

NEW YORK METROPOLITAN TRANSPORTATION COUNCIL



*New York Metropolitan Transportation Council*

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**Hudson River Valley Greenway Link**

**Task #6 Alternate Design Solutions  
Technical Memorandum #5  
Data Collection Summary**

January 6, 2010

**Submitted By:**



**with:**



# TASK 6: ALTERNATE DESIGN SOLUTIONS TECHNICAL MEMORANDUM

## DATA COLLECTION SUMMARY

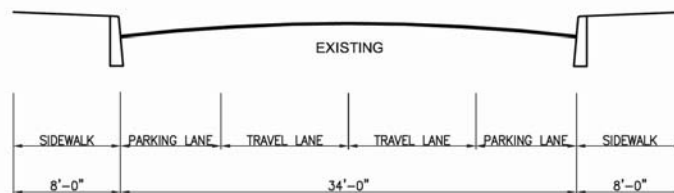
This memorandum provides a summary of the data collection performed under Task 6 of the Hudson River Valley Greenway Link (HRVGL) project. As part of the Task 6 scope, data collection is to be performed to assist the feasibility analysis of study corridors that were recommended in Task 4. This data will be analyzed to identify potential constraints and determine the extent to which bicycle facilities can be implemented along the study corridors.

The data collection consists of the following elements:

1. roadway and sidewalk measurements,
2. parking regulation inventory,
3. vehicle and pedestrian counts,
4. natural resources and coastal zone boundaries,
5. historic and cultural resources,
6. hazardous materials,
7. neighborhood demographics,
8. land use and zoning,
9. visual environment and scenic views.

### 1. Roadway and Sidewalk Measurements

Roadway measurements were collected for each of the segments along the study corridors that were recommended in Task 4 for further analysis. This includes roadway classifications, overall right of way width including roadway, sidewalk, and median widths. A cross section of each measurement is being developed and will be incorporated into the Task 6 report to illustrate the existing roadway conditions and document right-of-way limits. This information will then be used to determine the amount of room available along each corridor for a greenway facility. Below is a sample of the type of cross section that will be used in the Task 6 report to illustrate the existing roadway and sidewalk dimensions along each corridor.



Sample Cross Section of Existing Conditions on Fieldston Road

## **2. Parking Regulation Inventory**

On on-street parking survey was performed in August and September 2009 as part of the Hudson River Valley Greenway Link (HRVGL) Task 6 traffic and parking data collection program. The data collection was performed along all inland study corridors and entailed driving each segment and recording all official on-street parking regulations. A segment is a stretch of roadway that exhibits a continuity of character. Below is a summary of the parking regulations for the inland HRVGL study corridors broken down by the segments identified in Task 4. This summary provides an overall description of on-street parking regulations for each segment.

### **Manhattan**

#### Seaman Avenue/Broadway (Segment 1):

Parking regulations along this segment consist primarily of alternate side of the street parking regulations (temporary parking prohibitions that alternate sides of the street by day to allow for street cleaning) on both curbs occurring between the hours of 9:00 AM and 12:30 PM. There are also 'No Parking Anytime' regulations along the Broadway Bridge (between 220<sup>th</sup> and 225<sup>th</sup> Streets).

#### Broadway (Segment 3):

This segment consists of 'No Parking Anytime' regulations on both sides of the street.

### **Bronx**

#### Broadway (Segment 7):

Along this section of Broadway, there is a mix of no regulations and alternate side parking restrictions (from 9:30 to 11:00 AM). There are also 'No Parking Anytime' regulations along the east side of Broadway between 254<sup>th</sup> Street and Lakeview Place (where the Henry Hudson Parkway on- and off- ramps are located).

#### Tibbett Avenue (Segment 8/8a):

This segment generally consists of alternate side parking regulations (occurring between the hours of 9:00 AM and 12:30 PM). There is six-hour metered parking on the east curb between 240<sup>th</sup> and 238<sup>th</sup> Streets (between 8:00 AM to 10:00 PM Monday through Friday), except from 7:00 to 8:00 AM Monday and Friday for which there are alternate side restrictions.

#### Marble Hill Avenue/Kingsbridge Avenue/Terrace View Avenue Loop (Segment 8/8a)

Parking along Marble Hill, Kingsbridge, and Terrace View Avenues consists of alternate side parking regulations (8:30 to 10:00 AM).

#### 230<sup>th</sup> Street (Segment 8/8a)

Parking regulations along this stretch of 230<sup>th</sup> Street consist of either alternate side parking (occurring between the hours of 8:30 and 10:00 AM) or 'No Parking Anytime' regulations (between Tibbett and Corlear Avenues).

Henry Hudson Parkway East (Segment 12):

Parking regulations along this segment consist of alternate side parking regulations on the east curb (between 11:30 AM and 1:00 PM) and 'No Parking Anytime' on the west curb.

Henry Hudson Parkway West (Segment 12):

Parking regulations along this segment consist of alternate side parking regulations on the west curb (between 11:30 AM and 1:00 PM) and 'No Parking Anytime' on the east curb.

Palisade Avenue (Segments 20, 21):

Most of the Palisade Avenue corridor has 'No Parking Anytime' restrictions. An exception is the segment between Independence Avenue and Kappock Street where parking is allowed on the west curb with alternate side parking regulations (11:30 AM to 1:00 PM, Tuesday and Friday).

Kappock Street/Johnson Avenue (Segment 11):

This segment is characterized by a mix of 'No Parking Anytime' and alternate side parking regulations (occurring between the hours of 8:00 AM and 1:00 PM).

Fieldston Road/ Waldo Avenue/ 208<sup>th</sup> Parkway (Segments 9, 10, 10a)

Most of the parking regulations along these streets prohibit parking at all times, except for Fieldston Road between 261<sup>st</sup> and 250<sup>th</sup> Streets where there are no posted regulations and parking is allowed. Additionally, Waldo Avenue/Manhattan College Parkway between 208<sup>th</sup> Parkway and Broadway has one-hour metered parking with alternate side parking regulations (7:30 to 8:00 AM Monday, Wednesday, and Friday).

Riverdale Avenue (Segment 14):

Most of this segment does not have parking regulations; however, between 259<sup>th</sup> and 261<sup>st</sup> Streets, there is one-hour metered parking for most of the day on weekdays and Saturdays (9:00 AM to 7:00 PM, except Sunday) with 30-minute alternate side parking regulations for street cleaning on most days (8:30 to 9:00 AM, Monday, Tuesday, Thursday and Friday).

261<sup>st</sup> Street (Segment 15):

Along 261<sup>st</sup> Street, parking is unregulated between Broadway and Liebig Avenue. Between Liebig and Riverdale Avenues, there are one-hour parking regulations for daytime hours (9:00 AM to 7:00 PM except Sunday). West of Riverdale Avenue, there are 'No Parking Anytime' prohibitions.

**Yonkers**

Riverdale Avenue (Segment 25):

In Yonkers, parking along Riverdale Avenue is regulated by two-hour parking restrictions on Monday, Thursday, and Saturday. There are alternate side parking regulations from 8:00 AM to 12:00 PM between 263<sup>rd</sup> and Ludlow Streets; and from 1:00 AM to 7:00 AM between Ludlow and Main Streets. Also, there are 'No Parking Anytime' prohibitions on at least one curb along the section between Prospect and Main Streets.

Valentine Lane (Segment 30):

Along Valentine Lane, between Broadway and Hawthorne Avenue, parking is regulated by alternate side parking prohibitions occurring between 1:00 and 3:00 PM. Between Hawthorne Avenue and Sunnyside Drive, parking is prohibited at all times.

Hawthorne Avenue (Segment 31):

Along Hawthorne Avenue, parking is regulated by alternate side parking restrictions (from 9:00 to 11:00 AM). There are also 'No Parking Anytime' prohibitions on the west curb between Knowles and Herriot Streets.

Buena Vista / Sunnyside Drive (Segments 32 / 32a / 36):

Parking along Sunnyside Drive is regulated by alternate side parking restrictions at various times of the day (1:00 to 7:00 AM or 1:00 to 3:00 PM) except for the section between Pier and Ludlow Streets where there are 'No Parking Anytime' prohibitions. Along Buena Vista Avenue, parking is also regulated by alternate side parking. Also, one-hour and two-hour parking meters are present on Buena Vista Avenue between Main Street and Wells Avenue.

Alexander Street/Babcock Place (Segment 34):

Along Alexander Street south of Ashburton Avenue, the east side of the street is mostly restricted to parking for police vehicles only, with some 12-hour parking (between 6:00 AM and 6:00 PM, Monday through Saturday). On the west side of the street, parking is prohibited at all times. North of Ashburton Avenue, parking is prohibited at all times on Alexander Street. Parking is prohibited at all times on Babcock Place as well.

Lamartine Avenue (Segment 26):

The Lamartine Avenue segment is regulated by alternate side parking restrictions (occurring between the hours of 9 AM and 3 PM).

Ravine Avenue/ Woodworth Avenue Couplet (Segment 35):

Along the one-way couplet of Ravine and Woodworth Avenues, parking is generally regulated by alternate side parking regulations between 1:00 and 3:00 PM.

Warburton Avenue/ Trevor Park/ Connections to Old Croton Aqueduct Trail (Segment 29):

Parking along the Warburton Avenue corridor varies. Between JFK Memorial Drive and Arthur Street, parking is regulated by alternate side parking prohibitions occurring between 1:00 and 3:00 PM. Parking is prohibited at all times between Arthur Street and the MTA Metro-North Railroad Greystone Station.

The appendix contains a spreadsheet displaying parking regulations for the segments described above.

### 3. Vehicle and Pedestrian Counts

An existing traffic data inventory was developed as part of Task 4, identifying all locations within the study area for which recent traffic data are available. Traffic, bicycle, and accident data were gathered from various sources including NYSDOT, NYCDOT, Crashstats.org,, NYMTC Bicycle Data Collection Program, recent environmental impact studies, and data previously collected by the consultant team. Existing traffic data for downtown Yonkers were obtained primarily from the *River Park Center, Cacace Center, Larkin Plaza and Palisades Point in the City of Yonkers (SFC)* (2008) and *Yonkers Alexander Street Master Plan (2008) EISs* while Bronx and Manhattan data were obtained from recent traffic counts or other available sources such as the *NYCDOT's Manhattan River Crossings 2006* report. In cases where there was a data overlap (more than one source of traffic volume data for a particular location), the more recent data were used. All existing traffic data, along with a traffic inventory summary table and location map, have been included in the Appendix to the *Hudson River Valley Greenway Link Task #4 Report*.

Once the corridors to be studied in Task 6 were chosen, traffic data “gaps” - critical locations for which no existing traffic data are available - were identified, and original traffic data were gathered by the Hudson River Valley Greenway Link project team. A substantial amount of detailed traffic data was available for all Yonkers corridors (except Hawthorne Avenue) while little was available for the Bronx and Manhattan. The traffic count program therefore concentrated mostly on the Bronx and Manhattan in order to fill these data “gaps”.

All traffic and pedestrian data were collected on a typical weekday (Tuesday, Wednesday, or Thursday) during AM and PM peak periods (7 – 9 AM and 4:30 – 6:30 PM). Below is a summary of existing weekday peak hour traffic volumes obtained for key roadways in the Task 6 study corridors.

#### **Manhattan**

##### Broadway (Segment 3):

###### *Traffic Volumes*

At the Broadway Bridge, traffic volumes are approximately 800 vehicles per hour (vph) in the northbound direction and 1,300 vph in the southbound direction during the AM peak hour. During the PM peak hour, traffic volumes are approximately 1,300 vph in the northbound direction and 1,100 vph in the southbound direction<sup>1</sup>.

###### *Broadway Bridge Western Walkway (driveway and pedestrian counts)*

Pedestrian volumes along the western walkway of the Broadway Bridge were approximately 150 pedestrians per hour during AM and PM peak hours. There is a curb cut along the western sidewalk just south of the Broadway Bridge which is a driveway entrance/exit for the New York Presbyterian Hospital Allen Pavilion. There are approximately 50 to 75 vehicles turning in and 50 to 75 vehicles turning out of the driveway during AM and PM peak hours<sup>2</sup>.

## **Bronx**

### Broadway (Segment 7):

Along Broadway between 242<sup>nd</sup> Street and the Henry Hudson Parkway ramps, traffic volumes are 600 to 700 vph in the northbound direction and 550 to 800 vph in the southbound direction during the AM peak hour. During the PM peak hour traffic volumes are 650 to 850 vph in the northbound direction and 550 to 600 vph in the southbound direction<sup>2</sup>. North of the Henry Hudson Parkway ramps, AM peak hour traffic volumes are approximately 800 vph in the northbound direction and 1,450 vph in the southbound direction. During the PM peak hour, traffic volumes are approximately 900 vph and 1,050 vph, in the northbound and southbound directions, respectively<sup>2</sup>.

### Henry Hudson Parkway West (Segment 12):

Henry Hudson Parkway West is the southbound service road for the Henry Hudson Parkway. Traffic volumes on Henry Hudson Parkway West are approximately 725 vph north of 239<sup>th</sup> Street and 550 vph south of 239<sup>th</sup> Street during the AM peak hour. During the PM peak hour, these volumes decrease to 650 vph north of 239<sup>th</sup> Street and 300 vph south of 239<sup>th</sup> Street<sup>2</sup>.

At its southern terminus (at Kappock Street), Henry Hudson Parkway West has traffic volumes of 100 vph in the AM peak hour and 200 vph in the PM peak hour<sup>2</sup>.

### Riverdale Avenue (Segment 14):

In the Bronx just north of 254<sup>th</sup> Street, traffic volumes on Riverdale Avenue are 650 to 700 vph in the northbound direction and 600 to 675 vph in the southbound direction during both peak hours<sup>2</sup>.

Near the Bronx-Yonkers border (at 261<sup>st</sup> Street), traffic volumes are approximately 350 vph in the northbound direction and 450 vph in the southbound direction during both peak hours<sup>2</sup>.

### Palisade Avenue (Segments 20, 21):

Traffic volumes on Palisade Avenue range between approximately 50 and 150 vph per direction during the AM and PM peak hours<sup>2</sup>.

### Kappock Street (Segment 11):

Traffic volumes on Kappock Street west of Independence Avenue are 25 to 75 vph per direction during the AM and PM peak hours. East of Independence Avenue, traffic volumes on Kappock Street range from 100 to 200 vph<sup>2</sup>.

### 261<sup>st</sup> Street (Segment 15):

Traffic volumes along 261<sup>st</sup> Street range from 100 to 150 vph per direction during both peak hours<sup>2</sup>.

## **Yonkers**

### Riverdale Avenue (Segment 25):

In south Yonkers near Valentine Lane, AM and PM peak hour traffic volumes along Riverdale Avenue range from 350 to 500 vph per direction. Further north, near Prospect Street/Nepperhan Avenue, traffic volumes increase to 600 to 850 vph per direction during peak hours. In Downtown Yonkers (between Prospect and Main Streets), traffic volumes are 500 to 700 vph per direction

during the AM peak hour. In the PM peak hour, traffic volumes are 300 to 400 vph in the northbound direction and 650 to 750 vph in the southbound direction<sup>3</sup>.

Main Street (Segment 25)

On Main Street between Riverdale and Buena Vista Avenues, traffic volumes are 100 to 200 vph in the westbound direction and 50 to 100 vph in the eastbound direction during AM and PM peak hours<sup>3</sup>.

Hawthorne Avenue (Segment 31):

Hawthorne Avenue operates with two-way traffic south of Vark Street. Traffic volumes along this section during the AM peak hour are approximately 300 to 350 vph in the northbound direction and 150 to 200 vph in the southbound direction. During the PM peak hour, traffic volumes are 100 to 150 vph per direction<sup>2</sup>.

Buena Vista (Segment 32):

Traffic volumes on Buena Vista Street are approximately 200 to 400 vph per direction north of Prospect Street and 100 to 250 vph south of Prospect Street during peak hours<sup>3</sup>.

Alexander Street (Segment 34):

Along Alexander Street, traffic volumes are 50 to 150 vph per direction during peak hours<sup>4</sup>.

Ravine Avenue/ Woodworth Avenue Couplet (Segment 35):

Traffic volumes along the one-way couplet of Ravine and Woodworth Avenues are 50 to 125 vph per direction during peak hours<sup>4</sup>.

Warburton Avenue (Segment 29):

Warburton Avenue has traffic volumes that range from 200 to 300 vph in the northbound direction during the AM peak hour and 275 to 400 vph during the PM peak hour. In the southbound direction, traffic volumes are 275 to 400 vph during AM and PM peak hours<sup>4</sup>.

Valentine Lane (Segment 30):

Along Valentine Lane, traffic volumes are 125 to 200 vph per direction during the AM and PM peak hours<sup>3</sup>.

Lamartine Avenue (Segment 26):

Traffic volumes on Lamartine Avenue are 50 to 100 vph per direction during both peak hours<sup>4</sup>.

Figures 1a and 1b show the location of original traffic data collected for this project.

The appendix of this technical memorandum contains back-up data sheets, upon which the above summary was based, for existing data and data collected for this project.



The following notes identify the source of traffic volume data summarized above.

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<sup>1</sup> *2006 Manhattan River Crossings*, New York City Department of Transportation, April 2008.

<sup>2</sup> Traffic counts collected by Eng-Wong, Taub & Associates, September and October 2009.

<sup>3</sup> *River Park Center, Cacace Center, Larkin Plaza and Palisades Point in the City of Yonkers Draft Environmental Impact Statement*, Struever Fidelco Cappelli LLC (SFC), March 2008.

<sup>4</sup> *Yonkers Alexander Street Master Plan Final Generic Environmental Impact Statement*, AKRF, October 2008.

