

1.0 INTRODUCTION

The New York City Department of Transportation (NYCDOT), in collaboration with the Metropolitan Transportation Authority (MTA) New York City Transit (NYCT) and in cooperation with MTA Bus Company (MTA Bus), is sponsoring the “Proposed Project,” to implement new or enhanced transit service along 34th Street from the Hudson River to the East River in Manhattan (New York County, New York). The 34th Street Transit Corridor Alternatives Analysis will consider alternatives to decrease travel times for transit riders, reduce vehicular and pedestrian congestion along 34th Street, and provide convenient connections to the major land uses and transportation facilities along the corridor. NYCDOT (the “Project Sponsor”) is likely to apply for federal funds administered by the Federal Transit Administration (FTA) for the Locally Preferred Alternative (LPA). In order to select the alternative with the most significant improvements, the Project Sponsor is conducting this analysis to identify options for improving crosstown transit service along 34th Street, evaluate potential alternatives, and select an LPA, consistent with FTA requirements.

1.1 PROJECT LOCATION

This study focuses on 34th Street between the Hudson River and the East River and the blocks to its north and south that rely on crosstown travel along this corridor. The study area is therefore defined as the Hudson River to the west, 29th Street to the south, the East River to the east, and 40th Street to the north. Along the Hudson River, the study area extends north to include the Pier 79/West Midtown Ferry Terminal at 39th Street.

34th Street spans Manhattan from between Hudson River and the East River (see **Figure 1-1**). For much of its length, 34th Street is a five- to six-lane, two-way street. Its three to four center lanes are used for general traffic and, for much of its length, its curbside lanes are for dedicated bus use on weekdays from 7:00 AM to 7:00 PM. At other times, the curbside lanes are used by standing and/or parked vehicles, including the loading and unloading of commercial vehicles.

34th Street traverses the heart of Manhattan and has access to two of the portals to the island and its north-south highways. At its west end, 34th Street connects to Route 9A, and at its east end, to the Franklin Delano Roosevelt (FDR) Drive. Route 9A and the FDR Drive are part of the regional roadway network with connections to the interstate highways that serve New York City. 34th Street also has, between Third and First Avenues, an entrance to and exit from the Queens-Midtown Tunnel, which provides a vehicular connection between Midtown Manhattan and the Long Island Expressway. At Dyer Avenue, on the west side of Manhattan, access is provided to the Lincoln Tunnel, one of Manhattan’s three vehicular connections to New Jersey.

As shown in **Figure 1-2**, 34th Street is home to a number of Manhattan’s most popular and prominent destinations, including the Jacob K. Javits Convention Center, Pennsylvania (Penn) Station, Madison Square Garden, the flagship Macy’s store, the Empire State Building, and the New York University Langone Medical Center.

Due to its connections and adjoining land uses, 34th Street is an important travel corridor for a variety of functions. 34th Street has among the highest pedestrian volumes in New York City, with people accessing the regional transit network at Penn Station and the several subway stations, or taking advantage of the area’s numerous commercial and cultural destinations. The street is heavily used by both local buses for crosstown travel needs, commuter coach buses from other parts of the city and region, and some intercity bus routes. 34th Street serves as the only midtown crosstown through-truck route, although legal access is limited to local truck use between 11:00 am and 6:00 pm. 34th Street is also one of New York City’s designated snow emergency streets, with prohibited parking during declared snow emergencies.

1.1.1 CURRENT AND FUTURE LAND USE

The land use study area encompasses the width of Manhattan between 29th and 40th Streets, and its land use patterns vary depending on particular locations; however, some generalizations can be made. Overall, transportation uses are dominant in the western portion of the study area, particularly west of Ninth Avenue; commercial uses are dominant in the central portion of the study area, between Eighth and Park Avenues; and residential uses are most prevalent east of Park Avenue. As discussed above, a number of Manhattan’s most popular and prominent destinations are located within the study area, including the Jacob K. Javits Convention Center, Penn Station, Madison Square Garden, the flagship Macy’s store and the Empire State Building—both of which are National Historic Landmarks—and the New York University Langone Medical Center. Route 9A, the FDR Drive, the Pier 79/West 39th Street Ferry Terminal, the East 34th Street Ferry Landing, and the Lincoln Tunnel and Queens-Midtown Tunnel access points are all major transportation uses at the western and eastern edges of the land use study area. There are limited public open spaces within the study area, excepting the linear East River Esplanade and Hudson River Park along the East River and Hudson River waterfronts, respectively (see **Figure 1-3**).

On the west side of the study area, the Amtrak Empire Line rail cut runs north-south through the Tenth Avenue to Eleventh Avenue midblocks on a slight diagonal, north of West 36th Street; south of West 36th Street, the rail cut is beneath the Javits Center plaza and then beneath Eleventh Avenue into the eastern portion of Caemmerer Yard. Caemmerer Yard (the MTA Long Island Rail Road [LIRR] storage yard and maintenance facility) comprises the blocks between West 30th and 33rd Streets from Tenth to Twelfth Avenues. Amtrak and MTA also have various structures and facilities within this area. The main entrance plaza to the Lincoln Tunnel occupies the block between West 39th and 40th Streets and Tenth and Eleventh Avenues. The open access ramps to the tunnel entrance, including exclusive bus ramps extending from the Port Authority Bus Terminal, cut beneath and above the street, and are the most visible structures in the nearby area. Other uses in this area include the Jacob K. Javits Convention Center, which extends between West 34th and 39th Streets west of Eleventh Avenue; the James A. Farley Post Office, which has serves as Manhattan’s General Post Office and still contains some United States Postal Service uses; the former Westyard Distribution

building on Tenth Avenue, a commercial building that is home to the *New York Daily News*; and truck marshalling yards for the convention center, rental truck yards, gas stations, open lots for parking and storage use, and taxi dispatches. Penn Station, which lies beneath Madison Square Garden on the superblock between West 31st and 33rd Streets and Seventh and Eighth Avenues, provides regional commuter rail service via New Jersey Transit and LIRR, while Amtrak provides long-distance services along the Eastern seaboard and beyond.

The residential/mixed-use neighborhood of Hell's Kitchen incorporates the area roughly between West 33rd and 38th Streets and Ninth and Tenth Avenues, and the City's Garment District lies primarily within the area bounded by Fifth Avenue, West 35th Street, Ninth Avenue, and West 40th/41st Streets. The Hell's Kitchen area includes a number of tenement buildings with housing above and neighborhood retail uses at street level. The Garment District has lower-density commercial structures in its western portion, and higher-density structures in its eastern portion. A higher density of development along the northern and central sections of the study area characterizes the commercial office uses in the heart of Midtown Manhattan's central business district—it is the most densely developed area of the city. There are smaller institutional and community facility uses—including churches, schools, and police and fire stations—scattered throughout the study area. Some of the larger institutional uses within this area include the Morgan Library and Museum, on Madison Avenue at East 36th Street, The Mid-Manhattan and The Science, Industry and Business Libraries of the New York Public Library system, and the CUNY Graduate Center at Fifth Avenue.

In the eastern portion of the study area, there are a number of high-rise buildings, including the residential Kips Bay Plaza complex between East 31st and 33rd Streets and First and Second Avenues, and the New York University Medical Center, which covers the area between East 30th and 34th Streets, First Avenue, and the FDR Drive. The high-rise apartment buildings in this portion of the study area are mostly located along the north-south avenues and along East 34th Street. Some have publicly accessible plazas. There are also smaller apartment buildings, tenements, and rowhouses lining the area's midblocks. The area north of East 39th Street and west of Second Avenue is dominated by tall office towers. Near the United Nations, which lies to the north along First Avenue, just outside the study area, there are many associated office buildings that provide space for its administrative functions. As in the other sections of the study area, smaller uses within this area include churches, schools, libraries, and police and fire stations. Publicly accessible open spaces include St. Vartan Park on 35th Street between First Avenue and Second Avenue, and public plazas associated with residential buildings in the area.

