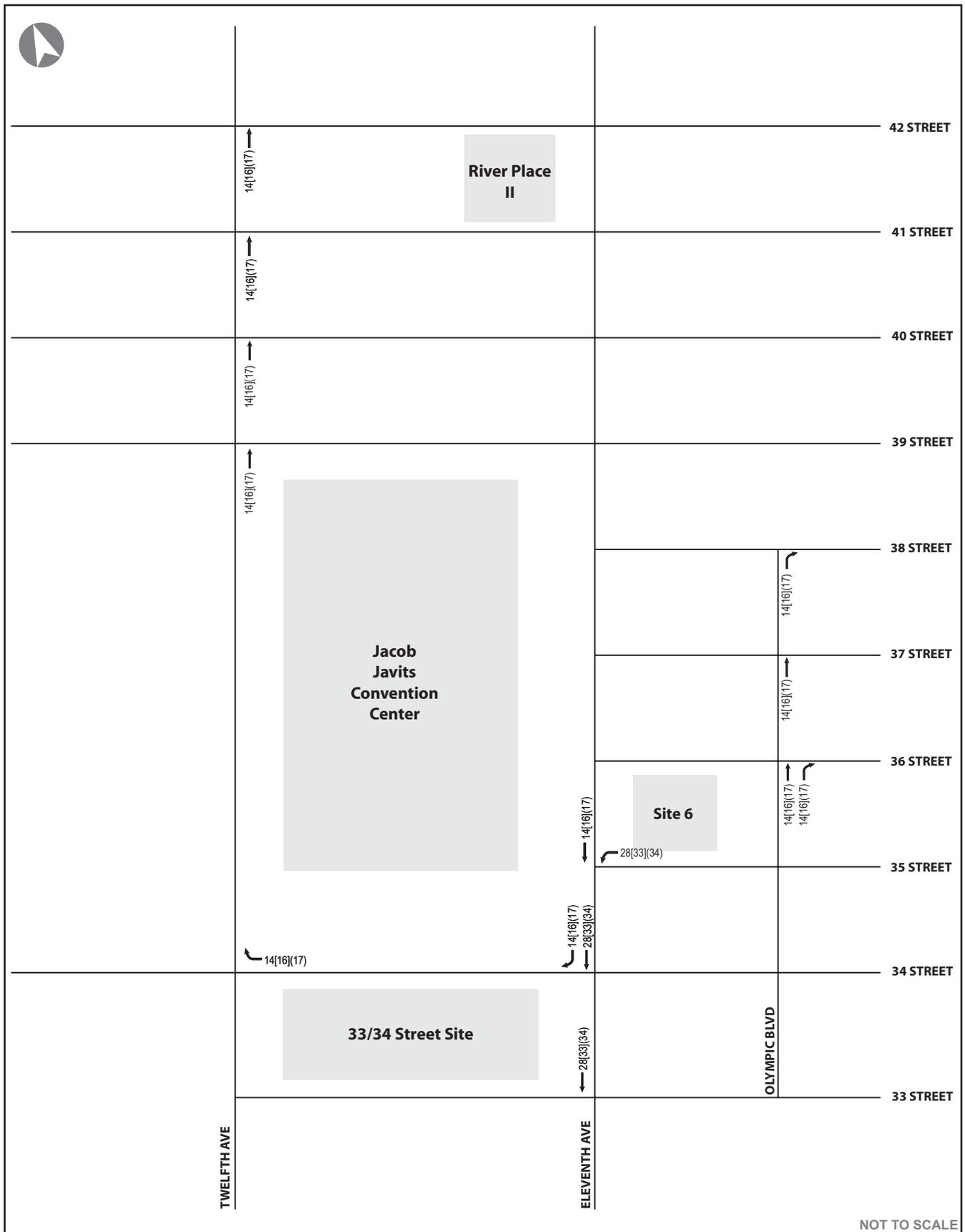


FIGURE 64: 2025 - FGEIS SITE 6 BUILDING TAXI TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 65: 2025 - FGEIS SITE 6 BUILDING TAXI TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



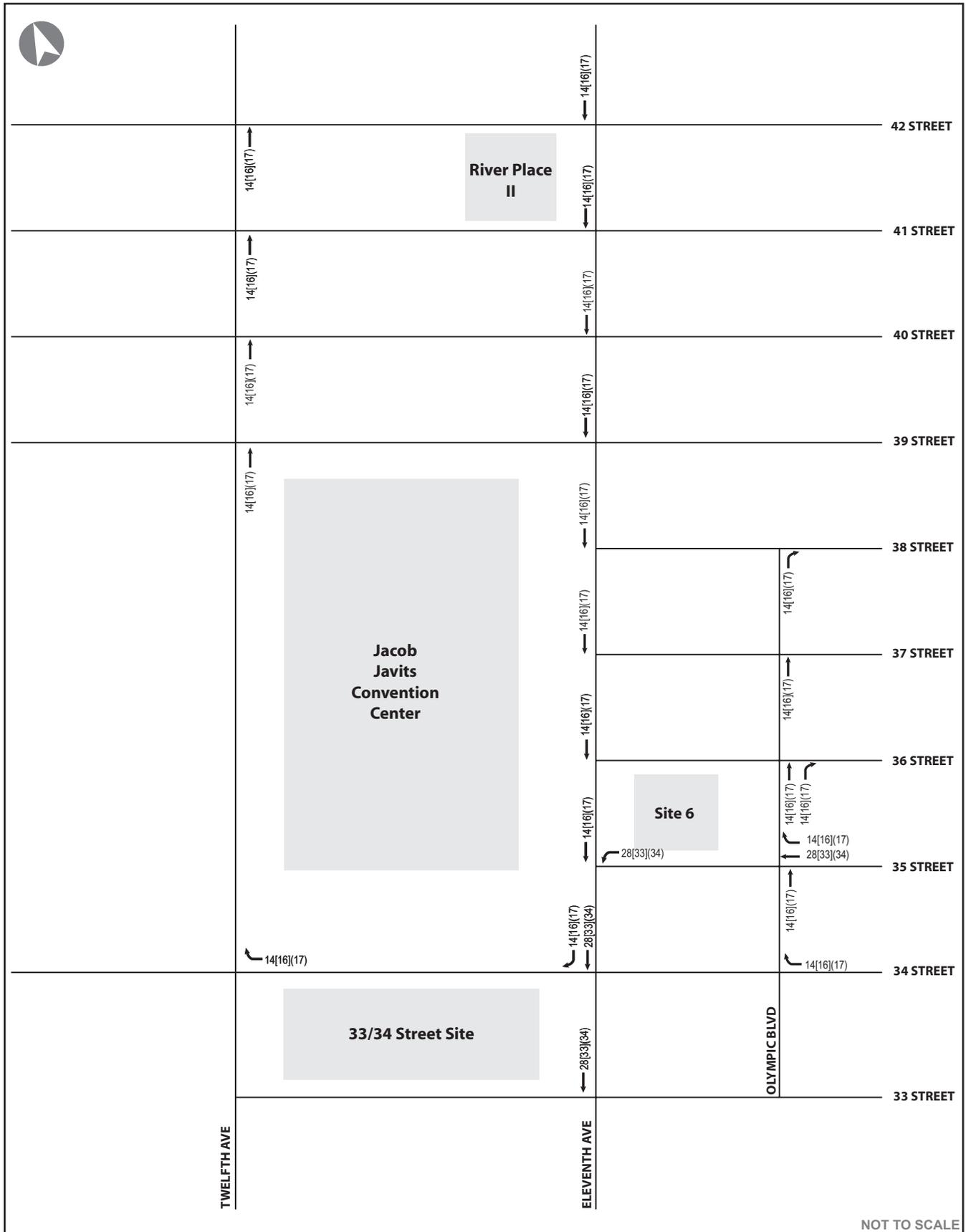


FIGURE 66: 2025 - FGEIS SITE 6 BUILDING TAXI TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



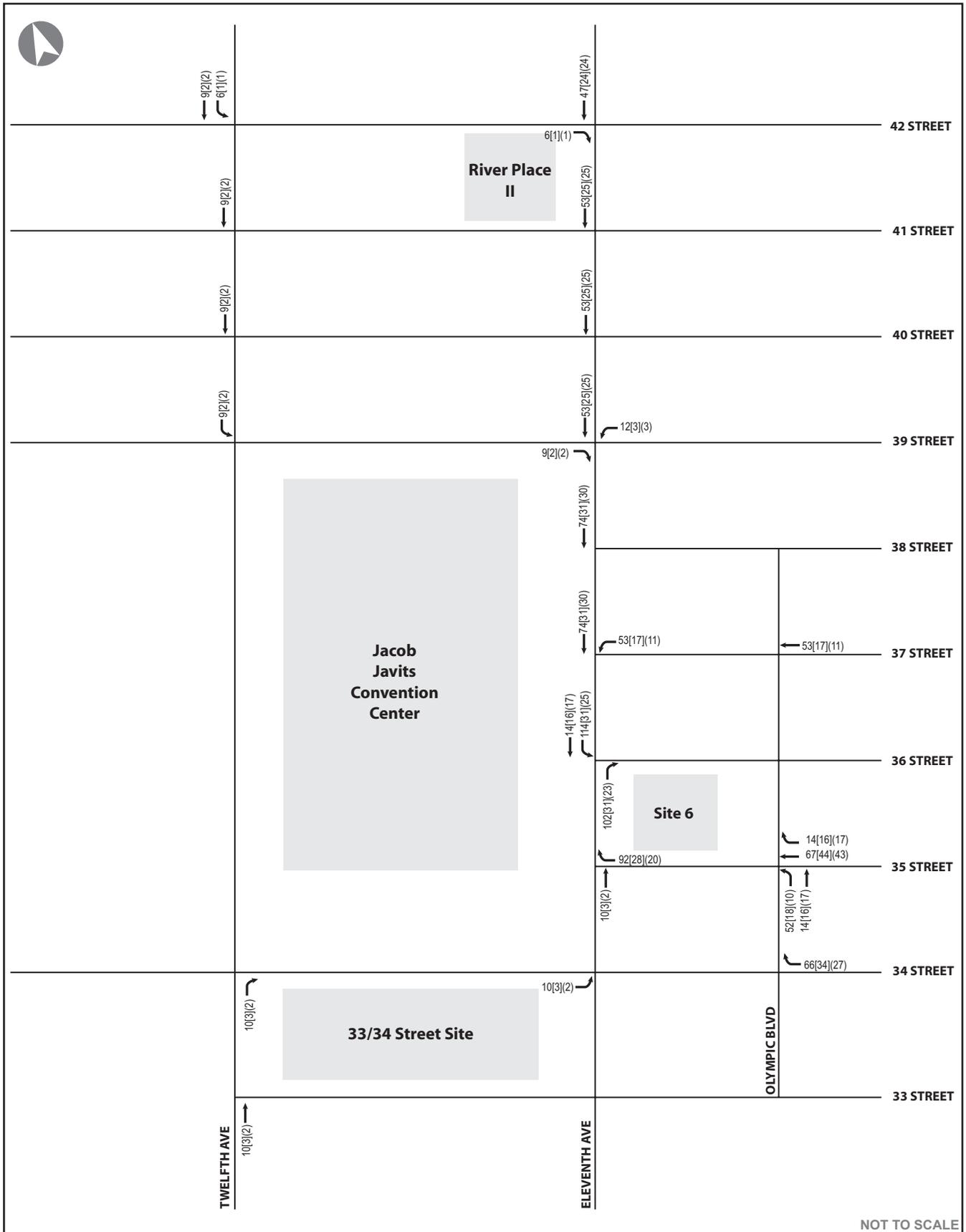
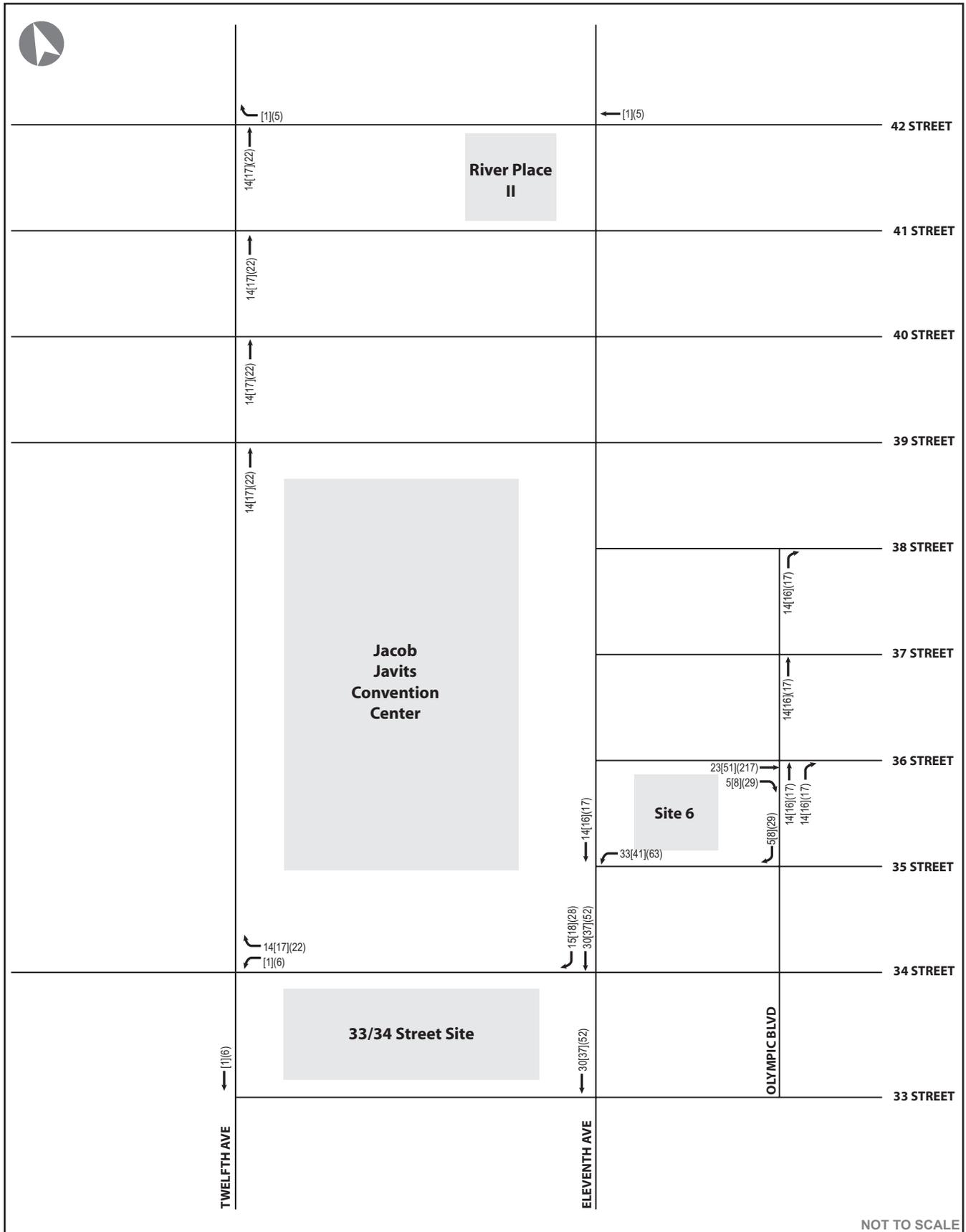


FIGURE 67: 2025 - FGEIS SITE 6 BUILDING TOTAL TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



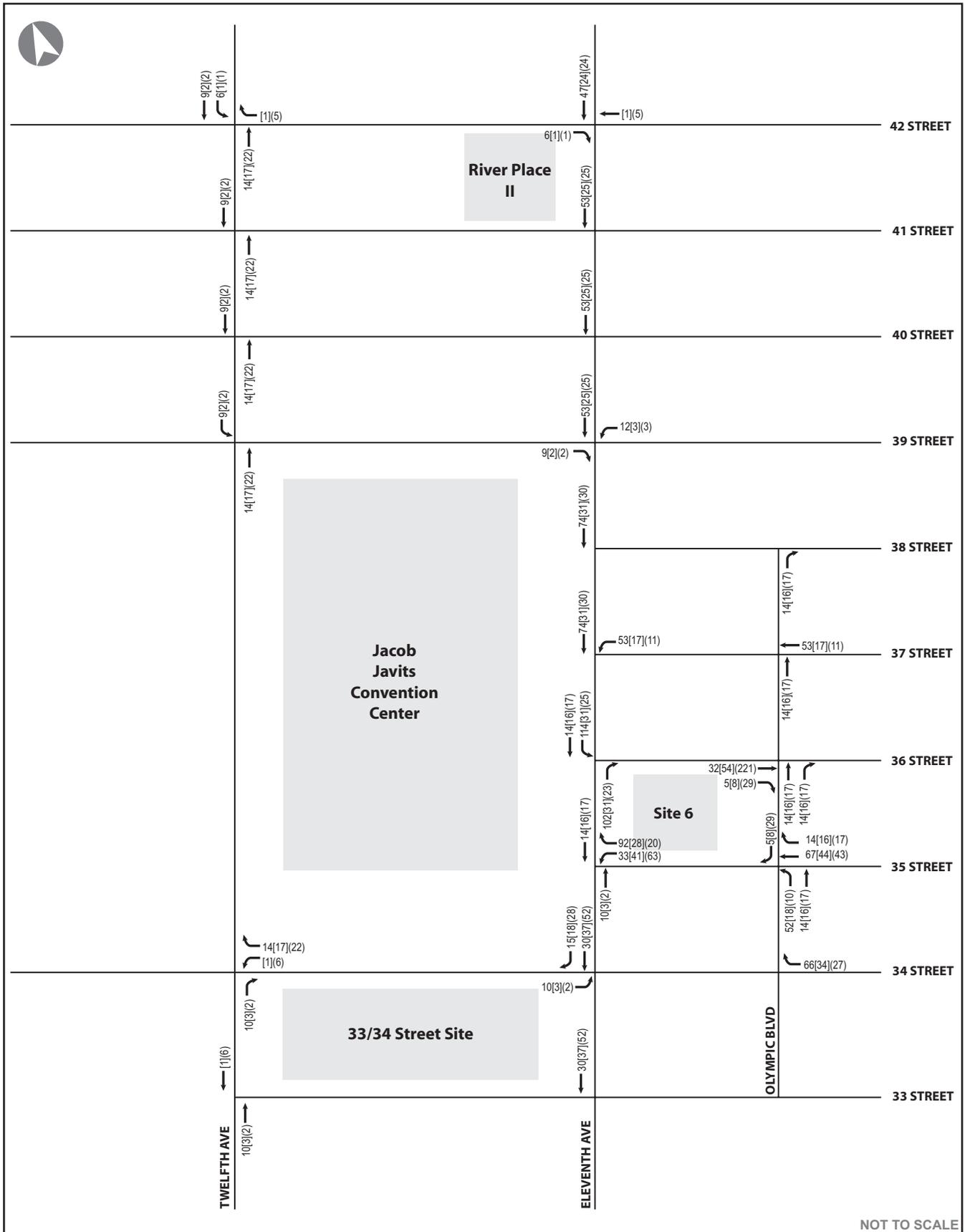


NOT TO SCALE

FIGURE 68: 2025 - FGEIS SITE 6 BUILDING TOTAL TRAFFIC VOLUMES (EXIT ONLY)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S