Figure 1a - HRVGL Traffic Count Locations (Manhattan/Bronx)

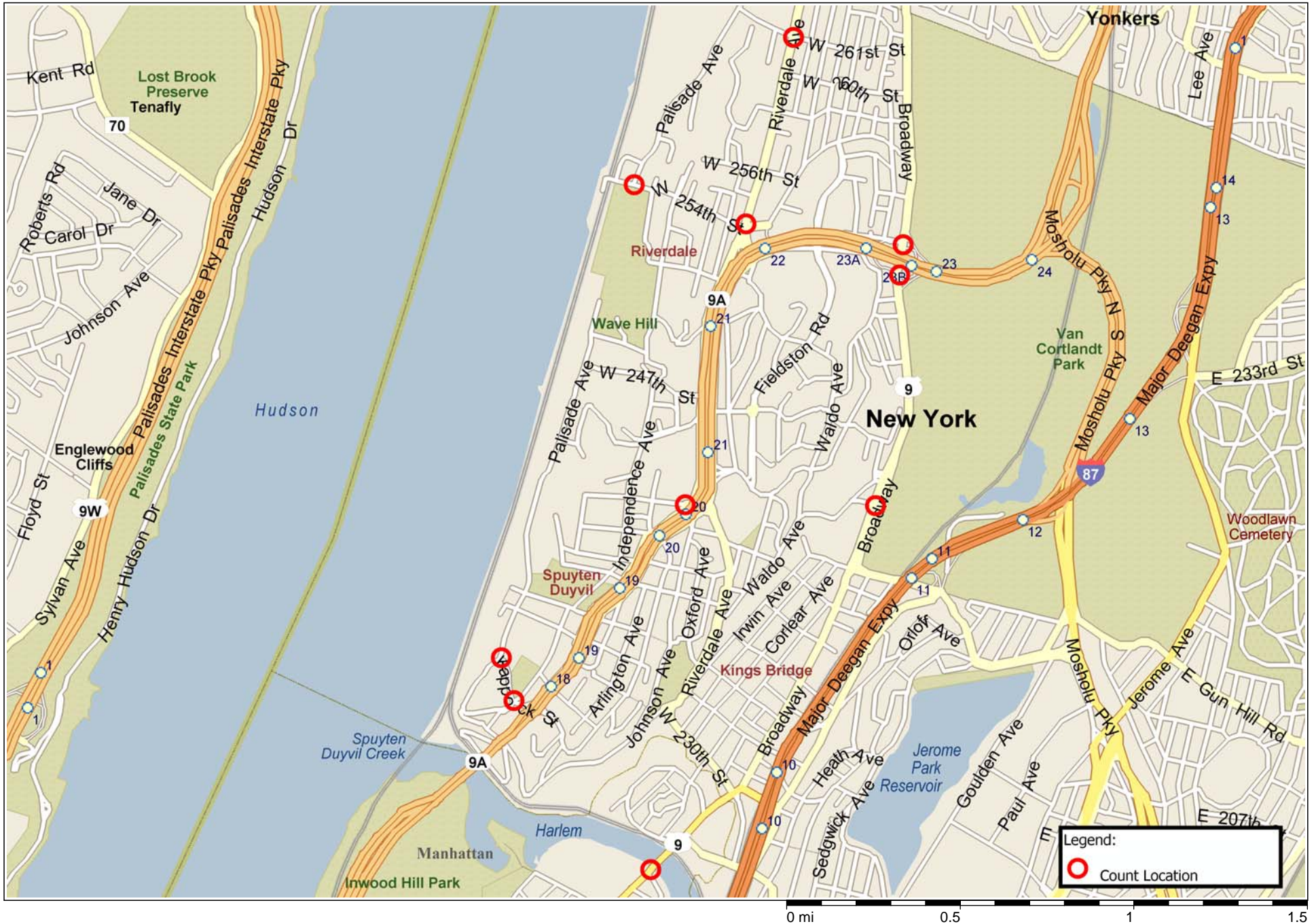
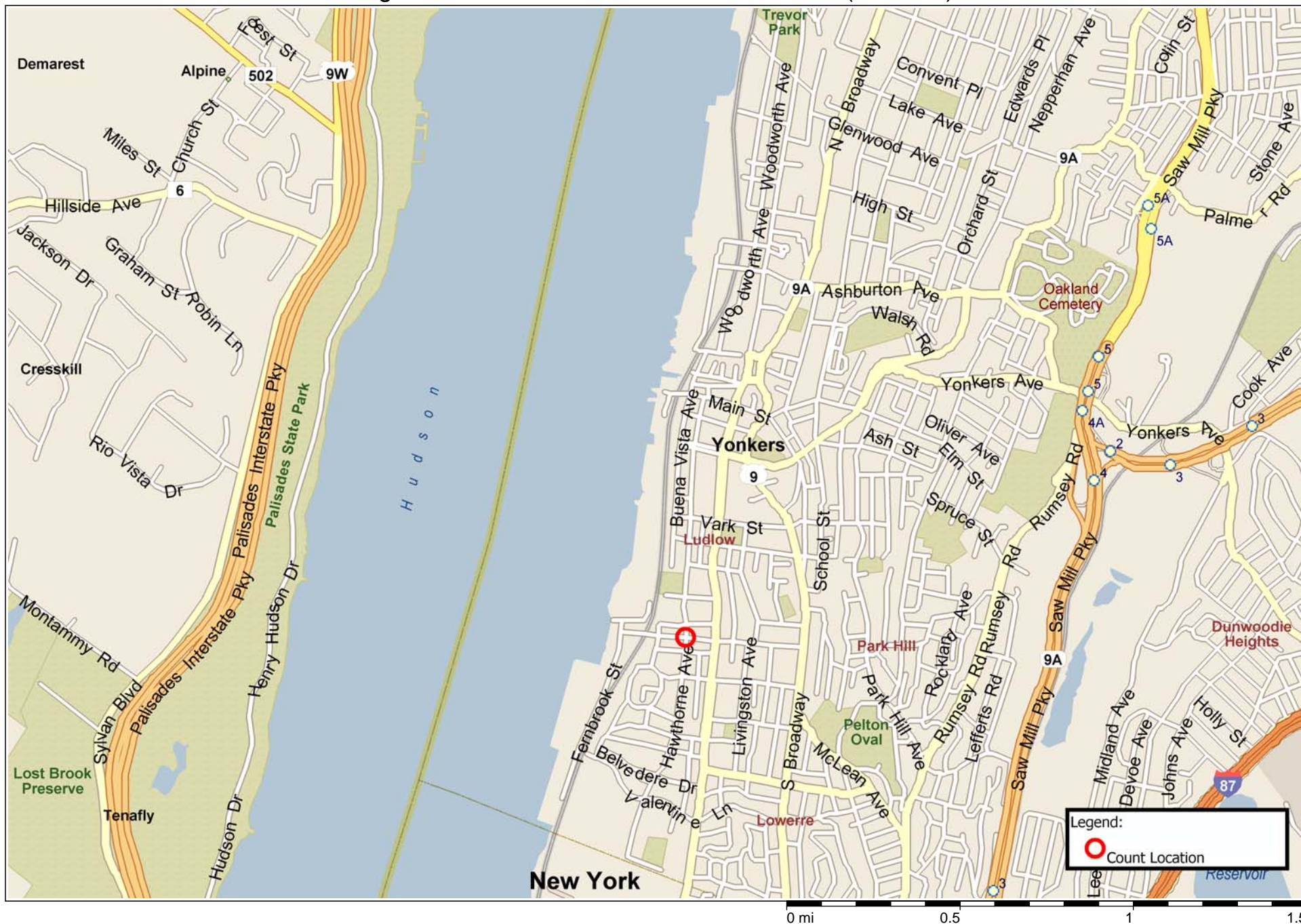


Figure 1b - HRVGL Traffic Count Locations (Yonkers)



#### **4. Natural Resources and Coastal Zone Boundaries**

Natural resources in the project area are being documented based upon available information obtained primarily from applicable resource agencies and secondarily from site visits to the corridors being analyzed.

Thus far it has been determined that the study area is located in a densely developed urban environment that supports significant natural resources primarily along the Hudson River waterfront and within select interior parklands. Several sources are being reviewed to determine significant natural resources: The New York State Department of State, Division of Coastal Resources (NYSDOS) Coastal Zone Boundary Map; New York State Coastal Atlas; New York State Department of Environmental Conservation (NYSDEC) 1974 Tidal Wetlands Inventory; Federal Emergency Management Agency (FEMA) Zone Maps; and the National Wetlands Inventory (NWI).

Based upon review of the above mentioned sources, the study area's proximity to the New York State Coastal Zone, FEMA- designated 100-year flood plain, and New York State Tidal Wetlands will be determined. This information will help identify future permitting and mitigation requirements should a greenway corridor under consideration fall within these boundaries.

Figures 2 and 3 display the Coastal Zone, Wetland and flood plain boundaries in the study area.

#### **5. Historic and Cultural Resources**

Historic and Cultural Resources such as landmarks, districts or other standing resources (including locally significant resources) will be documented based on information gathered from available studies and reports from local agencies and historical societies. Properties already listed or determined eligible for landmark status, as well as those of local significance will be described. New York State Historic Preservation Office (NYSHPO) and New York City Landmarks Preservation Commission (NYCLPC) will be contacted as appropriate, for more detailed information about sites near a selected corridor.

Based on a review of the New York State Office of Park, Recreation and Historic Preservation (NYSOPRHP) and the New York City Landmark Preservation Commission (NYCLPC) GIS databases, designated historic properties were identified within the study area. Within the project study area there are 37 historic resources of local, and national significance that include individual structures (churches, homes, etc.), locally landmarked lampposts in Manhattan and the Bronx, and expansive historic districts (e.g., Fieldston and Riverdale) in the Bronx. Consultation is currently underway with the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) to determine whether there are other properties of note that should be considered in this environmental screening.

Figures 4 and 5 display the historic and cultural resources in the study area.

**FIGURE 2: NATURAL RESOURCES IN MANHATTAN AND THE BRONX**

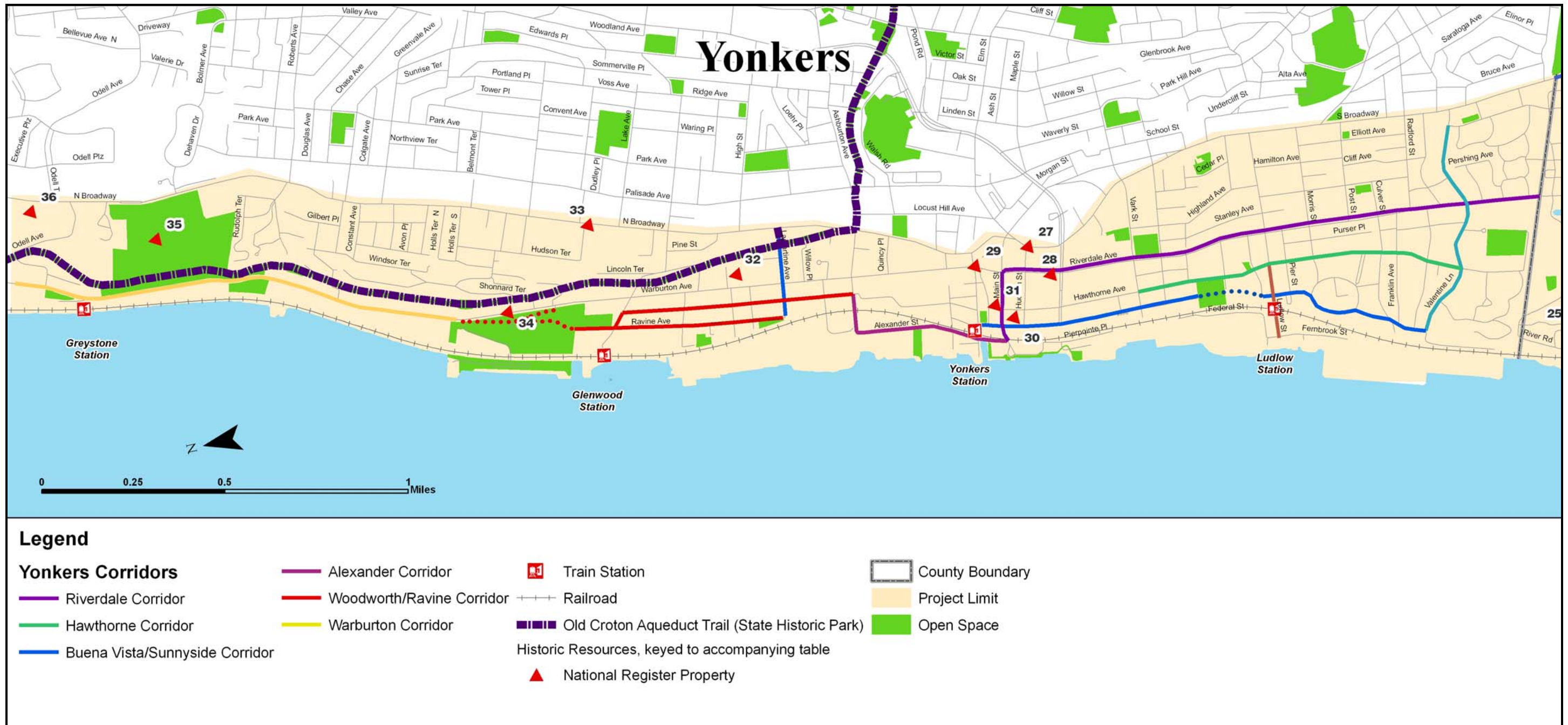




**FIGURE 4: HISTORIC RESOURCES FOR MANHATTAN AND THE BRONX**



**FIGURE 5: HISTORIC RESOURCES FOR YONKERS**





## 6. Hazardous Materials

Known hazardous sites will be documented and summarized based on a literature search of the corridors being analyzed. According to data retrieved from the US Environmental Protection Agency (EPA) and NYSDEC, several sites within the study area were identified as handling regulated hazardous materials. Many of the *Resource Conservation and Recovery Sites (RCRA)* have been identified as dry cleaners and auto-related sites that do not pose an immediate threat to the environment or public health. There are seven contaminated site on or near the Yonkers waterfront that are in the process of being remediated. No contaminated sites have been identified in the Bronx or Manhattan portions of the study area.

See Figure 6 for known contaminated sites in Yonkers.

## 7. Neighborhood Demographics

This section provides an overview of the socioeconomic characteristics of the population in the project study area. The study area's general socioeconomic conditions are based on 2000 US Census data, New York City Community District Profiles, and Westchester County: City of Yonkers data. These data are provided since development of the alignments(s) must consider potential impacts of the project on sensitive populations.

### Manhattan

The project study area is located within Manhattan Community District 12. The Manhattan portion of the study area has a total population of 23,172 residents, comprised of 24.7 percent White/non-Hispanic, 12.9 percent African American, 2.5 percent Asian, and 57.4 percent Hispanic Origin (any race). The median household income in 2000 was \$35,839, and approximately 21.7 percent of families were living below the poverty level. The highest proportion of families below the poverty level was reported in Census Tract 309. The median age of residents is 33.4 years and approximately 89.4 percent of residences are renter-occupied.

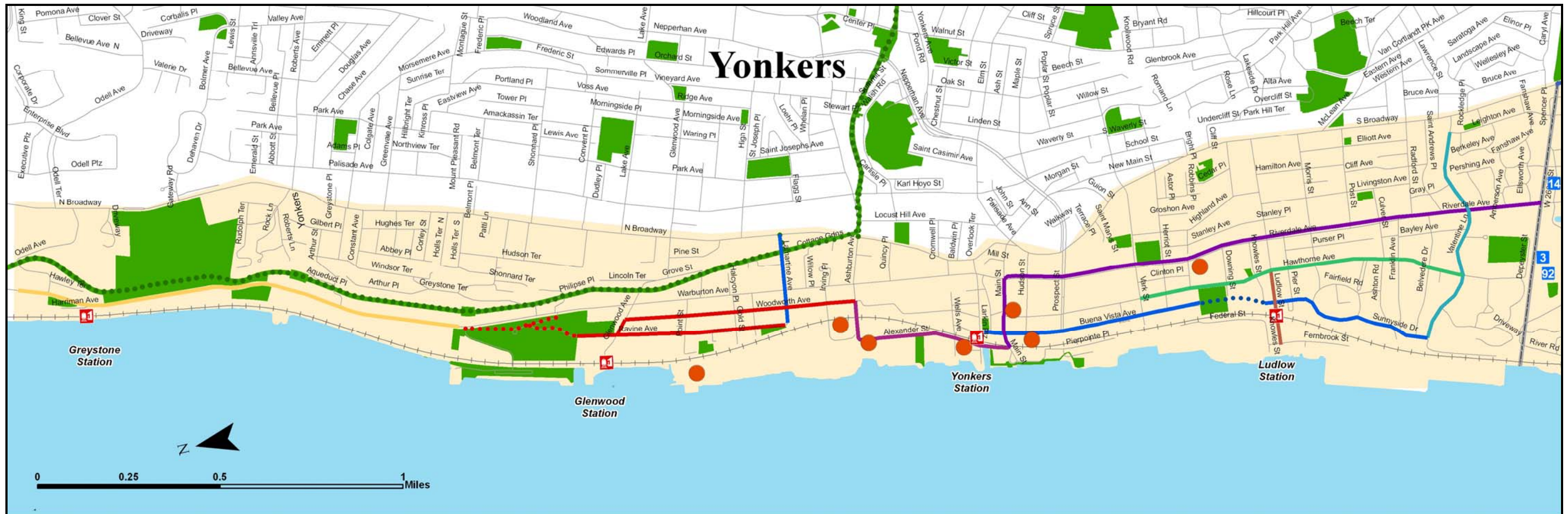
### Bronx

The Bronx portion of the study area is located in Bronx Community District 8 and falls within 18 Census Tracts. According to the 2000 Census, this area had a total population of 55,292 comprised of 66.7 percent White/non-Hispanic, 6.9 percent African American, 5.4 percent Asian, and 18.3 percent Hispanic. The median household income was \$53,317 and approximately 5.9 percent of families were living below the poverty level. The median age for residents in the study area is 43.1 years and approximately 65.8 percent of residential units are renter-occupied.

### Yonkers






According to the 2000 Census, this area had a combined population of 48,382, comprised of 32.4 percent White, 34.1 percent Black, 3.4 percent Asian, and 41.8 percent Hispanic (any race). The median household income was \$28,546. The median age of residents is 31 years and 79.5 percent of housing units are renter-occupied. Compared to the Manhattan and Bronx portions of the study

**FIGURE 6: CONTAMINATED SITES - YONKERS**



**Legend**

**Yonkers Corridors**

- |   |                                |   |                            |   |                 |
|---|--------------------------------|---|----------------------------|---|-----------------|
|  | Alexander Corridor             |  | Train Station              |  | County Boundary |
|  | Riverdale Corridor             |  | Brownfield Cleanup Program |  | Project Limit   |
|  | Hawthorne Corridor             |  | Old Croton Aqueduct Trail  |  | Open Space      |
|  | Buena Vista/Sunnyside Corridor |  | Railroad                   |   |                 |

area, the Yonkers portion of the study area has the highest percentage of total minority population and the lowest median household income.

The Task 6 report will describe and display demographic data at the census tract level.

## **8. Land Use and Zoning**

The existing land use defining the study area has been identified. Zoning for the Bronx and Manhattan have also been identified. Zoning for the Yonkers portion of the study area is currently being researched. Proposed development plans and projects in the surrounding communities that could potentially affect or be linked to the greenway have also been identified based on information gathered from relevant agencies and available studies and reports. Most notably the SFC Project and the Alexander Street Development Project, both located in Yonkers, are significant development projects that, if implemented, will significantly change the landscape of the study area on Yonkers. These projects have been summarized as part of the Task 4 deliverable and will be taken into consideration as the corridor analysis continues.

Data for Manhattan and the Bronx come from the City of New York's MapPLUTO file, published in June 2009. The MapPLUTO dataset represents a compilation of data from various government agencies throughout the City of New York, represented in a geographic dataset. The underlying geography is derived from the Tax Lot Polygon feature class which is part of the Department of Finance's Digital Tax Map(DTM). Information for the City of Yonkers was extracted from tax parcel data maintained by the City's Department of Public Works, also represented as a geographic dataset, and is current as of August 2009. The data for the City of Yonkers was edited for completeness, consistency, and currency. Parcel land use categories were derived from land use codes within each of the municipal data sets.

See Figures 7 and 8 for existing land use characteristics in the study area.