A large number of the structures within the land use study area are historic resources, and these resources illustrate the variety of land uses and building types that can be found within this area (See **Figures 1-4 and 1-5**, and **Appendix A, Table A-1**). They include high-rise commercial office buildings, hotels, warehouses and other manufacturing structures, parking garages, banks, department stores (former and current), tenements, lofts, houses of worship, performing arts venues, hospitals, schools, dormitories, diners, private clubs, subway stations, consulates, former stables, apartment buildings, detached houses, and rowhouses. The study area also incorporates the Garment Center, Lamartine Place, Park Avenue South, Sniffen Hill, and Murray Hill Historic Districts; the Lincoln Tunnel and associated ventilation buildings; the Farley Post Office complex; the Hudson River bulkhead, and the historic High Line rail viaduct, which runs along 30th Street between Tenth and Twelfth Avenues, and along Twelfth Avenue between 30th and 34th Streets.

A number of developments are anticipated to be completed or underway in the land use study areas by the proposed build analysis year of 2035 (see Chapter 2.2.1).¹ Future land uses in the western portion of the study area will include the new Access to the Region's Core (ARC) rail station beneath 34th Street between Sixth and Eighth Avenues, and a new 7 terminal at 34th Street and Eleventh Avenue; the redevelopment of the James A. Farley Post Office as the new rail passenger facility for Amtrak (Moynihan Station); a new development near the Farley Building with one million square feet of residential, hotel, and retail space; and a new high-rise development on the west side of the block bounded by West 32nd and 33rd Streets and Sixth and Seventh Avenues, with 2.65 to 2.84 million square feet of office space with ground-floor retail. Furthermore, the Special Hudson Yards District—which is bounded by 41st Street to the north, Eighth Avenue to the east (including Madison Square Garden), 30th Street to the south, and Eleventh Avenue to the west (including Caemmerer Yard) will be transformed within the next 10 to 15 years to a mix of residential, office, retail, hotel, community facility, and open space and recreational uses. The Special Hudson Yards District will also result in an expansion of the Jacob K. Javits Convention Center, a large amount of new public parkland, and a new boulevard between Tenth and Eleventh Avenues (see **Figure 1-6**). In general, the western portion of the study area is expected to be much more densely developed with a mix of commercial and residential uses by the project build year.

Land use trends in the eastern portion of the study area are likely to result in moderate- to high-density residential, commercial, and institutional development. Anticipated projects include the reconstruction and in-kind replacement of the FDR Drive and associated improvements; improvements to the 34th Street Ferry Terminal and the 34th Street Metroport Heliport; a new subway station at 34th Street and Second Avenue for the new Second Avenue subway line; and East Side Access, which is creating a new tunnel beneath Park Avenue to bring Long Island Rail Road service to Grand Central Terminal. Major non-infrastructure and transportation-related projects in this area include the former Consolidated Edison Waterside Power Plant and two adjacent parcels along First Avenue, which will be developed with residential, office, retail, public, school, and public open space uses; East River Science Park, a 1.1 million-square-foot biotechnology/medical office complex on the Bellevue Hospital campus; and a variety of changes to the New York University Langone Medical Center campus.

1.1.2 TRAVEL MARKET

The many uses along the 34th Street corridor attract riders for a variety of purposes. According to 2000 U.S. Census data, more than 381,000 people work within the study area, and more than 43,500 live within this area (see **Figure 1-7**).² As shown in **Table 1-1**, the Census showed that workers in the study area predominantly use transit modes (subway and bus) to reach their jobs; these modes represent approximately 61 percent of trips to work. Of people that live in the study area, transit modes also represent a large proportion of trips to work, with a combined share of approximately 41 percent. For both home-based and employment-based journey to work trips in the study area, walk-alone trips also represent a significant mode

¹ For the purpose of this Alternatives Analysis, it is assumed that implementation of any of the build alternatives could be finalized by 2035. Therefore, baseline conditions will reflect land use, social and demographic conditions, and transportation services in 2035.

² U.S. Bureau of the Census, Census Transportation Planning Package, 2000, Part 1, table 2 and Part 2, table 2.

share. Because of the availability of a large number of bus, commuter rail, and subway routes in the study area, many of the work trips to and from the study area are characterized by inter-modal transfers, with some transit trips involving multiple modes, as well as all transit trips having at least a small walk component to travel to and from the transit stop. Ferry service also plays an important role in travel to the study area – while the 2000 census lists a small number of ferry-only trips, ferries are typically part of a multi-modal journey, and the ridership may be listed in other categories. The Pier 39 ferry terminal serves approximately 8,500 trips per day, and the East 34th Street ferry terminal approximately 800 trips per day¹. The 2000 Census data also revealed that households located in the study area have relatively low vehicle ownership rates as compared with vehicle ownership rates citywide (21 percent versus 46 percent), reflecting a high dependence on public transit.²

**Table 1-1
34th Street Corridor Journey to Work and Reverse Journey to Work Data**

Mode to Work	Total Living in Study Area	% Living in Study Area	Total Working in Study Area	% Working in Study Area
Private Auto	3,379	7.8%	57,764	15.1%
Taxi	3,511	8.1%	7,505	2.0%
Subway	13,663	31.4%	182,742	47.9%
Bus	4,268	9.8%	51,025	13.4%
Railroad	944	2.2%	61,115	16.0%
Walk	17,754	40.7%	21,179	5.6%
Total	43,519	100%	381,330	100%

Source: U.S. Census Bureau, 2000 Census Transportation Planning Package Parts 1 and 2.

Despite the relatively low vehicle use in the overall study area, 2000 Census journey to work (Census Transportation Planning Package Part 1) data reveal that some tracts on the far east and west ends of the study area have substantially higher rates of auto and taxi commutes than those in the denser central core. Block groups at the western end of the study area, west of Tenth Avenue, have a rate of auto and taxi commuting of 36.4 percent, more than twice the study area rate. Block groups at the eastern end of the study area, east of First Avenue, have a rate of auto and taxi commuting of 22.6 percent, which is also substantially higher than that of the overall study area. These tracts are not as well served by transit and, therefore, have a much lower rate of transit commutes.

The development projects described above will increase the number of people that work and live in the study area. Combined, these projects could add more than 75,000 workers and more than 20,000 residents.³ The vast majority of this development would occur on the far east or far west sides, which as noted above currently have significantly higher auto and taxi mode shares for both origin and destination trips than has the corridor as a whole.

¹ NYCDOT Weekly Ferry Ridership Report, January 4, 2010

² U.S. Bureau of the Census, 2000, Summary File 3, table H44.

³ Based on four employees per 1,000 square feet of commercial (office, retail, and hotel) space and an average household size of 1.68 persons per unit as stated in the *Western Rail Yard Final Environmental Impact Statement* (New York City Planning Commission, September 2009).

In addition to the work-based travel, 34th Street is also a trip generator for leisure and tourism travel. The Empire State Building's observation deck is visited by 3.8 million people each year, and the area's retail uses attract huge volumes of shoppers. The Javits Center serves 3 million annual patrons for trade shows and exhibitions; Madison Square Garden seats between 18,500 and 20,000 people for sports and entertainment events multiple times each week; and the Manhattan Center/Hammerstein Ballroom hosts concerts and other live entertainment events throughout the year. The New York University Langone Medical Center, Bellevue Hospital, and surrounding medical office buildings form one of the highest concentrations of health care facilities in New York City. Finally, the City University of New York (CUNY) Graduate Center serves approximately 4,000 students on its campus at Fifth Avenue and 34th Street.

1.1.3 EXISTING TRANSIT SERVICE

34th Street is served by multiple transit modes, as shown in **Figures 1-8 and 1-9**. Penn Station is the country's busiest rail terminal, used by Amtrak intercity trains, and New Jersey Transit and MTA LIRR commuter trains. NYCT operates four subway stations along 34th Street with north-south express and local service on 15 subway routes, and provides north-south bus service on 16 routes. Ferry terminals at the Hudson River (Pier 79/West 39th Street) and the East River (East 34th Street) provide commuter and special event ferry service to the Bronx, Brooklyn, Queens, and New Jersey. New York Waterway provides shuttle buses from Pier 79 to Lexington Avenue for ferry customers. In addition, NYCT, MTA Bus, Westchester County Bee-Line Bus System, and Academy Bus provide express bus service between the area and neighborhoods in the Bronx, Brooklyn, Queens, Staten Island, Westchester County, and New Jersey. These express bus services all operate on portions of 34th Street.