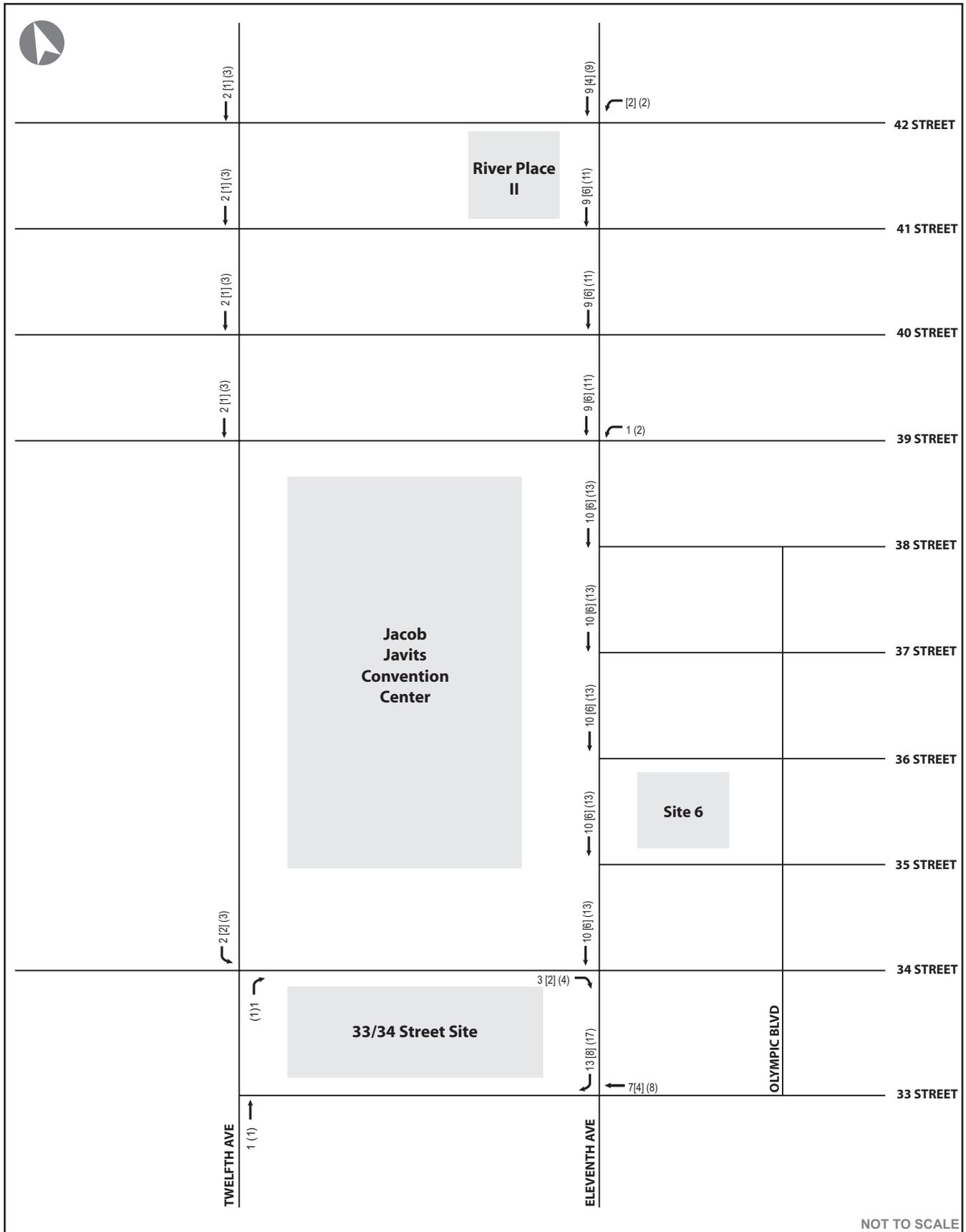


NOT TO SCALE

FIGURE 69: 2025 - FGEIS SITE 6 BUILDING TRAFFIC VOLUMES (TOTAL)  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





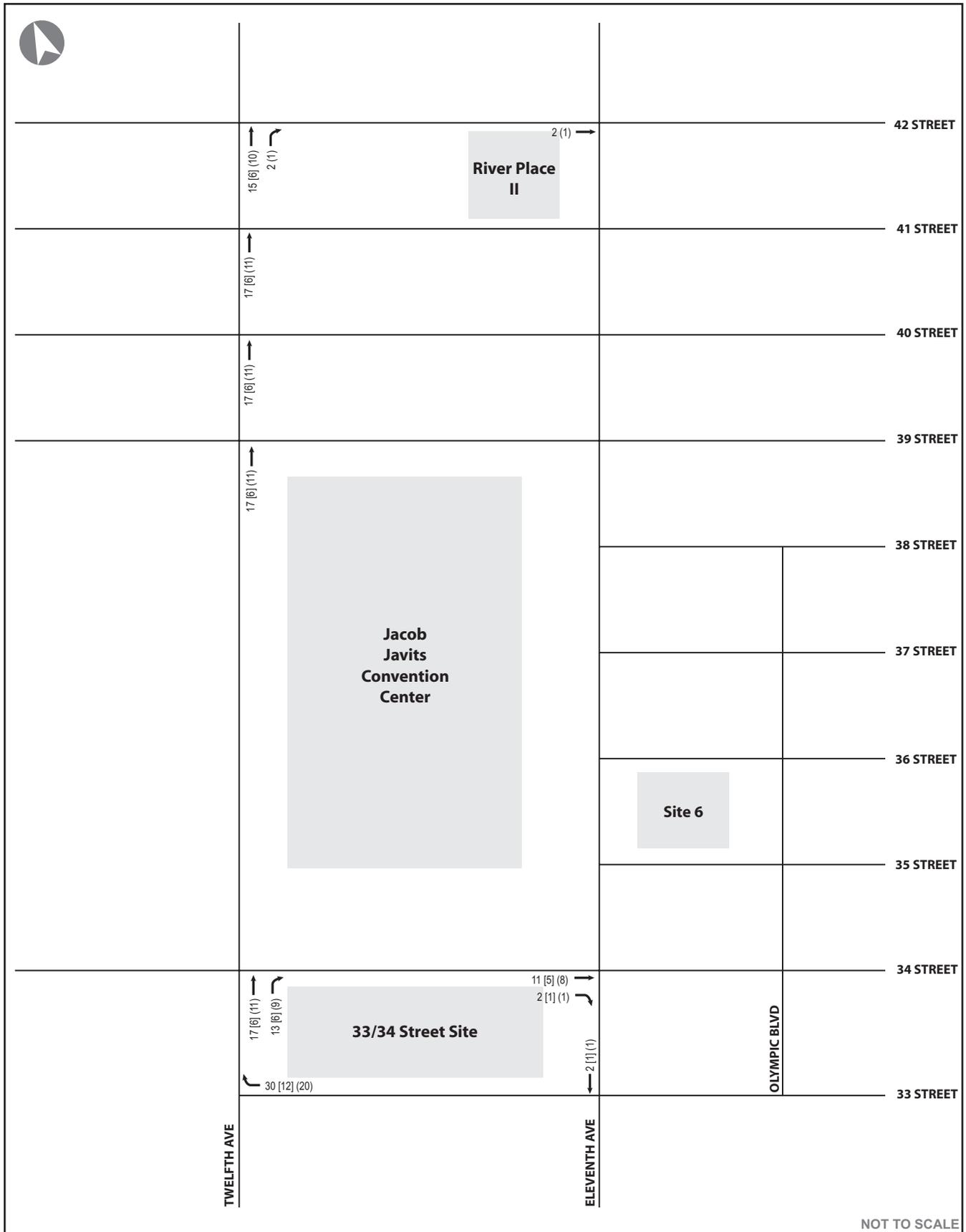
NOT TO SCALE

FIGURE 70: 2025 - 33RD/34TH STREET BUILDING RESIDENTIAL TRAFFIC VOLUMES (ENTER ONLY)

Traffic Volume AM[MD](PM)

Note: Second 500 unit residential building only in 2025





NOT TO SCALE

FIGURE 71: 2025 - 33RD/34TH STREET BUILDING RESIDENTIAL TRAFFIC VOLUMES (EXIT ONLY)

Traffic Volume AM[MD](PM)

Note: Second 500 unit residential building only in 2025



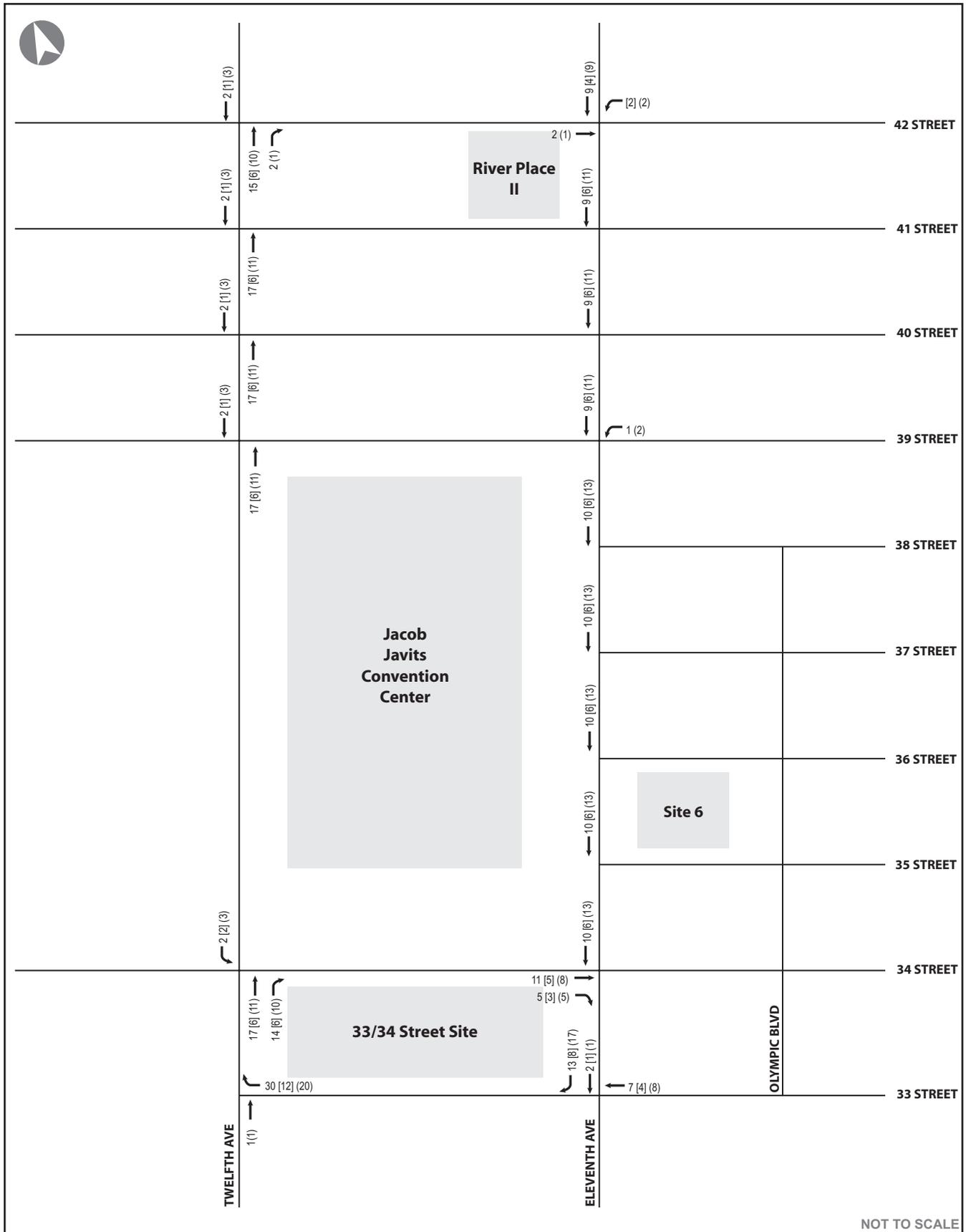


FIGURE 72: 2025 - 33RD/34TH STREET BUILDING RESIDENTIAL TRAFFIC VOLUMES (TOTAL)

Traffic Volume AM[MD](PM)

Note: Second 500 unit residential building only in 2025



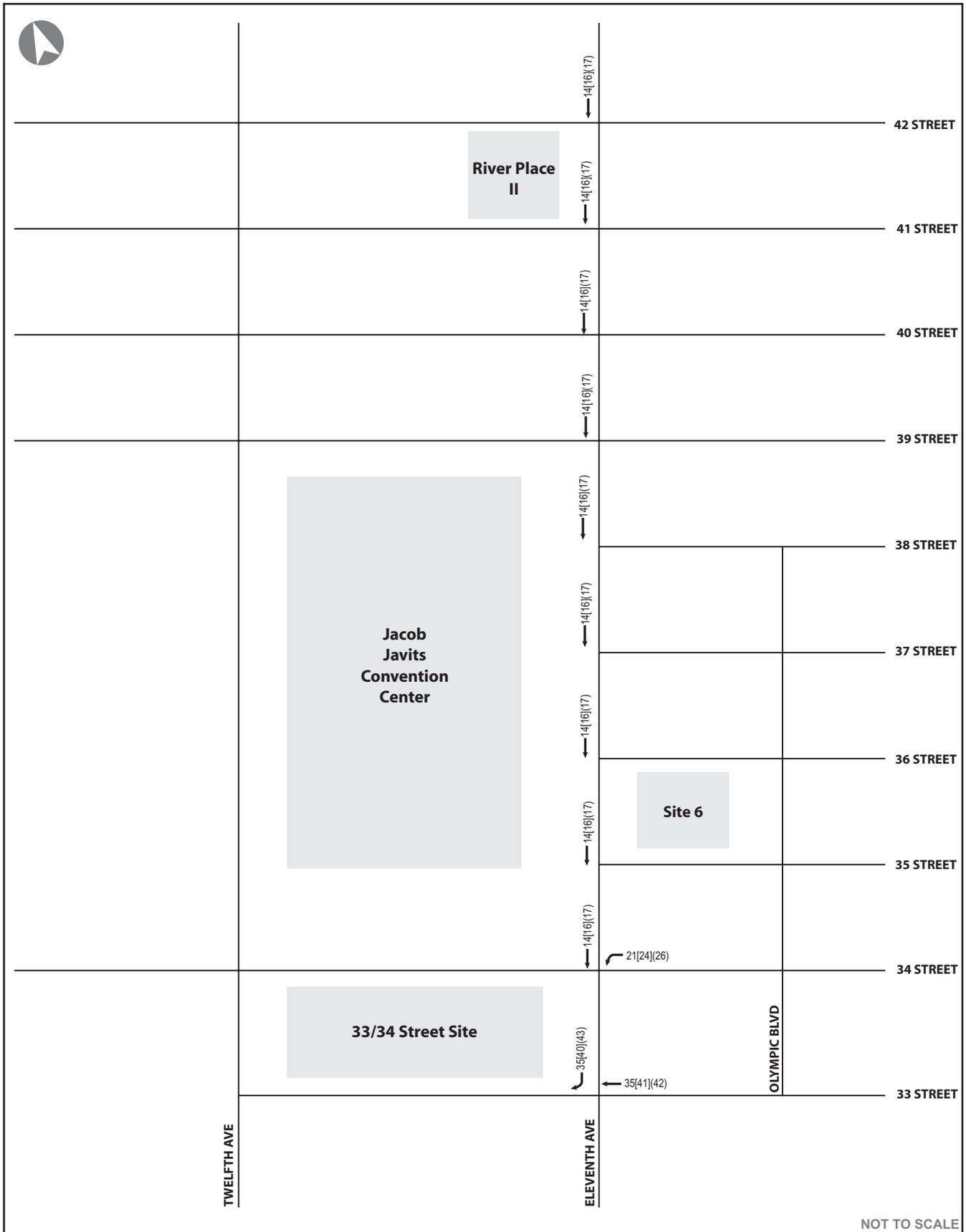


FIGURE 73: 2025 - 33rd/34th STREET COMMERCIAL BUILDING REROUTED TAXI TRAFFIC VOLUMES (ENTER ONLY)

Traffic Volume AM[MD](PM)

Note: Taxis rerouted from Site 6 building assume same distribution as residential to building frontage



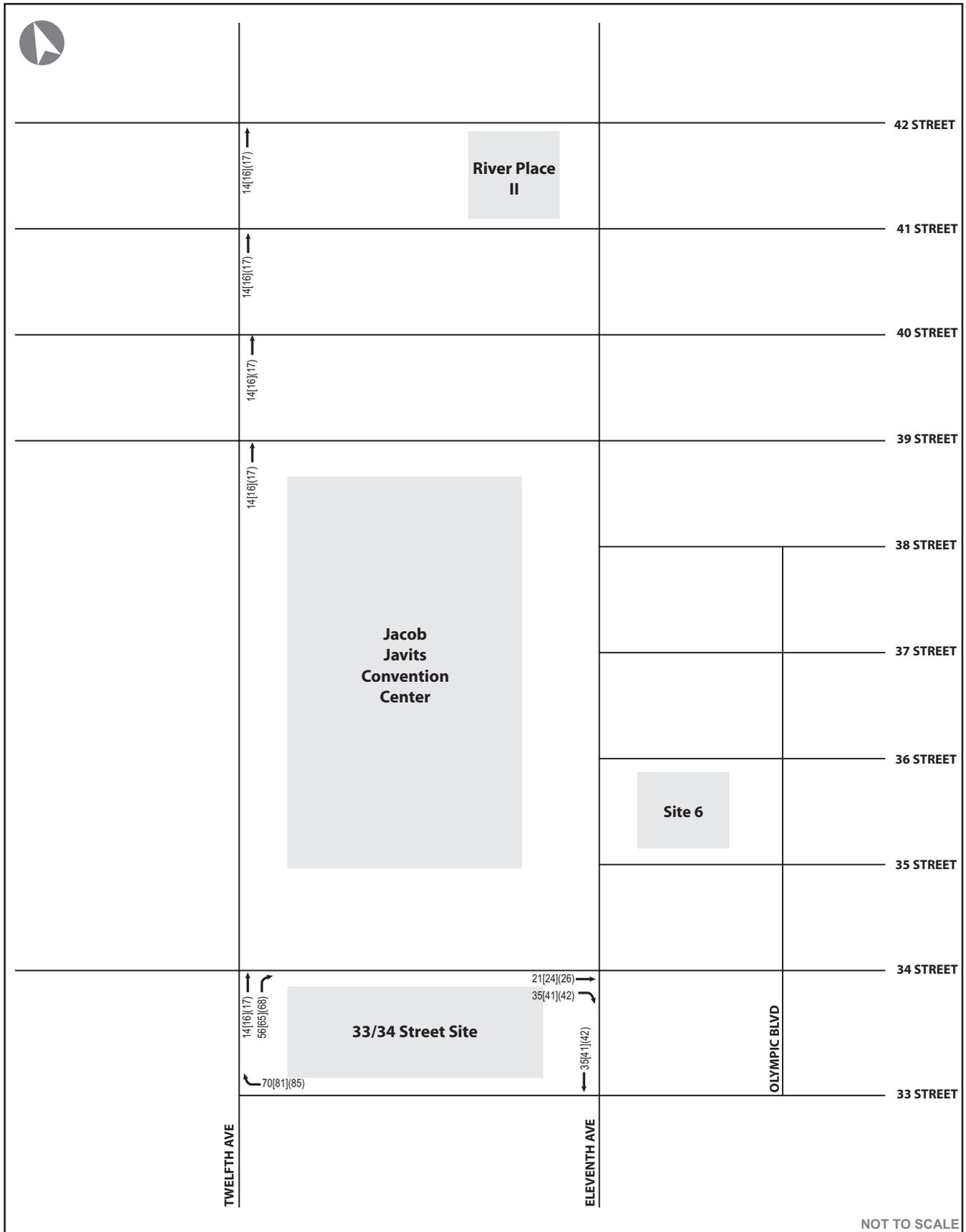


FIGURE 74: 2025 - 33rd/34th STREET COMMERCIAL BUILDING REROUTED TAXI TRAFFIC VOLUMES (EXIT ONLY)

Traffic Volume AM[MD](PM)

Note: Taxis rerouted from Site 6 building assume same distribution as residential to building frontage



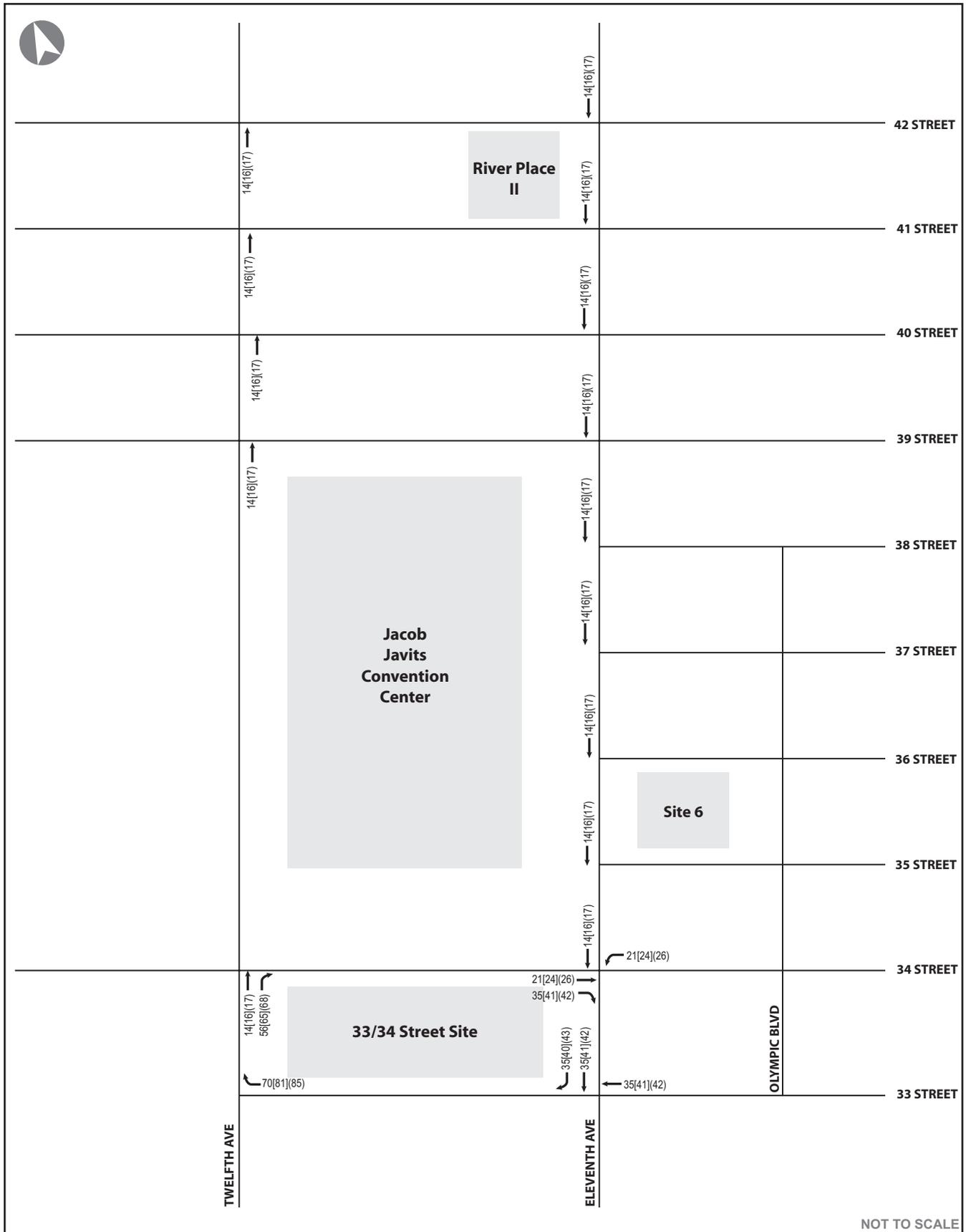
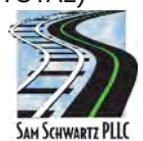
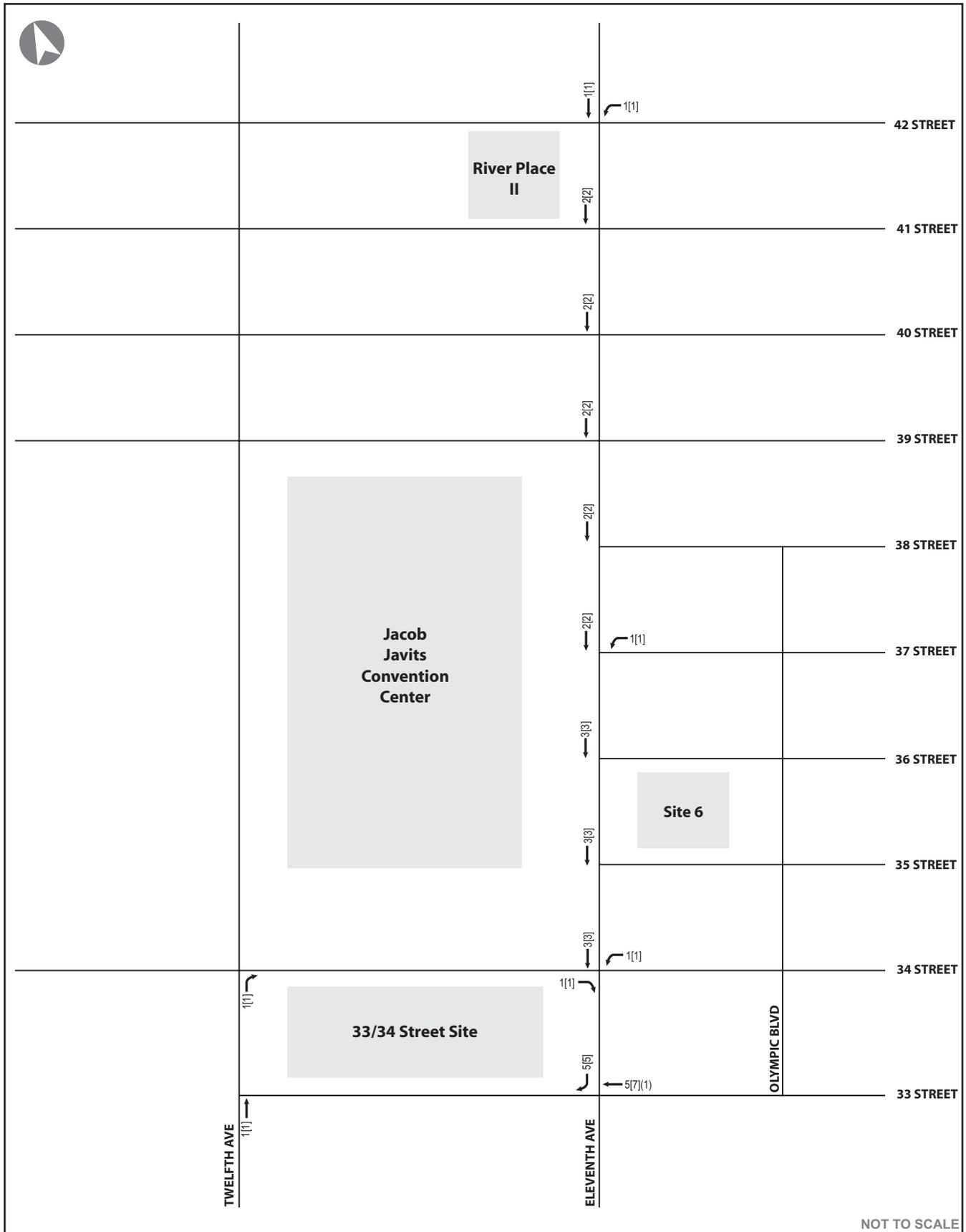