## **9. Visual Environment and Scenic Views**

Site visits were conducted to identify locations of special views, typically of the Hudson River or some other significant natural or human-made entity. Significant views from along each corridor were photographed and documented. In addition to documentation of significant views, each corridor has also been photographed to document its existing condition and visual character. Samples of these photos are contained in the appendix

FIGURE 7: LAND USE IN MANHATTAN AND THE BRONX

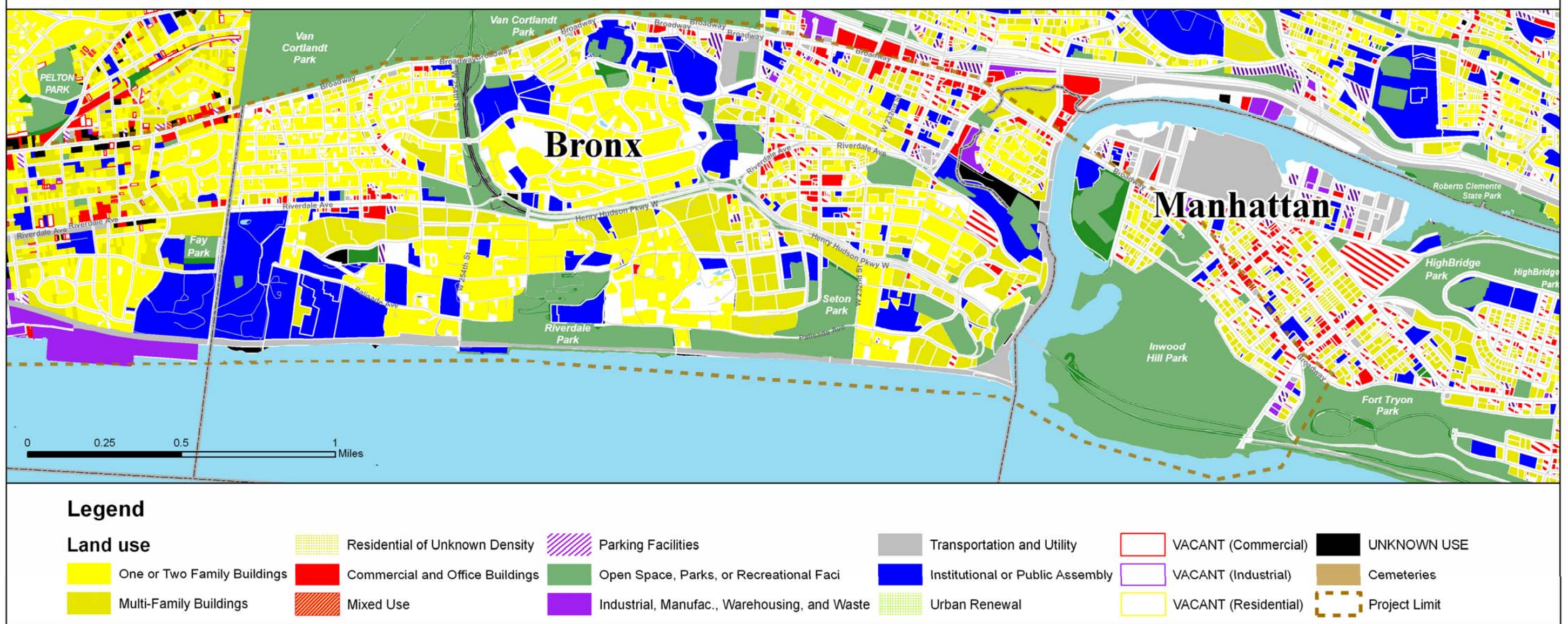
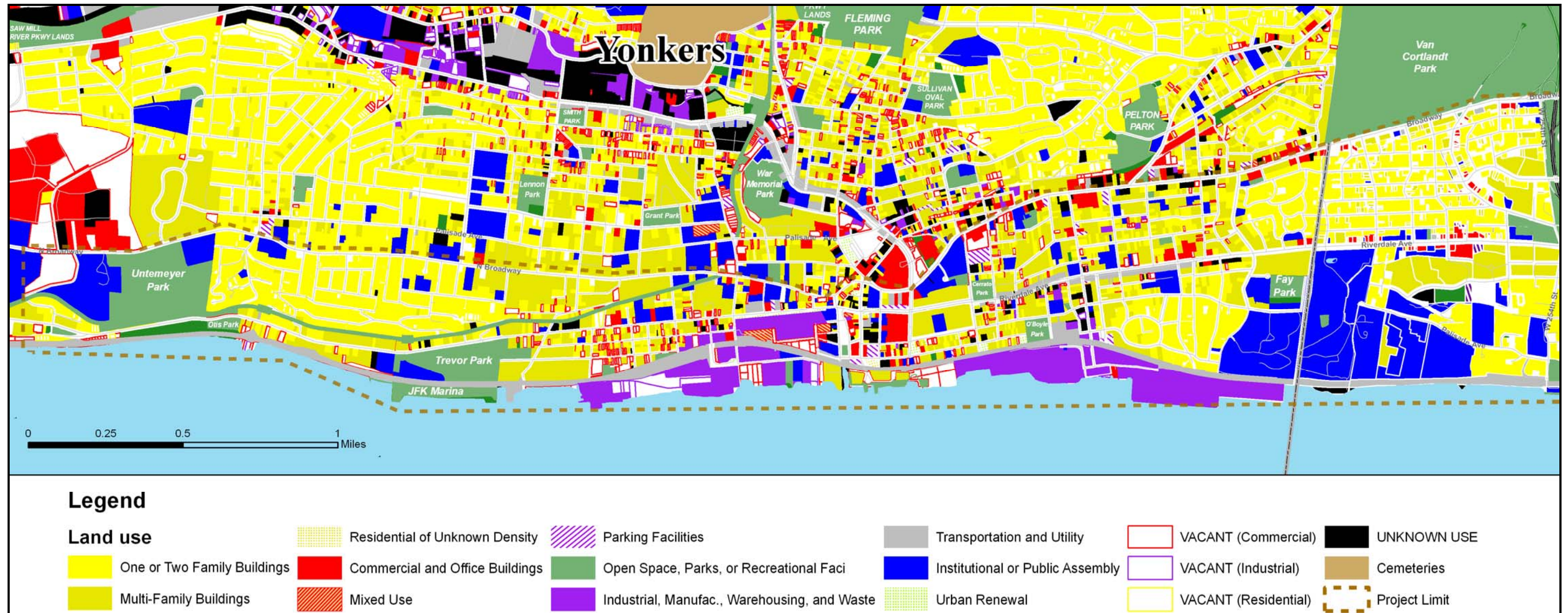


FIGURE 8: LAND USE IN YONKERS



## 10. List of Other Existing Data Obtained for the Hudson River Valley Greenway Link Project

In addition to the data and information summarized in this technical memorandum, the project team gathered other existing data from a variety of sources. Other data obtained as part of this effort include the following:

- Continuous vehicle counts along Broadway in the Bronx from NYSDOT
- AADT's at various locations from NYSDOT
- Bicycle crash data from CrashStat.org
- Bicycle and pedestrian counts for the Bronx and Manhattan from NYMTC and NYCDCP
- Truck Routes within the study area from NYCDOT
- Bus Routes and other transit in or near the study area from MTA and Bee Line Bus Company
- Location of Historic Districts within the project study areas from NYC Landmarks Preservation Commission
- Environmental Impact Statements for the SFC Project and the Alexander Street Development Project, both in Yonkers
- Case studies of existing rails with trails around the country
- Rail service volumes and frequency along the Empire Corridor within the project study area
- Inventory of parkland and other open space within the project study area
- Inventory of significant trip attractors within and near the project study area

# **APPENDIX**

## **On Street Parking Regulations**



**HUDSON RIVER VALLEY GREENWAY LINK  
ON-STREET PARKING REGULATION INVENTORY**

CORRIDOR	CURB	PARKING REGULATIONS
<u>Seaman Avenue/ Broadway (Segment 1)</u>		
Dyckman St between dead end and Seaman Avenue	<b>North</b> <b>South</b>	No Parking 9 AM - 10:30 AM Monday and Thursday; 2 Hr Parking 9 AM - 7 PM Except Sunday (Partial Block) No Parking 9 AM - 10:30 AM Tuesday and Friday
Seaman Avenue between Dyckman Street and Isham Street	<b>East</b> <b>West</b>	No Parking 9 AM - 10:30 AM Tuesday and Friday No Parking 9 AM - 10:30 AM Monday and Thursday
Seaman Avenue between Isham Street and 218th Street	<b>East</b> <b>West</b>	No Parking 11 AM - 12:30 PM Tuesday and Friday No Parking 11 AM - 12:30 PM Monday and Thursday
218th Street between Seaman Avenue and Broadway	<b>North</b> <b>South</b>	No Parking 11 AM - 12:30 PM Monday and Thursday No Parking 11 AM - 12:30 PM Tuesday and Friday
Broadway between 218th Street and 220th Street	<b>East</b> <b>West</b>	No Parking 11 AM - 12:30 PM Tuesday and Friday No Parking 11 AM - 12:30 PM Monday and Thursday
<u>Broadway (Segment 3)</u>		
Broadway between 220th Street and 225th Street	<b>East</b> <b>West</b>	No Parking Anytime No Parking Anytime
<u>Kingsbridge / Terrace View / Marble Hill Avenues Loop (Segments 8/8a)</u>		
Kingsbridge, Terrace View, and Marble Hill Avenues between 225th Street and 230th Street	<b>East</b> <b>West</b>	No Parking 8:30 AM - 10 AM Tuesday and Friday No Parking 8:30 AM - 10 AM Monday and Thursday
<u>230th Street (Segments 8/8a)</u>		
230th Street between Tibbett Avenue and Corlear Avenue	<b>North</b> <b>South</b>	No Parking Anytime No Parking Anytime
230th Street between Corlear Avenue and Kingsbridge Avenue	<b>North</b> <b>South</b>	No Parking 8:30 AM - 10 AM Tuesday and Friday No Parking 8:30 AM - 10 AM Monday and Thursday
<u>Tibbett (Segments 8/8a)</u>		
Tibbett Avenue between 230th Street and 238th Street	<b>East</b> <b>West</b>	No Parking 9:30 AM - 11 AM Tuesday and Friday No Parking 9:30 AM - 11 AM Monday and Thursday
Tibbett Avenue between 238th Street and 240th Street	<b>East</b> <b>West</b>	No Parking 7 AM - 8 AM Monday and Friday; 6 Hr Parking 8 AM - 10 PM Monday through Friday No Parking 9:30 AM - 11 AM Monday and Thursday
<u>Broadway (Segments 7)</u>		
Broadway between 242nd Street and Lakeview Place	<b>East</b> <b>West</b>	No Regulations No Regulations
Broadway between Lakeview Place and 254th Street	<b>East</b> <b>West</b>	No Parking Anytime No Parking 8 AM - 9:30 AM Tuesday and Friday
Broadway between 254th Street and 261st Street	<b>East</b> <b>West</b>	No Parking 8 AM - 9:30 AM Monday and Thursday No Parking 8 AM - 9:30 AM Tuesday and Friday
242nd Street / 208th Parkway between Broadway and Waldo Avenue	<b>North</b> <b>South</b>	No Parking Anytime No Parking 7:30 AM - 8 AM Monday, Wednesday and Friday

**HUDSON RIVER VALLEY GREENWAY LINK  
ON-STREET PARKING REGULATION INVENTORY**

CORRIDOR	CURB	PARKING REGULATIONS
<u>Henry Hudson Parkway Service Roads (Segments 12, 14)</u>		
Henry Hudson Parkway East between 227th Street and 254th Street	East West	No Parking 11:30 AM - 1 PM Tuesday and Friday No Parking Anytime
Henry Hudson Parkway West between 227th Street and 254th Street	East West	No Parking Anytime No Parking 11:30 AM - 1 PM Monday and Thursday
Riverdale Avenue between 254th Street and 259th Street	East West	No Regulations No Regulations
Riverdale Avenue between 259th Street and 261st Street	East West	No Parking 8:30 AM - 9 AM Monday, Tuesday, Thursday and Friday; 1 Hr Parking 9 AM - 7 PM Except Sunday No Parking 8:30 AM - 9 AM Monday, Tuesday, Thursday and Friday; 1 Hr Parking 9 AM - 7 PM Except Sunday
<u>261st Street (Segment 15)</u>		
261st Street between Riverdale Avenue and Liebig Avenue	North South	1 Hr. Parking 9 AM - 7 PM Except Sunday 1 Hr. Parking 9 AM - 7 PM Except Sunday
261st Street between Liebig Avenue and Broadway	North South	No Regulations No Regulations
261st Street between Palisade Avenue and Riverdale Avenue	North South	No Parking Anytime No Parking Anytime
<u>Palisade Avenue (Segments 20, 20a, and 21)</u>		
Independence Avenue between Kappock Street and Palisade Avenue	North South	No Parking 8 AM - 6 PM Monday, Thursday and Friday No Parking 11:30 AM - 1 PM Tuesday and Friday
Palisade Avenue between Independence Avenue and Kappock Street	East West	No Parking Anytime No Parking 11:30 AM - 1 PM Tuesday and Friday
Palisade Avenue between Kappock Street and Spaulding Lane	East West	No Parking Anytime No Parking Anytime
Spaulding Lane between Palisade Avenue and Independence Avenue	North South	No Parking Anytime No Parking Anytime
Independence Avenue between Spaulding Lane and 254th Street	East West	No Parking Anytime No Parking Anytime
Palisade Avenue between 254th Street and 261st Street	East West	No Parking Anytime No Parking Anytime
<u>"East-West Connector" - Kappock Street/Johnson Avenue/230th Street (Segment 11)</u>		
230th Street between Tibbett Avenue and Riverdale Avenue	North South	No Parking Anytime No Parking Anytime
Johnson Avenue between 230th Street and Kappock Street	East West	No Parking Anytime No Parking 8 AM - 9:30 AM Monday and Thursday
Kappock Street between Johnson Avenue and Netherland Avenue	East West	No Parking 8 AM - 9:30 AM Monday and Thursday No Parking 8 AM - 9:30 AM Tuesday and Friday
Kappock Street between Netherland Avenue and Independence Avenue	North South	No Parking Anytime No Parking Anytime
Kappock Street between Independence Street and Palisade Avenue	North South	No Parking 11:30 AM - 1 PM Monday and Thursday No Parking Anytime

**HUDSON RIVER VALLEY GREENWAY LINK  
ON-STREET PARKING REGULATION INVENTORY**

CORRIDOR	CURB	PARKING REGULATIONS
<u><i>Fieldston Road/Waldo Avenue (Segments 9, 10, 10a)</i></u>		
Waldo Avenue between 208th Parkway and Fieldston Road	East West	<i>No Parking Private Streets; Permit Parking Only (between 246th Street and College Road)</i> <i>No Parking Private Streets</i>
Waldo Avenue/Manhattan College Parkway between 208th Parkway and Broadway	North South	<i>No Parking Anytime</i> <i>No Parking Anytime (Partial Block); 1 Hour Parking 8 AM - 6 PM, Except Sunday; No Parking 7:30 AM - 8:00 AM, Monday, Wednesday, and Friday (Partial Block)</i>
208th Parkway between Fieldston Road and Manhattan College Parkway	North South	<i>No Parking Anytime</i> <i>No Parking Anytime</i>
Fieldston Road between 208th Parkway and 245th Street	East West	<i>No Parking Anytime</i> <i>No Parking Anytime</i>
Fieldston Road between 245th Street and 250th Street	East West	<i>No Parking Private Streets</i> <i>No Parking Private Streets</i>
Fieldston Road between 250th Street and 253rd Street	East West	<i>No Regulations; No Parking, Stopping, Standing Anytime; No Parking Private Streets</i> <i>No Regulations; No Parking, Stopping, Standing Anytime; No Parking Private Streets</i>
Fieldston Road between 253rd Street and 261st Street	East West	<i>No regulations</i> <i>No regulations</i>
<u><i>Riverdale Avenue - Yonkers (Segment 25)</i></u>		
Riverdale Avenue between 263rd Street and Valentine Lane	East West	<i>No Parking 8 AM - 12 PM Monday and Friday</i> <i>No Parking 8 AM - 12 PM Tuesday and Thursday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i>
Riverdale Avenue between Valentine Lane and Ashton Road	East West	<i>No Parking 8 AM - 12 PM Monday and Friday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i> <i>No Parking 8 AM - 12 PM Tuesday and Thursday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i>
Riverdale Avenue between Ashton Road and Morris Street	East West	<i>No Parking 8 AM - 12 PM Monday and Friday</i> <i>No Parking 8 AM - 12 PM Tuesday and Thursday (Construction)</i>
Riverdale Avenue between Morris Street and Ludlow Street	East West	<i>No Parking 8 AM - 12 PM Monday and Friday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i> <i>No Parking 8 AM - 12 PM Tuesday and Thursday</i>
Riverdale Avenue between Ludlow Street and Downing Street	East West	<i>No Parking Anytime</i> <i>No Parking 1 AM - 7 AM Tuesday and Friday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i>
Riverdale Avenue between Downing Street and Vark Street	East West	<i>No Parking 1 AM - 7 AM Monday and Thursday</i> <i>No Parking 1 AM - 7 AM Tuesday and Friday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i>
Riverdale Avenue between Vark Street and Prospect Street	East West	<i>No Parking 1 AM - 7 AM Monday and Thursday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i> <i>No Parking 1 AM - 7 AM Tuesday and Thursday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i>
Riverdale Avenue between Prospect Street and Hudson Street	East West	<i>No Parking Anytime</i> <i>No Parking Anytime</i>
Riverdale Avenue between Hudson Street and Main Street	East West	<i>No Parking Anytime</i> <i>No Parking 1 AM - 7 AM Tuesday and Thursday</i>
Main Street between Riverdale Avenue and Dead End	North South	<i>No Parking 1 AM - 7 AM Monday, Wednesday, and Friday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i> <i>No Parking 1 AM - 7 AM Tuesday, Thursday, and Saturday; 2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday</i>
<u><i>Hawthorne Avenue (Segment 31)</i></u>		
Hawthorne Avenue between Valentine Lane and Knowles Street	East West	<i>No Parking 9 AM - 11 AM Friday</i> <i>No Parking 9 AM - 11 AM Tuesday</i>
Hawthorne Avenue between Knowles Street and Herriot Street	East West	<i>No Parking 9 AM - 11 AM Friday</i> <i>No Parking Anytime</i>
Hawthorne Avenue between Herriot Street and Vark Street	East West	<i>No Parking Except 9 AM - 11 AM Tuesday</i> <i>No Parking 9 AM - 11 AM Tuesday</i>