Commuter rail lines, subways, express buses, and ferries make 34th Street easily accessible from far-reaching destinations, and the north-south subway and bus routes provide convenient service to the area from uptown and downtown Manhattan. However, only NYCT's M16 and M34 bus routes provide east-west local service along most of the 34th Street corridor.

1.2 PROBLEM STATEMENT

The existing bus service along 34th Street operates at slow speeds with substantial delays en route, resulting in long travel times for both crosstown and express commuter bus riders, increased operating costs, wasted fuel, and negative effects on air quality. These problems and associated costs are likely to escalate as M34 and/or M16 bus service is added to meet future demand from upcoming growth. Furthermore, pedestrian congestion is already severe along 34th Street, and will likely increase at key locations, as new development and transportation projects attract more people to the area. Improved, high-capacity transit service is needed to alleviate the issues facing existing bus service on 34th Street and to ensure that future riders can be fully accommodated.

1.2.1 NYCT BUS OPERATIONS (M16/M34)

The M16 operates between West 42nd Street and Ninth Avenue (Port Authority Bus Terminal) and the FDR Drive and 25th Street (Waterside Plaza). This 24-hour service operates on 34th

Street between Eighth/Ninth Avenues and FDR Drive/Second Avenues.¹ The M34 travels the length of 34th Street between the Javits Center and the FDR Drive. It runs from approximately 5:00 AM to 1:00 AM on weekdays and approximately 6:00 AM to midnight on weekends.²

In 2008, the annual ridership on the M16 and M34 routes was 2.492 million and 2.645 million passengers, respectively, for combined annual ridership of 5.137 million passengers. As of April 2009, the combined average weekday ridership on the M16 and M34 was more than 17,400 passengers. Approximately 9,000 customers (51 percent) ride the M34 each weekday while 8,400 (49 percent) use the M16. Saturday volumes on these routes total approximately 7,500, and Sunday volumes total approximately 6,000. Like patterns of weekday travel, approximately 52 percent of weekend customers ride the M34 while 48 percent use the M16.³

The M34 operates the full-length of 34th Street, while the M16 serves only the portion of 34th Street between Eighth/Ninth Avenues and First/Second Avenues. While passengers traveling between Second and Eighth Avenues have the option of either bus, the M34 is the only choice for passengers traveling the length of 34th Street. Because this study will analyze transit operations for the full east/west corridor, the discussion below focuses on M34 operations.

In 2004 and 2007, respectively, a New York City transit advocacy group ranked the M34 as the slowest and second slowest bus route in the city.⁴ A survey conducted in 2008 by NYCDOT and NYCT showed an average one-way, end-to-end trip time of 36 minutes, translating to an average speed of 3.3 miles per hour. Subsequently, NYCDOT and NYCT implemented roadway and operational improvements to reduce travel times for the M34. In 2008, NYCDOT introduced curbside, bus-only lanes and adjusted traffic signals. NYCT replaced the M34 fleet with low-floor vehicles, removed a stop at Dyer Avenue, shortened the route at the Javits Center, and adjusted schedules. As a result, run times of the M34 have improved, and in May 2009, the average one-way, end-to-end travel time was 28 minutes, with an average speed of 4.3 miles per hour.

While conditions have improved since 2008, the M34 still requires an average of 28 minutes to make the two-mile, one-way, end-to-end trip. As a point of comparison, at an average human walking speed of 3 to 4 miles per hour, a pedestrian could make the trip in approximately 40 minutes.⁵ While the M34 is 12 minutes faster for the full length of 34th Street, walking is a viable alternative for shorter trips, especially on the most congested portions of the route between Eighth and Lexington Avenues. For longer trips, taxis often provide a quicker connection between destinations than the M34.

As shown in **Figure 1-10**, only 40 percent of the M34's total travel time is spent in motion. Of the 60 percent in stopped time, approximately 22 percent is for waiting at traffic signals, and 38 percent is to board and alight passengers (dwell time). Dwell time is heavily influenced by

¹ When traveling westbound/northbound, the M16 uses the FDR Drive Service Road and Eighth Avenue. When traveling eastbound/southbound, the M16 uses Second Avenue and Ninth Avenue.

² www.mta.info, August 2009.

³ www.mta.info, August 2009.

⁴ NYPRIG Straphangers Campaign and Transportation Alternatives, *2004 Pokey Awards*, September 2004, *2007 Pokey Awards*, October 2007.

⁵ NYCDOT typically assumes an average walking speed of 3 to 4 miles per hour for pedestrian analyses per City Environmental Quality Review guidelines.

the number of passengers boarding at a stop and the associated time to pay the fare. Because the M34 operates with on-board fare collection, all boarding customers must enter via the front door of the bus and either pay the fare in coin or dip their MetroCard.

Combined, the slow travel speed of the M34 and its stopped or dwell time substantially reduce the efficiency and attractiveness of the route. As stated above, the average, one-way travel time is 28 minutes for the 2-mile route, meaning that one bus requires over one hour for a round trip run (including layover). The inefficient travel time and resultant vehicle requirements translate into higher operating costs from increased personnel requirements, increased fuel use, and increased vehicle maintenance. Furthermore, when stopped at traffic signals or to board and alight passengers, buses idle and burn fuel, exacerbating operating costs, wasting energy, and negatively affecting air quality.

1.2.2 NY WATERWAY FERRY BUS

The Pier 79/West Midtown Ferry Terminal, located at 39th Street and the Hudson River, provides a station for service between New Jersey and Midtown Manhattan. This ferry terminal is served by NY Waterway Ferry Buses which meet every arriving boat and utilize the local bus stops on 34th Street. During peak hours, these buses run in both directions from the ferry terminal to Lexington Avenue; during off-peak hours, a one-way operation is in effect, following a loop from the ferry terminal to 42nd Street, down Fifth Avenue and back to the ferry terminal via 34th Street.

Presently, NY Waterway Ferry Buses share the curbside bus lanes used by the M16 and M34 routes and are prone to the same congestion problems that impede the operation of the M16 and M34 local bus routes.

1.2.3 EXPRESS BUS OPERATIONS

As noted above, the 34th Street corridor provides east-west access in Manhattan for express buses seven days a week. Express bus service is most heavily concentrated in the weekday AM and PM peak hours. During the weekday AM peak hour, approximately 100 express bus trips are scheduled to operate on 34th Street, and the average weekday ridership on these routes exceeds 16,000 passengers per day.

Currently, express buses share the curbside bus lanes used by the M16 and M34 routes but have dedicated stops. To pass slower or stopped buses, express buses must merge into the general traffic lanes, which can delay their trip. Furthermore, express buses are prone to the same congestion problems that impede the operation of the M16 and M34 local bus routes.

1.2.4 PEDESTRIAN CONGESTION

The many attractions along 34th Street bring scores of pedestrians to the area. Madison Square Garden, Penn Station, Macy's and the surrounding shopping district, and the Empire State Building are located along and near the three blocks of 34th Street between Fifth and Eighth Avenues. Pedestrian congestion is a frequent occurrence as sidewalks often become so crowded that people walk in the traffic lanes (see **Figure 1-11**). Problems are even more pronounced near intersections where pedestrians queue to board buses and to cross the street. At the corners of Sixth, Seventh, and Eighth Avenues, subway stairways and the passengers ascending and descending them further crowd street-level pedestrian space (see

Figure 1-11). The congestion along this portion of 34th Street creates challenges for both pedestrian safety and comfort.

1.2.5 FUTURE DEVELOPMENT AND CROSSTOWN TRANSIT DEMAND

The future development projects identified above will generate substantial new demand for crosstown transit service. As shown in **Table 1-2**, Moynihan Station, the Eastern and Western Rail Yards, and the First Avenue Properties projects will generate more than 3,600 AM peak hour riders and nearly 3,500 PM peak hour riders on the 34th Street crosstown bus routes.