FIGURE 75: 2025 - 33rd/34th STREET COMMERCIAL BUILDING REROUTED TAXI TRAFFIC VOLUMES (TOTAL)

Traffic Volume AM[MD](PM)

Note: Taxis rerouted from Site 6 building assume same distribution as residential to building frontage





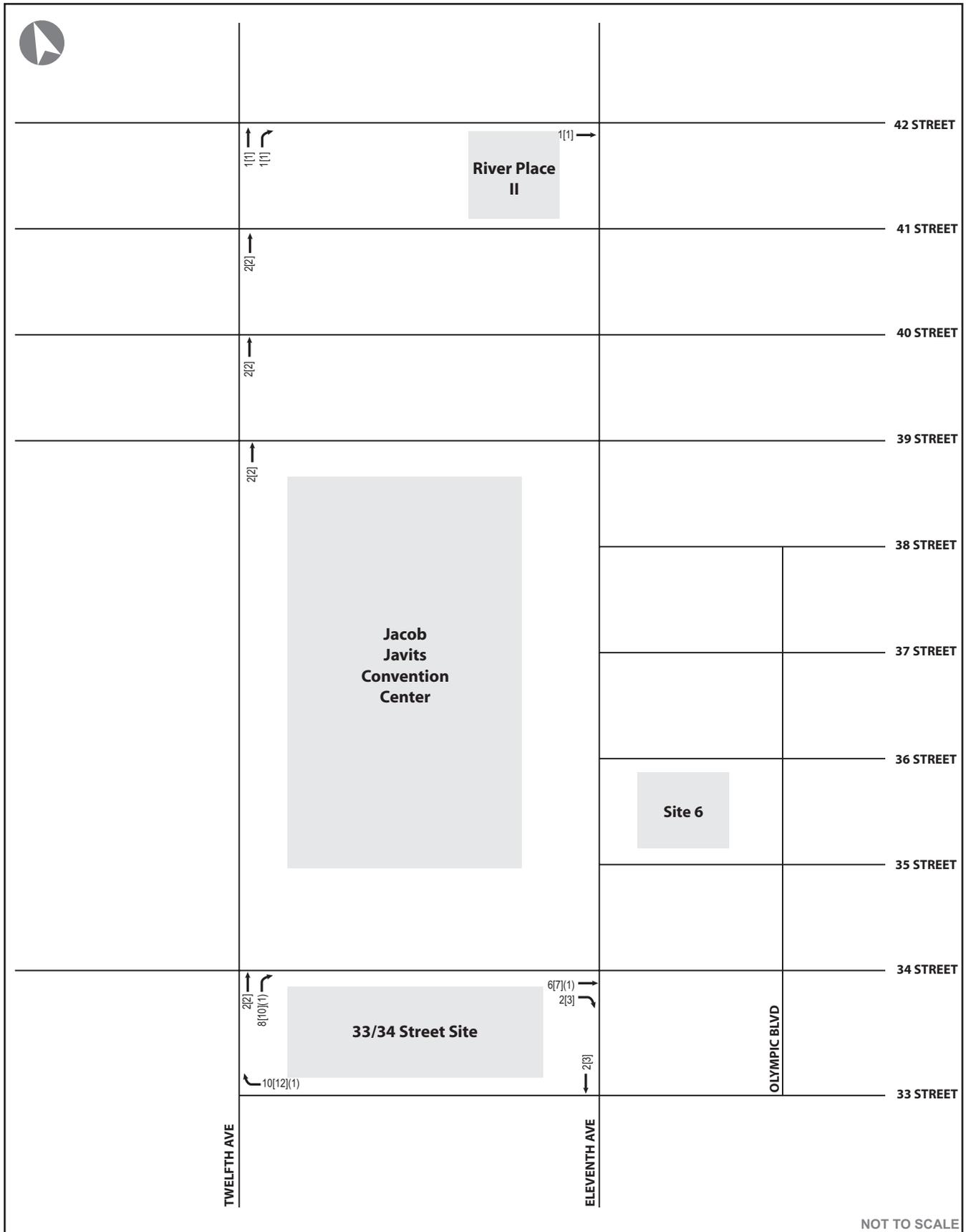
NOT TO SCALE

FIGURE 76: 2025 - 33rd/34th STREET COMMERCIAL BUILDING REROUTED TRUCK TRAFFIC VOLUMES (ENTER ONLY)

Traffic Volume AM[MD](PM)

Note: Commercial trucks rerouted from Site 6 building assume same distribution as residential to building frontage





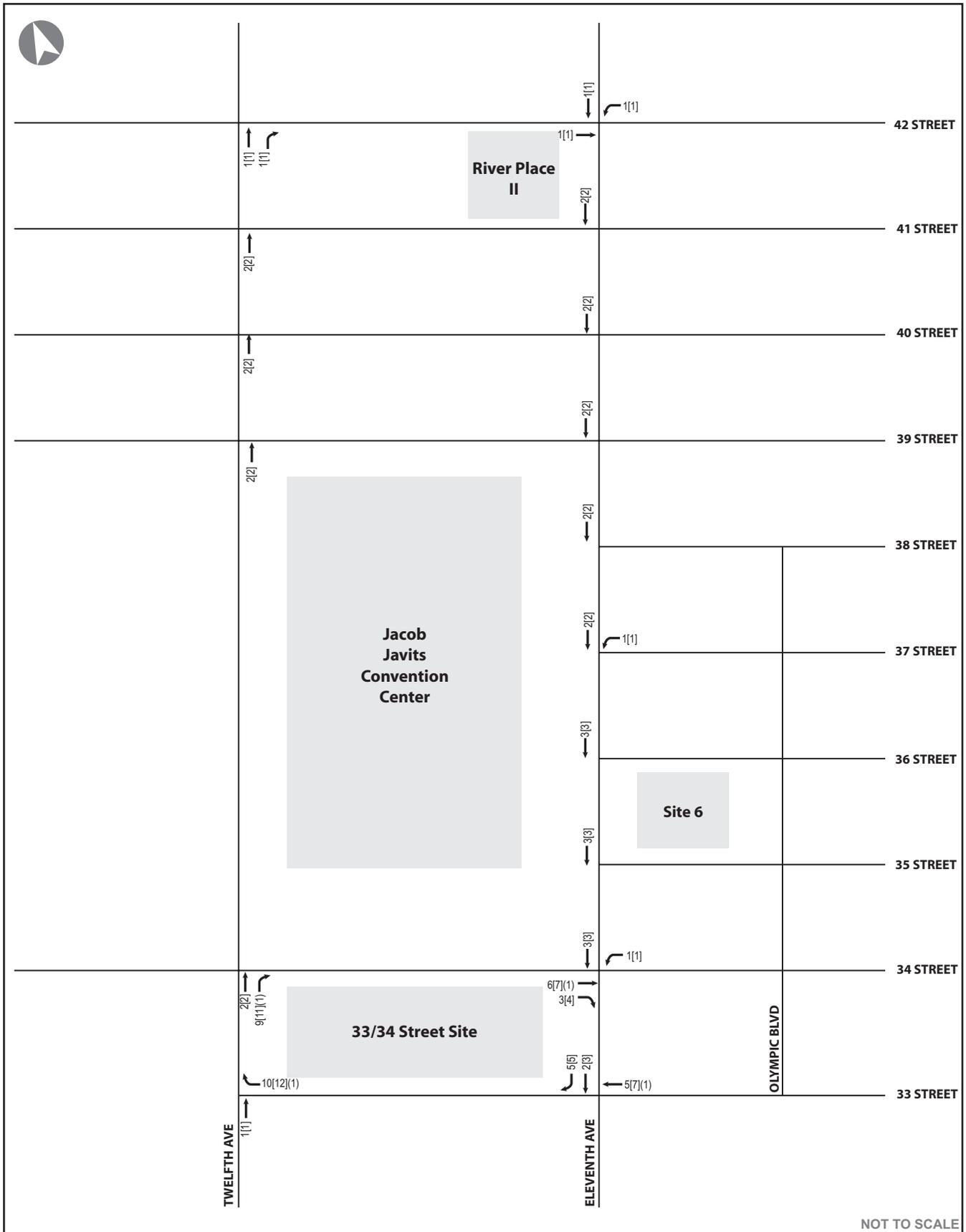
NOT TO SCALE

FIGURE 77: 2025 - 33rd/34th STREET COMMERCIAL BUILDING REROUTED TRUCK TRAFFIC VOLUMES (EXIT ONLY)

Traffic Volume AM[MD](PM)



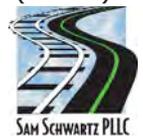
Note: Commercial trucks rerouted from Site 6 building assume same distribution as residential to building frontage



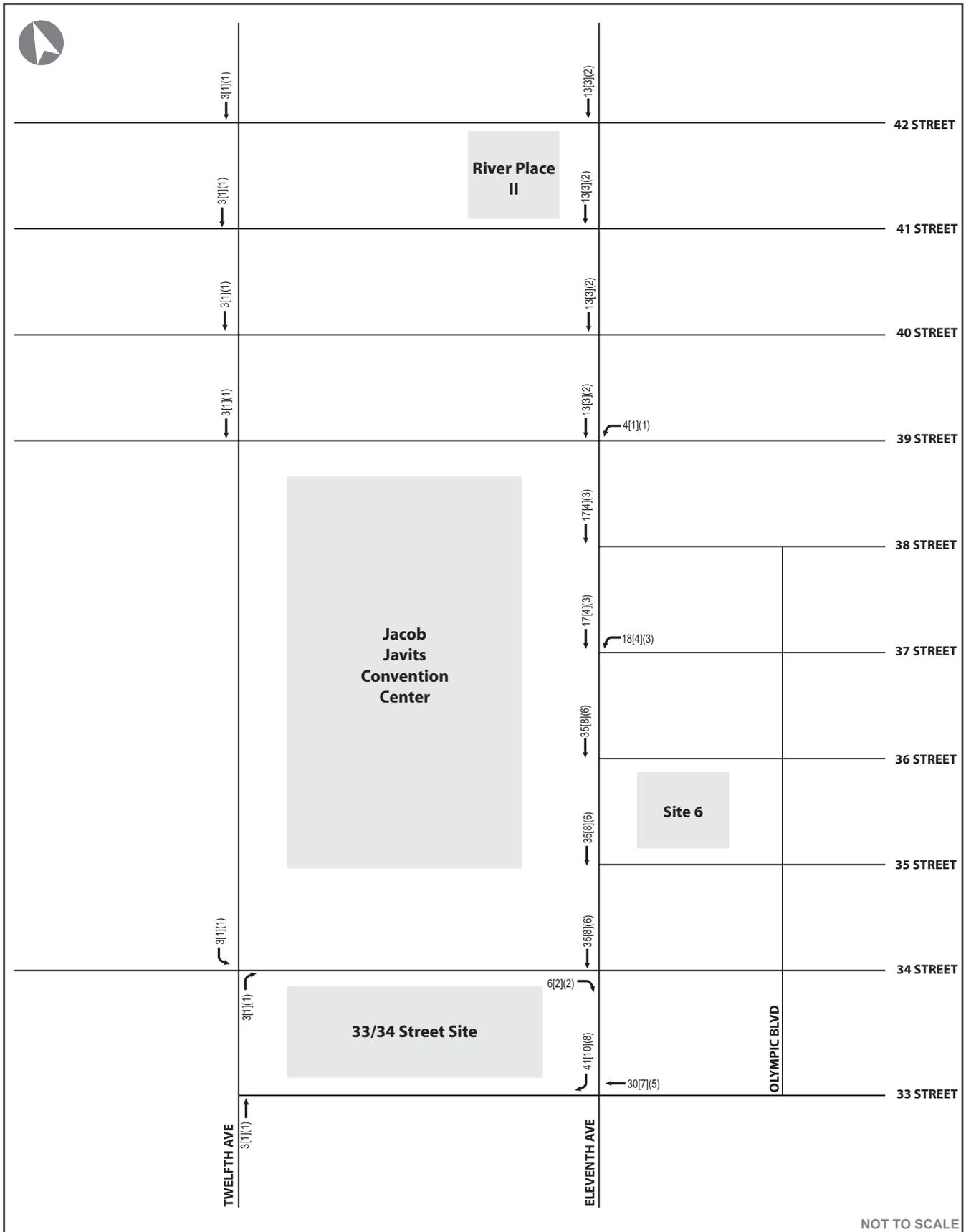
NOT TO SCALE

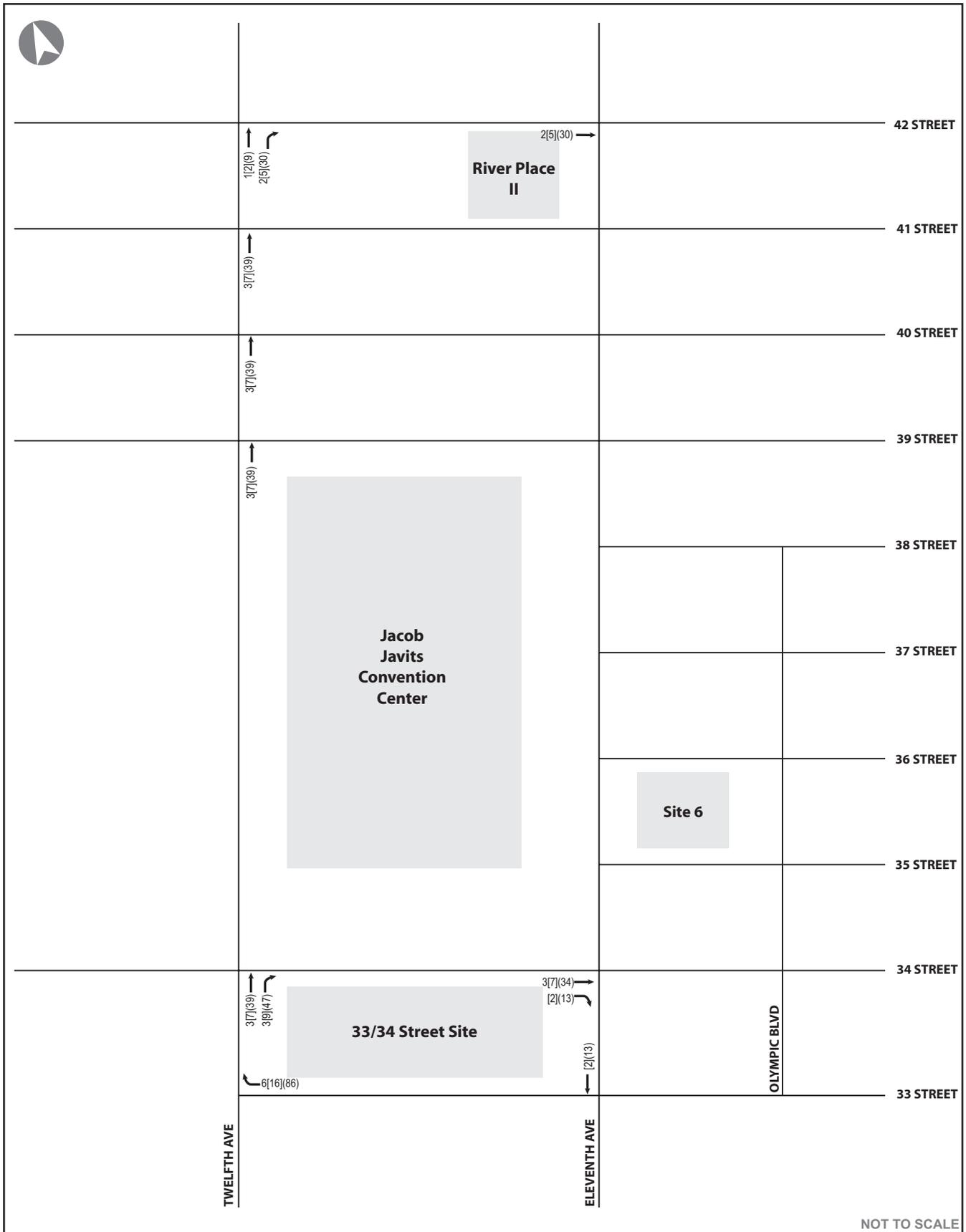
FIGURE 78: 2025 - 33rd/34th STREET COMMERCIAL BUILDING REROUTED TRUCK TRAFFIC VOLUMES (TOTAL)

Traffic Volume AM[MD](PM)



Note: Commercial trucks rerouted from Site 6 building assume same distribution as residential to building frontage



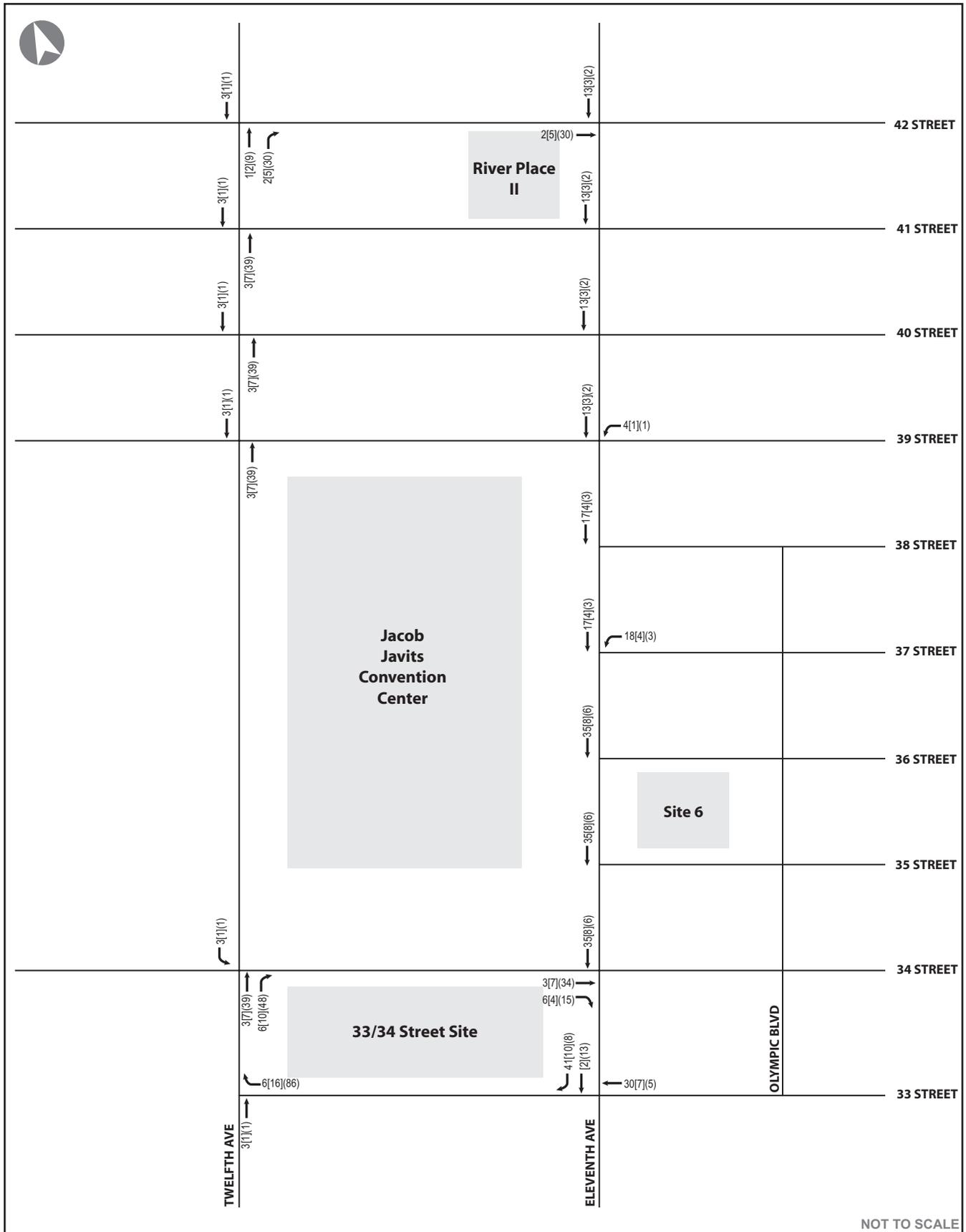


NOT TO SCALE

FIGURE 80: 2025 - 33rd/34th STREET BUILDING COMMERCIAL REROUTED AUTO  
 - ON SITE - TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