**HUDSON RIVER VALLEY GREENWAY LINK  
ON-STREET PARKING REGULATION INVENTORY**

CORRIDOR	CURB	PARKING REGULATIONS
<u><b>Buena Vista / Sunnyside (Segments 32, 32a, and 36)</b></u>		
Sunnyside Drive between Valentine Lane and Pier Street	East West	No Parking 1 PM - 3 PM Thursday No Parking 1 PM - 3 PM Monday
Sunnyside Drive between Pier Street and Ludlow Street	East West	No Parking Anytime No Parking Anytime
Sunnyside Drive between Ludlow Street and Knowles Street	East West	No Parking 1 AM - 7 AM Tuesday and Thursday No Parking 1 AM - 7 AM Monday and Friday
Buena Vista Avenue between Herriot Street and Prospect Street	East West	No Parking 9 AM - 11 AM Thursday No Parking 9 AM - 11 AM Monday
Buena Vista Avenue between Prospect Street and Main Street	East West	No Parking 9 AM - 11 AM Thursday No Parking Anytime
Buena Vista Avenue between Main Street and Wells Avenue	East West	2 Hr. Parking 9 AM - 6 PM Monday, Thursday, and Saturday 1 Hr. Parking 9 AM - 6 PM Monday through Saturday
<u><b>Alexander Street (Segment 34)</b></u>		
Alexander Street between Wells Avenue and Ashburton Avenue	East West	12 Hr. Parking 6 AM - 6 PM Monday through Saturday (partial block); No Parking Except Police Vehicles (partial block) No Parking Anytime
Alexander Street between Ashburton Avenue and Babcock Pl	East West	No Parking Anytime No Parking Anytime
Babcock Place between Alexander St and Woodworth Pl	North South	No Parking Anytime No Parking Anytime
<u><b>Ravine / Woodworth Couplet (Segment 35)</b></u>		
Woodworth Avenue between Babcock Place and Point Street	East West	No Parking 1 PM - 3 PM Friday No Parking Except 1 PM - 3 PM Friday
Woodworth Avenue between Point Street and Glenwood Avenue	East West	No Parking 1 PM - 3 PM Friday No Parking 1 PM - 3 PM Tuesday
Ravine Avenue between Lamartine Avenue and Trevor Park	East West	No Parking 1 PM - 3 PM Tuesday No Parking 1 PM - 3 PM Friday
<u><b>Trevor Park / Warburton Avenue / Connection to OCA (Segment 29)</b></u>		
Warburton Avenue between JFK Memorial Drive and Arthur Street	East West	No Parking 1 PM - 3 PM Friday No Parking 1 PM - 3 PM Tuesday
Warburton Avenue between Arthur Street and Greystone Train Station	East West	No Parking Anytime No Parking Anytime
<u><b>Valentine Lane (Segment 30)</b></u>		
Valentine Lane between Sunnyside Drive and Hawthorne Avenue	North South	No Parking Anytime No Parking Anytime
Valentine Lane between Hawthorne Avenue and Broadway	North South	No Parking 1 PM - 3 PM Monday No Parking 1 PM - 3 PM Thursday
<u><b>Lamartine Avenue (Segment 26)</b></u>		
Lamartine Avenue between Ravine Ave and North Broadway	North South	No Parking 1 PM - 3 PM Monday No Parking 9 AM - 11 AM Thursday

## **Traffic Data Back-up**

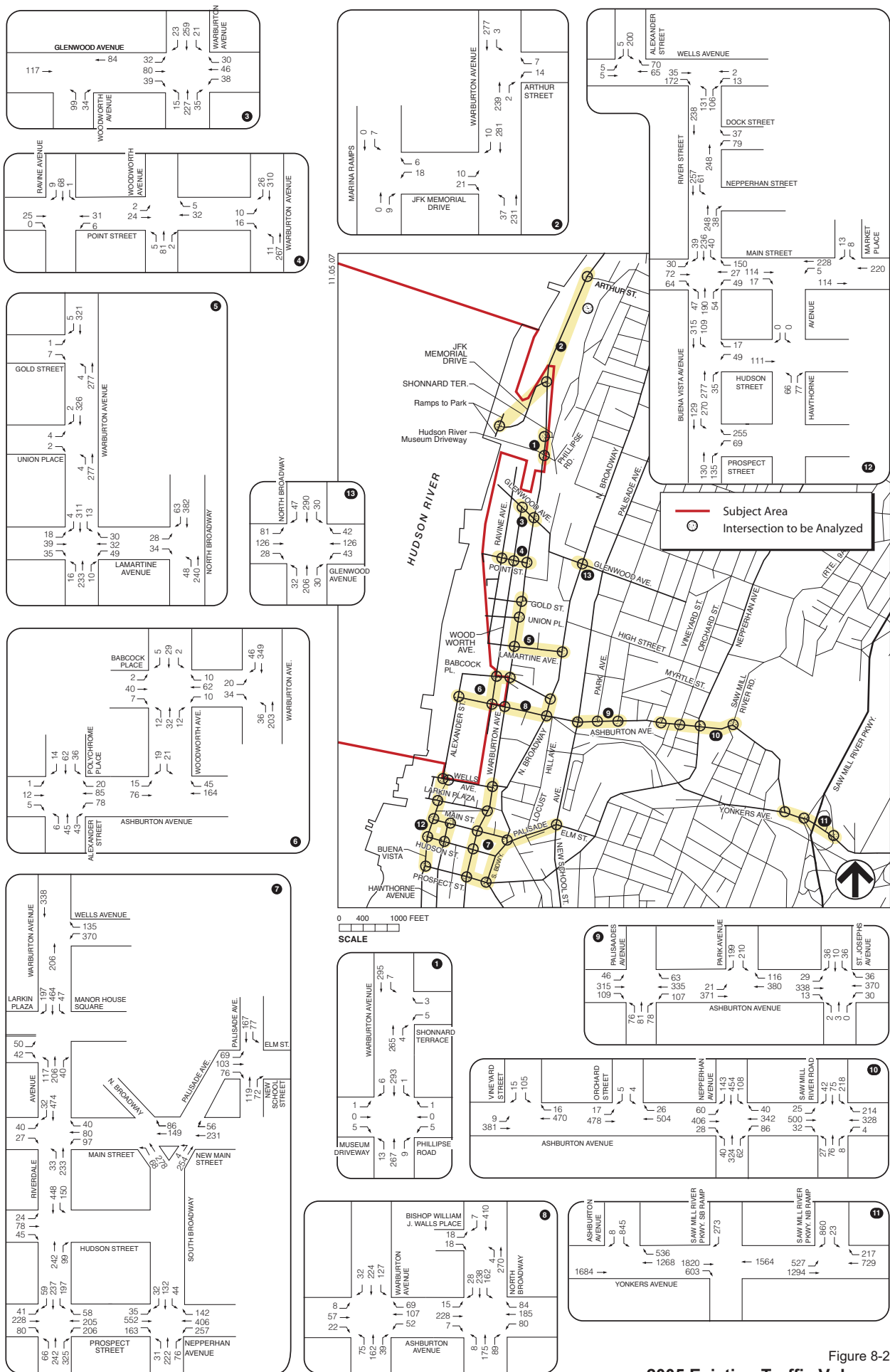


Figure 8-2  
**2005 Existing Traffic Volumes**  
**AM Peak Hour (8:00 - 9:00 AM)**

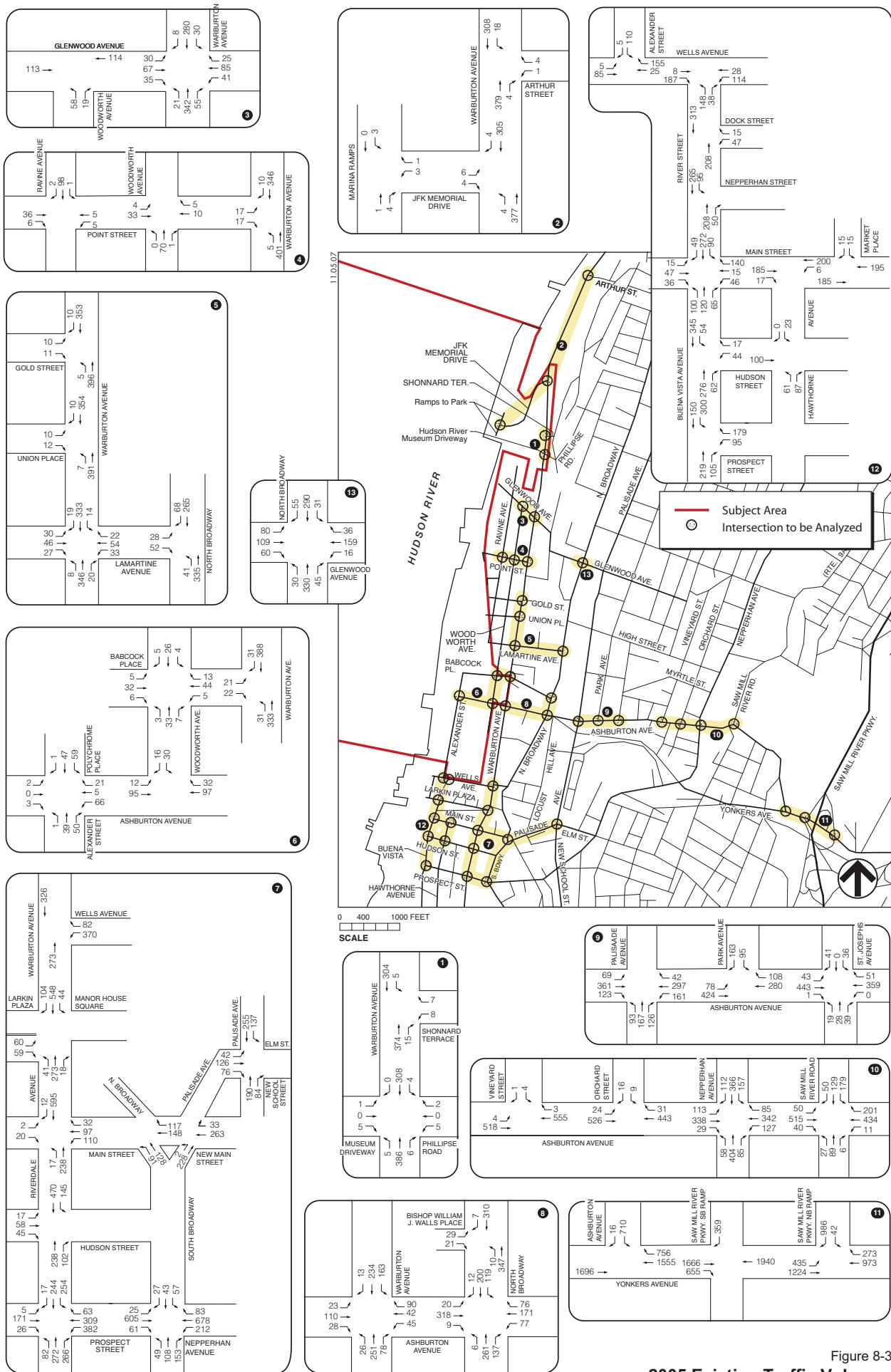
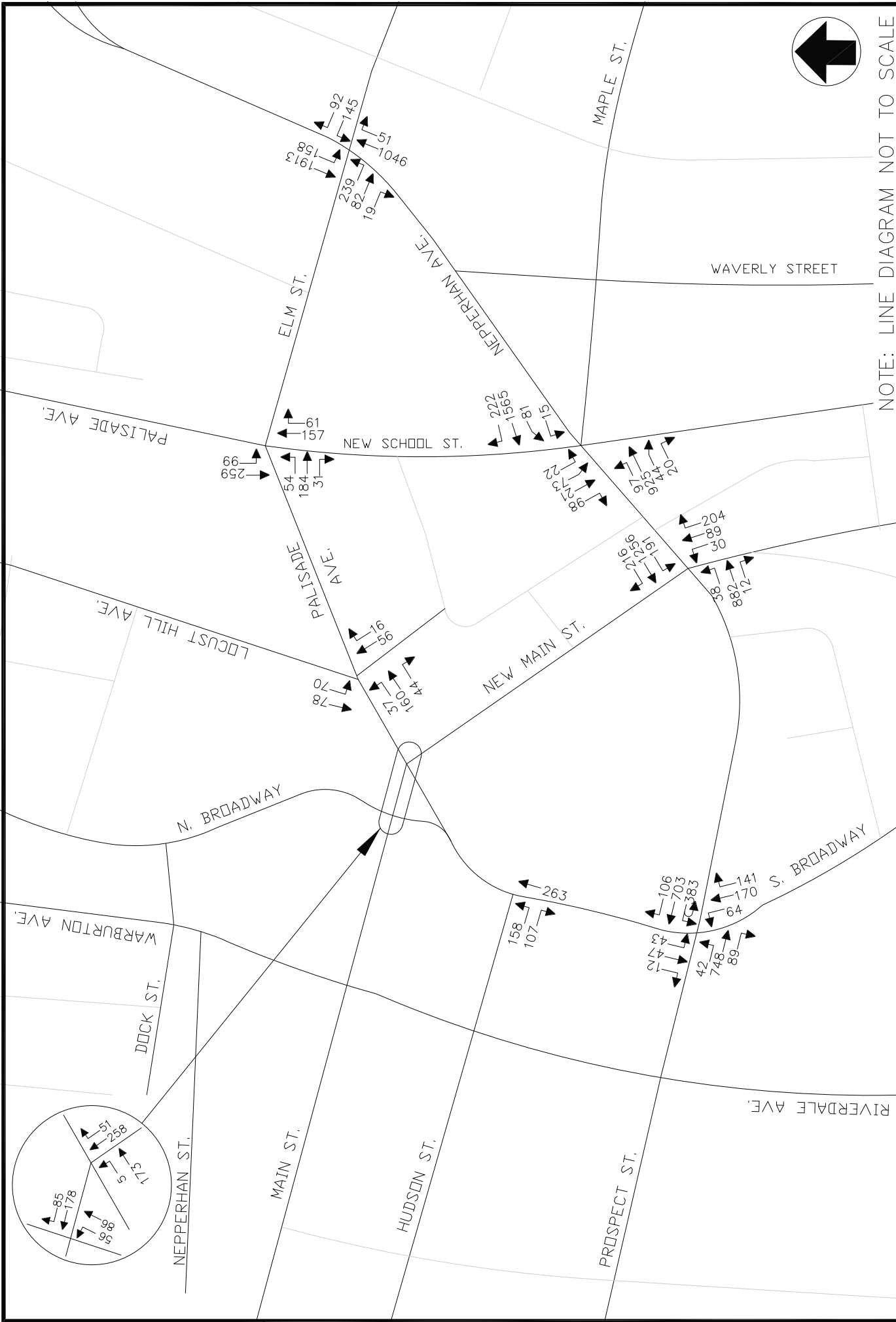


Figure 8-3  
 2005 Existing Traffic Volumes  
 PM Peak Hour (5:00 - 6:00 PM)