Table 1-2
Demand for M16/M34 Bus Service from Future Major Development Projects

PEAK HOUR AND DIRECTION OF TRAVEL		NEW M16/M34 BUS RIDERS			
		MOYNIHAN STATION	EASTERN AND WESTERN RAIL YARDS	FIRST AVENUE PROPERTIES	TOTAL
AM Peak Hour	Eastbound	60	1,107	237	1,404
	Westbound	185	1,967	50	2,202
	Total	245	3,074	287	3,606
PM Peak Hour	Eastbound	158	1,748	86	1,992
	Westbound	115	1,165	218	1,498
	Total	273	2,913	304	3,490

Notes:
 Consistent with analysis presented in the Western Rail Yard Draft Environmental Impact Statement, the capacity of the M16 and M34 routes was assumed as 65 passengers per bus.
 New demand for bus service was not fully quantified in the *ARC Final Environmental Impact Statement*.¹
 The 15 Penn Plaza and East River Science Plaza projects are not included in the above estimates, since data for these projects are not yet available.

Sources:
 Empire State Development Corporation, *Farley Post Office—Moynihan Station Redevelopment Project Final Environmental Impact Statement*, August 2006.
 Metropolitan Transportation Authority and New York City Planning Commission, *No. 7 Subway Extension—Hudson Yards Rezoning and Development Program Final Generic Environmental Impact Statement (CEQR No.: 03DCP031M)*, November 2004.
 Metropolitan Transportation Authority and New York City Planning Commission, *Western Rail Yard Draft Environmental Impact Statement (CEQR No.: 09DCP007M)*, May 2009.
 New York City Department of City Planning, *First Avenue Properties Rezoning, Final Supplemental Environmental Impact Statement (CEQR No.: 06DCP039M)*, January 2008.

The ARC project will improve access to Manhattan for commuters west of the Hudson River and will attract more people to the 34th Street area. Although the new demand for bus service was not fully quantified in the *ARC Final Environmental Impact Statement*, there will be a predicted increase in transfers between New Jersey Transit commuter rail and the M16/M34 bus routes.

Currently under construction, the East River Science Park at First Avenue between 28th and 30th Streets will provide a 1.1 million-square-foot office and laboratory space. Based on surveys prepared for the project’s Final Environmental Impact Statement, nearly 62 percent of its 2,263 employees will commute by transit. A number of other developments will also add a substantial number of transit customers in the study area by 2035.

In total, future development in the study area will result in upwards of 5,000 to 6,000 new bus riders in the study area. To accommodate these passengers, it is estimated that NYCT will need to operate 34 additional bus trips in the AM peak hour and 31 additional bus trips in the PM

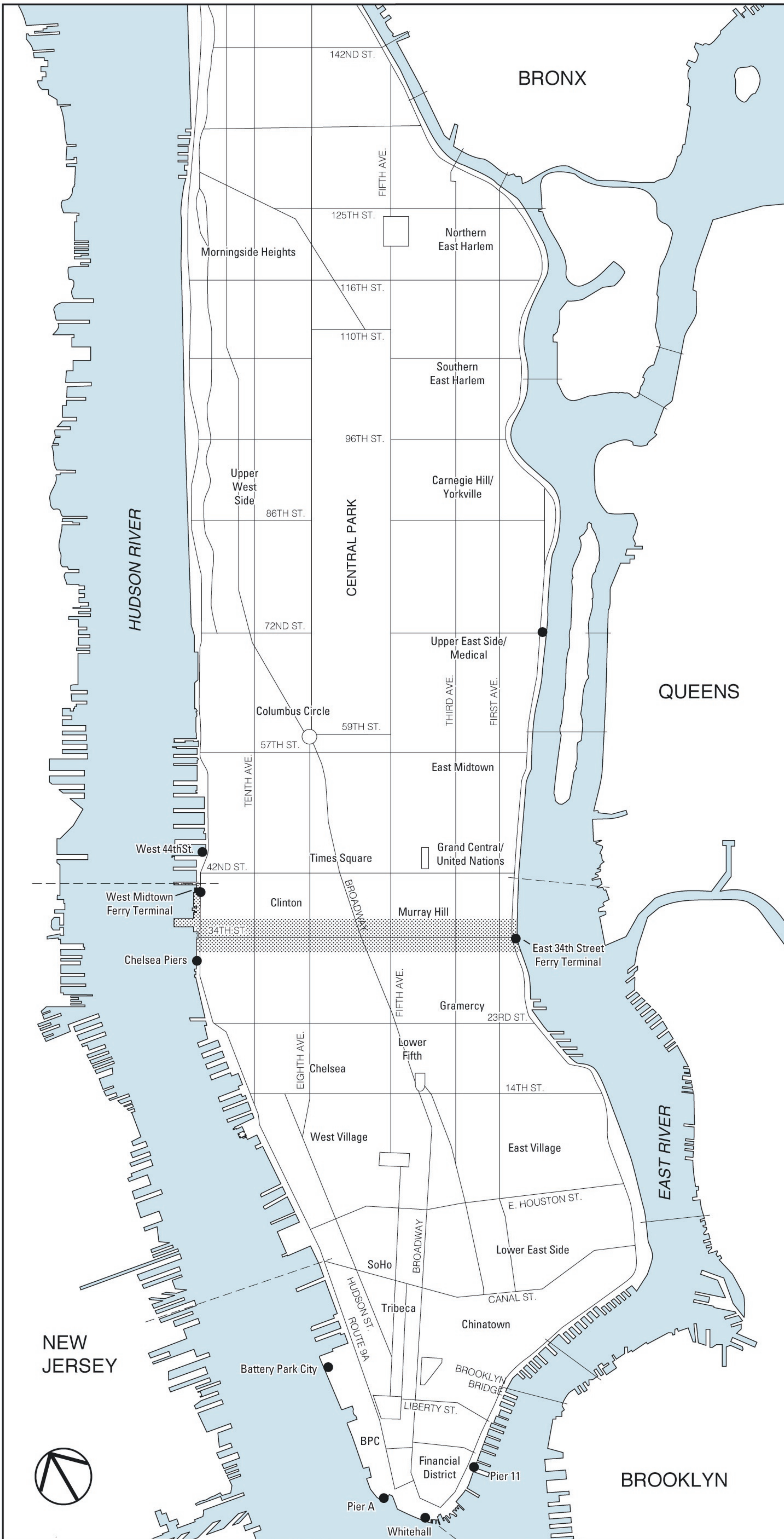
peak hour on the 34th Street crosstown bus routes. As most of this new development will be west of Eighth Avenue and east of Second Avenue, the M34 will absorb much of the new ridership. To fully meet demand, headways on the M34 would have to be less than 2 minutes - and the new bus service would be subject to the same operating difficulties as described previously for existing bus service along the corridor.

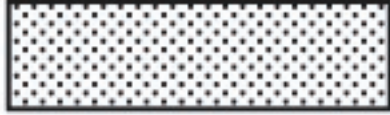
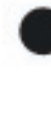


1.3 GOALS AND OBJECTIVES

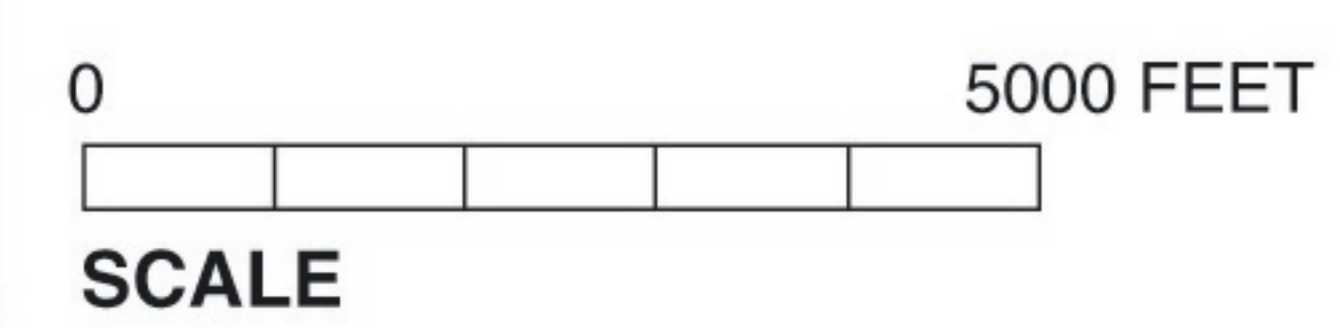
Based on the problems identified above, the Project Sponsor, in collaboration with NYCT and in cooperation with MTA Bus, has developed goals and objectives for the Proposed Project. The Proposed Project has two primary goals: 1) improve crosstown mobility; and 2) minimize capital and operating concerns. Combined, these goals aim to provide a service that not only reduces travel time and decreases congestion but is achievable both in reasonable time and cost. At the same time, the service will strive to benefit community character and avoid or minimize impacts on the environment, which are the secondary goals of the Proposed Project. The primary and secondary goals, and their supporting objectives, are shown in **Table 1-3**.