Note: 35% Commercial volumes assumed to park on site



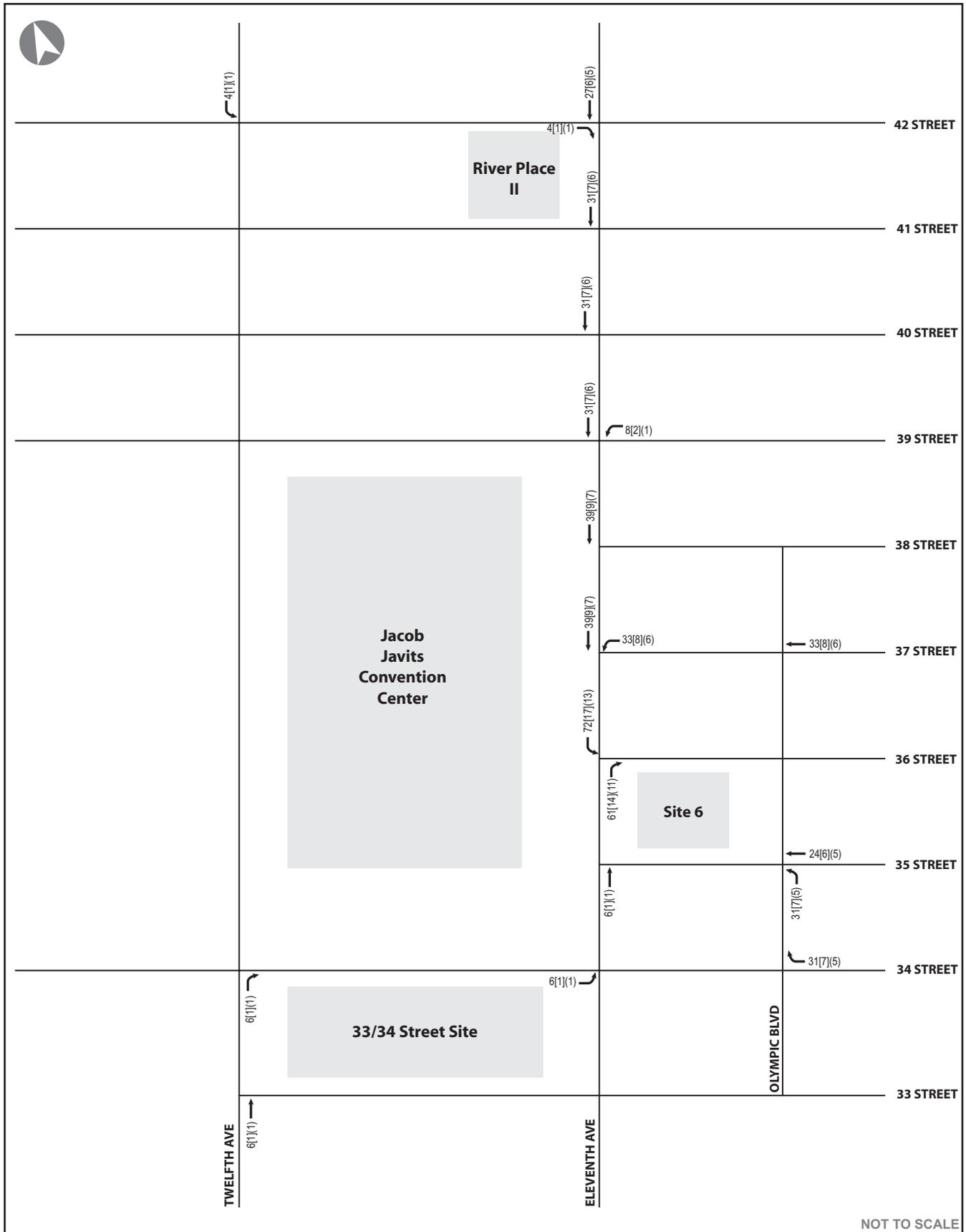


NOT TO SCALE

FIGURE 81: 2025 - 33rd/34th STREET BUILDING COMMERCIAL REROUTED AUTO  
 - ON SITE - TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

Note: 35% Commercial volumes assumed to park on site with same distribution as residential



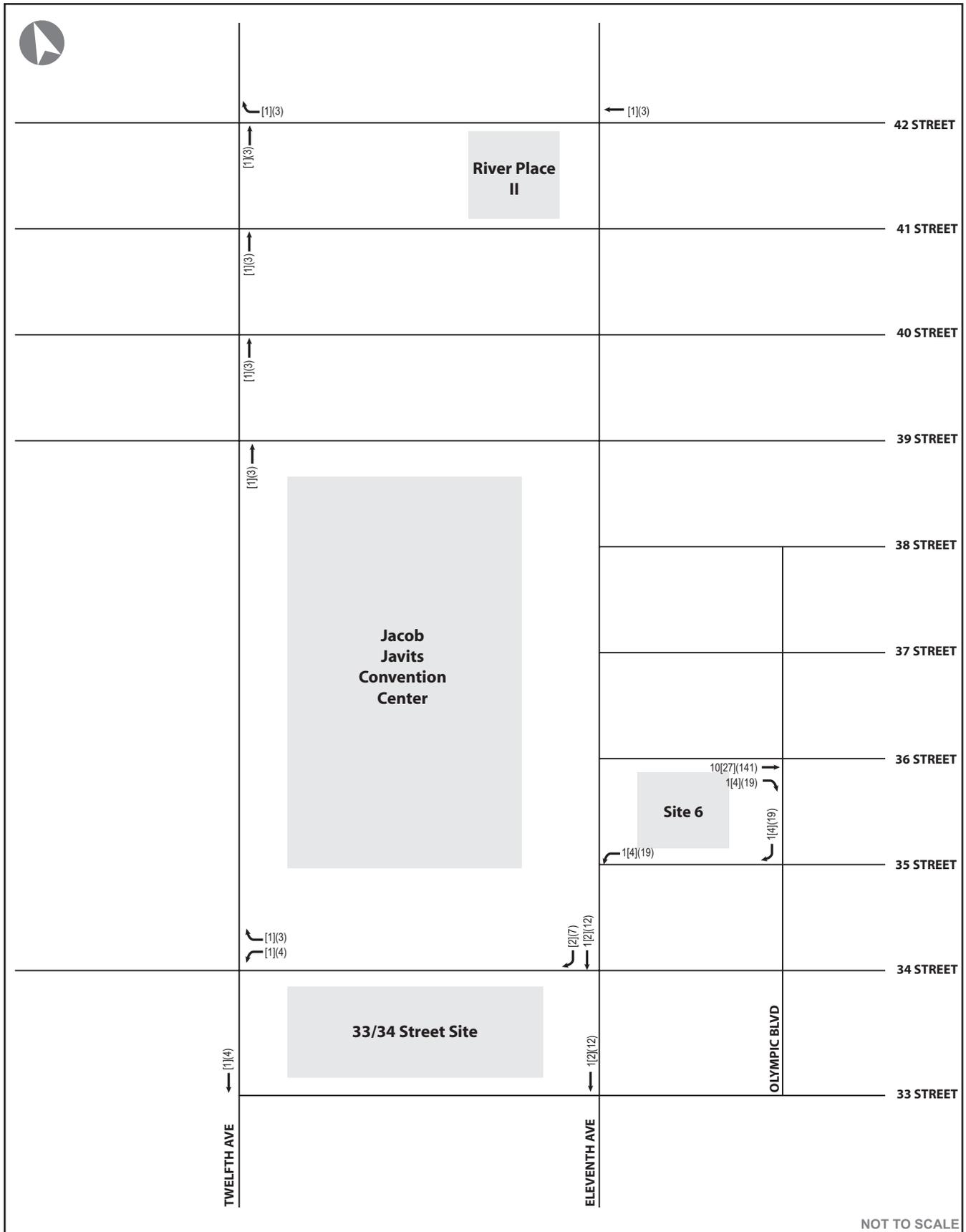


NOT TO SCALE

FIGURE 82: 2025 - 33rd/34th STREET BUILDING REROUTED AUTO  
 - OFF SITE - TRAFFIC VOLUMES (ENTER ONLY)  
 Traffic Volume AM[MD](PM)

Note: 65% Auto volumes assumed to park off site at 950 space garage based on Site 6 building distribution, rerouted for 39th Street closing



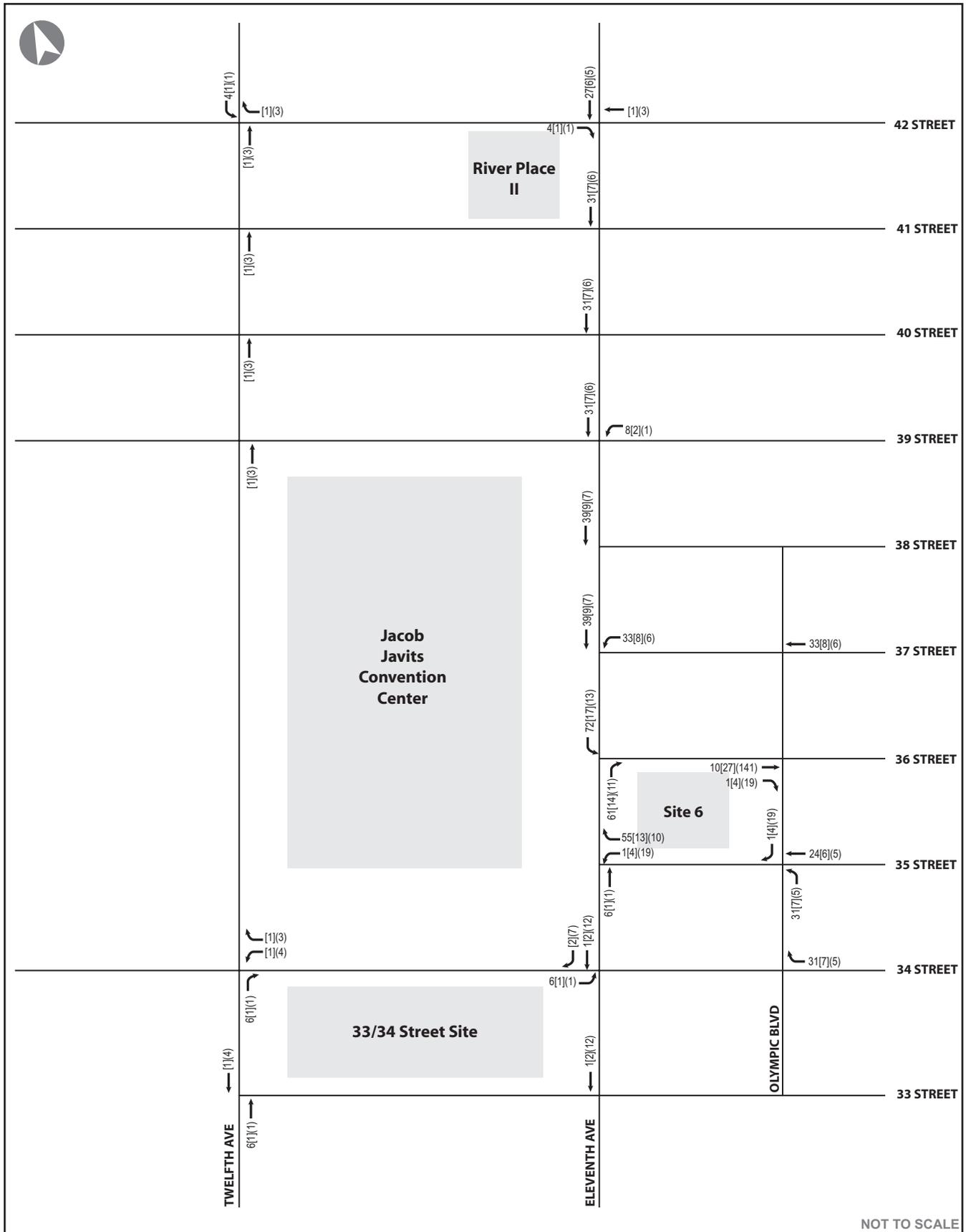


NOT TO SCALE

FIGURE 83: 2025 - 33rd/34th STREET BUILDING REROUTED AUTO  
 - OFF SITE - TRAFFIC VOLUMES (EXIT ONLY)  
 Traffic Volume AM[MD](PM)

Note: 65% Auto volumes assumed to park off site at 950 space garage based on Site 6 building distribution, rerouted for 39th Street closing



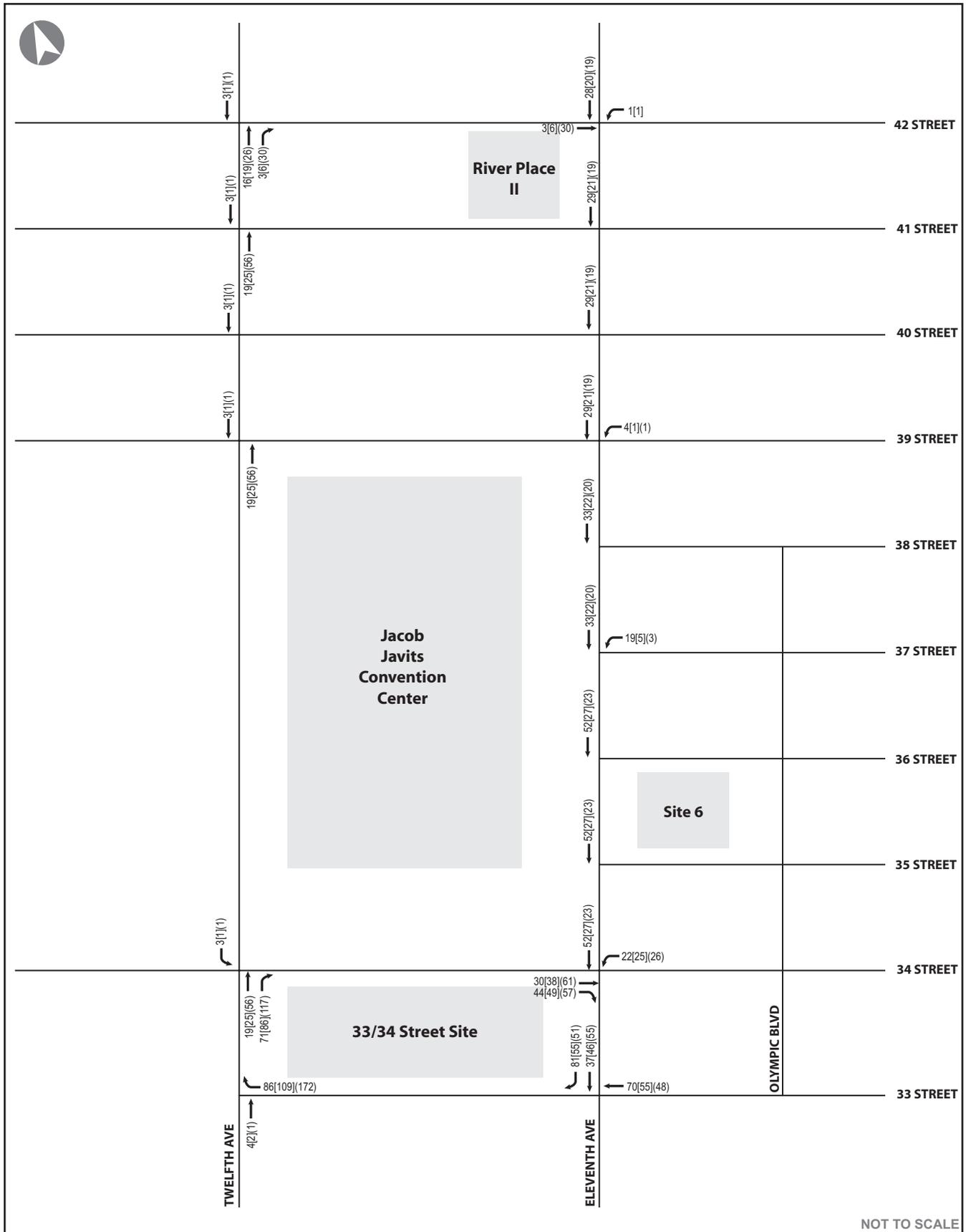


NOT TO SCALE

FIGURE 84: 2025 - 33rd/34th STREET BUILDING REROUTED AUTO  
 - OFF SITE - TRAFFIC VOLUMES (TOTAL)  
 Traffic Volume AM[MD](PM)

Note: 65% Auto volumes assumed to park off site at 950 space garage based on Site 6 building distribution





NOT TO SCALE

FIGURE 85: 2025 - 33rd/34th STREET COMMERCIAL BUILDING TOTAL REROUTED TRAFFIC VOLUMES

Traffic Volume AM[MD](PM)

Note: 35% Rerouted autos, trucks and taxis from original Site 6 volumes



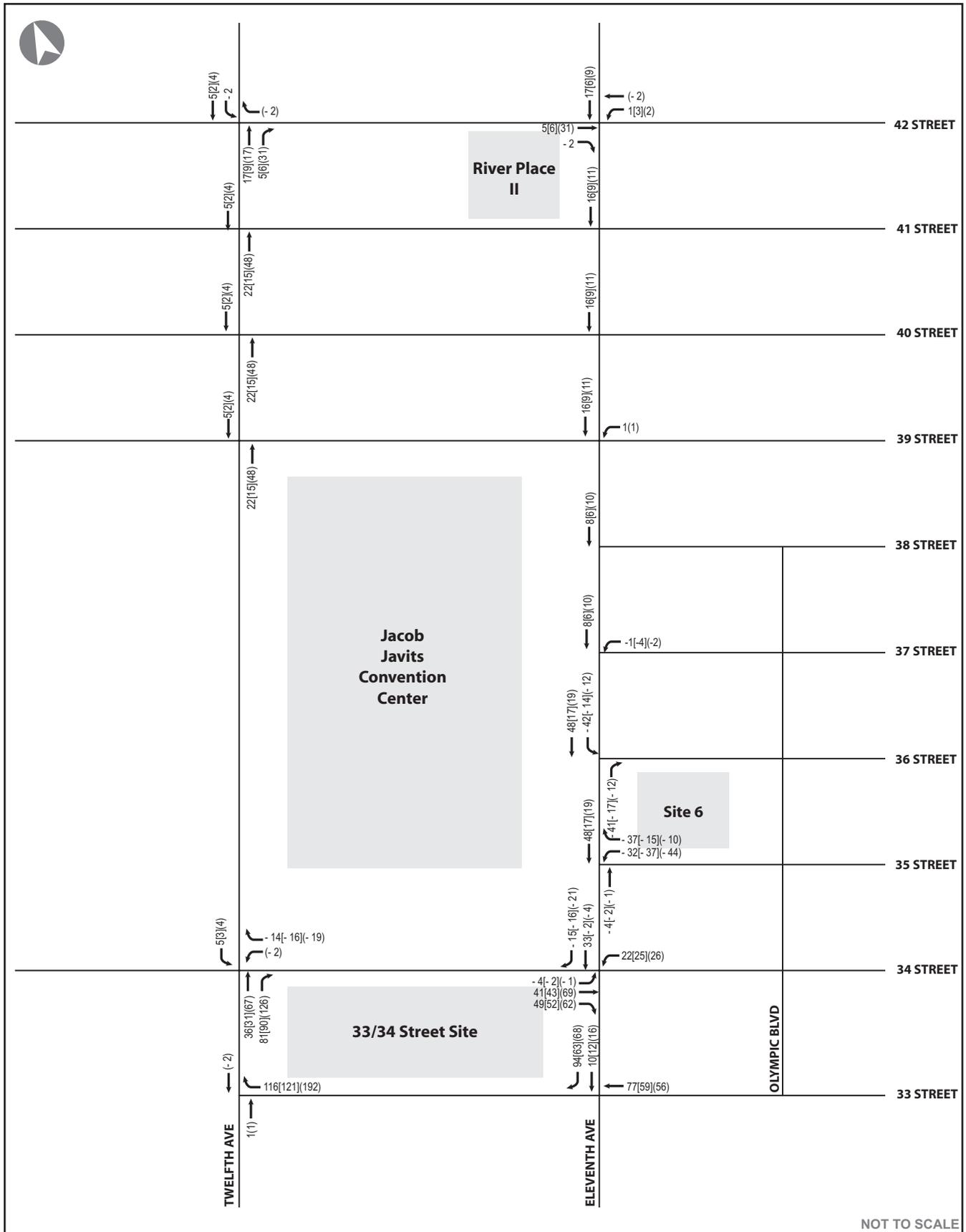
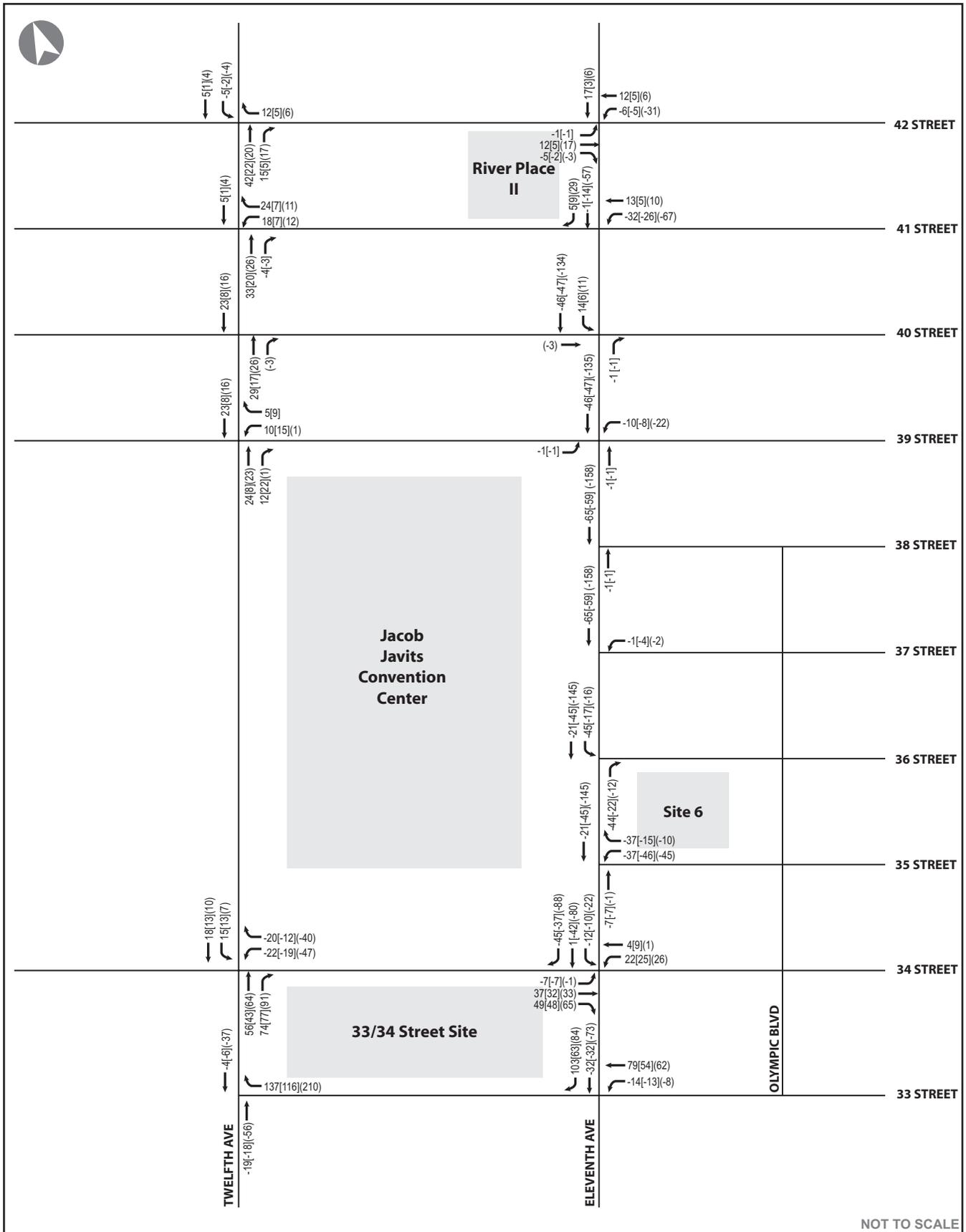


FIGURE 86: 2025 - NET PROJECT GENERATED TRAFFIC VOLUMES

Traffic Volume AM[MD](PM)

Note: 33rd/34th Street building volumes + Re-routed Site 6 volumes + 65% Auto Volumes - Original Site 6 volumes  
 Original Site 6 volumes are rerouted due to closure of 39th Street.