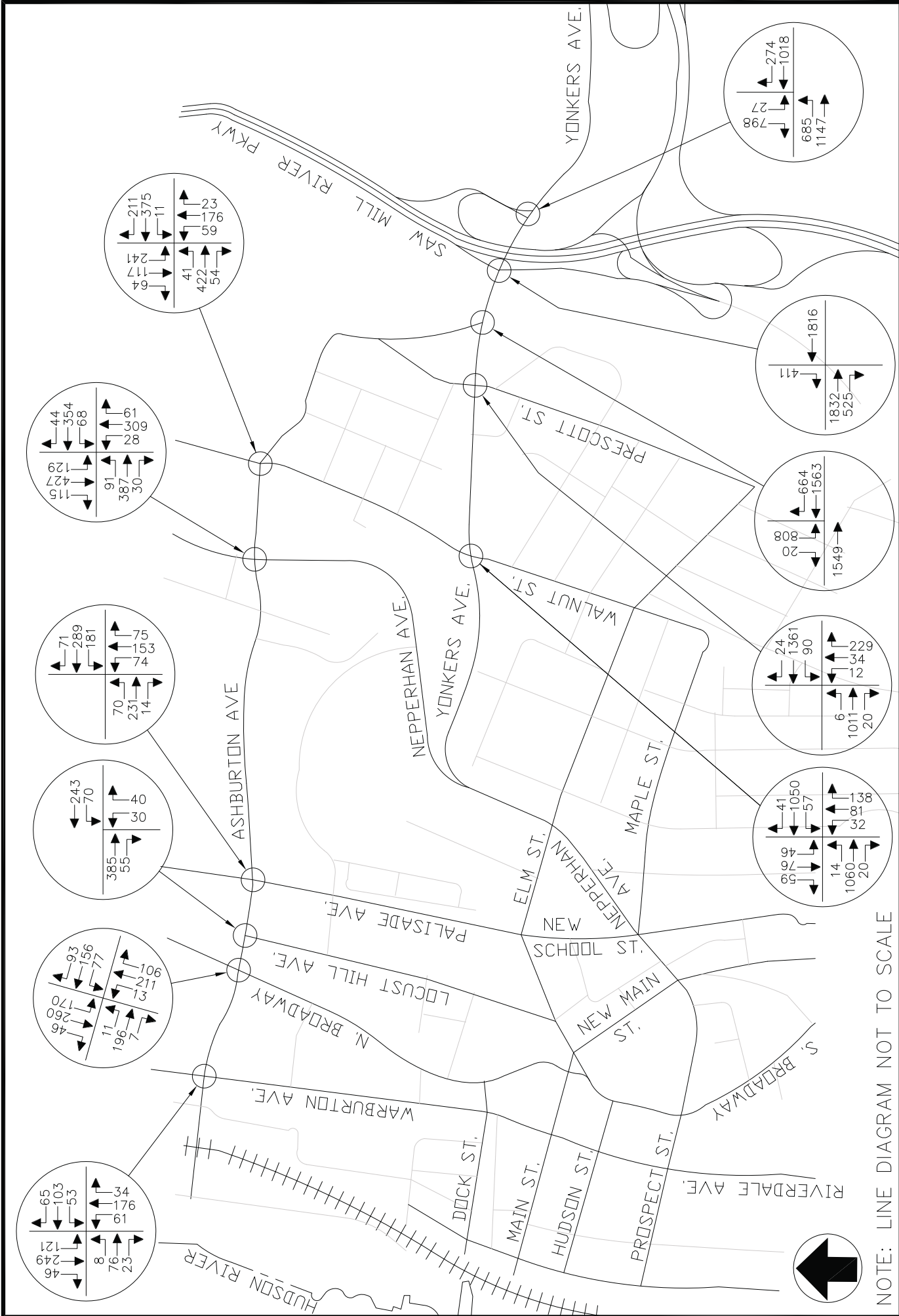
NOTE: LINE DIAGRAM NOT TO SCALE

2006 EXISTING TRAFFIC VOLUMES  
WEEKDAY PEAK AM HIGHWAY HOUR

SFC YONKERS  
YONKERS, NEW YORK  
JOHN COLLINS ENGINEERS, P.C.  
HAWTHORNE, NEW YORK

PROJECT NO. 281 DATE: APRIL 2007 FIG. NO. 11A

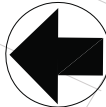
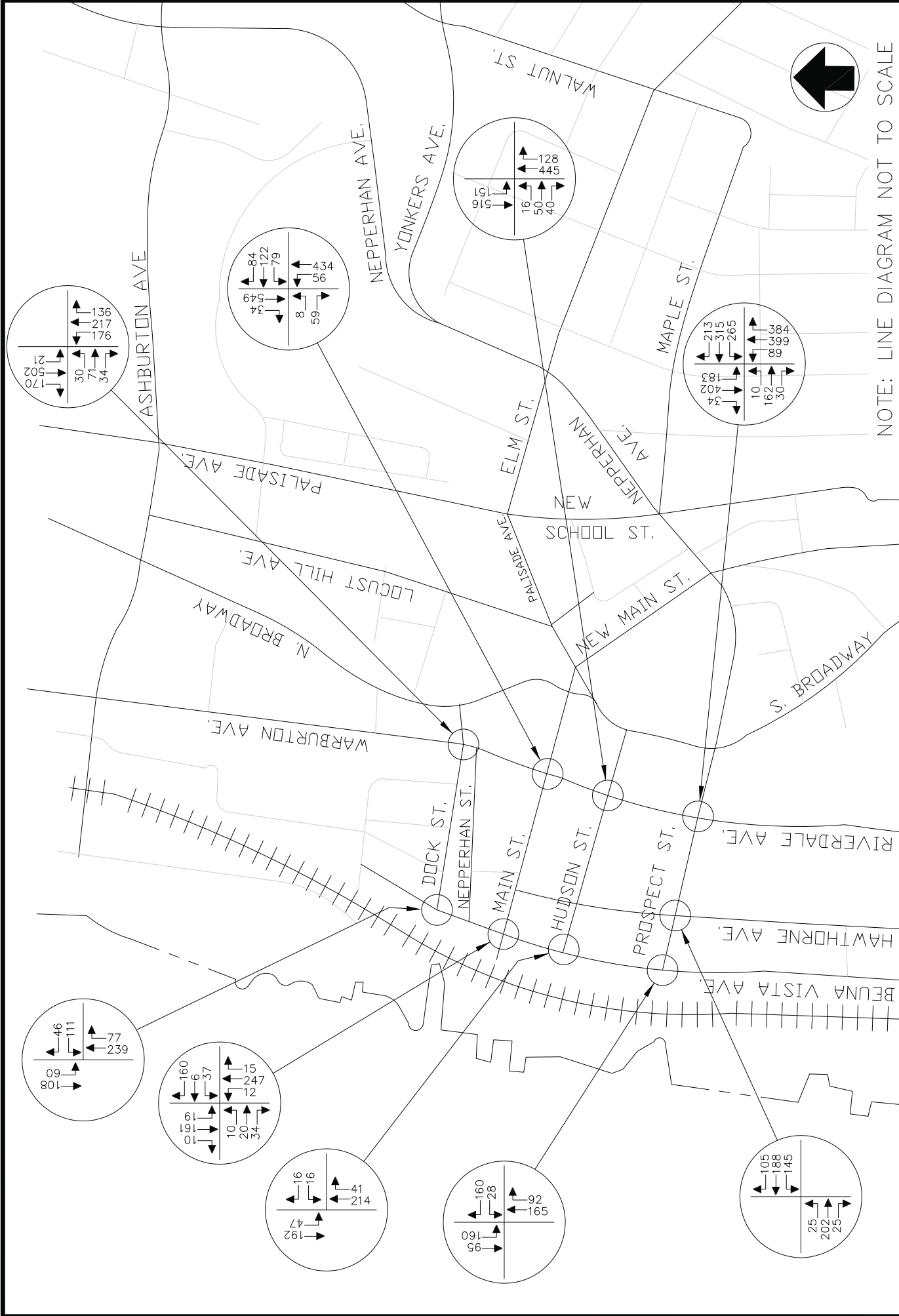




NOTE: LINE DIAGRAM NOT TO SCALE



SFC YONKERS  
 YONKERS, NEW YORK  
 2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK AM HIGHWAY HOUR  
 PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.11B  
 JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK

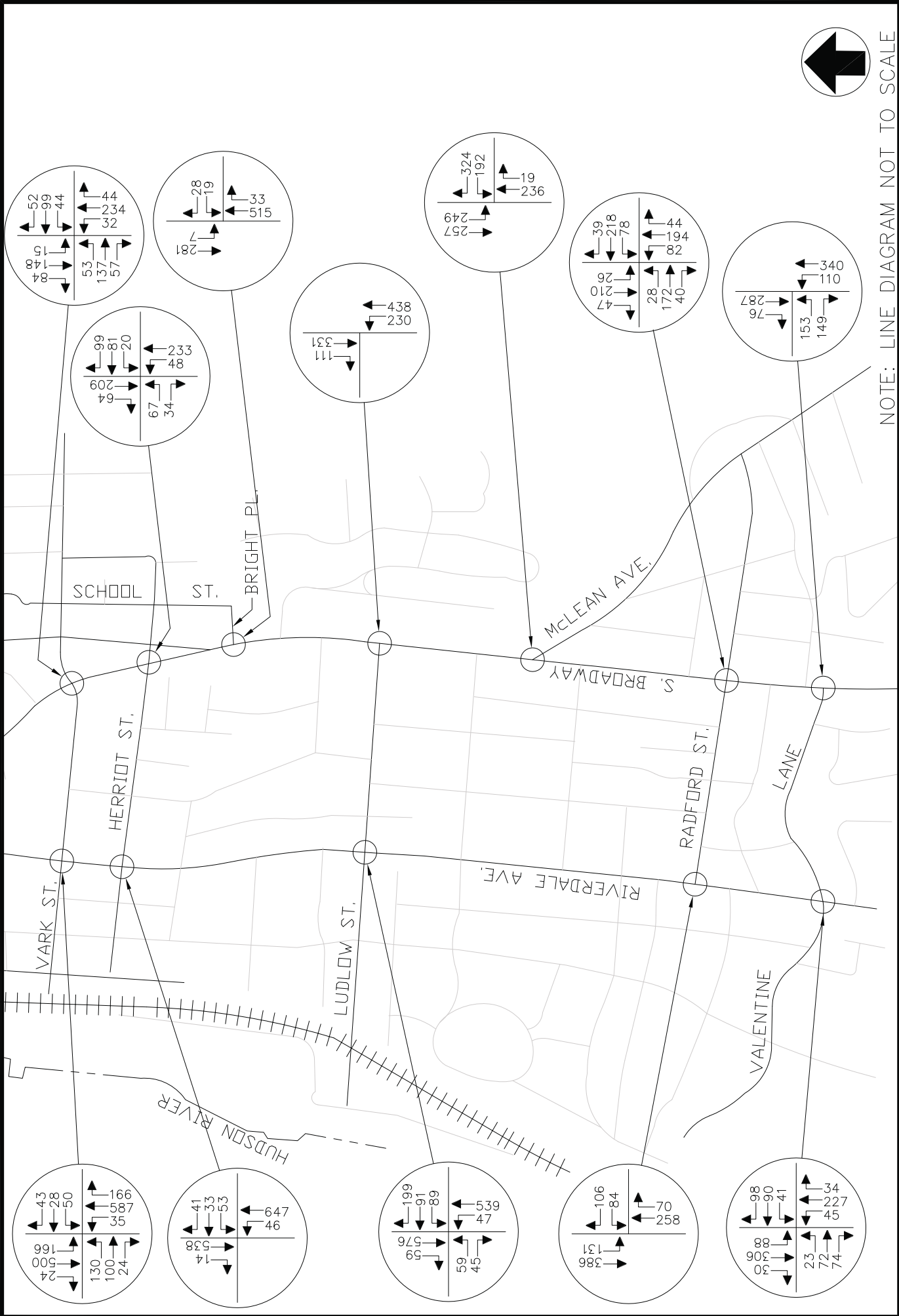


NOTE: LINE DIAGRAM NOT TO SCALE

2006 EXISTING TRAFFIC VOLUMES  
WEEKDAY PEAK AM HIGHWAY HOUR

SFC YONKERS  
YONKERS, NEW YORK

JOHN COLLINS ENGINEERS, P.C.  
HAWTHORNE, NEW YORK  
PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.11C



NOTE: LINE DIAGRAM NOT TO SCALE



SFC YONKERS  
 YONKERS, NEW YORK

2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK AM HIGHWAY HOUR

JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK

PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.11D



NOTE: LINE DIAGRAM NOT TO SCALE

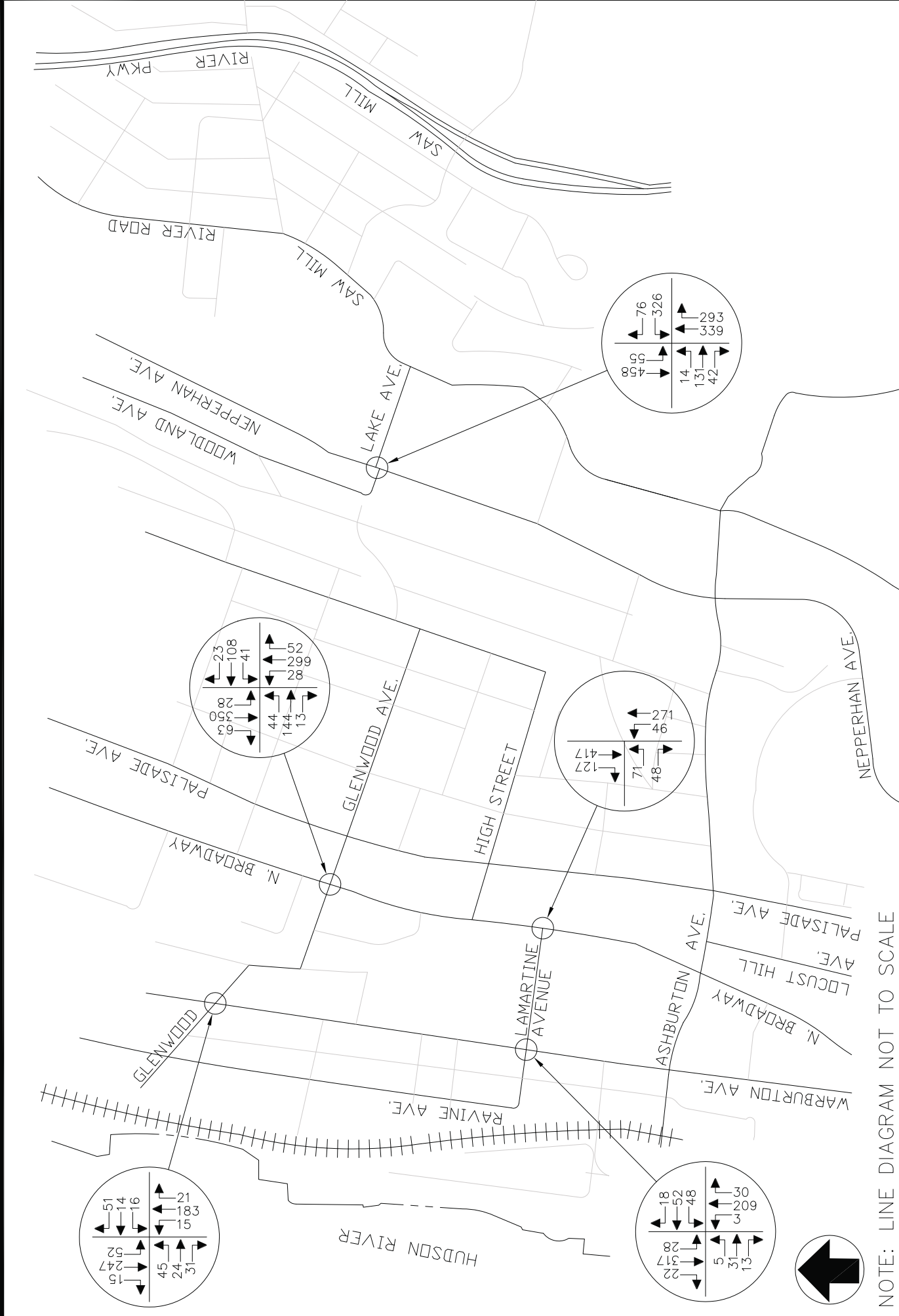


SFC YONKERS  
 YONKERS, NEW YORK

2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK AM HIGHWAY HOUR

PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.11E

JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK



NOTE: LINE DIAGRAM NOT TO SCALE

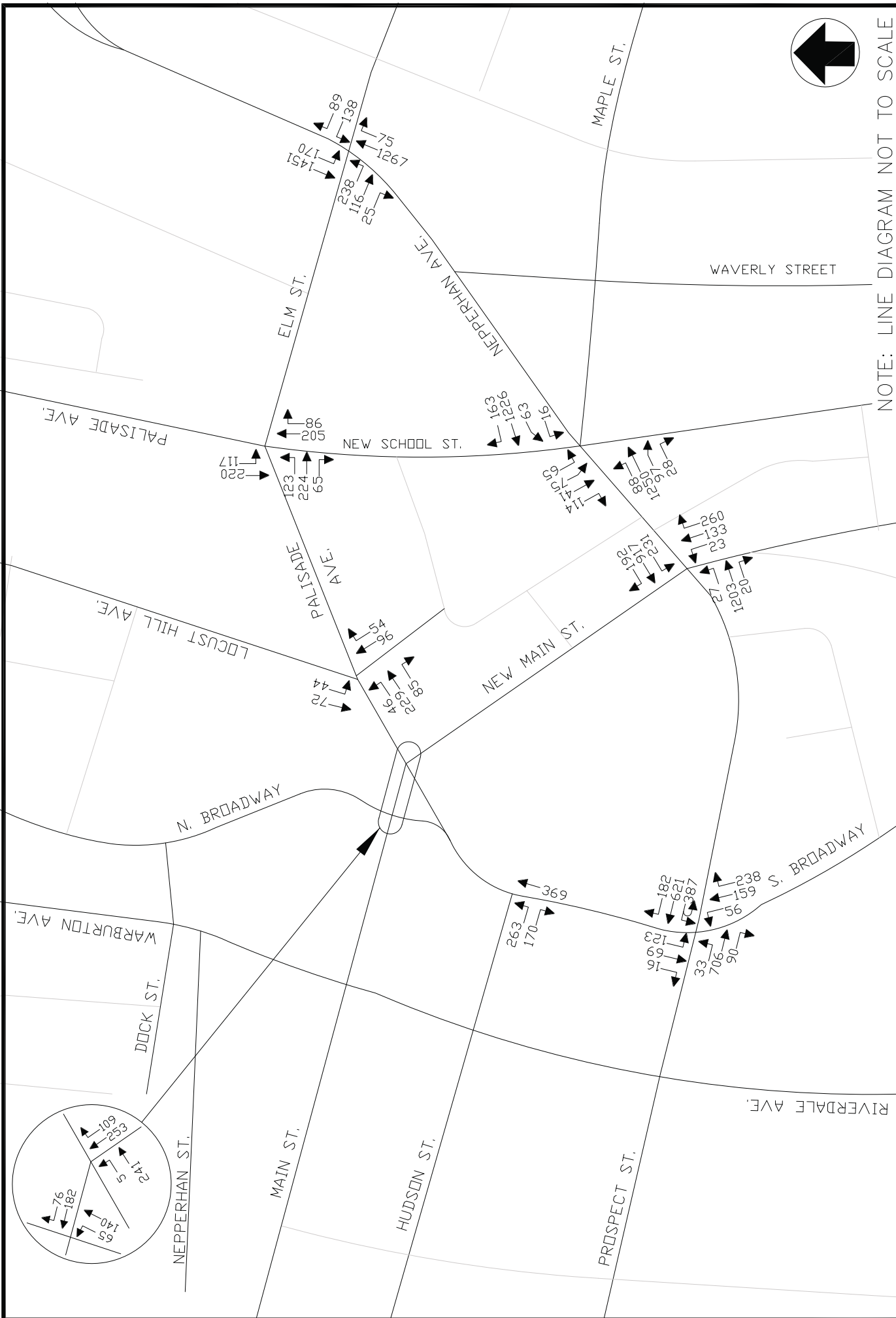


SFC YONKERS  
 YONKERS, NEW YORK

2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK AM HIGHWAY HOUR

JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK

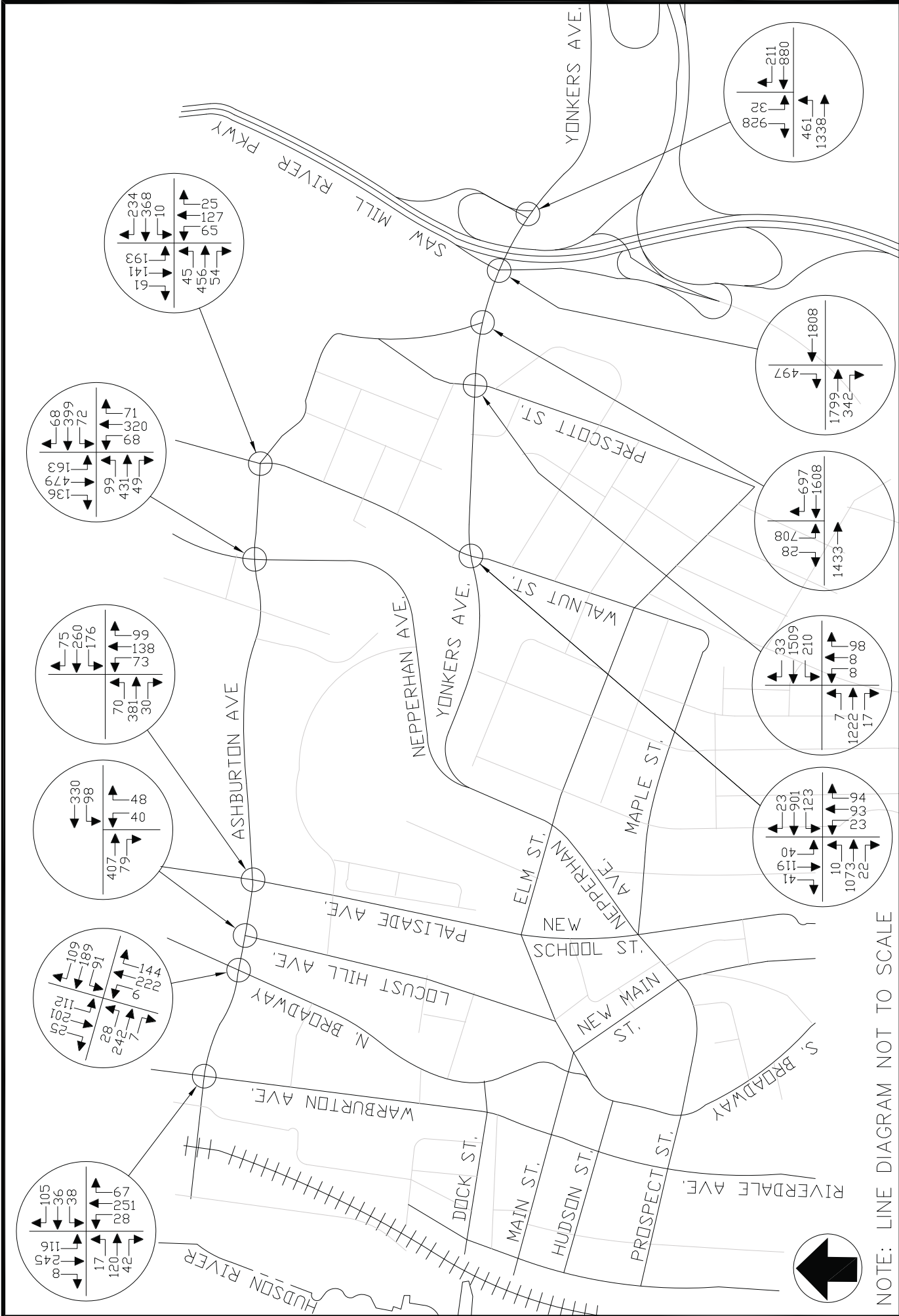
PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.11F