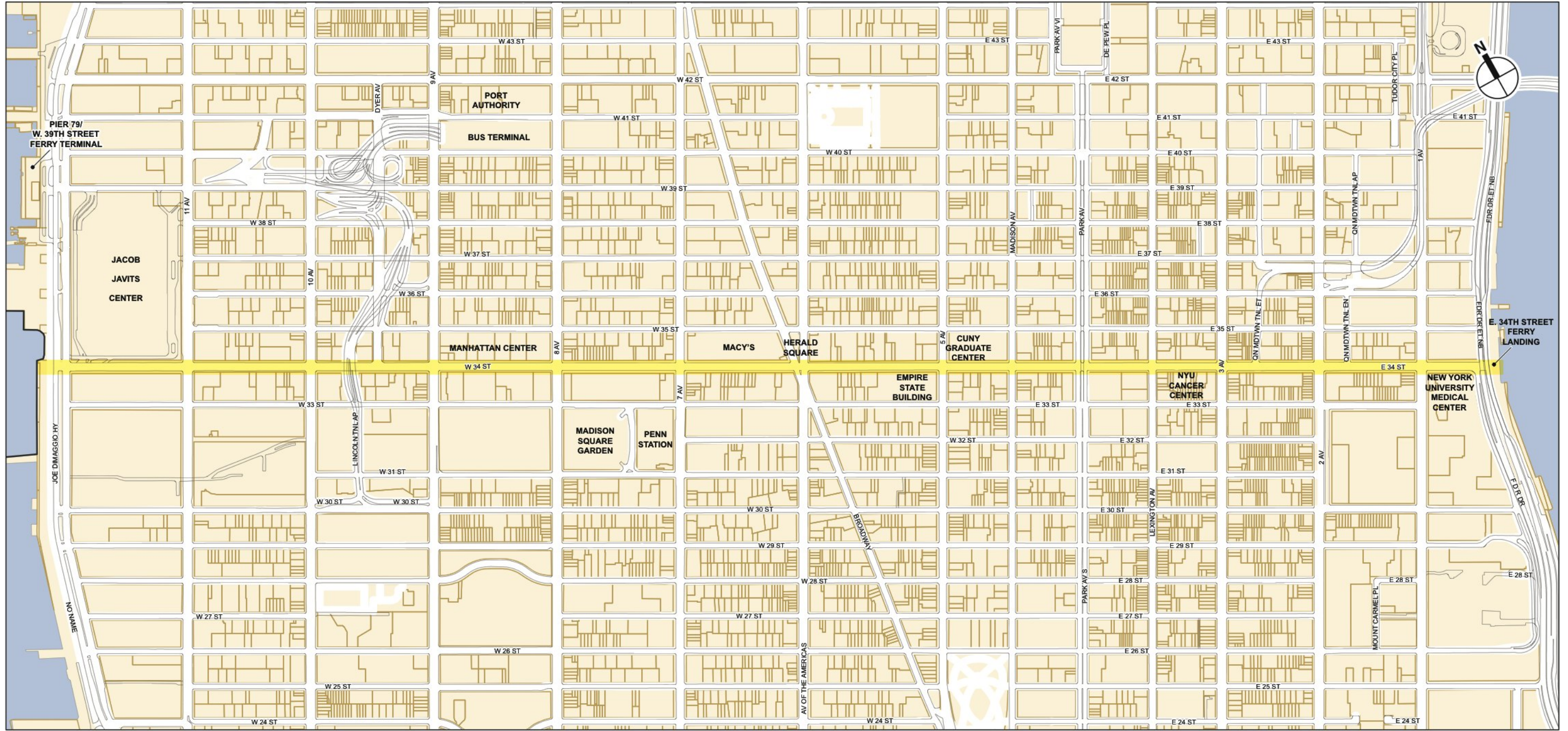
**Table 1-3
Goals and Objectives**

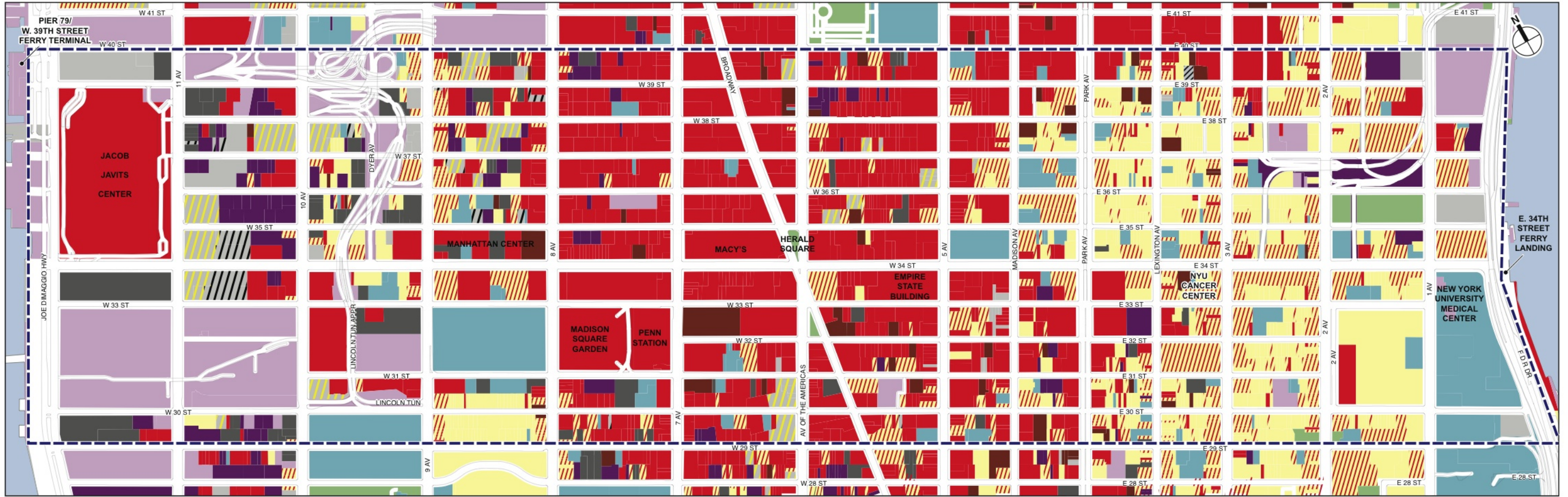
GOAL	OBJECTIVE
<i>PRIMARY GOALS</i>	
<i>IMPROVE CROSSTOWN MOBILITY</i>	<ul style="list-style-type: none"> • Reduce transit travel time for crosstown trips • Improve transit reliability • Reduce pedestrian congestion and improve pedestrian safety • Provide convenient connections to existing and future transit service • Improve express bus operations along 34th Street • Accommodate future transit demand
<i>MINIMIZE CAPITAL AND OPERATING CONCERNS</i>	<ul style="list-style-type: none"> • Implement within a reasonable construction timeframe • Implement within a reasonable construction cost • Be consistent with MTA operating procedures • Avoid conflicts with existing and proposed infrastructure during construction • Avoid conflicts with existing and proposed infrastructure during operation • Maintain delivery access to local businesses • Maintain access for emergency vehicles • Maintain access to arterial roadways and Manhattan portals
<i>SECONDARY GOALS</i>	
<i>ENHANCE COMMUNITY CHARACTER</i>	<ul style="list-style-type: none"> • Support existing and proposed development • Improve connections between residential and commercial destinations • Improve pedestrian circulation and safety
<i>MINIMIZE ADVERSE IMPACTS ON THE BUILT AND NATURAL ENVIRONMENT</i>	<ul style="list-style-type: none"> • Avoid, minimize, or mitigate adverse impacts on historic resources • Minimize encroachment on view corridors • Maintain access to existing and future uses on 34th Street • Avoid property acquisition to the maximum extent feasible • Reduce vehicular congestion, emissions, and noise • Minimize construction impacts to the extent feasible • Avoid impacts on natural features and coastal waters