NOT TO SCALE

FIGURE 87: 2025 - PROJECT GENERATED TRAFFIC VOLUMES

Traffic Volume AM[MD](PM)

Note: 2010 net project generated volumes + 2025 net project generated volumes



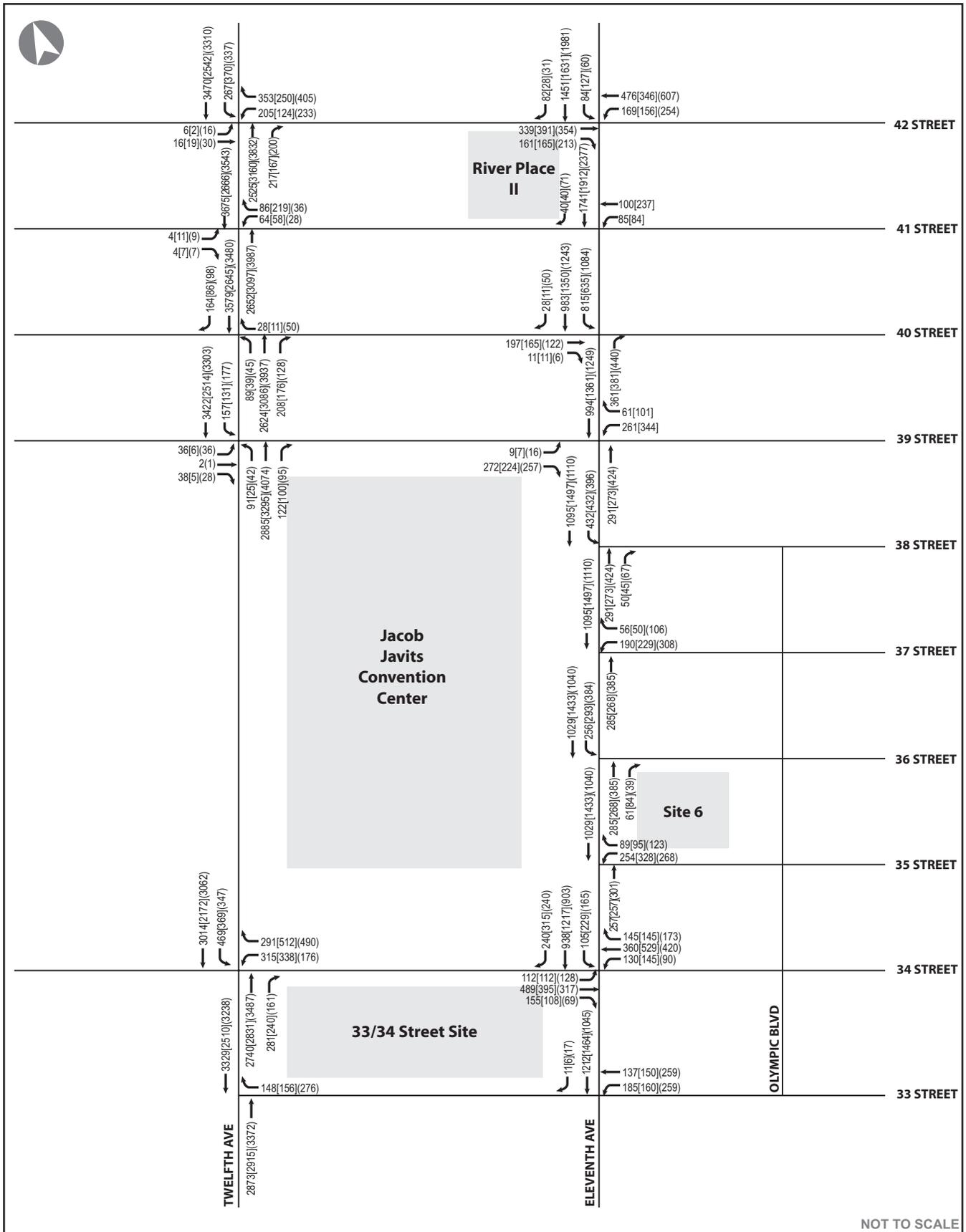
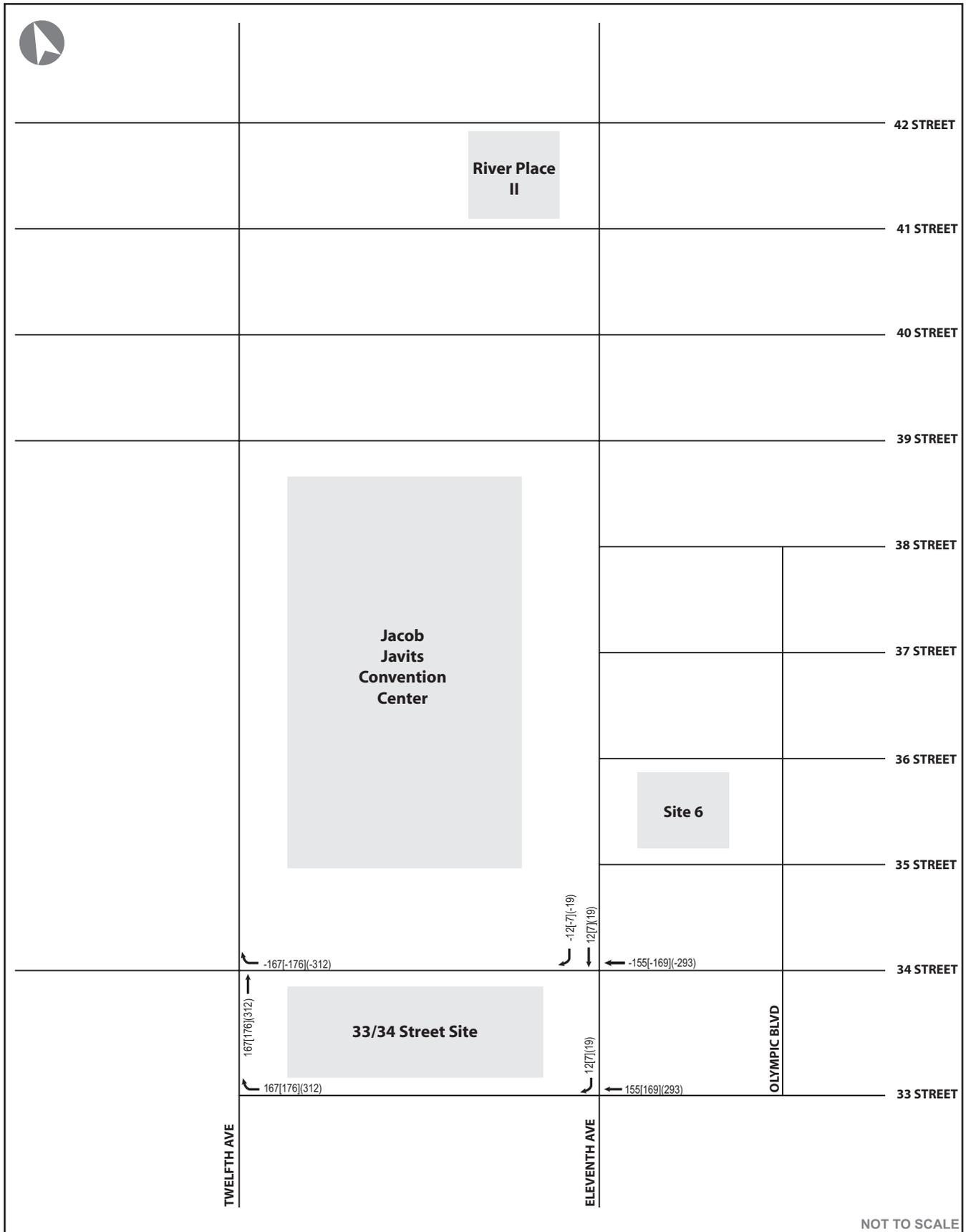


FIGURE 88: 2025 FGEIS NO BUILD TRAFFIC VOLUMES

Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





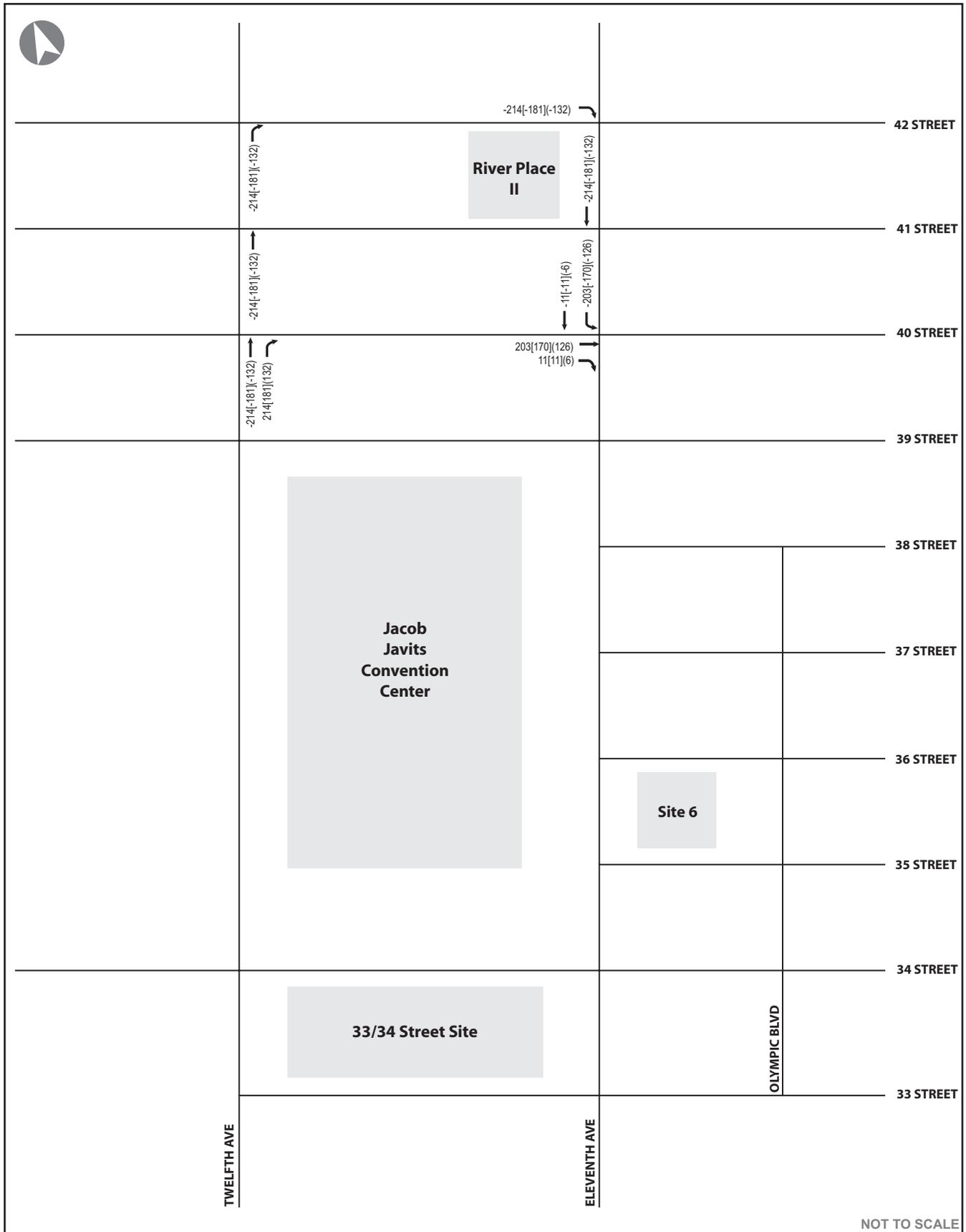
NOT TO SCALE

FIGURE 89: 2025 - REROUTED NO BUILD VOLUMES DUE TO 33RD STREET REOPENING

Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of 33rd Street





NOT TO SCALE

FIGURE 90: 2025 - REROUTED NO BUILD VOLUMES DUE TO 40TH STREET REOPENING EASTBOUND  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of eastbound 40th Street



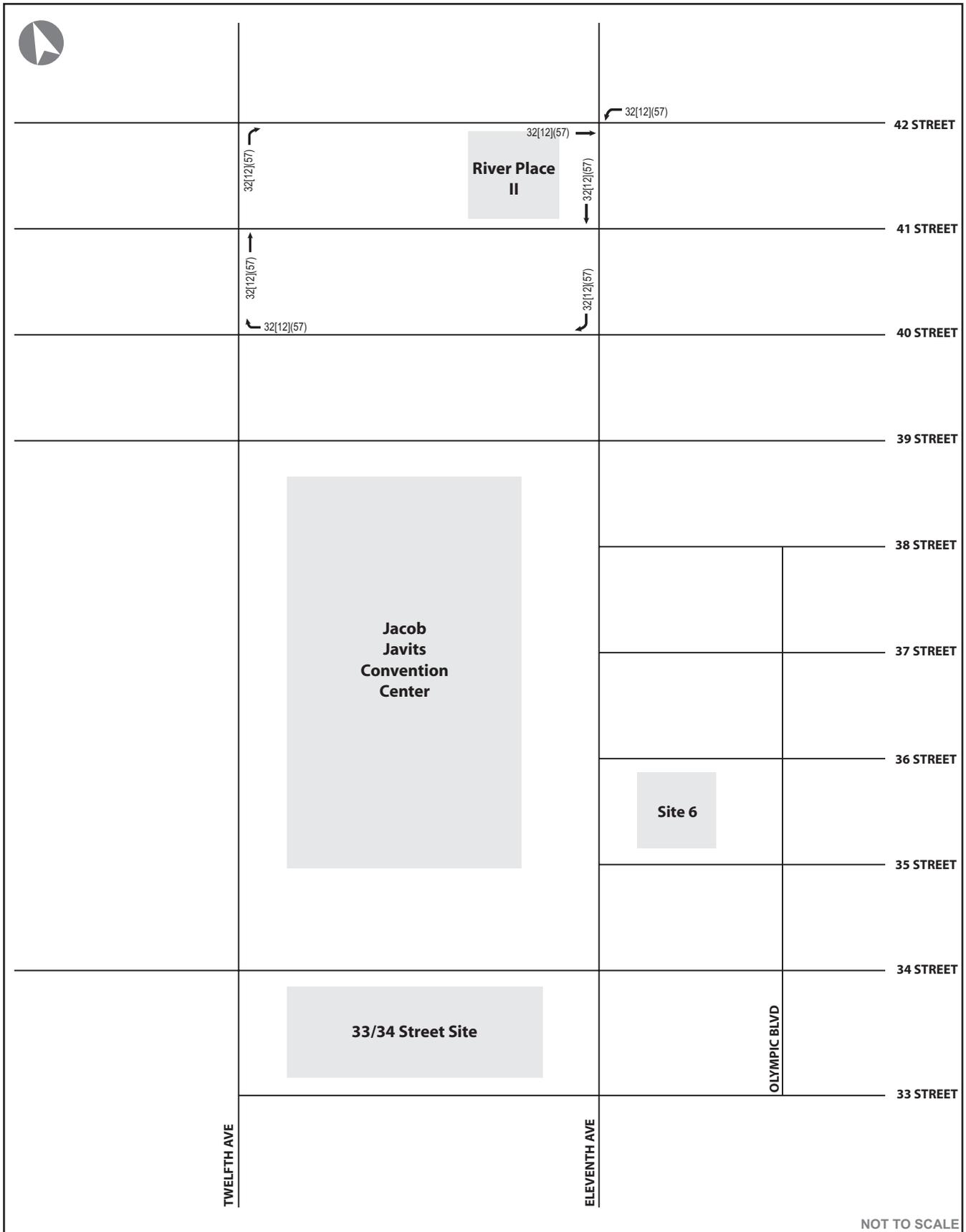


FIGURE 91: 2025 - REROUTED NO BUILD VOLUMES DUE TO 40TH STREET REOPENING WESTBOUND  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of westbound 40th Street



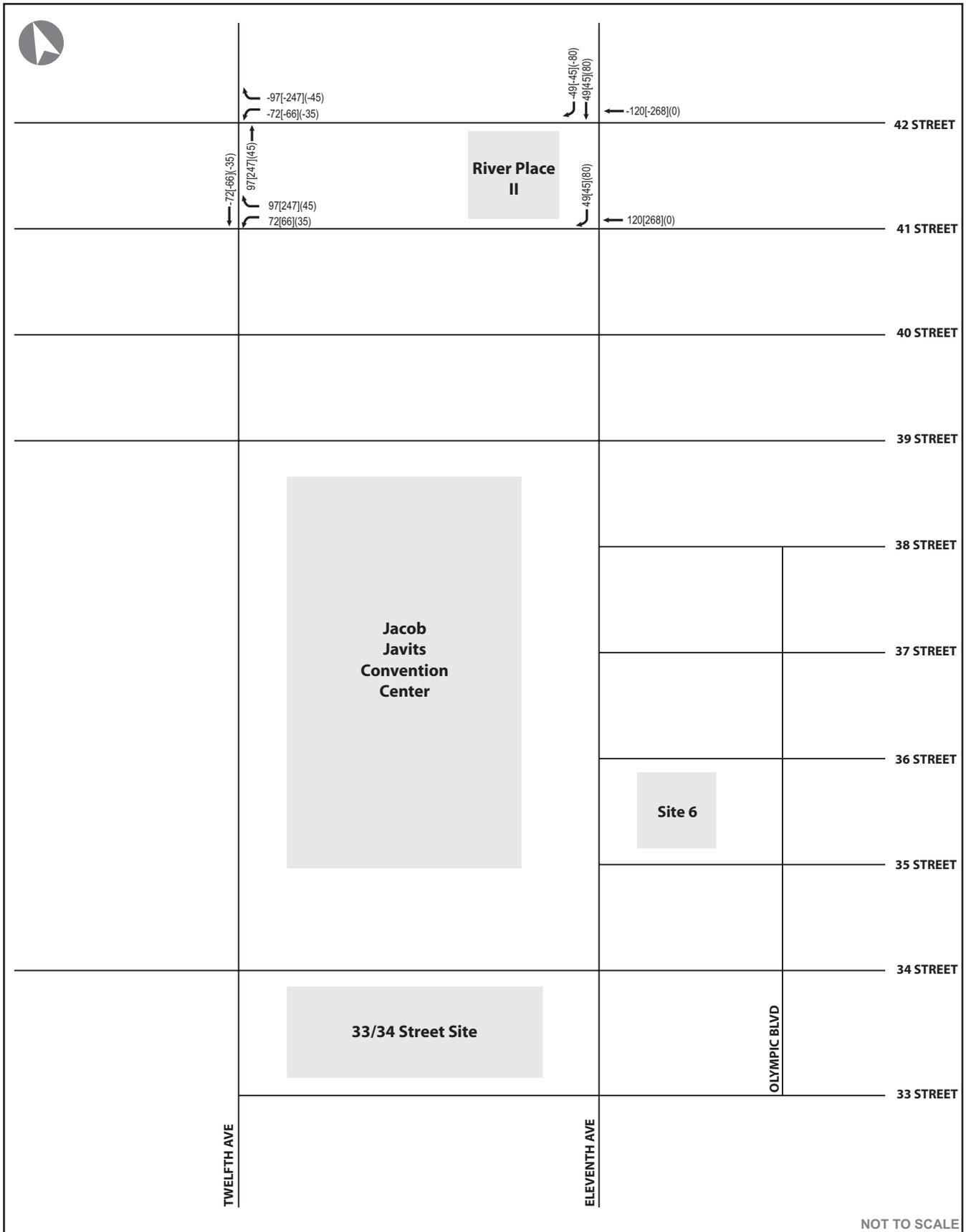


FIGURE 92: 2025 - REROUTED NO BUILD VOLUMES DUE TO 41ST STREET REOPENING  
Traffic Volume AM[MD](PM)