NOTE: LINE DIAGRAM NOT TO SCALE

2006 EXISTING TRAFFIC VOLUMES  
WEEKDAY PEAK PM HIGHWAY HOUR

SFC YONKERS  
YONKERS, NEW YORK  
JOHN COLLINS ENGINEERS, P.C.  
HAWTHORNE, NEW YORK



NOTE: LINE DIAGRAM NOT TO SCALE



SFC YONKERS  
 YONKERS, NEW YORK  
 2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK PM HIGHWAY HOUR  
 JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK  
 PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.12B







NOTE: LINE DIAGRAM NOT TO SCALE



SFC YONKERS  
 YONKERS, NEW YORK

2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK PM HIGHWAY HOUR

JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK

PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.12D



NOTE: LINE DIAGRAM NOT TO SCALE

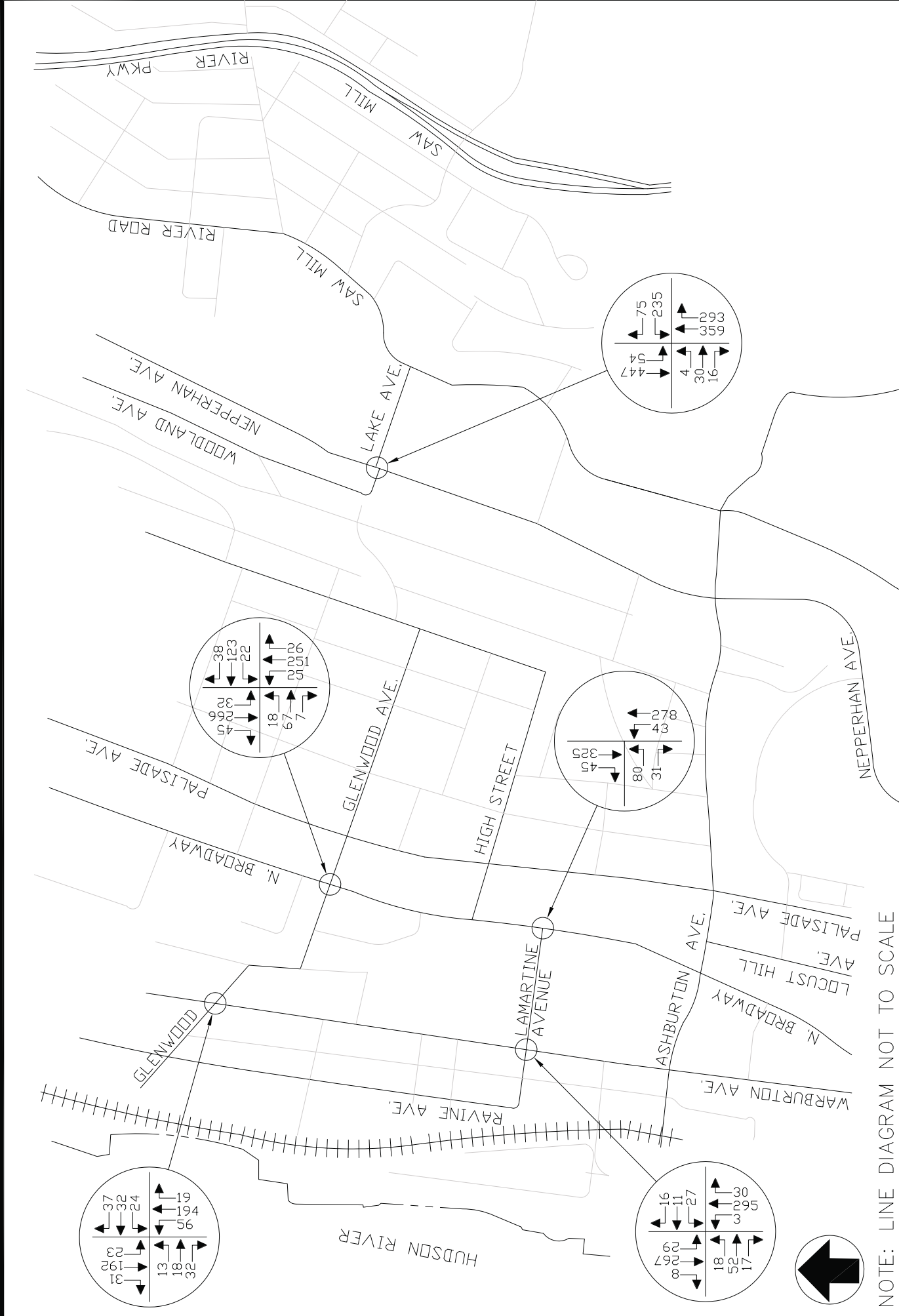


SFC YONKERS  
 YONKERS, NEW YORK

2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK PM HIGHWAY HOUR

JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK

PROJECT NO. 281    DATE: APRIL 2007    FIG. NO.12E



NOTE: LINE DIAGRAM NOT TO SCALE

SFC YONKERS  
 YONKERS, NEW YORK  
 JOHN COLLINS ENGINEERS, P.C.  
 HAWTHORNE, NEW YORK

2006 EXISTING TRAFFIC VOLUMES  
 WEEKDAY PEAK PM HIGHWAY HOUR  
 PROJECT NO. 281 DATE: APRIL 2007 FIG. NO.12F



### Hourly Vehicular Volumes Broadway Bridge - 2006

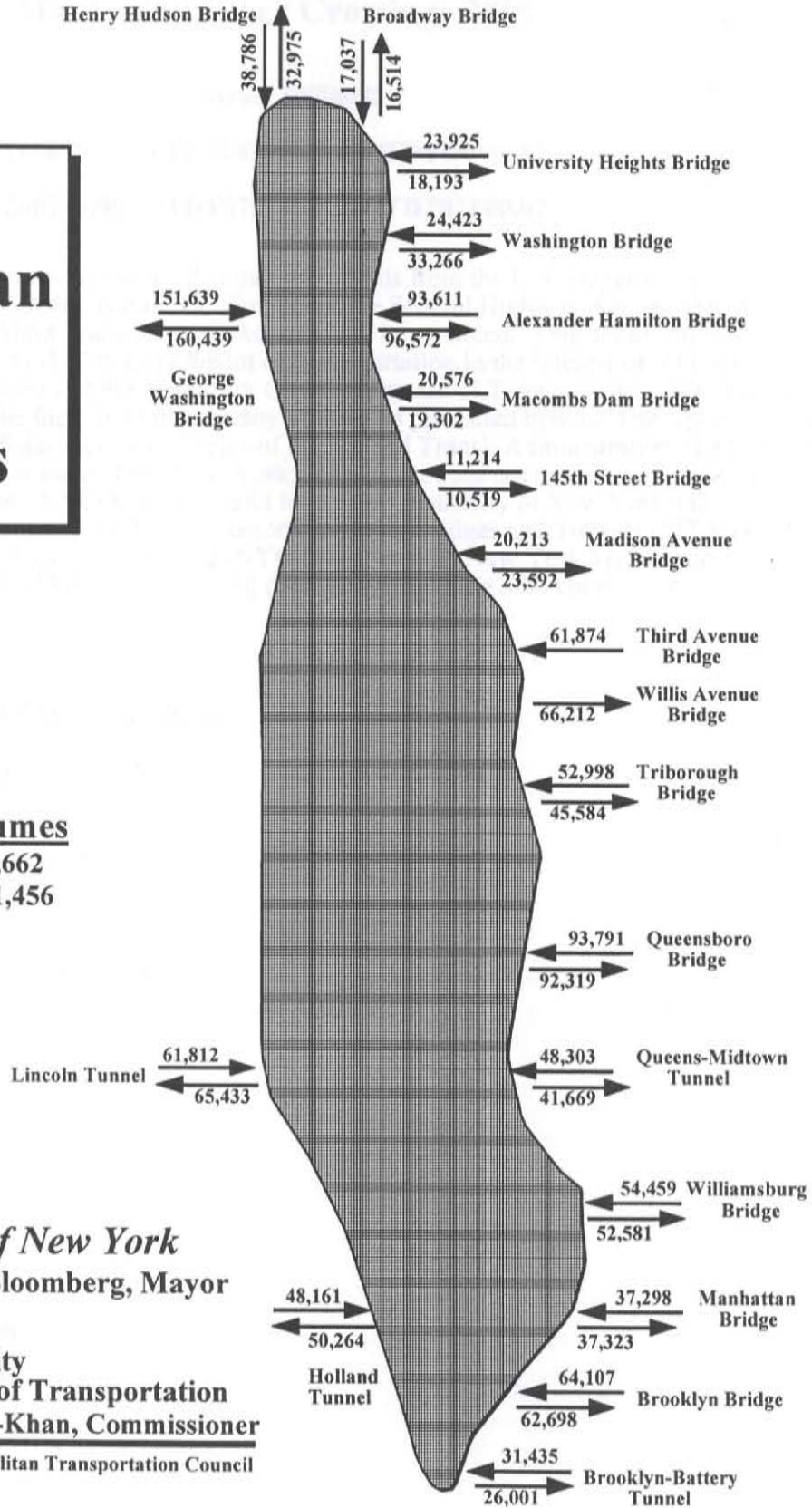
	Northbound to Bronx					Southbound to Manhattan					2-Way Totals	
	Autos	Buses	Commuter Vans	Trucks	Commercial Vans	Totals	Autos	Buses	Commuter Vans	Trucks		Commercial Vans
12-1am	--	--	--	--	--	334	--	--	--	--	--	245
1-2am	--	--	--	--	--	190	--	--	--	--	--	177
2-3am	--	--	--	--	--	113	--	--	--	--	--	94
3-4am	--	--	--	--	--	78	--	--	--	--	--	75
4-5am	--	--	--	--	--	126	--	--	--	--	--	130
5-6am	--	--	--	--	--	244	--	--	--	--	--	377
6-7am	--	--	--	--	--	514	--	--	--	--	--	819
7-8am	634	35	19	64	27	779	1,136	52	36	26	38	1,288 **
8-9am	730	53	18	32	25	858	1,054	36	24	37	36	1,187
9-10am	562	19	2	23	50	656	816	31	24	48	37	956
10-11am	630	16	2	32	22	702	728	19	11	34	9	801
11-12am	652	20	8	26	40	746	634	21	21	45	46	767
12-1pm	703	20	5	20	22	770	781	20	4	16	10	831
1-2pm	791	24	3	27	28	873	823	23	9	19	15	889
2-3pm	830	24	1	35	71	961	903	28	21	32	16	1,000
3-4pm	1,067	26	9	14	36	1,152	1,027	29	12	17	9	1,094
4-5pm	1,126	39	27	24	55	1,271	1,009	27	18	31	30	1,115
5-6pm	1,240	29	8	12	65	1,354	1,036	26	27	16	21	1,126
6-7pm	1,205	23	0	14	118	1,360 **	964	26	23	17	7	1,037
7-8pm	--	--	--	--	--	1,091	--	--	--	--	--	907
8-9pm	--	--	--	--	--	798	--	--	--	--	--	729
9-10pm	--	--	--	--	--	617	--	--	--	--	--	583
10-11pm	--	--	--	--	--	472	--	--	--	--	--	443
11-12pm	--	--	--	--	--	455	--	--	--	--	--	367
Totals	--	--	--	--	--	16,514	--	--	--	--	--	17,037
7-10am	1,926	107	39	119	102	2,293	3,006	119	84	111	111	3,431
10am-1pm	1,985	56	15	78	84	2,218	2,143	60	36	95	65	2,399
1-4pm	2,688	74	13	76	135	2,986	2,753	80	42	68	40	2,983
4-7pm	3,571	91	35	50	238	3,985	3,009	79	68	64	58	3,278
7am-7pm	10,170	328	102	323	559	11,482	10,911	338	230	338	274	12,091
Totals	--	--	--	--	--	16,514	--	--	--	--	--	17,037
7-10am	1,926	107	39	119	102	2,293	3,006	119	84	111	111	3,431
10am-1pm	1,985	56	15	78	84	2,218	2,143	60	36	95	65	2,399
1-4pm	2,688	74	13	76	135	2,986	2,753	80	42	68	40	2,983
4-7pm	3,571	91	35	50	238	3,985	3,009	79	68	64	58	3,278
7am-7pm	10,170	328	102	323	559	11,482	10,911	338	230	338	274	12,091
Totals	--	--	--	--	--	16,514	--	--	--	--	--	17,037
7-10am	1,926	107	39	119	102	2,293	3,006	119	84	111	111	3,431
10am-1pm	1,985	56	15	78	84	2,218	2,143	60	36	95	65	2,399
1-4pm	2,688	74	13	76	135	2,986	2,753	80	42	68	40	2,983
4-7pm	3,571	91	35	50	238	3,985	3,009	79	68	64	58	3,278
7am-7pm	10,170	328	102	323	559	11,482	10,911	338	230	338	274	12,091
Totals	--	--	--	--	--	16,514	--	--	--	--	--	17,037

Based on 1989 Classification Survey Data

\*\* Peak Volumes

# 2006 Manhattan River Crossings

**24 Hour Volumes**  
 Inbound = 955,662  
 Outbound = 951,456



*The City of New York*  
 Michael R. Bloomberg, Mayor



New York City  
 Department of Transportation  
 Janette Sadik-Khan, Commissioner

A member of the New York Metropolitan Transportation Council

April 2008

Turning Movement Counts

Intersection :	Broadway @ 242nd St
EBL	242nd Street
EBR1	242nd Street
EBR2	242nd Street
NBT	Broadway
SBT1	Broadway
SBT2	Broadway Service Road
SBR	Broadway Service Road

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv. Beg.	App			App				Approach Total			Inters 15 min. vol	Inters hrly vol
	EB	EB	EB	NB	SB	SB	SB	EB	NB	SB		
07:45	19	20	17	155	102	47	16	56	155	165	376	1,513
08:00	23	19	12	175	75	31	11	54	175	117	346	1,527
08:15	20	34	16	184	80	48	11	70	184	139	393	
08:30	16	18	27	173	94	61	9	61	173	164	398	
08:45	18	25	27	179	83	48	10	70	179	141	390	
16:30	19	51	19	181	113	30	7	89	181	150	420	1,587
16:45	28	21	20	182	76	36	12	69	182	124	375	1,603
17:00	22	22	13	186	111	29	15	57	186	155	398	1,633
17:15	12	24	15	208	86	40	9	51	208	135	394	1,647
17:30	18	26	18	218	97	48	11	62	218	156	436	1,644
17:45	17	27	19	216	75	42	9	63	216	126	405	
18:00	33	30	16	194	83	44	12	79	194	139	412	
18:15	29	28	22	175	73	45	19	79	175	137	391	

**Peak Hours Report**

<b>Intersection :</b> Broadway @ 242nd St	
EBL	242nd Street
EBR1	242nd Street
EBR2	242nd Street
NBT	Broadway
SBT1	Broadway
SBT2	Broadway Service Road
SBR	Broadway Service Road

<b>Date :</b> 9/10/2009	<b>Weekday :</b> Thursday	<b>INT ID</b>

<b>Interv. Beg.</b>	
<b>Hour Beg.</b>	<b>Description</b>

App			App	App				Approach Total			Inters. hrly total
EB	EB	EB	NB	SB	SB	SB	EB	NB	SB		
Mov			Mov	Mov							
EBL	EBR1	EBR2	NBT	SBT1	SBT2	SBR					

AM Intersection Peak Hour																	
8:00	Tot hrly vol	77	96	82	711	332	188	41			255	711	561				1527
	P.H.F.	0.84	0.71	0.76	0.97	0.88	0.77	0.93			0.91	0.97	0.86				0.96
	Vehicles	77	96	82	711	332	188	41			255	711	561				1527
	% All hvy vehs																

PM Intersection Peak Hour																	
17:15	Tot hrly vol	80	107	68	836	341	174	41			255	836	556				1647
	P.H.F.	0.61	0.89	0.89	0.96	0.88	0.91	0.85			0.81	0.96	0.89				0.94
	Vehicles	80	107	68	836	341	174	41			255	836	556				1647
	% All hvy vehs																

Turning Movement Counts

Intersection :	Broadway @ 254th St/Henry Hudson Parkway - SB Off-Ramp
WBL	Hudson Henry Parkway Off-Ramp
WBT	Hudson Henry Parkway Off-Ramp
WBR	Hudson Henry Parkway Off-Ramp
NBR	Hudson Henry Parkway Off-Ramp

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	App				App NB	Approach Total		Inters 15 min. vol	Inters hrly vol
	WB	WB	WB	NB		WB	NB		
	Mov								
	WBL	WBT	WBR	NBR					
07:00	28	5		57	33	57	90	507	
07:15	43	8		54	51	54	105	602	
07:30	53	10		70	63	70	133	658	
07:45	72	16		91	88	91	179	678	
08:00	79	20		86	99	86	185	605	
08:15	63	10		88	73	88	161		
08:30	65	11		77	76	77	153		
08:45	37	4		65	41	65	106		
16:30	29	10		79	39	79	118	561	
16:45	39	6		75	45	75	120	565	
17:00	36	18		98	54	98	152	578	
17:15	40	15	2	114	57	114	171	577	
17:30	40	14		68	54	68	122	519	
17:45	38	10		85	48	85	133		
18:00	37	13		101	50	101	151		
18:15	27	12	1	73	40	73	113		



**Peak Hours Report**

<b>Intersection :</b> Broadway @ 254th St/Henry Hudson Parkway - SB Off-Ramp	
WBL	Hudson Henry Parkway Off-Ramp
WBT	Hudson Henry Parkway Off-Ramp
WBR	Hudson Henry Parkway Off-Ramp
NBR	Hudson Henry Parkway Off-Ramp

<b>Date :</b> 9/10/2009	<b>Weekday :</b> Thursday	<b>INT ID</b>

Hour Beg.	Description	App			App			Approach Total				Inters. hrly total
		WB	WB	WB	NB				WB	NB		
		Mov			Mov							
		WBL	WBT	WBR	NBR							

AM Intersection Peak Hour												
7:45	Tot hrly vol	279	57		342					336	342	678
	P.H.F.	0.88	0.71		0.94					0.85	0.94	0.92
	Vehicle	279	57		342					336	342	678
	% All hvy vehs											

PM Intersection Peak Hour												
17:00	Tot hrly vol	154	57	2	365					213	365	578
	P.H.F.	0.96	0.79	0.25	0.8					0.93	0.8	0.85
	Vehicle	154	57	2	365					213	365	578
	% All hvy vehs											

Turning Movement Counts

Intersection :	Broadway @ 254th St/Henry Hudson Parkway
EBL	254th Street
EBR1	254th Street
EBR2	254th Street
NBR	Broadway
SBR	Broadway