-  34th Street Corridor
-  Ferry Terminal
-  Bridge
-  Tunnel







- 34th Street Corridor
- Residential
- Residential with Commercial Below
- Hotels
- Commercial and Office Buildings
- Industrial and Manufacturing
- Transportation and Utility
- Public Facilities and Institutions
- Open Space and Outdoor Recreation
- Parking Facilities
- Vacant Land
- Vacant Building
- Under Construction

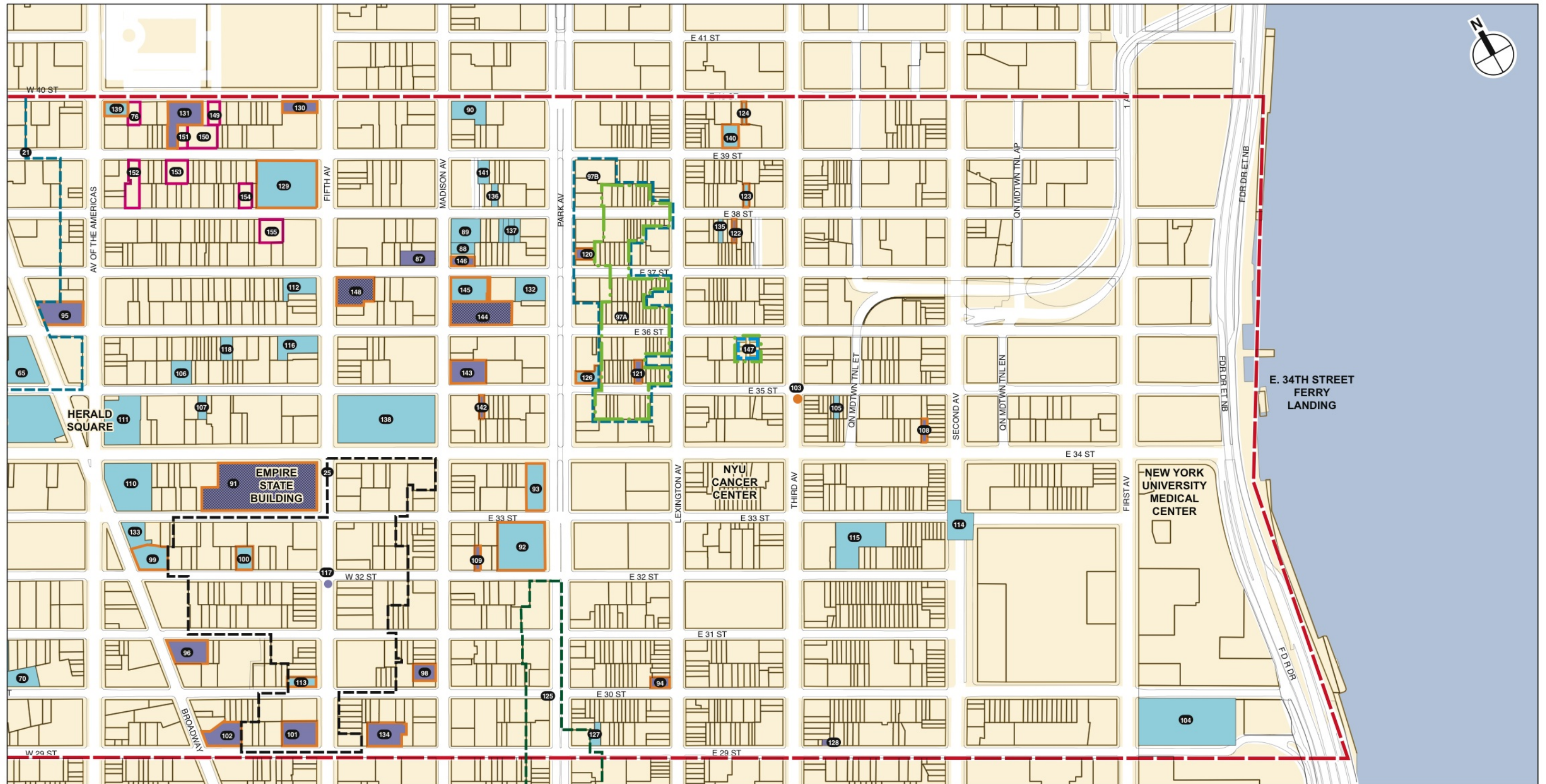




- 34th Street Corridor
- Architectural Resource*
- S/NR-Eligible (Individual)
- S/NR-Listed (Individual)
- S/NR-Listed (District)
- S/NR-Eligible (District)
- NYCL-Eligible (Individual)
- NYCL - Designated (Individual)
- NYCL - Eligible (District)
- NYCL - Designated (District)
- National Historic Landmark

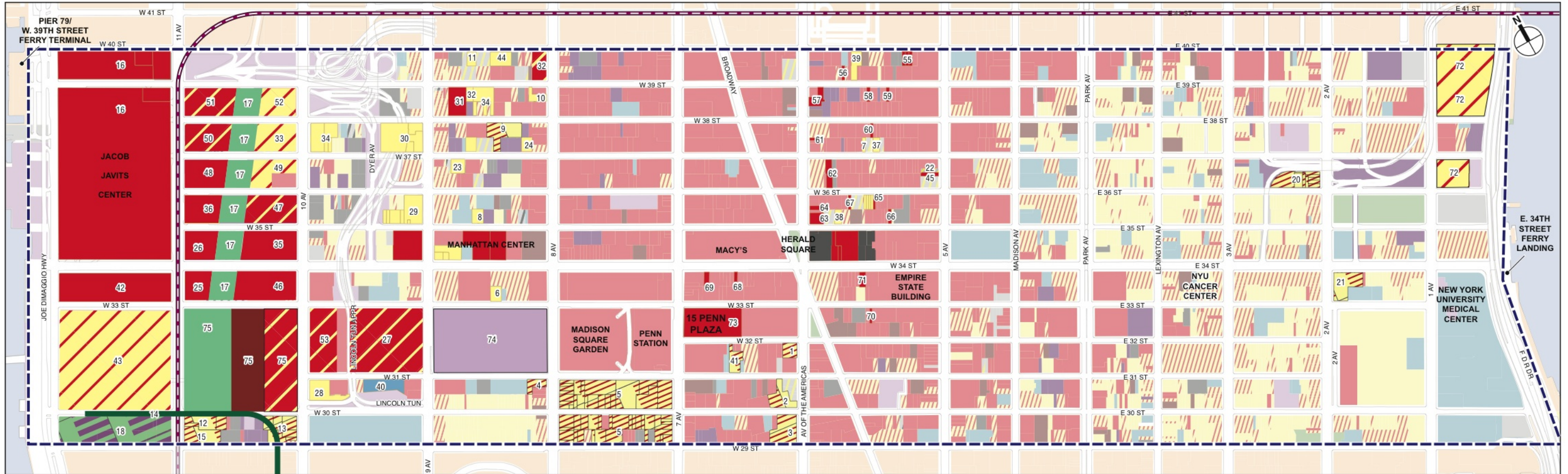
*NOTE: Refer to Appendix A, Table A-1 for list of Architectural Resources





- - - 34th Street Corridor
- Architectural Resource*
- S/NR-Eligible (Individual)
- S/NR-Listed (Individual)
- S/NR-Listed (District)
- S/NR-Eligible (District)
- NYCL-Eligible (Individual)
- NYCL - Designated (Individual)
- NYCL - Eligible (District)
- NYCL - Designated (District)
- National Historic Landmark