Note: Traffic rerouted due to reopening of 41st Street



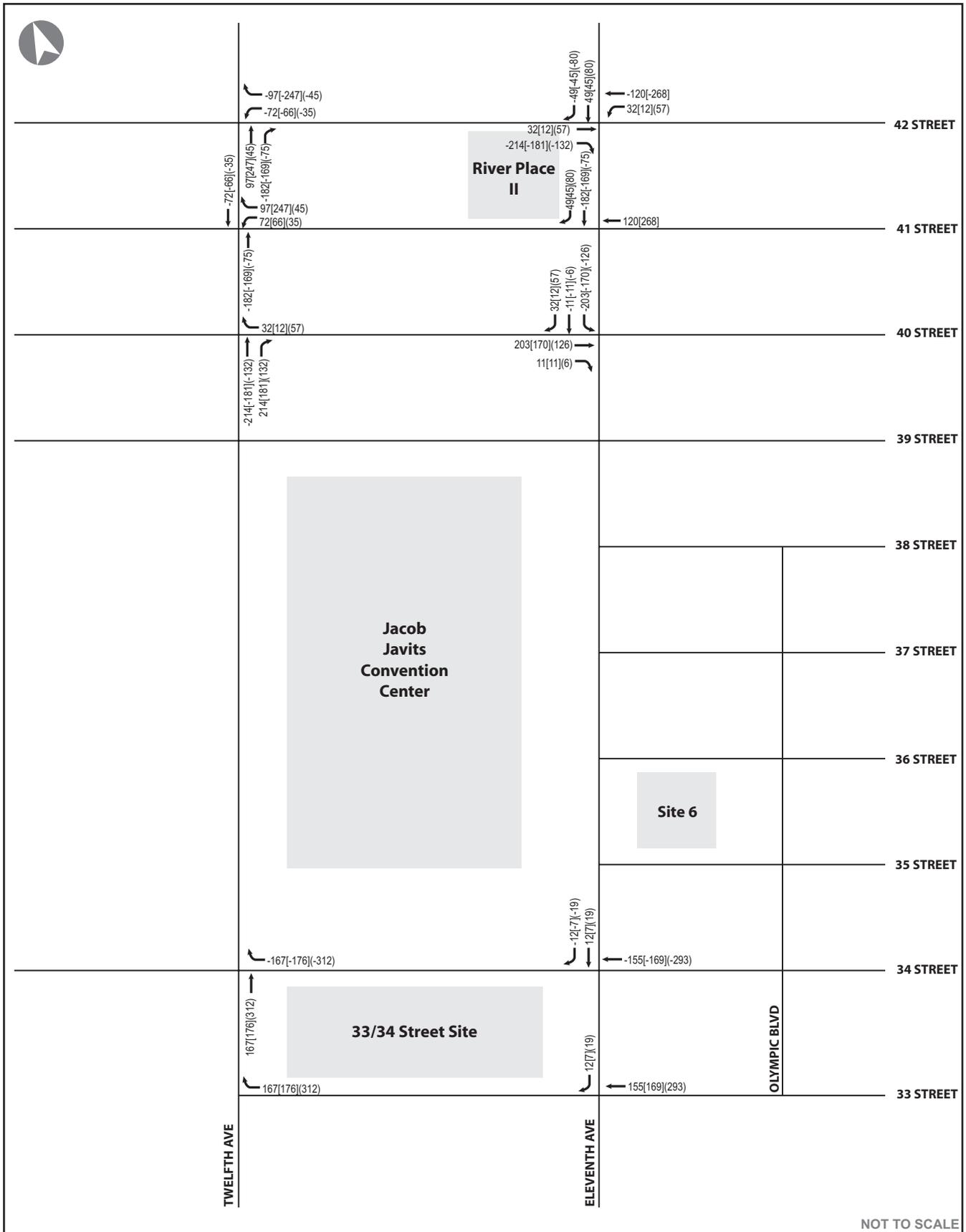
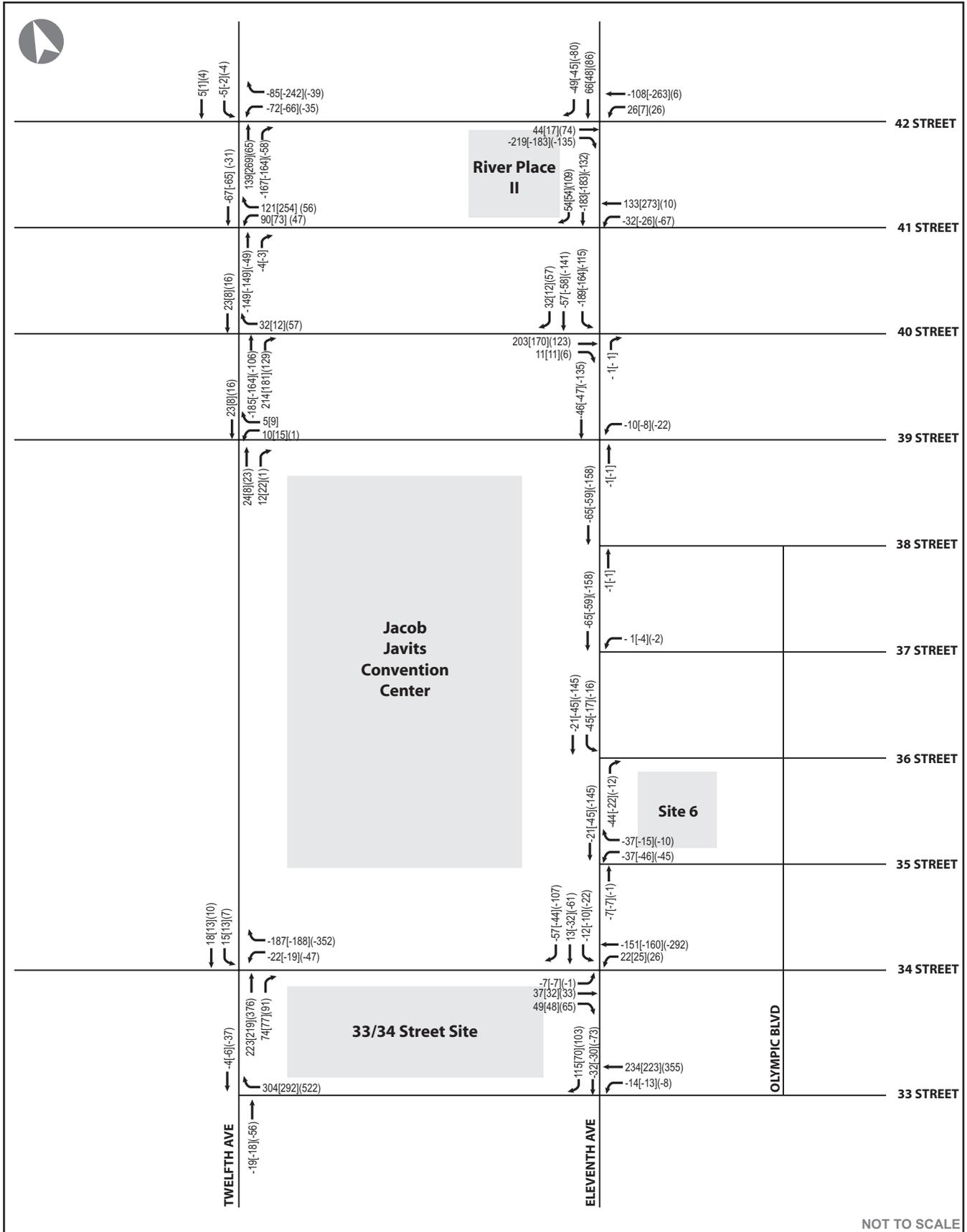


FIGURE 93: 2025 - NET REROUTED TRAFFIC VOLUMES DUE TO REOPENING OF STREETS  
Traffic Volume AM[MD](PM)

Note: Net rerouted traffic due to reopening of 33rd, eastbound and westbound 40th, and 41st Streets



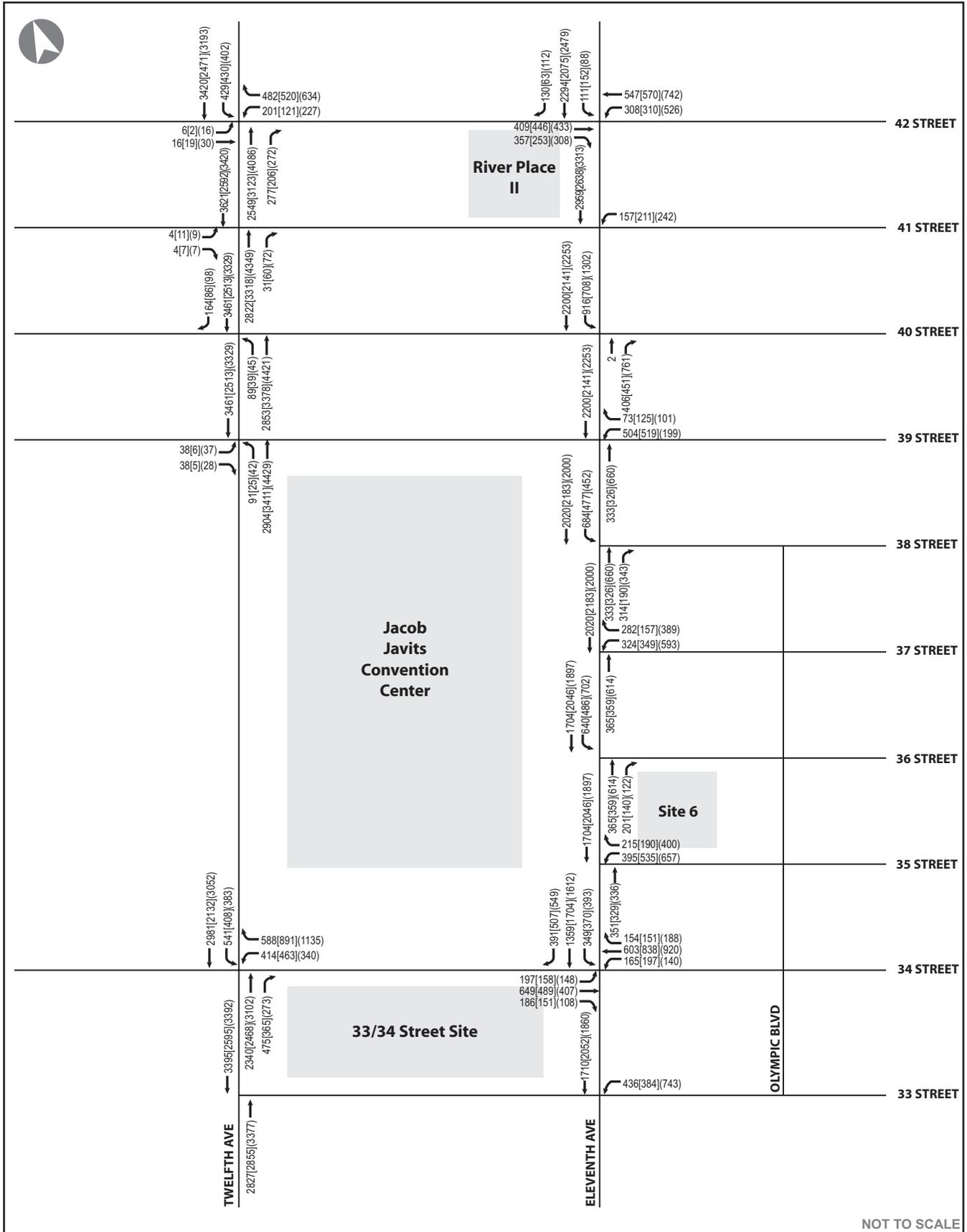


NOT TO SCALE

FIGURE 94: 2025 - PROJECT GENERATED & NET REROUTED TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)



Note: 2010 net project generated volumes + 2025 net project generated volumes + 2025 Rerouted volumes due to opening streets

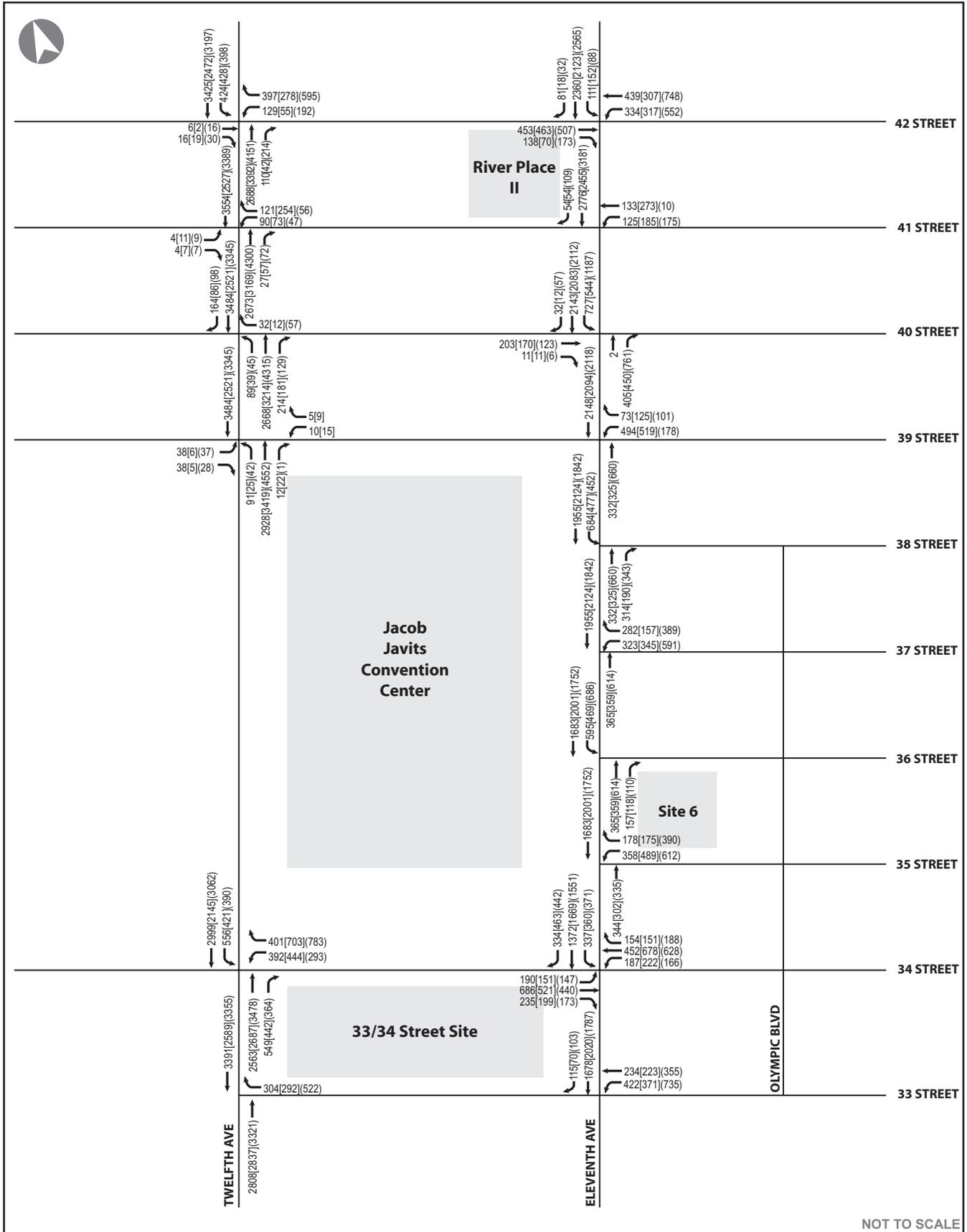


NOT TO SCALE

FIGURE 95: 2025 - FGEIS MITIGATED BUILD TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)

SOURCE: Hudson Yards FGEIS Data - Alt S





NOT TO SCALE

FIGURE 96: 2025 - PROPOSED MODIFICATIONS BUILD TRAFFIC VOLUMES  
Traffic Volume AM[MD](PM)

Note: Hudson Yards FGEIS - data - alt S 2025 mitigated build volumes + 2010 net project generated volumes + 2025 Re-routed traffic volumes + 2025 net project generated volumes



# 2010 Proposed Modifications Build Condition

		AM PEAK PERIOD																								MD PEAK PERIOD												PM PEAK PERIOD																	
		NO BUILD						MITIGATED BUILD						Changes in Volume						NO BUILD						MITIGATED BUILD						Changes in Volume						NO BUILD						MITIGATED BUILD						Changes in Volume					
		Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total														
11th Ave. @ 33rd St	WB	LT	28.3	C	L	27.1	C	-14	135		121	LT	27.9	C	L	27.4	C	-13	141		128	LT	30.9	C	L	29.5	C	-8	250		242																								
	SB	TR	9.1	A	T	9.3	A		-42	20	-22	TR	9.6	A	T	9.9	A		-44	5	-39	TR	8.6	A	T	8.9	A		-89	32	-57																								
	<b>Total</b>		<b>13.0</b>	<b>B</b>		<b>11.9</b>	<b>B</b>		<b>99</b>				<b>12.7</b>	<b>B</b>		<b>11.9</b>	<b>B</b>		<b>89</b>				<b>15.2</b>	<b>B</b>		<b>12.7</b>	<b>B</b>		<b>185</b>																										
	Additional Improvements	As approved in the Hudson Yards FGEIS																																																					
11th Ave. @ 34th St	EB				Def L	46.9	D	-3			-3	Def L	72.6	E	Def L	47.9	D	-5			-5	Def L	160.9	F	Def L	116.8	F				0																								
		LTR	64.3	E	TR	9.8	A		-4		-4	TR	21.6	C	TR	6.4	A		-11	-4	-15	TR	24.2	C	TR	8.6	A		-36	3	-33																								
	WB	Def L	216.3	F	LTR	11.4	B				0	LTR	139.9	F	LTR	29.7	C				0	LTR	48.5	D	LTR	24.7	C		-243		-243																								
		TR	39.6	D					-129		-129									-137		-137										0																							
	SB	LTR	3.6	A	LTR	19.4	B	-12	-21	-41	-74	LTR	7.3	A	LTR	32.4	C	-10	-35	-26	-71	LTR	4.6	A	LTR	19.0	B	-22	-60	-83	-165																								
	<b>Total</b>		<b>38.3</b>	<b>D</b>		<b>16.8</b>	<b>B</b>		<b>-210</b>				<b>46.2</b>	<b>D</b>		<b>28.7</b>	<b>C</b>				<b>-228</b>		<b>27.8</b>	<b>C</b>		<b>24.3</b>	<b>C</b>		<b>-441</b>																										
Additional Improvements	As approved in the Hudson Yards FGEIS																																																						
11th Ave. @ 35th St	WB	L	15.7	B	L	16.2	B	-2			-2	L	16.3	B	L	17.5	B	-3			-3	L	15.9	B	L	17.3	B				0																								
		LR	15.7	B	LR	16.2	B				0	LR	16.3	B	LR	17.4	B				0	LR	15.8	B	LR	17.3	B				0																								
		R	15.3	B	R	16.1	B				0	R	15.3	B	R	16.0	B				0	R	15.7	B	R	16.6	B				0																								
	NB	T	14.9	B	T	15.3	B		-3		-3	T	14.8	B	T	15.2	B				-5	-5	T	15	B	T	15.2	B				0																							
	SB	T	16.3	B	T	17.1	B		-69		-69	T	18.1	B	T	19.2	B				-62		-62	T	16.6	B	T	17.9	B		-164		-164																						
	<b>Total</b>		<b>15.9</b>	<b>B</b>		<b>16.6</b>	<b>B</b>		<b>-74</b>				<b>17.3</b>	<b>B</b>		<b>18.2</b>	<b>B</b>				<b>-70</b>		<b>16.1</b>	<b>B</b>		<b>17.3</b>	<b>B</b>				<b>-164</b>																								
Additional Improvements	As approved in the Hudson Yards FGEIS																																																						
11th Ave. @ 36th St	NB	TR	6.3	A	TR	12.5	B			-3	-3	TR	6.3	A	TR	12.4	B				-5	-5	TR	6.4	A	TR	14.1	B				0																							
	SB	Def L	13.0	B	Def L	14.5	B	-3			-3	Def L	16.6	B	Def L	18.2	B	-3			-3	Def L	63.7	E	Def L	45.6	D	-4			-4																								
		T	7.2	A	T	7.7	A		-69		-69	T	7.9	A	T	8.5	A				-62		-62	T	7.3	A	T	8.0	A			-164	-164																						
	<b>Total</b>		<b>7.9</b>	<b>A</b>		<b>9.7</b>	<b>A</b>		<b>-75</b>				<b>8.9</b>	<b>A</b>		<b>10.5</b>	<b>B</b>				<b>-70</b>		<b>18.9</b>	<b>B</b>		<b>16.0</b>	<b>B</b>				<b>-168</b>																								
Additional Improvements	As approved in the Hudson Yards FGEIS																																																						
11th Ave. @ 39th St	EB	LR	57.5	E	CLOSED							0	LR	57.4	E	CLOSED							0	LR	83.5	F	CLOSED							0																					
	WB	L	30.1	C	L	36.5	D	-11			-11	L	42.8	D	L	20.8	C				-22		-22	L	19.3	B	L	19.3	B	-22		-22																							
		LR	22.2	C	LR	26.5	C				0	LR	23.5	C	LR	16.7	B				0		0	LR	19.3	B	LR	19.3	B			0																							
	NB	T	10.2	B	T	10.6	B		-1		-1	T	10.0	B	T	17.3	B				-1		-1	T	10.4	B	T	10.6	B			0																							
	SB	T	11.6	B	T	12.9	B		-62		-62	T	12.9	B	T	25.3	C				-56		-56	T	12.4	B	T	14.7	B		-146	-146																							
	<b>Total</b>		<b>21.1</b>	<b>C</b>		<b>16.6</b>	<b>B</b>		<b>-74</b>				<b>21.9</b>	<b>C</b>		<b>23.0</b>	<b>C</b>				<b>-79</b>		<b>22.2</b>	<b>C</b>		<b>13.9</b>	<b>B</b>				<b>-168</b>																								
Additional Improvements	As approved in the Hudson Yards FGEIS																																																						
11th Ave. @ 41st St	WB	LT	20.7	C	L	20.6	C	-32	117		85	LT	21.7	C	L	20.7	C	-26	235		209	LT	19.3	B	L	19.4	B	-67	11		-56																								
	SB	TR	12.0	B	T	12.7	B		-184	48	-136	TR	12.3	B	T	13.0	B				-176	45	-131	TR	13.4	B	T	14.8	B		-140	98	-42																						
	<b>Total</b>		<b>12.8</b>	<b>B</b>		<b>13.3</b>	<b>B</b>		<b>-51</b>				<b>13.7</b>	<b>B</b>		<b>13.6</b>	<b>B</b>				<b>78</b>		<b>13.4</b>	<b>B</b>		<b>14.8</b>	<b>B</b>				<b>-98</b>																								
	Additional Improvements	As approved in the Hudson Yards FGEIS																																																					
11th Ave. @ 42nd St	EB	T	21.6	C	T	22.4	C		34		34	T	22.1	C	T	20.3	C		10		10	T	22.1	C	TR	39.7	D		33		33																								
		R	25.5	C	R	42.1	D			-197	-197	R	26.7	C	R	37.0	D				-166		-166	R	31.8	C					-122	-122																							
	WB	L	21.8	C	L	31.5	C	20			20	L	19.8	B	L	23.0	C	3			3	L	28.1	C	L	40.5	D	14			14																								
		LT	14.8	B	LT	15.7	B		-92		-92	LT	13.5	B	LT	13.6	B				-225		-225	LT	16.3	B	LT	12.7	B		7	7																							
	SB	LTR	20.0	B	LTR	21.2	C		43	-43	0	LTR	20.2	C	LTR	24.9	C				33	-36	-3	LTR	21.1	C	LTR	34.8	C		66	-69	-3																						
	<b>Total</b>		<b>19.7</b>	<b>B</b>		<b>22.7</b>	<b>C</b>		<b>-235</b>				<b>20.0</b>	<b>C</b>		<b>23.2</b>	<b>C</b>				<b>-381</b>		<b>21.5</b>	<b>C</b>		<b>32.8</b>	<b>C</b>				<b>-71</b>																								
Additional Improvements	As approved in the Hudson Yards FGEIS																																																						