Date :	9/22/09	Weekday :	Tuesday	INT ID

Interv Beg	App			App	App	Approach Total			Inters 15 min. vol	Inters hrly vol
	EB	EB	EB	NB	SB	EB	NB	SB		
	Mov			Mov	Mov					
EBL	EBR1	EBR2	NBR	SBR						
07:00	2	13	2	10	17	17	10	17	44	231
07:15		23	4	6	28	27	6	28	61	244
07:30	2	17	5	8	37	24	8	37	69	248
07:45	1	16	6	12	22	23	12	22	57	230
08:00	2	17	7	11	20	26	11	20	57	230
08:15		16	4	16	29	20	16	29	65	
08:30	2	15		15	19	17	15	19	51	
08:45	3	14	2	13	25	19	13	25	57	
16:30	3	10	2	11	15	15	11	15	41	161
16:45	2	7		6	18	9	6	18	33	158
17:00	1	18	3	7	15	22	7	15	44	168
17:15	1	12	1	6	23	14	6	23	43	171
17:30	1	18		6	13	19	6	13	38	172
17:45	2	10	2	6	23	14	6	23	43	
18:00	1	12		12	22	13	12	22	47	
18:15	2	16	1	7	18	19	7	18	44	

**Peak Hours Report**

Intersection :		Broadway @ 254th St/Henry Hudson Parkway
EBL	254th Street	
EBR1	254th Street	
EBR2	254th Street	
NBR	Broadway	
SBR	Broadway	

Date :	9/22/2009	Weekday :	Tuesday	INT ID

Hour Beg.	Description	App					Approach Total			Inters. hrly total
		EB	EB	EB	NB	SB	EB	NB	SB	
		Mov			Mov	Mov				
		EBL	EBR1	EBR2	NBR	SBR				

AM Intersection Peak Hour																			
7:30	Tot hrly vol	5	66	22	47	108						93	47	108					248
	P.H.F.	0.62	0.97	0.79	0.73	0.73						0.89	0.73	0.73					0.9
	Vehicles	5	66	22	47	108						93	47	108					248
	% All hvy vehs																		

PM Intersection Peak Hour																			
17:30	Tot hrly vol	6	56	3	31	76						65	31	76					172
	P.H.F.	0.75	0.78	0.38	0.65	0.83						0.86	0.65	0.83					0.91
	Vehicles	6	56	3	31	76						65	31	76					172
	% All hvy vehs																		

Turning Movement Counts

Intersection :	Broadway @ Henry Hudson Parkway NB On-Ramp
EBR	Henry Hundson Parkway Off-Ramp
WBR	Henry Hundson Parkway Off-Ramp
SBL	Broadway

Date :	9/22/09	Weekday :	Tuesday	INT ID

Interv Beg	App	App	App	Approach Total			Inters 15 min. vol	Inters hrly vol
	EB	WB	SB	EB	WB	SB		
	Mov	Mov	Mov					
	EBR	WBL	SBL					
07:00	3	5	151	3	5	151	159	659
07:15	4	10	176	4	10	176	190	666
07:30	1	7	149	1	7	149	157	610
07:45	6	14	133	6	14	133	153	611
08:00		14	152		14	152	166	584
08:15		14	120		14	120	134	
08:30	2	22	134	2	22	134	158	
08:45	5	13	108	5	13	108	126	
16:30	8	19	99	8	19	99	126	519
16:45	7	21	96	7	21	96	124	531
17:00	4	17	104	4	17	104	125	552
17:15	4	20	120	4	20	120	144	557
17:30	9	17	112	9	17	112	138	548
17:45	4	23	118	4	23	118	145	
18:00	10	19	101	10	19	101	130	
18:15	8	22	105	8	22	105	135	

**Peak Hours Report**

<b>Intersection :</b> Broadway @ Henry Hudson Parkway NB On-Ramp	
EBR	Henry Hundson Parkway Off-Ramp
WBR	Henry Hundson Parkway Off-Ramp
SBL	Broadway

<b>Date :</b> 9/22/2009	<b>Weekday :</b> Tuesday	<b>INT ID</b>

Hour Beg.	Description	App	App	App	Approach Total			Inters. hrly total
		EB	WB	SB	EB	WB	SB	
		Mov	Mov	Mov				
		EBR	WBL	SBL				

AM Intersection Peak Hour										
7:15	Tot hrly vol	11	45	610						666
	P.H.F.	0.46	0.8	0.87						0.88
	Vehicles	11	45	610						666
	% All hvy vehs									

PM Intersection Peak Hour										
17:15	Tot hrly vol	27	79	451						557
	P.H.F.	0.68	0.86	0.94						0.96
	Vehicles	27	79	451						557
	% All hvy vehs									

Turning Movement Counts

Intersection :	Broadway @ Hospital Driveway
EBL	Hospital Driveway
EBR	Hospital Driveway
NBL	Broadway
SBR	Broadway

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	App				Approach Total			Inters min. vol	Inters hrly vol
	EB	EB	NB	SB	EB	NB	SB		
	Mov		Mov						
	EBL	EBR	NBL	SBR					
07:00	6	7			13			13	60
07:15	6	8			14			14	64
07:30	5	7			12			12	72
07:45	6	15			21			21	79
08:00	7	10			17			17	73
08:15	13	9			22			22	
08:30	9	10			19			19	
08:45	8	7			15			15	
16:30	9	13	9	9	22	9	9	40	115
16:45	9	7	8	5	16	8	5	29	98
17:00	2	15	6	5	17	6	5	28	80
17:15	2	6	5	5	8	5	5	18	76
17:30	5	9	6	3	14	6	3	23	74
17:45	2	2	4	3	4	4	3	11	
18:00	6	6	7	5	12	7	5	24	
18:15	5	3	5	3	8	5	3	16	

**Peak Hours Report**

Intersection :		Broadway @ Hospital Driveway
EBL	Hospital Driveway	
EBR	Hospital Driveway	
NBL	Broadway	
SBR	Broadway	

Date :	9/10/2009	Weekday :	Thursday	INT ID

Hour Beg.	Description	App				Approach Total			Inters. hrly total
		EB	EB	NB	SB	EB	NB	SB	
		Mov		Mov	Mov				
		EBL	EBR	NBL	SBR				

AM Intersection Peak Hour											
7:45	Tot hrly vol	35	44								79
	P.H.F.	0.67	0.73								0.9
	Vehicles	35	44								79
	% All hvy vehs										

PM Intersection Peak Hour											
16:30	Tot hrly vol	22	41	28	24						115
	P.H.F.	0.61	0.68	0.78	0.67						0.72
	Vehicles	22	41	28	24						115
	% All hvy vehs										

Turning Movement Counts

Intersection :	Broadway @ Lakeview Place/Henry Hudson Parkway
NBT	Broadway
NBR	Broadway
SBT	Broadway

Date :	9/22/09	Weekday :	Tuesday	INT ID

Interv Beg	App			Approach Total		Inters 15 min. vol	Inters hrly vol
	NB	NB	SB	NB	SB		
	Mov						
	NBT	NBR	SBT				
07:00	81	35	142	116	142	258	1,179
07:15	78	23	151	101	151	252	1,270
07:30	94	28	194	122	194	316	1,361
07:45	89	31	233	120	233	353	1,419
08:00	98	33	218	131	218	349	1,367
08:15	126	49	168	175	168	343	
08:30	141	35	198	176	198	374	
08:45	114	36	151	150	151	301	
16:30	112	36	140	148	140	288	1,202
16:45	123	33	143	156	143	299	1,240
17:00	115	35	150	150	150	300	1,233
17:15	121	37	157	158	157	315	1,269
17:30	110	51	165	161	165	326	1,251
17:45	113	45	134	158	134	292	
18:00	122	52	162	174	162	336	
18:15	121	36	140	157	140	297	



**Peak Hours Report**

<b>Intersection :</b> Broadway @ Lakeview Place/Henry Hudson Parkway	
NBT	Broadway
NBR	Broadway
SBT	Broadway

<b>Date :</b> 9/22/2009	<b>Weekday :</b> Tuesday	<b>INT ID</b>

Hour Beg.	Description	App			App				Approach Total				Inters. hrly total
		NB	NB	SB				NB	SB				
		Mov		Mov									
		NBT	NBR	SBT									

AM Intersection Peak Hour													
7:45	Tot hrly vol	454	148	817					602	817			1419
	P.H.F.	0.8	0.76	0.88					0.86	0.88			0.95
	Vehicels	454	148	817					602	817			1419
	% All hvy vehs												

PM Intersection Peak Hour													
17:15	Tot hrly vol	466	185	618					651	618			1269
	P.H.F.	0.95	0.89	0.94					0.94	0.94			0.94
	Vehicels	466	185	618					651	618			1269
	% All hvy vehs												

Turning Movement Counts

Intersection :	Broadway Bridge - West Sidewalk/Walkway
NBT	Pedestrian
SBT	Pedestrian
B NBT	
B SBT	

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	App	App	App	App	Approach Total				Inters 15 min. vol	Inters hrly vol
	NB	SB	B NB	B SB	NB	SB	B NB	B SB		
	Mov	Mov	Mov	Mov						
	NBT	SBT	B NBT	B SBT						
07:00	13	16			13	16			29	149
07:15	14	18			14	18			32	153
07:30	18	21			18	21			39	155
07:45	25	24			25	24			49	150
08:00	14	19			14	19			33	130
08:15	15	19			15	19			34	
08:30	14	20			14	20			34	
08:45	13	16			13	16			29	
16:30	25	27			25	27			52	161
16:45	21	27			21	27			48	147
17:00	15	21			15	21			36	125
17:15	12	13			12	13			25	142
17:30	24	14			24	14			38	166
17:45	17	9			17	9			26	
18:00	28	25			28	25			53	
18:15	26	23			26	23			49	

**Peak Hours Report**

Intersection :		Broadway Bridge - West Sidewalk/Walkway
NBT	Pedestrian	
SBT	Pedestrian	
B NBT		
B SBT		

Date :	9/10/2009	Weekday :	Thursday	INT ID

Hour Beg.	Description	App	App	App	App	Approach Total				Inters. hrly total
		NB	SB	B NB	B SB	NB	SB	B NB	B SB	
		Mov	Mov	Mov	Mov					
		NBT	SBT	B NBT	B SBT					

AM Intersection Peak Hour											
7:30	Tot hrly vol	72	83					72	83		155
	P.H.F.	0.72	0.86					0.72	0.86		0.79
	Pedestrian	72	83					72	83		155

PM Intersection Peak Hour											
17:30	Tot hrly vol	95	71					95	71		166
	P.H.F.	0.85	0.71					0.85	0.71		0.78
	Pedestrian	95	71					95	71		166

Turning Movement Counts

Intersection :	Hawthorne Avenue @ Ludlow St
EBL	Ludlow Street
EBT	Ludlow Street
EBR	Ludlow Street
WBL	Ludlow Street
WBT	Ludlow Street
WBR	Ludlow Street
NBL	Hawthorne Avenue
NBT	Hawthorne Avenue

Date :	9/24/09	Weekday :	Thursday	INT ID
NBR	Hawthorne Avenue			
SBL	Hawthorne Avenue			
SBT	Hawthorne Avenue			
SBR	Hawthorne Avenue			

Interv Beg	App			App			App			App			Approach Total				Inters 15 min. vol	Inters hrly vol
	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	EB	WB	NB	SB		
	Mov			Mov			Mov			Mov								
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
07:00	8	39	8	2	27	5	8	16	3	5	28	6	55	34	27	39	155	534
07:15	6	21	8	5	18	5	9	19	2	8	23	3	35	28	30	34	127	511
07:30	6	9	2	5	12	9	3	21	9	3	29	5	17	26	33	37	113	570
07:45	8	11		5	18	8	1	36	5	10	31	6	19	31	42	47	139	646
08:00	9	6	2	6	10	8	1	21	3	7	48	11	17	24	25	66	132	630
08:15	8		6	1		1	3	36	1	1	104	25	14	2	40	130	186	
08:30	17		5	3		3	5	50	3	2	77	24	22	6	58	103	189	
08:45	9	1	7	3			3	30		3	47	20	17	3	33	70	123	
16:30	9	22	7	4	12	9	2	22	4	4	34	11	38	25	28	49	140	492
16:45	6	27	3	7	9	9	1	20	6	2	22	10	36	25	27	34	122	455
17:00	9	20	2	2	9	8	3	14	4	7	34	2	31	19	21	43	114	424
17:15	4	16	1	5	6	12	1	25	3	6	35	2	21	23	29	43	116	411
17:30	3	12	2	3	10	11		21	2	3	31	5	17	24	23	39	103	353
17:45	2	6	1	2	4	10	1	18	4	5	33	5	9	16	23	43	91	
18:00	6	15	2	3	4	2	2	26	4	4	33		23	9	32	37	101	
18:15	1	3	2	2	1	5	1	14	3	5	17	4	6	8	18	26	58	

**Peak Hours Report**

Intersection :		Hawthorne Avenue @ Ludlow St
EBL	Ludlow Street	
EBT	Ludlow Street	
EBR	Ludlow Street	
WBL	Ludlow Street	
WBT	Ludlow Street	
WBR	Ludlow Street	
NBL	Hawthorne Avenue	
NBT	Hawthorne Avenue	

Date :	9/24/2009	Weekday :	Thursday	INT ID
NBR	Hawthorne Avenue			
SBL	Hawthorne Avenue			
SBT	Hawthorne Avenue			
SBR	Hawthorne Avenue			

Hour Beg.	Description	App			App			App			App			Approach Total				Inters. hrly total
		EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	EB	WB	NB	SB	
		Mov			Mov			Mov			Mov							
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR					

AM Intersection Peak Hour																			
7:45	Tot hrly vol	42	17	13	15	28	20	10	143	12	20	260	66		72	63	165	346	646
	P.H.F.	0.62	0.39	0.54	0.62	0.39	0.62	0.5	0.72	0.6	0.5	0.62	0.66		0.82	0.51	0.71	0.67	0.85
	Vehicles	42	17	13	15	28	20	10	143	12	20	260	66		72	63	165	346	646
	% All hvy vehs																		

PM Intersection Peak Hour																			
16:30	Tot hrly vol	28	85	13	18	36	38	7	81	17	19	125	25		126	92	105	169	492
	P.H.F.	0.78	0.79	0.46	0.64	0.75	0.79	0.58	0.81	0.71	0.68	0.89	0.57		0.83	0.92	0.91	0.86	0.88
	Vehicles	28	85	13	18	36	38	7	81	17	19	125	25		126	92	105	169	492
	% All hvy vehs																		

Turning Movement Counts

Intersection :	Henry Hudson Parkway West @ 239th St - UNSIG
EBR	239th Street
WBL	239th Street

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	App		Approach Total		Inters 15 min. vol	Inters hrly vol
	EB	WB	EB	WB		
	Mov	Mov				
	EBR	WBL				
07:00	10	47	10	47	57	349
07:15	11	63	11	63	74	435
07:30	20	94	20	94	114	529
07:45	10	94	10	94	104	534
08:00	10	133	10	133	143	527
08:15	7	161	7	161	168	
08:30	11	108	11	108	119	
08:45	13	84	13	84	97	
16:30	8	58	8	58	66	278
16:45	5	64	5	64	69	283
17:00	5	60	5	60	65	286
17:15	7	71	7	71	78	301
17:30	9	62	9	62	71	288
17:45	2	70	2	70	72	
18:00	5	75	5	75	80	
18:15	6	59	6	59	65	

**Peak Hours Report**

<b>Intersection :</b> Henry Hudson Parkway West @ 239th St - UNSIG	
EBR	239th Street
WBL	239th Street

<b>Date :</b> 9/10/2009	<b>Weekday :</b> Thursday	<b>INT ID</b>

Hour Beg.	Description	App		Approach Total				Inters. hrly total
		EB	WB	EB	WB			
		Mov	Mov					
		EBR	WBL					

AM Intersection Peak Hour										
7:45	Tot hrly vol	38	496							534
	P.H.F.	0.86	0.77							0.79
	Vehicles	38	496							534
	% All hvy vehs									

PM Intersection Peak Hour										
17:15	Tot hrly vol	23	278							301
	P.H.F.	0.64	0.93							0.94
	Vehicles	23	278							301
	% All hvy vehs									

Turning Movement Counts

Intersection :	Henry Hudson Parkway West @ 239th St
EBT	239th Street
WBT	239th Street
SBL	Henry Hudson Parkway West
SBR	Henry Hudson Parkway West

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	App				Approach Total			Inters 15 min. vol	Inters hrly vol
	EB	WB	SB	SB	EB	WB	SB		
	Mov	Mov	Mov						
	EBT	WBT	SBL	SBR					
07:00	23	20	48	47	23	20	95	138	884
07:15	33	46	75	43	33	46	118	197	1,077
07:30	55	80	68	54	55	80	122	257	1,249
07:45	69	80	79	64	69	80	143	292	1,336
08:00	58	91	86	96	58	91	182	331	1,304
08:15	94	73	86	116	94	73	202	369	
08:30	84	50	111	99	84	50	210	344	
08:45	39	50	94	77	39	50	171	260	
16:30	39	52	87	37	39	52	124	215	981
16:45	43	82	85	46	43	82	131	256	1,044
17:00	46	61	109	41	46	61	150	257	1,063
17:15	46	64	96	47	46	64	143	253	1,094
17:30	47	73	108	50	47	73	158	278	1,067
17:45	33	69	109	64	33	69	173	275	
18:00	56	66	96	70	56	66	166	288	
18:15	40	48	83	55	40	48	138	226	



**Peak Hours Report**

<b>Intersection :</b> Henry Hudson Parkway West @ 239th St	
EBT	239th Street
WBT	239th Street
SBL	Henry Hudson Parkway West
SBR	Henry Hudson Parkway West

<b>Date :</b> 9/10/2009	<b>Weekday :</b> Thursday	<b>INT ID</b>

Hour Beg.	Description	App				Approach Total			Inters. hrly total
		EB	WB	SB	SB	EB	WB	SB	
		Mov	Mov	Mov					
		EBT	WBT	SBL	SBR				

AM Intersection Peak Hour												
7:45	Tot hrly vol	305	294	362	375							1336
	P.H.F.	0.81	0.81	0.82	0.81							0.91
	Vehicles	305	294	362	375							1336
	% All hvy vehs											

PM Intersection Peak Hour												
17:15	Tot hrly vol	182	272	409	231							1094
	P.H.F.	0.81	0.93	0.94	0.82							0.95
	Vehicles	182	272	409	231							1094
	% All hvy vehs											

Turning Movement Counts

Intersection :	Henry Hudson Parkway West/Grosvenor Avenue @ 254th
EBL	254th Street
EBT	254th Street
EBR	254th Street
WBL	254th Street
WBT	254th Street
WBR	254th Street
NBL	Grosvenor Avenue
NBT	Grosvenor Avenue

Date :	9/10/09	Weekday :	Thursday	INT ID
NBR	Grosvenor Avenue			
SBL	Henry Hudson Parkway West/Riverdale Avenue			
SBT	Henry Hudson Parkway West/Riverdale Avenue			
SBR	Henry Hudson Parkway West/Riverdale Avenue			