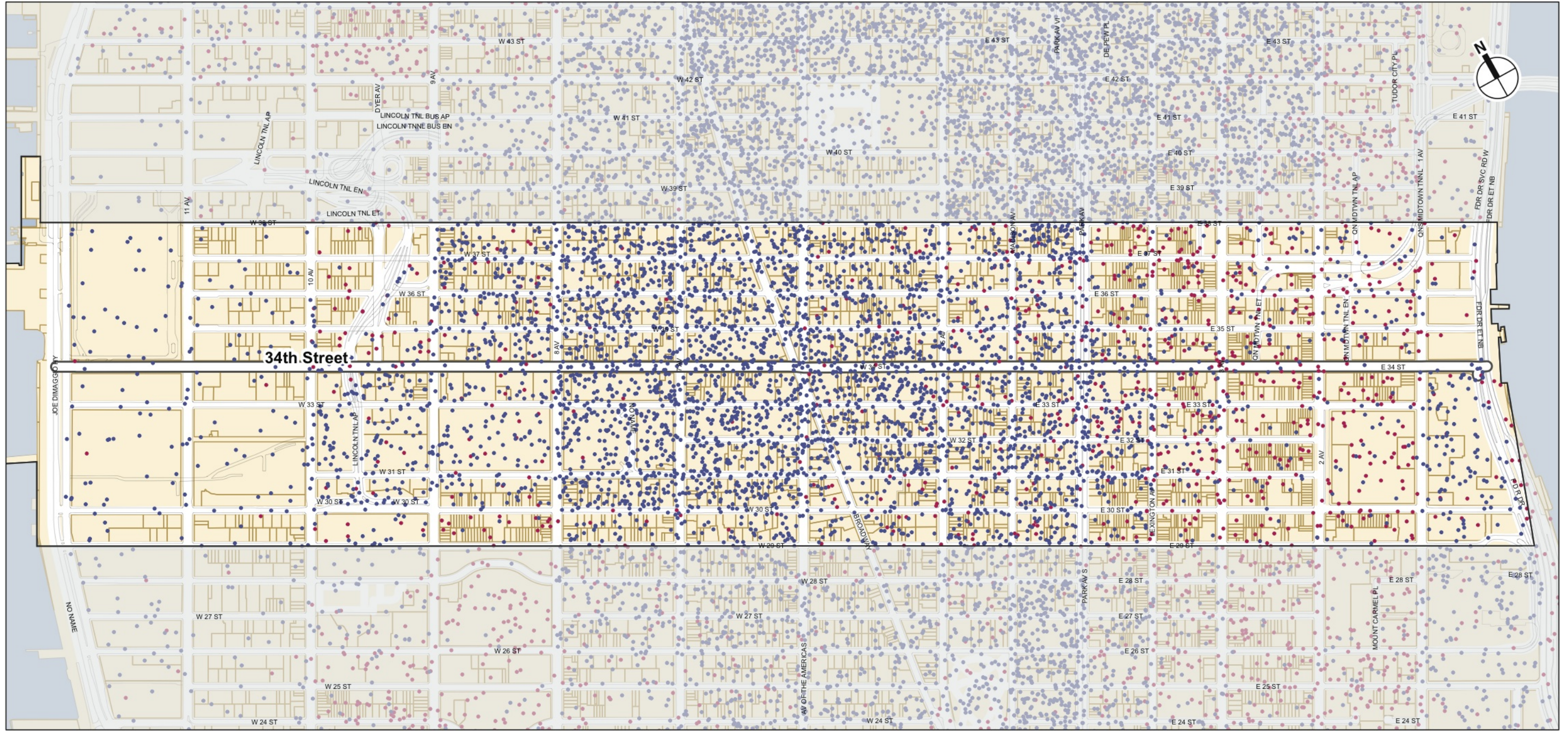
*NOTE: Refer to Appendix A, Table A-1 for list of Architectural Resources



FUTURE SITES

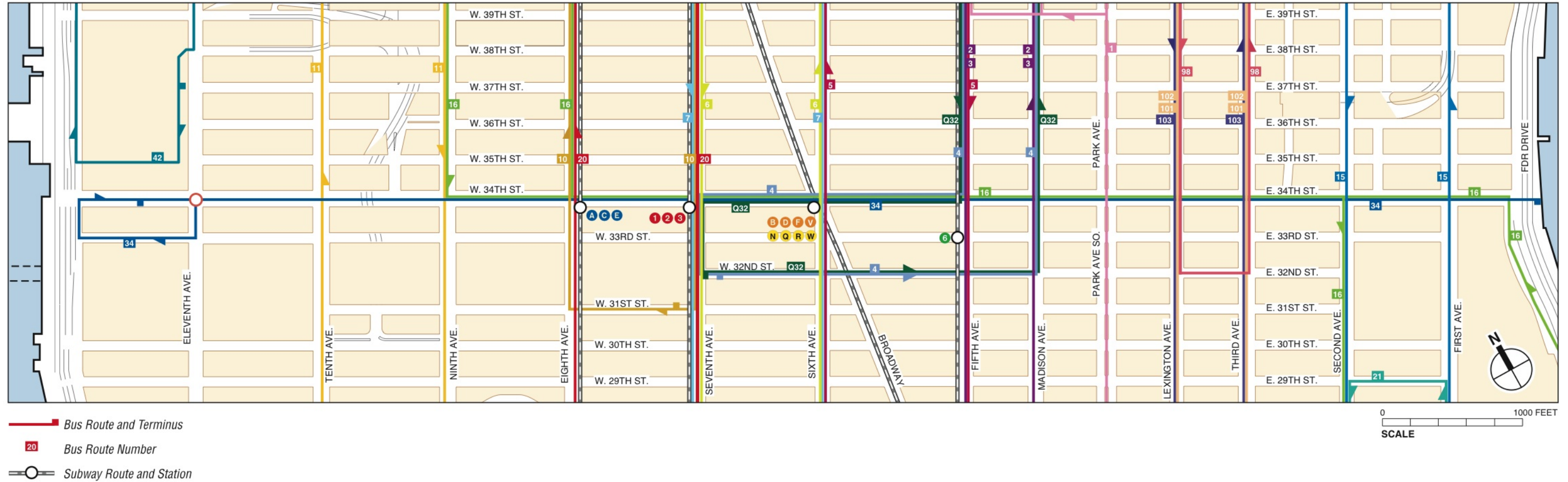
- | | | | |
|--|--|---|-------------------------------------|
| 1 885 Sixth Avenue | 21 300 East 34th Street | 41 Friars Tower, 125 West 31st Street | 61 1008 Sixth Avenue |
| 2 855 Sixth Avenue | 22 400 Fifth Avenue | 42 33/34 Development | 62 59 West 36th Street |
| 3 835 Sixth Avenue | 23 Tower 37 | 43 Western Rail Yard | 63 960 Sixth Avenue |
| 4 415 8th Avenue | 24 307-311 W. 37th Street | 44 Hudson Yards Potential Sites 68, 70 | 64 968 Sixth Avenue |
| 5 West 28th/29th/30th Streets Rezoning | 25 Hudson Yards, Site 2 | 45 398 Fifth Avenue | 65 38 West 36th Street |
| 6 325 West 33rd Street | 26 Hudson Yards, Site 4 | 46 Hudson Yards Site 3 | 66 23 West 35th Street |
| 7 Strand Hotel: 33 West 37th Street | 27 Hudson Yards Sites 32/33 | 47 Hudson Yards Site 7 | 67 58 West 36th Street |
| 8 345 West 35th Street | 28 Hudson Yards site 62 | 48 Hudson Yards Site 8 | 68 134 West 34th Street |
| 9 310-328 West 38th Street | 29 Hudson Yards Site 28 | 49 Hudson Yards Site 9 | 69 152 West 34th Street |
| 10 Sam Chang Hotels: 585 Eighth Avenue | 30 Hudson Yards Site 24 | 50 Hudson Yards Site 10 | 70 36 West 33rd Street |
| 11 Staybridge Suites: 334 West 40th Street | 31 Hudson Yards Site 37 | 51 Hudson Yards Site 12 | 71 32 West 34th Street |
| 12 316 Eleventh Ave | 32 Hudson Yards potential sites 68, 70 | 52 Hudson Yards Site 13 | 72 First Avenue Properties Rezoning |
| 13 Related Development | 33 Hudson Yards Site 11 | 53 Hudson Yards Site 31 | 73 15 Penn Plaza |
| 14 High Line Open Space | 34 Hudson Yards Site 23 | 54 Hudson Yards Site 39 | 74 Moynihan Station |
| 15 Special West Chelsea District Rezoning | 35 Hudson Yards Site 5 | 55 Republic National Bank, 12-18 West 40th Street | 75 Eastern Rail Yard |
| 16 Javits Convention Center Expansion | 36 Convention Center Hotel | 56 47 West 39th Street | |
| 17 Hudson Boulevard | 37 21 West 37th Street | 57 1026 Sixth Avenue | |
| 18 Department of Sanitation/ New York Police Department Facility | 38 57 West 35th Street | 58 36 West 39th Street | |
| 19 Open Space | 39 Homestead Village Hotel | 59 24 West 39th Street | |
| 20 Perlbinder Sit | 40 Fashion Institute of Technology (FIT) dormitories, 406 West 31st Street | 60 West 38th Street | |