# 2010 Proposed Modifications Build Condition

Intersection		2010 Proposed Modifications Build Condition																																					
		AM PEAK PERIOD												MD PEAK PERIOD						PM PEAK PERIOD																			
		NO BUILD			MITIGATED BUILD			Changes in Volume			NO BUILD			MITIGATED BUILD			Changes in Volume			NO BUILD			MITIGATED BUILD			Changes in Volume													
Approach	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total									
12th Ave @ 33rd St	SB	N/A	N/A	N/A		N/A	N/A		-4		-4		N/A	N/A		N/A	N/A		-18		-18		N/A	N/A		N/A	N/A		-38		-38								
	NB	N/A	N/A	N/A		N/A	N/A		-20		-20		N/A	N/A		N/A	N/A		-6		-6		N/A	N/A		N/A	N/A		-57		-57								
	WB	N/A	N/A	N/A		N/A	N/A			165	165		N/A	N/A		N/A	N/A			146	146		N/A	N/A		N/A	N/A		278	278									
	<b>Total</b>		N/A	N/A		N/A	N/A			141			N/A	N/A		N/A	N/A			122				N/A	N/A		N/A	N/A		183									
	Additional Improvements	Install Half Signal to accommodate WB right turns.												Install Half Signal to accommodate WB right turns.						Install Half Signal to accommodate WB right turns.																			
12th Ave @ 34th St	WB	L	56.9	E	L	55.8	E	-22		-22	L	40.1	D	L	42.7	D	-19		-19	L	37.1	D	L	39	D	-45		-45											
		R	42.3	D	R	31.9	C		-150	-150	R	67.1	E	R	32.6	C		-147	-147	R	84.9	F	R	48.2	D		-281	-281											
	NB	T	26.7	C	T	27.9	C		164	164	T	8.7	A	T	7.6	A		163	163	T	23.7	C	T	20.9	C		257	257											
		R	21.9	C	R	27.9	C		-7	-7	R	6.8	A	R	8.2	A		-13	-13	R	13.8	B	R	15.2	B		-35	-35											
	SB	L	86.6	F	L	80.9	F	10		10	L	67.0	E	L	66.5	E	10		10	L	134.1	F	L	128.7	F	2		2											
		T	12.6	B	T	14.9	B		18	18	T	2.3	A	T	2.2	A		13	13	T	16.6	B	T	16.4	B		7	7											
<b>Total</b>		26.5	C		27.9	C		13			16.1	B		14.4	B		7			29.9	C		27.4	C		-95													
Additional Improvements	Minor Signal Timing Modification to SB left												Minor Signal Timing Modification to SB left						As approved in the Hudson Yards FGEIS																				
12th Ave @ 39th St	EB	LTR	52.3	D	LR	52.3	D			0	LTR	34.2	C	LR	34.2	C			0	LTR	36.2	D	LR	36.3	D			0											
	WB	L						10		10	L						15		15	L						1		1											
		R	CLOSED							5	5	R	CLOSED							9	9	R	CLOSED							0									
	NB	L	215.8	F	L	215.8	F			0	L	62.9	E	L	62.9	E			0	L	61.2	E	L	61.2	E			0											
		TR	33.2	C	T	10.9	B	2	12	14	TR	63.9	E	T	15.6	B		-7	22	15	TR	81.9	F	T	18.5	B		-25	1	-24									
	SB	L	69.5	E	CLOSED							0	L	73.2	E	CLOSED							0	L	98.3	F	CLOSED							0					
	T	63.2	E	T	58.3	E		18	18	T	29.1	C	T	28.1	C		6	6	T	84.0	F	T	80.6	F		8	8												
<b>Total</b>		52.1	D		39.9	D		47			49.7	D		21.2	C		45			82.6	F		46.0	D		-15													
Additional Improvements	Provide 2nd NBL from median, Actuated WB movement. Minor signal timing modification to SBT												Provide 2nd NBL from median, Actuated WB movement						Provide 2nd NBL from median, Actuated WB movement, Minor signal timing modification to SBT																				
12th Ave @ 40th St	WB	R	41.6	D	CLOSED							27	27	R	33.6	C	R	CLOSED							11	11	R	36.6	D	R	CLOSED							47	47
	NB	L	159.2	F	L	159.2	F			0	L	34.7	C	L	34.8	C			0	L	36.0	D	L	36	D			0											
		TR	31.2	C	T	7.4	A		-187	-187	TR	22.2	C	T	4.5	A		-162	-162	TR	23.5	C	T	4.6	A		-141	-141											
		R	CLOSED							194	194	R	CLOSED							164	164	R	CLOSED							116	116								
	SB	T	16.7	B	T	15.9	B		18	18	T	11.7	B	T	11.3	B		6	6	T	13.4	B	T	12.7	B		8	8											
		R	12.3	B	R	12.3	B		0	0	R	8.0	A	R	8	A		0	0	R	8.9	A	R	8.9	A		0	0											
<b>Total</b>		24.9	C		14.2	B		52			17.6	B		7.7	A		8			19.0	B		8.3	A		30													
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS						As approved in the Hudson Yards FGEIS																				
12th Ave @ 41st St	EB	LR	38.4	D	LR	38.5	D			0	LR	25.2	C	LR	25.3	C			0	LR	32.7	C	LR	32.9	C			0											
	WB	L	40.4	D	CLOSED						82		82	L	25.9	C	CLOSED						60		60	L	31.7	C	CLOSED						40		40		
		R	39.6	D	CLOSED							107	107	R	27.3	C	CLOSED							220	220	R	32.8	C	CLOSED							45	45		
	NB	T	13.1	B	TR	13.3	B		-158	-4	-162	T	20.5	C	TR	21.9	C		-148	-3	-151	T	6.6	A	TR	7.5	A		-94	-94									
	SB	T	48.8	D	T	32.4	C		-64	-64	T	19.7	B	T	13.7	B		-54	-54	T	49.2	D	T	27.7	C		-32	-32											
	<b>Total</b>		33.9	C		24.2	C		-37			20.5	C		18.3	B		75			26.8	C		16.6	B		-41												
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS						As approved in the Hudson Yards FGEIS																				
12th Ave @ 42nd St	EB	LTR	47.0	D	LR	46.9	D			0	LTR	32.4	C	LR	32.4	C			0	LTR	33.7	C	LR	35.4	D			0											
	WB	L	57.1	E	L	57.1	E	-64		-64	L	34.8	C	L	35.0	C		-53	-53	L	39.7	D	L	42	D		-32	-32											
		R	26.2	C	R	28.7	C		-71	-71	R	15.3	B	R	18.8	B		-208	-208	R	27.6	C	R	30.2	C		-33	-33											
	NB	T	15.7	B	TR	14.2	B		108	108	T	68.4	E	TR	23.0	C		226	226	T	20.8	C	TR	10.6	B		40	40											
		R	13.0	B					-157	-157	R	16.7	B					-154	-154	R	6.4	A					-89	-89											
	SB	L	42.1	D	L	43.3	D	-3		-3	L	34.3	C	L	35.3	D	-2		-2	L	88.3	F	L	70.4	E	-4		-4											
	T	18.9	B	T	12.5	B		0	0	T	34.9	C	T	31.9	C		-1	-1	T	51.7	D	T	31.7	C		0	0												
<b>Total</b>		20.0	C		17.1	B		-187			49.8	D		26.9	C		-192			36.4	D		23.5	C		-118													
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS						As approved in the Hudson Yards FGEIS																				

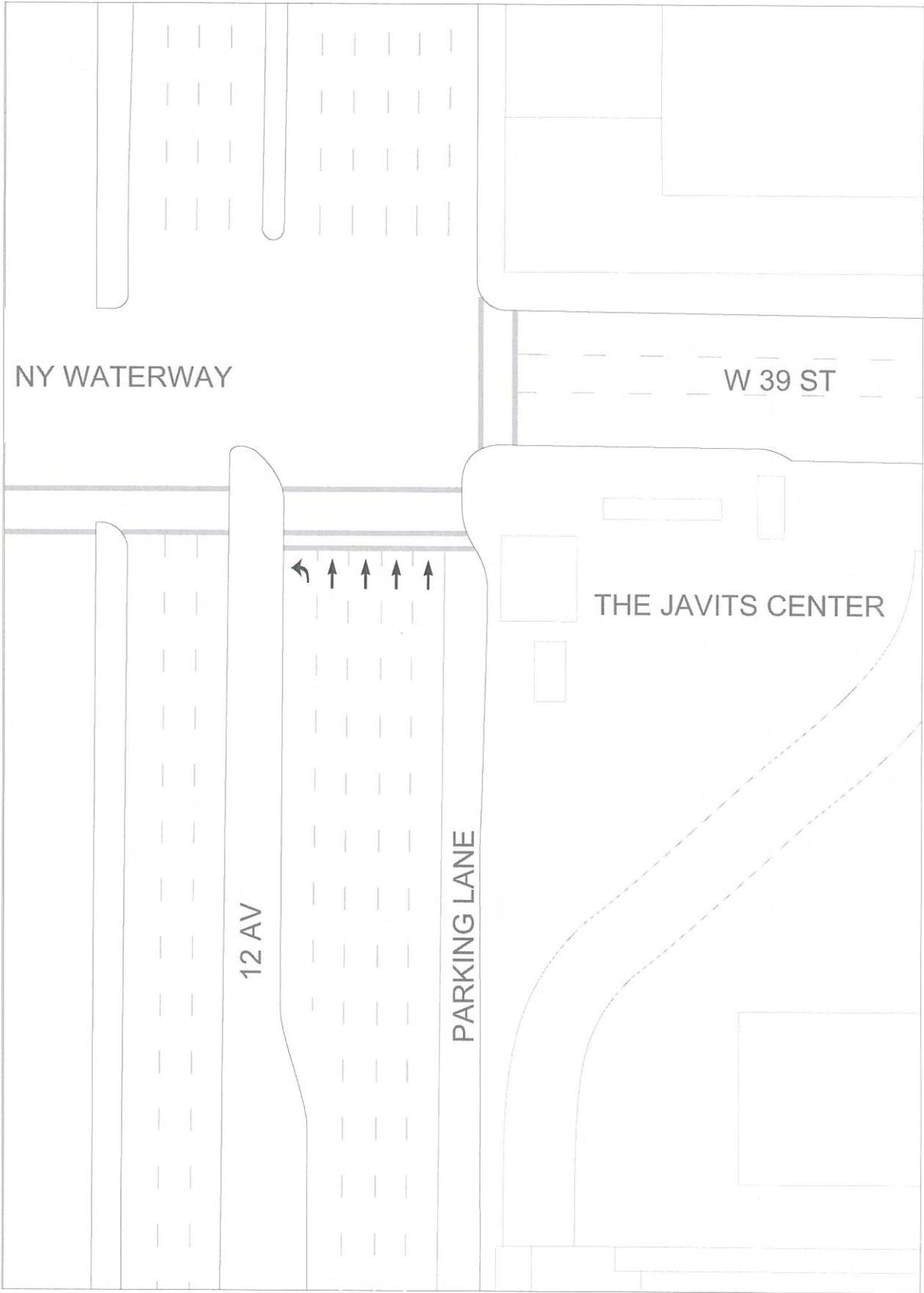
# 2025 Proposed Modifications Build Condition

		AM PEAK PERIOD												MD PEAK PERIOD												PM PEAK PERIOD											
		NO BUILD				MITIGATED BUILD				Changes in Volume				NO BUILD				MITIGATED BUILD				Changes in Volume				NO BUILD				MITIGATED BUILD				Changes in Volume			
Intersection	Approach	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total						
11th Ave @ 33rd St	WB	LT	29.0	C	L	37.3	D	-14	234		220	LT	28.6	C	L	44.7	D	-13	223		210	LT	35.8	D	L	34.8	C	-8	355		347						
	SB	TR	9.3	A	T	10.9	B		-32	115	83	TR	10.0	A	T	12.3	B		-32	70	38	TR	8.9	A	T	24.7	C		-73	103	30						
	<b>Total</b>		<b>13.4</b>	<b>B</b>		<b>16.2</b>	<b>B</b>		<b>303</b>					<b>13.2</b>	<b>B</b>		<b>17.4</b>	<b>B</b>		<b>248</b>					<b>17.7</b>	<b>B</b>		<b>27.6</b>	<b>C</b>		<b>377</b>						
	Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												Provide Daylighting for Westbound Approach											
11th Ave @ 34th St	EB	LTR	96.5	F	LTR	43.4	D	-7	37	49	79	DefL	96.8	F	LTR	22.1	C	-7			-7	DefL	243.0	F	LTR	43.7	D	-1			-1						
											0	TR	22.9	C					32	48	80	TR	25.2	C					33	65	98						
	WB	DefL	339.6	F	DefL	21.9	C	22			22	LTR	183.3	F	DefL	42.1	D	25			25	LTR	63.3	E	LTR	50.0	D	26	-292		-266						
		TR	47.7	D	TR	17.3	B		-151		-151				TR	41.3	D		-160		-160											0					
	SB	LTR	3.8	A	LTR	21.5	C	-12	13	-57	-56	LTR	7.8	A	LTR	33.8	C	-10	-35	-44	-89	LTR	4.8	A	LTR	38.5	D	-22	-61	-107	-190						
<b>Total</b>		<b>55.0</b>	<b>D</b>		<b>26.5</b>	<b>C</b>		<b>-106</b>					<b>58.3</b>	<b>E</b>		<b>33.7</b>	<b>C</b>		<b>-151</b>				<b>35.9</b>	<b>D</b>		<b>42.6</b>	<b>D</b>		<b>-359</b>								
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												
11th Ave @ 35th St	WB	L	15.9	B	L	17.9	B	-37			-37	L	16.6	B	L	22	C	-46			-46	L	16.0	B	L	19	B	-45			-45						
		LR	15.8	B	LR	18.2	B				0	LR	16.5	B	LR	22.2	C				0	LR	16.0	B	LR	19.5	B				0						
		R	15.4	B	R	29.2	C			-37	-37	R	15.5	B	R	28.7	C			-15	-15	R	16.2	B	R	43.5	D			-10	-10						
	NB	T	15.0	B	T	14.5	B		-7		-7	T	14.9	B	T	14.5	B		-7		-7	T	15.1	B	T	17.7	B		-1		-1						
	SB	T	16.6	B	T	19.1	B		-21		-21	T	18.7	B	T	22.3	C		-45		-45	T	17.0	B	T	26.5	C		-145		-145						
	<b>Total</b>		<b>16.1</b>	<b>B</b>		<b>20.2</b>	<b>C</b>		<b>-102</b>					<b>17.7</b>	<b>B</b>		<b>22.6</b>	<b>C</b>		<b>-113</b>				<b>16.5</b>	<b>B</b>		<b>27.2</b>	<b>C</b>		<b>-201</b>							
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												
11th Ave @ 36th St	NB	TR	6.4	A	TR	33.6	C			-44	-44	TR	6.4	A	TR	25.8	C			-22	-22	TR	6.4	A	TR	41.8	D			-12	-12						
	SB	DefL	15.9	B	L	39.4	D	-45			-45	DefL	21.2	C	L	40.0	D	-17			-17	DefL	113.0	F	L	55.2	E	-16			-16						
		T	7.4	A	T	11.8	B		-21		-21	T	8.2	A	T	14.9	B		-45		-45	T	7.5	A	T	14.7	B		-145		-145						
	<b>Total</b>		<b>8.5</b>	<b>A</b>		<b>22.1</b>	<b>C</b>		<b>-110</b>				<b>9.8</b>	<b>A</b>		<b>20.7</b>	<b>C</b>		<b>-84</b>				<b>29.2</b>	<b>C</b>		<b>29.2</b>	<b>C</b>		<b>-173</b>								
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												
11th Ave @ 39th St	EB	LR	75.4	E	CLOSED						0	LR	70.6	E	CLOSED						0	LR	105.7	F	CLOSED						0						
	WB	L	31.8	C	L	33.1	C	-10			-10	L	51.5	D	L	33.4	C	-8			-8	L	19.3	B	L	34.3	C	-22			-22						
		LR	22.5	C	LR	39.4	D				0	LR	23.8	C	LR	22.2	C				0	LR	19.3	B	LR	24.0	C				0						
	NB	T	10.3	B	T	15.5	B		-1		-1	T	10.1	B	T	15.9	B		-1		-1	T	10.6	B	T	11.4	B				0						
	SB	T	11.9	B	T	40.5	D		-46		-46	T	13.3	B	T	38.0	D		-47		-47	T	12.9	B	T	20.4	C		-135		-135						
	<b>Total</b>		<b>24.2</b>	<b>C</b>		<b>37.1</b>	<b>D</b>		<b>-57</b>				<b>24.8</b>	<b>C</b>		<b>33.9</b>	<b>C</b>		<b>-56</b>				<b>25.4</b>	<b>C</b>		<b>19.6</b>	<b>B</b>		<b>-157</b>								
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												
11th Ave @ 41st St	WB	LT	20.8	C	L	20.5	C	-32	133		101	LT	21.9	C	L	21.1	C	-26	273		247	LT	19.3	B	L	21.4	C	-67	10		-57						
	SB	TR	12.3	B	T	16.1	B		-183	54	-129	TR	12.7	B	T	14.6	B		-183	54	-129	TR	14.0	B	T	18.2	B		-132	109	-23						
	<b>Total</b>		<b>13.1</b>	<b>B</b>		<b>16.4</b>	<b>B</b>		<b>-28</b>				<b>14.0</b>	<b>B</b>		<b>15.1</b>	<b>B</b>		<b>118</b>				<b>14.0</b>	<b>B</b>		<b>18.4</b>	<b>B</b>		<b>-80</b>								
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												
11th Ave @ 42nd St	EB	T	21.9	C	TR	21.9	C		44		44	T	22.5	C	TR	28.3	C		17		17	T	22.5	C	TR	37.3	D		74		74						
		R	27.4	C	R	39.3	D			-219	-219	R	28.6	C	R	26.9	C				-183	-183	R	36.5	D	R	36.1	D			-135	-135					
	WB	L	24.1	C	L	34.7	C	26			26	L	21.3	C	L	29.9	C	7			7	L	32.2	C	L	44.3	D	26			26						
		LT	15.2	B	T	11.2	B		-108		-108	LT	13.8	B	T	15.1	B		-263		-263	LT	17.1	B	T	14.2	B		6		6						
	SB	LTR	20.7	C	LTR	36.5	D		66	-49	17	LTR	20.9	C	LTR	24.5	C		48	-45	3	LTR	22.0	C	LTR	29.1	C		86	-80	6						
	<b>Total</b>		<b>20.5</b>	<b>C</b>		<b>31.4</b>	<b>C</b>		<b>-240</b>				<b>20.7</b>	<b>C</b>		<b>24.2</b>	<b>C</b>		<b>-419</b>				<b>22.8</b>	<b>C</b>		<b>29.9</b>	<b>C</b>		<b>-23</b>								
Additional Improvements	As approved in the Hudson Yards FGEIS												As approved in the Hudson Yards FGEIS												Minor Signal Timing Modification to EBT and NBT												