Interv Beg	App			App			App			App			Approach Total				Inters 15 min. vol	Inters hrly vol	
	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	EB	WB	NB	SB			
	Mov			Mov			Mov			Mov									
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
07:00	4	3	10	20	23	32	7	41			130	9	17	75	48	139	279	1,445	
07:15	5	2	17	18	25	36	9	45	4	2	132	3	24	79	58	137	298	1,634	
07:30	6	4	11	28	21	53	9	70	1		147	24	21	102	80	171	374	1,828	
07:45	9	6	12	28	35	69	19	129	6	2	154	25	27	132	154	181	494	1,936	
08:00	10	2	23	21	52	46	31	86	2	2	157	36	35	119	119	195	468	1,870	
08:15	16	9	25	30	49	50	52	102	14		122	23	50	129	168	145	492		
08:30	21	5	22	30	46	70	23	105	9	1	130	20	48	146	137	151	482		
08:45	13	6	20	23	32	56	16	81	6	4	155	16	39	111	103	175	428		
16:30																			1,198
16:45	15	7	37	19	9	33	16	133	15		114	5	59	61	164	119	403	1,557	
17:00	11	3	34	23	12	40	8	117	16	1	142	5	48	75	141	148	412	1,538	
17:15	14	6	22	12	10	32	14	85	9	2	161	16	42	54	108	179	383	1,540	
17:30	13	3	18	18	14	34	3	106	11		133	6	34	66	120	139	359	1,540	
17:45	17	5	13	26	12	42	6	105	12	1	136	9	35	80	123	146	384		
18:00	11	7	14	22	26	41	15	108	11		146	13	32	89	134	159	414		
18:15	14	3	26	19	6	41	10	107	5	2	139	11	43	66	122	152	383		

**Peak Hours Report**

<b>Intersection :</b>	Henry Hudson Parkway West/Grosvenor Avenue @ 254th St
EBL	254th Street
EBT	254th Street
EBR	254th Street
WBL	254th Street
WBT	254th Street
WBR	254th Street
NBL	Grosvenor Avenue
NBT	Grosvenor Avenue

<b>Date :</b>	9/10/2009	<b>Weekday :</b>	Thursday	<b>INT ID</b>
NBR	Grosvenor Avenue			
SBL	Henry Hudson Parkway West/Riverdale Avenue			
SBT	Henry Hudson Parkway West/Riverdale Avenue			
SBR	Henry Hudson Parkway West/Riverdale Avenue			

Hour Beg.	Description	App												Approach Total				Inters. hrly total
		App			App			App			App			EB	WB	NB	SB	
		EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB					
		Mov			Mov			Mov			Mov							
EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							

AM Intersection Peak Hour																			
7:45	Tot hrly vol	56	22	82	109	182	235	125	422	31	5	563	104		160	526	578	672	1936
	P.H.F.	0.67	0.61	0.82	0.91	0.88	0.84	0.6	0.82	0.55	0.62	0.9	0.72		0.8	0.9	0.86	0.86	0.98
	Vehicles	56	22	82	109	182	235	125	422	31	5	563	104		160	526	578	672	1936
	% All hvy vehs																		

PM Intersection Peak Hour																			
16:45	Tot hrly vol	53	19	111	72	45	139	41	441	51	3	550	32		183	256	533	585	1557
	P.H.F.	0.88	0.68	0.75	0.78	0.8	0.87	0.64	0.83	0.8	0.38	0.85	0.5		0.78	0.85	0.81	0.82	0.94
	Vehicles	53	19	111	72	45	139	41	441	51	3	550	32		183	256	533	585	1557
	% All hvy vehs																		

Turning Movement Counts

Intersection :	Independence Ave @ Kappock St/ Henry Hudson Parkway West
NBL	Independence Avenue
NBT	Independence Avenue
NBR	Independence Avenue
SBL	Independence Avenue
SBT	Independence Avenue
SBR	Independence Avenue
EBL	Kappock Street
EBT	Kappock Street

Date :	10/12/09	Weekday :	Monday	INT ID
EBR	Kappock Street			
WBL	Kappock Street			
WBT	Kappock Street			
WBR	Kappock Street			
WB2L1	Henry Hudson Parkway West			
WB2L2	Henry Hudson Parkway West			
WB2L3	Henry Hudson Parkway West			
WB2R	Henry Hudson Parkway West			

Interv Beg	App			App			App			App			App				Approach Total					Inters 15 min. vol	Inters hrly vol
	NB	NB	NB	SB	SB	SB	EB	EB	EB	WB	WB	WB	WB2	WB2	WB2	WB2	NB	SB	EB	WB	WB2		
	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov	Mov							
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	WB2L1	WB2L2	WB2L3	WB2R							
07:00	3		6		6		9		3	3	6	18	15	3	6	6	9	6	12	27	30	84	408
07:15	1	13	3	10	6	2	4	7	2	2	8	17	12	1	1	8	17	18	13	27	22	97	450
07:30	1	9	4	11	5	3	11	7	2	3	4	13	15	3	2	5	14	19	20	20	25	98	481
07:45	1	11	5	18	9	1	5	9	5	1	9	23	24	4	1	3	17	28	19	33	32	129	487
08:00		13	3	25	8		3	8		6	8	27	19	2	2	2	16	33	11	41	25	126	467
08:15	1	10	2	24	8	1	5	14	1	2	11	23	13	5	4	4	13	33	20	36	26	128	
08:30	1	6	2	10	8	3	7	11	3	4	6	20	17	1	3	2	9	21	21	30	23	104	
08:45	1	7	2	20	4	2	7	6	2	1	5	18	26	1	1	6	10	26	15	24	34	109	
16:30		8	3	10	1	2	1	2		3	6	8	23	9	4	2	11	13	3	17	38	82	424
16:45		10	3	9	4	5	5	8	2	2	7	19	36	8	7	7	13	18	15	28	58	132	457
17:00	1	6	6	14	4	3	4	4			8	17	35	9	3	1	13	21	8	25	48	115	452
17:15		4	2	7	2	1	3	2	1	4	6	17	28	8	8	2	6	10	6	27	46	95	450
17:30		4	1	11	3	2	6	9	5	4	6	16	36	8	3	1	5	16	20	26	48	115	470
17:45	1	10	6	11	4		2	7		7	11	11	33	8	11	5	17	15	9	29	57	127	
18:00		9	1	13	7	3	4	4		5	7	13	24	12	11		10	23	8	25	47	113	
18:15		4	3	10	3	3	4	5	1	5	11	16	33	10	5	2	7	16	10	32	50	115	

**Peak Hours Report**

<b>Intersection :</b> Independence Ave @ Kappock St/ Henry Hudson Parkway West	
NBL	Independence Avenue
NBT	Independence Avenue
NBR	Independence Avenue
SBL	Independence Avenue
SBT	Independence Avenue
SBR	Independence Avenue
EBL	Kappock Street
EBT	Kappock Street

<b>Date :</b> 10/12/2009	<b>Weekday :</b> Monday	<b>INT ID</b>
EBR	Kappock Street	
WBL	Kappock Street	
WBT	Kappock Street	
WBR	Kappock Street	
WB2L1	Henry Hudson Parkway West	
WB2L2	Henry Hudson Parkway West	
WB2L3	Henry Hudson Parkway West	
WB2R	Henry Hudson Parkway West	

Hour Beg.	Description	App			App			App			App			App				Approach Total					Inters. hrly total
		NB	NB	NB	SB	SB	SB	EB	EB	EB	WB	WB	WB	WB2	WB2	WB2	WB2	NB	SB	EB	WB	WB2	
		Mov			Mov			Mov			Mov			Mov									
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	WB2L1	WB2L2	WB2L3	WB2R						

AM Intersection Peak Hour																							
7:45	Tot hrly vol	3	40	12	77	33	5	20	42	9	13	34	93	73	12	10	11	55	115	71	140	106	487
	P.H.F.	0.75	0.77	0.6	0.77	0.92	0.42	0.71	0.75	0.45	0.54	0.77	0.86	0.76	0.6	0.62	0.69	0.81	0.87	0.85	0.85	0.83	0.94
	Vehicles	3	40	12	77	33	5	20	42	9	13	34	93	73	12	10	11	55	115	71	140	106	487
	% All hvy vehs																						

PM Intersection Peak Hour																							
17:30	Tot hrly vol	1	27	11	45	17	8	16	25	6	21	35	56	126	38	30	8	39	70	47	112	202	470
	P.H.F.	0.25	0.68	0.46	0.87	0.61	0.67	0.67	0.69	0.3	0.75	0.8	0.88	0.88	0.79	0.68	0.4	0.57	0.76	0.59	0.88	0.89	0.93
	Vehicles	1	27	11	45	17	8	16	25	6	21	35	56	126	38	30	8	39	70	47	112	202	470
	% All hvy vehs																						

Turning Movement Counts

Intersection :	Palisade Ave @ 254th St
EBL	254th Street
EBT	254th Street
WBT	254th Street
WBR	254th Street
SBL	Palisade Avenue
SBR	Palisade Avenue

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	Vehicle Class.	App						Approach Total			Inters 15 min. vol	Inters hrly vol			
		EB		WB		SB		EB	WB	SB					
		Mov		Mov		Mov									
		EBL	EBT	WBT	WBR	SBL	SBR								
07:00	Autos Trucks Buses			8	20	13					30	14	44	189	
07:15	Autos Trucks Buses		3	7	18	12	2				3	27	16	46	231
07:30	Autos Trucks Buses			25	9	12	3					39	16	55	287
07:45	Autos Trucks Buses		2	14	13	10	1				2	29	13	44	345
08:00	Autos Trucks Buses			28	37	15	1					67	19	86	368
08:15	Autos Trucks Buses		1	25	44	19	7				1	73	28	102	
08:30	Autos Trucks Buses		2	26	44	22	10				2	76	35	113	
08:45	Autos Trucks Buses			10	32	21						44	23	67	
16:30	Autos Trucks Buses			3	9	16	1					12	17	29	167
16:45	Autos Trucks Buses		4	4	10	31	1				4	14	34	52	165
17:00	Autos Trucks Buses			1	5	24	2					8	26	34	164
17:15	Autos Trucks Buses	1	2	8	8	27	3				3	16	33	52	191
17:30	Autos Trucks Buses			6	3	15						12	15	27	176
17:45	Autos Trucks Buses		2	9	5	29	3				2	14	35	51	
18:00	Autos Trucks Buses			9	16	28	2					27	34	61	
18:15	Autos Trucks Buses		1	6	11	16					1	20	16	37	

**Peak Hours Report**

Intersection :		Palisade Ave @ 254th St
EBL	254th Street	
EBT	254th Street	
WBT	254th Street	
WBR	254th Street	
SBL	Palisade Avenue	
SBR	Palisade Avenue	

Date :	9/10/2009	Weekday :	Thursday	INT ID

Hour Beg.	Description	App						Approach Total			Inters. hrly total
		EB		WB		SB		EB	WB	SB	
		Mov		Mov		Mov					
		EBL	EBT	WBT	WBR	SBL	SBR				

AM Intersection Peak Hour														
8:00	Tot hrly vol		3	100	160	87	18							368
	P.H.F.		0.38	0.83	0.87	0.87	0.45							0.81
	Autos		3	89	157	77	18							344
	Trucks				1	1								2
	Buses			11	2	9								22

PM Intersection Peak Hour														
17:15	Tot hrly vol	1	4	37	32	108	9							191
	P.H.F.	0.25	0.5	0.84	0.5	0.84	0.75							0.78
	Autos	1	4	32	32	99	8							176
	Trucks													
	Buses			5		9	1							15

Turning Movement Counts

Intersection :	Palisade Ave @ Kappock St
WBL	Kappock Street
WBR	Kappock Street
NBT	Palisade Avenue
NBR	Palisade Avenue
SBL	Palisade Avenue
SBT	Palisade Avenue

Date :	9/10/09	Weekday :	Thursday	INT ID

Interv Beg	App		App		App		Approach Total			Inters 15 min. vol	Inters hrly vol
	WB	WB	NB	NB	SB	SB	WB	NB	SB		
	Mov		Mov		Mov						
	WBL	WBR	NBT	NBR	SBL	SBT					
07:00	5	2	15	1	2	1	7	16	3	26	160
07:15	5	5	8	6	3	3	10	14	6	30	184
07:30	2	12	24	13	5	4	14	37	9	60	207
07:45	4	9	17	4	4	6	13	21	10	44	175
08:00	4	9	28	3	3	3	13	31	6	50	176
08:15	4	4	23	7	3	12	8	30	15	53	
08:30	2	2	13	1	4	6	4	14	10	28	
08:45	4	8	17	4	8	4	12	21	12	45	
16:30	3	3	4	4	2	1	6	8	3	17	121
16:45	4	3	15		4	4	7	15	8	30	131
17:00	8	6	7	9	2	4	14	16	6	36	140
17:15	5	5	14	6		8	10	20	8	38	152
17:30	3	6	10	2	2	4	9	12	6	27	150
17:45	9	6	11	4	1	8	15	15	9	39	
18:00	7	8	17	8	5	3	15	25	8	48	
18:15	8	5	10	4	3	6	13	14	9	36	



**Peak Hours Report**

Intersection : Palisade Ave @ Kappock St	
WBL	Kappock Street
WBR	Kappock Street
NBT	Palisade Avenue
NBR	Palisade Avenue
SBL	Palisade Avenue
SBT	Palisade Avenue

Date :	9/10/2009	Weekday :	Thursday	INT ID

Hour Beg.	Description	App						Approach Total			Inters. hrly total
		WB		NB		SB		WB	NB	SB	
		Mov	Mov	Mov							
		WBL	WBR	NBT	NBR	SBL	SBT				

AM Intersection Peak Hour																			
7:30	Tot hrly vol	14	34	92	27	15	25					48	119	40					207
	P.H.F.	0.88	0.71	0.82	0.52	0.75	0.52					0.86	0.8	0.67					0.86
	Vehicles	14	34	92	27	15	25					48	119	40					207
	% All hvy vehs																		

PM Intersection Peak Hour																			
17:15	Tot hrly vol	24	25	52	20	8	23					49	72	31					152
	P.H.F.	0.67	0.78	0.76	0.62	0.4	0.72					0.82	0.72	0.86					0.79
	Vehicles	24	25	52	20	8	23					49	72	31					152
	% All hvy vehs																		

Turning Movement Counts

Intersection :	Riverdale Avenue @ 261st St
EBL	261st Street
EBT	261st Street
EBR	261st Street
WBL	261st Street
WBT	261st Street
WBR	261st Street
NBL	Riverdale Avenue
NBT	Riverdale Avenue

Date :	9/24/09	Weekday :	Thursday	INT ID
NBR	Riverdale Avenue			
SBL	Riverdale Avenue			
SBT	Riverdale Avenue			
SBR	Riverdale Avenue			

Interv Beg	App			App			App			App			Approach Total				Inters 15 min. vol	Inters hrly vol
	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	EB	WB	NB	SB		
	Mov			Mov			Mov			Mov								
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
07:00	8	34	1	2	4	9	2	22	7	6	48	2	43	15	31	56	145	817
07:15	7	13	4	4	4	2	4	55	5	5	80	9	24	10	64	94	192	922
07:30	2	6	4	7	12	4	4	52	15	14	86	8	12	23	71	108	214	999
07:45	5	5	1	9	20	6	13	72	15	11	94	15	11	35	100	120	266	1,032
08:00	6	9	5	12	12	6	6	74	10	15	94	1	20	30	90	110	250	918
08:15	3	9	4	19	15	13	8	79	18	9	84	8	16	47	105	101	269	
08:30	8	10	9	11	14	9	14	63	8	12	80	9	27	34	85	101	247	
08:45	2	6	7	4	8	5	3	49	6	4	53	5	15	17	58	62	152	
16:30	2	18	14	10	8	2	6	64	2	20	98	2	34	20	72	120	246	984
16:45	3	24	14	13	5	13	1	89	9	9	85	2	41	31	99	96	267	951
17:00	6	18	10	13	4	7	3	73	5	13	88	1	34	24	81	102	241	922
17:15	6	8	7	3	3	10	5	72	7	14	92	3	21	16	84	109	230	897
17:30	3	9	6	9		7	5	77	6	16	72	3	18	16	88	91	213	830
17:45	4	9	9	8	7	6	3	82	5	10	91	4	22	21	90	105	238	
18:00	5	6	3	6	4	11	3	63	10	14	89	2	14	21	76	105	216	
18:15	4	12		8	2		15	52	4	5	59	2	16	10	71	66	163	

**Peak Hours Report**

<b>Intersection :</b> Riverdale Avenue @ 261st St	
EBL	261st Street
EBT	261st Street
EBR	261st Street
WBL	261st Street
WBT	261st Street
WBR	261st Street
NBL	Riverdale Avenue
NBT	Riverdale Avenue

<b>Date :</b> 9/24/2009	<b>Weekday :</b> Thursday	<b>INT ID</b>
NBR	Riverdale Avenue	
SBL	Riverdale Avenue	
SBT	Riverdale Avenue	
SBR	Riverdale Avenue	

Hour Beg.	Description	App			App			App			App			Approach Total				Inters. hrly total
		EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	EB	WB	NB	SB	
		Mov			Mov			Mov			Mov			EB	WB	NB	SB	
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR					

AM Intersection Peak Hour																			
7:45	Tot hrly vol	22	33	19	51	61	34	41	288	51	47	352	33		74	146	380	432	1032
	P.H.F.	0.69	0.82	0.53	0.67	0.76	0.65	0.73	0.91	0.71	0.78	0.94	0.55		0.69	0.78	0.9	0.9	0.96
	Vehicles	22	33	19	51	61	34	41	288	51	47	352	33		74	146	380	432	1032
	% All hvy vehs																		

PM Intersection Peak Hour																			
16:30	Tot hrly vol	17	68	45	39	20	32	15	298	23	56	363	8		130	91	336	427	984
	P.H.F.	0.71	0.71	0.8	0.75	0.62	0.62	0.62	0.84	0.64	0.7	0.93	0.67		0.79	0.73	0.85	0.89	0.92
	Vehicles	17	68	45	39	20	32	15	298	23	56	363	8		130	91	336	427	984
	% All hvy vehs																		

**Samples of Photographic Documentation  
of Project Study Area**



Waterfront park at Riverdale Station



Henry Hudson Bridge walkway



Broadway Bridge walkway



Trail adjacent to Palisade Avenue



Henry Hudson Parkway Service Road



Looking south along Warburton Avenue



Waterfront path in Inwood Hill Park



Broadway along Van Cortlandt Park



Pavement markings along Tibbett Avenue



Maintenance road between waterfront and tracks



Downtown Yonkers waterfront esplanade



Beszak Environmental Center



Glenwood Power Station



Old Croton Aqueduct Trail in Yonkers



Spuyten Duyvil Railroad Bridge



Fieldston Road



View of Hudson River from  
Palisade Avenue



Riverdale Station from 254<sup>th</sup> Street



Bridge to the Point at College of Mount Saint Vincent



Remnants of bridge to water at 231st Street



Spuyten Dyuivil Bridge from Kappock Street



Bell Tower from Henry Hudson Parkway Service Road



Connection from Fernbrook to railroad right-of-way



Ludlow Street