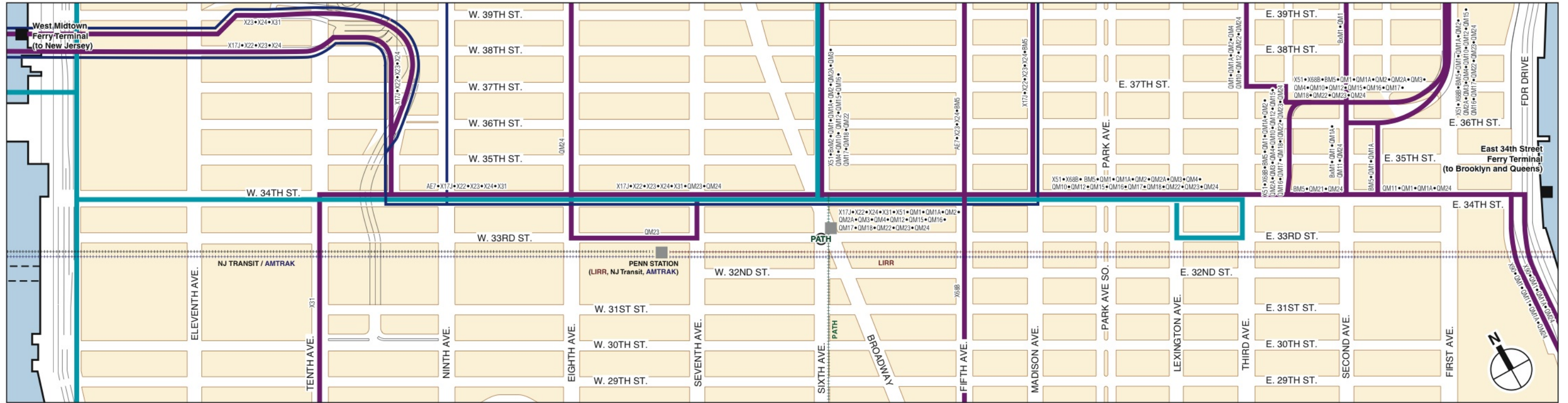




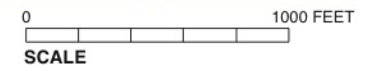
- Study Area Commuters
- 1 Dot = 50 Workers
- Study Area Residents
- 1 Dot = 50 People

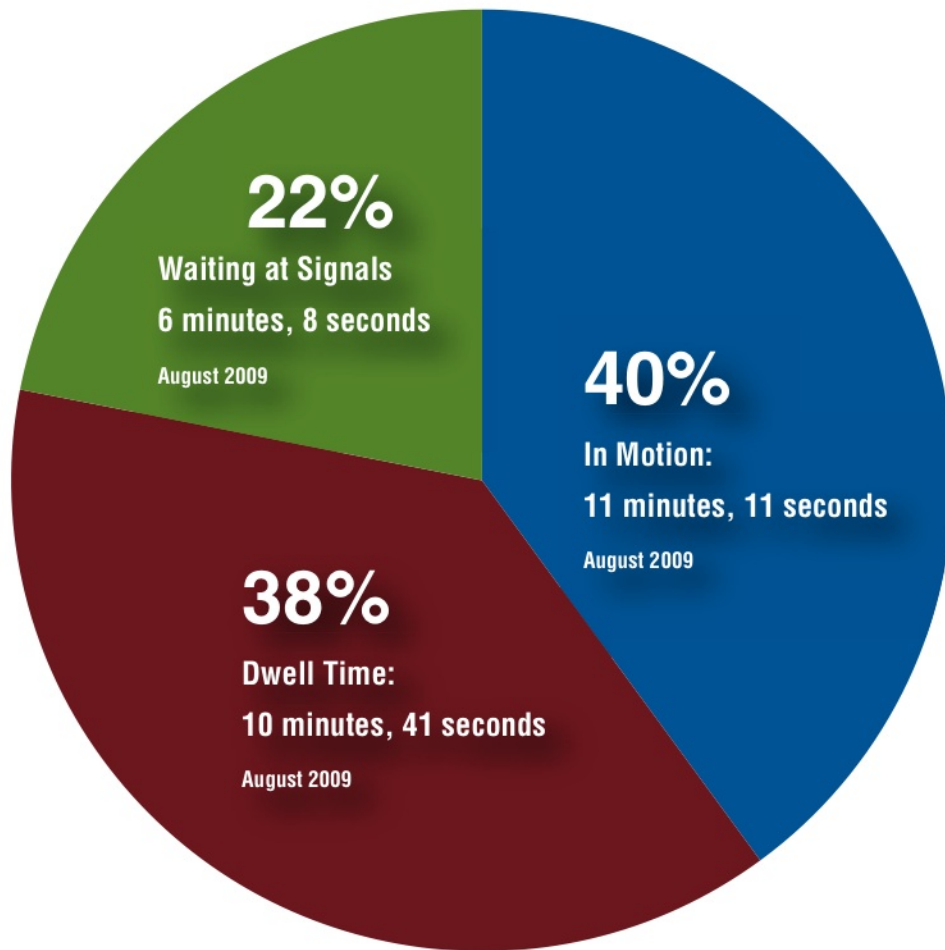
0 0.4 MILES
SCALE





- QM23 Express Bus Routes (New York City Transit, MTA Bus Company, and Atlantic Express)
- New York Waterway Bus Route
- Academy Bus

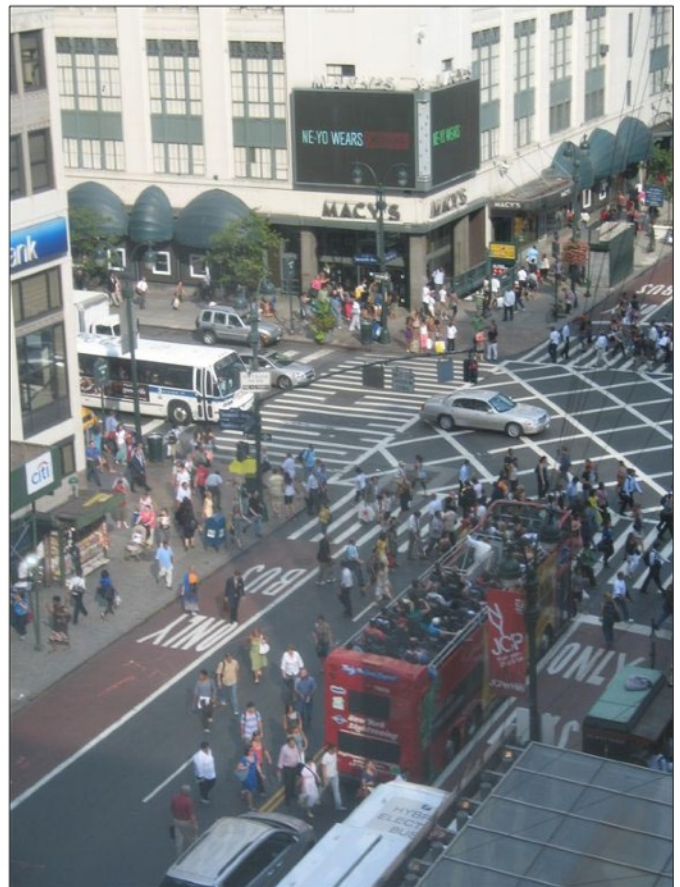




Both Directions	Percent of Total	Average Time
In Motion: 11 minutes, 11 seconds	40.0%	0:11:11
Dwell Time: 10 minutes, 41 seconds	38.2%	0:10:41
Waiting at Signals: 6 minutes, 8 seconds	21.9%	0:06:08
OVERALL AVG TRIP	100.0%	0:28:00



34th Street Pedestrians in Traffic Lanes (August 2009) 1



34th Street Pedestrian Congestion at Intersection (August 2009) 2