# 2025 Proposed Modifications Build Condition

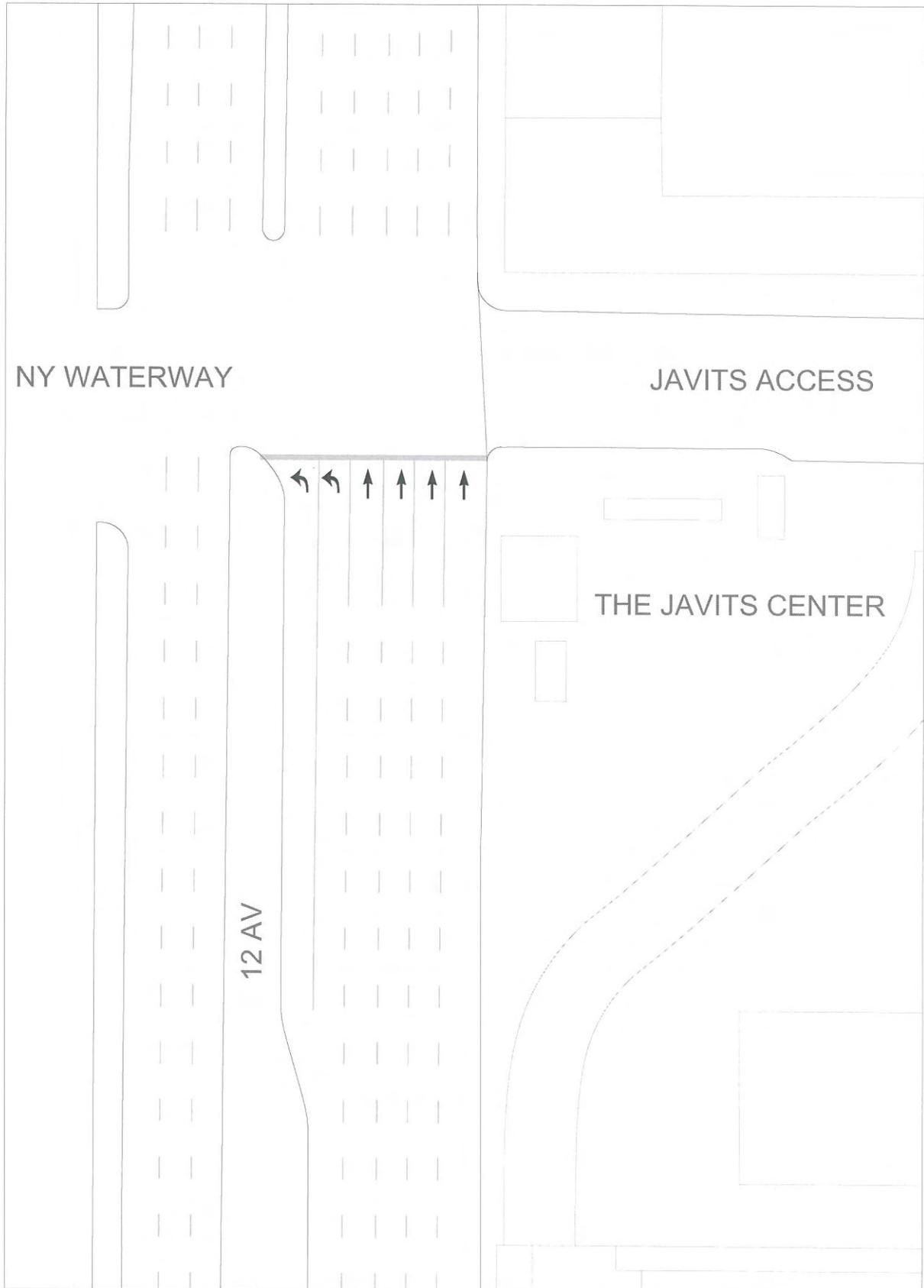
Intersection		2025 Proposed Modifications Build Condition																													
		AM PEAK PERIOD									MD PEAK PERIOD									PM PEAK PERIOD											
		NO BUILD			MITIGATED BUILD			Changes in Volume			NO BUILD			MITIGATED BUILD			Changes in Volume			NO BUILD			MITIGATED BUILD			Changes in Volume					
Approach	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	Movt.	Delay (sec/veh)	LOS	Movt.	Delay (sec/veh)	LOS	Left	Thr.	Rt.	Total	
12th Ave @ 33rd St	SB	N/A	N/A	N/A	N/A	N/A		-4		-4	N/A	N/A	N/A	N/A	N/A	N/A		-6		-6	N/A	N/A	N/A	N/A	N/A	N/A		-37		-37	
	NB	N/A	N/A	N/A	N/A	N/A		-19		-19	N/A	N/A	N/A	N/A	N/A	N/A		-18		-18	N/A	N/A	N/A	N/A	N/A	N/A		-56		-56	
	WB	N/A	N/A	N/A	N/A	N/A			304	304	N/A	N/A	N/A	N/A	N/A	N/A				292	292	N/A	N/A	N/A	N/A	N/A		522		522	
	<b>Total</b>		N/A	N/A	N/A	N/A	N/A			<b>281</b>		N/A	N/A	N/A	N/A	N/A	N/A				<b>268</b>		N/A	N/A	N/A	N/A	N/A		<b>429</b>		
Additional Improvements	As described in 2010 Comparison									As described in 2010 Comparison									As described in 2010 Comparison												
12th Ave @ 34th St	WB	L	57.9	E	L	54.5	D	-22		-22	L	40.6	D	L	39.4	D	-19		-19	L	37.3	D	L	34.9	C	-47		-47			
		R	44.4	D	R	32.1	C		-187	-187	R	89.9	F	R	32.4	C		-188	-188	R	109.8	F	R	66.1	E		-352		-352		
	NB	T	28.2	C	T	34.3	C		223	223	T	9.6	A	T	13.8	B		219	219	T	26.9	C	T	38.5	D		376		376		
		R	22.2	C	R	9.9	A		74	74	R	7.1	A	R	1.9	A		77	77	R	14.0	B	R	3.3	A		91		91		
	SB	L	106.4	F	L	90.3	F	15		15	L	81.7	F	L	74.6	E	13		13	L	172.0	F	L	76.9	E	7		7			
		T	14.2	B	T	18.5	B		18	18	T	2.5	A	T	2.7	A		13	13	T	19.4	B	T	28.3	C		10		10		
<b>Total</b>		<b>29.3</b>	<b>C</b>		<b>31.5</b>	<b>C</b>		<b>121</b>			<b>19.3</b>	<b>B</b>		<b>17.7</b>	<b>B</b>		<b>115</b>			<b>35.9</b>	<b>D</b>		<b>39.3</b>	<b>D</b>		<b>85</b>					
Additional Improvements	Minor Signal Timing Modification to SB left									Minor Signal Timing Modification to SB left									Minor Signal Timing Modification to NBT												
12th Ave @ 39th St	EB	LTR	52.7	D	L	51.5	D			0	LTR	34.1	C	L	33.9	C			0	LTR	36.3	D	L	35.7	D			0			
					R	55.5	E			0				R	34.0	C			0				R	36.5	D			0			
	WB	L						10		10	L						15		15	L						1		1			
		R							5	5	R							9	9	R								0			
	NB	L	224.1	F	L	84.5	F			0	L	63.3	E	L	56.3	E			0	L	61.5	E	L	54.5	D			0			
		TR	39.4	D	T	11.0	B		24	12	36	TR	99.7	F	T	17.7	B		8	22	30	TR	122.5	F	T	47.2	D		23	1	24
	SB	L	73.6	E						0	L	80.2	F						0	L	113.4	F						0			
		T	99.3	F	T	93.7	F		23	23	T	39.2	D	T	39.2	D		8	8	T	125.0	F	T	121.2	F		16		16		
<b>Total</b>		<b>73.2</b>	<b>E</b>		<b>55.7</b>	<b>E</b>		<b>74</b>			<b>74.0</b>	<b>E</b>		<b>26.9</b>	<b>C</b>		<b>62</b>			<b>122.3</b>	<b>F</b>		<b>78.1</b>	<b>E</b>		<b>41</b>					
Additional Improvements	As described in 2010 Comparison									As described in 2010 Comparison									As described in 2010 Comparison												
12th Ave @ 40th St	WB	R	41.7	D	R	CLOSED			32	32	R	33.6	C	R	CLOSED			12	12	R	37.0	D	R	CLOSED			57	57			
	NB	L	184.2	F	L	184.2	F			0	L	34.9	C	L	34.9	C			0	L	36.2	D	L	36.2	D			0			
		TR	32.6	C	T	8	A		-185	-185	TR	23.6	C	T	5	A		-164	-164	TR	26.1	C	T	5.6	A		-106	-106			
					R	CLOSED			214	214				R	CLOSED			181	181				R	CLOSED			129	129			
	SB	T	18.2	B	T	17.5	B		23	23	T	12.4	B	T	12	B		8	8	T	14.6	B	T	13.9	B		16	16			
		R	12.8	B	R	12.8	B			0	R	8.2	A	R	8.2	A			0	R	8.8	A	R	8.8	A			0			
<b>Total</b>		<b>26.6</b>	<b>C</b>		<b>15.5</b>	<b>B</b>		<b>84</b>			<b>18.6</b>	<b>A</b>		<b>8.1</b>	<b>A</b>		<b>37</b>			<b>20.9</b>	<b>C</b>		<b>9.2</b>	<b>A</b>		<b>96</b>					
Additional Improvements	As approved in the Hudson Yards FGEIS									As approved in the Hudson Yards FGEIS									As approved in the Hudson Yards FGEIS												
12th Ave @ 41st St	EB	LR	38.4	D	LR	38.4	D			0	LR	25.1	C	LR	25.1	C			0	LR	32.7	C	LR	32.7	C			0			
	WB	L	40.5	D				90		90	L	26.1	C				73		73	L	31.7	C				47		47			
		R	39.8	D					121	121	R	27.5	C					254	254	R	32.8	C					56	56			
	NB	T	13.8	B	TR	15.3	B		-149	-4	-153	T	25.7	C	TR	39.7	D		-149	-3	-152	T	9.3	A	TR	38.5	D		-49	-49	
	SB	T	91.1	F	T	82.9	F		-67	-67	T	47.3	D	T	35.6	D		-65	-65	T	89.1	F	T	70.1	E		-31	-31			
<b>Total</b>		<b>58.2</b>	<b>E</b>		<b>52.6</b>	<b>D</b>		<b>-9</b>			<b>35.3</b>	<b>D</b>		<b>37.9</b>	<b>D</b>		<b>110</b>			<b>46.7</b>	<b>D</b>		<b>52.1</b>	<b>D</b>		<b>23</b>					
Additional Improvements	As approved in the Hudson Yards FGEIS									As approved in the Hudson Yards FGEIS									As approved in the Hudson Yards FGEIS												
12th Ave @ 42nd St	EB	LTR	47.1	D	LTR	47.1	D			0	LTR	32.4	C	LTR	32.4	C			0	LTR	33.7	C	LTR	35.4	D			0			
	WB	L	58.9	E	L	58.5	E	-72		-72	L	35.4	D	L	35.3	D	-66		-66	L	40.8	D	L	43	D	-35		-35			
		R	26.8	C	R	28.2	C		-85	-85	R	15.6	B	R	19.8	B		-242	-242	R	28.7	C	R	37.8	D		-39	-39			
	NB	T	16.8	B	TR	18.0	B		139	-167	-28	T	105.4	F	TR	39.7	D		269	-164	105	T	47.0	D	TR	35.5	D		65	-58	7
		R	13.4	B						0	R	17.1	B						0	R	6.7	A					0				
	SB	L	42.8	D	L	44.9	D	-5		-5	L	35.1	D	L	36.6	D	-2		-2	L	109.2	F	L	102.5	F	-4		-4			
	T	51.6	D	T	44.6	D		5	5	T	47.0	D	T	41.2	D		1	1	T	83.1	F	T	54.4	D		4	4				
<b>Total</b>		<b>36.7</b>	<b>D</b>		<b>33.6</b>	<b>C</b>		<b>-185</b>			<b>72.1</b>	<b>E</b>		<b>38.5</b>	<b>D</b>		<b>-204</b>			<b>61.7</b>	<b>E</b>		<b>45.7</b>	<b>D</b>		<b>-67</b>					
Additional Improvements	As approved in the Hudson Yards FGEIS									As approved in the Hudson Yards FGEIS									As approved in the Hudson Yards FGEIS												





Existing Condition

Note: Schematic drawing derived from aerial photography. All lanes assumed to be approximately 11 feet in width.



Original Approved FGEIS Proposed

Note: Schematic drawing derived from aerial photography. All lanes assumed to be approximately 11 feet in width.

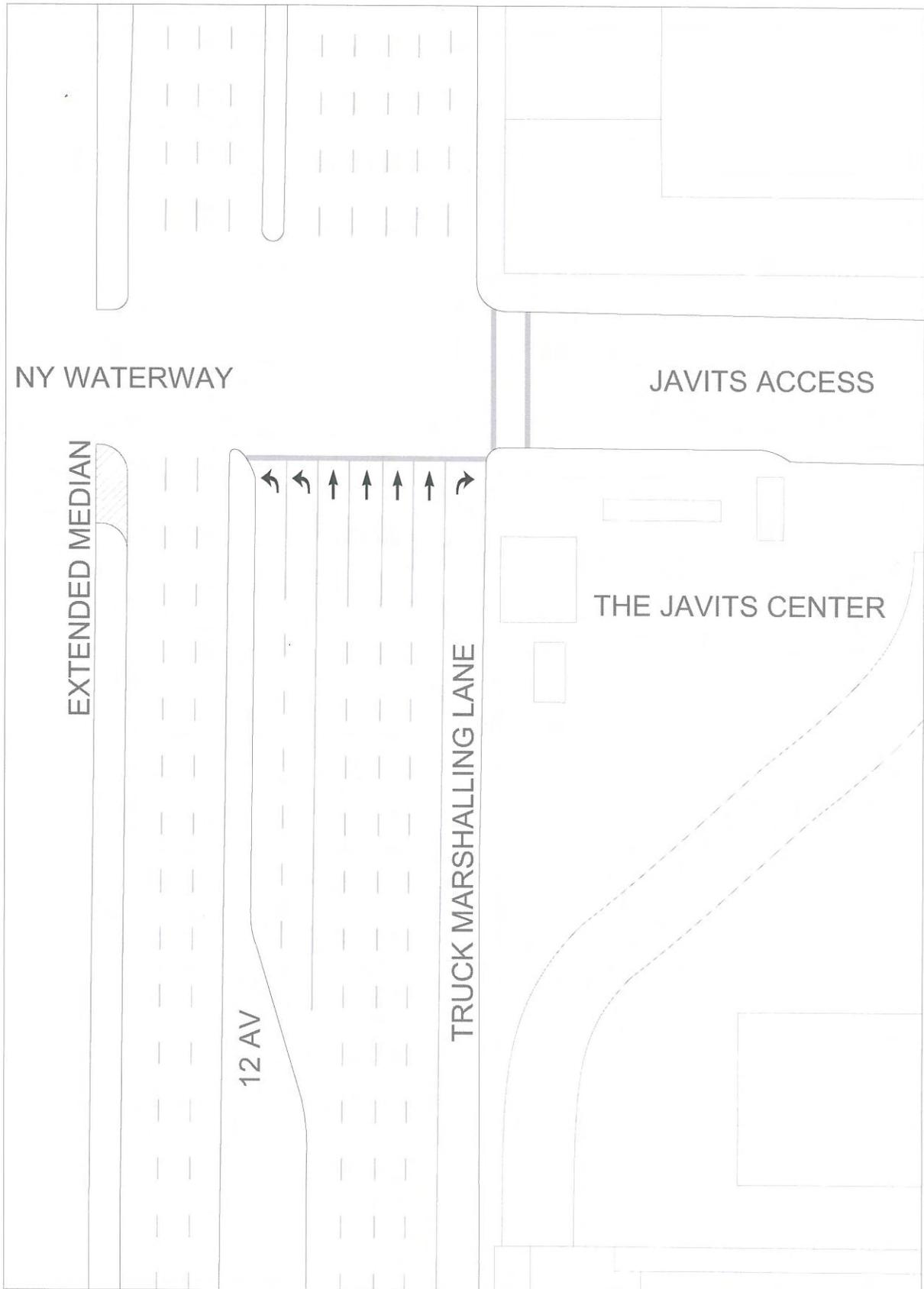


Table A						
33/34th Street Residential Development (500 Dwelling Units) <sup>1</sup>						
	AM Peak Period		MD Peak Period		PM Peak Period	
Total Dwelling Units	500					
Daily person Trips Per DU	8.075					
Total daily person trips	4038					
Temporal distribution	9.10%		4.70%		10.70%	
Directional Splits	IN	OUT	IN	OUT	IN	OUT
	15%	85%	50%	50%	70%	30%
Person Trips	55	312	95	95	302	130
Modal Splits	Auto					
	6.2%					
	Taxi					
	7.1%					
Vehicle Occupancy	Auto					
	1.65					
	Taxi					
	1.40					
Auto Trips	2	12	4	4	11	5
Taxi Trips <sup>2</sup>	18	18	8	8	15	15
<b>Total Trips</b>	20	30	12	12	26	20
<b>Total (IN + OUT) Trips</b>	50		24		46	

Note:

1. Trip generation rates are based on Hudson Yards FGEIS, Appendix S, Page 147 to 151.
2. Assumes 50% of entering cabs leave with a fare.

# **Appendix C**

## **Correspondence**



Bernadette Castro  
Commissioner

**New York State Office of Parks, Recreation and Historic Preservation**  
Historic Preservation Field Services Bureau  
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

March 16, 2006

Rachel Shatz  
Empire State Development Corporation  
633 Third Avenue  
New York, NY 10017-8167

Dear Ms. Shatz:

Re: ESDC  
Jacob K. Javits Convention Center  
Expansion  
New York County  
06PR01540 (old project 04PR05527)

Thank you for requesting the comments of the Office of Parks, Recreation, and Historic Preservation (OPRHP) concerning the proposed Jacob K. Javits Convention Center Expansion. We have reviewed this information in accordance with the provisions of Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Act of 1980.

Based upon our review of the proposed project, Our we understand that a section of the State and National Register eligible High Line is proposed for removal between 33<sup>rd</sup> and 34<sup>th</sup> Street. According to our documentation this section of the High Line was rebuilt in the 1980s and is structurally different from the original. As such, it is OPRHP's opinion that the project will have No Adverse Impact upon properties in or eligible for inclusion in the State and National Registers of Historic Places. If substantive changes are made to the proposed project, these will need to be submitted for our review if historic resources are involved.

Thank you for your consultation. If anyone has any questions, or if I can be of any assistance, please call me at (518) 237-8643, ext. 3282.

Sincerely,

Beth A. Cumming *BAC*  
Historic Preservation Specialist – Technical Unit  
e-mail: [beth.cumming@oprhp.state.ny.us](mailto:beth.cumming@oprhp.state.ny.us)



# THE NEW YORK CITY DEPARTMENT OF EDUCATION

JOEL I. KLEIN, *Chancellor*

Kathleen Grimm, Deputy Chancellor for Finance and Administration

March 22, 2006

Mr. Michael A. Petralia  
President  
New York Convention Center Development Corporation  
633 Third Avenue  
New York, N.Y. 10017-8167

Re: Javits Convention Center Expansion

Dear Mr. Petralia:

The New York City Department of Education (DOE) has reviewed the Jacob K. Javits Convention Center Expansion Technical Memorandum regarding the revised program for the Javits Convention Center Expansion, with particular regard to the aspects of the revised development program that would add new additional housing units to the Hudson Yards Project Area.

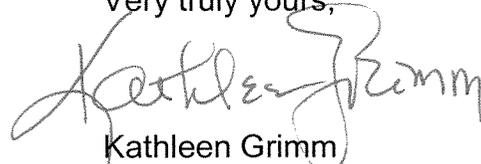
As described in the Hudson Yards FGEIS, in order to meet the needs anticipated as a result of the adopted Special Hudson Yards and Special West Chelsea rezonings for 2010-2013, the DOE amended its 5-Year Educational Capital Facilities Plan (FY 05-09) to include a \$540,000 appropriation for the design of an approximately 630-seat P.S./I.S. in the area and a \$900,000 appropriation for the design of an approximately 110-seat addition for P.S. 51 in Manhattan. Funding for the construction of these two facilities would be provided in the next 5-Year Educational Capital Facilities Plan (FY 2010-2014).

Under the proposed February 2006 amendment to the FY 2005-2009 plan, design start for both projects would be in June 2009, with construction start dates of August 2010 and September 2010, respectively. Additional measures to address increased school enrollments also include adjusting school catchment areas (feeder patterns) within Community School District 2.

The proposed Javits Center Expansion plan would introduce new school age population to the area by 2010 and between 2010 and 2025, not anticipated by the Hudson Yards FGEIS. In this regard, please be advised that the DOE expects that one of its planned lease facilities, currently in the Adopted 5-Year Educational Capital Facilities Plan (FY 2005-2009) but not yet sited, will be located within the Study Area.

The design start for this 504-seat leased facility would be October 2007, with a construction start date of July 2008. DOE will work with the Hudson Yards Development Corporation to identify suitable sites for this leased facility, as well as a suitable site for the planned 630-seat elementary/intermediate school that will be funded for construction in the FY 2010-2014 5-Year Educational Capital Facilities Plan.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Kathleen Grimm', written over a faint, larger version of the same signature.

Kathleen Grimm  
Deputy Chancellor for Finance  
and Administration

cc: D. Allee, AKRF  
A. Weisbrod, HYDC  
D. Karnovsky, DCP  
S. Lawitts, NYCSCA



**New York City  
Department of Transportation**

Iris Weinshall, Commissioner

Division of Traffic Planning  
40 Worth Street, Room 928  
New York, New York 10013  
Tel: 212-676-1680 Fax: 212-442-7912

Web: [www.nyc.gov/dot](http://www.nyc.gov/dot)

March 29, 2006

Erich Arcement, Director  
Sam Schwartz Company, LLC  
611 Broadway, Suite 415  
New York, New York 10012

**Subject: Draft Technical Memorandum Jacob Javits Convention Center Expansion**

Dear Mr. Arcement:

We have completed our review of the draft technical memorandum on the methodology and analysis for the revised Convention Center which represents minor changes to the original Hudson Yards/No. 7 Subway Extension FGEIS. The revised proposal basically retains the doubling of the Jacob Javits Convention Center and the No. 7 Subway Extension without the Multi-Use facility. Additional changes include relocation of the Convention Center Hotel, reconfiguring the commercial and residential towers and the reopening of 33<sup>rd</sup>, 40<sup>th</sup> and 41<sup>st</sup> Streets between 11<sup>th</sup> and 12<sup>th</sup> Avenues which were closed in the original FGEIS. The objective of the submission was to present an analysis to determine whether the proposed project would create any significant adverse traffic impacts beyond those in the original FGEIS. We have completed our review of the revised document and the additional information and have concluded that the revised proposal would not create any additional significant traffic impacts and that the proposed project traffic improvements are acceptable.

If you should have any questions please feel free to call me at (212) 676 1680 or Michael Griffith at (212) 442 3695.

Sincerely,

Naim Rasheed, Director

NR:MG:bd

c: D/C M. Primeggia, B/C M. Forgione, M. Griffith, File.  
E:\docs\Griffith\Jacobjavits2





STATE OF NEW YORK  
DEPARTMENT OF TRANSPORTATION  
REGION ELEVEN  
4740 21ST STREET  
LONG ISLAND CITY, NEW YORK 11101  
www.dot.state.ny.us

DOUGLAS A. CURREY, P.E.  
REGIONAL DIRECTOR

THOMAS J. MADISON, JR.  
COMMISSIONER

March 30, 2006

Erich Arcement, Director  
Sam Schwartz Company, LLC  
611 Broadway, Suite 415  
New York, NY 10012

**RE: Draft Technical Memorandum  
Jacob Javits Convention Center Expansion**

Dear Mr. Arcement:

We have reviewed the draft technical traffic analyses referenced above in regard to the proposed modifications to the Convention Center and the assessment of traffic impacts in the Hudson Yards/No. 7 Subway Extension FGEIS.

As stated previously, the 1994 FEIS for the Route 9A developed traffic volumes generated based on future development. Comparison with the referenced analyses shows that the traffic volumes and impacts identified therein are extremely conservative since accelerated development plus the background growth are assumed. Neither of those factors is considered necessary or appropriate under the traffic generation assumptions used in the development of Route 9A FEIS.

Our review indicates that the revised volumes with the proposed Convention Center modifications are similar, or in general lower than those identified in the FGEIS. Therefore, we find your analysis acceptable. We also find the project improvements related to Route 9A acceptable subject to continued monitoring of traffic increases and implementation of any related design refinements thereby determined. We continue to recommend implementation of a monitoring program to most appropriately plan and schedule any Route 9A improvements.

Sincerely,

Douglas A. Currey, P.E.  
Regional Director